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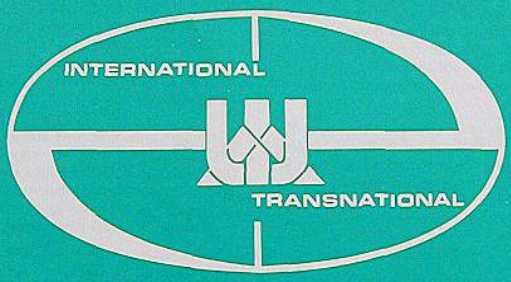

INGO Approaches to Global Environmental Problems

Les OING et la crise écologique

1989 - n° 3

The review of international associations and meetings

Revue bimestrielle Mai-Juin 1989
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La revue des associations et des réunions internationales

TRANSNATIONAL
ASSOCIATIONS
TRANSNATIONALES

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This publication, produced by the UAI, appears six times a year.

The purpose of the studies, surveys and information included in this periodical concerning the international and transnational networks of nongovernmental organizations is to promote understanding of the associative phenomenon in a human society which continues to grow and evolve regardless of the consequences.

The programme of the review, in accordance with the principles of the UAI, is intended to clarify general awareness concerning the associative phenomenon within the framework of international relations and, in particular, to inform associations about aspects of the problems which they tend to share or which are of common interest to them.

The columns of this review are open to association officers, research workers and specialists of associative questions. The articles do not of course necessarily reflect the point of view of the publisher.

Cette publication, éditée par l'UAI, se présente à ses lecteurs sous la forme d'une revue de période bimestrielle.

Son objet associatif d'études, d'enquêtes, d'informations, au service des réseaux internationaux et transnationaux d'organisations non gouvernementales, s'attache aux idées et aux faits d'un phénomène de société humaine en expansion continue et en évolution hâtée.

Son programme, conforme aux principes et aux méthodes de l'UAI, vise, en général, à éclairer les connaissances du grand public sur la vie associative dans la perspective des relations internationales et, en particulier, à informer les associations des divers aspects de leurs problèmes propres et d'intérêt commun.

Les colonnes de la revue sont ouvertes à la fois aux responsables d'associations, chercheurs, spécialistes des matières associatives, dont les articles n'expriment pas nécessairement le point de vue de l'éditeur.

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*The World Resources Institute **

Finding Answers For Today's Environmental Challenges

The World Resources Institute (WRI) is an independent research and political institute founded in 1982 to help governments, business, environmental and development organizations and others to address a fundamental question : how can societies meet human needs and nurture economic growth while preserving natural resources and environmental integrity?

Many of today's environmental concerns are interrelated. The greenhouse effect and acid rain are both linked to fossil fuel combustion: excess carbon dioxide in the atmosphere (three fourths of which come from burning coal, oil, and natural gas) threatens to raise global temperatures to unprecedented heights; and coal-burning power plants and gros-powered cars and trucks produce sulfur and nitrogen oxides, which turn into acids and damage trees and crops. Other «greenhouse gases», the chlorofluorocarbons (CFCs), do double duty : they speed the depletion of the stratospheric ozone layer, which filters harmful ultraviolet rays from the sun. Deforestation, too, contributes to the greenhouse effect by releasing stored carbon into the air when large tracts are burnt or left to rot. Intensive logging and conversion of forests to farmland also endangers untold numbers of living species.

These events and others are connected through global biogeochemical cycles, but they are inevitably linked to human actions. Unchecked industrial development can lead to unhealthy air and water pollution and can waste valuable resources. But in the developing world, poverty and poor natural resources management are contribute greatly to environmental degradation.

WRI's 85 staff members bridge science, economics, and policy to create viable policy responses to global environmental issues and make plain the links between economic development and environmental integrity. WRI research covers four broad areas-forests and biological diversity; energy, climate, and pollution; economics and institutions; and resource and environmental information. Through reports, conferences, seminars, and press briefings, WRI seeks to deepen public understanding and engage scientists and policy-makers in constructive dialogue. Through its Center for International Development and Environment (CIDE), the institute augments its policy recommendations with field services and technical support for organizations intimately involved with natural resources management. The center actively participates in national forestry and land use programs, seeks to strengthen non-governmental organizations, and lends technical and administrative assistance for environment management.

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(202) 638-6300

Tropical Forests and Biodiversity

Scientists estimate about 3 to 30 million species are alive today - most of them not yet discovered. Perhaps half of the life on the earth can be found in the tropical forests. But forests throughout the tropics are being cut down faster than new trees can grow - 11 million hectares are destroyed every year. And with the trees go innumerable plants, animals, and other species - each with potential medical, economic, or ecological value. In 1987, the World Resources Institute, with substantial contributions from governments, international agencies, and grassroots groups, drew up a tropical forestry action plan that is now being used as a tool to develop sustainable national forestry policies. A similar process is under way to gather scientific data and policy advice from around the world on conserving biological diversity.

Energy Use, Air Pollution, and Climate Change

Global climate change has recently brought nations together in debate and cooperation on environmental issues. WRI research helped spark and kindle the discussion by combining concrete scientific data with real-world policy options for alleviating or circumventing potential environmental risks. A WRI study of ozone layer depletion outlined actions to limit further damage, some of which were incorporated into the recent international agreement to protect the ozone layer. A WRI computer model of the Greenhouse Effect shows that actions taken today to reduce the amount of carbon dioxide and other gases in the atmosphere can slow down the warming of the earth's climate. Air pollution's effects on crops and trees were documented in another report, which also spelled out ways to avoid future damage. As these efforts continue, WRI researchers are looking at U.S. energy use and its relation to national security and environmental degradation,

Economics and Institutions

WRI recognizes how important sustainable development

is to all who share in the global environment and the global economy - developing and industrialized countries alike. Unfortunately, many governments pay high prices, mainly in subsidies and tax breaks, to promote unsustainable development. WR1 research on the economics of environmental degradation consistently confirms that few subsidies stimulate national economies and almost all degrade the ecological base on which agriculture and industry rely.

The United States, Canada, and other industrialized countries have vested interests in global resource issues. International trade and foreign relations ultimately hinge on environmental and economic stability. Appropriate technologies and natural resource management hold great potential for breaking the cycle of poverty and degradation in the developing world, while at the same time ensuring global environmental security.

Putting Information into Action

WRI believes that sound policies are based on accurate and up-to-date information and the ability of government at all levels to apply information where it is needed. The institute's *World Resources* series assesses environmental and resource conditions and trends around the world. The biennial report, produced by WRI in collaboration with the International Institute for Environment and Development (11ED) and the United Nations Environment Programme (UN EP), is used by government and international planners, environmental researchers, and grassroots organizations, and others concerned with managing natural resources wisely to support the global population.

International Development and the Environment

To bring its policy recommendations to the field, WRI's Center for International Development and Environment offers technical support to developing-country governments and non-governmental organizations (NGOs). For instance, the center's researchers are working with government and agency foresters to develop national forestry reviews and policies largely following WRI's tropical forestry action plan. The center also gives administrative advice, technical training, and small grants to local groups that may be far-removed from national governments but whose support and feedback can make or break development projects.

A New Environmental Agenda

Environmental dynamics - deforestation, the loss of biodiversity, the Greenhouse Effect, air pollution, and others — are inextricably tied to economic decisions made by governments and international agencies. For better or worse, actions on one front will register on others. Today's environmental issues transcend both national boundaries and traditional efforts to control them, but recent cooperation among nations on the environment, accompanied by advances in science and technology, and a growing awareness of global resource issues by governments, international development agencies, and business are good signs for the future.

Recent WRI publications:

Ill Winds: Air Polution's Toll on Trees and Crops by James J. Mackenzie and Mohamed T. El-Ashry (US$10)
The Forests for the Trees ? Government Policies and the Misuse of Forests Policies by Robert Repetto (US$10)
World Resources 1988-89 an assessment of the resource base that supports the global population (US$16.95)
A Matter of Degrees : The Potential for Controlling the Greenhouse Effect by Irving Mintzer (US$10)

WWF's 25 Steps in Conservation Progress *

Introduction

In the quarter-century of WWF's existence, conservation has come a long way; from an obscure preoccupation of scientists and enthusiasts, to a central factor in everyday life. WWF has played many roles in this development: banker, advocate, instigator, teacher, advisor, diplomat, planner and communicator, to mention but a few. Its methods have evolved too.

In the beginning, the public emphasis was on spectacular animals. But the plans were being laid for the day, which arrived with the publication of the World Conservation Strategy in 1980, when conservation would be seen as part of, rather than apart from, man's economic development.

Today WWF is increasingly concerned with persuading governments, decision-makers, and a host of special constituencies, to adopt and practise conservation principles. At the same time, it is enabling others - especially conservation groups in the developing world - to care for nature at a local level. This means developing the will and skill to conserve, throughout every society. This has to be done quickly, for the pressures on nature are greater than ever. Hence WWF's 25th Anniversary Campaign on Awareness, Training and Education.

• Extract from *Achievements and Priorities in Conservation,* World Wide Fund for Nature.

WWF, founded in 1961, is the largest world-wide private nature conservation organization. Based in Switzerland, WWF has national affiliates and associate organizations on five continents. WWF aims to conserve the natural environmental and ecological processes essential to life on earth. It pays particular attention to endangered species of plants and animals and to natural habitats which are of benefit to man.

WWF aims to create awareness of threats to the natural environment, to generate and attract on a world-wide basis the strongest possible moral and financial support for safeguarding the living world and to convert such support into action based on scientific priorities. Since its founding in 1961, WWF has channelled over US$130 million into more than 5,000 projects in some 130 countries which have saved animals and plants from extinction and helped to conserve natural areas all over the world. It has served as a catalyst for conservation action, and brought its influence to bear on critical conservation needs by working with and influencing governments, non-governmental organizations, scientists, industry and the general public.

Here are 25 examples of WWF at work over 25 years. Together they show the approaches required to achieve genuine conservation progress. And, they remind us that as difficult as it sometimes seems, conservation can succeed.

1 FOUNDATION: When Julian Huxley wrote a series of articles on endangered wildlife in the London Observer in 1960, among the many responses was a letter from London businessman Mr Victor Stolan. Wildife could only be saved, he reasoned, through *«vigorous and immediate action to raise the great funds needed».* He added *«I have some ideas on how to collect substantial donations ».* Others had similar ideas. Within a year, WWF was born. Initiative and determination led eventually to an organization which has channelled in excess of US$130m to over 5,000 projects in more than 130 countries, on every continent of the world. Today, there are 23 WWF National Organizations with an International Headquarters in Switzerland.

2 A LIVING LABORATORY FOR THE WORLD: At its first board meeting in 1961, WWF approved a grant to the Galapagos Foundation's Charles Darwin Research Station. Since then, more than 300 Ecuadorean scientists and technicians have been trained in ecology and park management in the islands where, in 1835, Charles Darwin formed his ideas of natural selection. WWF has contributed nearly US$2m to save Galapagos flora and fauna including giant tortoises and marine iguanas. Today each dollar from WWF is more than matched by the Ecuadorean Governement.

3 BACK FROM THE BRINK OF EXTINCTION - THE ORYX: This elegant and powerful antelope once ranged over the whole Arabian peninsula and into Mesopotamia. But hunting parties using jeeps and automatic weapons drove the wild herds into extinction. Fortunately, a captive breeding programme had been set up by the Flora and Fauna Preservation Society. In 1978, WWF and the Sultan of Oman began planning the reintroduction of the oryx. In 1980, the animals were flown to the stony plateau of Jiddat at Harasis to be acclimatized. After the local tribesmen were trained as wardens, the first animals were released in 1982. Today, a herd of 32 oryx once again roams the plains of Arabia.

4 PROTECTION AND PEOPLE: THE ANDEAN VICUNA: By 1965, hunting for its silky fleece had reduced the vicuña - a

latin American relative of the llama and the camel - to just 6,000 animais. More than 400,000 were taken in Argentina, Bolivia, Chile and Peru in 20 years. But today, after a WWF campaign which invested US$400,000 in anti-poaching activies and in winning polilical backing for scientific management of herds in the Pampas Galeras Reserve, vicuña numbers stand at nearly 80,000 and there is a thriving trade in vicuña wool.

5 PARKS FOR THE FUTURE: COTO DONANA: Cota Doñana, a 350 km^2 marsh, coastal woodland and sand dune complex in southern Spain, is Western Europe's most significant National Park. It owes its existence to WWF. Establishing Doñana - and so protecting habitat for lynx, flamingoes and the Spanish imperial eagle -took US$400,000 of WWF's own funds and US$200,000 and the co-operation of the Spanish Governement. It was WWF's first conservation success. Since then WWF has been involved in establishing over 330 National Parks and Protected Areas worldwide, covering over 81 million hectares.

6 TRAFFIC: Trade Record Analysis of Flora and Fauna in Commerce. «INTERPOL» FOR WILDLIFE: In 1985, WWF spent US$500,000 on a largely unseen and unrecorded battle against illicit trade in wildlife and skins, ivories and other illegal products. Around the world, ten WWF «TRAFFIC» offices monitor trade, collect and analyse data, and help governments in crackdowns on corruption, poaching and smuggling. In Belgium the WWF TRAFFIC office exposed and stopped the transport of illegal ivory in aircraft belonging to the national airline, Sabena. In 1987, TRAFFIC (Japan) successfully persuaded the government of Japan to implement CITES (the Washington Convention on International Trade in Endangered Species,of Wild Flora and Fauna), a 95-nation treaty which WWF helped bring into being in 1973.

7 SAVING THE TIGER: Project Tiger was launched in 1972 when a census revealed that the endangered Bengal tiger had sunk to just 1,827 animals in the wild, against an estimated 40,000 in 1900. Yet by 1983, the count was back up to almost 4,000. The success of Project Tiger owes much to Indira Gandhi, who, as prime Minister of India led a government campaign which established 15 reserves where grazing, hunting and logging were strictly controlled. Once-denuded forests have recovered and WWF's US$1 m investment has been matched by US$12m from the Indian Government.

8 A PLAN FOR WORLD CONSERVATION: A milestone in WWF's development, the World Conservation Strategy, was launched in 34 world capitals in march 1980. The Strategy's three goals are:
- maintenance of essential ecological processes and life-support systems,
- the preservation of genetic diversity, and
- the sustainable utilization of species and ecosystems. Published with UNEP, the United Nations Environment Programme and IUCN, International Union for Conservation of Nature and Natural Resources, the Strategy demonstrated that conservation is a prerequisite for sustainable economic development. National Conservation Strategies are being developed in 43 countries.

9 AWARENESS CAMPAIGNS: «Seas Must Live» launched in 1974 was WWF's first worldwide coordinated campaign to alert public opinion to a key conservation issue : in this case, pollution of the seas and exploitation of whales. Others followed : Tropical Forests in 1975 and 1982, Plants in 1983 and Wetlands in 1985. They successfully raised public awareness, stimulated further initiatives, won extensive editorial coverage, and, through the services of Ogilvy and Mather's worldwide advertising agency, have secured over US$11 million in donated advertising since 1978.

10 POLAR BEAR RESCUE BY INTERNATIONAL COOPERATION : In 1973 the International Union for the Conservation of Nature and Natural Resources (IUCN) and WWF persuaded the five Arctic nations of Canada, the United States of America, Denmark (Greenland), the Union of Soviet Socialist Republics and Norway, to sign the International Polar Bear Convention, which promoted scientific study and strictly controlled hunting. This action followed serious overhunting in the 1960s which had reduced the Norway-Greenland-USSR population of polar bears to just 1,000, putting the species at risk. By 1983 the population had climbed to 2,000 and the « ice bear » as it is known in Norway, is now out of danger.

11 PARTNERSHIPS IN CONSERVATION SCIENCE: WWF bases its conservation work on sound scientific research and evaluation. Since 1961 it has continuously supported the International Union for Conservation of Nature and Natural Resources (IUCN), which has government and-government members in over 500 countries, as well as other specialist scientific partners including the international Waterfowl Research Bureau. WWF has helped establish important scientific conservation services, such as the computer data banks of the Conservation Monitoring Centre in the UK which hold information on over 30,000 threatened species.

12 MWEKA COLLEGE: TRAINING FOR WILDLIFE'S FRONT LINE : The Mweka College of Wildlife Management in Tanzania has run conservation training courses since 1937. Its 1,200 graduates from 17 African countries form the backbone of practical management and wardening services throughout the continent. WWF's investment, which has passed the US$200,000 mark, began in 1961, when it sponsored a symposium entitled «Conservation of Nature and Natural Resources in Modern African States ». Prime Minister Nyerere then declared Tanzania's commitment to conservation. Mweka graduates are now found as directors, managers, chief game and park wardens, chief research officers and heads of conservation departments in places as significant as the Serengeti, Kilimanjaro and Tsavo National Parks.

13 CHINA AND THE GIANT PANDA: CONSERVATION BY COOPERATION: In September 1979, the Government of China invited Sir Peter Scott to visit the country and advise on the conservation of the dwindling giant panda, WWF's own symbol. During his visit, a memorandum was signed covering whaling (which China stopped), CITES (wich China joined) and the conservation of the panda. China now has ten panda reserves and has spent more than US$27 million on panda conservation. WWF has investes US$3 million on the panda project since 1979, as well as contributing US $800,000 to the protection of tropical forests and wetlands in China.

14 GORILLAS IN THE PUBLIC EYE: Rare species attract tourists but their interest can be fatal if uncontrolled. In Rwanda, one of Africa's poorest and most populous countries, conservation of the tropical forests housing the endangered mountain gorilla has been made possible largely because tourism provides local income. WWF has provided training for guides and rangers in the Volcanoes National Park, and carried out public awareness programmes for farmers and other local forest users.

15 BUILDING TO STOP THE DESERT: In 1980, WWF, IUCN and the Niger Government established a reserve for rare desert animals and flora - such as the addax antelope and wild sorghum - in the Aïr Mountains and Ténéré Desert. Bringing a halt to overcutting of trees and the resulting desertification was a priority. As the timber was used in house roofing, WWF Project leader John Newby and his Nigerian counterparts taught local people another African building technique: timber-free mudbrick vaults and domes. WWF has invested over US$1 m on the project so far, and in 1987 it was joined by Niger's Forest and Wildife Service, the World Bank, and US AID.

16 INDIA-MOBILIZING A SUB-CONTINENT: In 1976, WWF-India launched the Nature Clubs of India. Today, over 500 clubs with 16,000 members exist in 20 states or Union Territories. Each year, 800 members - octagenarians as well as youth — attend training camps in various wildlife habitats. The cost is US$15 per person although for some it is free. At the same time WWF has targetted opinion-makers, decision-makers and villagers. For the former, it has prepared a « Multi-Media Campaign for Conservation Education Awareness» aimed at civil servants, army personnel and others: as a result, the Indian Government is to spend US$300,000 on an Environmental Awareness Month beginning in 1987 on the anniversary of the birth of Indira Gandhi, the late Prime Minister.

