What We Consume is one of four curriculum modules which together make up WWF United Kingdom's *Global Environmental Education Programme.*

- **Earthwatch Now*** deals with children's actions and the environment.
- **Earthwatch 2086*** deals with children's decisions and the future.
- **What We Consume** examines what children consume and the environment.
- **Where We Live** is a further project looking at the environment and where we live.

What We Consume consists of a Teachers' Handbook and ten curriculum units sampling environment and development issues around the world.

Unit One*	**Society and Nature**
Unit Two	**The Rise of Industrial Society**
Unit Three	**Our Consumer Society**
Unit Four *	**The United Kingdom:** Agriculture and Wetland Drainage
Unit Five*	**Brazil:** Rondonia's Cattle Frontier and the Destruction of Tropical Moist Forest
Unit Six	**Ethiopia:** War, Famine and Desertification
Unit Seven*	**The USSR:** Lake Baikal and Water Management
Unit Eight*	**China:** Beijing - A Livable City?
Unit Nine	**Multi-lateral Action and the Environment**
Unit Ten*	**The Environment and Democracy**

*Already published

For information on these and other teaching materials produced by WWF, contact WWF United Kingdom, Weyside Park, Godalming, Surrey GU7 1XR.

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GLOBAL ENVIRONMENTAL EDUCATION PROGRAMME

TEACHERS HANDBOOK

WHAT WE CONSUME

Ten curriculum units dealing with issues of environment and development

WWF United Kingdom and Bedford College of Higher Education in conjunction with The Richmond Publishing Company. Module Co-ordinator John Huckle. Programme Co-ordinator Roy Williams, School of Education, University of Sussex.

WHAT WE CONSUME

AN OVERVIEW

What We Consume provides a curriculum framework and classroom activities for teachers wishing to explore issues of environment and development with their pupils. One hundred original activities, in ten units, link pupils as consumers to economies and societies around the world. They enable them to study different forms of development and underdevelopment, recognise the impact these have on nature and the environment, and consider alternatives which are more ecologically sustainable. In doing this, pupils learn of the part which they and others play in such issues as acid rain, desertification, and the destruction of tropical moist forests. They develop their understanding of the economic and political roots of environmental issues and consider social alternatives which may allow more harmonious relations between people and between people and nature. In this way, *What We Consume* introduces some of the central themes of the World and UK Conservation Strategies and educates young people for the roles they might play in the transition to ecologically sustainable development.

UNITS

What We Consume consists of a Teachers' Handbook and ten curriculum units:

1. Society and Nature
2. The Rise of Industrial Society
3. Our Consumer Society
4. The United Kingdom: farming and wetland drainage
5. Brazil: cattle ranching and rainforest destruction in Rondonia
6. Ethiopia: war, famine and desertification
7. The USSR: Lake Baikal – management of water resources
8. China: Beijing – a liveable city?
9. Multi-lateral action on the environment
10. The environment and democracy.

Unit One contains introductory activities on *Society and Nature*. It is followed by two units that explore the use of nature in our own society – in the recent past and at present. Units Four to Eight relate a range of environmental issues to the development policies of five nation states variously located within the world economy. While Unit Nine looks at attempts to resolve environmental issues through multi-lateral action from above, Unit Ten focuses on movements seeking greater democracy and environmental welfare by change from below. Unit Nine examines EEC action on acid rain and UN negotiations over Antarctica, while Unit Ten deals with the Chipko movement in the Himalayas, the environmental movement in Poland and initiatives by trade unions and local councils in Britain.

This series of educational materials is likely to appeal to teachers of Humanities and Social Studies, as well as those familiar with World Studies and others with an interest in political and social education. The units are designed for flexible use within the 11–16 Humanities and Social Studies curriculum, and it is hoped that they will also find other applications. The contexts in which they are taught, and the time they are given, are likely to vary. In the trial schools they were developed with 12–14 year-olds and taught over a period of between five and ten weeks.

THE PROJECT TEAM

What We Consume was developed by a team of eight teachers in Bedfordshire and Milton Keynes during 1985 and 1986. The Project Co-ordinator was John Huckle, Bedford College of Higher Education, who wrote the first unit and edited the supplementary units. The project's Research Assistant was Peter Wharmby. Using ideas and resources provided by the Project Co-ordinator, each teacher developed ten classroom activities related to one of the units. These activities were used in the classroom, evaluated and revised, and now form the sample activities found in each of the units.

The Project Team were:

Barry Bates, Hastingsbury Upper School, Kempston
Steve Blott, Parkwood Middle School, Bedford
Nigel Burgoyne, John Bunyan Upper School, Bedford
Joyce Grady, St Gregory's Middle School, Bedford
Brian Hardman and Martin Knight, Brickhill Middle School, Bedford
David James, Woodland Middle School, Flitwick
Michael Nolan, Cardinal Newman High School, Luton
Stephen Schwab, The Radcliffe School, Milton Keynes.

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WHAT WE CONSUME

THE TEACHERS' HANDBOOK

A guide for teachers using the third module of WWF's Global Environmental Education Programme

Co-ordinator: John Huckle

First and foremost the Commission has been concerned with people - of all countries and all walks of life. And it is to people that we address our report. The changes in human attitudes that we call for depend on a vast campaign of education, debate and public participation. This campaign must start now if sustainable human progress is to be achieved.

Source: Our Common Future, The World Commission on environment & development, 1987

WWF United Kingdom and Bedford College of Higher Education in conjunction with The Richmond Publishing Company. Module Co-ordinator John Huckle. Programme Co-ordinator Roy Williams, School of Education, University of Sussex.

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INTRODUCTION

Every morning, most of Britain's 37 million urban dwellers wake to an alarm clock which has been assembled half the world away with components from around the globe. Many of the clothes they wear and much of the breakfast they consume will come from cash crops grown in Third World countries, perhaps in competition with local food production. They ride to factories, shops and offices on fuel from the North Sea, use paper from the trees of Northern Europe and work at benches and desks made from the wood of tropical forests where one species is extinguished every 24 hours... Yet urban society remains largely ignorant of the scale, diversity and consequences of this resource consumption.

Source: The Livable City, Part 2 of The Conservation and Development Programme for the UK, Brian Johnson, Kogan Page, 1983

Suitable programmes of environmental education can help to erode the ignorance noted in the UK Conservation Strategy. They not only reveal the environmental and social costs of present forms of economic production and development, but also assist the critical examination of alternatives which claim to be more ecologically sustainable. By doing this they can introduce young people to the concept of ecodevelopment which lies at the heart of the World Conservation Strategy, and foster support for the type of social change which both the World and UK Conservation Strategies envisage.

It was with such aims in mind that WWF United Kingdom's Education Department commissioned the Global Environmental Education Programme. I was asked to co-ordinate a module which helped pupils examine the products they consumed, their links with societies and environmental issues around the world and the possibilities which these studies revealed for sustainable development. By sampling a range of products and issues it was hoped that a curriculum module, entitled *What We Consume,* would provide insights into the causes of environmental problems in different societies. At the same time it would reveal their potential for ecodevelopment and the social forces which either facilitated or opposed such change.

In this Teachers' Handbook you will find chapters on the module's theoretical rationale together with a selection of illustrative readings. Teachers are advised to try some of the introductory activities in the first unit, *Society and Nature,* sample some of the readings and perhaps look at some other units of *What We Consume,* before tackling the theory in this handbook. This sets out a curriculum rationale for environmental education as socially critical education and explores the social nature of environmental issues. It links the transition to ecologically sustainable development to an extension of economic and political democracy and argues for a form of environmental education which seeks to promote democracy. Political and development education are seen as closely linked to such environmental education and an extension of democracy in the classroom is regarded as an essential prerequisite to its extension in the wider world.

Chapter One in the handbook explores *What We Consume*'s links with the *Programme for Political Education* and *World Studies* and establishes a framework of key questions and concepts which teachers and pupils use while carrying out activities and exploring each unit's key ideas.

I would like to express my thanks to the Education Department of WWF United Kingdom for the opportunity to carry out this project. I have been encouraged by the response of the project teachers and their pupils and have enjoyed editing the activities they have produced. My thanks also go to their head teachers and to the Bedfordshire and Buckinghamshire Education Services for allowing activities to be trialled in schools. Don Lee and his staff at the Multi-cultural Education Resource Centre in Bedford were particularly supportive, as were my own colleagues and students at Bedford College of Higher Education. Peter Wharmby who researched some of the material, and Catherine Starrett, John Mohan and Stephen Page, who at various times took over some of my teaching, also deserve my thanks.

What We Consume was written during the European Year of the Environment and in the same year as the report of the World Commission on Environment and Development. I hope it plays some part in sustaining the growing debate between development and environmental educators. I hope it removes some of the current ignorance concerning environmental issues and creates greater understanding of the links between ecodevelopment, social justice and democracy. Above all, I hope that it plays some small part in helping school pupils understand how their world works and how it might be changed.

John Huckle

Bedford,
November, 1987

CHAPTER ONE

THE CURRICULUM RATIONALE

A consideration of dominant forms of schooling suggests that much education serves to sustain existing social structures and the environmental problems which result from these. While this may be the case, there is scope within schools to introduce or extend forms of education which develop social literacy, support democracy, and so contribute to the solution of environmental problems. Appropriate curriculum content and teaching methods can do this by cultivating a critical awareness of the structures within which pupils live their everyday lives, and by developing the knowledge, attitudes and skills they will need if they are to participate in democratic social change. ***What We Consume*** *is an attempt to develop such a curriculum. It represents a form of environmental education designed to encourage reflection on the present use of nature within different societies, and action in support of those seeking to extend democracy and environmental well being. This chapter sets out the rationale for* ***What We Consume****'s socially critical curriculum. It outlines a framework of key questions and concepts for exploring issues of environment and development in the classroom, considers teaching methods and examines the links between* ***What We Consume,*** *the* ***Programme for Political Education*** *and* ***World Studies.***

AIMS

What We Consume takes as its starting point the products which school pupils and others in Britain consume. Starting with products such as a tin of corned beef, a packet of potato crisps or a unit of electricity, teachers and pupils are encouraged to trace commodity chains and recognise their connections to such environmental issues as deforestation in Amazonia, the draining of wetlands in Britain and the debate over acid rain in Europe. Classroom activities are designed to help them recognise the location of producers and consumers within the network of economic and social relations examined in Chapter Three and so make them more aware of the social and environmental costs of what they consume. Other activities invite pupils to look critically at attempts to democratise existing structures of power and at actions which they and others might take in support of such action.

USE IN SCHOOLS

What We Consume is designed for flexible use within the 11–16 school curriculum. The units contain key ideas and sample activities which teachers can incorporate into their own syllabuses and schemes of work. The units are likely to be of use to teachers of Environmental Studies, Geography, Social Studies, World Studies and Humanities. In the project schools most of the activities were used with 12–14 year-old pupils and each unit was given between five and ten weeks of classroom time.

Teachers using the project are encouraged to develop their own activities and resources to support the materials contained in the units.

MAJOR THEMES

What We Consume consists of ten curriculum units which may be used in a variety of ways to follow particular themes. The first three units provide an introduction to the social use of nature, the world economy and Britain's changing role within it. These units are:

1 **Society and Nature**

2 **The Rise of Industrial Society**

3 **Our Consumer Society.**

The following five units are linked to particular products or countries and associated environmental issues. Units Four and Five explore environmental issues in market economies located within the core and semi-periphery of the world system. Units Six, Seven and Eight examine state collectivist economies, again with varied locations within the world system.

4 **Farming and the Countryside** (UK; wetland drainage of Halvergate marshes in Norfolk)

5 **The Brazilian Amazon** (corned beef, destruction of tropical moist forests)

6 **Ethiopia** (aid, desertification)

7 **Soviet Union** (tyre cord and the arms race, pollution of Lake Baikal)

8 **China** (education, urbanisation and city life).

Unit Nine considers multi-lateral action on the environment within the EEC and at the global level. While it examines action from above, Unit Ten links environmental issues to people's struggles for self-reliance and democracy from below.

9 **Multi-lateral Action on the Environment** (acid rain, EEC future of Antarctica, United Nations)

10 **The Environment and Democracy** (Chipko movement in Himalayas; Solidarity in Poland; municipal socialism in Sheffield).

CONCEPTUAL FRAMEWORK

To help develop pupils' social literacy, *What We Consume* provides teachers with **Key Questions, Concepts** and **Ideas.** Chapter Three outlines a view of society and nature and, on the basis of this, sets out a series of questions and sample concepts to guide classroom activity. The **Key Questions** and **Concepts** set out in Figure 1 (page 4) are designed to help teachers and pupils understand the inter-related nature of social and ecological systems. They provide a means of analysing environmental issues in a social context and so developing social literacy.

Clearly the list of questions and concepts is not definitive and teachers and pupils will find it necessary to ask other questions and use other concepts. Those provided do however focus attention on the major structural determinants of environmental problems, and have been found useful in generating discussion and critical awareness in the classroom.

Each unit of *What We Consume* contains ten sample activities designed to allow pupils and teachers to examine the **Key Questions** and develop **Key Concepts.** Each unit also contains a list of **Key Ideas.** These relate various environmental issues to different economic, political and cultural systems, and so provide the teacher with a guide to the design and sequencing of activities for that particular unit. It is through the critical exploration of **Key Ideas** that **Key Questions** can be investigated and **Key Concepts** developed.

FIGURE 1

THE PROJECT'S KEY QUESTIONS AND CONCEPTS

A ECONOMIC PRODUCTION

A1 What natural resources are being used or conserved?

A2 For what purposes are they being used or conserved? By whom, how and why?

A3 What is the impact of economic production on the environment? What environments does it produce?

A4 Is the production ecologically sustainable?

A5 Is the production socially useful? Does it meet people's basic needs?

A6 Who owns and controls the natural resources and technology used in economic production?

A7 What power do workers have to decide what is made and how it is produced?

A8 In what ways is economic production changing and how is this likely to affect the use of nature in the future?

A9 How does the society's history and present position within the world economy shape its production, development and use of nature?

Sample concepts: nature, ecosystem, land, land use, natural resource, renewable resource, non-renewable resource, resource conservation, labour, energy, capital, technology, alternative technology, ecologically sustainable production, economic development, industrialisation, needs, wants, ownership, economic power, economic democracy, division of labour, capitalism, profit, market, socialism, economic planning, state collectivism, world economy, interdependence, commodity chains, multi-national company, colonialism, imperialism, terms of trade, global division of labour, dependent development, economic recession, product cycle.

B DISTRIBUTION AND REDISTRIBUTION

B1 How are the benefits and costs of economic production distributed and redistributed? What principles determine this and what methods are used to bring it about?

B2 What is the level of inequality in society? Are differences in wealth and environmental well being increasing or decreasing?

B3 Is poverty a cause of environmental damage?

B4 Does wealth result in wasteful production and environmental damage?

B5 What amount of wealth is used for environmental research, management and conservation? How is the charge for this distributed?

B6 Would redistribution of wealth, and greater equality within society, assist a transition to ecologically sustainable production and development?

B7 How is the society involved in transfers of trade, investment, technology, loans and aid?

B8 Do these transfers help or hinder the society in moving towards ecologically sustainable production and development?

B9 Would a redistribution of wealth and greater equality between societies assist moves towards ecodevelopment?

Sample concepts: wealth, waste, poverty, environmental poverty, equality/inequality, scarcity/surplus, supply, demand, population, consumption, conservation, trade, investment, aid, social welfare, justice, environmental management, international economic order, competition/co-operation, arms trade.

C POWER AND DECISION MAKING

C1 How is the society governed?

C2 How does government regulate the use of nature?

C3 How does government plan and manage the environment? What institutions and procedures exist for this? How are decisions made? How are conflicts over the environment resolved or managed?

C4 What power do people have to participate in political decision making? How is political power distributed in society? According to what procedures and rules is it used?

C5 In what ways does environmental politics reflect the power and interests of different groups in society? What policies and strategies do environmental groups adopt in seeking to influence the political process?

C6 What forms of economic development does the government support? In what ways are the government's economic and foreign policies related to the society's role in world economy?

C7 In what ways do the government's economic, foreign and other policies shape its policies on the environment?

C8 In what ways does the international political system seek to resolve global environmental problems? Does competition between nation states prevent international action on environmental problems?

C9 In what ways do environmentalists seek to influence the national and international political system?

Sample concepts: politics, power/powerlessness, nation state, local state, international politics, government, forms of government, parties, pressure groups, law, force, authority, manipulation, reason, co-operation/conflict, representation, democracy, consultation, corruption, participation, bureaucracy.

D SOCIAL ORGANISATION

D1 What distinct groups exist in society and what amounts of economic and political power do they have at their disposal?

D2 Are there movements working to extend democracy; to give more people some control of economic production and political decision making?

D3 What form do these movements take? What are their aims and tactics?

D4 Do the movements incorporate environmental goals? What issues do they tackle? How effective are they?

D5 What groups work with environmentalists in such movements? What part do women play? What part do ethnic minorities play?

D6 Which groups in society oppose such movements for greater democracy and what actions do they take?

D7 What have the movements learnt from their campaigns?

D8 Do the movements co-operate at all levels, including the international level?

Sample concepts: individual, family, community, class, racism, patriarchy, social order/disorder, consent/dissent, social control, social movements, environmental movement, voluntary groups, pressure groups, trade union, consumer organisations, social responsibility, appropriate technology, co-option, alienation.

E CULTURE AND IDEOLOGY

E1 What are the accepted ways of interacting with, and thinking about, nature and the environment?

E2 In what ways is the society's culture and ideology being changed by economic development? What role do external forces play in this?

E3 How does technology reflect and shape people's relations with nature? What alternative or appropriate technologies would alter these relations?

E4 How do ideas from the natural and social sciences, and from other areas of knowledge, reflect and shape our relations with nature? What ideas are taught in schools? What ideas are not taught? What ideas act as ideology?

E5 What ideas are used by groups and parties engaged in environmental politics? How do these ideas reflect material interests?

E6 What messages about nature, the environment and the world does popular culture transmit? What role does popular culture play in consumerism and imperialism?

E7 To what extent do news media explain the real causes of problems relating to development and the environment?

E8 What elements of traditional, minority and alternative cultures could be useful in creating an ecologically sustainable society?

Sample concepts: cultural needs, communication, language, custom, tradition, religion, myth, values, moral code, world view, knowledge, science, social science, advertising, popular culture, consumer culture, political culture, education, environmental education, culture contact, cultural imperialism.

LINKS WITH THE WORLD AND UK CONSERVATION STRATEGIES

The World Conservation Strategy has three priorities:

1 To maintain essential ecological processes and life-support systems
2 To preserve genetic diversity
3 To sustain utilisation of species and ecosystems.

It maintains that economic development should respect these priorities by taking a form known as **ecodevelopment.**

The World Conservation Strategy deals with the most threatened and most important life support systems: agricultural systems, forests, coastal and freshwater systems. It outlines the ethical and economic reasons for preserving genetic diversity, and explores the meaning of ecodevelopment as it affects wild plants and animals, forests, woodlands and grazing lands. It considers the main obstacles to the integration of conservation and development to be:

1 The absence of conservation representation at the policy-making level
2 The lack of environmental planning and rational use allocation
3 Poor legislation and organisation in the field of environmental management
4 Lack of training and basic information
5 Lack of support for conservation
6 Lack of conservation-based rural development.

The UK Conservation Strategy examines the implications of the World Conservation Strategy for the following key sectors of UK society and environment: the industrial future; urban development and maintenance; rural land use; marine and coastal habitat use; overseas environmental policies; the creation of a conservation ethic; and education. It provides action proposals for decision makers, many designed to alter significantly the consumer society in which we live. Articles included in Chapter Two of this handbook provide a synopsis of both the World and UK Conservation Strategies.

The ten units of *What We Consume* are designed to explore some of the central themes in the two conservation strategies. The chart below shows the relationship between the units and sections of the published strategies. Clearly other elements of the two strategies can be incorporated into the units too.

TEACHING METHODS

A curriculum which seeks to educate pupils for democratic and progressive social change should involve them in democratic, participatory, co-operative processes within the classroom. Teacher and pupils should be active learners, reflecting on society and jointly considering the relevance of new insights gained. Learning should relate to the pupil's immediate situations and concerns and they should have some power to negotiate their own curriculum.

	UNIT	WCS Chapter No	ALLEN Chapter No	JOHNSON Chapter No
Integrating resource conservation with development	1 – 3	1 – 7	1	1 and 2
Putting trust in the countryside	4			4
Tropical forests	5	16	3	
Desertification and conservation-based rural development	6	4 and 14	2	
River basins and freshwater systems	7	19		
The liveable city/education	8			3 and 7
The global commons	9	18		
Ways to action	10		6 and 7	8

Source: The World Conservation Strategy, IUCN, UNEP & WWF, 1980 (WCS)
How to Save the World, Robert Allen, Kogan Page, 1980 (Allen)
The Conservation and Development Programme for the UK; an overview, Brian Johnson, Kogan Page, 1983

The activities within *What We Consume* are designed to promote dialogue and participation in the classroom. They enable pupils to reflect and act on the social use of nature in different parts of the world and should reflect democratic values when used in schools. It is possible to teach the key ideas and content of the modules in a formal way, and to carry out some of the activities without allowing dialogue and participation. These are tendencies which teachers should continually guard against.

Reflecting and acting on the social use of nature in the classroom involves three stages: **analysis, examination** and **action.** These develop pupils' critical awareness of their structural location within the world, their willingness to consider social alternatives and their capacity to engage in action. Figure 2 suggests what pupils might be doing in each of these stages.

FIGURE 2

REFLECTION AND ACTION IN THE CLASSROOM

ANALYTICAL	CRITICAL	CREATIVE
Illustrate	Experiment	Invent
Describe	Infer	Change
Identify	Interpret	Modify
Write	Generalise	Construct
List	Select	Produce
Match	Differentiate	Make
Draw	Question	Solve
Name	Discriminate	Use
Study	Distinguish	Illustrate
Outline	Reject	Combine
State	Assess	Compile
Record	Relate	Compose
Select	Decide	Create
Explain	Separate	Devise
Estimate	Test	Design
Examine	Divide	Organise
Summarise	Advise	Plan
Compute	Categorise	Prearrange
Research	Reflect	Re-organise
Show	Appraise	Reconstruct
Breakdown	Compare	Rewrite
Give examples	Criticise	Imagine
Compile	Justify	Role-play
Analyse	Verify	Write
Interview	Support	Give your opinion
	Predict	
	Hypothesize	
	Discuss	
	Investigate	
	Evaluate	

Source: Social Literacy Project, Sydney, 1986

REFLECTION AND ACTION

If critical awareness is to result in an extension of democracy, social justice and ecologically sustainable production, it must lead to action. An effective curriculum in environmental education should not only encourage pupils to reflect on social structures, but should also equip them to act as agents of democratic change. To this end *What We Consume* contains many activities which allow pupils to empathise with individuals and groups engaged in environmental politics at different levels. In studying such groups, pupils should become more aware of the choices facing individuals and communities, more willing to consider themselves as agents in social change, and more able to envisage alternatives to current social systems. Suggestions as to what they might do in support of action to improve environmental well being can be found within the project materials. A list of directories providing useful addresses can be found on page 17.

LINKS WITH EXISTING PROJECTS

What We Consume has drawn insights from two curriculum projects: *The Programme for Political Education* and *World Studies.* Their significant features will now be outlined for teachers not familiar with these projects.

THE PROGRAMME FOR POLITICAL EDUCATION

This project, sponsored by the Hansard Society in the mid 1970s, provides a curriculum rationale for developing political literacy and sustaining democracy. The politically literate person is one who,

"...will know what the main political disputes are about, what beliefs the main contestants have of them, how they are likely to affect him, and he will have a predisposition to try to do something about it in a manner at once effective and respectful of the sincerity of others and what they believe."

Source: Political Education and Political Literacy, B. Crick & A. Parker (eds), Longman, 1978

Environmental issues are generally disputes over the social use of nature, as explained in Chapter Three. They are resolved or managed by political systems of power and decision making operating at various scales. The development of political literacy is therefore an integral part of *What We Consume.* As they carry out the activities pupils develop the knowledge, skills and values which contribute to political literacy.

POLITICAL LITERACY: A CHECKLIST

ATTITUDES & PROCEDURAL VALUES	SKILLS		KNOWLEDGE	
	Intellectual Skills	**Communication Skills**	**Propositional Knowledge**	**Practical Knowledge and Understanding**
1. Willingness to adopt a critical stance toward political information. 2. Willingness to give reasons why one holds a view or acts in a certain way and to expect similar reasons from others. 3. Respect for evidence in forming & holding political opinions. 4. Willingness to be open to the possibility of changing one's own attitudes & values in the light of evidence. 5. Value fairness as a criterion for judging & making decisions (i.e. regardless of whether the outcome will personally benefit or harm oneself). 6. Value the freedom to choose between political alternatives (goals, methods, values, parties or groups). 7. Toleration of a diversity of ideas, beliefs, values and interests.	1. Ability to interpret & evaluate political information and evidence. 2. Ability to organise information through basic political concepts and generalisations. 3. Ability to apply reasoning skills to political problems & construct sound arguments based on evidence. 4. Ability to perceive the consequences of taking or not taking specific political actions in given contexts. **Action Skills** 1. Ability to participate in group decision making. 2. Ability effectively to influence and/or change political situations.	1. Ability to express one's own interests, beliefs and viewpoints through an appropriate medium (oral or written). 2. Ability to participate in political discussion and debate. 3. Ability to perceive and understand (if not agree with) the interests, beliefs and views of others. 4. Ability to exercise empathy (i.e. to imagine what it might be like in someone else's shoes).	Within given political contexts (e.g. the State, workplace, union, college, school, etc.) the politically literate individual should know something about: 1. the structure of power 2. customary ways of taking decisions and settling disputes 3. alternative ways and means of taking decisions and settling disputes 4. where the resources (money, goods, time, space, etc.) come from and how they are allocated 5. alternative ways of allocating resources 6. the main political issues and disputes 7. who promotes what policies, goals or values, and why.	1. The nature of political disputes & issues (whether they are about goals, values, methods or results) & their causes. 2. How these political disputes might affect oneself and the groups to which one belongs. 3. How these disputes affect other people and the groups to which they belong. 4. How to influence the decision-making process in given contexts, including knowledge of alternative means of influence and their relative appropriateness for particular purposes. 5. Basic political concepts: (conflict, decision making, power, consent/dissent, order/disorder, and rules). 6. How to obtain information which one lacks.

