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ENVIRONMENTALISM AND POLITICS

The Earthscan Action Handbook for People and Planet

Miles Litvinoff

ENVIRONMENTALISM AND POLITICS

Volume 8

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for People and Planet**

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The Earthscan Action Handbook for People and Planet

Miles Litvinoff



publishing for a sustainable future

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The Earthscan Action Handbook

For People and Planet

by Miles Litvinoff

Earthscan Publications London

Dedicated to Cecilia, Angela and Daniel

Miles Litvinoff was born in London in 1950. He studied English at Liverpool University before going first into teaching and then into book publishing. He is now a freelance writer and editor and co-edited (with Czech Conroy) *The Greening of Aid* (Earthscan Publications, 1988). Married with two children, he lives in London and is an active member of the Green Party.

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The Problem:

Peoples of the past: in tune with nature; the first environmentalists; **Colonialism:** cash crops and commodities; **No food for the landless; Farming for the rich:** International trade; Aid and inefficiency; **Environmental destruction:** mechanized agriculture; wood for fuel; overfishing; escaping the consequences; **The “green revolution”:** miracle seeds?; new problems; pests and pesticides; irrigation; who gained?; **Food aid:** “grain junkies”; political bias.

Action:

Hunger: children; women; land reform; soil restoration; rural development; social change; the NGOs; self-reliance; Northern production and consumption; fishing; food aid.

Getting Involved:

Consumer and lifestyle choices: buy direct; boycott products; go vegetarian; buy organic; grow your own; your lifestyle; **Community and political action:** videos; World Food Day; Oxfam – Hungry for Change; tell them what you think; **Organizations.**

2. Wealth – Greed versus Need 32

The Problem:

Unequal partners; Multinationals; The World Bank: giant dams; displacing people; **Southern debt:** what went wrong?; the power of oil; money down the drain; enter the IMF; the debt crisis; **And the good news?**

Action:

The wealth gap: human development; grass roots; new priorities; self-reliance; regional co-operation; controlling the corporations; appropriate development; urban renewal/rural investment; exploited labour; rewriting debts; reforming world trade; what we owe the South.

Getting Involved:

Consumer and lifestyle choices: fair trading; boycott the offenders; ethical investment; **Community and political action:** Intermediate Technology; Oxfam 2000; In Whose Interest?; tell them what you think; **Organizations.**

3. Population and Health 60

The Problem:

Population – still soaring: population mathematics; upsetting the balance; **Disease in the South:** water and sanitation; health care; the corporations; **Poisons on the land;** legal standards; misuse and accidents; different safety standards; do pesticides work?; nitrates; **Chemical poisons in industry:** worldwide problem; dioxins; landfill and contamination; accidents will happen; weak laws; the poison trade; contaminated air; **Radiation:** the anti-nuclear case; nuclear tests; nuclear accidents.

Action:

Population and health: appropriate family planning; better opportunities for women; preventive health care; water and sanitation; local solutions; primary health care; the multinationals; traditional medicines; fewer poisons; integrated pest management; tighter controls; alternative processes; polluter pays; nuclear waste.

Getting Involved:

Consumer and lifestyle choices: small families; wealth and income redistribution; consumer boycotts; buying safely; converting/giving up your car; water quality; better personal health;

Community and political action: tell them what you think; an end to secrecy; water contamination; waste dumping; nuclear power; **Organizations.**

4. Women – Present Burdens and Future Role 92

The Problem:

Discrimination under the law: the weight of tradition; work in the home; women's health; marriage and motherhood; domestic violence; divorce; **Women as farmers:** colonial disruption; ignoring women's role; **Women in the modern economy:** inequality in employment; obstacles for working mothers; new technology; unemployment and poverty; **Women in a man's world:** education; fertility; politics; rape.

Action:

Women's burdens and role: collective action; legal rights; culture; women and work; women and development; rural women.

Getting Involved:

Consumer and lifestyle choices: buy from women; changes at home; equal treatment for boys and girls; women's refuges; **Workplace, community and political action:** equal pay; co-ops; child care; self-development; **Organizations.**

5. Human and Civil Rights 118

The Problem:

Children and education: early drop-outs; child labour; street children; the adoption trade; victims of war; **Indigenous peoples:** European conquest; pushed into poverty; forest and mountain people; oppression worldwide; genocide; the cost; **The violent state:** political prisoners; Latin America; Asia; Middle East; Africa; South Africa; **Rights in the North:** poverty and injustice in the West; the high cost of Northern wealth; support for oppression; Eastern Europe; **The future.**

Action:

Human rights: making choices; rights of the child; community schooling; protection; indigenous peoples; a change in material values; political will; public opinion; strengthening the UN; better democracy.

Getting Involved:

Consumer and lifestyle choices: buy from fair traders; **Community and political action:** letter-writing; in the workplace; education; Survival International; Amnesty International; Central America Week; broader issues; UK democracy; **Organizations.**

Part Two: The Planet

6. Working the Land to Death 149

The Problem:

Disappearing forests: an essential resource; worldwide destruction; **Deforestation – the causes:** blaming the rural poor; rural defenders; commercial exploitation; dams and mining; migration programmes; **Deforestation – the real costs:** who benefits?; environmental damage; less rainfall/more drought; firewood crisis; forest peoples; **Death of the soil:** soil loss ancient and modern; the deserts advance; destructive farming; mismanaged irrigation.