17 EVIDENCE FOR CONSERVATION : Hardly anyone questions the need for conservation today but that was not always the case. Evidence for the need has been built up by careful research and study over a period of decades: WWF has played a significant part. Red Data Books, produced with WWF support, now provide detailed lists of species endangered, threatened or vulnerable as a result of man's activities. Red Data Books follow the pattern of the « Preliminary List of Rare Mammals and Birds», which totalled 250 species, and was published by WWF in its (1961-4) First Report, *The Launching of a New Ark*. Today the lists cover over 35,000 species. Many WWF projects demonstrate how nature conservation benefits man. Here are two examples. In the Amazon, WWF funded research which showed that 30-40% of all the fish landed at Manaus, a city of 700,000 people, were species dependent on the «seed rain» from riverside trees to provide their food. Clearing such forest is thus economically unwise. And in 1986, for its Wetlands Campaign, WWF funded the publication of *Waterlogged Wealth,* the first comprehensive review of wetland conservation and its economic benefits.

13 A CALL FOR PLANT CONSERVATION: In 1985, WWF launched the first worldwide campaign to mobilize support for plant conservation, (in cooperation with IUCN). The campaign raised US$2m for 26 urgent projects with WWF's contribution to the continuing Plants Programme rising to over US$8m. But its main purpose was to alert and mobilize particular constituencies inlcuding the network of 1,200 botanic gardens around the world. In Novermber 1985, 220 plant conservation experts from 42 countries gathered in Las Palmas, Gran Canaria, to develop the first Botanic Gardens Conservation Strategy, and set up a Secretariat to pull together and stimulate conservation action by Garden staff around the world.

19 TALKING TO BUSINESS: Industry and environment were once seen as enemies. WWF believed that the World Conservation Strategy showed that not only dialogue, but also active cooperation between business and conservation groups, would benefit both «sides». One result was the 1982 launch of HELMEPA, a Greece-based consortium of shipping and environmental interests devoted to cleaning up the Mediterranean and Adriatic. In Canada, WWF recently secured the backing of Noranda Inc. to finance a Wildlife Toxicology Fund, supporting research into pollution problems. In Sweden, cooperation with Silja Ferry Lines helped the Baltic seal, the symbol of the line and at risk from shipping activities and pollution: new practices have been introduced for all ferry captains. Newly-designed ferries have been introduced to reduce wake damage and routes changed to avoid breeding areas.

20 CURBING ACID RAIN : The « 30% Club » started life as a group of seven countries committed to cutting the sulphurous emissions which give rise to acid rain and kill lakes and forests. In 1985 it was formalised as the 30% Sulphur Protocol of the United Nations Economic Commission for Europe's Convention on Long Range Transboundary Air Pollution. Twenty-one countries signed. But most failed to ratify it so the Protocol did not enter into force. In 1986 WWF urged all governments to pass the necessary legislation, and in June 1987 Austria brought the Protocol into force by becoming the 16th country to ratify.

21 INFLUENCING DEVELOPMENT AID: In 1978 WWF started a project with the Washington-based Natural Resources Defense Council, to monitor and influence the decisions of aid agencies and banks. In recent years this effort has paid off with the World Bank adopting a wildlands policy and establishing a significant environmental unit in 1987, and with US AID cooperating in joint projects with WWF totalling over US$2 m. Now it is at least possible that the bulk of aid funds will begin to go to ecologically sustainable forms of development.

22 STOPPING WHALING: Since 1961 WWF has been represented at the International Whaling Commission as one of several conservation organizations seeking better controls on whaling. After years of bitterly contested scientific arguments over whaling quotas and population levels, the Commission declared a moratorium on commercial whaling in 1982. As a result, the number of whales taken has been reduced dramatically. However, Iceland, Japan and South Korea continue so-called «scientific whaling », which WWF aims to stop.

23 SCOUTS WORLD CONSERVATION BADGE: Cooperation between the World Organization of the Scout Movement and WWF started in 1973. Conservation projects were

launched in most of the 120 National Scout Organizations, representing 16 million young people around the world. Several million copies of the now famous book *Show-and-Do* were published in a least 20 languages. As many as 13 million World Conservation Badges have been awarded to date.

24 SCROLL BEATS THE FROGS' LEGS TRADE: In 1987, the Indian Government banned the export of frogs' legs. Since the 1960s India had been exporting 140 million frogs legs a year to supply the European gourmet trade. But the ecological cost was high : rice-field pests once controlled by the frogs had to be attacked with chemical pesticides. This increased the risk to humans and wildlife, and cost the country more in imported chemicals than the value of exported frogs' legs. WWF-India used a traditional scroll, depicting the problems caused by upsetting the natural balance, to alert farmers and villagers to the problem. WWF TRAFFIC'S office in Germany led a vigourous campaign in Europe. Announcing the ban, the Indian Government pointed out that 700,000 Rupees a year would be lost in sales of frogs' legs but the saving in pesticides and other costs would be more than 5,000,000 Rupees.

25 NEW ALLIANCES : In September 1986, on its 25th Anniversary, WWF initiated a new and unusual conservation network founded on an alliance with five of the world's great religions (Buddhism, Christianity, Hinduism, Islam and Judaism). The five met, and took part in a Conference, Retreat and Interfaith Ceremony in Assisi, Italy. The religious event was as unprecedented as were the new links being made for conservation. Each religion is now working on the practical implementation of Declarations on Man and Nature issued at Assisi, and field projects are being developed. The alliance with religions is tangible evidence that it is possible to reach and stimulate new and powerful constituencies in support of conservation.

WWF'S CONSERVATION AWARENESS PROGRAMME

Internationally, WWF now concentrates on three key conservation priorities :

- FOREST conservation : in particular this means stemming the loss of tropical forests and preventing damage to temperate forests from acid rain and poor land use.
- The conservation and rehabilitation of WETLANDS and coasts.
- The preservation of BIOLOGICAL DIVERSITY: in other words, species, natural communities and genetic variety.

These priorities stem WWF's commitment to the goals of the World Conservation Strategy and WWF's awareness programme is designed to help achieve them.

In the words of His Royal Highness, The Duke of Edinburgh, President of WWF International:

"Money alone will never solve all the world's conservation problems. It has long been recognized that one of the top priorities is to mobilise public opinion ».

« We need people to make a personal contribution by taking responsible attitudes towards nature in their daily lives, We need people in positions of political and authority to let their decisions be influenced by a consideration for the health of the world's natural system. We need people who communicate and who help to form opinions to take the subject of conservation seriously».

But awareness only achieves results when it is matched against decisions that lead to action. This is why WWF is helping make the conservation case clearly and effectively. While nations draw up their positions on trade agreements and resource treaties such as the International Tropical Timber Agreement, the Ramsar Convention on Wetlands of International Importance, the International Whaling Commission and CITES, WWF briefs governments, consults with conservation groups and business interests and contacts the media, to mobilise support.

AWARENESS

To build awareness, WWF tailors its activities to particular audiences. Here are some recent examples:

TROPICAL FORESTS: WWF briefed politicians and decisionmakers from the 41 countries who attended the first meeting of the new International Tropical Timber Agreement, at its headquarters in Yokohama, Japan. Many experts believe the Agreement, which has unique pro-conservation clauses, could help save tropical forests, currently being destroyed at over 20ha a minute.

WETLANDS : WWF is urging more countries to join the Ramsar Convention, the world's oldest conservation treaty, to give stronger protection to vital wildlife sites listed under the Convention.

ACID RAIN: WWF provided colour graphics, booklets and advice to help nine European television companies in a unique environmental TV co-production, THE ACID TEST, broadcast to over 20 million people on the eve of an influential United Nations conference on curbing air pollution.

FILM MATERIAL: A message by HRH The Duke of Edinburgh, President of WWF International, introduces a 28-minute film « CONSERVATION » which explains conservation problems and methods from the poles to the tropics. This special film and accompanying booklets and posters are available on video from WWF and have already been distributed in over 55 countries.

NEWS REACTION: WWF devotes considerable resources to rapidly alerting the media to conservation problems. For example, early in 1987, surveys and satellite photos showed panda habitat was being seriously eroded and the population was declining. Within a month, WWF had issued a special report at a London press conference, and WWF International President, HRH The Duke of Edinburgh then led a televised campaign to raise funds and explain the solution to the problem.

REACHING NEW CONSTITUENCIES: The quarterly magazine The New Road is WWF's link to over 5,000 individuals and institutions taking part in WWF's new Network on Conservation and Religion.

Les activités multi-régionales du Fonds mondial pour la nature (WWF)

En mars 1987, les représentants de 40 nations et de 14 organismes internationaux de défense de l'environnement, dont le WWF, convergèrent vers le port japonais de Yokohama pour participer à la première conférence de l'Organisation internationale des bois tropicaux (O1BT), un organisme international chargé de la mise en œuvre d'un accord de produit reconnaissant de manière unique la nécessité de la défense des forêts tropicales.

A peine commencée, la réunion menaçait de se terminer en impasse. Plusieurs des pays important des bois tropicaux, en général les pays industrialisés les plus riches, refusèrent de consentir au financement d'un ensemble de projets proposés par le secrétariat de l'OIBT et exigèrent un complément d'informations. Le WWF mit fin à l'impasse en effectuant publiquement une contribution de 10.000 $ au budget de l'OIBT, et d'autres organismes de défense de l'environnement se joignirent au WWF en assurant une contribution de 2.300 $. L'atmosphère changea instantanément. La Suisse fournît rapidement 1 million $ et les Pays-Bas fournirent par la suite un montant de 600.000 $. A la fin de la deuxième réunion de l'OIBT, qui eut lieu à Rio de Janeiro en juin 1988, une somme de 7 millions $ avait été promise afin de prendre en charge les projets envisagés au cours des deux premières années, 60 pour cent de cette somme étant fournies par le Japon.

La réunion de Rio de Janeiro permit aussi de mettre en route les premiers projets. Le plus important est constitué par une expérience devant faire œuvre de pionnier dans l'Etat brésilien d'Acre, à la frontière du Pérou, afin de vérifier si les forêts tropicales de l'Amazonie pouvaient ou non être gérées de manière durable, à savoir le bois, le caoutchouc, les noix du Brésil et autres produits, au lieu d'être déboisées sans discernement. Il sera fart appel aux résultats de l'expérience pour élaborer des lignes de conduite du développement de tout l'Etat, dont les forêts sont soumises à des pressions de plus en plus pressantes et pourraient assurer l'une des meilleures chances de sauvegarder une grande partie des forêts de l'Amazonie. En tout, plus de 70 pour cent des dépenses de projets approuvées lors de la réunion intéressaient la défense de l'environnement et la gestion durable des forêts tropicales. Les congressistes ont aussi sanctionné le développement de plus d'une demie douzaine d'importants projets de défense des forêts, quatre d'entre eux ayant été proposés par le WWF et l'UICN. Ils donnèrent par ailleurs l'ordre à l'OIBT de travailler en collaboration étroite avec le WWF et les autres organismes non gouvernementaux.

Le WWF a la conviction que l'OIBT peut faire beaucoup en faveur de la défense de l'environnement. Le traité sur lequel il se base est le seul accord de produits encourageant activement l'untilisation rationnelle et la défense des forêts tropicales. L'IOIBT est soutenu par les gouvernements des pays producteurs et consommateurs ainsi que les organismes du commerce et de défense. H constitue aussi un forum pour les pays achetant et vendant les bois tropicaux afin de débattre les lignes d'action d'égal. Mais le financement de cet organisme est toujours insuffisant et les épineuses questions de politique n'ont toujours pas été résolues; les forêts étant coupées si rapidement qu'il doit travailler aussi vite que possible pour pouvoir mettre fin à cette destruction. Le WWF poursuivra ses efforts en vue de consolider l'OIBT.

Dans l'intervalle, le WWF continuera à lutter en faveur des forêts, à une échelle internationale, par le biais de campagnes et de pressions et en prêtant assistance en matière de mise sur pied et de gestion de réserve, ainsi que par le biais des recherches et autres projets dans le monde entier. A titre d'exemple, il a l'an dernier élaboré une brochure en couleur de 24 pages et a financé la publication d'un rapport détaillé, *A Hard Wood Story,* portant sur la participation de la Communauté européenne dans le commerce des bois tropicaux. H a aussi établi deux rapports spéciaux, l'un portant sur les forêts tropicales et l'autre sur les forêts de l'Amérique latine.

Le commerce et TRAFFIC

Le WWF travaille actuellement sur de multiples questions similaires n'étant pas réservées à un seul pays, ou même a un seul continent mais qui sont véritablement globales. Il se trouve, à titre d'exemple, au cœur de la réglementation mondiale du commerce international d'animaux sauvages et des produits de ces derniers. La valeur de ce commerce se chiffre à $4 milliards par an et il est estimé que jusqu'a un tiers de ce commerce est illégal. La CITES a pour objectif de mettre fin à ce commerce, lequel favorise encore davantage l'extinction des espèces menacées de la faune et de la flore.

Depuis son entrée en vigueur, en 1975, un nombre croîssant de pays se sont joints à la CITES : 95 pays en sont désormais membres et l'envergure du commerce des espèces menacées a été progressivement restreinte. Plusieurs des grands centres de contrebande d'animaux sauvages dans le monde, tels que Hong Hong, Singapour et la Belgique ont mis un frein à ce commerce, par suite des pressions exercées par le WWF. La mise en application demeure toutefois un problème, en partie du fait que certains pays ne se sont pas joints à la Convention et en partie du fait que le commerce illégal continue dans certains des pays qui en font partie. Il n'y a aujourd'hui en Afrique de l'Est que la moitié des elephants qu'il y avait en 1982, cette situation étant principalement le résultat du commerce illégal de l'ivoire. En juillet 1988, néanmoins, ce commerce souffrit d'un sérieux revers alors que Hong Kong, l'un des principaux centres du commerce de l'ivoire du monde, annonça qu'il mettrait strictement en application les contrôles portant sur tout l'ivoire entrant sur son territoire.

Le WWF joue un rôle vital dans la surveillance du commerce grâce à son financement du réseau TRAFFIC. Les centres de surveillance implantés dans dix pays différents assurent la compilation des données d'importation et d'exportation, aussi bien légale qu'illégale, des espèces reprises par la CITES et des produits fabriqués à

partir de ces dernières et informe le secrétariat de la CITES des infractions commises à rencontre du traité. L'an dernier par exemple, TRAFFIC fit connaître au monde l'échec du Japon et de la France en particulier en matière de maintien d'un contrôle correct sur certaines importations illégales des espèces listées par la Convention.

TRAFFIC, au fil des années, a aidé à mettre fin au commerce des gibbons rares au Japon, à interdire les importations en RFA des produits à base de tortues marines et à contrôler le commerce des cornes de rhinocéros.

Scientifique et impartial, TRAFFIC surveille étroitement le commerce et est en mesure, en exposant systématiquement les infractions, de convaincre les gouvernements à renforcer les contrôles.

Revitalisation de Ramsar

Le WWF a aussi été actif lors d'une conférence ayant eu lieu au Canada en 1987 et qui a marqué un progrès important dans la préservation des zones humides de la planète. Quarante-cinq pays ont convenu d'assurer un budget annuel de 400.000 $ et un secrétariat pour la Convention de Ramsar, le traité international signé pour la protection des plus précieuses zones humides de la planète. Les efforts faits par la Convention de Ramsar afin d'en restreindre la destruction ont, jusqu'à présent, été gênés par la pénurie de ressources, principalement du fait du petit nombre de pays en voie de développement qui s'y sont joints car ils pensent que la Convention n'a rien a leur apporter. Comme un congressiste sénégalais l'observait lors d'une conférence de Ramsar, *«Le monde veut sauvegarder les zones humides... les pays pauvres ne peuvent pas payer la note»*.

Les pays participant à la conférence canadienne ont convenu, entre autres, que les pays plus riches devront contribuer davantage au budget annuel que les pays pauvres et que le secrétariat devra servir de lien entre les pays en voie de développement ayant d'importantes zones humides et les organismes de financement étrangers, tels que l'Overseas Development Administration en Grande-Bretagne, pouvant financer des projets de défense de l'environnement. Le WWF a parrainé un atelier d'organismes non gouvernementaux afin de mettre au point un système de surveillance de la mise en application des impératifs de la Convention et a fait pression avec succès en faveur de son adoption. Le WWF prête assistance en matière de financement du personnel expert exigé pour la mise en œuvre du système.

Campagne en faveur de l'épuration de l'atmosphère

La pollution atmosphérique dévaste les ressources naturelles et la nature dans le monde entier. Bien que les plus graves problèmes se produisent dans le pays développés, de multiples pays en voie de développement sont menacés ou y sont déjà confrontés. Le WWF intervient de très près dans le domaine des stratégies internationales contre la pollution. Il particpe aux réunions de la Convention sur la pollution atmosphérique transfrontière à longue distance de la Commission économique des Nations Unies pour l'Europe, laquelle surveille la pollution provoquant les pluies acides et tente de la réduire. Le WWF exerce aussi des pressions sur les gouvernements afin qu'ils se joignent au Club des 30% des nations ayant convenu de réduire de 30 pour cent, d'ici 1993, les échappements de soufre et a fait campagne pour qu'il soit incorporé dans la Convention un protocole de réglementation des oxydes d'azote. Il même actuellement une campagne en faveur d'un nouveau protocole portant sur les hydrocarbures, qui contribuent à la pollution de l'ozonosphère. Le WWF a élaboré un rapport spécial traitant des pluies acides et ce rapport a été diffusé à la presse internationale ainsi qu'aux participants des conventions de 35 pays développés.

Echange des dettes contre protection de la nature

Tandis que les pays en voie de développement fortement endettés poursuivent leur croissance économique, il leur est souvent difficile de prévoir des fonds pour la protection des animaux sauvage et des parcs, pour l'éducation et la formation en matière de défense de l'environnement et autres mesures visant à protéger et à utiliser leurs ressources naturelles avec sagesse. Consciente de cette situation, le Fonds mondial pour la nature (WWF) assure l'élaboration et l'application de techniques juridiques et financières innovatives en faveur de la défense de l'environnement.

Depuis 1987, le WWF joue un rôle prépondérant dans la transformation d'une idée nouvelle, appelée échange de la dette contre la nature, en une réalité concrète. Cette méthode fait intervenir le rachat de la dette d'un pays en voie de développement par un organisme de défense de l'environnement, moyennant un rabais et son remboursement en monnaie locale, obligations en monnaie locale ou obligations en dollars qui seront consacrées à des activités de défense de l'environnement. L'impact de telles opérations sur cette défense peut être significatif: lorsque la dette escomptée est remboursée, par exemple, en obligations en monnaie locale à taux d'intérêt élevés, les accords d'changes de la dette contre la nature peuvent multiplier par six ou davantage les fonds utilisés par le WWF à la défense de l'environnement dans les pays en voie de développement.