FIGURE 3

Source: Alex Porter, 1985

EXAMPLES OF HOW THE PROJECT DEVELOPS POLITICAL LITERACY
This figure should be read in conjunction with Figure 3. Numbers in brackets refer to the units in ***What We Consume.***

ATTITUDES & PROCEDURAL VALUES	SKILLS		KNOWLEDGE	
	Intellectual Skills	**Communication Skills**	**Propositional Knowledge**	**Practical Knowledge and Understanding**
1. Willingness to be critical of estimates of the deforested area in Amazonia *(5)*. 2. Willingness to give reasons why one agrees, or disagrees, with the policies of the Tigray Liberation Front *(6)*, or uses private rather than public transport *(8)*. 3. Respect for evidence that the Soviet Union has attempted to clean up Lake Baikal *(7)*. 4. Willingness to change one's attitudes and values when confronted with new evidence on the causes of famine in Ethiopia *(6)*. 5. Value fairness when reaching a decision on whether or not to buy goods from a firm which imports hardwoods from Brazil *(5)*. 6. Value the freedom of trade unionists to influence the nature of work and economic production *(10)*. 7. Tolerate a diversity of ideas, beliefs, values and interests about possible futures for the UK countryside *(4)*.	1. Ability to interpret and evaluate information and evidence from different sources on acid rain *(9)*. 2. Ability to use political concepts & ideas to organise information about the Countryside Commission *(4)*. 3. Ability to apply reasoning skills to the problems of food surpluses & construct sound arguments for restructuring the CAP *(4)*. 4. Ability to perceive the consequences of taking or not taking, direct action in order to prevent the felling of forests *(10)*. **Action Skills** 1. Ability to participate in a group decision concerning migration in Brazil *(5)*. 2. Ability to use local government in order to create a "greener" town *(8)*.	1. Ability to design a newspaper page supporting or opposing government policy on acid rain *(9)*. 2. Ability to participate in a discussion on the real value of Band Aid *(6)*. 3. Ability to perceive and understand the interests, beliefs and views of environmentalists supporting different political parties *(1)*. 4. Ability to exercise empathy with a school pupil in China *(8)* a shopper in Moscow *(7)* or a family in Brazil *(5)*.	1. The structure of power within the UN system as it affects the review of the Antarctic Treaty *(9)*. 2. How disputes over access to farmers' land are settled in the UK *(4)*. 3. How disputes over economic policy & development are settled in China *(8)*. 4. Where the resources of UNEP come from and how they are used *(9)*. 5. The possible consequences should dockland communities in London be given resources to plan and develop their own environment *(10)*. 6. How some local government authorities in Britain have spent more on the environment and job creation than the national government considers necessary *(10)*. 7. How some rubber tappers in Brazil have promoted sustainable development policies for forest areas *(5)*.	1. The differing values, goals & methods of the CEGB, UK government and Greenpeace, in the dispute over acid rain *(9)*. 2. The possible danger of pesticide residues on our food & the failure of politicians to impose and enforce adequate controls *(1)*. 3. How poverty and desertification in Ethiopia is linked to the foreign policies of other nations, including those of the USSR *(6)*. 4. How to lobby one's MEP in an attempt to influence the restructuring of the CAP; knowledge of how to use the local press to draw public attention to one's views *(4)*. 5. A developing understanding of the decision-making process in a state collectivist economy, and the meaning of democracy within such societies *(6, 7, 8)*. 6. Knowledge of how to obtain information about environmental pressure groups and their policies (several units).

FIGURE 4

The Programme for Political Education provides the following useful insights:

1 A Framework for Political Literacy

The Programme's approach is based on the belief that political literacy can be developed by direct teaching of appropriate knowledge, skills and attitudes. Its framework (Figure 3) is an attempt both to outline these components and to provide teachers with a checklist to aid course design. The knowledge helps pupils to understand the political dimensions of situations which affect their everyday lives, while skills enable political expression and participation in strategies for change. Attitudes and values encourage a commitment to rationality and tolerance.

What We Consume seeks to develop political literacy through study and involvement in environmental politics. Figure 4 is based on Figure 3 and provides examples of how relevant knowledge, skills, attitudes and values are developed through various activities within the ten units.

2 Basic Political Concepts

In the column entitled "Practical Knowledge and Understanding" in Figure 3, is the aim of developing an understanding of such basic political concepts as power, disorder and rules. The Programme for Political Education offers twelve of these basic concepts and suggests they are central to understanding the relationship between government and people. These concepts have been incorporated into the list of key questions and concepts for *What We Consume* which was introduced on page 4.

Robert Stradling offers an alternative set of basic concepts based on an analysis of political decision making. See Figure 5. This is a useful reference for considering many of the issues and disputes dealt with in *What We Consume*. It also provides a model against which the teacher can evaluate the outcome of some of the decision making activities carried out by pupils. Many of the key concepts shown have been incorporated into Figure 1.

The Programme for Political Education suggests that political concepts should be developed by considering political issues of varying degrees of complexity, at varying scales. Teachers should work from the simple to the complex, and from the local to the international scene. *What We Consume* deals mainly with nation states and the international political system, but there are some activities which focus on politics at the community level.

3 Teaching Issues

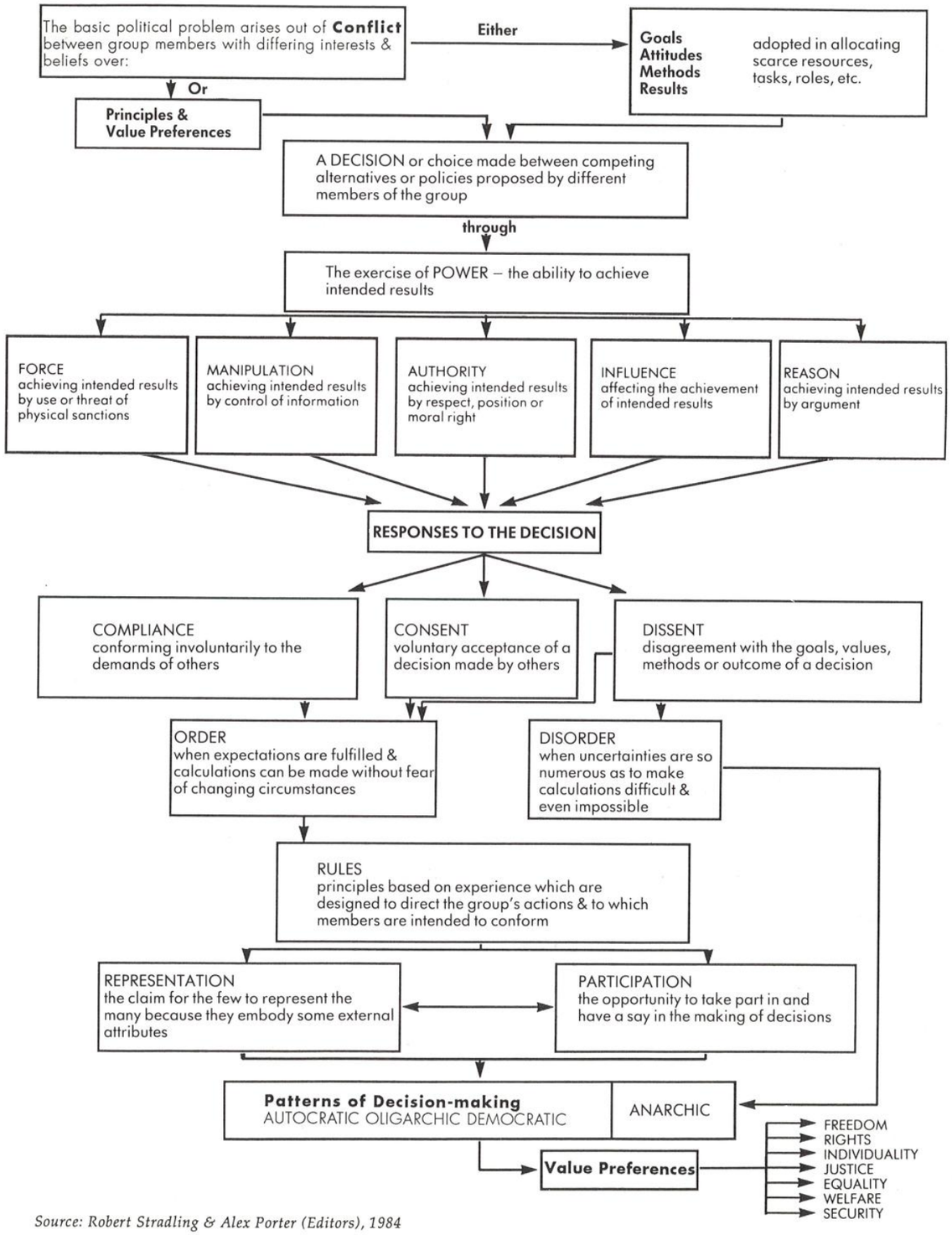
The Programme advocates the development of political literacy through study and involvement in real political issues. It helps teachers to recognise the potential of different issues by offering questions such as those listed in Figure 6. These allow teachers and pupils to probe the issue in such a way as to generate the type of knowledge, skills and values outlined in Figure 3. The questions in Figure 6 are closely related to the key questions of *What We Consume*, in particular C3, C4 and C5.

The Programme suggests that political issues should be handled in such a way as to develop critical awareness and a readiness to engage in democratic political activity. Classroom activity should involve consideration of the policies, attitudes and actions of **all** parties involved, and should cultivate rational decision making by the pupils themselves.

In restating the aims of political education, Alex Porter has emphasised the need to develop a critical stance towards propositional and procedural knowledge, and a readiness to examine and evaluate alternative political systems. *What We Consume* seeks to develop such constructive scepticism by examining environmental management and politics within a range of nation states, with different forms of government, variously located within the world economy. It requires pupils to question the efficacy of national and international agencies set up to protect the environment, and to assess critically the beliefs, policies and actions of all groups engaged in environmental politics.

FIGURE 5

A DEVELOPMENTAL APPROACH TO POLITICAL THINKING



Source: Robert Stradling & Alex Porter (Editors), 1984

FIGURE 6

TEACHING ISSUES TO DEVELOP SOCIAL & POLITICAL LITERACY

Political literacy involves

1. *A perception of issues and political problems.*
   Regarding the allocation and present use of scarce resources what disagreement is there about:

a What people say needs doing and what is likely to happen?	b What the purposes and contents of their actions should be?	c How they should set about doing things?	d How suitable the result of their actions is?
An understanding of:			
2. *Own responses* How does this matter affect you – your rights, freedom and welfare?	What are your interests? What are your opinions? What are your rights, etc.?	Can you justify your opinions?	
3. *Others' responses* How would others be affected – their rights, freedom and welfare?	What are others' interests? What are others' opinions? What are their rights, etc.?		How do others justify the opinions they hold?
4. *Procedures* What are the circumstances in which the disputes occur?	How are they normally tackled? What are the rules?	What conditions help a successful solution to the problem? Are the rules fair/being applied fairly?	In what other ways could the problems be tackled? Could the rules be changed?
5. *Policies* Who proclaims what policies? What right/authority do they have?	What are their interests and attitudes?	Where does information on these policies come from? How reliable are these sources?	Are there other sources? Are there other ways of looking at things?
6. *Influence* How are people persuaded to act or change their minds?	Who has the ability to get things done?	Is this done fairly?	Are there other ways you can go about this?
7. *Effective participation* How can you get your point of view across?	Will anyone else speak for you?	Are these methods fair?	Are there other ways you can go about it?

and
What issues have you seen at first hand?
What issues have you been involved in?
Are you experienced in getting your views across?

Source: Porter 1984.

4 Guidelines on Bias and Indoctrination

The key questions and concepts on which *What We Consume* is based stem from the analysis of environmental issues presented in Chapter Three. There the transition to ecologically sustainable production and development, envisaged in the world and UK Conservation Strategies, is linked to the extension of democracy and social justice in a range of societies around the world. Teachers using *What We Consume* should regard this relationship between ecodevelopment and the redistribution of economic and political power as a hypothesis to be critically examined within the contexts provided by the ten units. Similarly, **the key ideas of each unit are presented for critical examination by teachers and pupils rather than as "facts" to be accepted and learnt.**

It is important that in each of the units pupils are exposed to a range of views on environmental and other issues, carry out accurate and honest evaluation of a range of evidence, and remain prepared to change their minds should new evidence arise. The teacher should seek to develop their commitment to democracy and their tolerance of political diversity in a manner consistent with the attitudes and values listed in Figure 3.

Teachers using *What We Consume* are advised to read the opening chapter of *Teaching Controversial Issues* (R. Stradling, M. Noctor & B. Baines, E.J. Arnold, 1984) for useful insights into the debate on balance, neutrality, objectivity and commitment within political education. They should also consider the guidelines issued by the Politics Association reprinted in Chapter Two of this handbook, and the issues raised by Robin Richardson in the article "Now listen children . . ." *(New Internationalist,* No 115, September 1982). It is hoped that *What We Consume* will be taught in such a way as to reflect much of the advice which such sources contain.

As well as drawing insights from the *Programme for Political Education, What We Consume* has also made use of theory and practice which shapes *World Studies.*

WORLD STUDIES

Many teachers will probably have used World Studies approaches and materials, particularly the teaching strategies set out in the two handbooks *Learning for Change* (World Studies Project/One World Trust, 1979) and *World Studies 8–13,*(Simon Fisher and David Hicks, Oliver & Boyd, 1985). A reminder of the aims and basic principles of World Studies hints at its considerable relevance to the *Global Environmental Education Programme.*

World Studies enables pupils of all ages to

- ☐ understand their own cultural background
- ☐ respect the cultural background of others
- ☐ resolve conflict creatively and fairly
- ☐ make sense of the news
- ☐ understand, and thus cope more effectively with, a rapidly changing world
- ☐ begin shaping the future.

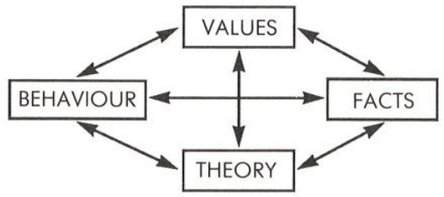
Underlying the whole approach of *World Studies 8–13* to teaching and learning are four main principles:

- ☐ that a developing knowledge of self needs go hand in hand with a growing understanding of the wider world
- ☐ that a growing competence in thinking and talking about the wider world needs to be accompanied by an increasing ability to understand and influence one's own situation
- ☐ that the wider world can usefully be viewed through the window of one's own immediate situation
- ☐ that the process of learning has two separate components: action – either real or simulated; and reflection – on what has been learnt and on appropriate future action.

The two World Studies projects have provided *What We Consume* with valuable insights in the following areas:

1 **Dividing up World Society.** The central units of *What We Consume* are based on products, environmental issues and political economies and designed to explore particular ideas and concepts. They divide up the world primarily on the basis of political economy, but the choice also reflects something of each of the five themes explored in *Learning for Change,* i.e. cultures and regions; events and trends; disciplines and concepts; topics and issues; needs and interests.

2 **Approach to Issues.** World Studies suggests an approach to issues summarised by the familiar diagram:



It offers a vocabulary of terms/concepts and a repertoire of teaching strategies to aid enquiry. *What We Consume* has sought to guide enquiry more closely by using key questions, and to balance attention to culture, values and personal decisions with a more overt recognition of politics.

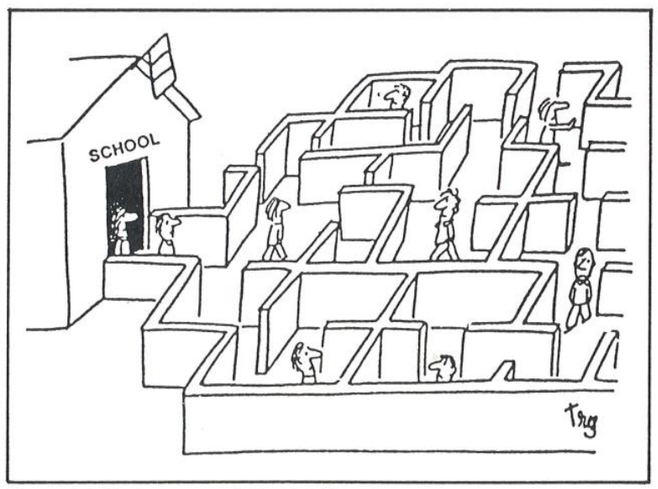
3 **Shared Concerns.** World Studies recognises the related nature of problems of war, poverty, injustice and ecological balance. It stresses the links between the various educational responses: development education; multi-cultural education; peace education; and environmental education. *What We Consume* has similarly sought to stress these links.

4 **Attention to Bias.** World Studies has played a major role in raising awareness of bias in teaching materials. *What We Consume* has tried to reflect this advice and to produce anti-racist, anti-sexist materials.

5 **Life Cycle.** World Studies suggests that a course should follow a life cycle (see *Learning for Change* pages 122 and 123). The ten units of *What We Consume* have been designed to follow such a cycle.

6 **Experiential Learning.** A particular strength of World Studies is to offer teachers strategies whereby their pupils learn about issues through real or simulated involvement with those issues. *What We Consume* has drawn on this repertoire of strategies and has developed other activities which allow pupils to develop political knowledge, skills and attitudes through experience. The checklist on page 126 of *Learning for Change* was particularly useful in this connection.

While developing out of the World Studies approach, *What We Consume* gives greater attention to economics and politics in structuring the world order and causing "global" problems. In asking teachers and pupils to explore the use and abuse of nature within a range of political economies, it regards East/West divisions as as important as those between North and South. It relates environmental issues to the struggles for self-reliance and sustainable development currently taking place in both capitalist and state collectivist societies, in both the core and periphery. Some would argue that World Studies needs to be more explicit about these matters.



Source: World Concerns and the United Nations

CHAPTER TWO

READINGS FOR REFLECTION

This chapter contains a series of twenty one readings from sources which shaped ***What We Consume****'s curriculum rationale. They are included in this handbook to help other teachers reflect on issues of environment and development and the theoretical foundations of an appropriate environmental education. They might be particularly useful discussion starters during sessions of pre-service or in-service teacher education.*

The first four readings relate specifically to education. The others have been arranged in a sequence which approximates to the sequencing of the modules ***Key Questions and Concepts.*** *Reference to the module's* ***Key Texts*** *and suggestions for further reading, are to be found after this brief description of the readings.*

1 **Olive Stevens** suggests that political education should start at age nine or ten. Many lower secondary pupils are capable of examining the concepts and ideas contained in *What We Consume.*

2 A summary of **Department of Education and Science** recommendations on environmental education. In what ways can *What We Consume* help realise these objectives?

3 **Dr Jones** presents some guidelines on bias in political education. Teachers might wish to consider the extent to which the activities within the modules of *What We Consume* represent a "balanced approach". Also see "Position Paper Number 5: Bias in Political Education" Bill Jones, *Teaching Politics,* Vol 15, No 5, 1986.

4 **Robert Stradling** provides some sound advice on teaching "green" issues.

5 **Bob Sutcliffe** sketches some basic facts about the world economy and inequalities on planet earth.

6 **Raymond Williams** outlines the manner in which both North–South and East–West relations should be changed and predicts a long and complex political struggle.

7 A cartoon, based on a cautionary tale by **Peter Donaldson,** which asks us to question the nature of conventional economic growth and realise its social costs.

8 **Michael Redclift** argues that the challenge for the environment–development debate is not to protect the environment from people, but to alter the global economy in favour of the South.

9 **Ramesh Diwan** and **Dennis Livingston** compare conventional and alternative development strategies. There are many similarities between their alternative development strategies and ecodevelopment.

10 **Norman Myers** considers three factors causing species extinction: population growth, poverty, consumerism.

11 **Adrian Leftwich** sets out the three arguments which are central to his redefinition of politics. His systems and questions were a significant influence on the framework of key questions and concepts outlined in Chapter One.

12 Nuclear Power **Cartoon.** In 1978 the last chapter of *Nuclear Power for Beginners* urged a growing debate between environmentalists and trade unionists. The "Red/Green debate" has continued into the mid 1980s.

13 **Robert Riddell** sets out an eleven-point package to aid the transition to ecodevelopment.

14 **Johan Galtung** urges teachers to view problems in their political settings. His conflict map of the world influenced the choice of units for *What We Consume.*

15 A **New Internationalist** guide examines the forms of government and democracy existing in theory and practice in different parts of the world.

16 **Tim O'Riordan** summarises the spectrum of beliefs held by environmentalists. Where do we stand?

17 **Posy Simmonds'** cartoon stresses the middle-class nature of much environmentalism.

18 **André Gorz** describes an ecologically sustainable and democratic society of the future.

19 **Richard Barnet** discusses the requirements for the survival of the human race: developing harmonious human relationships and harmonious relationships with nature.

20 **Robert Allen** provides a summary of the *World Conservation Strategy*.

21 **Mo Dodson** summarises the *Conservation and Development Programme for the UK*.

FURTHER READING

The following three **Key Texts** provide useful background for many of the units in *What We Consume:*

Economic Systems and Society; Capitalism, Communism and the Third World George Dalton, Penguin, 1983.

Models in Political Economy Michael Barratt Brown, Penguin, 1982.

The Gaia Atlas of Plant Management Norman Myers, Pan Books, 1985.

In addition to the sources of the readings and the key texts, the following books have provided useful reference while developing *What We Consume:*

ON ENVIRONMENTAL, DEVELOPMENT AND POLITICAL EDUCATION:

Social Education: Principles and Practice C. Brown, C. Harber & J. Strivens (eds), Falmer Press, 1986.

Critical Teaching and Everyday Life I. Shor, South End Press, 1980.

Environmental Education and Community Action I. Watson, Canberra Environment Centre, 1985.

Teaching for Survival M. Terry, Ballantine, 1971.

Geographical Education; Reflection and Action J. Huckle (ed.), OUP, 1983.

World Studies 8–13, Teachers' Handbook S. Fisher & D. Hicks, Oliver & Boyd, 1985.

Learning for Change World Studies Project/ One World Trust, 1979.

Caring for the Planet R. Richardson, Nelson, 1977.

Teaching World Studies; An Introduction to Global Perspectives in the Curriculum D. Hicks & C. Townley (eds), Longman, 1982.

Political Education and Political Literacy B. Crick & A. Porter (eds), Longman, 1978.

Teaching Political Literacy A. Porter (ed.), London University Institute of Education, 1983.

Teaching Controversial Issues R. Stradling, M. Noctor & B. Baines, E.J. Arnold, 1984.

Political Education and Democracy T. Brennan, CUP, 1981.

Earthrights: Education as if the Planet Really Mattered S. Greig, G. Pike & D. Selby, WWF/Kogan Page, 1987.

ON ECONOMICS AND THE WORLD ECONOMY:

The Democratic Economy G. Hodgson, Penguin, 1984.

Of Bread and Guns N. Harris, Penguin, 1983.

Nature's Price; the Economics of Mother Earth W. van Dieren & M. Hummelinck, Marion Boyers, 1979.

Third World Atlas B. Crow & A. Thomas, Open University, 1983.

ON INTERNATIONAL POLITICS:

This Endangered Planet R. Falk, Vintage, 1971.

Modern World Affairs Made Simple P. King, Heinemann, 1984.

Political Geography; World-Economy, Nation State, and Locality P. Taylor, Longman, 1985.

A World in Crisis R. Johnston & P. Taylor (eds), 1986.

The Politics of the World Economy I. Wallerstein, CUP, 1984.

ON ENVIRONMENT AND DEVELOPMENT

Due South J. Hill & H. Scannell, Pluto, 1983.

The Real Cost R. North, Chatto & Windus, 1986.

Abandon Affluence F. Trainer, Zed, 1985.

Development Without Destruction M. Tolba, Tycooly, 1982.

The Human Environment; Action or Disaster R. Clarke & J. Palmer, Tycooley, 1983.

Stockholm Plus Ten Earthscan, 1982.

Natural Resouces: Allocation, Economics and Policy J. Rees, Methuen, 1985.

Our Common Future The World Commission on Environment and Development, OUP, 1987.

Only One Earth: Living for the Future, L. Timberlake, BBC Books/Earthscan, 1987.

ON ENVIRONMENTAL POLITICS:

Green Britain or Industrial Wasteland E. Goldsmith & N. Hilyard (eds), Polity Press, 1986.

Green Politics C. Spretnak & F. Capra, Paladin, 1986.

Red and Green; The New Politics of the Environment J. Weston (ed.), 1986.

Seeing Green J. Porritt, Blackwell, 1984.

Capitalism, Socialism and the Environment H. Stretton, CUP, 1976.

Ecology for Beginners S. Croall & M. Rankin, Writers and Readers, 1981.

Paths to Paradise; on the Liberation from Work A. Gorz, Pluto, 1985.

The Roots of Modern Environmentalism D. Pepper, Croom Helm, 1984.

Environmentalism T. O'Riordan, Pion, 1981.

Environmental Groups and Politics P. Lowe & J. Goyder, George Allen & Unwin, 1983.

The Environment; from Surplus to Scarcity A. Schnaiberg, OUP, 1980.

Blueprint for a Green Planet J. Seymour & H. Girardet, Dorling Kindersley, 1987.

The Green Alternative Guide to Good Living P. Bunyard & F. Morgan-Grenville, Methuen, 1987.

ON ENVIRONMENTAL ISSUES:

The User's Guide to the Environment J. McCormick, Kogan Page, 1985.

Ecology 2000 E. Hillary (ed.), Michael Joseph, 1984.

The Human Impact A. Goudie, Basil Blackwell, 1982.

The Environmental Crisis; a Handbook for all Friends of the Earth D. Wilson (ed.), Heinemann, 1984.

The State of the Ark Lee Durrell, The Bodley Head, 1986.

World Conservation Strategy IUCN, WWF & UNEP, 1980.

The Conservation and Development Programme for the UK B. Johnson, Kogan Page, 1983.

World Resources 1986 World Resources Institute/International Institute for Environment and Development, Basic Books, 1986.

DIRECTORIES:

Environmental Action Pack, J. Edginton & D. Warburton, Channel Four Publications, 1985 (PO Box 4000, London W3 6XJ).

Environmental Education Enquiries, Conservation Trust, c/o George Palmer School, Northumberland Avenue, Reading, RG2 7PW.

Environmental Directory, Civic Trust, 17 Carlton House Terrace, London, SW1Y 5AW.

Directory of the Environment, M. Barker, RKP, 1984.

READING ONE

CHILDREN TALKING POLITICS

By nine, children were showing increased ability to sustain a discussion and to contribute a wider range of political topics to it. Concepts of democracy, leadership and accountability of governments were accessible to them, and some examination of these ideas was attempted, partly in the form of speculative philosophy, for the age of nine seems to be the age of the "world view", when general theories of human nature and "right" social arrangements flow easily. Some of these nine-year-olds were instinctive social-contract theorists; Hobbes and Rousseau were not only resuscitated but re-invented, and when ideas for re-thinking social arrangements were produced, they were justified with considerable feeling and no lack of convincing rhetoric. A capacity for social conviction and ideals became apparent, re-interpreted by some of the ten-year-olds as a belief in the power of rationality in human nature.

The ten- to eleven-year-olds produced discussions that were able to deal with aspects of competing ideologies and to understand the economic dimension in both world affairs and party politics not, obviously, in economists' terms, but as a casual effect and a dimension of policies.

Some children, at the age of nine, were able to construct the possibility of alternative social and political arrangements to their present ways of life, and to justify these alternatives according to certain principles. The ability to formulate and justify such ideas is usually connected with the stage of formal operations, or abstract thought. The question therefore arises of whether, in terms of the development of social or political understanding, the stages either contract to some extent, or overlap more than in other areas.

Piaget would deny that children's progress through the different stages can be speeded up in any way, for example by teaching. Nevertheless this point of divergence appeared to exist. It must therefore be concluded that the development of political cognition may be a special case, in which some contraction or unusually wide overlapping of the stages is possible. Further research here appears to be justifiable.

The age of approximately nine years appears, from the data collected, to be significant in the development of political concepts. A spurt in understanding, interest, and the ability to articulate ideas appears to take place for many children at about this age. Many of them appear to arrive on a cognitive plateau where further, less dramatic gains and consolidation are achieved during the next two years. This finding is well documented in the study. Its particular implication is that the consolidation process might well be assisted by appropriate education at the Junior School stage. Between nine and ten years of age would appear, on these conclusions, to be the optimum time for the start of political education.

To turn first to the development of concepts; the indications are that children between the ages of seven and eleven are capable not only of acquiring information, but of using it intelligently, that is, to further their own enquiries and understanding. They can apply certain intellectual abilities to specific subject matter and use this to strengthen and extend their abilities. We have seen this process happening in the record of discussions, and it seems reasonable to conclude that, as a process, this is not restricted to political concepts; that the verbal stimulus to thought and ideas could, as a technique, be employed with small groups of children in order to help them "think through" certain kinds of problems.

In the Primary classroom there is a difficulty of balancing the time needed for teaching the basic skills of reading, writing and numeracy against the need for a wide range of activities for children. However, many of these activities tend to be of the "information gathering" variety while, as yet, "learning to think" skills are hardly recognised as a category. An accepted virtue of the "information gathering" skills is that they tend to reinforce levels of literacy and numeracy, so that much of education in its early stages is concerned with this.