Action:

Deforestation and soil loss: problems with “sustainability”; damage limitation; international bans and campaigns; alternatives; extractive reserves; no more big developments; new trees; local control; local solutions; soil management; livestock; irrigation.

Getting Involved:

Consumer and lifestyle choices; avoid hardwoods; tell them what you think; food choices; recycling paper and card; plant trees; **Community and political action:** join campaigns; National Tree Week; Reforest the Earth; make the connections; letter-writing; **Organizations.**

7. Water – the Most Precious Resource 178

The Problem:

Water rich and water poor: heavy water users; exhausting supplies; access to water; increasing demand; flooding; **Irrigation**

and large dams – hidden costs: irrigation; how dams go wrong;
Dirty inland waters: disease and waste; waters of the North;
 chemical and nuclear contamination; **Filthy seas:** the effects of
 dumping; nuclear waste; no escape route; damage to fishing.

Action:

Water use and abuse: conservation; dual solution; political
 action; flood and irrigation controls; recovery time; industry
 and agriculture; recycling; meeting the cost; enforcement of
 standards.

Getting Involved:

Consumer and lifestyle choices: use water sparingly; buy wisely;
 fewer chemicals and batteries; recycle paper and other products;
 plastics; boat users; **Community and political action:** water
 metering; recycling schemes; limiting landfill; report pollution
 incidents; **Organizations.**

8. The Atmosphere – the Sky's the Limit 205

The Problem:

Global warming: the stratosphere; rising temperatures; green-
 house gases; too hot to handle; rising seas and refugees;
 disappearing habitats; **The hole in the ozone layer:** what causes
 it?; depletion rate; the effects; **Airborne acid:** the causes;
 widely travelled pollution; how serious?; “forest death”; water-
 ways and fish; other damage.

Action:

Atmosphere and climate: preventive measures; planting new
 trees; curbing CO₂; energy efficiency; recycling; government
 action; restoring a balance; nuclear power; alternative energy;
 less motor car use; CFCs; acid pollution; cleaner power stations;
 catalytic converters.

Getting Involved:

Consumer and lifestyle choices: conserve energy and heat;
 recycling schemes; organic foods; avoid CFCs; less driving/more
 cycling; Environmental Transport Association; **Community and
 political action:** for youngsters; UK government; campaign
 against nuclear power; environment-friendly transport;
Organizations.

9. Habitats and Species – Nature under Siege 235

The Problem:

The importance of biological diversity: species co-operation; disrupting the system; nature's wealth; medicinal plants; untapped potential; **Disappearing worlds:** the rainforests; wetlands and coral reefs; islands; grassland and wilderness; Antarctica; **Vanishing species:** wildlife trade; plants; invertebrates; fish, amphibians and reptiles; birds; larger mammals; elephants; rhinos; on the brink; migration routes; the big cats; primates; modern farming; mammals at sea.

Action:

Habitats and species: parks and reserves; wilderness corridors; success stories; zoos and gardens; farming for conservation; strategy for survival; species census; the rainforests; wildlife trade convention; alternatives to trade; wildlife ranching; whaling ban; "world park" for Antarctica; a new outlook.

Getting Involved:

Consumer and lifestyle choices: interrelated action; care for wildlife; consume carefully; criticize and boycott; teach respect; wildlife gardens, trees, recycling; **Community and political action:** protect local habitats; conservation volunteers; lobby the government; support campaigns; **Organizations.**

10. A World without War? 268

The Problem:

Weapons and wars: the nuclear threat; who has the bomb?; chemical and other weapons; worldwide war; today's battlefields; **Superpowers and cold war:** the cold war; the arms race; Star Wars; the future; **The real cost of military spending:** opportunity costs; inflation and jobs; the myth of the spin-off; social costs; knock-on effects; the price of power; wasting resources; environmental damage; the military obsession; **The arms trade:** the background; competitive market; prolonging war; secret deals.

Action:

War and the arms race: the role of the UN; international treaties; strengthening the UN; peace dividend?; NATO and

the Warsaw Pact; nuclear test ban; dissolve the alliances; chemical weapons; disarmament and development; controlling sales; arms conversion; the peace movement.

Getting Involved:

Consumer and lifestyle choices: make do with less; avoid competition; oppose violence; **Workplace, community and political action:** international links; industrial conversion; lobby for peace; peace studies; **Organizations.**

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About This Book

Everybody is “green” these days, but how much has really changed? True, there is an upsurge of interest in doing things to save the planet, and even our mainstream political parties and the multinational corporations say they want to help. Yet there has been a lot of talk and too little action. What we in the rich countries now think of as an environmental crisis is nothing new to the hundreds of millions of people in poor countries who have lived with hunger, poverty, the degradation of natural resources, physical violence, economic exploitation and political oppression for generations, *and whose suffering is in many ways increasing.*

Aims of the book

This book sets out to show the connections between the global crisis as we in the wealthy North see it and as those in the impoverished South experience it in the brutality of their everyday lives. A time of crisis is also one of opportunity, and this book tries to suggest remedial action for most of the major problems facing us, even if these are rarely simple, swift or conflict-free.