Au titre d'un échange de la dette contre la nature avec l'Equateur, le WWF a fait l'achat d'un million de dollars de la dette extérieure du pays auprès de la banques américaines pour un montant de $355.000, soit 35 cents par dollar- un taux qui a triplé la valeur des investissements de défense de l'environnement effectués par les membres du WWF et autres donateurs. Au titre de l'accord avec l'Equateur, le WWF et d'autres organismes peuvent aussi faire l'acquisition de dettes complémentaires, à concurrence de neuf millions de dollars.

L'Equateur convertit la dette acquise en obligations en monnaie locale pour la défense de l'environnement. Les intérêts sur les obligations financent les prestations de gestion de parcs et d'autres efforts, tandis que le capital de la dette assure une dotation pour Fundación Natura, le principal organisme privé de défense de l'environnement de l'Equateur ainsi qu'un associé du WWF ayant lancé l'échange de la dette.

Au cours de cette année, le WWF a aussi organisé de tels échanges aux Philippines. Il a convenu d'acquérir un maximum de $2 millions de la dette extérieure de ce pays, qui sera mis en œuvre pour la gestion de parcs, la mise à disposition de programmes de formation quant à la défense l'environnement et l'exécution d'autres mesures de défense.

Le personnel du WWF travaille aussi en étroite collaboration avec les représentants officiels de la Banque mondiale et autres agences d'aide multilatérale et bilatérale afin de les aider à incorporer des éléments de défense de l'environnement dans leur planification du développement. A titre d'exemple, un cadre supérieur du WWF aux Etats-Unis assure la coordination d'un groupe d'intervention de la Banque mondiale afin d'identifier les écosystèmes d'importance majeure et les pays à haute priorité pour bénéficier de mesures de défense et de suggérer aussi les manières dont la Banque peut protéger la diversité biologique dans les pays dans lesquelles elle est active. Le WWF participe par ailleurs à la mise sur pied d'un système solidaire des zones protégées pour la paix le long de la frontière entre le Costa Rica et le Nicaragua proposé par les gouvernements des deux pays. Parmi ces zones frontalières, qui sont depuis longtemps soumises aux activités militaires et à l'intense immigration rurale, se trouve la plus importante région de forêts tropicales vierges du bassin des Antilles et de l'Amérique centrale. Parmi les espèces qui bénéficieraient de la protection, citons le requin taureau, exceptionnellement adapté aux eaux douces, les poissons-scies, les tarpons, les lamantins, les tortues vertes et les tortues à écailles.

Une question de taille

Le seul fait de protéger une zone de la forêt tropicale n'en garantit pas la survie, ni celle de ses animaux sauvages. Il semble que beaucoup dépende de sa taille. En effet, lorsque la majorité d'une large zone de la forêt est coupée, les fragments isolés qui restent ont tendance à perdre nombre de leurs espèces sinon toutes.

Le WWF, en collaboration avec deux organismes brésiliens de défense de l'environnement tente d'en découvrir les raisons. Deux réserves, l'un d'un hectare et l'autre de dix hectares, furent isolées dans l'Amazonie brésilienne en 1980. Alors que la forêt voisine était détruite, les oiseaux et papillon s'échappèrent dans les réserves, d'autres espèces furent perdues et il fut observé des changements significatifs dans les plantes forestières, probablement provoqués par des changements de la température et de l'humidité relative. En quelques mois, ni l'une ni l'autre de ces minuscules réserves n'étaient représentatives des écosystèmes de la forêt amazonienne.

Les études effectuées jusqu'à présent semblent suggérer que deux facteurs sont au cœur de ce processus : les réserves sont trop petites et il est créé une nouvelle lisière de la forêt alors que les arbres voisins sont coupés. Ceci suggère qu'il est de loin préférable d'avoir une grande réserve plutôt que plusieurs petites et qu'il est indispensable que les réserves soient protégées par des zones tampons de plusieurs centaines de mètres d'épaisseur, ou même reliées par des couloirs non perturbés à des zones de forêt continue.

Cette situation a d'importantes répercussions sur les programmes futurs de défense de la forêt tropicale. A titre d'exemple, le Costa Rica est fréquemment cité en modèle en matière de défense de l'environnement car près de 27 pour cent de ses terres sont partiellement ou totalement protégées ou sont gérées en tant que réserves. En dehors de ces zones néanmoins, le Costa Rica est en train de perdre sa forêt plus rapidement que tout autre pays du monde; on prévoit que tout ce qui reste de sa forêt non protégée sera détruit au début des années 90 et les zones qui restent seront soumises à de très fortes pressions.

Collaboration avec les populations

Les paysans pauvres coupent la forêt pour survivre; ils ont besoin de terres pour y cultiver des plantes vivrières pour eux-mêmes et leur famille. Ils savent fréquemment qu'ils détruisent les avantages à longue échéance au profit de la survie à courte échéance, mais ils n'ont pas le choix. Il peut néanmoins leur être prouvé que la défense de l'environnement apporte des avantages immédiats, ils sont en général prêts à l'accepter.

Dans la région sud-est du Costa Rica le WWF travaille en collaboration avec les paysans de la communauté de Gandoca. Des pressions ont été exercées sur les exploitants pour déboiser leurs terres afin de prouver qu'ils en sont propriétaires; une fois néanmoins que les arbres sont coupés, la terre se détériore rapidement et le sol devient pratiquement inutilisable pour l'agriculture. Le WWF leur prête assistance afin que ces paysans adoptent des méthodes agricoles plus productives et moins préjudiciables à l'environnement. Ces paysans assurent en retour la gestion d'un marais local de bois d'orey, le seul de ce type en Amérique centrale, en tant que refuge d'animaux sauvages. Dans le Yucatan, le WWF a prêté assistance à un agronome mexicain, Felipe Sanchez, afin de remplacer l'agriculture de type «couper et brûler» par des méthodes d'agriculture nouvelles et salutaires. Traditionnellement, chaque paysan maya de la péninsule débroussaille deux hectares de nouvelles terres chaque année. Avec le nouveau système toutefois, faisant appel à des méthodes simples d'irrigation, une couverture et des doses modérées d'engrais, les fermiers peuvent obtenir plusieurs fois leur récolte normale d'une parcelle juste inférieure à un seul hectare et ils peuvent l'utiliser année après année sans avoir à déboiser davantage. Près d'une douzaine de communautés de Mayas ont déjà adopté les nouvelles méthodes. Par ailleurs, sur la lisière de l'Amazonie, les chercheurs soutenus par le WWF tirent parti des leçons des Indiens Kayapo qui «exploitent» la forêt de façon intensive, sans la détruire; ils récoltent plantes, fruits et graines, plantes médicinales et gibier. Le WWF, avec l'appui de la Mac Arthur Foundation, prête assistance aux organismes non gouvernementaux d'Amérique latine afin de leur permettre d'accroître leur influence. Les organismes prolifèrent, mais sont confrontés à de sérieux obstacles; les fonds sont rares, les projets pour se procurer des fonds n'ont pas été mis à l'épreuve et l'expérience est restreinte. Sur demande des groupes, le WWF les aide sur le plan de la formation. Au Guatemala par exemple, une petite subvention du WWF a permis à l'organisme local, Defensores de la Naturaleza, d'élaborer un calendrier présentant les animaux sauvages uniques à ce pays. Il fut demandé aux entreprises commerciales locales d'acheter de l'espace publicitaire; leur réponse dépassa toutes les espérances et les sociétés demandèrent à participer aussi à d'autres projets. Grâce à la vente du calendrier, le groupe fut en mesure non seulement de recouvrer ses frais de production, mais il fut aussi possible d'obtenir une somme de 11.000 S. Le WWF a aussi prêté assistance en matière de liaison des organismes d'Amérique centrale dans le Réseau national d'organismes non gouvernementaux de défense de l'environnement pour le développement durable de l'Amérique centrale (REDES), réseau venant d'être mis sur pied.

En Amérique latine, comme dans le monde entier, l'homme se préoccupe de plus en plus de la défense de l'environnement et souhaite y participer. Et c'est à l'homme lui-même, en fin de compte, qu'appartient de prendre la décision entre la destruction continue et le développement durable.

Programme international géosphère-biosphère

Des propositions de participation de l'Union des associations techniques internationales

par Joseph JACQUET*

L'introduction de la dimension planétaire de la protection de l'environnement

L'attention accordée à la *protection de l'environnement*- c'est-à-dire aux conditions favorables au développement de la vie telles qu'elles se trouvent réalisées dans une faible portion d'espace dénommée « Biosphère » - est un fait irréversible à mettre à l'actif des trente dernières années. Une prise de conscience de la vulnérabilité de ces conditions à l'action de l'homme s'est opérée à l'échelle *locale* puis *régionale,* notamment sous la pression des concentrations urbaines, des grands aménagements, de l'effet de taille des installations industrielles à risques, de la surexploitation de ressources continentales et marines, etc. Il en est résulté la mise au point d'outils d'identification et d'évaluation *d'impact local ou régional* des divers types d'activités sur les écosystèmes qui constituent la biosphère, le développement de techniques et de technologies permettant d'en limiter tes nuisances et, dans certains cas, d'entreprendre la restauration de la qualité de certains milieu dégradés. Des réglementations ont été édictées pour prévenir les pollutions mais leur efficacité de mise en œuvre dépend étroitement de l'adéquation des connaissances scientifiques sur lesquelles elles s'appuient. Or *l'écologie* en tant que *science* est encore loin d'avoir acquis la maturité que nécessiterait la maîtrise responsable de l'homme sur son milieu: le passage de la phase descriptive des écosystèmes à l'explication et la compréhension de leur fonctionnement - qui seules peuvent fournit des bases assurées de gestion prospective des ressources planétaires - s'opère très progressivement.

La dimension *planétaire* de la protection de l'environnement s'est affirmée plus récemment : sa prise en compte est aujourd'hui un fait, concrétisé tout dernièrement par des conventions internationales (Montréal, Vienne). Il faut rappeler à ce sujet que cette dimension planétaire s'est imposée à partir de l'évidence apparue au cours des dernières décennies que l'environnement planétaire qui nous est familier dans sa diversité géographique n'est pas une « donnée » immuable mais qu'il est la résultante de processus dynamiques dans lesquels interviennent inextricablement mêlés facteurs naturels et anthropiques et qu'il s'insère dans une *histoire* mouvementée quand on change de référentiel temporel: par exemple si l'on passe du siècle à 10 000 ans comme unité temporelle de référence. Un des grands succès de la recherche scientifique appliquée à l'environnement a été le *« décodage » d'archives planétaires* à partir d'indices des conditions environnementales du passé piégés dans l'accumulation des glaces polaires et dans les sédiments marins et continentaux. Les *techniques de datation* mises au point permettent d'accéder à la connaissance des rythmes d'évolution d'éléments caractéristiques du climat planétaire et les techniques d'analyses physiques, chimiques et biologiques d'indices fossiles ont permis à l'heure actuelle de reconstituer les paysages du passé sur près de 200 000 ans. L'apparente «stabilité» globale de notre environnement présent est un phénomène relativement récent qui se révèle être un *«moment»* très bref intégré dans une succession d'alternances d'âges glaciaires et chauds dont on a identifié plus de 20 cycles au cours du dernier million d'années!...

Le dernier paroxysme glaciaire date d'environ 18000 ans et, à cette époque, le niveau marin se situait 120 m en dessous du niveau actuel qui a été atteint - à quelques petites oscillations près - il y a moins de 7 000 ans, c'est-à-dire à l'aube de l'ère historique... L'explication de ces grandes phases d'évolution de l'environnement planétaire dans le passé est encore une question ouverte mais le problème est posé en termes de *risques de «déstabilisation»* de la composante essentielle de l'environnement qu'est le *climat sous* l'effet de l'utilisation intensive et incontrôlée des ressources de la planète par l'homme. En effet, les rejets gazeux et particulaires d'activités humaines — industrielles, agricoles, domestiques - tendent à altérer la composition de l'atmosphère et par là sa fonction de «filtre» vis-à-vis du rayonnement solaire, de même que les aménagements et l'utilisation des terres affectent les propriétés réfléchissantes et absorbantes du sol, toutes altération qui peuvent concourir à modifier les bilans globaux radiatif et thermique de la planète et, par conséquent, la distribution des climats.

L'évaluation de tels risques à l'échelle du globe - par exemple les menaces sur la couche d'ozone stratosphérique dont on sait le rôle capital dans l'absorption des rayonnements ultra-violets nocifs -, en vue de leur intégration dans des processus de décision impliquant le long terme, der-

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eure une question plus que jamais à l'ordre du jour. Il faut en effet tenir compte des temps de réponse et des durées de réactions des milieux composant le système global géosphère-biosphère aux perturbations introduites par l'accroissement rapide des activités humaines et de leurs inéluctables déchets de toute nature. Un seul chiffre permet de caractériser la rapidité de cette évolution et l'urgence de décisions concertées et appliquées au niveau mondial: il aura fallu 2 millions d'années pour que la population du globe atteigne 4 milliards d'individus (vers 1960), il suffira de 45 ans pour doubler ce chiffre...

Toutefois, pour être réalistes et efficientes, ces décisions doivent s'appuyer sur un *capital de connaissances* suffisant pour permettre *en toute objectivité* des évaluations prospectives de leurs effets : un *dialogue direct* entre scientifiques et décideurs politiques et techniques s'avère ici indispensable. Il devra s'effectuer en dehors du prisme déformant des « médias », en excluant les emphases nourries de la recherche de « coups » *à* sensation : il s'agit d'instituer une attention permanente au progrès des connaissances scientifiques et à l'évaluation critique de la capacité prédictive des modèles pour répondre à différents scénarios de développement envisagés et fournir des éléments consistants d'aide à la décision.

Face aux questions posées par la communauté scientifique pour expliquer les constats d'évolution du passé et identifier les effets de modifications significatives récentes de composition de l'atmosphère (augmentation de constituants minoritaires radiativement actifs tels que CO_2, CH_4, etc.) et aux interrogations des décideurs, des techniciens et du grand public sur le sujet, il était nécessaire de promouvoir *un effort de recherche accru,* coordonné à l'échelle mondiale, pour répondre à cette attente et élaborer sur des bases assurées des outils d'identification et de prévision de l'impact de l'homme sur son environnement planétaire.

Le Programme international géosphère-biosphère pour l'étude des changements globaux (P.I.G.B.)

Ce programme proposé en 1986 par le Conseil international des unions scientifiques (C.I.U.S.) constitue moins un «nouveau programme» qu'un «label» accordé à une intégration plus poussée d'actions de recherches multidisciplinaires déjà entreprises par la communauté scientifique et impliquant la dimension planétaire dans tous les domaines de recherche concernés. Ce qui est visé ici est non seulement la *description* de l'évolution de l'environnement planétaire dans le temps mais *la compréhension* des mécanismes des changements constatés pour modéliser la dynamique, avec comme objectif final l'identification et la prévision de l'impact des activités humaines de toute nature sur le fonctionnement du système géosphère-biosphère. Il s'agit donc d'un effort ambitieux et vital, concernant *le long terme,* pour *décrire* et *comprendre :*

- les *processus* interactifs physiques, chimiques et biologiques qui constituent les conditions originales de l'environnement planétaire et règlent le fonctionnement de la biosphère;
- les *changements* qui sont intervenus au cours de l'histoire de la Terre;
- les *voies* par lesquelles ces processus sont ou peuvent être influencés par les activités humaines.

Par rapport aux grandes actions scientifiques précédemment engagées, l'originalité de ce nouveau programme réside en ce qu'il inclut de façon explicite l'étude de *l'impact des activités humaines* sur le fonctionnement du système géosphère-biosphère à l'échelle planétaire.

Compte tenu des temps de réponse et des réactions du système, on cherche à constituer un corps de connaissances permettant d'évaluer son évolution à *l'échelle du siécle à venir.* Le choix de cette échelle de temps est un élément clé du programme en question dont la finalité de recherche est à la fois fondamentale et appliquée: une meilleure connaissance du « fonctionnement » de la planète Terre permettant d'asseoir une *gestion responsable* de ses ressources et d'assurer la *fiabilité* d'indicaters de changements significatifs dans l'environnement planétaire. Cet effort unificateur - à la fois *multidisciplinaire* et *international* - des recherches mobilisant les sciences de la terre, de l'atmosphère, de l'océan, de l'eau, de la vie, de l'homme... devrait s'épanouir tout au long de la *décennie 1990.*

Il devra s'appliquer en priorité aux domaines qui offrent les meilleurs promesses d'élucidation des interactions biogéo-chimiques susceptibles d'être affectés par des « perturbations » anthropogéniques qui pourraient induire des changements significatifs à l'échelle du siècle.

L'atmosphère est un de ces domaines au premier chef en tant que «filtre » du rayonnement solaire et en tant qu'agent répartiteur de son énergie sous forme de chaleur à la surface de la planète. Couplées avec le *cycle de l'eau,* les circulations atmosphériques et océaniques sont en effet les mécanismes fondamentaux de cette distribution et de la génération du climat planétaire avec ses particularités régionales. Ainsi le problème de fond, qui peut servir de fil directeur à la mise en valeur des objectifs du programme et à la perception de ses enjeux, est bien celui de *l'évolution du climat et* de *l'influence potentielle de l'homme* sur cette dynamique (1).

Les intentions et propositions de participation de l'UATI et de ses associations membres au programme géosphère-biosphère (PIGB)

Consciente de l'importance vital des objectifs de ce programme pour le futur à long terme du développement des techniques et des choix technologiques, l'UATI, lors de son Assemblée générale des 21 et 22 avril 1988, tenue à Paris au siège de l'UNESCO, a confirmé son intention d'apporter des contributions spécifiques à la réalisation du PIGB. Une démarche est en cours auprès des différentes associations membres de l'UATI pour identifier les retombées du programme dans leurs domaines spécifiques et les incitera participer à cette action par l'apport de leurs compétences techniques. Un groupe de travail spécialisé a été constitué au sein du Comité environnement de l'UATI pour définir, en liaison avec les associations membres intéressées et avec le CIUS, ces contributions concrètes au PIGB.

A l'occasion de la première réunion du Conseil scientifique du PIGB tenue à Stockholm du 24 au 28 octobre 1988, l'UATI a été invitée à présenter ses intentions et l'état actuel de ses propositions de participation au programme.

Les reflections du groupe de travail «géosphère-biosphère » de l'UATI s'organisent autour de deux pôles d'actions concrètes correspondant à des lacunes ou insuffisances bien identifiées :

- d'une part dans les travaux visant *l'impact quantifié* des activités de l'homme sur son environnement,
- d'autre part dans la *diffusion* et le *transfert* des résultats de la recherche vers les utilisateurs : décideurs politiques et techniques, gestionnaires des ressources planétaires, etc.