Obviously, it is very necessary for children to become both literate and numerate, but there is a question of logical priorities; if children are not required to think in ways that extend their conceptual levels, until after certain standards of fluency in the basic skills are reached, then it would seem that these are being granted precedence over the development of mind. I am not suggesting that we should think in "either/or" terms, but rather of trying to achieve some kind of balance.

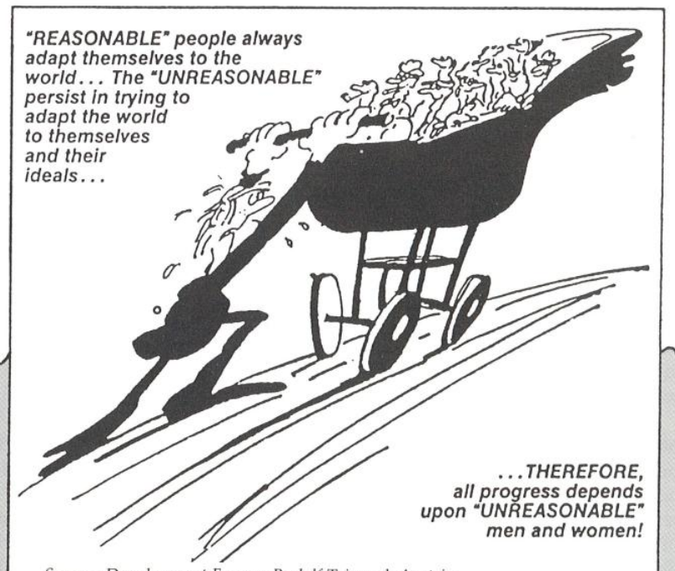
Source: Children Talking Politics, Olive Stevens, Martin Robertson, Oxford, 1982

READING TWO

CONTENT TO ACHIEVE ENVIRONMENTAL EDUCATION OBJECTIVES BASED ON LISTS PUBLISHED IN THE DOCUMENT, ENVIRONMENTAL EDUCATION: A REVIEW, DES 1981

a. knowing of and studying various plants and animals in their natural environment;
b. recognising interdependences among soil, air, plants, animals and man, and the delicacy of the ecological balance;
c. recognising the main types of biological communities and the influence of humans upon them, both directly and indirectly;
d. understanding the main factors affecting the distribution of organisms, including competition;
e. knowing the major living resources in the sea and the importance of coastal wetlands in life cycles;
f. understanding how the ecosystem is maintained by a cycling of energy;
g. knowing the necessity of water for life, its influence on the distribution of biological communities and how the balance can be affected by human activity;
h. understanding basic air/sea interactions, energy exchanges, the hydrological cycle and thermostatic influence;
i. understanding soil function and conservation measures;
j. recognising the limits of planet earth;
k. understanding human reliance on the stable balance of natural systems;
l. being aware of endangered species and reasons for their conservation;
m. observing trends in urbanisation and their impact on living resources;
n. relating food, clothing and shelter needs to available resources;
o. recognising the main types of pollution, the principles of conservation, and the wise use of resources;
p. considering environmental problems in connection with the equality of life;
q. encouraging constructive action in environmental matters;
r. applying aesthetic values in relation to other values in environmental situations;
s. knowing local legislative controls and understanding the main political and other decision-making processes;
t. contrasting attitudes towards the use of natural resources;
u. contrasting the resource, social and economic implications of strategies for planned obsolescence and durability in manufactured goods;
v. considering environmental problems in connection with the quality of life;
w. encouraging constructive action in environmental matters;
x. being aware of the strategy of planned obsolescence and its implications for living resources.

Source: Know Your Surroundings, GlosCAT, 1986



Source: Development Forum, Rudolf Trimmel, Austria

Let the biased beware

Guidelines for the classroom

Young people should be encouraged to understand what bias is and how it can be detected. This means in practice:

☐ some attention to the nature of ideas, beliefs and opinions; how they are formed and how they can influence judgements

☐ consideration of the difference between "mild" and "flagrant" bias

☐ some concentration on how all political information reflects degrees of bias: the press, political speeches – even ostensibly "objective" television news and current affairs programmes

☐ making young people sensitive to the presence of bias in the way they are taught and in other written, spoken or visual forms

☐ equipping students with the tools of rational analysis necessary to identify bias in all its many forms.

The end product of political education should be balanced learning, the achievement of an overall understanding of political processes and issues in young people's minds. This will normally mean the consideration of a number of different perspectives on the topic under discussion but it does not necessarily mean that equal time will be spent on each. The objective is to achieve comprehensive awareness, not merely to give a balanced performance. The starting point should always be the knowledge and attitude prevailing within the class. The real barrier to learning is often the bias of the pupil rather than of the teacher. A sincere commitment to the achievement of balanced learning would be part of a politics teacher's professional ethic.

The balanced learning approach can be served by a number of classroom strategies. The neutral chairman requires the teacher to play a relatively low profile role but to encourage discussion within the class with the objective of promoting understanding and sympathy for other points of view.

Debates and simulations are extensions of the same principle and also serve other important ends, such as the development of political skills. It is important too that pupils meet, listen and talk to politicians, but visits should reflect a balance either over time or in the form of panels representative of different political groupings. On other occasions, teachers might choose the Devil's advocate approach, to argue through a position neglected by or unknown to the class.

A teacher's personal views are of peripheral importance to the teaching process and accordingly should be kept in the background. It follows that teachers should never seek to advance their own personal views, selecting evidence which supports them, ignoring that which does not, and excluding consideration of other views. They should also be on their guard lest this process occurs unconsciously. Teachers should always seek to keep their own views separate from their teaching.

In order to counteract their effects, teachers should honestly analyse and recognise the extent and intensity of their own opinions and prejudices. If teachers are members of political parties – as they quite properly might be – they are advised to make this clear at the beginning of courses.

If asked by pupils, there is no reason why teachers should not explain their own views on specific topics, but it is generally better to withhold such statements until the end of class and even then to present them briefly. Too early a statement might determine the course of class discussion and appear to legitimise a particular approach in the minds of young learners.

A teacher should show respect for the views of others, not ridicule or belittle them.

The teacher cannot be neutral towards those values which underpin liberal democracy. This position is open to criticism on the grounds that it appears itself to advocate a form of indoctrination but values such as freedom of speech and discussion, respect for truth and reasoning, the peaceful resolution of conflicts, are the means whereby indoctrination is combated. To encourage young people to resist indoctrination is not to succumb to it oneself.

Even the most value-free researcher has to have a powerful bias in favour of the truth.

It follows that it is also important that the manner in which schools are organised and run conforms as much as possible to these procedural values. Arguably, the best form of education in democracy a young person can receive is through involvement in the application of democratic principles within the school community.

Subjects chosen for discussion in political education classes should be drawn from as wide a range of problems and controversial issues as possible. Those teachers who deliberately avoid such topics and concentrate, for example, on constitutional or institutional approaches are denying their pupils the advantages of the subject. Provided they are not in conflict with procedural values and are taught in a way which contributes towards balanced learning, there are few reasons why any subject – war, peace, racism – should be excluded from consideration, whether on examination or non-examination courses.

However, teachers should have some regard for the age of their pupils in choosing topics and if parents object to their choice they should listen carefully and exercise their judgement accordingly.

These guidelines will not end the ringing of alarm bells about political education, but if followed they should help reduce the frequency and stridency of complaints against a necessary and neglected subject.

Source: W. Jones, The Times Educational Supplement, 30 May 1986

TEACHING GREEN ISSUES

First, I would suggest, that we need to help young people develop their own "built-in crap detectors". This means learning how to ask good, searching questions and how to detect poor, misleading or evasive answers. Teasing out people's taken-for-granted assumptions, considering what we would need to know in order to substantiate such assumptions, critically examining the public utterances of those who wish to pursuade us to their point of view for evidence to back up their claims; distinguishing between information and evidence which can be substantiated by sources not connected to the original source, and that information that we are expected to take on trust, represent the investigative style of thinking encapsulated by the phrase "crap detection".

This indicates a process-based rather than a product-based approach to the teaching of issues. The emphasis is less on the acquisition of knowledge and more on the learning of "take-away skills" which the students will be able to apply to any future controversial issue they might encounter.

Second, we need to encourage students to apply a "green perspective" to relevant issues. As long as this perspective is marginalised by those within the mass media who have editorial control and by those in official quarters who have the power to set the agenda for political debate, then a state of unfair competition exists between alternative ideas and points of view. It is not too difficult to identify a dominant perspective on environmental issues and problems. It may be characterised as promoting an unshakeable faith in the technological fix, i.e. that the problems confronting humanity are all capable of being solved by technological and scientific advances. It portrays those who question the alleged benefits of technology as Luddites and cranks. It propagates the belief that the only appropriate measure of the efficient use of natural and human resources is "value for money". It presents civilisation as the progressive taming of nature. And it advances the economists' narrow view of human nature in which people are assumed to be interested only in maximising their own short term personal gains and minimising their losses.

By contrast, I would suggest that the central organising concept of a green perspective is the quality of life. I am not advocating here that this perspective should be promoted in a proselytising way by teachers – that seems to me to be miseducative and probably counter-productive since most students seem to switch off mentally when their teachers start peddling their principles. Instead they ought to be encouraged to broaden the criteria which they or the mass media or policy makers apply when thinking about what ought to be done. For example, when the Department of Energy claims that one particular source of fuel is cheaper than the other, have they included in their calculations the ecological costs, the social costs and the research and development costs? The LEA and DES guidelines on teaching issues assert that the teacher's objective should be to encourage rational judgement on these issues.

But rational judgement does not develop simply out of familiarity with a range of different opinions, it develops out of an understanding of the *consequences* of alternative actions and policies. If we do not have free and open access to all the facts then at least we can critically examine the criteria which people applied in reaching a decision.

Third, the implication of the two previous points is that our objective as teachers of green issues should be *balanced learning* rather than balanced teaching. It should be clear that there are a number of situations where teaching in a balanced way (i.e. giving equal weight to all the options) may not necessarily be the most appropriate means of developing critical, rational and autonomous thought and action. In most instances we are not initiating students into an academic discipline with which they are familiar; we are intervening in a learning process which is already very active outside the school. They are likely to be exposed to the dominant perspective on the environment long before they encounter an alternative green one.

So, when teaching green issues we need to assess what students are learning from all other sources, identify the gaps in their learning and ensure that they have an opportunity to look at particular issues from perspectives other than those which they have already been exposed to. Only then can they challenge taken-for-granted assumptions, compare the knowledge they already have with new information, and thereby evaluate its significance and validity. Then we could realistically talk about the development of critical reflection, rational judgement and independent thought.

Source: Teaching Green Issues, Robert Stradling, Green Teacher, February 1987

THE WORLD ECONOMY

Imagine viewing the economy of the planet earth from the vantage point of an extra-terrestrial being in an economic observer satellite. How could today's world economy be described?

First of all the value of the total production of goods and services in the world in 1980 – what might be called the "Gross Planetary Product" – was around $10 trillion (1 trillion = 1,000 billion). Given that the population of the earth is around 4.5 billion that implies that the average value of production per head was $2,222 – that is about two-fifths of the average level for Britain, and about equal to countries such as Argentina, Portugal and Yugoslavia: countries which could be described as the least developed of the developed countries or the most developed of the underdeveloped countries.

Even though there are many reasons why the figure of $2,222 may be inaccurate and misleading, it still possesses great significance. It means, if it is accurate, in even the broadest terms, that the total value of production in the world at the present time – forgetting for a moment what exactly is produced and the way in which it is distributed – is just about enough to sustain a basic standard of life and health for the world's population. If we take into account the fact that many of the world's economic resources are underutilised (both existing means of production and labour) and also that the technical knowledge exists to produce many achievements in the very short run (e.g. the elimination of certain diseases such as malaria) – and if we go beyond that and say that a relatively short-run reallocation of productive resources would make it possible to produce more socially useful products than today – then it is possible to argue an extremely important point: the development of the productive potential of the earth today is sufficient fairly comfortably to meet all the material and many of the cultural needs of its people.

It shows that the reason why the majority of the population of the world endure poverty, hard labour, cultural deprivation and in hundreds of millions of cases chronic hunger, disease and premature death, is not that the earth is either short of productive resources. Nor is it that the forces of production (the knowledge, skills and material means of production like machines) have not yet been developed enough to meet human needs. Rather, the reason is, quite simply, the exploitative way in which the world's production takes place and the staggeringly unequal manner in which the world's products are distributed.

It is, therefore, no longer impossibly utopian to conceive of a world in which want and deprivation are abolished. So at first glance an extra-terrestrial wellwisher might think that things were not too bad. But, on descending to a lower orbit, she, he or it would begin to experience some nasty surprises.

Unfair shares

The extra-terrestrial observer would first of all be shocked and astonished to see literally billions of people on this rich planet with urgent unfilled needs while millions of people were not working, tens of thousands of factories were closed down and millions of hectares of fertile land left uncultivated.

Our observer would be further perplexed to discover that in one part of the planet (the so-called Third World) 800 million people are suffering from undernourishment (too few calories) and millions of others from malnutrition (deficiencies of essential nutrients). Yet elsewhere the European Economic Community spends $7 billion a year to accumulate unsold stocks of food under its infamous Common Agricultural Policy. And the US Government spends billions more to encourage farmers in the USA not to plant food crops.

Source: Development Forum

The ET might also be disturbed to notice that spending on the means of destruction (so-called "defence") in the 18 most developed countries is about $200 billion (and if the Warsaw Pact countries are added that goes up to perhaps $400 billion); at the same time spending on health care in the 36 poorest countries of the world (containing over half its population) was only $5 billion. In fact the poorest countries themselves spend 3½ times as much on the military as they do on health.

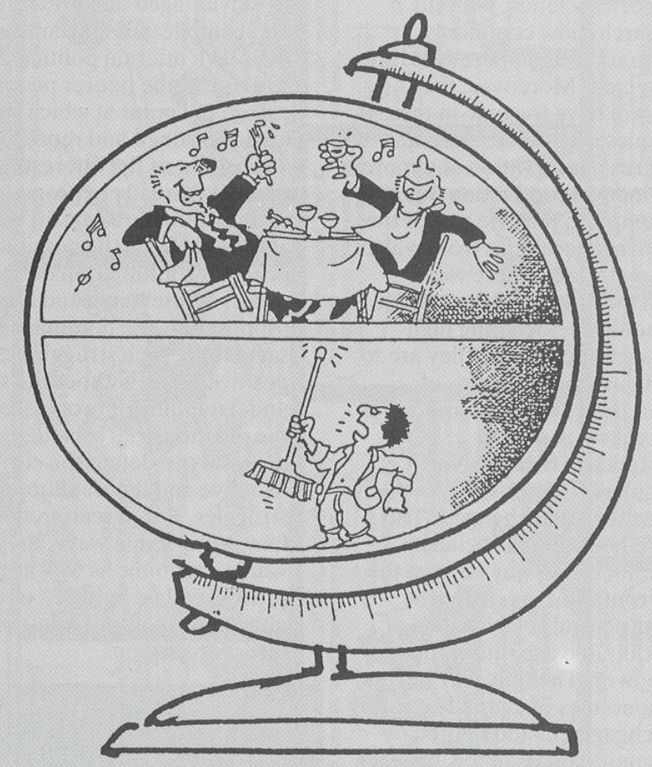
A few countries dominate the world economy – broadly speaking those which succeeded in industrialising before the early twentieth century, and Japan. Out of the "Gross Planetary Product" of $10 trillion no less than 63 per cent is produced in the 18 industrialised capitalist countries, which contain only 16 per cent of the world's population. These are most of the countries of the OECD (Organisation for Economic Cooperation and Development). One country alone, the USA, contains 5 per cent of the world's population but accounts for 25 per cent of planetary production.

By contrast the 36 poorest countries contain 50 per cent of the earth's population and produce only 5 per cent of its product. The "socialist" economies contain 8 per cent of the world's population and produce 15 per cent of its product. So if we just look at national averages then the national income in the USA per person is over 40 times as high as it is in the 36 poorest countries.

That kind of figure, however, is misleading: it grossly underestimates the amount of inequality in the world because within the individual countries there are also huge inequalities. In the United States, for example, the wealthiest 10 per cent of the population (over 20 million people) have an average income ten times as high as the poorest 20 per cent of the people. And in Brazil, to give an extreme example, the wealthiest 20 per cent are 67 times better off than the poorest 20 per cent.

So we see here, not for the last time, the deceptive nature of economic averages. The earth's average income of $2,222 per head (in 1980) conceals the fact that the most privileged sections of the people in the advanced capitalist countries are many thousands of times wealthier than the poorest people in the underdeveloped countries. Within nearly all countries these economic differences between individuals are systematically related to the place people occupy in the social hierarchy. In the capitalist West wealth and power are concentrated in the hands of the minority who own and control the means of production and who as a result enjoy many economic privileges. In the "socialist" East and in many countries in the Third World an oversized parasitic bureaucracy often occupies an equivalent privileged position.

Source: Hard Times, Bob Sutcliffe, Pluto, 1983



Source: Le Monde, Plantee Developmental Forum

TOWARDS 2000

Yet this is not a problem that can be projected to the rise of population in the poorest countries, urgent though measures to control this, by changes within these countries, are. The population–resources equations have always to be related to the systematic inequality within which a quarter of this population have four-fifths of the world's income. It is then clear that both the technological directions and the processes of economic pressure have to be radically revised in every part of the world, and, first, that the penetration of other societies by these currently advantageous directions and pressures has to be halted and driven back.

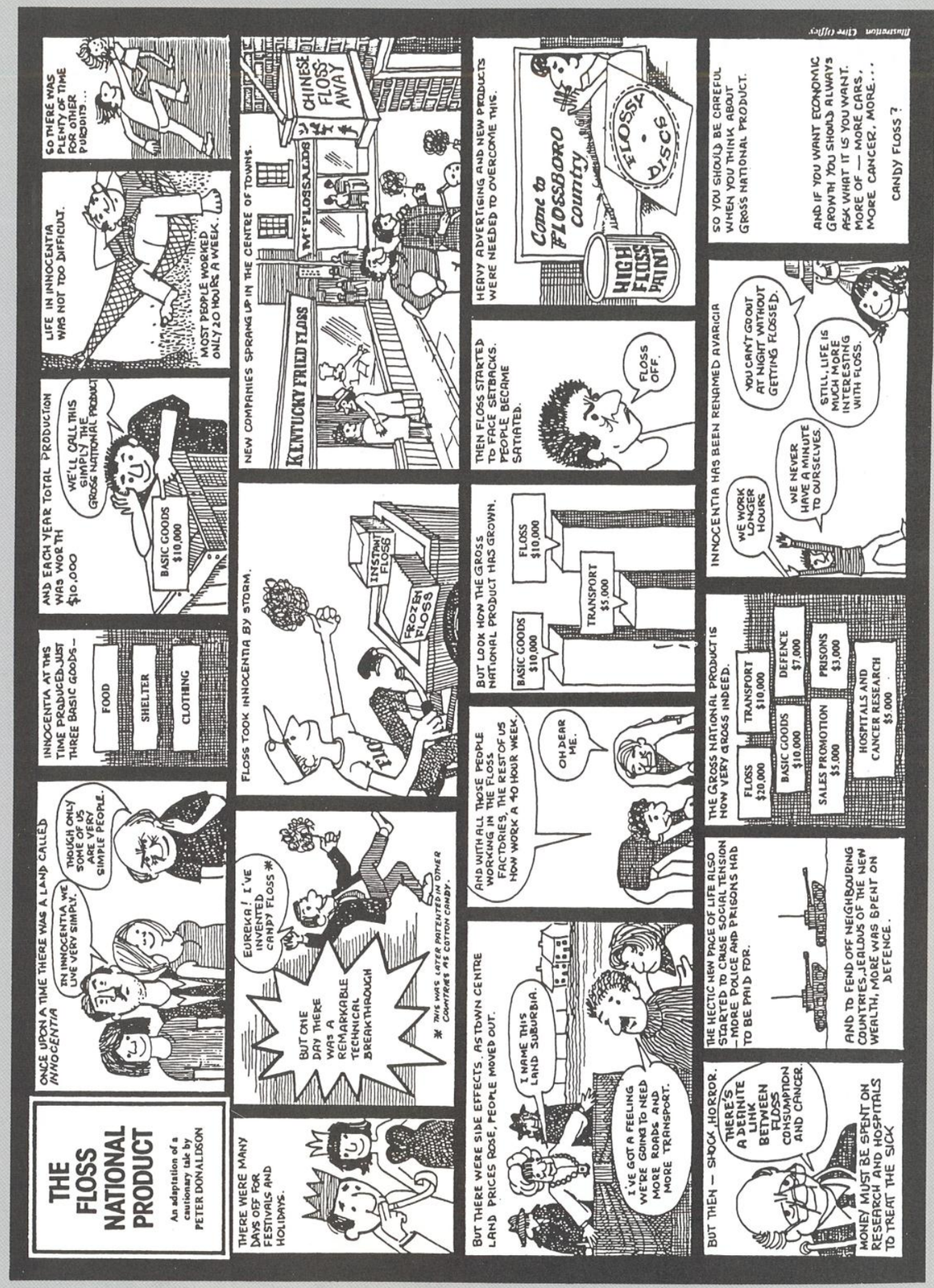
As part of this change, alternative technologies, of an autonomous and locally resource-based kind, will have to take over as new diverse lines of genuine development. There can be real aid in this, from the most technically advanced societies, but only if their lines of research, now commonly subject to profit-marketing imperatives, are consciously redirected. Moreover, the deepest changes will have to come in the old industrial economies themselves: not only in major shifts towards conservation and more durable and economical production but also in their deep assumption that the rest of the world is an effectively vacant lot from which they extract raw materials. There will probably be even more scope than now for alternative technologies, including high technologies, in such societies, if they are to solve or even mitigate the problems of adjustment as this destructive assumption is abandoned or breaks down.

It is in this perspective that the North–South relation, but also the East–West relation, has to be seen and changed. The real change is a redefinition of socialism, which is the only liberating way beyond the East–West confrontation: a positive redemption of the central socialist idea of production for equitable use rather than for either profit or power. The only way beyond the command economies of 'actually existing socialism', now engaged in and limited by competitive accumulation, is in this broader socialist direction. This is also the only desirable future for the old capitalist societies. The different social processes which would emerge from this change, redefining "production" as the sources and resources of life, would in themselves ease the pressures on the poorest societies, now locked into the old central drives. There would then be a basis for a genuinely new international economic order, beyond the attempted adjustment of its market terms.

The changes involved are so substantial, and resistance from existing interests so certain and powerful, that nobody can suppose that this will be anything but a very long and complex struggle. The issues have then to be restated in their hardest terms. It is already a distinct possibility that the most aggressive marketing and militarist societies will destroy the world simply by continuing their own current policies. It is also already clear that the rest of the world will not simply sit back and let this happen to them. Disadvantaged and pressured though they are, complicated and confused by many of their own internal political and economic structures, the poorer peoples have already passed the point at which they were for so long restrained and repressed: to be at the disposition of the interests of others. The struggles already in progress, the further struggles that are certain to follow, absolutely deny the possibility of any peaceful continuation of the present world order, on the bland and blinkered lines now proposed by the dominant powers. At the same time, such struggles cannot succeed, in positive ways, without the support and understanding of progressive movements in the old industrial societies. Indeed it is necessary to defeat the current mobilisation of active and ignorant opposition to such struggles. For in scattered, complex but finally inevitable ways, the choice within the whole economic as well as the whole political process will be between new and radically alternative kinds of relationship or chronic disorder and war.

Source: UNICEF

Source: Towards 2000, Raymond Williams, Pelican, 1985



Source: The New Internationalist, 1984

THE ENVIRONMENT – DEVELOPMENT DISCOURSE

It is clear that the environmental–development discourse needs to be redirected. Such a discourse acquires increased urgency in the face of a world recession. The integration of environmental assessment into the management practices of industrial society provides no guarantee that the environmental crisis will be averted. At the same time, by representing these elements in the reappraisal of capitalism which Marxism has neglected, the ecological movement has assured itself of a continuing and subversive role. Environmental management, if it means anything in the South, suggests that man is capable of inflicting on nature what he has already inflicted on himself. It does not mean that he is capable of meeting supranational threats to his resource base with supranational political action.

The way forward may be to re-examine what we mean by the "inner limits" – the social and political imperatives behind environmental action. We have already seen how the "outer limits", represented by the earth's resources, can be modified by technological changes, such as those promised by the new biotechnologies. The "inner limits", our capacity to meet basic human needs for all the world's people are determined by the economic and social systems under which we live. Without changing these systems radically the "inner limits" will continue to press on resources in ways which are more harmful to some groups than to others. Conservation will continue to be seen as a management exercise, designed to ensure that a privileged population has access to a privileged environment.

Redefining the "inner limits" imposed by human activity on the environment means recognizing that the removal of structural obstacles to development will do more to help poor people in the South than adopting notions of "conservation" from northern industrial countries. Poor people impose excessive strains on the carrying capacity of the natural environment because of the structural demands imposed on them. The need to increase cash income, repay debts and meet the necessities of the household impinge upon poor people while they are held in a vice by the terms of trade which govern intersectoral and international relations. As "development" removes them from control over their own environment, this control is assumed by transnational companies and capital-intensive technologies. As some activities, especially those of women, are transferred from the household to the market place, the environment is relocated not as a part of a *local* system of production, but as a link in the international division of labour. By removing structural constraints on the activities of the poor, and imposing them on the activities of the rich, the door is opened to a more sustainable development.

The key to redirecting the development and environment discourses lies in the political and economic support given the powerless and the poor. It is an illusion to believe that environmental objectives are other than political, or other than redistributive. It is also clear that "no new liberties can be granted from above, by institutionalised power, unless they have already been taken and put into practice by people themselves" (Gorz, 1982). The challenge then, is not to seek to protect the natural environment from man, but to alter the global economy in which our appetites press on the "outer limits" of resources. This can only be done by altering the entitlements of the poor in the South so that the environmental discourse becomes a development discourse. It is possible that, entrusted with the continuation of the species, we should take our cues from societies whose very existence "development" has always threatened.

Source: Development and the Environmental Crisis, Michael Redclift, Methuen, 1984

Source: Development Forum

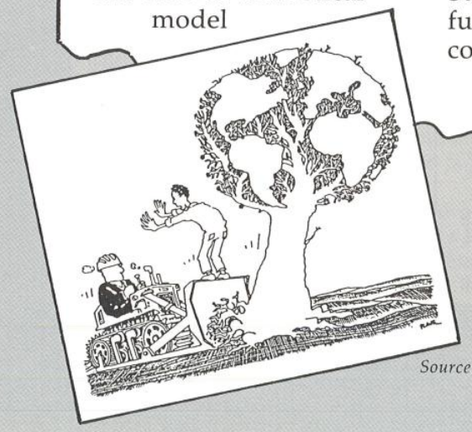
CONVENTIONAL VERSUS ALTERNATIVE DEVELOPMENT STRATEGIES

Conventional Development Strategies (CDS) have been rationalised on the grounds that poor people cannot, and do not, save; and that large-scale production – in factories and on farms – is more efficient. In view of these two assumptions, there is little for the bulk of poor people to participate in the development process because the bulk of the population in developing countries is poor and the major part of their productive activities is carried on in small-scale production. They have small land holdings, small farms, and small businesses. Their participation, whenever it is possible, therefore involves inefficiency which by definition reduces growth. People, accordingly, are a problem and their participation leads to inefficiencies.

In Alternative Development Strategies (ADS) this logic and the implied assumptions do not apply. The assumptions instead are that poor people can, and do save; and that small-scale production is more efficient, particularly from the point of view of resource cost and the long run. This is the basic meaning of the phrase "small is beautiful". There is now evidence on both these propositions and accordingly, ADS seeks participation by the people...