For the sake of clarity, the book is divided into two parts, although any separation of the planet’s problems from those of the human race is artificial (neither can be eased without the other):

- Part One focuses on the denial of a decent life to millions of low-income people because of decisions made in board-rooms and parliaments around the world. It considers the upsurge of non-violent but determined effort needed to restore and uphold the rights of the world’s oppressed majority.
- Part Two describes the well-documented problems of land, water and atmospheric degradation and pollution, as well

as species loss and the threat arising from the warrior mentality.

Action

Solutions

Solutions are suggested in every chapter. Most of them involve a change of priorities, and many demand apparent material sacrifices on the part of the industrialized countries, so much of whose wealth is wasted on misguided projects and short-sighted goals; many solutions also mean less material consumption by better-off people. Yet for every material loss, there will be more-than-compensatory gains of a different kind: healthwise, emotional, moral, spiritual and convivial.

Where possible, the book tries to link long-term solutions with action we can take as individuals, by adjusting our consumption and lifestyle and participating in campaigns and political life.

Letter-writing

There are suggestions in the “Getting Involved” sections at the end of each chapter for issues to raise in letters to local councillors, Members of Parliament and Members of the European Parliament, to UK government ministers, to the chairmen/-women of banks and multinational corporations, to newspapers and so on. Write to your MP at the House of Commons, London SW1A 0AA. You can obtain the name and address of your MEP from the European Parliament UK Office, 2 Queen Anne’s Gate, London SW1H 9AA.

A few points about letter-writing:

- Be polite if you want your letter to have a constructive effect or to receive a reply.
- Make your points clearly and briefly.
- When you write to a person, rather than to the press, ask at least one specific question and ask for a reply.
- Keep a copy of every letter you send and file the replies.
- Be persistent; don’t be put off if you’re not satisfied with the first reply.

- Going to the “top” can be effective; if you want to write a critical letter to a multinational or any other organization, phone first to find out the name and job title of the company president, chairman/-woman or chief executive and write to them.

Campaigning

In the UK you can also arrange to meet your MP in the House of Commons lobby by writing first. Or you can visit the MP in his or her constituency “surgery”. During elections, send a letter or questionnaire to each candidate, asking their views on the subject of your concern, or put questions to them at public meetings or when they canvass you. If you find yourself in broad agreement with a political party, become an active member and try to influence its policies.

Names and addresses of campaigning organizations and action groups are listed at the end of every chapter. When contacting them for advice, information or resources, bear in mind that many are run on tight budgets; if you want a reply, send at least a stamped self-addressed envelope or, better still, a donation. For more guidance about community action in the UK, see the books by John Button, Gavin Scott and Des Wilson listed in “Recommended Reading” (pages 324–9).

Definitions

The terms “North” and “South” became widely known through the Brandt Report (*North–South: A Programme for Survival*; London: Pan, 1980). I have used them in preference to “First World” and “Third World”, although they mean more or less the same and, like all generalizations, are helpful only up to a point. “North” usually refers to the high-income industrialized countries (Western Europe, North America, Australasia and Japan), often in the context of the relationship dating back to the colonial era between European powers and colonies and extending to economic domination today. (Eastern Europe and the USSR account for only a tenth of world trade and have until recently traded chiefly between themselves.)

In chapters dealing with the relationship between the capitalist democracies and the (former) Communist bloc, I have used the

terms “East” and “West”. “South” refers to the low-income countries of Africa, Asia, the Caribbean, Latin America and the Pacific, and also usually to the high-income Middle Eastern oil states.

I have used “billion” and “trillion” in the North American sense of 1,000 million and 1,000 billion respectively. All monetary figures are given in dollars. Metric measures are used throughout; a hectare is 10,000 square metres, roughly 2.5 acres. For other definitions, see the “Glossary” (pages 299–305).

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Grateful acknowledgements are made to *Housmans World Peace Directory* for much of the data on organizations and action groups listed at the end of each chapter. The full Directory, listing some two thousand national and international organizations, is revised and updated annually, appearing as part of the Housmans Peace Diary. Contact: Housmans, 5 Caledonian Road, London N1 (071-837 4473).

Grateful thanks also to the *Spare Rib Diary* for data on women’s organizations listed at the end of Chapter 4.

Abbreviations

CFCs	Chlorofluorocarbons
CHP	Combined heat and power
CITES	Convention on International Trade in Endangered Species
EC	European Community
FAO	Food and Agriculture Organization of the United Nations
FOE	Friends of the Earth
GATT	General Agreement on Tariffs and Trade
GNP	Gross national product
HYV	High yield variety
IIED	International Institute for Environment and Development
IMF	International Monetary Fund
IMO	International Maritime Organization
IPM	Integrated pest management
IPCC	Intergovernmental Panel on Climate Change
ITDG	Intermediate Technology Development Group
ITTO	International Tropical Timber Organization
IUCN	International Union for the Conservation of Nature and Natural Resources
MEP	Member of the European Parliament
NATO	North Atlantic Treaty Organization
NGO	Non-governmental organization
NIC	Newly industrializing country
NIEO	New international economic order
ODA	Official development assistance
OPEC	Organization of Petroleum Exporting Countries
SDI	Strategic Defense Initiative (US)
TASM	Tactical air-to-surface missile
TFAP	Tropical Forestry Action Plan
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations (International) Children's (Emergency) Fund
UV	Ultra-violet
WCS	World Conservation Strategy
WHO	World Health Organization
WWF	World Wide Fund for Nature

PART ONE

HUMAN NEEDS

1. Food – the Right to Eat

“Hunger...is almost always the result of people being too poor to buy food. In virtually every famine studied, food exports from the area have increased during the famine because local people could not buy the food being produced.”