1° - Le premier rôle concerne le recueil et l'élaboration de données fiables à *l'échelle planétaire* pour quantifier les «perturbations» introduites par les activités humaines — notamment par leurs *déchets* - dans l'environnement. Ces données sont toujours relatives à une histoire avec ses trois composantes: le *passé,* le *présent et* le *futur* tel qu'il peut être appréhendé à partir des différents scénarios de développement envisagés à l'échelle du siècle à venir. Les dimensions planétaires et prospectives sont ici essentielles. Chacune de ces trois composantes porte en elle ses propres incertitudes qu'il faudra évaluer en tenant compte d'autres facteurs :

• suivant qu'il s'agit des pays industrialisés ou en développement,
•suivant les types de sources de déchets: industrielles, domestiques, agricoles - mobiles ou fixes - concentrées ou diffuses - avec prise en compte du développement des techniques.

La communauté scientifique est ici en position de demandeur vis-à-vis des organisations techniques susceptibles de fournir, dans leur domaine de compétence propre, de telles données assorties d'un label de qualité. On citera à titre d'exemple:

• les données relatives aux divers scénarios de *consommation* d'énergie, d'utilisation des *combustibles fossiles,*
• les rejets de *polluants par les grandes industries (chimiques, métallurgiques, etc.), par les systèmes de transports (véhicules à moteur),*
• les données relatives à la *consommation des engrais,* au *déstockage du carbone* par *la deforestation et les pratiques agricoles,* etc.

Une application de cette proposition pourrait être tentée sur quelques types de déchets rejetés dans l'atmosphère, avec le concours de l'Union internationale des associations de prévention de la pollution 1tmosphérique (UIAPPA).

Il Importera particulièrement de veiller ici à ce que cette proposition ne fasse pas double emploi avec les activités de banques de données existantes ou d'autres organisations internationales concernés et à ce que cette contribution s'opère en totale concertation avec elles. Des moyens devront être dégagés pour procéder à des inventaires critiques, à des évaluations et à des tests de cohérence sur les données statistiques rassemblées, le problème de l'extrapolation et de l'intégration spatiotemporelle des informations devant faire l'objet d'une attention particulière avec la recherche d'indicateurs locaux et régionaux pour guider ces opérations,

2° - la mise en œuvre d'un programme aussi ambitieux que le PIGB suppose un *effort de communication permanent* tout au long de son déroulement:

• d'abord au sein de la communauté scientifique pour faire sauter les cloisonnements « disciplinaires » et faire converger les travaux vers les objectifs pluridisciplinaires affichés, en *direction de l'aval,* c'est-à-dire des praticiens, techniciens, décideurs et gestionnaires afin que s'instaure un *dialogue constructif* entre chercheurs «fondamentaux» et utilisateurs «bénéficiaires» des résultats de leurs travaux, face en particulier au défi climatique dont on sait qu'il caractérise le siècle à venir.

La seconde proposition de l'IATI concerne ce dernier volet de communication. Elle consiste en la mise en place d'une *cellule pérenne d'information* jouant le rôle d'un nœud de relations permanentes entre la communauté scientifique et les décideurs concernés par le long terme. Cette cellule aurait à remplir des missions bien définies, telles que:

- la tenue à jour de *synthèses de connaissances scientifiques* faisant ressortir les acquis et les incertitudes dans les différents domaines du programme, la fiabilité des outils de simulation élaborés pour évaluer l'impact des activités humaines, par exemple sur le climat planétaire.
- la promotion du dialogue entre scientifiques, décideurs et techniciens sur des thèmes précis en relation avec la prise en compte de l'influence potentielle de l'homme sur l'environnement planétaire, ses conséquences pratiques à terme, les décisions politiques et technologiques à prendre,
- la diffusion d'informations, avec un label *d'indépendance* et *d'objectivité,* au fur et à mesure de l'avancée de connaissances,
- la capacité de réponder à toute *demande d'information* sur le déroulement du programme géosphère-biosphère et ses enjeux,
- l'organisation de *rencontres pluridisciplinaires* entre les acteurs du programme.

Cette liste est simplement indicative et une concertation avec les organisations internationales intéressées est indispensable pour définir avec précision les missions et la structure d'une telle cellule qui doit être un *organisme vivant et* non un conservatoire de documentation ou un nouvel avatar de la machinerie bureaucratique internationale. L'enjeu est de taille car cette proposition vise la mise en place d'une structuure *permanente,* au moins pour la durée du programme géosphère-biosphére, à vocation mondiale, à caractère non gouvernemental pour assurer son indépendance, animée par quelques personnalités choisies, agrées par les deux parties, et dont les missions ne fassent pas double emploi avec les acivités d'organismes existants (SCOPE par exemple), l'accent étant mis ici sur la dimension spécifiquement *planétaire* des problèmes évoqués.

Comme il a été indiquée précédemment, ces propositions sont formulées ici à titre indicatif et nécessitent un examen critique approfondi, d'une part pour définir avec précision les besoins correspondants, et d'autre part pour assurer l'adéquation des projets à des besoins réels identifiés par toutes les parties concernées, la concertation indispensable et les moyens nécessaires à leur mise en œuvre. L'année 1989 devra permettre d'avancer cette tâche à laquelle les associations membres de l'UATI sont invitées à apporter leur contribution.

(1) On trouvera une présentation détaillée des objectifs et de la structure du PIGB dans le document préparatoire à la réunion de Stockholm: *The International Geosphere-Biosphere Programme: A Study of Global Change (IGBP) - A Plan for action* - Rapport préparé par le Comité Spécial pour l'examen du PIGB à la première réunion du Conseil scientifique du PIGB.

The Shrinking Library *

Introduction

Some 250,000 higher plant species are known to exist world-wide. Intelligent utilization of these species has extraordinary implications for agriculture, medicine and industry. Yet only 1 percent have been assessed for their usefulness to mankind.

Today, man relies on only 8 crops for 85% of his nutrition and only three types of crops — wheat, rice and maize - provide over half of all human nourishment. Thousands more vegetable food species can be used to feed mankind. In view of the food scarcity in many countries - more than 500 million of the Earth's inhabitants are malnourished - there is a clear need to broaden the global food base using every available resource.

Yet despite the tremendous agricultural gains that could result from exploiting the world's species richness, it is the genetic diversity existing *within* a particular crop or crop genepool that holds the key to future food production.

Genetic diversity

Throughout agricultural history, crop plants have adapted to a range of environments and farming systems. The plants that are grown today as crops evolved from forms that originally grew in the wild. Through the process of natural selection, cultivars developed with resistance to the pests and diseases prevalent in their area. Early farmers introduced additional selection pressures as they gradually chose plants which suited their own tastes and met the need for easy harvesting. The evolution of these plants has led to the development of tremendous genetic diversity among traditional populations of crops throughout the world. The greatest concentrations of this diversity can be found in the tropics and southern hemisphere, in areas where natural selection and crop cultivation were not affected by the coming of the glaciers.

Plant genetic diversity is among mankind's most valuable treasures. The appropriate use of diverse species can help ensure future food security, both as new food crops and by the addition of genetic material through breeding to create more versatile strains of familiar food crops. Important characteristics - such as disease resistance and tolerance to stressful environmental conditions - can be bred into staple food crops to produce remarkable increases in yields. Fields where indigenous species grow undisturbed are veritable libraries, storing the genes with which scientists can produce the seeds of tomorrow.

Of course plant germplasm - the material that controls heredity - can't claim total responsibility for yield gains. Irrigation, fertilizer, pesticides, herbicides and improved farm machinery have important roles to play as well. But these «inputs» could accomplish nothing without genetically adapted varieties of crops to take advantage of them.

It is impossible to predict exactly which genetic resources will be required by future generations. Diseases and insects can adapt to man's defences creating new problems for plant breeders. When this happens, scientists must search through existing varieties for one resistant to the pest or new disease. In many cases, this can only be accomplished by incorporating genes from wild, ancestral or related species into existing cultivars. By cross-breeding the old and the new varieties, scientists can try to transfer resistance to create the next superior generation. The importance of maintaining a large and diverse « genetic library » can perhaps best be illustrated by example : a rare species of corn, *Zea diploperennis,* has immunity to seven major diseases that plague domesticated corn. Discovered in Mexico in 1977-, it is the only known source of resistance to streak virus, the most serious corn disease in Africa, and it promises to be of major importance in maintaining high corn yields through the next century.

Genetic erosion

But time is running out. Many traditional cultivars have been abandoned and have disappeared forever. Population growth, deforestation, desertification and modern agriculture have obliterated many of the natural habitats where genetic diversity once flourished and have hastened the extinction of many potentially valuable species. In South America, for example, wild tomatoes with unknown genetic richness have stopped growing in areas cleared for farming and other uses. And in Southeast Asia, deforestation and farmland expansion have destroyed wild banana and sugarcane habitats.

These continued assaults on the rural environment are not the only threats facing the Earth's natural genetic diversity. Ironically, the Green Revolution, which raised agricultural productivity to previously unimagined heights in the 1960's and 1970's, has itself hastened the extinction of

* This article was contributed by the International Board for Plant Genetic Resources (IBPGR).

many potentially valuable plant species. Seeking to increase their crop yields, many farmers abandoned the traditional cultivars in favour of the new high-yielding varieties. As uniformity replaced diversity, many valuable species were lost forever. Previously, plant genetic diversity had helped to protect the farmers' crops from loss or damage: when a disease or pest struck one variety of crop, there would usually be another, with at least partial immunity, to limit the damage. Genetic uniformity increased the damage that could be caused by a disease or pest. When a disease struck, instead of being localized by natural crop diversity, an entire crop might be destroyed.

History has proved the dangers inherent in genetic uniformity: it was the unrecognized cause of the Irish potato blight, which left 2 million dead in the mid-19th century.

Germplasm conservation: A global mandate

Loss of genetic diversity in the wider genepools of crop species was perceived as early as the 1940's, but it was not until the 1960's that many plant scientists began to appreciate just how serious the situation had become. A series of international technical meetings, organized by the Food and Agriculture Organization of the United Nations (FAO) in the 1960s and early 1970s, recommended that a worldwide network of centres be established for the conservation of plant genetic resources. In 1974, the Consultative Group on International Agricultural Research (CGIAR) took up this challenge when it established a specialized institution, the International Board for Plant Genetic Resources (IBPGR). Co-sponsored by the Food and Agriculture Organization of the United Nations (FAO), the World Bank and the United Nations Development Programme (UNDP), the CGIAR is an association of countries, international and regional organizations and private foundations dedicated to supporting a system of 13 agricultural research centers and associated institutions worldwide. (See Annex)

The CGIAR is the major mobilizer of support to crop genetic resources activities worldwide, both through its support of major germplasm collections housed by the commodity centers of the system and by its sponsorship of IBPGR.

IBPGR's mission is to ensure that crop genetic resources, the raw materials upon which the success of crop improvement strategies depend, are kept safe and made available to anyone who can use them. The Centre is not a technical assistance or funding agency. Its work is largely conceptual and centers on the establishment of scientific leadership in genetic research, the development of documentation and transfer methods, and the training of plant geneticists and technicians.

The task of global germplasm conservation is so vast as to require a truly internationalist approach. IBPGR has sought to encourage that approach by stimulating worldwide recognition of the threat to genetic material and supporting the world's capacity to meet the threat at all levels and in all regions. In developing countries, IBPGR has worked to strengthen the ability of national genetic resources programmes to carry out collecting, conservation, documentation, training and all other activities required for the preservation of endangered plant germplasm. IBPGR has also sought to coordinate the genetic resources activities of institutions in the developed world and other International Agricultural Research Centres (IARC's).

Collecting

When IBPGR was established in 1974, there were virtually no complete collections of primitively cultivated and wild forms of any major crop. Faced with these tremendous gaps and a loss in genetic variability that was reaching crisis proportions, IBPGR moved quickly to collect the primitive forms of many crops. Special attention was given to germplasm which was of particular importance as staple crops or was in danger due to genetic erosion. As a result, more than enough of this material was acquired to satisfy the immediate needs of breeders. In recent years, IBPGR has emphasized wider genepools to ensure the inclusion of wild and weedy relatives in the collections. Since 1974, the Centre has been instrumental in the collection of 170 000 samples of crops in 120 countries.

Conservation

Once it has been collected, germplasm must be rapidly transferred to suitable storage facilities. Plant genetic resources can be conserved in a number of ways : as seed in specialized storage centers known as seed genebanks; as growing plants in field genebanks; as samples of plant tissues in laboratories, using *in vitro* methods of conservation; and in the natural environment, through *in situ* conservation. Seed conservation is the most common and practical of these methods, although *in vitro* genebanks, currently under development, hold great potential for the conservation of material that cannot be easily stored as seed.

All material collected by or with the help of IBPGR is distributed to genebanks worldwide for long-term conservation. These genebanks may be associated with other international centres, although most often they are operated by national genetic resources programmes. Part of the material is always incorporated into collections in the country of origin. Duplicate samples are also sent to other long-term storage facilities for extra security. IBPGR holds strongly to the position that to guarantee the material's safety, no one institute should hold unique material.

IBPGR's conservation strategy seeks to ensure that, for each major crop, there is at least one institution in the world that holds a base collection of materials, under conditions that will maintain their long term viability. Where possible, at least one back-up collection is held elsewhere under similar conditions.

Plant genetic resources are exchanged and used through the distribution, multiplication, characterization and evaluation of germplasm stored in active collections. Active collections hold materials in medium-term storage so that it can easily be made available for research and breeding.

Until fairly recently, the most important collections of food crop germplasm were located in the developed world, in the United States, Australia and various European countries. Traditionally, these countries have had a policy of providing germplasm to most countries that request it.

Today, however, some of the world's largest germplasm collections are maintained by national genetic resources programmes in developing countries. Most IARC's, located in developing countries, hold substantial collections as well. The International Rice Research Institute (IRRI) in the Philippines, for example, hold 81 000 accessions of rice and the International Center for Tropical Agriculture (CIAT) holds a collection of 36 000 accessions of *Phaseolus* alone.

The involvement of the IARC's in developing countries has helped to strengthen the efforts of national programmes, many of which are in the earliest stages of their development. Only about 15% of the countries associated with IBPGR have clear, scientifically justified and adequately financed genetic resources programmes and many national programmes are unable to meet their commitments because of inadequate financial resources and limitations in staffing. These national gaps are one reason why an international programme is absolutely necessary. IBPGR has been particularly active in attempting to draw together diverse and independent activities into an effective and cooperative global operation for the conservation of plan genetic resources. Only this type of approach will guarantee the safeguard of the Earth's vital genetic heritage.

Training

IBPGR's training programme, like those of the other IARC's, has made important contributions to building the knowledge and skills of personnel for national, regional and international organizations, especially in developing countries. Since 1974, IBPGR has trained approximately 1 300 scientists and technicians throughout the world in all aspects of genetic resources work, from collecting and seed physiology to database management. The success of this effort is evidenced by the fact that 20% of IBPGR's former students have gone on to high positions in genetic resources programmes in their home countries.

Research

IBPGR has played a lead role in stimulating and coordination strategic research in various areas of the plant sciences. Research is being conducted on aspects of seed physiology that relate to the development of safe and cost effective techniques for the storage of seed. IBPGR has pioneered the development of *in vitro* based collecting methods for plant materials - such as tuber crops and tropical fruits - which are difficult to collect due to seed recalcitrance or poor seed production. In addition, the operational aspects of *in vitro* conservation are being examined by a pilot active *in vitro* genebank developed in collaboration with CIAT.

The global operation

It is estimated that the cost of all current global genetic resources activities, whether funded bilaterially, multilaterally or nationally, does not exceed $70 million per year. IBPGR's activities require an annual budget of only 8-9% of that figure. The global nature of plant genetic recources activities, which comprises interlocking institutional arrangements and operational strategies world-wide, has proven an expedient and cost-effective means of ensuring the preservation and exploitation of genetic resources. As of 1989, IBPGR had developed cooperative activities in 120 countries, ranging from sophisticated laboratory research in advanced industrialized countries to individual collecting efforts in some of the smallest and poorest countries.

IBPGR has proposed that networks of institutes and scientists be established on a crop by crop basis and that each crop network encompass all genetic resources activities for hat particular crop. The primary objective of this exercise is to create a dialogue among all parties involved in work on the genetic resources of a specific crop. Once in place, the crop network system will greatly enhance the ability of concerned scientists world-wide to guard the security of the world's food supply.

ANNEX

INTERNATIONAL AGRICULTURAL RESEARCH CENTERS (IARC's) OF THE CGIAR

Centro Internacional de Agricultura Tropical (CIAT), Cali, Colombia
Centro International de Mejoramiento de Maiz y Trigo (CIMMYT), El Batán, Mexico
Centro Internacional de la Papa (CIP), Lima, Peru
International Board for Plant Genetic Resources (IBPGR), Rome, Italy
International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad, India.
International Food Policy Research Institute (IFPRI), Washington D.C., USA
International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria
International Livestock Center for Africa (ILCA), Addis Ababa, Ethiopia
International Laboratory for Research on Animal Diseases (ILRAD), Nairobi, Kenya
International Rice Research Institute (IRRI), Los Baños, Philippines
International Service for National Agricultura Research (ISNAR), The Hague, Netherlands
West Africa Rice Development Association (WARDA), Bouaké, Côte d'Ivoire.

Biorevolution and Biotechnologies: The Role of INGOs*

by Henk Hobbelink

« *Present day biotechnology is the result of the work of thousands of people who patiently built the foundations, the walls and raised the roofbeams of an enormous edifice. Now that these labours are over, corporations new and old are crowding and jostling each other on the building site to put the final slates on the roof and call the whole place theirs».*

Susan George **

As soon as a new technology moves from the laboratories to the market place, the question of who owns the technology and the products resulting from it, becomes important. Intellectual property and patent discussions have always accompanied progress in science. But the debate has never been so heated in the past as it has become recently over the question of whether and how to protect property of living matter. And the possible consequences of living matter as intellectual property have never been so threatening and far-reaching as at this very moment when biotechnology is likely to multiply the impact of almost every scientific development.

The question of intellectual property is not new. Way back in history, many examples can be found of how societies tried to honour the inventor of a product on the one hand and, at the same time guarantee access by society to technological progress on the other. The first examples of patent protection can be found with the ancient Greeks. But examples of opposition to this type of exclusive monopoly control also date from the same period. Matters seemed to be settled in a definite way in 1883 when the industrial powers of that time signed the International Patent Convention in Paris. Inventors were assigned exclusive property rights on their products, which is the basis on which industrial production still rests today.