A Comparison between the Characteristics of CDS and ADS

General Characteristics	CDS	ADS
I. Objective	Maximum GNP per Capita or Welfare of Rich	Development of a Human Being or Welfare of Poor
Indicator	Level of GNP	Level and composition of GNP
II. Technology	Imported	Indigenous
Modes of production	Centralised	Decentralised
Local institutions	Unimportant	Crucial
People participation in decision-making	Unnecessary	Fundamental
Local solutions	Uniform	Diverse
Social change for people's benefit	Unnecessary	Necessary
Role of people vs. experts	People are the problem, experts are the solution	People are solutions, experts are advisors
III. Role of theoretical model	Standard theory is fundamental, answers come from theory	There is no standard theory. Experimental



Source: Development Forum

Source: Alternative Development Strategies and Appropriate Technology, Ramesh Diwan & Dennis Livingstone, 1979
Reprinted in The A.T. Reader, M. Carr (ed.) I.T. Publications 1985

FACTORS OF EXTINCTION

Population Growth

The tropics, which host the greatest number and diversity of species, also lie within the developing world, where population is projected to be the greatest.

By the end of the next century there will be three-fifths more people living in rural areas in the Third World than there are today. If they are forced to continue employing low-grade *extensive* agriculture, the tendency will be to spread to the farthest corners of what are now natural environments. If, on the other hand, they are able to practise efficient *intensive* agriculture they could make sustainably productive use of relatively limited sectors of their countries, with reduced impacts on wildlands.

But they will need technical inputs they can afford, and this, in turn, requires the full support of their governments. In short, the challenge is not only technological but political. As much attention must be paid to these broader perspectives of land use in the Third World, as to narrowly focused campaigns to safeguard threatened species. To reiterate a familiar theme: conservation and development must operate hand in hand.

To visualise the prospect if most Third World farmers remain subsistence peasants, let us consider how things would work out for the United States if it were still a developing country. Instead of 80 per cent of its 230 million people occupying only 2 per cent of its territory, at least as many would be living off the land, and over-loading natural environments. Hordes of land-hungry peasants would be clamouring to occupy the country's parks and reserves, first the better-watered areas such as the Everglades (exceptionally rich in species), then the moderately-watered areas, and so on. How would the government be able to keep cattle herders out of Yosemite Valley, or timber cutters out of Yellowstone's forests?

By way of the real-world parallel, let us consider the prospect for Kenya, a country that has established an outstanding conservation record by setting aside 6 per cent of its territory as parks and reserves in order to protect its wildlife and threatened species. Kenya's present population of 18 million people is pressing so hard on protected areas that the three leading conservation units are losing portions of territory to land hunger. Yet Kenya is projected to reach a total of 109 million people before its population growth stabilizes in the year 2115. The situation is particularly severe in sub-Saharan Africa because of the population growth rates, which are the highest in the world and are still increasing; and because of the increasing incidence of hunger, which forces rural agricultural communities to spread into hitherto undisturbed wildlands.

Poverty

Poverty reinforces the detrimental impact of population build-up. No person causes greater injury to natural environments than a hungry farmer. There are already 600 million of these "poorest of the poor", projected to reach at least one billion by the start of the next century and perhaps increasing to two billion by the time the developing world's population comes close to levelling out at around 10 billion in the year 2100.

The subsistence peasant is often conscious of the fact that by altering soils, grasslands and forests he is jeopardising the resource base which ideally should provide a livelihood for an indefinite period of time; yet the urgent food requirements of the short-term preclude any conservation measures.

Of course we can always hope for significant advances in agricultural technology, of a quality and scale enabling large numbers of farmers to practice improved forms of agriculture. But progress along these lines does not necessarily relieve the overall problem, insofar as enhanced agriculture for some does not inevitably lead to optimum patterns of land use overall. The Green Revolution now permits many farmers to make much better use of their croplands. But because of associated socio-economic problems, the Green Revolution tends to "marginalise" the majority of less fortunate farmers, pushing them off traditional farmlands and into previously undisturbed marginal zones which are less suited to agriculture. Similarly, plantation agriculture, while making intensive use of croplands, often serves to leave multitudes of farmers landless.

In Thailand, the Philippines, Indonesia, Brazil, Peru, Colombia, Kenya, Ivory Coast, Madagascar, and a string of other nations with unusual abundance of species, we can already observe a massive overflow of farmers from traditional homelands into virgin territories. These territories often include tropical forests, perceived by the migrant peasantry as "free" lands available for unimpeded settlement. They can also include woodlands, with their diverse wildlife, savannahs with their rich arrays of herbivores, montane zones with their concentrations of endemic species, and wetlands (both coastal and inland water bodies) with their unique communities of species.

Tropical moist forests, covering only 7 per cent of Earth's land surface, harbour at least two-fifths of all species. Many other species feature extreme ecological specialisations, notably their integration with complex food webs and communities, which makes them vulnerable to even moderate disruption of their life-support systems. When these species are eliminated their passing tends to precipitate a process of "linked extinctions", with "shatter effects" throughout their ecosystems.

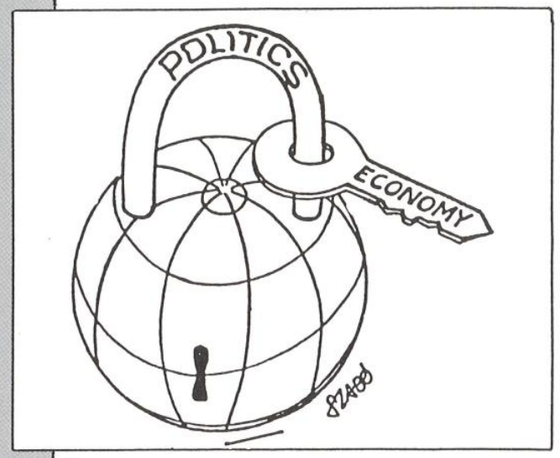
Consumerism

Besides the subsistence farmer, the agent who is next most capable of environmental destruction is the person at the other end of the "welfare scale": the super-affluent person who seeks more goods at "fair" prices. Communities in North America, concerned about increases in the cost of beef, foster, albeit unwittingly, the deforestation of Central America in order to supply ostensibly cheap beef for fast foods such as hamburgers. Beef seekers in Western Europe are starting to promote similar "deforestation linkages" in Amazonia. They also stimulate deforestation in Thailand through marketplace demand for inexpensive food supplements in the form of cassava for feed-lot cattle; and they foster a spread of commercial ranching into savannah zones of Kenya, Botswana and other countries of Africa with an eye to the beef-export trade.

These economic–ecologic linkages between the developed and the developing worlds seem likely to become more numerous, and more extensive in their impact as the global economy becomes increasingly integrated. Thus the problem of species extinction reflects not only growth in human numbers, but growth in human consumerism – an aspect of the situation that is occasionally accorded less than due attention by persons preoccupied with the basic issue of population explosion.

Source: Norman Myers, Ambio, Vol 13, No 3, 1984

REDEFINING POLITICS



Source: Szabb J. Gybrgy/Magyer Nemzet

The purpose of these various examples has been to illustrate and underline the central thesis of the book: if one wishes to make sense of a wide range of different kinds of societies, and the enormous number of issues, problems and conflicts which arise within and between them, the conception of politics used here will provide a firm starting point. In conclusion, then, there are three strands of the argument to stress.

Firstly, politics is central to the life of the human species, and always has been. It is found in all societies, institutions and groups, and is hence much wider and more important than its usual identification with "government" and associated activities. Therefore, when administrators and politicians, for instance, ask us to "keep politics out" of things like sport (or vice versa), or not to "mix" politics with religion or industrial relations or "race" relations, what they are **actually** asking is that we do not **participate** in politics, that is in decisions about the use and distribution of resources in relation to affairs that are often very important in our lives. They are not really seeking to promote, defend or even isolate politics, they are seeking to **suppress** it.

Secondly, if we are to understand politics, we should pay **less** attention to the narrow **institutional** context of bosses, chiefs, chairpersons, vice-chancellors, parties and parliaments, and **more** attention to the wider context of the relations of the "systems" discussed earlier. This is **not** to say that institutional detail is unimportant: there may be circumstances, which will emerge later, when a great deal does need to be known about such detail. But it is *less* important, in the first instance, than a clear grasp of the relations of these "systems" of production, distribution, power, social organisation, culture and ideology.

Thirdly, the way to go about doing this in a preliminary fashion for any society or institution is to ask the following set of related questions about it:

What resources are being obtained, used, produced, argued about or mobilised? For what purposes are they being used, by whom and why?

How are they currently distributed and redistributed, and according to what principles and methods?

How are decisions taken about such matters, by whom and according to what procedures and rules? That is, what is the structure of power, how is it distributed, and why?

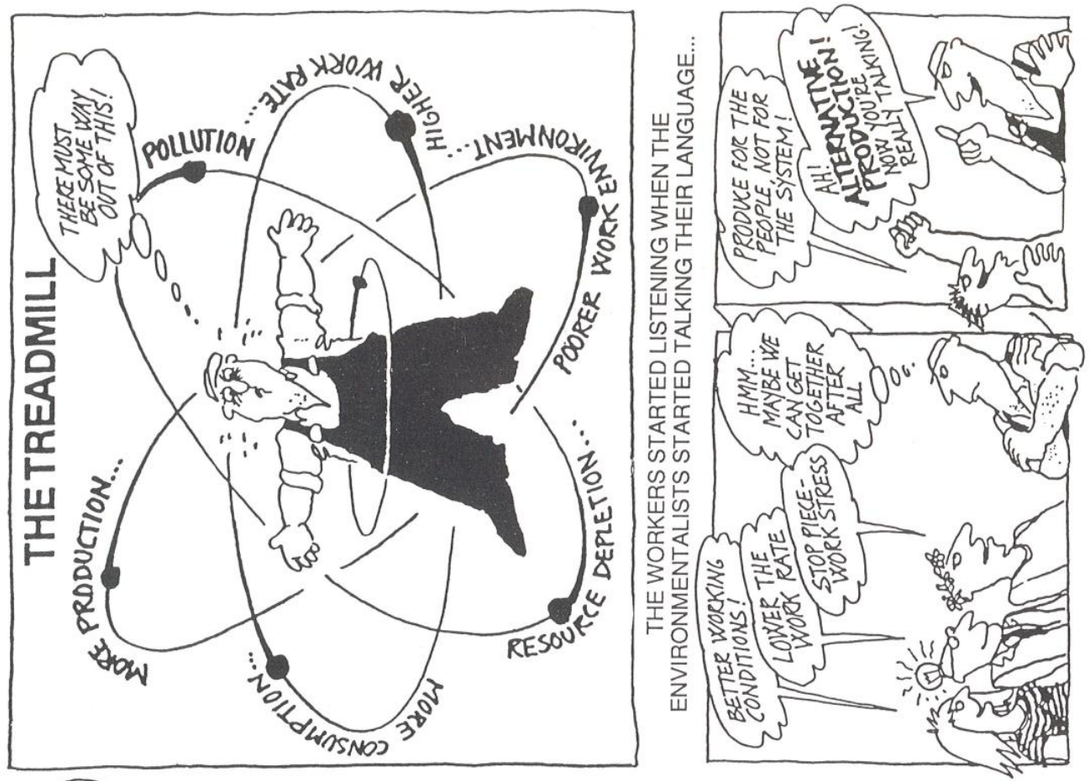
What is the social organisation associated with this? For instance, is it composed of sharply defined and unequal groups, which are hierarchically arranged in relation to both the distribution of resources and power? In a society this may consist of kings, princes, barons, knights, priests, commoners and slaves. Or, more broadly, estates, castes, classes or "racial" groups. In institutional terms, in a hospital for example, what are the relations between administrators, consultants, registrars, deputy registrars, junior doctors, nurses, patients and porters? Or, in a factory, what are the relations between shareholders, managers, clerical staff, foremen, workers and apprentices, and how does each group stand in relation to the control and distribution of resources and power? Alternatively, are the relations of social groups more egalitarian and informal, for instance within and between clans, villages and camps in some societies, or between the members of many voluntary associations in other societies?

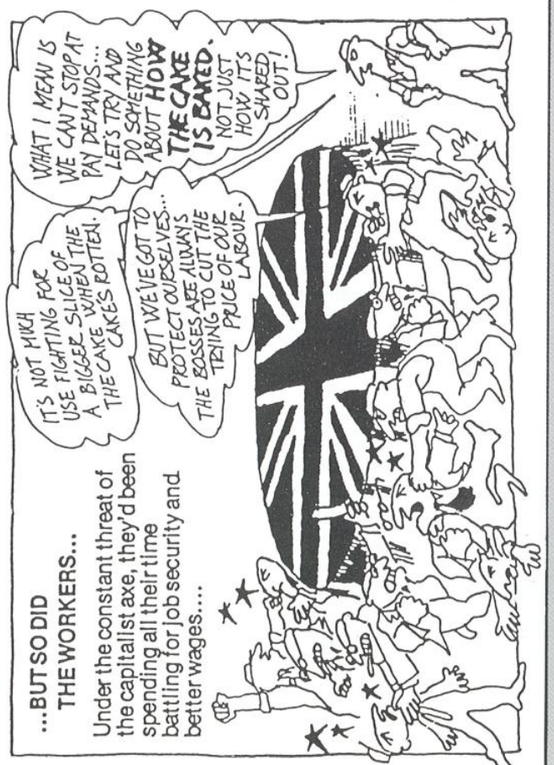
Finally, in what ways do culture and ideology both reflect and influence all this? Even the smallest institutions have their own "cultures", their regular ways of doing things, and also ideologies which encourage certain kinds of behaviours and frown on others. What are these? How are they sustained?

All the activities of cooperation and conflict which constitute politics flow through and around the relations of these features in all groups, institutions and societies, sometimes formally and sometimes informally. Moreover, all the major social problems faced by them, and their achievements, can be traced to these relations – their politics.

Source: Redefining Politics, Adrian Leftwich, Methuen, 1983

THE "RED/GREEN" DEBATE





Source: Nuclear Power for Beginners, Stephen Groall & Kalanders Sempler, Writers and Readers 1978

ECODEVELOPMENT: MACROPRINCIPALS

The elements in the eleven-point package which follows cannot be dissociated; ecodevelopment must be viewed integrally.

1: establish an ideological commitment

Political cohesion is essential during the early years of ecodevelopment in order to generate the necessary political will to break with Northern insistence to compete on Northern terms and to avoid a replication of Northern mistakes. Confidence in the policy objective and a commitment to achieve this over a relatively long time scale are essentials.

2: sharpen political and administrative integrity

The correlation of official lassitude and public dishonesty with national malaise can hardly be overdrawn. If ecodevelopment, with an emphasis upon social equity, is to get under way, entrenched corruption and petty inefficiencies in bureaucracy must be scotched.

3: attain international parity

Cornering or even substantially participating in capital control is understandable as a desire but it represents futile tactics for low income nations. They are no real monetary threat to the economically developed nations. More relevant for them is improving parity on international fora as a right they are prepared to assert. Trade adjustments favourable to low income nations, and the self-reliance this will engender in the overdeveloped regions fire a guarantee for survival which current development models do not provide.

4: alleviate poverty-hunger

Hunger is the issue, poverty a main cause. Share out more fairly the unprocessed food resources that are already available and expand the band of those in employment by regulating job displacement through technological uptake, whilst also furthering the development of indigenous skills of agriculture, industry and construction.

5: eradicate disease-misery

Misery is the issue, disease the main cause. Preventative public health measures have to run in tandem with curative medicine. The degree of self-reliance within the health services of poorer nations can be improved: first by banning the importation of most of the drugs offered at extortionate costs through international dealers; and second by establishing a hierarchy of decentralised health posts staffed by para-medical workers.

6: reduce arms

It is commonplace in low income nations for the foreign exchange investment in arms to be double the sum of hard currencies allocated to industrial and agricultural expansion. Gains from arms reduction can be double accounted; first as savings in foreign investment and non-productive labour, and second as a bonus injection of capital and skills for industry, agriculture and commerce. International parity (see point 3) is a policy matter bound closely to arms reduction.

7: move closer to self-sufficiency

The two main stems to self-sufficiency are: (a) be as self-reliant as possible in the supply of food and construction materials; (b) establish socially acceptable low demand thresholds for consumer durables so that as much as possible is made at home, and only those functional essentials beyond local manufacturing capability are imported.

8: clean up urban squalor

Urban squalor is the most degrading human environmental condition. Urban improvement involves the provision of supply and disposal services as curative measures, coupled to an identification of and adherence to parameters for urban function, form and size. This introduces the complex administrative task and moral problem of restricting the rights of people to move and settle. One answer is to fashion rural renewal as a counter-attraction to urban opportunity. Rural structural reforms in terms of access to employment, education and medical services must counterweigh against urban profligacy.

9: balance human numbers with resources

Birth control has little appeal in Southern nations where the large family is idolised and children are seen as a social investment. Yet in poor, densely settled lands, reduced numbers enables more to be shared. Achieving the threshold limits required to balance population with food production from renewable resources depends upon the use of socio-economic measures. In poorer countries direct material incentives may have to be introduced.

10: conserve resources

The main case which any Southern nation, well off in terms of non-renewable resources, must weigh up is whether material enhancement for short-term profits balances against resource scarcity in the future. Ecodevelopment does not stand in the way of non-renewable resource extraction, but it would direct: (a) that it be subject to full impact assessment; (b) that it be conducted piecemeal, winning every ounce possible; and (c) that locally available technology is used as fully as practicable.

11: protect the environment

The protection of urban heritage and the preservation of rural flora and fauna are, of course, desirable; but in terms of the poor masses, these are hardly imperatives. It is in urban areas that the need for environmental protection is more clearly apparent. Basic needs include running water in households, the disposal of household refuse and facilities to defecate with reasonable dignity.

Source: Ecodevelopment: Economics, Ecology and Development; Robert Riddell, Gower, 1981

A CONFLICT MAP OF THE WORLD

The problems of peace are well known to all of us: the threat of war (between and within states), poverty, all kinds of injustice and suppression of rights, and problems related to the environment. They can be divided into three: the depletion and scarcity of raw materials, the pollution of nature and of ourselves, and the population problem. Turn these four problems around and they read **absence of violence, economic welfare** (including satisfaction of fundamental needs), **social justice** (including satisfaction of human rights) and **ecological balance.**

But there is something very basic that is nevertheless missing if we hope to come any way near an understanding of the problems of peace. This is conflict, or more precisely, conflict formation. In conflict formations states, classes, groups of people and individuals are pitted against each other, in open, direct conflict (like that between the Arabs and Israelis recently) or in structural conflict that may one day turn into an open conflict (like that between African states and the European Community or between South-east Asian states and Japan – due to economic relations). There are many conflict formations in the world, and two of them are particularly well known from the press: the so-called East–West conflict and the so-called North–South conflict. However, if we want to make some kind of conflict map of the world – another way of looking at it – one suggestion is shown below.

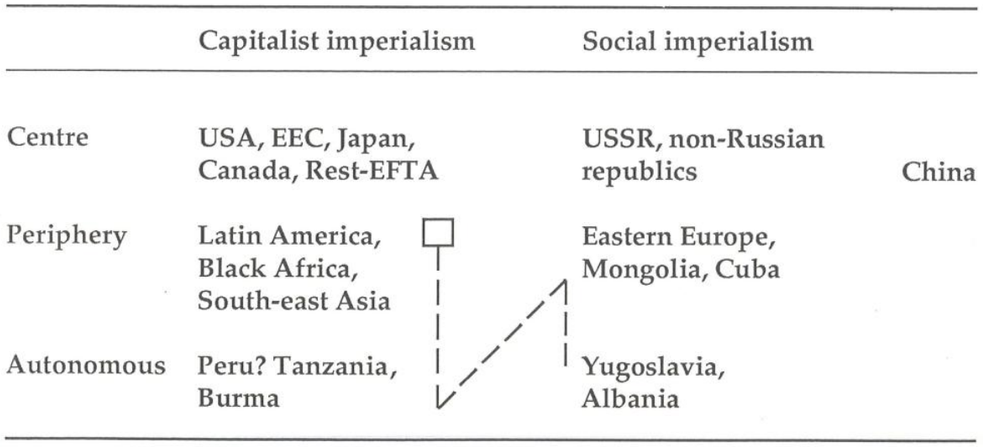
According to this diagram the world is seen as two great empires: the capitalist one ruled by a triumvirate of the Big Three – the USA, the European Community and Japan – and another ruled by the USSR (or by Russia to be more precise, for much of the periphery of that empire is found inside the USSR). These two empires are relatively similar. The first example within this map was Russia in 1917, followed by other Eastern European countries between 1945 and 1948, then China in 1949 and so on till Cuba in 1959. But Russia became the powerful USSR and started creating its own periphery with its own liberation movements: Yugoslavia in 1948, China from the mid-1950s, culminating with the cultural revolution of 1966–69, and Albania during the 1960s. The zig-zag arrow in the diagram shows nations which have moved from capitalist periphery to autonomy, then to peripheral position under the USSR, then once more to autonomy.

But the only country that really has had two dramatic acts of liberation within a short time span is a giant country: China. So where is China on this map? On the side, by itself. Maybe it is an empire in its own right. At any rate, it is insignificant relative to the other two.

Further, one can read off the diagram six major conflict formations in the world today:

1 Capitalist imperialism – between the USA–EEC–Japan and their economic periphery.
2 Between capitalist powers – rivalries between the USA, EEC and Japan.
3 Social imperialism – between the Soviet Union and her political periphery.
4 Between socialist powers – all the conflict material between the USSR and China.
5 Superpower hegemony – the USA–USSR "gentleman's agreement" establishing some kind of condominium.
6 Between capitalist and socialist powers – the so-called East–West conflict.

There are many others, but these alone make the major point in connection with peace education: *We cannot continue teaching our pupils and students about "problems" in general; we have to be more honest and place these problems in their political setting – and the conflict formations give a good basis for doing so.* Of course, many would disagree with the map and perhaps put forward an alternative, so what could be better than discussing precisely this, using as teaching material how various states and groups and authors see the major dividing lines in the world?



Source: Johan Galtung, Education for Peace, M. Haavelsrud (ed.), IPC Press, 1975

Democracy – The Facts

A New Internationalist guide to the different forms of government: the theory and the reality

Democracy originally meant rule by the common people – the lowest class in society. Since then, the theory has been embellished with ideals of human equality and liberty. This political theory confers responsibilities and obligations both on the governors and the governed. People are expected to do, or not do things for the good of the community. Ultimately government power is controlled by the citizens who can, if they are in a majority, withdraw the right to govern and give it to others. Today, there are many variations on the democratic theory. Most claim they are closest to the original thinking, but all stray in practice.

Third World Democracy

There are many different models of government in the Third World, and they include examples of both liberal and Soviet democracies. There are also traditional conservative regimes, where rule is by right of birth, and authoritarian conservative regimes where rule is based on repression. Neither of these conservative systems claim to be democratic.

But the two systems that predominate are military and 'popularist' governments. The latter does claim to be inspired by democractic ideals.

Source: Solidarité, the quarterly review of Peuples Solidaires (5 rue François Bizette, 35000 Rennes, France)

Popularist Government

The Theory

Popularist democratic governments are determined to avoid the faults of the liberal and Soviet democratic systems. They agree with the Soviet analysis that different political parties represent antagonistic class interests. As they see no such social divisions in their own societies, there is no need for any competing parties. Formerly, social distinctions were subdued by colonial oppression, and people united behind one national independence party.

The national party that took power faced, and still faces, a war against poverty and underdevelopment. It is essential to maintain a united front, to harness all the people's energies against this common enemy. And so no political divisions – opposition parties – can be allowed.

Although there is only one party, there is still a choice of candidates who compete for the people's votes. As well as regular elections to the governing legislature, the President also seeks a mandate to govern, through a free and secret ballot. The government is aiming to be democratic in the broad sense of aiming for an equal, caring community.

In Practice

It's true that many Third World nations, particularly in Africa, have a much milder class division than those of the West. However, this is often overstated to legitimise one-party rule, and unite a fledgling state.

Despite the lack of choice in a one-party system, there can often be a real choice of candidates and policies. Elections for the presidency, however, are seldom open enough to allow a real choice of alternative leaders.

Liberal democratic freedoms of speech, of political opposition and lack of arbitrary arrest are seldom found. But concern for communal equality can sometimes be quite genuinely felt by the popularist government. Power is seldom as monolithically embodied in the party and leadership as with the Soviet pattern.

Because of the paucity of education and technical skills in these countries the senior government administrators have a near monopoly of knowledge. These bureaucrats often exert pressure on the policies they are meant to implement. Major financial interests too may hold great sway over the economy. Finally, the very newness of the country may mean that traditional leaders – ethnic, tribal or religious – can command a greater loyalty amongst the people than the governing party. Their wishes then have to be accommodated to avoid a clash of allegiances within society.

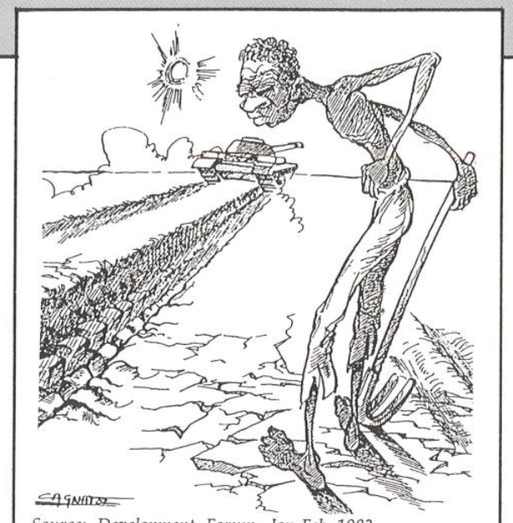
Military Rule

The Theory

Military rulers do not claim to be directly democratic, but claim they were forced to take over the running of the country *in the national interest*. Seizure of power was necessary because of the ineptitude of the ruling politicians. Formal democracy is impossible until passions have cooled, the people have become more educated in citizen's responsibilities, and the country's economy is more stable.

In Practice

Military government is strongly hierarchical, enforces discipline, and opposes any democratic form of organisation. The military's lack of governing and administrative skills means that even more power gravitates towards the technocrats and civil servants. Indeed, they are often invited to join the government as ministers. The experts provide some programmes and policies, often tinged by the values of the elitist background from which they came.



Source: Development Forum, Jan-Feb 1983

Political power can also be wielded by financial interests, domestic or foreign – and traditional leaders *(as with the popularist governments in practice, see previous page)*.

Liberal Democracy

The Theory

The essence of liberal democracy emerged from the nineteenth century free enterprise economy. Both economy and politics were, and are, concerned with individual freedom to act and to choose. Power is given by citizens to elected deputies and a national leader, who are held accountable to their constituents at periodic elections.

Just as citizens must be given the economic freedom to pursue their own interests in the market place, so they must be given political freedom to plump for the best "buy" in government. These liberties include the universal right to vote, freedom of speech and publication, and freedom from arbitrary arrest. Such characteristics allow a peculiar and distinctive feature of liberal democracy to appear – the opposition party.

One of the greatest liberal democratic theoreticians, Thomas Jefferson, believed that no real democracy was possible unless minority opinion could be represented by parties in opposition to the government – the denial of minority representation led to the tyranny of the majority.

In Practice

In liberal democracies some power does rest with the electorate and their governing representatives. And the system of civil and political liberties of the individual, although not perfectly realised, is a unique achievement.

However, these political liberties are part and parcel of economic freedoms which bring gross social and financial inequalities. The unequal distribution of wealth which has emerged means that some power is unfairly shared – that is, power to employ, power to persuade, power to buy. This ensures that rich interest groups, whether corporations or individuals, have far more political clout than is strictly democratic.

In many liberal democracies power is accumulated by a certain stratum of society whose members share a similar background of birth, education and values. Such people can achieve a near monopoly of the senior political, business, financial and administrative posts in the state. Such a group has been termed "The Establishment" and critics have pointed out that liberal democratic freedoms can be allowed because of the omnipresence of "The Establishment", which stays in power no matter who governs.