Lloyd Timberlake¹

The Problem

In today's world of plenty, more people starve to death or die of hunger-related disease than ever before. Nine hundred and fifty million adults and children are undernourished, of whom 50,000 die each day; 20 children die because of hunger each minute. For most of these people, the lack of food is part of everyday life, not the result of famine. Millions of children grow up physically stunted and mentally retarded because they are underfed, and even unborn children suffer permanent damage if the mother is short of food. Yet most of this hunger and nearly all of these deaths are preventable. We have the means but do we also have the political will to act? Today hunger haunts the lives of the poor people of the South – the inhabitants of Africa, Asia, the Caribbean, Latin America and the Pacific. Have large numbers of people in these lands always been short of food; and if not, why are they hungry now?

Peoples of the past

History and mythology tell us that famines did occur in ancient times – for example, the Old Testament story of Joseph and the seven lean and seven fat years. Ecological catastrophe, crop failures and food shortages may have destroyed such civilizations as Minoan Crete and Mesopotamia. Smaller tribal groups may also have vanished as a result of drought and famine.

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Untouched by the rise and fall of mighty civilizations, however, a great many local cultures of rainforest hunter-gatherers, island fisherfolk, farmers and nomads survived independently for thousands of years. These modest communities maintained their way of life uninterrupted (or resumed it as soon as any ruling civilization in the region had passed away) because they coexisted in harmony with their environment.

In tune with nature

Whether these communities inhabited moist forests or dry savanna, mountainous regions or fertile river valleys, they took no more from the land than they needed for survival and for occasional feasts and celebrations. Their way of life had evolved over countless generations and was rooted in an acceptance of the Earth's natural abundance, but they knew the importance of prudence. Where they did suffer harvest failure and food shortage, the Earth's natural resilience would usually recover quickly.

Land was owned collectively, if at all. In the rainforests there was no need for ownership, although within tribes different individuals or groups might by custom use the produce of particular trees. Elsewhere, as in Africa, a village might jointly own the land round about, the elders assigning temporary land-use rights to individuals according to need and capacity. Or the territory of a small nation might be symbolically owned by the king or queen but again assigned according to need.

As with the air, the waters and the animals, the idea that individuals could own the land would have seemed ridiculous to most traditional societies. Many never even considered the possibility until it was too late. In 1626 the Dutch bought the island of Manhattan from its Amerindian inhabitants for \$24 worth of kettles, axes and cloth; a similar price was paid two centuries later by the British for Maori land in what would become New Zealand. In neither case did the sellers have any idea what was taking place. In the words of the Sioux chief Crazy Horse: "One does not sell the earth upon which the people walk."²

With their small populations, most pre-colonial peoples had enough land and water for all, provided it was used wisely. Food and other necessary items were obtained with the minimum disruption of nature. In most of Africa, the least populated continent, dry climates and fragile soils made it essential to

use the land lightly. Farmers knew that after a few harvests a piece of terrain would be exhausted for some years, so they would shift to another place; grazers knew they had to keep their herds on the move to avoid stripping the vegetation bare.

The first environmentalists

All such subsistence cultures had a deep ecological knowledge and felt a closeness to and veneration for the Earth. This was practical common sense, not some mystical religion. They knew that only by preserving the systems of soil, water, plants and animals intact could human survival be safeguarded. The environment was to them the sum of all goodness, and their relationship with it was their morality. If people abused or degraded the world they lived in (although their capacity to do so was limited), their way of life would be endangered.

One important survival strategy was the deliberate cultivation of genetic diversity. Traditional Indian farmers, for example, could call on a “library” of perhaps 10,000 varieties of rice, many of which are now lost. Each household and community had its stock of different strains and would use a range of them each planting season; in dry years poor yields of some varieties would be compensated by the survival of hardier strains.

To this day many indigenous peoples maintain their traditional way of life. One such group, the Chagga of northern Tanzania, practise a sophisticated and complex form of “forest farming” on the slopes of Mount Kilimanjaro. Here they combine agroforestry (growing trees and crops together), polycropping (mixing together different varieties of plants) and organic composting. Complementary crops are grown at every height, from the forest floor to the tree canopy. Fifteen types of banana tree alone provide the Chagga with food, animal fodder and ingredients for beer, while stabilizing the soil and helping retain moisture. Other crops, such as coffee, are produced for sale to outsiders. Today the Chagga forest farms successfully support the highest population density in Tanzania.³

Colonialism

The regional civilizations and enduring local cultures of Africa, the Americas, Asia, the Caribbean and Oceania were disrupted for ever by a new force from the North. The coming

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of the Europeans would dislocate traditional ways of life in every continent and alter the world beyond recognition. European colonizers imposed new forms of landownership, agriculture and economic organization on their subjects. Some of the conquered peoples, such as the Caribs, were destroyed by genocide. Elsewhere, the Europeans enslaved or dispossessed the indigenous people, expropriating and enclosing the best land.