A special system for plant breeding

The debate on intellectual property was given a new and massive impulse when the bio-sciences developed to a stage where, through systematic research, life forms could be changed and brought to the market place. After the work of Georg Mendel and the rediscovery of his heredity laws in 1900, systematic plant breeding started to take off.

When plant breeding matured and developed into an industrial activity, pressure to protect the ownership of the resulting products also grew. The first to react were the Americans, by adopting the Plant Protection Act in 1930. But «life» never fitted comfortably into the industrial patent schemes. The American Plant Protection Act was limited to asexually-reproduced plants, as seeds were considered to be too unstable to be described completely. Seeds change, mutate and reproduce - all too difficult for patent systems which had been based on industrial products.

Pressure from the newly-emerging seeds industry grew steadily and resulted in a special property protection system for plants, outside the industrial patent system: the Plant Breeders Rights system (PBR). In 1961 the Union for the Protection of New Varieties (UPOV) was formed, and the UPOV Convention was signed by a number of (mainly European) industrialized states. PBR gives, for a certain period of time, exclusive monopoly control on the reproduction of plant varieties for commercial purposes, marketing and sale for the breeder that developed them. In the 1970s several more industrialized countries joined UPOV (including the USA), but the growth of UPOV came to a halt by the end of the 1970s when several industrial states did not ratify the convention and efforts to persuade the developing countries to join the club were unsuccessful.

The reason for this setback was increased recognition of the negative impact of PBR for plant breeding. Evidence began to appear that because of PBR, TNCs started to gain increasing control of the breeding sector. It was also increasingly acknowledged that PBR, because of its requirements for uniformity, increases genetic uniformity and that it hardly contributes to the development of new, qualitatively distinct, varieties (2). Developing countries recognized that PBR would not contribute to the build up of viable national agricultural systems. On the contrary, PBR would jeopardize efforts to build and independent national breeding sector. The UPOV convention attracted up to now only 17 member state signatories and it does not seem that this number will increase much in the future.

Tightening the grip: the push for industrial patents

With the debate about PBR still going on, the multinational seeds industry, now massively involved in biotechnology, is pushing already for a much stronger form of protection. Advances in biotechnology result in an increasing value of the genetic resources themselves, and techniques to manipulate them also assume a strategic importance. Increased pressure is being exercised to bring varietal property protection under the general industrial patent system in order to achieve more far-reaching monopoly control.

* This paper is an extract from *New Hope or False Promise ? Biotechnology and Third World Agriculture,* by Henk Hobbelink,

** Quoted in Susan George, « Biobusiness : Life for Sale », a paper prepared for the Institute for Policy Studies' Conference. *Meeting the Corporate Challenge,* June 6-10, 1984.

Despite the profoundly negative impact that PBR had - and still continues to have - on plant breeding, the scope of the PBR protection itself is relatively limited compared to the industrial patent system that is now being sought. PBR does not protect the germplasm in the seed, it «only» gives a monopoly right for the selling and marketing of a certain variety. The property rights of industrial patents go much further. To have a clear understanding of the implications of industrial patenting in the field of plant breeding and biotechnology, we should distinguish first the two different types of patents: process patents and product patents.

Process patents protect the property of a certain technological method, for example the method by which a new gene is inserted into a micro-organism. PBR does not protect this kind of process, which means that breeders can use each other's technologies to improve varieties. With patented processes, this type of technology-exchange between research institutions would be seriously limited, thus hampering technological progress. To use a patented process, the breeder must obtain a license from the patentee, and pay royalities for it. Extensive use of process patenting will make plant breeding more expensive and thus facilitate further concentration within the industry.

The impact of *product patents* goes still further. The industry is very actively seeking product patents on genes and on seeds. The patentee of a gene can, at least in theory, control all varieties in which his gene is incorporated. Or even worse : he can prevent anyone else using the gene and incorporate it exclusively in his own varieties. However, the degree of protection of a patented gene is not well defined at present. Decisions in patent offices and law suits in the coming years will have to clarify these matters. The chemical giants are pressing hard for the option that gene-patents should be extended to all subsequent varieties in which the patented gene is incorporated, thus giving them a much more comprehensive control over the whole breeding sector. But many plant breeders oppose this concept as it would virtually mean the end of their business. *« The artificial gene which science is today able to construct should be protectable by patents, but as soon as this gene is incorporated into a plan and starts functioning, it should no longer be allowed patent protection »*, gays a Dutch breeder (3). His opinion is supported by the Dutch Ministry of Agriculture which has recently supported the claim that PBR should be given precedence over patents.

Patenting varieties: the consequences

The industry is not only pushing for strong patent-protection on individual genes, but also wants to establish the possibility to patent new varieties. As a product patent on a variety gives complete property control over the germplasm in that variety (contrary to PBR protection), seed patents would have two dramatic consequences.

First, the patenting of varieties would make it impossible for breeders to freely use finished varieties patented by someone else as a source for further breeding. Using existing varieties for crop improvement is in fact the very basis of all contemporary plant breeding. Abolishing this practice by the introduction of industrial seed patent systems, would mean quite simply the destruction of what is left of the independent seeds industry. It would be the means by which the chemical industry could further integrate the seeds sector in their main areas of interest and at the same time dispose of competition from traditional breeders. It would also jeopardize progress in crop improvement as the gene-pool that could be used as the basic source for breeding would be severely limited. Finally, it would make current efforts to guarantee free exchange of genetic resources, such as that undertaken by FAO, completely worthless.

Secondly, patented varieties would make it illegal for farmers to use part of their harvest for next year's sowing, as the germplasm in the seeds would continue to be owned by the patentee. The farmer would have to return to the market each year to purchase seed, as it now the case with hybrid crops. It would also be illegal for a farmer to pass on harvested seed to this neighbours or sell it on a limited scale. This would virtually eliminate a widespread farming practice, not only in developing countries but also in the North. It is estimated that only 63% of all planted seeds worldwide are supplied commercially by companies and public organizations. The other 37% is the result of the farmers practices mentioned above (4). In Table 5, the use of home-grown seed by US farmers is given, by crop. While use of such seed in the USA is substantial, especially for non-hybrid crops, the use of home grown seeds in developing countries is much greater.

TABLE 1
The use of «home grown» seeds in the USA:
A practice to disappear?

Crop	%
Corn	5
Grain Sorghum	5
Alfalfa	5
Tobacco	10
Vegetables	15
Rye	25
Rice	30
Peanuts	30
Barley	50
Soybeans	65
Wheat	65
Oats	70

Source: Jack Kloppenburg Jr. L. The Social Impact of Biogenetic Technology in Agriculture. In : G. Berardi and C. Geisler (eds.) : *The Social Consequences of New Agricultural Technologies*. Westview Press, Boulder, Colorado.

The result of the extend property protection described above would be to increase greatly the farming community's dependence on the plant breeding and biotechnology industry. It would also mean the total loss of the genetic diversity that is maintained in the field by farmers through the selection and use of their own seed. Lesser, Associate Professor of Agricultural Economics at Cornell University, estimates that a complete prohibition of farmer-saved seeds would cost the USA farmers half a billion US$ annually. However, his message is simple: *«Farmers, though, must overcome a psychological resistance to having the uses of their crop dictated by the legal system »* (5).

In one of its documents (6), UPOV adds two more dangers arising from the patenting of varieties. One is that it

might be possible, by defining the claims carefully, to extend the exclusive right of the patent on a variety to the final product of that variety thus controlling not only the seed but also its post-harvest products. The second is the danger arising from patents being defined very broadly. On the basis of just a few characteristics, a patent could cover a whole range of existing - or even still to be produced - varieties: for example a patent on all blue or thornless roses. UPOV has several times pointed out its resistance to industrial patents on varieties. The reason for it is not so difficult to understand : *If it were possible to protect plant varieties by means of a product patent, the further development of the specialized legislation of the UPOV countries (...) would be jeopardized»* (7). The very existence of UPOV is threatened by industrial patents.

The way the lobby works

Debate in the international community on the industrial patenting of plants, genes and processes, has only just begun. Pressure for patenting comes, of course, from the major corporations that are now investing in biotechnology. The problem for the proponents is that important legal conventions have to be changed to make their wishes possible. This is expecially true in Europe. The European Patent Act, signed by 11 European countries, specifically excludes *plant or animal varieties or essentially biological processes for the production of plants and animals»* from patentability. Further, the UPOV legislation itself forbids a *«double protection »*. When a variety is protectable under PBR, it cannot be patented by another system. This makes, at least in the European context, patents on plant and animal varieties impossible for the time being. The question of process patents under the European Patent Act is more complex. It depends on how «biological processes» are interpreted. The biotechnology industry bluntly defines all their activities as essentially technical, or chemical, and thus patentable.

Not having signed the European Patent Act, the situation in the USA is more flexible. In the past, the USA patent office did not grant patent protection to crop varieties that are protectable under the UPOV-like PBR legislation that falls under the USA Plant Variety Protection Act. But after two important decisions, one of the U.S. Supreme Court in the Chakrabarty case (1980) and one of the USA Board of Patent Appeals in the Hibbert case (1985), industrial patent protection can now be granted to plant varieties. It is expected that a major shift will now take place in the USA from PBR to industrial patents (8).

But despite the socio-economic impact, legal problems and existing conventions, the lobby for patents is moving steadily ahead. At the international level, the position of the agro-chemical multinationals is voiced especially by the World Intellectual Property Organization (WIPO). WIPO is a United Nations body, based in Geneva, dealing with patent policy. Mr. Baeumer, director of WIPO's Industrial Property division, is very clear about his mission. *« Our task in this field is to stimulate better patent protection for the biotechnology sector»* (9). WIPO established a special Committee of Experts on Biotechnological Inventions and Industrial Property, which met for the second time in February 1986. Twenty-nine states were represented at this meeting, of which only seven were developing countries. Representatives of these seven countries participated very little in the discussions.

More interesting still was the massive participation of industry representatives as NGO-observers. The WIPO secretariat prepared a background documend for this meeting, which clearly outlines the WIPO position. The document notes that certain national laws exclude plants, animals and biological processes from protection and states that *«such an exclusion is no longer justified. All biotechnological inventions should be eligible for patent protection»* (10). Most government representatives were more guarded than the WIPO secretariat might have wished, stating that the time is not yet ripe for patenting plants and animals. The secretariat managed nevertheless to keep the initiative and was asked to prepare a further study on the issue for the next session in 1987. The industry will be asked to put their views on paper for that meeting, undoubtedly to build up more pressure and so speed up the decision making process.

WIPO is not alone in the push for patents. The Organization for Economic Co-operation and Development (OECD) published a report in 1985, recommending that the industry should have the choice between PBR and patents (11). The European Commission has also been dealing with the question.

As stated earlier, the debate has just begun and important groundwork to strengthen patent protection is being carried out. Regardless of the outcome of the controversy, the dispute really amounts to a confrontation between traditional plant breeders and the chemical companies.

Where is the Third World in this debate? Hardly anywhere. Although developing countries are represented in bodies like WIPO, this complex issue is completely dominated by the industrialized world : not surprisingly, since the whole international patent system is completely dominated by and benefits the north. But increased patent control and the resulting dominance of the chemical industry, will be especially disastrous for the South. There is an urgent need for developing countries to talk to each other and involve themselves more actively in the debate. The concern expressed by Mr. Skov on the socio-economic impact of industrial patents, quoted at the beginning of this chapter, is too often expressed by just a few individuals. In UPOV and WIPO meetings they are often minuted as a dissident opinion. It is of crucial importance that the concerns about the socio-economic impact of industrial patents in biosciences are thoroughly assessed and voiced in the appropriate decision making bodies.

Appropriating Biotechnology by the third world: Possibilities and Problems

In the previous chapters we tried to show that the biorevolution will have a profound impact on global agriculture, both in developed and underdeveloped countries. It will affect the position of the Third World as exporter of agricultural commodities, and also as importer of agroinputs. It will also affect Third World capability of producing its own food, and in general the dependence on agro-industry. We have stressed several times that biotechnology as it is being developed now, will have mainly a negative impact on developing countries. But we have also pointed out that the technology could, at least in theory, make a significant contribution towards resolving some of the pressing problems that currently face developing nations.

Central to the whole qestion of the impact of biotechnology is the context in which it is now being developed. At the moment, the technology is being heavily privatized, mainly by large TNCs, and the direction of the research is strongly biased towards a «high-tech» type of agriculture and towards the interests of industrialized nations. The implementation of biotechnology under present conditions, is likely to result in a new international division of labour, a decreased value of raw agricultural materials traditionally produced by the South, and an enhanced dependence of the Third World on the industrialized nations.

The developing countries will feel the negative impact of biotechnological developments most keenly if they are unable to take action. Their capacity to appropriate and adapt biotechnology to their special needs will determine the extent to which the technology will contribute to the solution of their problems. The contribution of biotechnology will also be determined by the capacity of these countries to minimize the negative effects of the type of technology and the type of restructuring described in the previous paragraph which is currently benefitting the North. Simultaneous strategies will need to be defined to both counter these negative effects and, on the positive side, to strengthen indigenous biotechnological capacity. Some suggestions for elements of such strategies are given below, together with a discussion on the main obstacles to implementation,

A. POSITIVE STEPS: STRENGTHENING INDIGENOUS CAPACITY

1. Guaranteed access to the building blocks

Of crucial importance in any attempt to appropriate biotechnology for Third World needs is access to genetic resources, the very building blocks of this technology. Most of the diversity of genetic resources originates in developing countries. Over the past decade a massive «gene-drain» took place from the farmers » fields in the South to the genebanks in the North. It is estimated that over 90% of all germplasm collected by the intergovernmental International Board for Plant Genetic Resources (IBPGR), an international body responsible for collecting and conserving plant genetic resources came from the Third World. Some 40% of that germplasm ended up in the genebanks of Europe and North America, while another 40% went into the storage facilities of the International Agricultural Research Centres (IARCs). Only 15 % was stored directly in the genebanks of the developing nations (12). With plant breeding and biotechnology growing into major commercial activities, the strategic importance of genetic resources is growing likewise. A heated debate is currently taking place in the Food and Agriculture Organization of the UN (FAO) on access to and ownership of those genetic resources. Efforts now underway in FAO to guarantee free access to these resources, taking control of stored germplasm away from individual states and bringing it under a truly international system, should be enthusiastically supported.

It is also important that FAO proposals to set up an international fund for plant genetic resources are succesful. This fund is meant to support germplasm storage and utilization in developing countries. At a recent FAO meeting it was stressed that contributions to this fund should be supplementary to IBPGR contributions and the question of including payments from Plant Breeders' Rights in this fund was also raised (13).

Although these initiatives are not aimed directly at biotechnology research, they are in fact of utmost importance for any biotechnology programme in developing countries. Without free access to genetic resources and without substantial funding for germplasm storage and utilization in the South, the current leaders in the « biotechnology race » are likely to continue to create the conditions for development of biotechnology in their own interest. The developing countries are doing nothing more nor less than requesting equal rights over a resource, originating largely within their own boundaries, which has up to now been used freely by industrialized countries.

2. The role of the (non governmental) International Agricultural Research Centres (IARCs)

In the past decade the IARCs, having led the Green Revolution, have been heavily critized for their role in Third World agricultural development and for the negative impact that the Green Revolution has had on the rural poor. Rightly so, as we pointed out in Chapter 1. But with the heavily privatized, Northern-based biotechnology threatening developing nations, use of the IARC system might yet prove to be one of the few mechnisms that could reverse the privatization of biotechnology and challenge the direction of current research. But even that is an open question. While the Green Revolution was firmly in the hands of the IARCs, biotechnology is almost completely dominated by TNCs. In the case of the Green Revolution, the TNCs acted «merely» as suppliers of the input for seeds that the IARCs had developed; for the bio-revolution, the TNCs are direct competitors of the IARCs in bringing the technology to the farmers' fields. This applies especially to those crops with large market potential such as maize and wheat, the speciality crops of the IARCs.

The competition between IARCS and the TNCs will focus mainly on access to the technology. As the IARCs will probably continue to emphasise applied research, they will require access to fundamental biotechnological information externally developed. A research team at Cornell University in the USA, identified four possible sources for this kind of information : small biotechnology start-up firms in the North, public research institutions in the North, the ICGEB (see below) and the national research programmes of developing countries (14).

If the IARCs are going to have any role at all in developing biotechnology for the needs of the rural poor, access to this type of information must be guaranteed. Apart from strategies to gain access, by far the most important question is how the biotechnology research objectives are developed. If anything is to be learned from the Green Revolution, it is that peasant smallholders in the Third World are not well served by a genera! type of hight-input technology. In principle, biotechnology affords the opportunity to develop an appropriate type of agricultural technology, specifically directed towards the rural poor. It is clear enough that TNCs will not develop this technology. The real challenge for the IARCs in responding to the bio-revolution is to put into practice the lessons of the Green Revolution by appropriating biotechnology and gearing the research towards the specific problems of the rural poor.

3. International biotechnology centres: ICGEB and MIRCENs

UNIDO has made what appears to be the most ambitious and promising attempt to create an institutional mechanism for the transfer and adaptation of biotechnology to the needs of developing countries. But the creation of the (intergovernmental) International Centre for Genetic Engineering and Biotechnology (ICGEB) has proved to be very difficult, partly due to resistance from the USA and Japan, the two countries with the largest biotechnology interests. These countries are very reluctant to share their technology internationally, as it might affect their dominant position (15). Another difficulty in setting up the Centre was the choice of location. Some argued to establish it in the North, while the developing countries argued for a site in the South. A compromise was reached by establishing it in two places: India (New Delhi) and Italy (Trieste). Each Centre has a different mandate. ICGEBs activities will focus both on research and training and will also facilitate a networking function for national research programmes in the South.

Although the Centre is still in its infancy, and its initial budget is very limited, ICGEB could make a vital contribution toward the development of biotechnology in the interests of developing countries. It could play a very important role in North-South and South-South information exchange and provide an important input to the work of the IARCs. Finally, its role in training scientists from developing.countries could be crucial. A dangerous weakness of ICGEB is the lack of support from the industrialized countries. By mid-1985, only 33 states had signed the statutes of the Centre and were participating in the Preparatory Committee. Only three out of the 33 states are from the North (Spain, Italy and Greece) (16). To really make the Centre work, industrialized states should be pressed to join ICGEB and support the creation of independent biotechnology research capacity in the South aimed at developing appropriate agricultural technology. Substantial funding should be made available to the ICGEB.

Another intiative, at a more advanced stage than ICGEB, under the cooperative auspices of Unesco and UNEP (the United Nations Environment Programme) is the creation of the so-called « Microbiological Research centres » or MIRCENs. Up to now eight such centres have been assigned, all of them located in developing countries. The objectives of the MIRCENs initiative are to strengthen the research and training capacity of the regionally situated centres and contribute to policy formulation at the national and international level. Currently supplementary training is provided for nearly 300 biotechnology researchers (17).