However, there is great variation between liberal democracies. Although there is a strong system of class and privilege in Europe, the social system is far more fluid in the "new" countries of Australia, Canada, New Zealand and the USA. Whilst a great deal of influence rests within a "closed" civil service administration in France and the UK, the bureaucracy in the USA and Canada is far more open to senior business or academic administrators. The military machine can figure large in much US decision making, and the influence of the trade unions is considerable in the UK.

Nevertheless, at the heart of the dilemma about the freedoms in a liberal democracy lies the right to acquire and pass on power of wealth to successive generations. This ultimately contradicts the communal freedoms of equality and liberty central to the democratic theory.

Soviet Democracy

The Theory

Western liberal democracies are seen to have a number of political parties, each representing different class interests. By contrast, the democracy of the Soviet Union is based on one political party, because the country doesn't have class divisions and only one party is needed to represent the working people.

The Communist Party evolved democratically from the Bolsheviks. Through socialist revolution, the Russian people overthrew the oppressive minority of landlords, aristocrats and capitalists. Political power was then consolidated by the representatives of the working people, the Bolshevik vanguard party. The present Communist Party represents the most politically conscious and active representatives of the people.

Soviet democracy guarantees rule by the common people, through the Communist Party. It provides individual social and political rights like the right to work and the right to vote. It provides universal equality of opportunity, social equality and liberty through the public ownership of the national wealth and freedom from an exploitative class.

In Practice

There are serious differences in the Soviet Union's supposedly egalitarian and classless society. Standards of living for townspeople are far higher than for those in rural areas. And there are large disparities in privilege and power between those who work for the Party/state apparatus and those who don't.

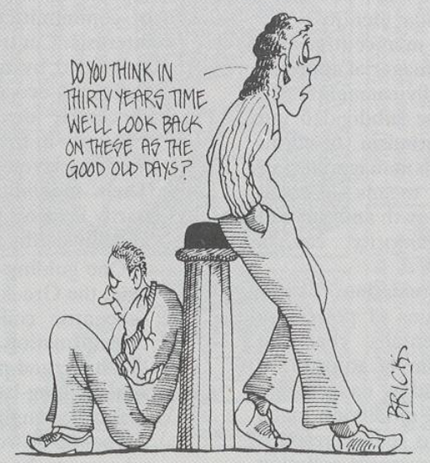
The central dilemma of Soviet democracy is whether rule by an elitist, vanguard party can be democratic. It might be government *for* the people, but it is not government *by* the people. Even if democracy means only Party members have the right to political representation (that is, 10–15 per cent of Russians) *internal* Party democracy is small.

There are elections both within the Party, and outside. But the list of candidates is drawn up in advance by senior Party administrators and there is no effective choice. No information is released to allow worthwhile public debate on government policies.

Real power rests within the senior ranks of the Party bureaucracy. As there is no sharp distinction between the legislative and executive functions of state – often those who prepare laws also execute them – so the Party bureaucracy merges with the state administration. There is rigid centralisation. Since the renunciation of the "personality cult" of Stalin, decisions are taken by senior administrative committees, with increasing consultation of scientists, engineers and industrial managers.

The terrifying memory of the Stalin purges, and the present tough restrictions on the voicing of any criticism, combine to make the Russian citizen politically apathetic. Soviet claims of providing individual democratic freedoms are highly dubious. Their claims to be moving toward a broader democratic ideal of social equality, despite the bureaucratic elite, are slightly more credible.

Source: The New Internationalist, January 1979



Source: Brick, Peace News

THE NEW ENVIRONMENTALISM

The ideological structure of modern environmentalism.

ECOCENTRISM		TECHNOCENTRISM	
gaianism	**communalism**	**accommodation**	**optimism**
belief in the rights of nature and of the essential coevolution of humans and natural phenomena	belief in the cooperative capabilities of societies to be collectively self-reliant using "appropriate" science and technology	faith in the adaptability of institutions and mechanisms of assessment and decision making to accommodate to environmental demands	faith in the application of science, market forces, and managerial ingenuity
redistribution of power towards a decentralised, federal political economy based on the interlinkage of environmental and social justice		maintenance of the status quo in existing structures of government power	

The modern era is the period of the new environmentalism. The rosy glow of the 1970s is over. A very different picture is emerging in which a coalescence of the nineteenth century romantic ideals, early twentieth century technical expertise and scientific understanding, and late twentieth century political lobbying and institution building is taking place.

The table above outlines the major strands of modern environmentalist thought. This illustrates patterns of thinking which have emerged over the past century or so. No single individual would believe purely in any single strand of ideology: the columns represent systems of belief which are more or less dominant in contemporary society, but whose mixture varies with age, education, social status, life cycle and national identity.

Technocentrism is based on a man-centred view of the earth, coupled with a managerial approach to resource development and environmental protection. Technocentrism can be subdivided into two subsidiary nodes. First, **optimism** (or cornucopia) which holds that, through managerial skills born of ingenuity and by means of well-established economic forces, growth and survival, at least for a substantial majority, can be guaranteed.

The other node is **accommodation,** namely adjustment by those in positions of power and significance to the environmentalist challenge. Accommodation takes the form of adjusting to and moulding regulation (including environmental impact assessment) and of modifying managerial and business practices to reduce resource wastage and economically inconvenient pollution, without any fundamental shift in the distribution of political power. Technocentrism tends to be most commonly found amongst conservative politicians of all political parties, leaders of industry, commerce, and trades unions, and amongst skilled workers. These are collectively termed "the productive classes". They all aspire to improved wealth for themselves and for society at large, they enjoy material acquisition for its own sake and for the status it endows, and they are politically and economically very powerful.

Ecocentrism is based on a belief that social relations cannot be disconnected from man-environment relations. It is also promoted by a radical vision of how a future society should be organised with far more real power in the hands of communities and confederations of regional interests. Central control and national hegemony, so valued by technocentrists, are the very antitheses of ecocentrism. Many magazines preach ecocentric ideals – *Alternatives* in Canada. *The Ecologist* in the United Kingdom, and *Mazingira* for the developing world, are some examples. Their individual circulations are not large – partly because they compete for a relatively small and unwealthy market.

One guiding concept for ecocentrism is that of **gaia,** the Greek name for the Earth Goddess. The ecocentric concept holds that radical societal transformation with substantial shifts in ethos, life-style, and political power will be necessary to achieve long-lasting survival. Ecocentrists believe that the engine driving this change will be economic distress and environmental destruction, whereas technocentrists argue that environmental

continued

Source: Posy Simmonds, The Guardian, 28 September 1986

destruction can be overcome by managerial and technological innovation which is necessary to promote economic revival. Ecocentric thinking tends to be found among those who are in the periphery of modern economies, the so-called "non-productive classes" – clerics, artists, teachers, students, and, to an increasing degree, women. To some extent these classes are the product of the economic success and affluence of the 1960s and early 1970s: they are characterised by a willingness to eschew material possessions for their own sake and to concern themselves more with relationships.

There are two subdivisions within ecocentrism. The **communalists** are those who believe in the cooperative abilities of people to organise their own economies if given the right incentives and freedom. This view extends to a "bottom-up" approach to Third World development based on the application of indigenous customs with appropriate technical and economic assistance from Western donors. **Gaianists** are as extreme in their views as are the optimists, both tending toward moral self-righteousness. Gaianists believe that man is not a dominant species and that human consciousness is not the only means through which nature should be judged and interpreted. They argue that the earth is a living system which is evolving by means of mysterious self-regulating mechanisms within which man plays a relatively minor part. They believe that the moral basis for economic advancement must lie in the interconnection between natural and social rights: there is no pure anthropocentric ethos.

The new environmental era is characterised by a widening divide between the ecocentric and technocentric lines of thought. This gulf is stretching because of growing pessimism about the ability of governments to provide full employment, as conventionally defined, and a stable economy. It is also enlarged because of disenchantment at the way in which institutions and structures based on a technocentric style seem increasingly to be impervious to what are adjudged to be the "real" needs of communities. This is part of the driving force of the green movement in Western European politics and for the emergence of new coalitions of liberal and left-wing movements everywhere (consumerism, peace, feminism and civil liberties).

Source: Future directions for environmental policy, Tim O'Riordan, Environment and Planning A, 17, (11), 1985

READING EIGHTEEN

Nabobs or Pariahs

Radical ecologist André Gorz takes a fictional look at what might happen in France if his own theories became practice.

The day after the new government came into office, those who set out for work found a surprise awaiting them. At the major points of entry to each city, hundreds of bicycles and mopeds were assembled for use by the public, and long lines of police cars and army vans supplemented the buses. On this morning, no tickets were being sold or required on the buses or suburban trains.

At noon, the government announced that it had reached the decision to institute free public transportation throughout the country, and to phase out, over the next 12 months, the use of private automobiles in the most congested urban areas.

That evening, the President of the Republic and the Prime Minister went on nationwide television to explain the larger design behind these measures.

The President reminded his listeners of the period, no so distant, when the standard of living of Americans seemed an impossible dream to French men and women. Only ten years ago, he recalled, liberal politicians were saying that once the French worker began earning American wages, that would be the end of revolutionary protests and anti-capitalist movements. They had been, however, profoundly mistaken.

"On the contrary. For in France, as in the United States, the people find themselves having to pay more and more to maintain an increasingly dubious kind of well being. We are experiencing increasing costs for decreasing satisfactions. Economic growth has brought us neither greater equity nor greater social harmony and appreciation of life. I believe we have followed the wrong path and must now seek a new course."

□ "We shall work less." Until now, the purpose of economic activity was to amass capital in order to increase production and sales, and to create profits which, reinvested, would permit the accumulation of more capital, and so on. But this process must inevitably reach an impasse. Beyond a certain point, it could not continue unless it destroyed the surplus which it had created.

"It is, in fact, only by wasting our labour and our resources that we have managed in the past to create a semblance of the full employment of people and productive capabilities."

In the future, therefore, it was necessary to consider working less, more effectively, and in new ways. He argued that once the productive machinery reaches the level of technical efficiency where a fraction of the available workforce can supply the needs of the entire population, it is no longer possible to make the right to a full income dependent on having a full-time job. "We have earned," the President concluded, "the right to free work and to free time."

□ "We must consume better." Until now, products had been designed to produce the greatest profit for the firms selling them. "Henceforth," the President said, "they will be designed to produce the greatest satisfaction, for those who use them as well as for those who produce them."

To this end, the dominant firms in each sector would become the property of society. The task of the great firms would be to produce, in each area, a restricted number of standardised products, of equal quality and in sufficient amounts, to satisfy the needs of all. The design of these products would be based on four fundamental criteria; durability, ease of repair, pleasantness of manufacture, and absence of polluting effects.

□ "We must re-integrate culture into the everyday life of all." Until now, the extension of education had gone hand in hand with that of generalised incompetence.

Thus, said the President, we unlearned how to raise our own children, how to cook our own meals and make our own music. Paid technicians now provide our food, our music and our ideas in prepackaged form.

It had become urgent, the President said, for individuals and communities to regain control over the organisation of their existence, over their relationships and their environment . . .

To translate these principles into practice, the Prime Minister said it was necessary to rely on the workers themselves. The workers should allow themselves a month, the Prime Minister estimated, to define, with the assistance of outside advisers and consumer groups, a reduced range of product models and new sets of quality standards and production targets.

The Prime Minister further remarked that the workers would be free to organise themselves in such a way that each individual could, for certain periods, work more or less than the standard 24 hours for the same firm. They would be free to have two or three part-time jobs, or, for example, to work on construction during the spring and in agriculture towards the end of the summer – in short, to learn and practice a variety of skills and occupations. To facilitate this process, the workers themselves would be helped to set up a system of job exchanges...

The government's economic aim, the Prime Minister stated, was to gradually eliminate commodity production and exchange by decentralising and scaling down in such a way that each community was able to meet at least half of its needs. The source of the waste and frustration of modern life, the Prime Minister noted, was that "no one consumes what he or she produces and no one produces what he or she consumes."

As a first step in the new direction, the government had negotiated with the bicycle industry an immediate 30 per cent increase in production, but with at least half of all the bicycles being provided as kits to be put together by the users themselves.

The Prime Minister voiced the hope that in the future local communities would develop this kind of initiative themselves: each neighbourhood, each town, indeed each apartment block should set up studios and workshops for free creative work and production; places where during their free time, people could produce whatever they wished thanks to the increasingly sophisticated array of tools which they would find at their disposal.

The 24-hour week and the fact that income would no longer depend on holding a job would permit people to organise so as to create neighbourhood services (caring for children, helping the old and the sick, teaching each other new skills) on a co-operative or mutual-aid basis, and to install convenient neighbourhood facilities and equipment.

The cornerstone of the new society, the Prime Minister continued, was the rethinking of education. It was essential that, as part of their schooling, all young people learn to cultivate the soil, to work with metal, wood, fabrics and stone, and that they learn history, science, mathematics and literature in conjuction with these activities.

After completing compulsory education, the Prime Minister went on, each individual would be required to put in 20 hours of work each week (for which he or she would earn a full salary). In addition to continuing with whatever studies or training he or she desired. The required social labour would be done in one or more of the four main sectors: agriculture; mining and steelworks; construction, public works, and public hygiene: care of the sick, of the aged, and of children.

The Prime Minister specified that no student-worker would, however, have to perform the most disagreeable jobs, (such as collecting garbage, being a nurse's aide, or doing maintenance work) for more than three months at a time. Conversely, everyone up to the age of 45 would be expected to perform these tasks for an average of 12 days a year (12 days a year could mean one day per month or one hour per week).

"There will be neither nabobs nor pariahs in this country any more", the remarked.

"Defending our territory", the Prime Minister said, "requires first of all that we occupy it. National sovereignty depends first of all on our capacity to grow our own food." For this reason the government would do everything possible to encourage a 100,000 people a year to establish themselves in the depopulated regions of the country, and to reintroduce and improve organic farming methods and other "soft" technologies. All necessary scientific and technical assistance would be provided free for five years to newly established rural communities. This would do more to overcome world hunger, he added, than the export of nuclear power stations or insecticide factories . . .

Source: Ecology as Politics, André Gorz, South End Press, 1980

Source: UNESCO

THE POLITICS OF SURVIVAL

The choice is more democracy or much less. The effective participation of people in making the decisions that most directly affect them is the precondition for economic, political and spiritual liberation. Until people can play a direct role themselves in shaping their own physical and economic environment they are not fully alive. When masses of people come to see themselves as either extensions of machines for making things they can never have, or as surplus population, they lose the incentive to create. They lose and the world loses immense resources – imagination, creativity, love and power. There are stories from many parts of the world that corroborate one simple idea. Where peasants in Latin America have been able to organise farms in such a way that they can control what is grown, how it is grown, and how it is shared, productivity increases and many of the pathologies associated with "development" disappear.

When workers share not only in the proceeds of the assembly line but in the decisions concerning its operation and, ultimately, what is produced, the alienation that now threatens productivity in every industrial country begins to dissolve and the passion for living returns. Social relationships change when the majority is able to exert *effective* demand. Before they can get their fair share of resources, they must have the power of entitlement. That is something that is usually fought for, not given.

Political participation can take many different forms. Consultation before decisions are made builds community more effectively than opportunities for ratification after the fact. Most elections are votes of confidence or no-confidence and have little discernible impact on specific decisions. For most people in the world their connection to the productive order is tenuous; they can lose their land or their job on a moment's notice. They live at the mercy of economic and political decisions over which they have no control. In such conditions of insecurity it is not surprising that peasants overplant and overgraze and that millions of tons of good soil are washed away through erosion and forests are hacked away for firewood.

The sense of stewardship which is essential for conserving and renewing resources grows out of a sense of belonging. Where there are stable communities, agricultural practices tend to be more careful. Traditional peasant societies in many cultures practice conservation for self-preservation. But when the old society is disrupted and an intruding culture brings in new values that are the antithesis of traditional values, peasant communities dissolve.

In the US the appeal to conserve goes unheeded because it runs counter to the basic ideology of the country: Consume more. The economy depends upon it. A pious message from the President is no match for the hundreds of millions of dollars of advertising designed to stimulate consumption. The example of turning off a light or two in the White House makes little impression on those who pass by the world headquarters of global corporations in the heart of Manhattan all ablaze twenty-four hours a day.

Stewardship is a survival value for the human race, for unless each generation is willing to limit its share of resources, it is sentencing the next generation to deprivation and increasing misery. Stewardship does not mean zero growth for the world economy. The debate about when or whether to arrive at a "steady state" economy has clouded the issue. In order for the planet to achieve a certain stability some parts of the world economy must grow at a faster rate than others. It is obvious that the non-industrial world must use far more natural resources than in the years of colonial exploitation and that the industrial nations, the US in particular, must limit their consumption. It is inconceivable that 250 million Americans can continue to consume a third of the most crucial resources in a planet of six billion people. The monopoly of sophisticated technology in the hands of the rich nations must be broken in the interests of a minimum world order.

Stewardship requires a capacity to feel the pain and to share the joy of people who live at a great distance. People do not practise conservation unless they see a compelling purpose and can envision the flesh-and-blood beneficiaries of their sacrifice. Our educational establishment inoculates us against empathy. The survival values our society prizes are individualist. We are trained to be cerebral, thick-skinned, and obsessed with ourselves. These are not the survival values of a world of scarcity.

Stewardship implies a rational system of sharing not only across distance but across time. When people were tied to particular plots of land it was easier to feel part of the rhythm of the generations. The son, the grandson, and the great-grandson would be tilling the same land in the same way. But with these ties broken, where are the roots of obligation to posterity? That sense of building a future over centuries eludes modern men and women. In a world built on exchange relationships it is hard to see what posterity has to give me to compensate for my limiting my share of resources. Why then should I care? For some there is a religious injunction. The only secular answer is that without a sense of the future, living loses its meaning.

The process begins by a gradual overcoming of the self-protective ignorance that isolates us from the majority of people of the world and a growing awareness of the needs, fears, and hopes that bind all humanity. Developing harmonious human relationships and a harmonious relationship with nature go hand in hand. Both are requirements for survival of the human race. Surely, the continuation of the present competitive assault on the natural order will bring chaos, deprivation, and quite possibly the death of everything. However, no new relationship with nature is possible without a new stage in human relationship rooted in the most basic survival values of all: sharing and co-operation. The point has been made in a thousand ways throughout history.

There is a storehouse of human wisdom about the relationship between the social order and the natural order. It is the New Testament story of the feeding of the 5,000 with a few loaves and fishes. It is the tale from Greek mythology of the miraculous pitcher: a poor couple share their bit of milk with the stranger and the pitcher flows forever. The tale is retold in a bit of folklore from Brittany as the miraculous fish. In the Tibetan tale "The Story of Two Neighbours" a poor man helps a young sparrow with a broken leg and is rewarded with a kernel of grain that becomes a harvest of jewels. His rich neighbour learns the secret and looks for a sparrow of his own to help. Finding none, he creates a charitable opportunity for himself by shoving a sparrow out of the nest and fixing its broken leg. His reward is a kernel that yields not jewels but a process server who levies on all his lands and cattle.

The secret of survival in the coming lean years lies somewhere in these mythic shadows. The most basic human need of all is the need to be human, which, in an age of scarcity, means being in psychological and biological harmony with the rest of creation. The task of politics is to give expression to these yearnings so that institutions can be created to enable people to do what they know they must.

Source: The Lean Years, Richard Barnet, Abacus,1980

How to Save the World

by Robert Allen

Robert Allen, associate editor of *The Ecologist*, is currently senior policy advisor for IUCN (International Union for the Conservation of Nature).

Earth is the only place we know of in the universe that can support human life. Yet human activities are progressively making the planet less fit to live on. Current attempts by a quarter of the world's people to carry on consuming two-thirds of the world's resources and by half of the people simply to stay alive are destroying the very means by which all people can survive and prosper. Everywhere fertile soil is either built on or flushed into the sea; otherwise renewable resources are exploited beyond recovery, and pollutants are thrown like wrenches into the machinery of climate. As a result, the planet's capacity to support people is being irreversibly reduced at the very time when rising human numbers and consumption are making increasingly heavy demands on it.

A Disappearing Planet

The fertile soils of Himalayan valleys are being washed away in such quantities that a new island is forming in the Bay of Bengal, an island of soil which, if the land had been properly managed, would still be growing food. Erosion is also rampant in developed countries, for example, in the century during which it has been cultivated, southern Iowa (USA) has lost as much as half its topsoil.

If present rates of land impoverishment are allowed to persist, one-third of the world's cropland will disappear in a mere 20 years. The deserts are expanding at a rate of almost 60,000 square kilometres (23,000 square miles – an area twice the size of Belgium) a year. An area twice the size of Canada – 20 million square kilometres (nearly 8 million square miles) – is now on the brink of being turned into desert.

Huge quantities of fertile soil are stripped from the land each year as a result of deforestation and poor land management: 400 million tonnes a year from Colombia; 1000 million tonnes a year from Ethiopia; 6000 million tonnes a year from India. Even in the USA, with the largest soil conservation service in the world, so much soil has already gone that the country's potential to grow food has been cut by 10 to 15 per cent and perhaps by as much as 35 per cent.

Fertile land is also disappearing under concrete and tarmac. Together, the USA and Canada submerge 4,800 square kilometres (more than 1.2 million acres) of prime farmland under buildings roads and reservoirs every year.

In developing countries hundreds of millions of rural people are compelled by their poverty, and the consequent vulnerability to inflation to destroy the means of their survival. In widening circles around their villages they strip the trees and shrubs for fuel until the plants wither away and the villagers are forced to burn dung and stubble. The 400 million tonnes of dung and crop wastes that rural people burn annually are badly needed to regenerate soils already highly vulnerable to erosion now that the plants that bind them are disappearing.

Fuelwood is now so scarce in the Gambia that gathering it takes 360 woman days a year per household. Even when firewood is available for sale, it is often beyond the budgets of poor householders. In the highlands of South Korea cooking and heating can cost up to 15 per cent of the household budget; and in the poorer parts of the Andean Sierra and of Africa's Sahel it can be as high as 25 per cent. Because of the cost many families are forced to do without.

Lack of soil and forest conservation contributes to the rising energy, financial and other costs of providing essential goods and services. Throughout the world, but especially in developing countries, siltation caused by deforestation and poor land management cuts the "life-times" of reservoirs supplying water and hydroelectricity, often by as much as half. Large and increasing sums of money have to be spent on dredging docks and harbours to counter the effects of siltation. Floods devastate settlements and crops; in India the annual cost of floods ranges from $140 million to $750 millions.

The resource base of major industries is shrinking as tropical forests rapidly contract and as the coastal support systems of fisheries are polluted or removed altogether. At present rates of clearance, the remaining area of unlogged productive forests will be halved by the end of this century. It has been estimated that tropical rain forests (genetically the richest land environments on the planet) are being felled and burned at the rate of 11 million hectares (27 million acres) a year – about 20 hectares (50 acres) a minute. At this rate *all* tropical rain forests will have disappeared within 85 years. Tropical forests are not uniform, however; nor is their rate of disappearance. The most valuable, and the richest in species, are lowland rain forests, and these are being destroyed at a much faster rate. Some, like the forests of west Africa and the lowland forests of Malaysia, Indonesia and the Philippines, seem unlikely to survive much beyond the turn of the century.

Overfishing has already dep-

continued

rived people of millions of tonnes of seafood. Now, as overfishing spreads, so too does destruction of the fisheries' support systems. Many coastal wetlands and shallows, the support systems of two-thirds of the world's fisheries, are either degraded already or are being destroyed by dredging, dumping, pollution or shore "improvement". In the USA the resulting losses to fisheries cost an estimated $86 million a year.

As a result of the spread of environmental destruction, some 25,000 plant species and more than 1,000 species and subspecies of mammals, birds, amphibians, reptiles and fish are threatened with extinction. These figures do not take account of the inevitable losses of small animal species, particularly of invertebrates like molluscs, insects and corals, whose habitats are being eliminated in their entirety. Indeed estimates that do attempt to take this factor into account suggest that from half a million to a million species will have been made extinct by the end of this century.

Coming to Terms with the Facts of Life

As the biosphere loses its elasticity – its capacity to recover from the effects of human pressure – and as everybody's demands on the biosphere increase, so choices will be harder and the room for manoeuvre will be reduced. If, for example, the USA or other developed countries wish to reduce their dependence on oil imports, they must among other things conserve their farmland and their soil. It has been estimated that in 1978 $1,200 million of fertilizer would have been needed to replace the nutrients lost through soil erosion in that year. The sum would be greater today and will continue to grow, not only because soil erosion is spreading but also because much fertilizer manufacture depends on oil. Now an estimated 50 million barrels of fuel equivalent are used every year to offset past US soil erosion losses.

The devastation of the biosphere is ultimately the greatest of all threats to the survival and well being of human beings. It is seldom perceived as such because for many peoples and their governments it is overshadowed by apparently more pressing concerns: war, poverty, epidemics, the energy crisis, inflation, unemployment. Nevertheless, failure to conserve living resources is closely linked to the worsening of the other problems. Continuing lack of conservation is likely to make life more expensive for the affluent and impossible for the poor. In so doing it will contribute to the rise in tension between the haves and the have-nots and hence to global instability.

Conservation: How to Have our Cake and Eat it

The biosphere is like a self-regenerating cake, and conservation is the conduct of our affairs so that we can have our cake and eat it too. As long as certain bits of the cake are not consumed and consumption of the rest of it is kept within certain limits, the cake will renew itself and provide for continuing consumption. For people to gain a decent livelihood from the earth without undermining its capacity to go on supporting them, they must conserve the biosphere. This means doing three things:

1 Maintaining essential ecological processes and life-support systems

2 Preserving genetic diversity

3 Utilising species and ecosystems sustainably.

How the World can be Saved

No creature can be in a predicament more treacherous than the one in which human beings find themselves today. To survive, every species must modify its environment. But human societies are altering their environments so drastically – whether out of ignorance, greed, irresponsibility, or the desperate struggle to escape the trap of poverty – that they are making their survival unlikely if not impossible. It is as if the only means of improving our planetary home was to knock down the walls and bulldoze the foundations.

Although environmental modification is natural and a necessary part of development, this does not mean that all modification leads to development, (nor that preservation impedes development). While it is inevitable that most of the planet will be modified by people and that much of it will be transformed, it is not at all inevitable that such alterations will achieve the social and economic objectives of development. Unless it is based on conservation, much development will continue to have unacceptably harmful side-effects, provide reduced benefits or even fail altogether; and it will become impossible to meet the needs of today without foreclosing the achievement of tomorrow.

The way to save the world is to invent and apply patterns of development that also conserve the living resources essential for human survival and well being. Living resource conservation is often thought of and treated as a specialised and somewhat limited activity, but in fact it is a process that cuts across and must be incorporated in all human activities. For this to be achieved, each of us will have radically to reorientate our view of the world and of our place and role in it. Meanwhile, it is essential that conservation and development be fully integrated without delay to ensure that, in their quest for a higher quality of life, people protect those parts of the biosphere that need protecting and modify the rest only in ways that it can sustain. For this we need a world conservation strategy.

A Brief Guide to the World Conservation Strategy

The World Conservation Strategy is intended to stimulate a more focused approach to living resource conservation and to provide policy guidance on how this can be carried out. It concentrates on the main problems directly affecting the achievement of conservation's objectives: the maintenance of essential ecological processes and life-support systems, the preservation of genetic diversity, and the sustainable utilisation of species and ecosystems. In particular, the Strategy identifies the action needed both to improve conservation efficiency and to integrate conservation and development.

Irrespective of its purpose, the function of every strategy is to:

- ☐ determine the priority requirements for achieving its objectives
- ☐ identify the obstacles to meeting the requirements
- ☐ propose the most cost-effective ways of overcoming those obstacles.