Poorer-quality or inaccessible land was sometimes left to the colonized populations as a source of the grains, vegetables, fruits, firewood, water, animal fodder and other goods they needed. Not surprisingly, however, the way of life these peoples had developed when land was more plentiful became less able to support many of them and began to damage the environment. Traditional communities increasingly knew hunger. As time went on, and more land was taken over by colonialist landowners and business interests, it began to appear to many of the subject peoples that there was no future for them on the land. But now there was an alternative – the towns that had sprung up as seats of government and as trade and industry centres throughout the South. Over the decades, millions of once self-supporting people left the countryside to become urban-dwellers, dependent on others for their food.

Cash crops and commodities

To the first European settlers and landowners, life was an adventure; but to succeed, the adventurer had to get rich. The fastest way to generate profit was to produce food crops and raw materials for sale in Europe and North America. This was the start of the international trade in “cash crops” and commodities – unprocessed food and agricultural products, timber, rubber and mineral ores – and it coincided with the beginning of the Industrial Revolution.

The rulers of the colonies geared themselves to supply what the newly industrializing powers wanted but could not produce sufficiently for themselves. The former croplands, woodlands and rangelands of pre-colonial peoples were thus adapted for the large-scale production of tea, coffee, tobacco, cotton, sugar, nuts, fruits, vegetables and, later, beef. Most of the wealth generated by primary production and export remained in the hands of the colonialist elites or was repatriated to Europe.

Once established, the cash crop/commodities sector took on

its own momentum. Myths of racial superiority were used to justify the theft of what had belonged to indigenous populations. If the Europeans were superior, then their profits and pleasure were more important than the survival of a few hundred, hundred thousand or million Africans, Amerindians, Asians or Australasians. Another myth, by-product of Europe's agricultural and industrial revolutions, was that indigenous people's farming methods were backward and that large-scale, modernized agriculture was more efficient. By taking over control of the world's land, the Europeans could therefore claim to be acting for the good of all.

As land use became further dominated by the rich and powerful, their ranks came to include favoured members of the indigenous populations and the mighty multinational corporations of the modern world. Europe was transformed, no longer having to support itself with food. Now that many of its primary supplies were produced in the hungry lands of the colonized peoples, it could use its own populations to produce industrial goods.

The pattern has continued to this day. In the 1960s, for example, Del Monte, the US fruit company, moved into pineapple production in Kenya by buying out the small local growers. This was "modernization". Now producing about 40,000 tonnes of canned fruit every year (more than the original growers did), Del Monte Kenya exports nearly all of it; so the land no longer supplies local needs. This might be acceptable if Kenyans earned a good income from the pineapples. However, using imported modern machinery and technology, Del Monte employs (at low Southern wages) only a fraction of the people who used to work the land as smallholders. Where are they now, and who is feeding them?⁴

No food for the landless

The international agricultural and trading system is usually justified on the grounds that it is "efficient" and the best way to feed all the world's people. The truth is that it fails to feed hundreds of millions in the South and several million elsewhere.

People go hungry when they lack both access to the means to grow food and the money to buy it with. Neither the land nor the money is evenly distributed. One hundred million hectares of Africa, Asia, the Caribbean and Latin America have been

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taken out of local production. The use of these “ghost acres”, as they are sometimes called, is paid for by rich and densely populated countries such as Japan, the Netherlands and the UK to provide the food and other materials they want.

In some cases, such lands are taken out of productive use completely. Del Monte reportedly farmed only 4,000 of the 23,000 hectares of Guatemala it owned in the 1970s. Many large landowners and multinationals leave their land idle (but increasing in value) rather than allow it to be used by the hungry people whose parents or grandparents once farmed it.⁵

Farming for the rich

In all, three-quarters of the world’s productive land is controlled by 2.5 per cent of all landowners. In Latin America 93 per cent of the farmland is owned by 7 per cent of the population. If present trends continue, there could be 220 million landless rural households – a billion people – by the end of the century.⁶

Much of the land left to peasant farmers and livestock herders is, or becomes, unproductive. To many of them, colonialism and land-theft are recent history. What will be taken from them next and when? Why work hard to manure the soil or plant trees if this will only make some future landowner rich? Insecurity of tenure leads in the long run to deforestation and soil erosion to the point where land has to be abandoned.

The one billion people of the North – in Europe, North America, Japan and Australasia – dominate the world’s land use because food markets respond to cash, not to need. Take the consumption of cereals and meat, for example. In 1986 roughly 1.8 billion tonnes of cereals were grown worldwide. Between a third and a half of these grains were not eaten directly by people, although most were fit for human consumption, but were fed to animals on their way to the dinner tables of the rich. Brazil’s plantation farmers grow enormous quantities of soya cattle-feed for North American and European livestock on land that could otherwise support thousands of peasants.

In Botswana, where large numbers of people are too poor to buy a decent diet, World Bank funding has helped set up a massive expansion of cattle ranching, mostly for export. Worldwide, as much land is now used for animal grazing as for food crops, and each kilo of animal protein is produced at

a cost of five, ten or fifteen times its own weight in grain. Who said modern agriculture was efficient?

The same goes for fish. South American-based European and US companies export huge quantities of Pacific fishmeal to the developed countries for animal feed. Meanwhile in Chile and Peru, from whose waters the catch is taken, hundreds of thousands of people lack the daily protein they need.