4. National biotechnology programmes in developing countries

International structures to facilitate the creation of indigenous research capacity in the Third World and to counteract the current direction that biotechnology is taking are of the utmost importance. But the crucial question remains as to whether developing countries will be able and commited enough to develop indigenous national research programmes directed towards the need of the rural and urban poor. Several developing countries, among them Argentina, India, Cuba, Brazil, China and the Philippines, have already taken steps in this direction, some of them with remarkable success. The research programmes vary, according to the different needs of each country. However, in most countries the biotechnology programmes still face serious technical, economic and political obstacles.

The most important technical obstacle are the lack of trained personel and the absence of a basic scientific infrastructure - a feature of many developing countries, especially the poorest obes. This is in fact a general problem in setting up any applied agricultural research programme. Additionally, long term financial commitment to biotechnology research is difficult for many of the developing countries at a time of widespread austerity programmes related to debt servicing.

The basic requirement for the success of such programmes is that research priorities are very carefully defined according to the specific needs of the majority of the population. It would be inappropriate for developing countries to try to join the «high-tech» biotechnology race that is taking place now among the industrialized countries. Biotechnology has already provided some low-tech, low-cost techniques which could be of considerable benefit for the Third World. Focussing on this type of technology may seem to be an obvious choice, but there is a danger here. Martin Kenney, having visited biotechnology programmes in Brazil and Mexico, puts it in this way: *«Yet, technically simple projects such as these are not well supported. It is scientists with extensive credentials, following the U.S. model, who impress politicians and continue to extract considerable funding, while accomplishing little that is applicable to the needs of the vast majority of the citizens»* (18).

This is in fact one of the crucial points in counteracting biotechnology as it is now being developed in the interest of the industrialized nations. Programmes can only succeed if there is a clear understanding of the problems faced by the rural and urban poor and the political will exists to solve them. This in addition to knowledge of the realistic possibilities offered by biotechnology to solve these problems. In many cases this also means that appropriate research programmes will only be effective if accompanied by broader socio-economic reforms aimed at improving the position of the rural poor. Priorities could be set in consultation with grass-roots organizations and other NGOs, which often have considerable knowledge and experience of the local situation.

B. CONTROLLING THE NEGATIVE IMPACTS

Whether or not developing countries will manage to appropriate biotechnology and develop it in accordance with their specific needs, they will have to cope with the negative impact that is imposed on them by the development of biotechnology in the North. Some of those negative consequences have been discussed in the previous chapters. To reduce this impact and protect the interest of their people, developing countries themselves will, of course, need to develop their own policies and joint strategies. But others can also contribute to this process and so we list below some possible actions that could be undertaken by governments, NGOs and intergovernmental organizations.

5. The need for Early Wartning Systems on the impact of emerging biotechnologies

To be able to react in time to expected developments and adjust policies, developing countries need timely and adequate information. Until now gathering and disseminating such information on has been quite sporadic and fragmentary. Elements of this type of information could be:

- technological information : development of new techniques and possibilities.
- commercial information: developments within the biotechnology industry; identification of TNCs controling the market; research priorities of TNCs and the extent to which are moving into Third World markets.
- socio-economic information: the impact of Northern developed biotechnology on crop displacement in the Third World; displacement of labour; impact on prices; the impact of increased food crop production in the North; monitoring and assessment of dumping surpluses on Third World markets.

Development NGOs in both industrialized and developing countries could play a crucial role in gathering and disseminating information on the developments mentioned above. Several UN agencies could also have a vital role here and could upgrade their activities in the area. Several NGOs and UN bodies are already involved but much more needs to be done. As shown below, developing countries are too often faced with the negative impact of new technologies after the event.

6. The need for adequate regulations in the South

Technology regulation has always been a difficult issue for developing countries. Often due to pressing economic problems in Third World countries, foreign technology and TNC investment has been welcomed without sufficient attention to possible dangers for the environment and the population. Recent tragedies such as Bhopal and the gas explosion in Mexico City have demonstrated that adequate safety standards are often not met. The debate on dangers inherent in genetically-engineered organisms currently taking place in most industrialized countries has also brought the regulation issue under scrutiny. There is already speculation that TNCs might relocate part of their biotechnology research in developing countries in order to circumvent domestic safety regulations. Legal regulatory schemes are also important for the development of national biotechnology programmes in the Third World. Again, ICGEB could play an important role in drafting legal guidelines and in providing a forum for developing countries to discuss this complex issue. Building capacity in the Third World, one of ICGEBs main tasks, should also include the promotion of effective legal instruments to control the technology and protect people and the environment from harmful effects (19).

7. The need to reject patent systems

Perhaps the most powerful instrument in increasing the privatization of biotechnology and establishing monopoly control, are patent systems. While in theory patents are meant to facilitate the availability of information, in practice the opposite happens. Experience has shown that the major beneficiaries of patent protection are the industrialized nations, and more specifrically the large TNCs in those nations. Patents basically act as a concentration and market-control instrument. As indicated in Chapter 7, the Third World will come under increasing pressure to adopt patent-like legislation for biotechnology products. For developing countries, patent legislation on biotechnology inventions, including plant and animal varieties, would mean simply handing over the development of biotechnology to foreign companies. It would also mean jeopardizing public research programmes. For these reasons, ressure to adopt patent-like legislations should be resisted by developing countries. WIPO is a forum where such resistance could be expressed. Until now, the Third World has been generally reluctant to adopt both Plan Breeders Rights legislation and patent legislation for biotechnology-related products. They were right in doing so. However, it might be in the interest of developing countries to establish other types of legislation in order to reward inventors and stimulate indigenous research efforts. The property rights question is not without options. Developing countries might choose to use inventors certificates, reward concepts, or taxation measures, for example. Specific licensing agreements might also prove to be very useful in the stimulation of research and transfer of technology (20). Exploration of such alternatibes is needed.

8. Negotiating a way out: building on experience

The role of the Third World in the FAO debate on genetic resources, is a positive example of collective action on the part of developing countries resulting in concret progress. Five years ago genetic resources was a « non-issue » in the whole UN system. Now the Third World is in a position to negotiate with the industrialized countries on this issue. For example, concrete agreements on ownership, exchange and conservation of germplasm and on financial support for setting up breeding and conservation programmes in the Third World are now being discussed in FAO. Increasing awareness that genetic resources originate mainly in the South and are often used for the benefit of the North, helped to build a strong joint position on the part of developing countries.

The building blocks of biotechnology are these same genetic resources; the development of biotechnology is also directed mainly for the benefit ot the North. Based on their FAO experience, developing countries could ensure that biotechnology is placed on the agenda of all relevant bodies where negotiations take place, including UN organizations. On the basis of solid information, carefully gathered as described above, developing countries could put forward concrete proposals to limit the negative impact that Northern based biotechnology will have on the South. Such a position could also gain substantial politifcal and financial support for creating indigenous biotechnology programmes. The best way to achieve some success in this effort is by developing joint positions on the main items — not an easy objective. In its present mode of development, biotechnology itsef induces conflicting interests within the Third World block, Effords could nevertheless be made to develop joint positions by embarking on the debate within the South. Joint positions on issues like patenting, regulation, product and labour displacement and TNC involvement, is a fundamental prerequisite for reshaping biotechnology in a way which will help solve some of the developing countries' problems.

The Role of NGOs

In the past decade, several networks have been set up to coordinate and facilitate the work of NGOs on several specific issues related to agriculture, health and the environment. The International Baby Food Action Network (IBFAN), Health Action International (HAI), Pesticides Action Network (PAN) and the Seeds Action Network (SAN) have all been actively involved in and have achieved considerable success in raising public awareness, pressing for better international regulatory procedures and challenging the more extreme marketing practices of some of the compagnies involved. International NGOs such as IOCU (International Organization of Consumers' Unions) and ELC (Environmental Liaison Centre) and ICDA have played an important rote in the initiation of the networks.

As biotechnology will have a substantial impact on agriculture, health and the environment, the work of the NGO networks will need to take these developments into account. Biotechnological developments lead to a closer integration of these sectors. For example, naturally produced medicines, often based on developing country agriculture will increasingly be replaced by industrially-produced pharmaceuticals. Seeds will be programmed, through genetic engineering, to resist higher doses of pesticides. Screening of new pesticides will be accelerated by tissue culture techniques. Milk production will increase and could result once again in baby food dumping in developing countries. Moreover, it is often the same corporation that produces and markets the pharmaceuticals, the pesticides and the seeds. Dealing with the future impact of biotechnolgoy will therefore provide the stimulus to closer collaboration between the existing issue networks. Recently, several new NGO networks, focusing specifically on socio-economic and environmental aspects of biotechnology, have been set up. In the USA, groups such as «The Committee for Responsible Genetics» and the «International Network on the Social Impacts of Biotechnology » have already embarked on sensitizing public opinion. In Europe, the German-based « Genetisches Netzwerk» is now being created.

For all of us, biotechnology is still something new. There is an urgent need for increased NGO network interaction. A first step is being undertaken by the Dag Hammarskjold Foundation and the Rural Advancement Fund International (RAFI) in collaboration with ICDA, IOCU and UN Non-Governmental Liaison Service (NGLS). A conference is being Organized which will bring together the main actors to discuss the impact of biotechnology and the possibility of increasing cooperation.

Below we list some areas where we feel that NGOs can play a role in influencing the course of biotechnology and its socio-economic impacts.

1. Monitoring the industry

NGOs participating in the different networks, often focus their attention on the same corporations and a considerable body of information has been built up by NGOs. These companies are often the ones which are now investing heavily in biotechnology. NGOs can contribute substantially to understanding the impact of biotechnology by monitoring ways in which the industry is being restructured and research priorities set. Information on the companies which are dominating the market, their trade and marketing practices, can be usefully collected and shared.

2. Monitoring and forecasting the impact

A common feature of all the issue networks is an active participation of NGOs from both industrialized and developing countries. These north-south links can be very important in monitoring the global impact of biotechnology and assessing its future impact in certain areas. It is important to link this type of activity with university-based research which is also contributing substantially to understanding of the biotechnological impacts.

3. Informing and mobilizing public opinion

An important part of the activities of the different networks and NGOs involved in them, has been to inform the public and mobilize public opinion against dangerous and harmful practices. Apart from the possible dangers to the environment of genetically-engineered micro-organisms, the public view of biotechnology is that it will be tremendously beneficial to mankind, not least because the press mainly focuses on the positive side of the story. There is an urgent need to publish information on the possible negative socio-economic aspects of the newe biotechnologies and to stimulate public debate on these aspects.

4. Influencing research priorities

In many industrialized countries commissions have been set up by governments to promote biotechnology research and development, install national biotechnology programmes, and to facilitate cooperation between the public and private sector. Governments in mots of these countries see biotechnology as an important strategic sector, and give high priority to their leadership role in the «biotechnology race ». Generous subsidies are made, often indiscriminately, to attain this goal, sometimes without sufficient attention to other aspects such as the impact on specific groups in the society, on the quality of food and agriculture and on the developing countries. At present, the views of trade unions, environmentalists, consumers and development organizations are poorly represented in these national biotechnology bodies. At the international level important decisions are being taken on biotechnology programmes. A recent example is the « Eureka » project of the European Community that contains substantial funding for biotechnology research. There is an urgent need for wider and more democratic participation in the decision-making progress on the applications of biotechnology, especially with regard to definition of research priorities.

5. Helping the Third World in raising concerns

This is also an area where many NGOs have considerable experience. PAN and SAN have been working with developing country delegates in FAO in raising those countries' concerns on pesticides and seeds. HAI and IBFAN have worked within WHO on pharmaceuticals and baby food in a similar way.

NGOs could play a supportive role by stimulating discussion on patents in WIPO, and encouraging developing country representatives to make their views known in that discussion. The same is true for discussions on changing trade relations arising from biotechnology in bodies like

UNCTAD and GATT, and on labour aspects in ILO. The impact of biotechnology on health and the environment should be raised within WHO and UNEP and the impact on agricultural production in FAO. In many of these bodies, discussions are heavily dominated by the North because of lack of information, resources and expertise on the part of the developing countries, NGOs have often played a crucial role in bridging this gap by providing concrete and timely information to Third World delegates and by discussing strategies with them. Positions of Northern delegations can be influenced by mobilizing the public opinion in industrialized countries and through direct contacts with national governements.

While work in all these different fora is very important, a detailed discussion among concerned NGOs within the networks is needed to set priorities for action. NGOs have the commitment, shared concern experience and expertise, network structure and contacts. These valuable assets can be used to tackle the biotechnology issue if information is shared and priorities are set realistically.

(1) H. Skov, Chief of Administration of the Danish State Plant Production office. In: «Industrial Patents and Plant Breeders' Rights». Records of a Symposium. UPOV publication no. 342 (E). page 66.
(2) See, for example, Pat Mooney «The Law of the Seed », in : *Development Dialogue,* No. 1-2, Uppsala, 1983.
(3) Quated in : David Dickson, « Chemical Giants Push for Patents on Plants», Science, vol 228, 14 June 1985.
(4) Kent, James W. « The Driving Force Behind the Restructuring of the Global Seeds Industry». In: *Seed World,* Vol. 124 No. 7. June 1986.
(5) Lesser, W. « Patenting Seeds : What to expect », Dept. of Agricultural Economics, Corneil University, U.S.A., January 1986.
(6) op. cit. UPOV document no. 342 (E), page 80.
(7) de Lange, Peter. Head of the Legal Department of KWS (German seed company) at a UPOV conference on patents. op. cit. UPOV docuement no. 342 (E), page 37.
(8) op. cit. Lesser, 1986.
(9) *ICDA Seedling.* Barcelona, July 1986.
(10) WIPO document «Biot/CE/II/2, «Industrial Property Protection of Biotechnological inventions». Geneva, 1985.
(11) Beier, F.K. et. al. *Biotechnology and Patent Protection.* OECD, Paris 1985.
(12) Mooney, Pat. «The Law of the Seed Rivisited» In: *Development Dialogue* No. 1985/1. Uppsala, Sweden, pages 141-142.
(13) FAO: «Report of the Working group of the FAO Commission on Plant Genetic Resorces » First Meeting. Rome, 2-3 June 1986, page 6.
(14) Buttel et.al. «The IARCs and the Development and Application of Biotechnologies in Developing Countries». In: Biotechnology in international Agricultural Research. IRRI, Manila, 1985.
(15) See Kenney at. al. «Biotechnology, Prospects and Dilemmans for Third World Development» In: Development and Change. SAGE publications, London/Beverly Hills/New Delhi, Vol 16 (1985), 61-91.
(16) UNIDO, Genetic Engineering and Biotechnolgy Monitor. Issue no. 12 Vienna, June/July, 1985.
(17) See: UNCTSD, ATAS Bulletin, Vol 1, No. 1, New York, Nov. 1984. p. 59-60.
(18) Kenney, Martin. «Reflections on a Visit to Latin American Biotechnology Research Institutes ». In : *Gene Watch,* Vol. 2, No. 3 Sept/Oct 1985.
(19) See for a detailed discussion on regulation: Dembo et. al.: «Biotechnology and the third World» In: *Rutgers Computer and Technology Law Journal,* Vol. 11, No. 1, 1985.
(20) See for a more detailed discussion on such alternatives note (8) and: UNCSTD, 1984, Op. Cit. p. 73-74.

ANNEX 1

THE USE OF TISSUE CULTURE IN AGRICULTURE
TEN POINTS TO PONDER

Positive considerations	Negative considerations
1. GENETIC DIVERSITY	
Tissue culture techniques offer a safe and quick means of germplasm transfert from one region to another. An increase in such transfers could substantially broaden the breeding base available to agronomists from which to develop new cultivars. Particularly in areas of new production (for oil palm, rubber, coffee, etc.) this could have the effect of widening the genetic base of the crop and reducing the risk of losses.	Tissue culture techniques permit the mass production of genetically identical plants over vast areas. While it is possible to expand the breeding base of plantation crops in this way, the highly-centralised nature of the technology (for example Unilever in oil palm) is more likely to increase the uniformity and vulnerability of the crop. In addition, replantings are now taking place in the absence of a conservation strategy and are already accelerating the pace of genetic erosion.
2. GERMPLASM IDENTIFICATION	
It can now take as long as ten years to identify the usefulness of characteristics in a free crop from seed (such as coconut or oil palm for example), Clonal propagation could almost eliminate this risk of undesirable characteristics and enormously increase the pace of new cultivar development.	While this application has undeniable advantages, the key question is « who » will decide « what » characteristics are benefical and for «whose» purpose. Recent commercial breeding for developing country markets has focused on broad adaptability often at the expense of resistance to local pests or in ignorance of those local conditions for which breeders should seek advantage.

3. CULTIVAR DISSEMINATION

The low seed-bearing rate of some plants, combined with their long germination period, means that the multiplication of a new cultivar is slow and expensive. New technologies can produce hundreds of thousands of plantlets a year and make the total replanting of a crop feasible with a growing season.

The employment of this new technique has indisputable advantages for the dissemination of improved cultivars, as long as it is preceded by an equally thorough orientation/training programme upgrading husbandry skills etc., to match the innovation. The mass dissemination of uniform cultivars however, could destroy or severely handicap the crop's longer term biotech capacity. A full collection/ conservation strategy is a first priority.

4. PRODUCTION INCREASES

Whereas 20 percent of the trees often produce 80 percent of the yield, the development of uniform new cultivars could bring plantation harvests up to the level of the most productive trees. The new technologies can also be employed to significantly increase the yield of even the best trees. Depending on the crop, plantation harvests could easily increase anywhere from three to twelve-fold within a few decades.

Little attention has been given to the breeding of plantation crops, in general, and it is likely that even an increase in orthodox breeding would lead to major yield improvements. Higher-yields could prove a significant benefit to some developing countries unable to grow their domestic requirements. There is reason to be concerned, however, that a sharp increase in production in major exporting states could mean overproduction leading to further market instability and reduced export prices. In such a case, the only beneficiaries may be those marketing the technology and/or those importing the product. In some cases (i.e. Unilever for vegetable oils or Firestone for rubber) the technology source and the importer are the same enterprise.

5. PEST PROBLEMS

Rapid tissue culture technique may be the fastest way to combat pest epidemics (such as now afflicting bananas). The speed of character identification and multiplication are often essential to the survival of many vulnerable tree crops.

Such techniques may well be the saviour of banana in the short-term but banana's major problem arises from its genetic uniformity resulting from its clonal propagation. The long term security of such crops depends upon increasing genetic variability of the crop. Further, seed crops which may soon be propagated by clones (such as coconut and oil palm) can be expected to suffer six times the pest losses of outbred crops, meaning a major increase in the cost of chemicals.

6. MACHINE UNIFORMITY

Beyond the development of higher-yielding and more disease resistant varieties, cell and tissue culture will make it possible to develop more uniform plants amenable to harvest machinery and/or processing and other market requirements.