With resources limited and time running out, it is essential to be sure that the available resources and effort are applied to the highest priority requirements first, and only afterwards to lesser priorities. We are in exactly this situation with conservation, yet conservation organisations have seldom attempted to agree priorities. This is understandable, since there are so many urgent problems to be dealt with, people have different perceptions of priorities, and there have been few universally accepted criteria for what is important. However, it is precisely because there are so many requirements, most of them urgent, and many of them alone demanding all or more of the resources at conservation's disposal, that priorities must be determined and followed. The first need, therefore, is for criteria for deciding priorities. There are three: significance, urgency, and irreversibility.

Significance is determined by asking such questions as:

- ☐ how important is this requirement in relation to the other requirements for achieving the objective concerned?
- ☐ what proportion of the global, regional, and national population depends on this requirement being met?
- ☐ how important is the requirement to the people most affected?
- ☐ how much of a particular resource will be conserved if the requirement is met?

Urgency is a function of the rate at which a significant problem will become worse if the requirement is not met and of the time required to meet that requirement.

Irreversibility is the key criterion: highest priority is given to significant, urgent requirements to prevent further irreversible damage to living resources, notably the extinction of species, the extinction of varieties of useful plants and animals, the loss of essential life-support systems, and severe soil degradation.

Priority Problem Areas

Using these criteria the problem areas of greatest and most immediate concern are outlined below.

Agricultural systems. In view of the scarcity of high-quality cropland, the rapidity with which it is being destroyed and the rising demand for food and other agricultural products, it is vital that the most suitable land for crops be reserved for agriculture and that all cropland be managed to high standards. Loss of cropland and of soils and the disappearance of genetic resources essential for crop breeding have profound implications for everybody, since they presage the collapse of the biological basis of our food supply. The world's drylands, which cover about one-third of the earth's land surface, are particularly seriously affected. There the spread of desert conditions already jeopardises the survival of almost 80 million people, and as many as 630 million could be threatened by it in coming years.

Forests. Forest destruction means not only the loss of valuable products but also the decline of essential services, notably protection of water sheds (the upper parts of river basins). At least half the global population is affected by the way in which watershed areas are managed, for although only 10 per cent of the world's people live in mountain regions another 40 per cent live in the adjacent lowland basins. The most endangered forests are tropical rain forests. The world has only about 10 years to save lowland tropical rain forests and no more than 20 years to save the rest. If it has not done so by then, not only will a huge store of vital genetic resources have been lost for ever but regional climates, and perhaps the global climate, could be changed for the worse.

The sea. The sea is so huge that it seems invulnerable to human impacts. Its most productive areas are close to shore, however, and are very heavily damaged by pollution, habitat destruction and overfishing. Coastal wetlands and shallows together with the marine fisheries that depend on them, constitute the world's biggest wildlife resource. The mangroves and estuaries that support the fisheries are throughout the world either being polluted or destroyed altogether. Other marine areas are also strikingly important, particularly coral reefs, but are not yet under such universal pressure as coastal wetlands. Action to conserve them should be taken without delay to take advantage of the fact that they are not yet as badly off as temperate estuaries or tropical forests.

Endangered species. Thousands or possibly a million species and many more varieties are threatened with extinction, so it is difficult to know where to

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begin their conservation. The Strategy recommends concentrating on three types of threatened organism: those that are so different genetically from other species that their extinction would be an exceptionally great loss; those that are, or are closely related to, economically or culturally important species; and those that are so concentrated in certain areas that groups of them can be saved in one operation.

Priority Actions

Three kinds of action are needed to ensure that conservation objectives will be achieved. The first is specific to the problem areas and concerns the priority requirements for meeting the conservation needs of each. The second kind of action is much more fundamental since it aims to overcome the main obstacles to conservation irrespective of the problem area. The third strikes at underlying factors, such as population growth, overconsumption by the affluent, and poverty.

The priority requirements for achieving conservation with respect to each of the problem areas are discussed in detail in later chapters. Most are obvious: reserve good cropland for crops; manage cropland to high standards; protect watershed forests; protect the support systems of fisheries; control pollution; prevent the extinction of species; preserve as many varieties as possible of crop plants, forage plants, timber trees, livestock, animals for agriculture, microbes and other domesticated organisms and their wild relatives; establish comprehensive systems of protected areas; regulate international trade in wild plants and animals; reduce excessive catches to sustainable levels, and so on.

Obvious though they may be, these and similar requirements are often overlooked. One reason is that competition among different uses of land and water has become so acute that governments have become reluctant to take the action conservationists recommend. Conservationists have given them little encouragement because often they have pushed for extreme courses of action, not recognising the difficult trade-offs involved. Take, for example, the requirement to reserve good cropland for crops. On the face of it, it is straightforward. The demand for food continues to grow but high quality cropland is scarce. Only one-tenth of the earth's land surface does not have a serious problem in agriculture. Since it is not possible to relocate prime cropland but it is possible to be flexible about the siting of buildings and roads, agriculture should have precedence. However, the need for farmland competes not just with the need for building land but also with other conservation needs. Many wetlands are often essential nurseries and nutrient suppliers of fisheries, but when drained they make good cropland. Similarly, forest areas rich in species and ideal candidates as nature reserves might need to be cleared for crops or pasture. Governments need guidance on how to decide such difficult conflicts.

If the land is prime quality land, with no serious limitation for agriculture, then agriculture should still have priority, even over other conservation needs. If the land poses difficulties for farming, however, agriculture, while continuing to have priority over non-living resource uses (such as building), should be subordinated to the needs of genetic resource conservation and (in the case of wetlands) to those of fisheries.

Main Obstacles

The obstacles to conservation are many and complex but the main ones are outlined below.

1. The belief that the conservation of living resources is a specialised activity rather than a process that cuts across and must be considered by all sectors of activity.
2. The consequent failure to integrate conservation with development.
3. A development process that is generally inflexible and needlessly destructive, because of inadequate environmental planning and a lack of rational allocation of land and water uses.
4. The lack of a capacity, because of inadequate legislation, to conserve; poor organisation (notably government agencies with insufficient mandates and a lack of coordination); lack of trained personnel; and a lack of basic information on priorities, on the productive and regenerative capacities of the living resources concerned, and on the trade-offs between one management option and another.
5. The lack of support for conservation, because of a lack of awareness (other than at the most superficial level) of the need for conservation and of the responsibility to conserve amongst those who use or have an impact on living resources, including in many cases governments.
6. Failure to deliver conservation-based development where it is most needed, notably the rural areas of developing countries.

The need to tackle these obstacles must be kept constantly in mind. A species may be rescued, an area protected, or an environmental impact reduced, but such successes will be temporary or will be overshadowed by much greater failures unless every country's capacity to conserve is greatly improved and permanently strengthened.

Accordingly, the Strategy's recommendations for national action are devoted entirely to this set of issues. They begin with the proposal that every country (indeed every governing unit, such as the federal states in the USA and Canada's provinces, with responsibilities for planning and managing the use of living resources) should prepare a conservation strategy. Only in this way can wasteful *ad hoc* action and excessive concern for symptoms rather than causes be avoided.

The Strategy goes on to establish priorities for international action. Although most action must be taken by and within countries, there are several aspects of conservation that can only be tackled internationally. Many living resources are shared by two or more nations. Many occur (temporarily or permanently) in areas beyond national jurisdiction, notably in the open ocean farther than 200 nautical miles from shore. Living resources in one state may be affected by activities carried out in another: for example, fish may be killed by acid rain originating with sulphur dioxide pollution in another country. These resources can be conserved only by international action. International action is also necessary to promote the conservation of resources (such as the genetic resources of crops) vital for the survival of all humanity, as well as to stimulate and support national action.

The Strategy therefore recommends a series of cooperative programmes concentrating on tropical forests and drylands, the establishment of protected areas for the preservation of genetic resources, the global commons (the open ocean, the atmospheric climate and Antarctica), and regional strategies for international river basins and seas. These programmes will provide an essential focus for international action in those areas in which it is indispensable, as well as for international support for national action to carry out other priorities of the Strategy.

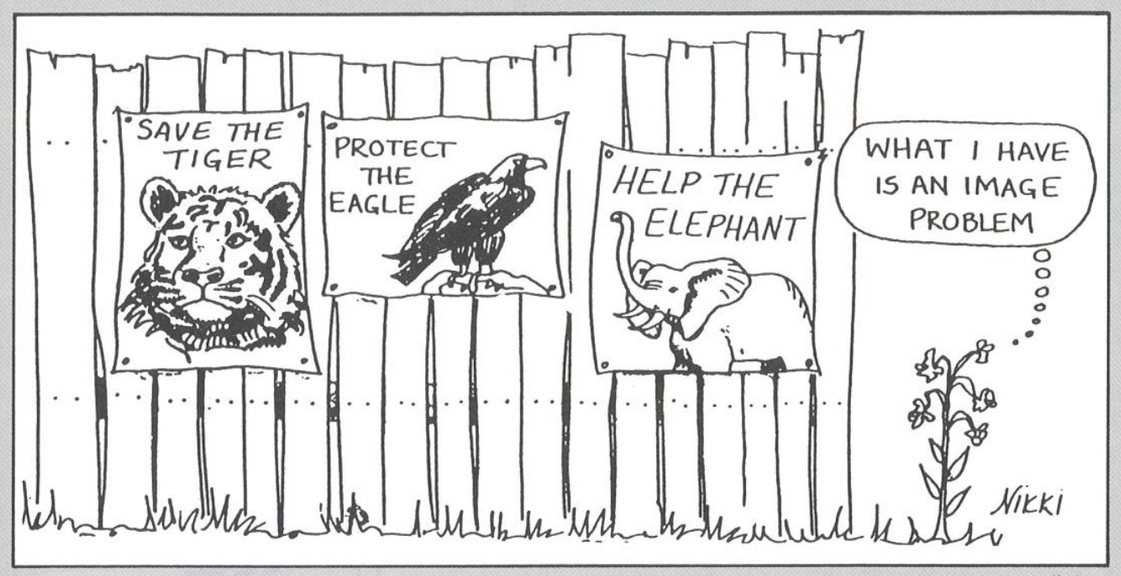
Other Strategies are Needed too

Much habitat destruction and over-exploitation of living resources by individuals, communities and nations in the developing world, is a response to relative poverty, caused or exacerbated by a combination of rising human numbers and inequities within and among nations. Peasant communities, for example, may be forced to cultivate steep, unstable slopes both because their growing numbers exceed the capacity of the land and because the fertile, easily managed valley bottoms have been taken over by large landowners. Similarly, many developing countries have so few natural resources and operate under such unfavourable conditions of international trade that often they have very little choice but to exploit forests, fisheries and other living resources unsustainably. In many parts of the world, population pressures are making demands on resources beyond the capacity of those resources to sustain themselves. Every country should have a conscious and deliberate population policy to avoid as far as possible the development of such situations, and eventually to achieve a balance between numbers and environment. At the same time it is essential that the affluent constrain their demands on resources, and ideally reduce them, shifting some of their wealth to assisting the deprived. To a significant extent the survival and future of the poor depends on conservation and sharing by the rich.

These are some of the underlying factors which inhibit both conservation and development. It is beyond the scope of a conservation strategy to deal with all of them. Living resource conservation is just one of several conditions necessary to assure human survival and well being, and a world conservation strategy is but one of a number of necessary strategies. Strategies for a new international economic order, for human rights, for overcoming poverty, and for population are also essential. The New International Development Strategy prepared by the United Nations deals with some of these issues. Strategies for the others are still urgently needed, for ultimately each is necessary for the others' success. Meanwhile, for the first time in history, a world strategy for living resource conservation now exists. It is long overdue.

Source: Development Forum

Source: The Ecologist, Vol. 10, Nos 6/7, July/August/September 1980



Source: *IUCN Bulletin*

READING TWENTY ONE

BRITAIN'S ANSWER TO THE WORLD CONSERVATION STRATEGY

It *is* possible to both have our cake and eat it, according to the Conservation and Development Programme for the UK. *Mo Dodson* discusses the impact of this important new document, aimed at industry and Government.

On 8 June this year, many distinguished and famous people gathered to celebrate the publication of *The Conservation and Development Programme for the UK*. An important event – as David Bellamy said, perhaps more important than the UK General Election, due to take place on the following day. There were certainly plenty of reporters and tv cameras to indicate that something important was happening – and a few people like myself who looked as if this was the second time they had worn a suit in their lives, trying desperately to let everyone else know by subtle body language that it was a supreme sacrifice of comfort in honour of the occasion.

But in vain did I sit through the tv news broadcasts that evening. Not one little mention, not a whisper did I hear of the event for which I had worn a suit. Election mania had gripped the news editors. Which is why, I guess, the news programmes virtually ignored one of the most famous and important people in the UK (in terms of social protocol at least) who gave an amusing, articulate, sensible and distinctly progressive launching speech.

He said things that even sounded a bit radical, coming, as they did, from very near the throne of England, Scotland, Wales and Northern Ireland. He deplored the widening gulf between "the industrialised countries and the developing nations" and he hoped that this gulf might be bridged by changes in our attitudes towards our own "appalling waste of resources", by our "awareness of certain forms of intermediate technology", and by our "awareness of acting in harmony with Nature... rather than seeking to subdue Her and to exploit Her at every available opportunity." The speaker was HRH the Prince of Wales.

The Royal Assent

I mention his speech first because it was, in parts, one of the clearest and most sensible statements on the environment I have heard, and partly for masochistic reasons, as my primal instincts are republican. It just goes to show that instincts can be wrong – the Prince of Wales seems to be changing his indigenous colour of royal blue to a distinctly benign shade of ecological green. There is, of course, a tradition in the British Royal Family of enlightened princes intervening in affairs of the greedy society of philistine merchants, trying to create an alternative ideal of humane values for the younger generation to emulate. Significantly, perhaps, the few press reports that I read ignored the Prince of Wales' understanding of the relationship between the problems of individual farmers in the UK and the global conservation problems that so urgently require changes in our values and our collective national and international behaviour.

A Cry for Action

Only two of the other speakers stand out in my mind now – David Bellamy and Professor Kassas, President of the IUCN (International Union for Conservation of Nature and Natural Resources). Professor Kassas, with passionate and articulate enthusiasm, congratulated the UK for producing such a worthwhile and prompt response to the World Conservation Strategy. He emphasised the opportunity the UK had to set an example for the rest of the world.

He ended by saying that a conservation strategy should be a compromise, not between conservation and economic growth, but between the needs of the present and the needs of the future.

Unlike the bureaucratic balancing of most English speechmaking, Kassas's oratory nearly brought me to my feet shouting "Right on brother, tell it like it is!" I had to wait another hour before my red corpuscles started moving again. This was when David Bellamy raised his clarion voice, and again intelligence, justice and passion arose, phoenix-like, out of the ashes of a dry-as-dust panel discussion among what seemed to me closet conservationists who come out from their executive office suites every once in a while to make the right sounds in public – like those Renaissance bankers who prayed piously in chapels of their own commissioning before engaging in business deals that the holy fathers expressly forbade as sinful.

A Lot to do in a Short Time

Most of the panel felt that we had a few years' margin (perhaps ten) before present economic and population pressures needed to be turned around. Bellamy cut straight in here with the real story – we have no margin of time, he said – species loss, deforestation, and so on have to be stopped, or drastically slowed down, *now,* or it will be too late. The people who are in charge of the world, he said, are not interested at the moment in conservation – all they want to do is fight over what little is left of our natural resources.

The important point of this article, however, is not to say that bureaucrats and politicians are mealy-mouthed hypocrites, nor to point out, as I should, that the 500 page report itself often degenerates into bland, academic mumbling. The point is that we should all try to carry forward the **aims** of the report with the kind of enthusiasm and sincerity displayed by Bellamy and Kassas. The report was written *by* academics **for** politicians and businessmen. It therefore has to deal with the "art of the possible", and it has to use the carefully measured but boring language of the committee meeting. If it did not, it would not stand an ice-cube-in-hell's chance of being heard by decision makers. As it is, these decision makers cannot now dismiss this document as lunatic ravings from the fringe. It is written in their own "language", and it is formulated with perspectives that they are familiar with.

The Seven Papers

The report consists of seven papers by recognised experts, each laying out what our National Conservation Strategy should aim to do in terms of Industry, Urban Development and Maintenance, Rural Land Use, Marine and Coastal Habitat Use, Overseas Environmental Policies, the creation of a Conservation Ethic, and Education. Each of the papers' authors was attached to special committees composed of representatives of the various industries, voluntary bodies, educational establishments and government departments which would have something to contribute to the paper. After a draft of each paper was written, it was submitted to a wider circle of individuals and groups for further criticism; and, finally, each paper was subjected to public debate. The book includes summaries of all this activity and lists the members of the overall committees and the seven Sector Revision Groups.

Plans for Action

Within each paper there is a great deal of good hard information and sensible recommendations. These recommendations are condensed into ten Action Proposals in the companion volume by Brian Johnson – *An Overview of Resourceful Britain* – the most interesting of these proposals perhaps being number 10: the setting up of a Centre for a National Conservation Strategy which would be a kind of clearing house for information, advice, liaison, and, in general, the promotion of the aims of the UK conservation strategy.

Top academics, top civil servants, big industrialists, rich and powerful pressure groups, etc., have all spent time and effort on this report. Seven of the most respected organisations concerned with conservation in Britain commissioned and organised its writing, and their prestige hangs over the whole effort with a reassuring bureaucratic charisma.

It is indeed a pleasant surprise to find beneath this mantle of respectability that the report is often hard-hitting and well on target. If we could implement its recommendations, we might yet save the world we know. But the point is, can we implement them?

The answer is, of course, "who knows?" But we are now in a much better position to go to the politicians and other decision makers and say: here are the facts and here is a plan of action which is practical and coordinated at all levels. The report itself was commissioned in response to the urgent request sent out by the World Conservation Strategy Conference in 1980 to every nation of the world: "the world is one planet, and we have to act together now if we are to save it. Now is the time to draw up your plans." Some countries, such as Britain, have already started to respond.

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In 1982, the British Foreign Secretary and his Minister of Overseas Aid admitted on a public platform that they were unaware of the existence of the World Conservation Strategy. That kind of ignorance at the top level is dumbfoundingly scary. Hopefully it will never occur again. We **must** not let it occur again. We now have a club (or should I say a trumpet) with which to break down the Jericho-like walls of official ignorance and negligence. Let's use it.

Where the Report Fails

Some criticisms of the report should be made. A minor one is the lack of an index, which reduces the usefulness of the book as a reference work. Another criticism, at a detailed level, is that many of the papers seem to back-track on their hard-hitting analyses with diplomatic and misleading generalisations. Experts in various fields I have talked to say that, as a result, the general picture painted is a lot rosier than is warranted by the real facts.

A more fundamental criticism is the fact that the report as a whole, and even in the section on Conservation Ethics, underestimates the strength of the consumer ethic.

How Do You Change a Consumer Society?

A recent historical study, *The Birth of a Consumer Society* by N McKendrick *et al.*, has shown how deeply the notion of wasteful consumption was involved in the Industrial Revolution. Wasteful consumer buying not only resulted from the Industrial Revolution but also helped to create it, and was encouraged by brilliant entrepreneurs like Wedgewood, who created new "fashions" at frequent intervals, pushing forward an ever-increasingly expensive style of life among all social classes.

One might say that wasteful consumption has become structurally and emotionally built into industrial society. Our way of life and consequently our personalities, and the intellectual framework we use to interpret reality, have all become deeply stained with this notion that wastefulness is good because it stimulates more buying, which stimulates more production, which in turn creates jobs, which in turn raises the general standard of living, which in turn requires more goods and stimulates more growth.

How we go about changing this deeply held belief in wasteful consumption is not directly attacked by the report, and yet it is at the heart of the problem.

Isolated remarks within the depths of the text do, however, refer to the problem, for example: "The Ecology Party is not alone in seeing the rampant inflation which has afflicted most developed economies in recent years as a symptom of a wider problem: the pursuit of non-sustainable economic growth which, because it must ultimately consume the planet's natural capital, is inherently inflationary." "Now is an auspicious time to challenge the growth ethic. For economics has overreached itself, and is in crisis."

Government Support?

Another point that should be mentioned is that David Bellamy has promised to write a book extrapolating from the whole report what he feels are the important themes and signposts. One of the main points Bellamy's book may well make is that a lot of the recommendations in the reports are already being implemented by various groups, and that what is needed to speed up the process is government backing.

For example, a survey recently conducted by my wife and myself on alternative farming methods revealed a large number of individuals and organisations who are already experimenting with new ways of land management. These include not only organic and biological techniques but also such imaginative ideas as forest farming, perennial horticulture, agro-forestry and wildlife management. Although there seems to be a healthy number of these experiments, the amount of financial support given to these organisations is miniscule when compared to the support given to the research into high-input high-tech agriculture and food production.

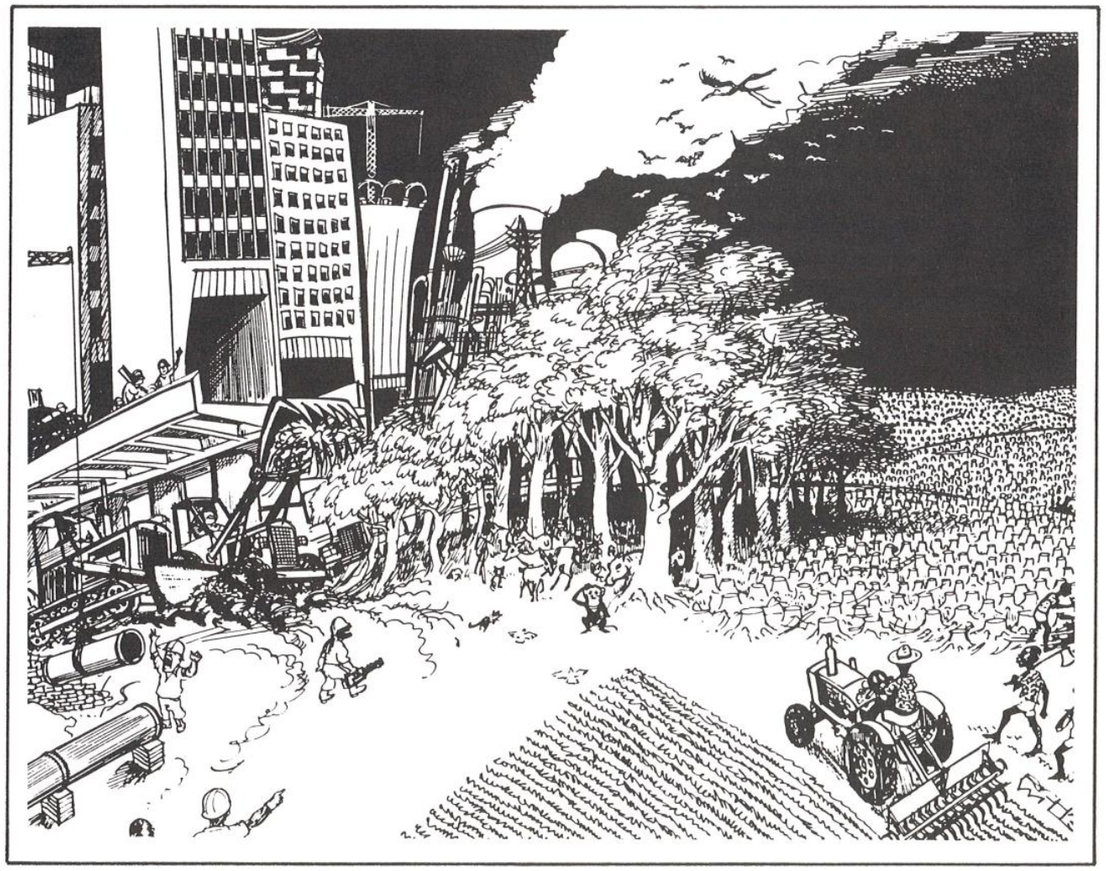
I can forsee two depressing scenarios. First, these brave and imaginative experiments will be passed over by big business and government agencies, rushing to cash in on ecologically based developments. The long years of hard work in the "wilderness" (no pun intended) of such organisations as the Soil Association and Permaculture will then add up to an ironic insult. Second, these experiments will be bought up by the Big Boys.

In either case, the original ecological ethic of a humane, rational and sensitive attitude towards the environment and fellow humans, will be lost in the perverse "logic" of profit and corporate power.

What You Can Do

In conclusion, therefore, if you actually embark on the long project of reading this report, make a mental note of the fact that many of the valuable conservation and environmental projects that have been going on for some years are not mentioned. Nonetheless, it is an instructive and invaluable work of reference, and the basis for future action. Whether you intend to read the whole work or not, you should make sure that your public library has a copy, and that your MP and local councillors know of its existence and importance to you as a voter.

Source: BBC Wildlife, August 1983



Source: Richard Willson, WWF United Kingdom

CHAPTER THREE

UNDERSTANDING SOCIETY AND NATURE IN THE CONTEMPORARY WORLD

By now, you have perhaps used some of ***What We Consume****'s classroom activities, learned something of its curriculum rationale, and considered some of the readings in Chapter Two which influenced its approach. While you will already have developed some understanding of the key questions and concepts which form an important part of the rationale, this chapter seeks to develop that understanding by providing an overview of the social use of nature within the contemporary world. It tries to explain how our global society works, how issues of environment and development can be related to social processes, and how the key questions, concepts and ideas focus teachers' and pupils' attention on these. You will find it useful to make repeated reference to the framework of key questions and concepts (page 4) while reading this chapter.*

Human societies are based on the social use of nature. Everything we use is ultimately derived from nature and no society can entirely isolate itself from the natural world. In working to transform nature, people in societies create economic wealth and the physical and social environments in which they live. The development of societies results from changes in economic production which bring new impacts on nature as well as changed human environments and patterns of social organisation. While much of the debate on development and the environment focuses on nature and ecology, the immediate environmental problems facing the majority of the world's people relate to such concerns as work, food, housing, health and safety.

IMMEDIATE ENVIRONMENTAL PROBLEMS...

This chapter will argue that the type of transition to ecologically sustainable production and development, advocated by the *World Conservation Strategy*, should be used to solve these problems. It suggests that the extension of economic and political democracy, to make possible new forms of production supported by new institutions and values, would improve the environmental well-being of the majority of the world's people and facilitate a more caring use of nature. This argument begins from an historical perspective.

AN HISTORICAL PERSPECTIVE

Human history is one of increasing control of nature using changing technology. It shows two lines of development: people's changing relations to each other – to society; and their changing relations to the natural world. These two lines are interdependent because new forms of social relations allow new forms of economic production involving new ways of using nature. Development brings new patterns of ownership and control of human and natural resources which allow new forms of work, new technologies, and changed relations with the natural world. Because a society's relations with nature reflect its economic and political organisation, issues of environment and development can only be explained by reference to underlying social, or structural causes.

For most of human history societies have existed at a subsistence level with no significant surplus of economic production. Such "primitive", communal societies, such as the Australian aborigines or Amazonian indians, generally show a form of social organisation based on mutual aid and protection, the sharing of labour, a high level of equality, and the absence of private property. It is only with the development of technology and control over nature that surplus becomes a reality. It allows the development of society in material and non-material ways for, unlike surplus in other ecological systems, surplus in human ecosystems can have permanent as well as temporary impacts. It can become the basis for expanded future production and also allow one group or class within society to become advantaged compared with another.

Recent history shows a succession of societies in which surplus has been appropriated by a minority and used as the basis of economic and political power. Slave owners, feudal lords, capitalists and state bureaucrats have organised production and society in ways which have increased their power. Each form of society has further developed economic production and control over nature and so made possible the transition to new forms of economy and society. In each case a new form of social organisation, which was progressive in facilitating such development, later became regressive and an obstacle to further progress. It is at such times in history that people's awareness of alternative forms of society, which can better contribute to human development and freedom, motivates political action for radical social change.