International trade

The benefits of international trade are conventionally explained in terms of "comparative advantage". Africa, Asia, the Caribbean and Latin America, the theory runs, specialize in the production of agricultural products and other raw materials, while Europe and North America concentrate on manufactured goods. Each side sells its surplus to the other at a fair price, and both prosper. But as we have seen, the relationship has been one of dominance from the start. By the time slavery was abolished, the North had become so much wealthier than the South that its position was self-sustaining. Having cornered the market in manufactured goods, Northern industry kept prices cripplingly high. At the same time, it was relatively simple to play off one poor commodity supplier against another to keep prices of food and raw materials low.

On average less than a quarter of the value of Southern exports goes to the producer country; the rest is taken up by foreign shippers, processors and packagers. Also, food and commodity prices (with the exception of oil and precious metals) are unstable and have fallen almost from the first, reaching their lowest ever levels in the 1980s.

Huge food subsidies paid by the rich countries to their farmers (\$26 billion in the USA and \$21 billion in the European Community in 1986) help depress the prices of Southern produce by undercutting competition. At the same time, the overproduction of food in Western Europe and North America leads to the dumping of low-priced Northern produce on the poor countries, putting local small farmers out of business.

Despite major increases of world food output, the access of millions of poor people to land, food or cash has failed to improve. Even for those who survive as small farmers or obtain waged labour, the money they can earn usually buys a poorer diet than they previously achieved outside the cash economy.

After the postwar modernization of Indian agriculture, for example, India's grain stocks doubled, yet average food consumption among poor people fell. Many smallholders who had previously produced their own wholegrain rice now had to buy less nutritious, commercially milled grain from intermediaries.⁷

Whatever their cash income on paper, Southern households often reap little benefit. In general it is the men who control family cash crop sales or wage income, and it is widely recognized that men are as likely to spend the money on beer and prostitutes as on family nutrition. Even when rural women control cash income, those with little experience of handling money often misspend it, being easily tricked by merchants or misled by advertising. When a formerly self-reliant community is brought into the cash economy, the quality of the household diet invariably suffers.

Most low-income countries have long ceased to be self-sufficient societies where most people grow their own food. Instead, as in the North, a farming sector provides some of the country's food directly and, with an industrial and service sector, tries to earn enough foreign currency to buy from abroad whatever else is required. With local farmers forced out of business, and the export of commodities earning damagingly low prices, under the present system most developing countries cannot feed themselves properly.

The former colonies of Asia and Latin America generally have rural services such as roads, schools and health centres, although often of poor standard. Elsewhere, especially in Africa, they are non-existent. Lacking such necessary infrastructure, most of the South is just not equipped to participate as an equal partner in an international trading system built upon cut-throat competition.

Aid and inefficiency

With worsening balances of trade and payments, the countries of the South have looked vainly to the North for significant long-term assistance. Instead, the International Monetary Fund (IMF) offers short-term loans with nasty strings attached. In the early 1980s, for example, child malnutrition rose by 50 per cent in Botswana, Ghana and Peru after the IMF dictated cuts in food subsidies. When the Mexican government cut subsidies in 1986 there followed average price rises of 75 per cent

for bread, beans, tortillas and rehydrated milk. The story has been repeated many times.⁸

Corruption, inefficiency and misguided priorities among Southern governments must take some share of responsibility for world hunger. These ruling elites are usually preoccupied with their power base in the urban areas and ignore the needs of people in the countryside. While the army and civil service are usually favoured, rural-dwellers are denied the basic amenities that would enable them to support themselves. In the meantime, poor countries build airports and hotels for the benefit of travelling salesmen peddling weaponry from the North.

Environmental destruction

Environmental pressures are reducing the planet's capacity to produce food. As trees have been felled and vegetation stripped, more and more soil has been eroded. Soil has also been degraded and lost through overgrazing by livestock and overcultivation by short-sighted landowners. On marginal lands, desperate small farmers, with little other choice, over-plough delicate soils or deny them the fallow periods they need to regenerate. As vegetation is removed, local climate becomes drier. Droughts increase, but so paradoxically do floods when it rains, because less water is absorbed by the ground. In Africa, the most damaged continent, food output per head of population has fallen since the 1960s, with drought the primary cause of the terrible famines of the 1970s and 1980s.

Mechanized agriculture

The impact of mechanized agriculture can be especially destructive. Unlike traditional farming communities, with their respect for the land, the first priority of commercial farming is to reduce cost and maximize output and profit. A classic example of this approach was the infamous groundnut scheme imposed on East and Central Africa by the British in the late 1940s. Valuable for their oils, groundnuts make hard demands on the soil, needing long fallow periods. Huge sums of money were spent on mechanically clearing more than a million hectares of Kenya, Tanganyika (Tanzania) and Rhodesia (Zimbabwe). Each groundnut farm in the region was to use as much machinery and chemical fertilizer and as little human labour as possible. Within ten years much of

the ground had baked hard as rock, and the project had to be abandoned.⁹

Applied indiscriminately to fragile Southern environments, industrialized agriculture wreaks havoc, relying on chemical inputs and mechanical ploughing that poison the soil and turn it to dust. It rejects the mixture of livestock and arable farming to manure the ground; and it clears away the trees and hedges that shade the soil and keep it moist, provide natural fertilizer and harbour pest predators. Little wonder that modern intensive farming has produced a soil crisis; and as every traditional farmer knows, a soil crisis means a food crisis.