The market requirements being met may reduce the value of the crop for alternative domestic and export use (bananas for cooking or coconut for fuel or mats). The net benefit to the economy might be substantially reduced or eliminated. The obvious social risks of unenmployment due to mechanical harvesting etc. (for example, date palm) may make the socio-economic gain even more dubious.

7. GERMPLASM STORAGE

Cell and tissue culture may prove to be the only viable means of achieving the long term storage of large-seeded and clonally-propagated crops. Living collections (now often the only means of conservation) take up enormous land areas and are very costly in labour and money.

The present international proposal for a tissue culture base collection would locate the centre in Australia and further the concentration of such collections in industrialized contries (i.e. Japan, France, U.K., U.S.A.), increasing the political problems currently associated with access to economically important germplasm. Further, while tissue culture storage should not be overlooked, the technology is new and living museums cannot safely be abandoned.

8. LAND USE

In some countries, it may be possible to dramatically reduce the area devoted to a tree crop and make this land available for other national purposes including domestic food production and redistribution to peasant farmers.

This could prove to be a very wonderful advantage. It is, however, more likely that global overproduction will force a reduction in land area in the context of a depressed economy unable to take advantage of the potential social benefits.

9. SMALLHODERS	
More productive plants could do much to strengthen the viability of small holdings and allow the redirection of production towards family estates and away from traditional plantations.	While this would be a constructive result, large estates will have the technological access, husbandry skills, financial resources, market experience and economies of scale, needed to utilize the technology first. In all likelihood, small holders will be seriously disadvantaged or eliminated.
10. AGRICULTURAL DEVELOPMENTS	
More stable and higher levels of production of a better quality crop - should strengthen market conditions and reduce the risk of losses to synthetics or alternative crops.	The history of industrial country-originated technology since the Second World War would suggest that developing countries have not benefitted equally from these changes (for example, synthetic textiles vs cotton; synthetic latex vs. natural rubber; polypropylene vs, natural cordage, etc.). Early experiences in biotechnology (maize replacing sugarcane, guayule challenging rubber; laboratory of flavours and fragrances, etc.) argue that this trend will continue and could lead to factory farming of many plantation crops in the decades to come.

Source: Reprinted from: Pat Mooney «Impact on the Farm». In: UNCSTD, *ATAS Bulletin*, Vol. 1, No. 1, New York, Nov. 1984.

ANNEX 2

COMPARING TWO REVOLUTIONS

CHARACTERISTICS	GREEN REVOLUTION	BIOREVOLUTION
Crops affected	Wheat, Rice, Maize	Potentially all crops, including vegetables, fruits agro-export crops (e.g. oil palms, cocoa, etc.) and speciality crops (spices, etc.)
Other products affected	None	Pesticides, animal products, pharmaceuticals, processed food products, energy
Areas affected	Some developing countries	All areas; all nations; all locations, inlucding marginal lands (characterized by drought salinity, Al, toxity, etc.)
Development of technology and dissemination	Largely public or quasi-public sector	Largely private sector, especially transnational corporations
Proprietary considerations	PBR and patents generally not relevant	Process and products patentable and protectable
Capital costs of research	Relatively low	Relatively high for some techniques, relatively low for others
Access to information	Relatively easy, due to policy of IARCs	Restricted, due to privatization and proprietary considerations
Research skills required	Conventional plant breeding an parallel agricultural sciences agricultural sciences	Molecular and cell biology expertise plus conventional plant breeding skills
Crop vulnerability	Seed bred High Yielding Varieties, relatively uniforme, thus increasing genetic vulnerability	Crop propagation through tissue culture produces genetically exact copies and increases vulnerability even more.

Source: Martin Kenney, Frederick Buttel, «Biotechnology; Prospects and Dilemmans for Third World Development». In: *Development and Change*. SAGE, London/Beverly Hills/New Delhi, Vol. 16 (1985), p. 70. Adapted by ICDA.

ANNEX 3

ABBREVIATIONS

ATAS	Advance Technology Alert System (of UNCSTED)
EEC	European Economic Community
ELC	Environment Liaison Centre
FAO	Food and Agriculture Organization (UN)
HAI	Health Action International
HFCS	Hight Fructose Corn Syrop
IARC	International Agricultural Research Centre
IBFAN	International Baby Food Action Network
ICDA	International Coalition for Development Action
ICGEB	International Centre of Genetic Engineering and Biotechnology
ILO	International Labour Office (UN)
IOCU	International Organization of Consumer Unions
MIRCEN	Microbiological Research Centre (UN)
OECD	Organization for Economic Co-operation and Development
OTA	Office of Technology Assessment (USA Congress)
PAN	Pesticide Action network
PBR	Plant Breeders Rights
RAFI	Rural Advancement Fund International
SAN	Seeds Action Network
SCP	Single Cell Protein
TNC	Transnational Corporation
UNCSTD	UN Centre for Science and Technology for Development
UNCTAD	UN Conference on Trade and Development
UNEP	UN Environment Programme
UNIDO	UN Industrial Development Organization
UPOV	Union for the Protection of New Varieties of Plants
WHO	World Health Organization (UN)
WIPO	World Intellectual Property Organization (UN)

ANNEX 4

USEFUL PUBLICATIONS AND RESOURCES PUBLICATIONS

I. *Selected Books and reports*

UNCSTD, *ATAS Bulletin.* «Tissue Culture Technology and Development ». Vol 1, No. 1. New York, Nov. 1984. 93 pp. (ATAS/UNCSTD, United Nations, New York, NY 10017, USA)

OTA, *Commercial Biotechnology, an International analysis* U.S. Congress, Washington D.C., January 1984. 612 pp. (U.S. Congress, OTA, Washington D.C. 20510, U.S.A.)

OTA, *Technology, Public Policy and the Changing Structure of American Agriculture Summary, U.S. Congress, Washington D.C., March 1986.*

F.K. Beier et. al. Biotechnology and patent protection. OECD, Paris, 1985.

Jack Doyle, *Altered Harvest,* Viking Press, New York, 1985, 502 pp. (ISBN 0-670-11524-X).

Edward Yoxen, *The Gene Business.* Pan Books in conjuction with Channel Four Television Company Limited. London 1983, ISBN 0-330-28112-7, 264 pp.

« Biotech 85 : The World Biotech Report 1985 ». Proceedings of Biotech 85 Europe, Geneva, May 1985. Online Publications, Pinner, U.K. 1985.

John Elkington. *Double Dividend? US Biotechnology and Third World Development.* World Resources Institute Papers, no 2. Washington, DC, U.S.A. November 1986.

Social Impacts of Agricultural Biotechnology Study Group, Department of Rural Sociology, Cornell University. Ithaca, NY 14853, USA. This group has produced several very interesting publications, some of which are:

Jack Kloppenburg, Martin Kenny: «Biotechnology, seeds and the restructuring of agriculture ». In : *The Insurgent Sociologist,* Vol 12, No. 3, Summer 1984.

Martin Kenny, Frederick Buttel: «Biotechnology/ Prospects and Dilemmas for Third World Development». In: *Development and Change,* Vol 16, 61-91, London 1985.

For a more complete list, write to the address above.

The biotechnology research team of the University of Amsterdam produces very useful materials, some of which are:

Guido Ruivenkamp: «Biotechnology: the production of new relations within the agro-industrial chain of production». Paper presented at the Conference of the World Food Assembly. Rome, 12-15 November 1984.

Bijlman, v/d Doel, Junne: «The impact of biotechnology on living and working conditions in Western Europe and the Third World » University of Amsterdam, April 1986.

For a more complete list, write to : University of Amsterdam, Vakgroep Internationale Betrekkingen, Research Team on Biotechnology, Herengracht 510, 1017 CC Amsterdam, The Netherlands.

David Dembo, Clarence Dias, Ward Morehouse, « Biotechnology and the Third World: Some social, economic, political and legal impacts and concerns » In : *Rutgers Computer and Technology Law Journal,* Vol 11, No. 2. 1985.

II. *Selected Journals*

A) NGO and UN newsletters.

Seeding, bi-monthly bulletin of ICDA's seed campaign. General information on the seeds issue, including information on biotechnology (for address of ICDA Seeds Campaign see « Resources » section)

IGRP Report, Quarterly newsletter of Rural Advancement Fund Int'l (RAFI). Information on Genetic Resources and related issues, (for address RAFI see « Resources » section).

Bio/Communique is also published by RAFI on specific topics related to biotechnology and the Third World.

GeneWatch, bi-monthly bulletin of the Committee for Responsible Genetics. Background information on several aspects of biotechnology, updates, activities, etc. (for address, see «Resources»).
Genetic Engineering and Biotechnology Monitor, quarterly bulletin of UN1DO, free of charge. General information, news from the UN (especially ICGEB), country and company news, applications, etc. UN1DO, Industrial information section, PO Box 300, 1400 Vienna, Austria.

8} Some Commercial Magazines.

Agricultural Biotechnology News. Academic/Research News, Company News, Conferences, Governemental News, New Products. (PO Box 7, Cedar Falls IA 50615, USA)

Agricultural Genetics Report. Academic/Research News, Company News, Conferences, New Publications. Technicial News. (Mary Ann Leibert Inc., 157 East Street, New York, NY 10028, USA)
Applied Genetics News. Company News, Governemental News, New Products, Patents, Technical News. (Business Communications Co. Inc., PO Box 2070C, Stamford, CT 06906, USA).
Biofutur (French). Background Articles, Company News, Conférences, Governmental News, New Products, New Publications, Patents Technical News. (56, rue de l'Université, 75007 Paris, France).
Bio/Technology. Academic/Research News, Background Articles, Company News, Conferences, Governmental News, New Products & Publications. (Nature Publishing Co.. 15, East 26th Street, New York, NY 10010, USA).
European Biotechnology Newsletter. Academic/Research News, Company News & Surveys, Conferences, Governemental News, New Products Technical News. (Biofutur, 29 rue Buffon, 75005 Paris, France).
Genetic Engineering News. Background Articles, Company News, Conferences, Governemental News, New Products, New Publications, Technical News. (Mary Ann Leibert Inc. 157 East 86th Street, New York, NY 1028, USA)
These are just a few journals on biotechnology from the many that appear on the market. For a more complete list, write to : The European Biotechnology Information Project (EBIP), The Britisch Library, 9 Kean Street, London WC2B4AT, UK. EBIP also issue EBIP News, with useful information in the different fields of biotechnology-

Resources :

NGO Networks on Biotechnolgoy and related issues

Committee for Responsible Genetics (CRG).
CRG wants to « create a forum for discussing, evaluating and distributing information about the social impacts of genetic engineering». A useful newsletter is published bi-monthly by CRG *(«GeneWatch»,* see section on periodicals).
Address: CRG, 186A South Street, Boston, MA 02111, USA. Tel: (617) 4230650.
International Network on the Social Impacts of Biotechnology (INSIB). INSIB, also US based, wants to improve communication between concerned individuals and groups. They issue, and update, a useful resource guide with names, addresses, publications, etc.
Address: INSIB, Sheldon Krimsky (Network Coordinator), Department of Urban and Environmental Policy, Tufts Univesity, Medford, Massachusetts 02155 USA.

Foundation on Economic Trends
Focusses especially on legislative action on the release of genetically altered organisms.
Address: 1346, Connecut Av., Nw. Suite 1010, Washington DC 20036, U.S.A.
Genetischen Netzwork
German based, recently launched. Wants to facilitate information exchange and networking on biotechnology among interested groups. Address: Potsdamestr. 96, 1000 Berlin 30. Tel; 30-2618500.
Seeds Action network (SAN)
Launched in 1985, active on genetic resources and related issues, monitoring the seeds industry, also interested in biotechnology. Contact points:

Europe/Australia/New Zealand :
ICDA seeds campaign
Apartado 23398
08080 Barcelona, Spain
Tel: (3)2158949

North America :
Rural Advancement Fund
PO Box 1029,
Pittsboro
NC 27312, U.S.A.
Tel: (919)5425292

Africa :
Asia :
ELC
PO Box 72461
Nairobi, Kenya
Tel: (254)24770

Sahabat Alam Malaysia
37, Lorong Birch
Penang, Malaysia
Tel: (04)376930

or: PAFATU
B.P. 7130
Togo, Lomé
Tel: 216259

Pesticide Action Network (PAN)
Active on the use, regulation and export of pesticides, monitoring TNC that operate in this field, also interested in biotechnology. Contact points :
Europe :
North America :

PAN-Europe
22, rue des Bollandistes
1040 Bruxelles, Belgium

Pesticides Education and Action Project
P.O. Box 610
San Francisco, CA 94101,
USA
Tel: (2)7352431

Tel: (415)4337373

Latin America :
Asia/Pacific :

Fundación Natura
Casilla 243
Quito, Equador
Tel: 239177

IOCU
PO Box 1045
Penang, Malaysia
Tel: (04)20391

Africa :
ELC (see under SAN)

Health Action International (HAI)
HAI is working to further the safe, rational and economic use of pharmaceuticals worlwirde. Contactpoints :

IOCU
HAI European Coordinator
PO Box 1045
Penang, Malaysia
Tel: (04)20391

c/o
Emmastraat 9
2595 EG Den Haag
The Netherlands

International Baby Food Action Network (IBFAN)
Contact: Case 157, 1211 Genève 19, Switzerland.

ABOUT ICDA

ICDA is a network of over 500 development oriented groups and agencies in 21 industrialized countries. The network is committed to building a more just and equitable international order. ICDA provides the framework for development groups working at national level, to:

- undertake joint campaigns to raise public awareness of development issues and their underlying causes;
- exchange ideas and experiences on action models and campaign strategies;
- create channels of communication between development groups in the North and their counterparts in the South, and hence to develop understanding of the particular problems faced by Third World groups;
- initiate and maintain active links between development groups and other important people's movements such as trade union's, women's organizations, the peace movement and environmental action groups;
- be informed on a regular basis about issues and events affecting the relations between industrized countries and the Third World.

ICDA SEEDS CAMPAIGN

ICDA Seeds Campaign started 8 years ago with the main campaigning focus on preventing national monopolistic control on plant genetic resources and pressing for the adoption of an international convention to regulate the exchange and conservation of genetic resources by the United Nations. Emphasis is also placed on the development educational aspect of the seeds issue in order to raise awareness and stimulate public participation in the Seeds Campaign.

ICDA considers the seeds campaign as a fundamental part of the struggle for sustainable agriculture in both developed and developing countries insofar as erosion of genetic diversity and increasing monopolistic control over genetic resources by a few multinational corporations, threaten the very basis of sustainable agriculture.

The work of ICDA's seeds campaign includes or has include:

- Publication of information on genetic resources in ICDA News, the monthly newsletter of ICDA
- Publication of SEEDLING, the bi-monthly newsletter of the seeds campaign, SEEDLING reports on new developments in the seeds issue, news from the different national seed groups, lobby preparations and results, meetings, etc.
- Publication of a study on the European Seeds Industry, analysing multinational involvement in the seeds sector in Europe and reviewing the current monitoring and research activities of NGO's in this field
- Preparation of a slide-show kit (over 300 slides) on seeds for use and adaptation by national seed groups. This already resulted in the production of slide-shows in 6 different European languages
- Support for the work of national seed groups by providing information and research
- Organization of regular Seeds Campaign Meetings, where organizations active in the Seeds Campaign come together, report on their work and discuss future activities.

For further information contact:

ICDA Seeds Campaign, Apartado 23398, 08080 Barcelona, Spain. Telephone (34)(3) 2158949.

Patenting Life Forms in Europe
A New Publication of the ICDA Seeds Campaign

The patenting of life forms has grown into a highly controversial issue, now that the new biotechnology products are starting to reach the marketplace. The EEC is about to take decision on a draft Directive which would make virtually all forms of life subject to exclusive monopoly control in all EEC member states. The U.S. Patent Office already granted industrial patents on plants and animals, while developing countries are under increasing pressure to do the same.

Most of the decision making on patenting life forms is being done within board rooms and lawyers offices, which the impact of life patents will be felt by all of us. Deep concern has already been expressed by breeders' and farmers' unions, consumers and church-based organisations, and by environment and Third World groups. The heart of the question in wheter genetic resources should be privately owned, and whether society should grant monopoly control over them to a handful of large transnational corporations that are already controlling the development of the new biotechnologies.

In order to provide a platform for the public interest community to openly voice its concerns on the impact of life patents, the ICDA Seeds Campaign and GRAEL convened an international conference at the European Parliament on the patenting of life forms (February 1989). The Conference was attended by almost 200 people from many different sectors, including NGOs, private industry, government officials and public research institutions. ICDA has now published *Patenting Life Forms in Europe,* in which the full texts of all interventions -18 in total - are reproduced.

Patenting Life Forms in Europe brings together, for the first time, a whole range of data, views and opinions on the impact of life patents presented by policy makers and public interest groups. What do patents mean for the biotechnology industry, for public research, for famers and for breeders ? What are the ethical and religious concerns and how will they affect the position of developing countries? Written in understandable language. *Patenting Life Forms in Europe* intends to broaden the discussion on life patents and present accessible information and views to facilitate the work of policy makers and NGOs.

Patenting Life Forms in Europe
80 pages, tables/graphs/illustrations
US$ 30 Individuals & other / US$ 12 NGOs
Available form ICDA Seeds Campaign

Faire cause commune sur le plan international

*Déclaration et programme d'action au niveau international des ONG consacrées au développement, à l'environnement et à la population**

Le forum du développement de Rome, qui a par ailleurs consacré d'abondants débats aux recommandations de la Commission mondiale sur l'environnement et le développement, a estimé que le teste *Faire cause commune sur le plan international* apportait, dans le cadre et la suite à donner au rapport de cette Commission par les ONG, des éléments précieux qui arrivaient à point nommé.

Les lacunes de la communication ont trop longtemps séparé les groupes se consacrant à l'environnement, à la population et à l'aide au développement, ce qui nous a empêchés de prendre conscience de nos forces conjuguées. Ces lacunes sont heureusement en voie de disparition. Nous savons aujourd'hui que ce qui nous unit compte bien plus que ce qui nous divise.

Ce *qui nous unit*

Nous nous efforçons tous de créer un monde plus supportable, non violent. Nous sommes tous préoccupés par la pauvreté dans le monde. Nous affirmons la nécessité de préserver l'intégrité, la stabilité et la beauté de l'écosystème, ainsi que celle d'établir impérativement la justice sociale. Nous reconnaissons que la pauvreté, la dégradation de l'environnement, la gâchis, la répartition inéquitable des richesses et la croissance démographique sont inextricablement liés et qu'aucun de ces problèmes fondamentaux ne saurait trouver isolément une solution valable. Nous reconnaissons aussi l'existence d'autres questions connexes - la dette, les conflits et les termes de l'échange - dont les ONG ont à s'occuper autant que les gouvernements. En nous attachant à l'environnement, au développement et à la population, nous entendons non pas laisser les autres questions de côté, mais nous attaquer à un ensemble de problêmes prioritaires du programme de tant d'ONG, susceptibles de nous rassembler sans peine autour d'une cause commune. Si nous ne réussissons ensemble, c'est ensemble que nous échouerons.