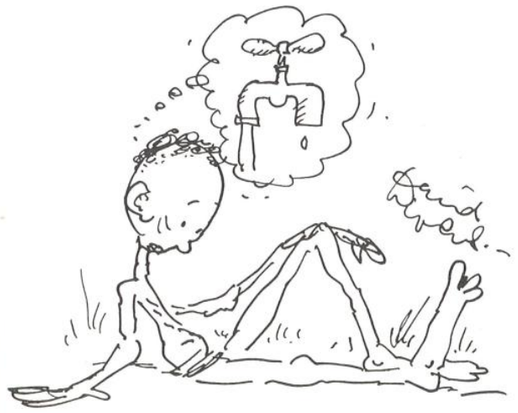
We are currently living through such a time when environmentalists are amongst those pointing out the mounting problems of sustaining existing socio-economic systems and urging a transition to viable alternatives. Their arguments and actions, designed to promote ecologically sustainable forms of economy and society, are paralleled by those of other social movements concerned about such issues as global inequality, the arms race and women's rights. Together with the abuse of nature, such issues result from the uneven distribution of power in existing societies and can only be resolved by an extension of economic and political democracy.

To enable teachers and pupils to examine critically such arguments as those set out in the previous paragraph, *What We Consume* relates environmental issues dealt with in the World and UK Conservation Strategies to the economic and social structures of different societies. Following a scheme used by Adrian Leftwich in his book *Redefining Politics* (see reading 11), it views issues in the context of five systems which define a society and shape its use of nature. These are the systems of **economic production, distribution and redistribution, power and decision making, social organisation** and **culture and ideology.** The salient features of each of these systems will now be considered.

ECONOMIC PRODUCTION

Economic production is the process whereby natural resources, labour and technology are used to produce economic goods and services. The earth's natural resources sustain a wide variety of human societies, carrying out different forms of economic production and placing widely different demands on nature. The overall impact of this production on the natural world leads the authors of the *World Conservation Strategy* to urge the adoption of forms of economic production and development which are ecologically sustainable. In other words, ones which maintain ecological processes and life-support systems, preserve genetic diversity and encourage the sustainable use of species and ecosystems. Such change would require new forms of production and consumption, based on alternative technology and governed by new priorities and regulating mechanisms.

The case for new forms of economic production and development can also be made on the grounds that existing systems of production have failed to solve the problem of poverty. Economic production has the potential to satisfy a wide variety of human needs from food and shelter to health care, education, leisure and the arts. Yet despite huge increases in the quantity of production, millions of the world's people lack many of these basic needs while many others live lives of luxury involving considerable waste. To understand why growing production has failed to meet everyone's needs, and why ecological knowledge has not been applied to the wise management of resources, we need to consider the priorities of those who control systems of production. By placing the needs of minorities before those of the majority, they have precipitated an ecological crisis and jeopardised the sound development of countless environments and societies.



MANY LACK BASIC NEEDS...

CAPITALISM AND STATE COLLECTIVISM

The two dominant forms of economy in today's world are capitalism and state collectivism. In both systems a minority controls economic life, but the mechanism it uses to do this differs. **Capitalist economies** are regulated by the market, whereas state collectivist economies are regulated according to a central plan drawn up by the state.

In capitalist societies natural resources are privately owned. The market plays the central role in allocating them to different forms of production and also determines the distribution of the resulting goods and services. Resources are put to the most profitable use and the benefits distributed to those who can pay the highest price. The uneven distribution of economic wealth means that the market operates in the interests of a minority and that many needs remain unmet. Competition between capitalists and the need to contain antagonisms between capitalists and workers bring continual pressure for economic growth—generally at the expense of the environment.

In **state collectivist societies** there is much public ownership of resources, and production and distribution are determined by a central plan. In theory, planning is used to generate and allocate resources according to human need, but in practice it faces major difficulties. State collectivist societies have shown the growth of insensitive bureaucracies which have stifled democratic political institutions seeking to represent the needs of the people. To maintain their political power bureaucratic elites have pursued policies of rapid economic growth with an indiscriminate approach to technology and scant attention to the impact of economic production upon the environment.

While it is convenient to divide economies according to their dominant form of regulation, all societies are characterised by economic pluralism. While one mode of regulation, or economic structure, is dominant, others are also necessary if a full range of goods and services are to be available, and the society is to reproduce itself over time. In capitalist societies the role of the market is supplemented by economic decision making and planning within the firm and the state; in state collectivist societies central planning is supplemented by legal and illegal markets and some privately owned enterprises. In both types of society, the production and reproduction of labour power within the family also serves to sustain the economy.

The existence of economic pluralism within all societies means that there are a variety of causes of conflict. These will be considered later in the chapter as part of the system of social organisation, but it is important at this point to note that the extension of economic democracy is currently a focus for growing conflict at numerous sites within both capitalist and state collectivist societies. Some workers and citizens are demanding the right to decide priorities within the economy and to have a major say in matters of immediate concern at work and in the community. Such demands often include alternative forms of economic production, making use of alternative technology and having the potential to provide better work, meet social needs and sustain a healthy environment.

These calls for greater economic democracy are closely linked to those of the environmental movement. They are also related to trends within the world economy: that system of economic production which links all societies together in a single process of combined but uneven development. It is the growing impact of this process which has strengthened demands for economic democracy throughout the world.

THE WORLD ECONOMY

Over the last four hundred years, the world's people and resources have been progressively integrated into a single network of economic production and exchange with a related division of labour. Today, commodity chains criss-cross the globe, linking producers of raw materials with processors, manufacturers and consumers. Consumption in one society depends on production in another far away, and consumers generally remain unaware of the social and environmental impacts of what they consume. The world economy is one based on profit and the accumulation of capital; a process which can only take place through unequal exchange and the exploitation of people and environments throughout the world.

One of the major agents of such exchange is now the multinational company, assisted by the international banks and powerful nation states. The multinational company sustains and develops ways of transferring surplus from other parts of the world which have their origins in colonialism and later forms of imperialism.

Developed as sources of cheap raw materials, food and labour, colonies also provided markets for manufactured goods and profitable returns on investment. Following political independence their economic dependency has been sustained by deteriorating terms of trade, protectionism by industrialised capitalist countries, increasing balance of payment deficits and mounting foreign debts. Present-day imperialism, or foreign control of resources and economic development, is based on processes of unequal exchange which are built into world markets and sustained by political and military power.

Multi-national companies take advantage of these processes and of a competitive state system which means that they can operate within boundaries wider than any political entity and continually transfer capital from political to economic units. Their investments sustain the dependency of societies in the South as does their control and diffusion of technology.

While aid and development assistance are often seen as a means of overcoming poverty, much aid and financial help is designed merely to bring underdeveloped countries in line with the economic and political priorities of powerful donor states and multilateral agencies such as the IMF. In the present world economy development and underdevelopment are the two sides of one process each bringing environmental problems in their wake.

It is the location of production, in response to the processes just examined, which structures the world's economic and environmental relations. A hierarchy of nation states, based on their dominant production processes, shows a threefold division into core, periphery and semi-periphery, which mirrors the global division of labour. The fact that there is no political power which controls the whole system is an important root of many global problems including those relating to the environment.

NATION STATES AND THE GLOBAL DIVISION OF LABOUR

Within the world economy it is possible to recognise four groups of states. The **core** states, centred on the USA, Western Europe and Japan are the recipients of capital produced elsewhere in the world. Consisting of the ex-colonial and newer neocolonial powers, these states are the centres of industrial and finance capital. Here are the headquarters of multinational companies and international banks and the homes of the world's most powerful people. The economies of core states are broadly based on highly mechanised and profitable processes. It is here that most of the world's research and development, which leads to new product cycles, are concentrated. The majority of people in core states enjoy high wages and standards of living sustained by energy and materials imports from elsewhere, particularly from peripheral states. Politics in the core is dominated by the struggle between the owners and managers of capital and organised labour.

It is the **peripheral** states of the world economy – those countries which Brandt referred to as the South – which are being actively underdeveloped by the process of unequal exchange mentioned above. Predominantly small and powerless, these states have dual economies in which an extensive subsistence and pre-capitalist sector exists alongside a modern sector orientated to the needs of overseas investors and their local agents. They are heavily dependent on manual labour and the export of raw materials and cash crops, and there is an urgent need for appropriate development to meet people's needs. While the introduction of capitalist enterprises into these states can serve to increase useful production, socialise labour, provide vocational training and increase the tax base, too much foreign investment serves only to deplete resources, damage the environment and casualise the workforce without developing useful infrastructure or paying a fair return in royalties and taxes.

Unable to break free from structures of economic and political dependency, the development of peripheral states is constrained and their future largely determined outside their borders. While local elites act as the agents of multi-national capital and foreign governments, the vast majority of the people find themselves condemned to a life of increasing poverty and powerlessness. Politics is dominated by anti-imperialist and national liberation movements which seek to turn the economy and development to the advantage of the local majority. Such movements have succeeded in establishing variants of socialism in some states and many of them find a common voice and international links through the Non-Aligned Movement.

Between core and periphery are found a third group of states, many of them large and rich in resources. These **semi-peripheral** states have been able to accumulate some capital locally and attain a degree of dependent development, having production processes typical of both core and periphery. They include the Newly Industrialised Countries, which are essentially the cheap labour manufacturing outposts of the core states. The political price of their dependent development has generally been high for many are characterised by undemocractic and repressive regimes. Some may be destined to enter the core while others, who remain heavily dependent on outside capital, may return to the periphery.

The fourth and final group of states consists of the "socialist" states or **state collectivist** economies of the Eastern bloc which have their own satellites in the South. While these state collectivist economies tend to be more isolated and self sufficient than those of capitalist states, it is possible to recognise core and periphery within the realm of Soviet imperialism, and to document an increasing dependence of the socialist states on the rest of the world where they have peripheral or semi-peripheral status (see reading 14).

While economic development in the COMECON countries has at times been impressive, these economies share the common problems of periodic shortages of consumer goods, excessive bureaucratic centralisation and the slow emergence of socialist technology. Current policy changes in China are the latest indication of their declared need for Western capital, technology, strategic raw materials and management styles. Their politics are characterised by power struggles within the ruling bureaucracy and the state's need to meet popular demands for greater democracy if it is to revive economic performance.

BRITAIN FACES DECLINE...

CYCLICAL AND SECULAR TRENDS

As no single agency is in overall control the world economy shows periodic phases of capital overaccumulation when the capacity for economic production exceeds that for consumption. As such periods approach the rate of profit falls, factories close and workers are laid off. Major economic recessions, such as that of the late 1970s and early 1980s, seem to occur every 40 to 55 years and are related to the growth and decline of major product cycles. The upturn which is slowly emerging will be based on the new computer technologies and may see the core of the world economy shift to South East Asia and the Pacific Basin.

In restoring profitability, capital reorganises or restructures the global network of production processes together with the social and spatial relations associated with them. It does this with the help of nation states which move up or down the spatial hierarchy, depending on the nature and profitability of the processes within their borders. In the past 40 years Japan has moved into the core while some commentators suggest that Britain faces decline from the core to the semi-periphery.

A recurring result of such restructuring has been the extension of the periphery to bring new workers, resources and markets into the world economy. There are real physical limits to such growth; these are an important cause of the long-term and persistent trend towards crisis within which shorter term economic cycles are embedded. A further cause is the expansion of opposition movements as more and more poor people in the periphery find their lives constrained by new economic and political structures, and more and more people in the core demand a high level of welfare, or a high social wage, as their price for co-operating with the system.

ECOLOGICAL CRISIS

The ecological crisis, documented in such reports as the *World Conservation Strategy*, results from the workings of the world economy. Competition between capital formations, which must expand their capital in order to preserve it, and between nation states seeking increased economic and political power, fuels economic growth. More and more of the earth's living and non-living resources become mere commodities to feed commodity chains and provide goods and services for the global market. Pressure to continually expand and cheapen production inevitably results in such social costs as pollution, resource depletion, habitat destruction and species extinction.

While the general causes of environmental problems are to be found in the processes at work within the world economy, it is important to recognise that their specific origins and forms vary across the four groups of states described. The continued and accelerating transfer of surplus from the periphery to the core leads to increased exploitation of people and nature in the countries of the

PRESSURE TO EXPAND AND CHEAPEN...

South. Locked into structures of economic and political dependency, many governments and people in these countries are forced to overexploit their natural resources in order to survive. Minerals and timber are sold off to national and multi-national companies to increase cash income and repay national debts. Pastures are overgrazed, soil is eroded and wildlife hunted to extinction to maintain the power and wealth of ruling elites and to meet the immediate needs of the desperately poor. Dependency means that the majority of people have no alternative but to work the land to exhaustion, and without appropriate development family sizes remain high, partly to maximise labour availability and provide security in old age.

Conventional development often serves merely to increase this dependency by undermining traditional, ecologically sustainable forms of production, and by eroding the knowledge and technology on which they are based. The disaster currently affecting much of Africa illustrates these trends for famine and desertification result from such factors as government antipathy, urban policy bias and export cash cropping, made worse by drought. These products of dependency worsen the plight of the poor and ensure that traditional pastoralism is no longer viable.

Those states which have moved to the semi-periphery have often done so by exploiting their considerable resource base. Some have been prepared to accept levels of pollution no longer tolerated in the core and the breakthrough to mass consumerism in these states brings with it a range of new environmental problems. While socialist states have experimented with the public ownership of resources and the central planning of the economy, they have not avoided these problems. Their reforms have unlocked productive capacity and improved economic growth, but a growing literature suggests that they now show severe symptoms of environmental abuse.

As was suggested when considering state collectivist economies earlier, the majority have adopted Western technology uncritically and have failed to give sufficient attention to the limits of nature in their economic planning. Their mistakes can be traced to the lack of a developed ecological perspective in Marxist ideology and to the growth of bureaucracies which exploit people and nature in their own interests. While any analysis should recognise the wide differences between state collectivist economies acknowledging China's experiments with communal organisation and radical technology for example, there is clearly a need for their planning to incorporate an ecological dimension.

In the core states, environmental problems result from the need to maintain profitability and political stability. Here consumer societies are based on a treadmill of production which establishes ever more distorted wants and satisfies them with ever more damaging impacts on the natural environment. Consumerism gained the support of capital, workers and the state for it yielded increased profits, living standards and taxes. Firms, governments and individual households have all become addicted to patterns of growing production and consumption. The political consequences of the slowing of the treadmill, with the onset of recession, have therefore been severe.

RECESSION AND FUTURE ECONOMIC PRODUCTION

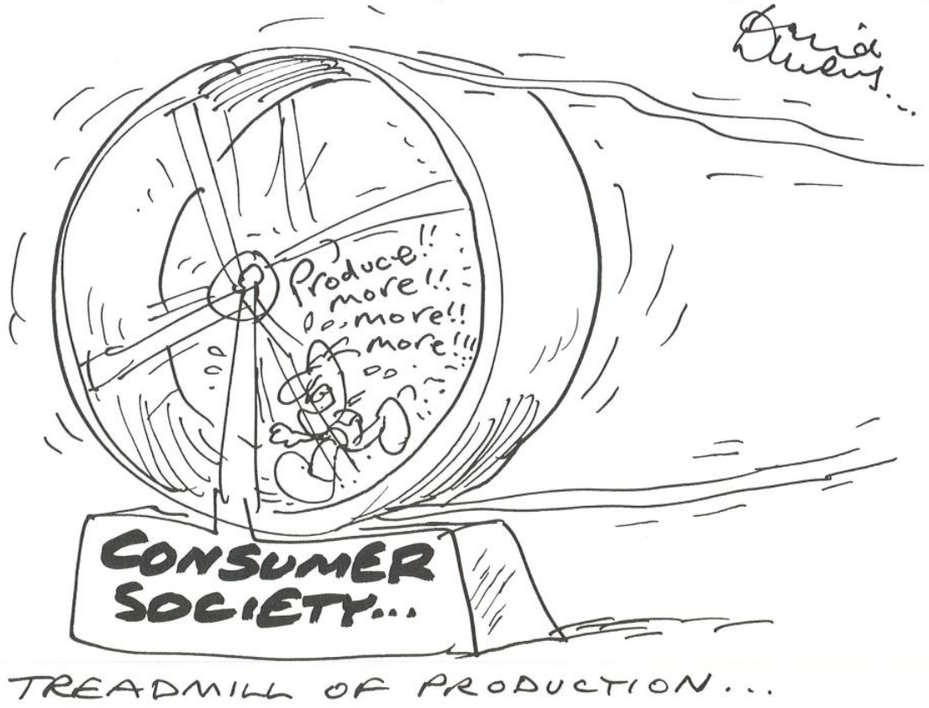
The recession of the 1970s and early 1980s was a product not only of capital over-accumulation but also of the physical limits to growth. The post-war boom saw the acceleration of the treadmill in the core states, in order to counter falling profitability, but this brought higher rates of resource depletion and environmental damage to much of the world. Capital was therefore faced with rising costs of raw materials and increased charges for such elements of the environment as clean water, previously free. Its costs were also increased as pressure from a newly emerging environmental movement brought tighter controls over the use and abuse of nature.

In order to counter falling profitability and create the conditions for a new cycle of investment, much productive capacity within the world economy has been written off. Demand for raw materials has fallen, interest rates have risen, and there is less funding available for development from rich states whose leaders put increased faith in market forces. Such results of recession mean that the plight of poor people and their environmental well being have worsened considerably in recent years. Resolving the economic crisis has intensified the environmental crisis and eroded the concessions which environmentalists gained in better times. All is not lost, however, for the new cycle of growth offers clear possibilities for more ecologically sound production.

The new electronic technology which is providing the foundation for a new wave of accumulation within the world economy can further consolidate existing hierarchical relations or can be used to extend economic democracy. Computer-aided production and services can be used to generate profit, create unemployment and widen existing inequalities. Alternatively they can be used to abolish the need for routine and boring work, and to extend the range and availability of socially useful goods and services in a more equal, decentralised and democratic society. In arguing for the latter, many environmentalists recognise that the future of economic production – the new technology – and ecologically sustainable development are intimately linked. The new technology now allows forms of economic democracy, planning and development which have previously been mere utopias.

DISTRIBUTION AND REDISTRIBUTION

Once nature has been transformed by the system of economic production, the resulting wealth is distributed and redistributed within and across societies. We have seen that because market regulation is dominant in the world economy and economic power is unevenly distributed, marked inequalities result. Within societies, groups or classes vary in their gains from past and present use of nature, experience varying degrees of environmental well being and share unequally



TREADMILL OF PRODUCTION...

in the costs and benefits of environmental protection efforts. Across societies there are similar variations with different nation states experiencing different forms of development and underdevelopment, each with consequences for the environment.

These inequalities are related to the divisions of labour within the world economy and are maintained by prevailing social institutions, cultures and ideologies. The redistribution of economic wealth and power to allow greater economic democracy would encourage socially useful and ecologically sustainable forms of production and development to take root. In short, social justice and ecological harmony are inseparable.

The *World Conservation Strategy* recognises that conservation without development could widen existing inequalities. It therefore advocates conservation **with** development, suggesting that development is production and conservation the maintenance of production. The liberal nature of the Strategy does however mean that it gives little attention to the need to restructure economic relations. Only redistribution of wealth and power can end the competition and envy which fuels economic growth, slow the treadmill of production and consumerism which generates so much waste, and eliminate the poverty which leads to environmental damage.

While the market is incapable of such redistribution, nation states and the international political system have attempted some redistribution as part of their attempts to manage the economy and maintain social harmony. The role of the state in environmental management and planning will be considered as part of the system of power and decision making. For the moment it is sufficient to note that most governments act as agents of redistribution through taxation and public expenditure.

In capitalist societies such spending is not simply welfare or a social wage designed to moderate conflict. Some of it sustains the advantages of the privileged and much can be seen as a direct subsidy to the private sector. Advanced capitalism requires state management for its survival and there are close corporate links between the private and public sectors. Capital is well adapted to socialising its environmental costs by ensuring that the state pays for much of its necessary infrastructure and for such environmental services as waste control. Increased taxes, to support a rising level of public expenditure, have contributed to the decline in capital's profitability and governments therefore find themselves under increasing pressure to reduce spending.

In state collectivist societies the central plan allocates resources to environmental and other goals. That environmental standards are so rarely reached is partly the result of inefficient bureaucracies, secrecy and inappropriate technology. It is also due to the primacy of economic targets and the need to compete with Western powers.

Within the realm of international relations and politics, redistribution across states is a constant item on the agenda. Liberal reformists, such as the authors of the *Brandt Report*, advocate increased transfers of trade, investment, technology and aid as a form of international welfare designed to develop the economies of the South while reviving those of the North. They fail to acknowledge that most of these transfers only sustain structures of power and dependency and that real help for the poor requires radical change in the world's economic order.

Only when peripheral states have some control over the price of their imports and exports and of the terms on which they acquire technology, aid and loans will they be able to realise autonomous development and begin to eliminate poverty and its environmental impacts. Demands for such a New International Economic Order gain wide support amongst the governments and peoples of the South but have fallen on increasingly deaf ears in the North. There is no international agency with the power to force such redistribution on powerful nation states whose primary interests are maintaining their advantage.


ARMS RACE DIVERTS RESOURCES

Ultimately, a competitive world order depends on the ability to resort to armed force. Military power is a necessary part of political

power and in defending their spheres of influence the superpowers are locked into an arms race. The "military–industrial complex" is now a significant part of the leading capitalist and state collectivist economies and the leaders of many peripheral and semi-peripheral states depend upon arms imports to sustain their power.

The arms race is potentially the most damaging form of consumerism. It diverts considerable resources from human needs, dictates constant economic growth and poses the ultimate environmental threat. It is not surprising that so many environmentalists regard the attainment of peace, and the diversion of arms spending to development, as a priority within their programmes.

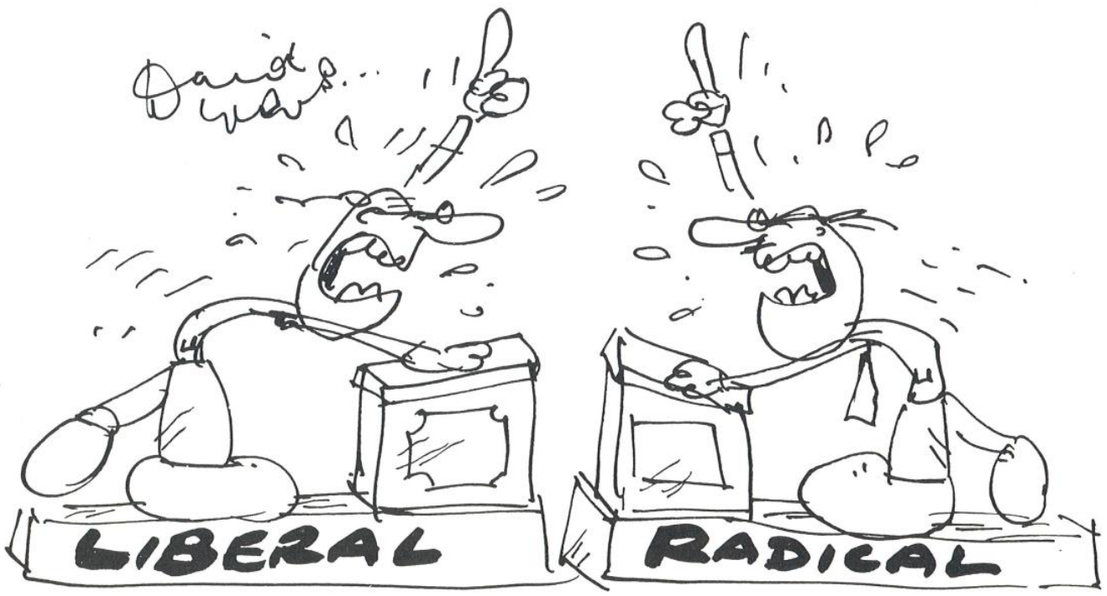
POWER AND DECISION MAKING

In societies where economic wealth is unevenly distributed and people's levels of environmental well being show marked variations, politics plays a central role in social affairs. The policies and actions of governments seek to regulate society's use of nature, affect the distribution and redistribution of the resulting costs and benefits and determine the outcomes of conflicts over the environment. An understanding of political systems of power and decision making is therefore central to an understanding of society and nature.

A three-tier political system, consisting of local and nation states and the realm of international politics, operates alongside the world economy. Decisions in this system regulate activity within the component parts of the world economy and it is often perceived as an effective instrument for resolving such problems as poverty, armed conflict and environmental abuse. Further consideration, however, suggests that existing political systems are generally only capable of ameliorative or reformist action and that their capacity for this is currently in decline.

The rise of capitalism saw the rise of the nation state; an institution for the collective management of the affairs of the ruling class within a particular territory. The state was needed to impose some order and co-operation on economic and political life within its borders and so provide the ground rules for competition between capitalist enterprises. It also expressed the collective power of its rulers and enabled the competitive seizure of territory and people elsewhere in the world. Many states were set up in self-defence against such imperialism. Some are still carrying out a form of colonisation designed to consolidate their territory and power. In those states where workers' parties have gained control of the state and attempted to create socialist states, these have generally failed to realise their promise of real economic and political democracy.

The modern world consists of around two hundred nation states, each containing a sector of the world economy and displaying



THE KEY DEBATE...

one of a large number of forms of government. Government is the major agent of the state; a short-term mechanism for carrying out its day to day business and promoting its long-term goals. Government action can however only be understood by reference to a theory of the state which separates it from government.

The development of such theories has been one of the growth areas of the social sciences in recent years. The key debate has been between liberal and radical theorists. Liberals separate economic and political life and employ pluralist theories of a neutral state. Radicals regard the economic and political as complementary aspects of one overall process and use Marxist theory, which regards the state as an instrument of the dominant class. Debate amongst radicals has centred on the need to avoid a narrow economism (which allows the political sphere no autonomy from the economic) and to explain the wide variety of states, each with different forms of political life and government, within the world system.

Nation states are the local authorities of the world system, enabling local capital accumulation and providing a platform for local capital to operate in the world market. Since they have different histories, populations and fragments of the total economy, and are differently affected by cyclical and secular trends over time, we should expect great variety in their form. The political will attain greater autonomy from the economic in some states at some times, but this should not distract one from the modern state's core functions of aiding capital accumulation and legitimating the prevailing economic system.

The global scale of capital's operations and the current need for economic restructuring mean that an increasing number of states find these functions contradictory. They must ally themselves with imperialism to attract investment and employment, but at the same time they must set themselves against imperialism if they are to protect other jobs and investment and so maintain the support of the people. As the state loses its bargaining power and room for manoeuvre, it tends to become more repressive.

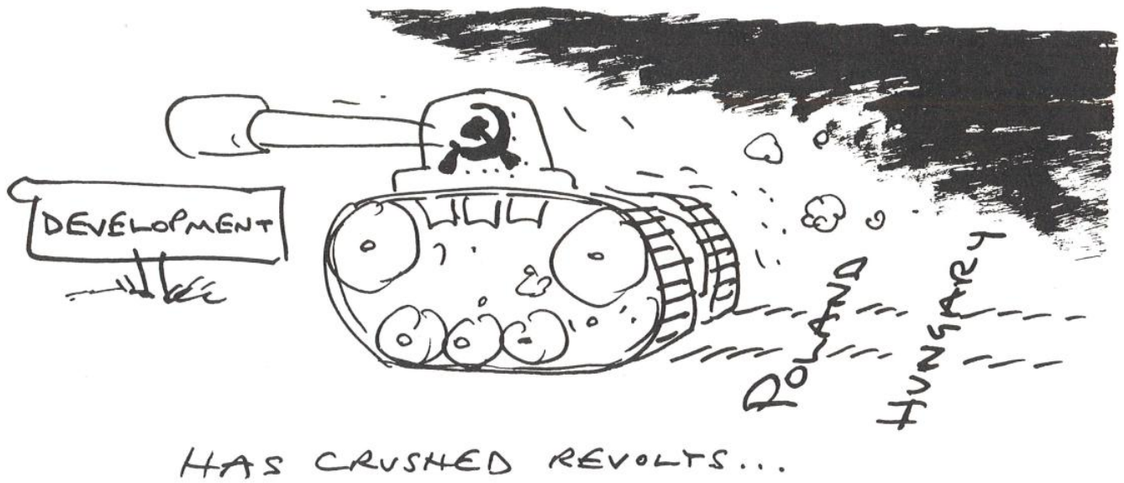
The political stability of core states has been based on their strong place in world markets and consequent ability to pass on surplus to their peoples. The post-war boom enabled the growth of welfare and sustained forms of liberal democracy in which the political did gain greater autonomy. In these conditions, workers' parties have been content to pursue reformist policies, and their leaders have often defended imperialism in their own interests. As growth turned to recession, the state acted to aid restructuring and this automomy was reduced. Welfare was cut back, the policies of social democracy changed to those of the new Right and social consensus was replaced by social conflict.