Wood for fuel

Matters are made worse by a severe shortage of firewood, on which a billion people depend for cooking and heating. As land is cleared of trees or privatized, the poor have to spend more and more time in search of wood to burn. When supplies of dead wood are exhausted, they are forced to cut live branches. When these cannot be found, they have to burn crop residues and animal manure, the natural organic matter the earth needs to maintain its fertility and structure.

The firewood shortage increases rural hunger in another way, too, as poor households are unable to cook often enough. Women, the food and fuel providers, are too busy searching for firewood to grow food or prepare it properly.

Overfishing

In the rivers and seas, sources of much of the world's protein, the pattern is similar. With the introduction of mechanized trawlers and factory ships by the industrialized countries in the 1960s and 1970s, the global commercial fish catch has increased dramatically to 80 million tonnes a year or more. The artisanal or non-commercial catch by Southern people for their own needs is put at about 24 million tonnes a year. So overall we have probably exceeded the upper limit for sustainable fishing from the world's seas, estimated as a total annual catch of about 100 million tonnes.

Some fish populations are already well into a decline, as is the share of the total catch that Southern fisherfolk enjoy. The performance of Peru's anchovy fisheries, formerly a mainstay of the national economy, has steadily worsened; and offshore of West Africa only a third of the catch goes to local fisherfolk

– long-distance foreign fleets take the rest. Overall, a third of all the fish commercially caught is earmarked for animal feed and fertilizer, mainly in the North, rather than for direct human consumption. Besides overfishing, pollution and industrialization of river systems and coastal areas have done much to exhaust the productivity of the world's waters. Not surprisingly, from West Africa to South Asia (where ocean fishing supplies a high proportion of people's daily protein needs), traditional fishing communities are being forced into debt or out of business.

Escaping the consequences

The rich countries have so far escaped the consequences of the food crisis. Criticizing "ignorant" peasant farmers for cutting down too many trees, Northern consumers are themselves protected from feeling the pinch. When there are shortages, the available food goes to the highest bidder. If the lands become unproductive in one country or region, it is easy for the food multinationals to sell up and buy better land elsewhere. In the end, however, if enough of the world's fertile lands and waters are destroyed or endangered, these shortages will affect us all.

The "green revolution"

Before its official abolition in the nineteenth century, slave labour was the key to keeping costs low on the Northern-owned plantations and farming estates that covered the South. As time went on, however, it became harder to justify the enslavement of human labour. From the business point of view, in any case, human employees were increasingly expensive to pay and difficult to handle. But now there was an alternative – machinery and oil. In place of the human tasks such as ploughing, watering, weeding and spreading mulches by hand, oil-powered machinery, irrigation systems and chemical pesticides and fertilizers could be used. "Agribusiness" – industrialized agriculture – was born.

Miracle seeds?

To this capital-intensive method of farming was added one further component that launched what was to be called the "green revolution". The final element was specially developed genetic strains of wheat and rice that, given constant irrigation and enough chemical fertilizer, grew faster and produced larger

seed-heads than traditional strains. Some varieties could produce three crops in a year.

This was surely the “miracle” the world had been waiting for. It would both feed the hungry and make the agribusiness firms rich. No wonder the food scientists of the US government and the UN Food and Agriculture Organization (FAO) who developed the new strains in the 1940s called it a revolution.

The new “high yield varieties” (HYVs), as they were called, may have been useless in the rugged conditions in which most of the world’s small farmers grew their cereals; but when the situation was right they seemed unbeatable. Introduced first in Mexico and the Philippines and then throughout Central America and South Asia, as well as in North Africa, HYVs caused an upsurge in the use of irrigation and agrochemicals. The world’s area of irrigated land doubled in three decades, while chemical fertilizer and pesticide applications shot up by 900 per cent and 3,200 per cent respectively.¹⁰

New problems

True to predictions, yields have increased fast, but there have been many unforeseen problems. Because of their heavier seed-heads, HYVs would fall over were it not for the shorter stems bred into them. Shorter-stemmed strains, however, are easily crowded out by weeds, so extra doses of herbicide are needed. Again, water makes up a larger proportion of the magnificent size and weight of HYVs than of traditional strains (hence the need for constant irrigation); this means that their nutritional value is relatively lower, and they are more prone to destruction by moulds during storage. Another drawback for the world’s undernourished people – although not for Northern agribusiness, which owns the seed patents – is that the characteristics of HYVs do not reproduce; instead of being able to rely on their own seeds, farmers have to buy new seeds each year from such global giants as Sandoz, Shell, Upjohn and Volvo.

There are further problems. Only two cereals have been developed in this way – wheat and rice – whereas most of the world’s poor rely on other staples such as sorghum, cassava, millet and pulses; so millions of people cannot benefit from the “revolution” unless they change their eating habits. In any case, with its need for continuous irrigation and petrochemicals, HYV farming is out of reach of most small farmers. The

“revolution’s” founders argued in favour of “building on the best” – when the more prosperous farmers were successfully using the new techniques, other cultivators would follow. In the event, large landowners have benefited from increased yields and been able to expand their market share, forcing thousands of smaller farmers off the land.¹¹

Blindly imposed on many developing countries, this uninvited revolution has rightly been called a “socioeconomic disaster”.¹² The new techniques replaced the one resource there is plenty of everywhere – labour – with factors of production that are abundant only in wealthy countries: credit, technical know-how, machinery and petrochemicals. Nobody ensured that the increased food output was made available to the growing numbers of landless poor at fair prices. And as the price of oil and of Western manufactures climbed during the 1970s, poor countries that had enthusiastically converted to the “green revolution” found themselves hard pressed to pay.

Pests and pesticides

Worse still, the “miracle seeds” are unusually vulnerable to pests. Traditional cereal growing relies on planting several crops or varieties together or alternating them over time, with fallow periods, to prevent pest species finding a secure “niche” in which to multiply and cause serious damage. HYVs, by contrast, grown as uniform “monocrops” on vast, uninterrupted tracts of land with hardly a pause, provide ideal conditions for insect pests. (The application of herbicides can itself leave a residue on the ground that is a haven and breeding-ground for pests.)

Each application of pesticide destroys the weaker but not the stronger members of the target pest species. Free from competition, these stronger specimens enjoy a food bonanza and a population explosion. So a heavier pesticides dose is needed next time, and so the process goes on. By 1980 it was said that over 400 insect and mite species had developed pesticide resistance. Trapped on this pesticide treadmill, the insecticide expenditure of Philippines rice farmers shot up by 4,500 per cent during the 1960s and 1970s.¹³

Yet another problem arose in South-east Asia, where large areas of HYV rice paddy are stocked with edible fish. Masses of these fish have been poisoned with insecticide, causing losses of 600,000 tonnes of food a year in Indonesia alone.¹⁴

Dangerous as well as expensive, pesticides poison hundreds of thousands of people each year, in some cases fatally. Ironically, however, there is evidence that they are as good as useless. Worldwide crop losses to pests have remained at about 35 per cent since pesticides were first widely introduced in the 1950s, and only another 1 or 2 per cent of most crops would probably be lost if none were used at all.¹⁵

Irrigation

More harmful side-effects of the “green revolution” have been caused by large-scale irrigation. Many river ecosystems have been disrupted by the need for reservoirs. Areas flooded by the reservoirs include once-productive river valleys, sometimes destroying as much farmland as has been brought into use through irrigation. While new irrigation waters have allowed some farmers to increase their output, many small cultivators have been displaced by the reservoirs. The consequent clearing of new land on hillsides causes soil erosion that silts up the reservoirs, shortening their useful life.

Large reservoirs were to be a source of fish, but their yields are invariably lower than predicted, due to silting or to acidification caused by rotting vegetation in the water. As if this were not enough, life close to irrigation reservoirs and canals can be unpleasant and dangerous because these waters are breeding-grounds for malarial mosquitoes and disease-carrying snails. Finally, as with most components of the “green revolution”, large-scale irrigation can rarely be sustainable in the long term; huge quantities of water are wasted through poor management and drainage, and this results in water shortages plus the salinization of soils, gradually rendering them sterile.

Who gained?

The “green revolution” has made some landowners and merchants wealthy. It has delivered vast profits to the multinational corporations that control agribusiness. Yet for hundreds of millions of the world’s most needy people it has done nothing at all. As the writers Frances Moore Lappé and Joseph Collins point out, if the “revolution” could have worked, it would have by now.¹⁶ Even the World Bank now admits that increasing food output alone cannot solve world hunger and that “redistributing purchasing power and resources toward those who are undernourished” is needed.¹⁷ This idea is long overdue.

Food aid

Plenty of surplus food is produced – in the wrong places. Using hormone treatments, oil-guzzling machinery and agrochemicals as if there were no tomorrow, Western Europe and North America have given birth to monstrous beef, grain and dairy mountains. What could be wrong, an innocent might ask, with Northern growers giving this food surplus, currently worth about \$2,600 million a year, as aid to the hungry of the South?

The main objection is that non-emergency food aid, like the dumping of low-priced food, is inflicted on poor countries at the whim of the rich and causes structural dependence. There is, in fact, little to choose between low-priced dumping and the supposedly humanitarian gift of non-emergency food aid. By undercutting local prices, both strategies put small farmers out of business.

The flood of cheap or free foreign food may dry up at any time if conditions, markets or foreign-policy objectives in the North change. But by then people in the recipient country or region may have got so used to Northern wheat that local producers cannot woo them back to traditional grains. Apart from during emergencies, a large temporary influx of food can reduce a country's potential to feed itself for years to come.

“Grain junkies”

The conscious promotion of food dependency is an unpleasant feature of US foreign policy. In the 1950s, worried by rising domestic wheat surpluses, the US government devised its Food for Peace Act. The Act aimed to prevent a crash in US prices by selling the wheat cheaply in Southern markets for local currencies. This would not affect US farmers' dollar incomes and would “make friends” abroad. The Americans knew exactly what they were doing; in the words of Senator Hubert Humphrey: “If you are looking for a way to get people to lean on you and be dependent on you...it seems to me that food aid would be terrific.”¹⁸ Whole regions became “grain junkies”.¹⁹

Largely unchanged, this approach was adopted by the European Community (EC) for disposing of the food mountains and lakes arising from its common agricultural policy in the 1970s and 1980s. The reduction in storage costs for its meat, wheat,