In the peripheral states, a lack of economic surplus means that politics is often based on coercion and a strong state. Military rule has proved a popular means of sustaining the interests of local and international capital under forms of neo-colonialism. Where revolutionary and nationalist movements have fought to establish a form of socialism, economic scarcity has generally undermined their ambitions on coming to power. Popularist governments pursuing programmes of self-reliant development have been frequently subverted by internal tensions and bureaucracy, the growth of corruption and bribery, the foreign policies of the superpowers and the existing global economic order. The superpowers remain anxious to maintain their spheres of influence in the periphery and armed conflicts here have been a common feature of recent world history.

It is in the semi-peripheral states that the balance between coercion and consensus is often most delicately poised. If the state is to accumulate capital and climb into the core, it must put accumulation before consumption by its people. The potential for unrest and class struggle is therefore strong and dictatorships are common. The costs of coercion are generally lessened by governments adopting the mobilising strategies of fascism, socialism or nationalism, and these policies are again influenced by the foreign policies of the core states.

The state collectivist economies provide further examples of the difficulties of creating democratic socialism from economic backwardness and scarcity. The Soviet Union has achieved development at the expense of democracy and its dependent states, and has crushed revolts in Hungary and Poland in the process. It has used its own version of the treadmill to maintain public support and finance the arms race. "Nation before self" has been a continuing theme in the socialist states and the need for more rapid accumulation underlies current political change in several of these states.

Within the various nation states are local political and administrative units. In advanced liberal democracies like Britain there are often three levels of government, the triad serving the same stabilising function as the threefold division of the world economic and political order. The local state develops its own priorities and bureaucracy, and its rela-



tions with local capital may set it in competition with national or international interests.

As the number and complexity of commodity chains have grown, individual states have sought to control the flows of capital, materials and labour across their borders, and to shape world markets in the interests of local enterprises. The international political system provides the ground rules for such competition by legitimising and constraining sovereign states. It uses a framework of international law and treaties, much of it embodied in the United Nations system, to impose limits on the economic, political and military behaviour of its constituent members.

The political relations between states mirror the economic relations found in the global division of labour. Strong states are able to shape world trade to their own advantage and recreate new peripheral zones, using force if necessary. Weak states have very little global power; their sovereignty is often little more than a token identity. The strongest states rely heavily on covert power which stems from their structural position in the world economy and their ability to determine and manipulate the questions which appear on international agenda and the decisions which are, or are not, taken. Rarely will they need to resort to actual use of force and their considerable power means that they can afford to appear liberal in nature. It is the weaker states which are often authoritarian and given to displays of overt power.

Consideration of the politics of the world economy suggests that the modern world is characterised by two kinds of politics. The basic struggle between classes within states, at national and local levels, has been made more complex by the rise of other opposition groups seeking separate identities or pursuing single issues such as peace, women's liberation or ecologically sustainable development. Across states, international politics is characterised by the struggle for economic and political power between different groups of the world's ruling class. States continually enter and leave pacts and alliances in pursuing shared aims. It is the competition between these groupings which sustains the arms race and poses the ultimate global threat.

ENVIRONMENTAL POLITICS

In seeking to reduce the environmental damage which results from the workings of the world economy, environmental pressure groups seek to engage the governments of nation states and international political agencies. They must take on the state because it is generally a major owner and user of land, plays a key role in regulating land use and is regarded as the only body capable of enforcing environmental controls.

Studies of the environmental movement in the liberal democracies of the core countries help us to understand the class background, ideologies and utopias which guide its activities, plus the ways in which its constituent groups take part in politics. These strategies include appeal to elites, electoral methods, links with trade unions and community action. The studies show that environmental groups vary in the resources at their disposal: in their relations with government, parliament and the media; and in their links with one another. Their tactics and level of success can be largely explained in terms of the theory of the state they overtly or covertly adopt.

Social scientists relate environmental politics to alternative theories of the state. Pluralist strategies rely on mobilising public opinion, using the electoral system, and making use of such consultative mechanisms as public inquiries. They are often successful in protecting the interests of the already privileged, but reflect an essentially benevolent view of the state, a fragmented view of power and a reluctance to recognise the class character of environmental issues.

Those who see power as unevenly shared and lying with established groups, are more inclined to adopt what are called corporatist strategies. Recognising that much debate is closed and that decision making is not democratic, they seek to get issues on the agenda and reform political procedures. In Britain such strategies have led to a growth of lobbying, demands for greater freedom of information and proposals for changes in the planning enquiry system.

Radicals doubt whether pluralist or corporatist strategies can have much impact. Since the state acts in the interests of the capitalist system as a whole and has certain underlying imperatives, it can make only occasional concessions to environmentalists. These will be necessary to maintain its legitimacy and, while some have had major beneficial results – especially for human health, they have rarely harmed capital as a whole.

The managerial activities of the state can only shift the balance of power between capital and other groups within certain limits. In times of recession these limits are reduced and what environmental concessions are granted are likely to be at the expense of the already poor. In this situation radicals should employ labour-based and grassroots methods to relate environmental issues to the concerns of ordinary people, to challenge the state directly, and to give people a sense of their own power and of alternative futures.

The global dimension of such issues as desertification, acid rain and the future of Antarctica means that there is increased pressure for supranational action. There is now a proliferation of international organisations concerned with environmental management and conservation and they police a growing number of international agreements and regulations. The main agencies are intergovernmental organisations such as the United Nations Environment Programme and the European Economic Community, and non-governmental organisations such as the International Union for the Conservation of Nature and Natural Resources, and the World Wildlife Fund. Much of their work is done through negotiation and international diplomacy, but NGOs may resort to other tactics as Greenpeace has done in its efforts to ban whaling.

Until 1980 the actions of these agencies were largely reactive and *ad hoc*, but in that year WWF and the IUCN launched the *World Conservation Strategy* to persuade governments of the need for national conservation and development programmes. By that time the initially hostile and suspicious attitudes to conservation of many peripheral and semi-peripheral states had mellowed, but the priorities of the international political system and national sovereignty remained significant obstacles to the implementation of what were essentially liberal reforms.

Within the international political system, ecologically sustainable development is not a significant item on the agenda. International politics remains dominated by East/West rather than North/South issues and the United Nations Environment Programme lacks the power and resources of a UN agency. It is merely the environmental **conscience** rather than the environmental **programme** of the United Nations and many states fail to fund it with international taxes as they are supposed to.

International laws and regulations on environmental matters are frequently ignored by nation states who put their own interests and sovereignty before the common good. Economic and political competition between states generally acts against the co-operative solution of global problems.

SOCIAL ORGANISATION

Within any society there are generally sharply defined and unequal groups with varying amounts of power. So far this discussion has related environmental problems to such inequalities, suggesting that existing economic and political structures work in the interests of a minority of the world's people. These structures are opposed by anti-imperialist movements in peripheral and semi-peripheral states, by movements for greater self-management within state collectivist societies, and by organised labour and other groups within the core states. Their political struggles for greater democracy seek to change the organisation of many societies, and offer some prospect of change towards more ecologically sustainable production and development.

Within political movements seeking to extend democracy, socialist elements urging the popular control of economic production and the reshaping of society, are particularly significant. While they take different forms – shaped by the history, culture and type of state within different societies – they generally seek to encourage self-determination through policies which would transfer land and technology to communal ownership, create a high degree of economic and social

equality and give workers and citizens real control over their workplaces and communities. A degree of planning and co-ordination from above would still be necessary but, by devolving economic and political power to smaller units, socialists argue that people would lose the sense of alienation and powerlessness they currently feel.

In these conditions, co-operation would replace competition. Social criteria would replace existing criteria in determining economic production and distribution, with consequent gains for both economic and environmental well being. There would be real incentives to conserve energy and materials, to adopt appropriate technology, to reduce pollution and to produce a different mix of goods and services – many for public rather than private consumption. In such a society, everyone would be found mental and manual work to do. A restructured economy, together with the sound use of new technology, would allow more time for personal development and mutual aid. The divisions between home and work, town and country, field and factory, production and consumption, would slowly disappear as these became fused in a different way of life.

Visions of such a socialist society are not new. They have been rediscovered and revised in recent years until they now provide a radical alternative to socialism based on nationalisation and state power. The goal of maximising autonomy and devolution, while maintaining social cohesion and overall democratic control, would be achieved by reform from below, co-ordinated from above. While planning would dominate, the market would still play a role and each would serve the interests of democracy. The resulting societies would be more self-sufficient, but international in outlook. Their joint aim would be a world federation of people's states, governed by a co-operative world order, capable of solving problems with an international dimension.

This could only be achieved by collective action to challenge present global patterns of economic, political and military power, and to create a new world order. States which have unilaterally attempted this form of development have been wholly or partially defeated by their continued dependency and consequent inability to provide the material and cultural bases of democratic socialism.

As we have seen, the worsening global situation currently serves to focus attention on such radical social alternatives. Economic recession, East–West tension, the arms race, terrorism, trade breakdown, poverty and famine, mounting Third World debt and deteriorating environments are all products of a competitive world order which increases economic and political instability and threatens our very survival. The governments of nation states have little power to ameliorate these problems, and many have become less democratic and less able to deliver welfare or carry out development as the problems have intensified.

In this situation democratic socialism finds increased support from many groups throughout the world, some of which have begun to create the seeds of new societies from within the old. Municipal socialism in Britain, the Chipko movement in the Himalayas, the rubber tappers' initiative in Brazil, Solidarity in Poland, the movement for aboriginal land rights in Australia, the revolution in Nicaragua ... all are attempts to bring about fundamental change which offers new relationships between people and between society and nature.

Not all environmentalists in a liberal democracy such as Britain will acknowledge the need for democratic socialism. Those with a considerable stake in the existing power structure will put their faith in "business as usual", believing that market forces and technological innovation can avert all major problems without major state intervention or significant social change. The majority are likely to support a form of "managed scarcity" or environmental managerialism in which a growing environmental bureaucracy engages in environmental planning, administers economic adjustments, formulates legislation and arranges compensation payments – all designed to ameliorate the worst impacts of production and development.

The extension of such managerialism depends on the state's continuing readiness and ability to pay, linked to a continuing consensus supporting such redistribution within society at large. This discussion has suggested that these conditions are by no means certain and that environmentalists might be better advised to focus on both the causes and symptoms of deteriorating environmental well being, and seek a solution via more radical social change.

In working for such change, radical environmentalists can gain support from other groups fighting oppression. Ethnic minorities, women, trade unionists, the unemployed, the poor, all suffer from existing power structures and have an interest in extending their own control over their lives. The task of environmentalists is to widen the appeal of ecodevelopment by demonstrating its potential to solve such problems as those mentioned at the start of this chapter.

Women have a particularly valuable part to play because, in patriarchal societies, they have been generally disadvantaged at home and in the workplace. Much of women's traditional role has been in creating and maintaining life. However, conventional forms of economic development tend to make this "invisible" work more difficult. In many poor societies they have made basic resources such as water and fuelwood more difficult to find. Hence women become agents of environmental degradation as well as its victims. In semi-peripheral economies they are increasingly used in low-paid employment, often in dangerous workplaces. In the core countries women find themselves trapped in the demands and expectations of a consumer society.

The women's movement demonstrates that ecologically sustainable development should provide for everyone's needs, but not at the expense of women. Groups of women throughout the world are already trying to change the basis of work and their relation to society and nature.

These efforts are a reminder that in societies characterised by economic pluralism there will be many sites of political conflict. Environmentalists can work with others to extend democracy in the household, the workplace, community, school, town hall and parliament. Leadership will be necessary to plan and co-ordinate the many struggles for change and the movement will require access to state power if people's initiatives are not to be blocked, divided or co-opted. Britain's recent history provides clear examples of such setbacks but also suggests that citizen's movements can be successful when they challenge structures as well as policies, make positive proposals, and are democratic, non-violent and persistent.

CULTURE AND IDEOLOGY

Every society has its own culture consisting of everything made by people and passed from generation to generation. Divided into material culture (technology) and non-material culture (beliefs and values), it governs how people behave and interact with each other and their surroundings. As a result of recent world history, most societies are multicultural, displaying diverse cultural elements and a wide variety of beliefs and attitudes towards the environment and nature. The landscape and built environment is itself a cultural artefact, expressing in material form a society's way of organising economic and political life.

Ideologies are generally considered to be sets of beliefs which serve to legitimate social structures and processes while concealing their true nature. With the development of technology and control over nature, religious mysticism and nature worship has given way to scientific rationalism and the rise of secular materialism. No longer dominated by nature, we remain dominated by social structures, partly because our means of understanding and controlling society lag behind our understanding and control of nature. Much social science represents ideology concealing the nature of social, political and economic forces in the contemporary world.

The rise of capitalism saw the rise of a competitive, forceful, manipulative culture with an instrumental approach to nature. This culture has diffused through much of the world with the growth of the world economy, breaking down or modifying diverse local cultures in the process. Such "cultural imperialism" results from the spread of commodity exchange and the entry of foreign institutions, technology and media into peripheral and semi-peripheral societies. The core imposes its life-styles and values on the rest of the world, shaping notions of progress, development and environmental management.

The result is that local knowledge and technology is devalued or destroyed. However, much of this provides the basis for ecologically sound production and development. Societies which claim to be socialist have also found it difficult to break free from cultural domination and have generally failed to develop alternative technologies and cultures. It should be acknowledged however that "cultural imperialism" is an uneven process, that valuable elements of traditional cultures remain, and that minorities within culturally plural societies are often the carriers of alternative life-styles and beliefs.

Technology, culture and ideology develop together in a social context. Technology reflects dominant interests and patterns of power and, once developed, shapes society through its impact on such areas as work, social interaction, leisure, art and education. It conditions the nature of organisations and ideas, and provides an infrastructure of facilities and tools within which we live our lives. Day to day interaction with technology persuades us to accept the existing order. It is therefore necessary for environmentalists to re-examine the logic of technology. They should campaign against its damaging forms, and defend and promote technologies which extend people's power to control and manage their own lives. As we have already seen, the future of the new computer technologies is crucial in this respect.

Academic culture and its accepted body of knowledge also serve to sustain existing forms of society. Scientific rationalism conditions our view of nature and erodes beliefs which might promote a holistic, spiritual, ethical understanding of the biosphere. Biological ideas have been incorporated into the social sciences to form theories of environmental and ecological determinism which, along with other deterministic doctrines, teach us that we are powerless to change our nature and society.

The ideas taught in schools too are generally based on an unquestioning view of social change and economic forces. Lessons on environmental problems tend to blame purely natural causes, or regard them as global or universal problems attributable to such causes as overpopulation, resource scarcity, inappropriate technology, overconsumption or overproduction. All such teaching fulfils an ideological role. It fails to relate issues to the different social settings in which they arise, and fails to explain how population, scarcity, technology, consumption and production are structured by economic and political forces. Blame is effectively transferred; the crisis is attributed to nature, the poor, or inappropriate values.

Materials which do acknowledge environmental management and planning are too ready to consider this solely within the context of existing social relations. Such teaching denies people alternative views of conflict between capital, environmental activists and the state; fails to consider adequately the use and abuse of nature in other social contexts; and consequently renders pupils impotent as agents of social and environmental change. Both within and outside schools, the ideology of environmental management serves to depoliticise environmental issues, and encourages a technocratic environmentalism based on the cult of the expert.

A third type of culture and ideology which shapes society's relations with nature is that associated with politics. A range of environmental ideologies and utopias have evolved from different social and political philosophies. These beliefs and values now shape environmental decision making and may motivate experiments with alternative lifestyles. Debate between blue, red, green and other shades of environmentalists soon convinces the listener that they perceive the environment and environmental politics in different ways. Their varying diagnoses and prescriptions can be related to their material position in society.

Popular culture is a fourth powerful agent in shaping our views of the world. Advertising, television, popular music and the news media are among the sources which spread messages – mainly supportive of the existing order. Not only do they sell consumerism and materialism, they encourage us to regard nature as a commodity to be purchased along with health foods or a holiday. Popular culture also offers entertaining, persuasive and diversionary products which, while not ignoring social problems, represent these in ever more dramatic and often violent forms. This is seen in many of the computer games and videos which young people watch. Along with other consumer goods, such products offer temporary and ultimately unsatisfactory compensation for the feelings of powerlessness which contemporary society produces.

People's support for the existing order might be less strong if they understood the full social and environmental costs of the economic and political systems within which they live. The popular news media are unable to convey such understanding because they have become essentially entertainment, showing us the most dramatic symptoms of events around the world but explaining little of their causes. Such news is increasingly the product of a multi-national information economy controlled by large corporations. Like other elements of culture, it attributes to personalities and nation states powers which they do not possess and fails to relate events to the global economic and political order. As we have seen, it is only at this level that so many of the everyday events which affect our lives can really be explained.

Finally in considering culture and ideology we need to recognise that ideas do not, of themselves, change the world. Culture and ideology are products of material circumstances. A self-managing, ecologically sustainable society will result from significant changes in systems of production, distribution and decision making. New or rediscovered ideas can assist the transition to such a society, but it is organised action which will change the world. We should therefore be cautious in making claims for education as a means of social change.

Schools are essentially conservative institutions, sustaining prevailing hierarchies and existing ideology. They do however allow some space to examine alternative ideas, to learn to work and live co-operatively and to develop social literacy in order that people may collectively reshape society and nature. The struggle for this type of education in our schools is part of the wider struggle to extend democracy which has been the central theme of this chapter. *What We Consume* has been designed and written as a vehicle for such education.

USEFUL ADDRESSES

British Museum
(Natural History)
Cromwell Road
South Kensington
London SW7 5BD
Tel: 01 589 6323

Provides a broad range of resources, materials and facilities for the study of all environment and conservation related subjects.

British Trust for Conservation Volunteers
Headquarters
36 St Mary's Street
Wallingford
Oxfordshire
Tel: 0491 39766

Provides advice, projects, training courses, and sometimes tools for schools and other groups and individuals. Conservation Volunteers (16+) carry out holiday and weekend projects. Affiliated schools groups (12+) work on local projects and on school grounds. There are 14 regional offices covering England, Scotland and Wales.

The British Youth Council
57 Charlton Street
London NW1 1HU
Tel: 01 387 7559

BYC is the representative forum for young people from all the major organisations in the country. It promotes political education, develops local youth councils and produces information and project material involving youth affairs.

The Centre for Alternative Technology
Llwyngwern Quarry
Pontperthog
Machynlleth
Powys
Tel: 0654 2400

The Centre aims to demonstrate ways in which people can live in balance with the natural system and resources on which they depend. Information is available on alternative energy sources and energy conservation.

Centre for World Development Education
Regents College
Inner Circle
Regents Park
London NW1 4NS
Tel: 01 487 7410

An independent agency partly funded by the Overseas Development Administration. Its main aim is to promote education in Britain about world development issues and Britain's interdependence with developing countries.

Community Service Volunteers (CSV)
237 Pentonville Road
London N1 9NJ
Tel: 01 278 6601

Promotes voluntary community service among young people and produces information and project material involving young people in community decisions and projects.

Conservation Trust
George Palmer Site
Northumberland Avenue
Reading
Berks RG2 7PW
Tel: 0734 868442

Produces and catalogues a large amount of environmental education material particularly in relation to various environmental topics.

Council for Environmental Conservation (CoEnCo)
80 York Way
London N1 9AG
Tel: 01 278 4736

Co-ordinating body for voluntary environmental organisations. Provides an information service on most aspects of environmental education.

Council for Environmental Education
School of Education
University of Reading
London Road
Reading RG1 5AQ
Tel: 0734 875234
also offices at
London Ecology Centre
45 Shelton Street
London WC2 9HJ
Tel: 01 240 4936

Provides information and advice on all aspects of environmental education and produces resource lists on available teaching materials. Has a Youth Unit working in the field of environmental education with youth groups. CEE produces a monthly newsletter which is distributed to most schools.

Council for the Protection of Rural England
4 Hobart Place
London SW1W 0HY
Tel: 01 235 9481

The CPRE works to make sure public opinion is effectively organised to protect the English countryside. The Council is expert in handling public enquiries.

Countryside Commission
John Dower House
Crescent Place
Cheltenham
Glos GL50 3RA
Tel: 0242 521381

Government-backed body which advises on and supports conservation and countryside recreation policy and practice.

Education for Neighbourhood Change
School of Education
University of Nottingham
Nottingham NG7 2RD
Tel: 0602 506101

Promotes active participation by people in changing and improving their neighbourhood. Produces materials, project ideas, and information on local community projects.

Friends of the Earth (FoE)
26–28 Underwood Road
London N1 7JQ
Tel: 01 490 1555

Largely a campaigning organisation promoting conservation policies and practices, it also produces information and educational material, and has local groups including school groups.

Greenpeace Limited
3rd Floor
30–31 Islington Green
London N1 8XE
Tel: 01 354 5100

Greenpeace groups operate throughout the world to promote peaceful but uncompromising direct action in the defence of the environment. They focus on specific issues such as whaling, seal culling and pollution of the oceans.

Green Teacher
Llys Awel
22 Heol Pentrehedyn
Machynlleth
Powys
Wales SY20 8DN
Tel: 0654 2141

A bi-monthly magazine for teachers, teacher trainers and curriculum developers relating the latest green movement debates to ideas and practices in education for the environment.

Groundwork Trusts
Bennetts Court
6 Bennetts Hill
Birmingham B2 5ST
Tel: 021 236 8565

In the north-west Groundwork Trusts provide advice, information and possible grants for projects. Or you can join one of their existing projects.

IIED
3 Endsleigh Street
London WC1H 0DD

Intermediate Technology
Development Group
103–105 Southampton Row
London WC1B 4HH
Tel: 01 436 9761

Promotes and provides information on alternative and intermediate technology.

International Centre for
Conservation Education
Greenfield House
Guiting Power
Cheltenham GL54 5TZ
Tel: 04515 549

Produces a range of tape/slide sets and videos on wildlife, conservation and development issues. Catalogue available.

Keep Britain Tidy
Bostel House
37 West Street
Brighton BN1 2RE
Tel: 0273 23585

National group for litter abatement, it now has a wider remit for example relating to recycling and pollution, and produces educational material including project packs.

National Association of
Development
Education Centres (NADEC)
6 Endsleigh Street
London WC1H 0DY
Tel: 01 388 2670

Development education centres exist in most parts of the country. Addresses available from NADEC, the co-ordinating organisation. Also runs annual conference of interest to teachers.

National Association for
Environmental Education
West Midlands College of
Higher Education
Gorway
Walsall WS1 3BD
Tel: 0922 31200

Association of individuals involved in environmental education. Produces publications on the practice of environmental education in schools.

National Federation of
City Farms
The Old Vicarage
66 Fraser Street
Bedminster
Bristol BS3 4LY
Tel: 0272 660663

Most large cities now have city farms – small areas of once derelict land taken over for livestock and vegetables, but largely used for educational purposes. Information on them and also 'how to do it' is produced by NFCF.

National Trust
36 Queen Anne's Gate
London SW1H 9AS
Tel: 01 222 9251

Founded to preserve places of historic interest or natural beauty and therefore covers houses, countryside and coastline. Educational materials and projects are organised by the Young National Trust, Junior Division, PO Box 12, Westbury, Wiltshire BA13 4NA
Tel: 0373 826302

Nature Conservancy Council
Great Britain Headquarters
Northminster House
Northminster
Peterborough
PE1 1UA

Responsible to government for conservation of flora, fauna and natural features of interest. Produces a wide range of publications.

OXFAM
274 Banbury Road
Oxford
Oxfordshire OX2 7DZ
Tel: 0865 56777

Produces information and resources for educational programmes and projects.

Prince of Wales Committee
Sixth Floor, Empire House
Mount Stuart Square
Cardiff CF1 6DN
Tel: 0222 495737

Encourages and supports environmental projects by young people and others, and provides an information service in Wales.

Royal Society for
Nature Conservation
22 The Green
Nettleham
Lincoln LN2 2NR
Tel: 0522·752326

National co-ordinating body for the County Conservation Trusts and junior section, WATCH. The Trusts are responsible for the management of nature reserves and other conservation activities.

The Royal Society for the
Protection of Birds (RSPB)
The Lodge
Sandy
Bedfordshire SG19 2DL
Tel: 0767 80551

Advises on the conservation of birds and manages nature reserves. Has extensive information including an education service for schools. Runs the Young Ornithologists' Club.

'Streetwork'
c/o Notting Dale
Urban Studies Centre
189 Freston Road
London W10 6TH
Tel: 01 968 5440

Promotes urban and local studies in schools and community education. Publishes BEE (Bulletin for Environmental Education).

Survival International
310 Edgware Road
London W2 1DY
Tel: 01-723 5535

Campaigns to help tribal people exercise their right to survival and self-determination. Films, slides, photo exhibition available. Also newsletter and leaflets.

Third World Publications
151 Stratford Road
Birmingham
B11 1RD

A small workers' co-operative distributing books from and about the Third World. Catalogue and special lists available.

Urban Wildlife Groups

Avon
The Old Police Station
32 Jacobs Well Road
Bristol BS8 1DR
Tel: 0272 28018

Birmingham
11 Albert Street
Birmingham B4
Tel: 021 236 3626

Liverpool
52 Park Lane
Liverpool L17 8UU
Tel: 051 727 7338

London
80 York Way
London N1 9AG
Tel: 01 278 6612

Urban Nature Conservation Groups equivalent to the county nature conservation Trusts. Organise practical projects and produce information sheets.

WATCH (Trust for
Environmental Education)
22 The Green
Nettleham
Lincoln LN2 2NR
Tel: 0522 752326

National organisation for young people formed into local groups organised by the County Trusts. May be attached to schools. Produces regular news-sheets, project material, and leadership packs on rural and urban nature conservation.

WWF United Kingdom
Panda House
Weyside Park
Godalming
Surrey GU7 1XR
Tel: 0483 426444

Promotes and supports the conservation and protection of species and their habitats all over the world. Education Development produces regular school mailings and other information and projects.

SCOTLAND

Bellarmine Environmental
Community Resource Centre
Bellarmine Secondary School
42 Cowglen Road
Glasgow G53 6EW
Tel: 041 880 7630

BECRC provides a wide range of materials and services to schools, community organisations, etc., with the aim of encouraging active interest for the environment.

Environmental Resource Centre
(ERC)
Drummon High School
Cochran Terrace
Edinburgh EH7 4PQ
Tel: 031 557 2135

Provides a wide range of information, materials and project ideas for environmental projects, particularly those related to nature conservation.

Nature Conservancy Council
12 Hope Terrace
Edinburgh EH9 2AS
Tel: 031 447 4784

Scottish Conservation Projects
24 Allan Park
Stirling FK8 2QF
Tel: 0786 79697

Promotes outdoor conservation work throughout Scotland for young people including schools and community groups through practical projects. Affiliated groups, residential projects, national training weekends.

NORTHERN IRELAND

Department of the
Environment
for Northern Ireland
Conservation Branch
Hut 6
Stormont
Belfast BT4 3W

Provides resources, support and advice on all aspects of conservation and environmental education within Northern Ireland.