Accepter de partager le destin du reste de la création équivaut, nous en avons conscience, à accepter l'interdépendance et la coévolution comme une réalité. Nous faisons nôtre l'opinion de feue Barbara Ward, bâtisseuse de ponts elle-même, selon laquelle les grandes idées de la Conférence de l'ONU sur l'environnement (Stockholm, 1972) auront été l' « interconnexion » et un certain sens de la « gestion à assurer en commun » de notre patrie planétaire commune. Nous déplorons que nos dirigeants gouvernementaux semblent souvent refuser d'admettre aujourd'hui la leçon d'hier, à savoir que nous sommes tous les passagers du même vaisseau spatial «Terre».

La crise en Afrique, une incitation à l'action

Tout en reconnaissant que les ONG s'emploient à favoriser le processus de développement social et économique dans toutes les régions du monde, nous avons à nouveau ressenti l'urgence qu'il y a, devant la crise persistante que connaît l'Afrique, à faire cause commune. La pauvreté rurale en Afrique met tout particulièrement en évidence les liens entre la pauvreté, la croissance démographique rapide et la dégradation de l'environnement; elle montre l'injustice de la division Nord-Sud qui perpétue des pratiques commerciales inéquitables et l'exploitation. Les populations concernées, dont le taux de croissance démographique est le plus élevé du monde, sont les plus touchées par l'épuisement des resources, tirant péniblement leur subsistance des sols, des forêts, de la faune et des eaux de leur milieu environnant. Les femmes ont la plus lourde charge, étant donné leur rôle dans l'approvisionnement de leur famille en eau, en produits alimentaires et en combustible. Les pauvres ruraux sont dans une large mesure tributaires des possibilités de tolérance de l'environnement pour se procurer ces éléments de base et d'autres produits indispensables. Pourtant, dans leur lutte pour la survie, ils sont obligés de porter atteinte aux ressources dont ils auraient précisément besoin pour améliorer leur avenir.

La nécessité qu'il y a à s'attaquer d'urgence aux problèmes de l'Afrique ne doit naturellement pas nous faire négliger les problèmes qui se posent dans d'autres régions en matière d'environnement, de développement et de population.

* Le groupe de travail du Conseil international des agences bénévoles (CIAB/ICVA) sur les problèmes du développement a présenté, lors d'un forum sur le développement qui s'est tenu en mars 1988 à Rome, un projet de document «international», adopté avec de légers amendements. Le 16 mars 1988, le Conseil d'administration de l'ICVA adhérait au contenu de ce texte comme déclaration de principe.
La version « internationale » a été établie par Cyril Ritchie, président de la Fédération des institutions privées et semi-officielles établies à Genève (FIIG), sur la base d'un document adopté par un groupe d'associations des Etats-Unis.

La Commission Brundtland, autre incitation à l'action

En 1987, la Commission mondiale sur l'environnement et le développement («Commission Brundtland») a présenté aux Nations Unies, aux gouvernements, au monde, son rapport intitulé *Notre avenir commun,* d'une opportunité saisissante. L'analyse, les données et les séances qui avaient servi à l'élaboration de ce qui est appelé partout le « rapport Brundtland», de même que les conclusions tirées par la Commission quant à la situation alarmante du monde et à l'urgence d'un développement durable, ne peuvent que mettre en lumière et renforcer la nécessité d'une cause commune.

Madame Brundtland elle-même n'aurait d'ailleurs pas pu être plus explicite qu'elle ne l'a été dans l'allucution à la mémoire de James Marshall, le 19 octobre 1987, à New York:

«La Commission a estimé que, pour aboutir à un développement durable, il fallait notamment disposer au préalable d'un système politique assurant une participation effective des citoyens à la prise des décisions... Il y a quelques années encore, les préoccupations morcelées des ONG ne reflétaient que trop fidèlement les préoccupations morcelées des gouvernement et de leurs institutions. Certains groupes s'occupaient de défense de l'environnement, d'autres de développement, d'autres des secours, d'autres de population, d'autres de désarmement. Trop souvent, ils étaient rivaux plutôt qu'ils ne coopéraient les uns avec les autres: la recherche d'un terrain d'entente n'était que trop rare.

Aujourd'hui, une chance existe de voir tous ces groupes coopérer sur un vaste front... Les nombreux problèmes dont les nombreuses organisations non gouvernementales s'occupent se ramènent tous à celui d'un progrès humain durable. Saurons-nous saisir cette occasion ? Avons-nous des perspectives assez vastes pour dépasser le champs de vision de nos mandats traditionnels et voir la convergence actuelle de tous les problèmes, et de tous les peuples qu'anime le souci commun d'un avenir commun?»

Nous ne saurions demander un énoncé plus clair, plus encourageant, plus stimulant. Peut-être devrions-nous répéter ce que nous avions dit initialement : nous savons aujourd'hui que ce qui nous unit compte bien plus que ce qui nous divise.

Orientations quant au processus à suivre

Un large accord doit se réaliser, non seulement sur nos buts communs, mais également sur le processus à suivre pour les attendre. L'activité qui nous incombe est si délicate - faisant intervenir à la fois les relations humaines et un usage avisé des resources - que tous ceux qui consentent à coopérer doivent comprendre le processus en question et y souscrire, même si tous ne réalisent pas des programmes sur le terrain.

Nous devons encourager le croissance et le développement d'ONG autochtomes et de groupes communautaires au sein des pays du tiers monde. Nous estimons que si la conception, la planification, la mise en œuvre et la prise de décisions ne sont pas confiées aux bénéficiaires, le projet aura un sens insuffisant pour eux et ils seront peu portés à se sentir responsables de sa prolongation et de ses résultats. Nous affirmons que cette assertion vaut autant pour les projets concernant l'environnement et la planification familiale que pour les programmes d'aide au développement, et pour les projets de ces trois domaines intéressant les femmes comme les hommes.

Nous reconnaissons que le mode selon lequel s'opèrent le transfert des connaissances et l'assistance est l'élément capital, que se soit à des fins de développement, d'environnement, ou de planification familiale. Nous estimons qu'il ne s'agit pas de savoir simplement ce que nous accomplissons, mais selon quel mode nous procédons. Nous devons faire en sorte que la liberté et la dignité du bénéficiaire soient préservées, et non diminuées, le plus possible, que celui-ci soit une personne, une collectivité ou une nation.

Développement durable

Les ONG internationales s'occupant d'aide au développement se rallient à celles des domaines de l'environnement et de la population pour soutenir un consensus qui s'amorce, en vertu duquel les préoccupations du développement économique et social et celles de l'environnement ne sont pas antagonistes, mais se renforcent mutuellement. Les priorités et les méthodes différeront, bien sûr. Nous pouvons néanmoins reconnaître que les populations en but à la pauvreté auront du mal à conserver les systèmes naturels et les ressources dont la vie et le bien-être de l'homme dépendent. Un développement économique et social judicieux contribue à poser les fondements et à effectueur les choix nécessaires au respect des valeurs de l'environnement.

Parvenir à une définition commune du développement durable demeure une gageure pour tous les participants au processus du développement. Nous pouvons cependant définir provisoirement celui-ci comme une stratégie de développement exploitant les ressources naturelles dételle sorte qu'elles répondent aux besoins d'aujourd'hui tout en garantissant les ressources de demain. Rechercher un développement durable implique le rejet des politiques et des pratiques qui assurent le maintien du niveau de vie actuel en épuisant la base de ressources, en appauvrissant les perspectives laissées aux générations futures et en créant pour ces dernières des risques accrus. Du fait que les pressions exercées sur l'environnement sont nombreuses et complexes - certaines résultant des erreurs de calcul humaines - l'exploitation durable à long terme, accompagnée d'une élévation du niveau de vie, est une nécessité cruciale et urgente.

Nous devons être attentifs aux enseignements nous venant des populations autochtones qui ont pendant des siècles exploité durablement leurs ressources.

L'union dans la différence

Les trois ensembles d'ONG dont il s'agit disposent d'une expérience sur le terrain variable par son ampleur et sa nature.

Ces trois groupes ont évolué à partir de contextes différents, communiquent des messages différents et utilisent des stratégies différentes pour parvenir à une exploitation judicieuse des ressources, ainsi qu'à la transformation et à la justice sociales. C'est donc uniquement en resserrant la coopération que nous pourrons déterminer les reltations éventuelles et continuer à forger des liens. Nous devons songer que, malgré les différences qui nous déparent, notre objectif commun est d'améliorer la vie humaine.

1. Echange d'informations

Développer les tribunes et les conférences au plan national afin d'y faire participer des représentants des domaines de l'environnement, de l'aide au développement et de la population, s'il y a lieu, et d'y insérer des débats sur la corrélation entre les trois.

Encourager les séances de formation et les ateliers qui fournissent des informations utiles émanant de chaque groupe. Continuer à accroître la réalisation de documents techniques sur l'environnement à l'usage du personnel occupé dans l'aide au développement.

Assurer des informations sur des études de cas dans le cadre de la planification, de la mise en œuvre et de l'évaluation de projets d'aide au développement où l'exploitation des ressources naturelles intervient afin que:

- les groupes s'occupant d'environnement et de population puissent être initiés à l'aide au développement;
- les réussites puissent être répétées;
- les documents concernant l'éducation pour le développement soient plus facilement accessibles;
- le personnel de terrain puisse être mieux formé;
- les études et les recommandations concernant les principes d'action reçoivent le soutien nécessaire.

Préparer une liste des répertoires actuels d'agences travaillant sur le terrain, qui indique ce qu'elles font et où elles opèrent.

2. Coopération indirecte en faveur des activités menées sur le terrain

Créer tes liens entre les groupes en aidant les ONG des pays industrialisés à être introduites auprès d'ONG et de consortiums du tiers monde et renseignées à leur sujet.

Aider les personnes du tiers monde qui se rendent dans les pays industrialisés à établir des contacts polyvalents avec des personnes et groupes accomplissant une tâche équivalente à la leur dans les domaines de l'environnement, du développement et de la population.

Offrir aux groupes du tiers monde s'occupant d'environnement, de développement et de population des possibilités de dialogue et d'échanges avec des groupes des pays industrialisés, dans le cadre d'une information sur des problèmes spécifiques liés à l'environnement, au développement et à la population.

3. Coopération directe dans le cadre des activités menées sur le terrain

Assurer un apport ainsi qu'une assistance technique en matière d'environnement en faveur des projets de développement. Un mécanisme propre à permettre d'accéder aux types d'aide appropriés s'impose au sein de chaque pays et/ou région.

Relever des études des cas-projets menés sur le terrain avec succès, au sein desquels interviennent l'environnement, le développement et la population, et des projets qui auraient été plus satisfaisants si l'intégration avait été meilleure.

Sélectionner un projet pour assurer un modèle et montrer les liens. L'échange d'informations et de connaissances à propos de ce que nous accomplissons et de la façon dont nous procédons, ainsi que le choix d'études de cas, devraient nous permettre de déterminer un lieu et de coopérer sur le terrain afin de nous attaquer à des questions qui revêtent de l'importance pour nous tous.

Conseil international des agences bénévoles
Le Conseil international des agences bénévoles (désigné par le sigle ICVA) est une association internationale réunissant des organisations non gouvernementales à but non lucratif œuvrant dans les domaines de l'aide humanitaire et de la coopération pour le développement. L'ICVA a été crée en 1962 pour promouvoir le développement des agences bénévoles dans le monde entier, d'assurer leur croissance et d'améliorer la qualité de leurs prestations. ICVA, 13, rue Gautier, 1201 Genève, Suisse, T'l: 32 66 00 telex: 22891 icva ch, Téléfax: 86 72 37.

Organising to Preserve Our Common Future*

Let me begin the journey towards *«Our Common Future »* by taking you on a trip into the past. During the great Russian famine of 1921, an American journalist visited a refugee community on the banks of the Volga River in the USSR. Almost half of the refugees had already died from hunger and starvation. The death rate was rapidly escalating, and there seemed no real hope for the surviving refugees. The journalist was intrigued by a huge mound of untouched grain-filled sacks, stacked-up in an adjacent compound. When the journalist asked why the refugees simply did not overpower the lone soldier guarding the grain-filled sacks and find respite, the community leader, a white-bearded patriach, explained that the sacks contained grain seeds for the next planting season, and stressed that *« We do not steal from the furture »*.

However, we have, in the name of development, not only been stealing, but also plundering and ravaging from the future, with little or no regard for the ensuing social and environmental consequences. From this standpoint, existing development policies appear primarily geared towards securing the present and satisfying short-term gains by mortgaging the future and sacrificing long-term costs. Such myopic development policies — coupled with the cumumative effects of « modern » life-styles, consumption patterns, desires, demands, choices and actions — have slowly but surely increased the ecological interest rates that will have to be borne and paid for by future generations. Instead of judiciously utilising and living -off the *«ecological interest»,* we have been rampantly exploiting and depleting the *"ecological capital»* itself - a vicious process that is moving us closer and closer towards a state of *«ecological bankruptcy»*.

in June 1972, some 113 countries participating in the historic UN Conference on Human Environment adopted the Stockholm Declaration, which enshrines several important ingredients for an international policy to protect the environment ans promote a mode of *«development without destruction».* By underscoring the interlocking linkages between environmental concerns and the welfare of mankind, the Stockholm Declaration provided us, for the first time, with a glimmer of hope to be able to survive both as a species and a social being under the umbrella of *«sustainable development»*.

But today, some fifteen years later, that glimmer of hope has grown dim and continues to grow dimmer, as mankind finds itself on the brink of what might arguably be described as an ecological crisis of global proportions. And ironically, this crisis, which looms ominously over our heads like the proverbial «Sword of Democles», has been largely precipitated by man's own attempts to achieve «development». The very process of such development has instead fostered a litany of ecologtical tragedies worldwide. It has also simultaneously etched a labyrinth of ugly scars on the social and physical environments of the vast majority of the people, especially the poor, vulnerable, powerless and impoverished in Third World countries.

Obviously, a new paradigm of development - one that takes into account the interests of future generations and the quality of the environment - is not only desirable but also imperative if mankind wishes to live in harmony with nature upon which he depends for his very survival and existence. In order to achieve this, we must learn to conduct a proper dialogue with nature in all its forms and manifestations. Only then can we even begin to hope to attain what James Robertson calls the «SHE» (same, humanistic and ecologically sound) society.

The first steps towards achieving a «SHE» society are embedded in a realisation that just as a human being is simply not the sum total of individual organs and systems, the environment too is merely not a conglomeration of individual units and ecosystems. And just as a human being is a complex living entity constantly interacting with his inner and outer environments, the environment too may be considered as a complex web linking a myriad of plants, animals and other biotic and abiotic components in a fragile, dynamic and delicately poised state of ecological balance.

It is agains this backdrop that the report of the World Commission on Environment and Development, aptly titled *«Our Common Future»* (or the Brundtland Report as it is popularly referred to), assumes paramount significance, both in terms of its timeliness and content. Although the general and specific recommendations contained in the Brundtland Report are far too many and diverse to be adequately summerised here, the principal proposals can, however, be broadly categorised into six priority areas - viz. getting at the sources, dealing with the effects, assessing global risks, making informed choices, providing the legal means, and investing in our future. Last but not by any means the least, the Brundtland Report echoes a «call for action», based on common concerns, common challenges and common endeavours towards realising the common goals of sustainable development and preservation of the environment.

The Brundtland Report warns that generations to come may not have a future worth mentioning, leave alone to share, unless mankind as a whole makes a conscious and concerted effort in drastically altering existing development

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policies, value systems, world-views, and strategies for safeguarding our planet and its bountiful resources. The bottom-line is that the present generation owes both a moral and social obligation to protect and preserve the environment for our own sake, and more so for the sake of future generations,

But the Brundtland Report is simply not a documentation of a litany of the negative impacts of ill-conceived development and environmental management policies. It is, more importantly, a document with a message that inspires hope and action. This is well reflected in a quote from the Brundtland Report which states that, *«Humanity has the ability to make development sustainable - to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs ».*

According to the Brundtland Report, the following key elements are essential preconditions for sustainable development:
- Reviving growth.
- Changing the quality of growth.
- Meeting essential needs for jobs, food, energy, water, and sanitation.
- Ensuring a sustainable level of population.
- Conserving and enhancing the resource base.
- Reorienting technology and managing risk.
- Merging environment and economics in decision making.

The Brundtland Report alo identifies serveral prerequisites for pursuing a paradigm of sustainable development, including:
- A political system that secures effective citizen participation in decision making.
- An economic system that is able to generate surpluses and technical knowledge on a self-reliant and sustained basis.
- A social system that provides for solutions for the tensions arising from disharmonious development.
- A production system that respects the obligation to preserve the ecological base for development.
- A technological system that can search continuously for new solutions.
- An international system that fosters sustainable patterns of trade and finance.
- An administrative system that is flexible and has the capacity for self-correction.

Anyway we look at it, the Brundtland Report breaks new ground and blazes a pioneering trial towards a better understanding and attainment of the «from one earth to one world» concept at the global level. In this context, the uniqueness of the Brundtland Report lies in its success not only in combining, in a logical fashion and in a coherent volume, a wide spectrum of issues and concerns of global significance, but also in elucidating the interdependency and interrelated ness of the fate of resources, environment, ecology and development as determined by factors like population growth, food supply, agriculture, species extinction, deforestation, soil erosion, desertification, urbanisation, nuclear safety, energy sources, greenhouse effect, ozone layer depletion, utilisation of the «global commons», pollution, GNP, foreign debt, arms race, technology transfer, etc.

In short, the Brundtland Report provides a useful framework and practical agenda of common action for achieving sustainable development. It also spells out ways and means by which all of us can join hands to meet the formidable, but fortunately not as yet insurmountable, environmental woes that confront us. But before embarking on this common quest, we have to understand, respect and recognise the intricate and interlocking relationships that link man and the environment, economy and ecology, products and processes, costs and benefits, needs and surpluses, the powerful and the powerless, the informed and the unwary, promises and practices, governments, corporations, NGOs and the people, and perhaps most vital of all, the present and the future. We must simultaneously dispel and put to rest permanently many existing misconceptions which arise from a monolithic or reductionist approach of fragmenting and compartmentalising development-related environmental issues.

We must also expose and eradicate many popularly cherished myths if we are to move towards sustainable development along the lines stipuated in the Brundtland report. Such myths include:
- That development and environmental conservation are mutually exclusive (i.e. that we can only have one or the other).
- That the environment is resilient enough to absorb any amount of anthropomorphic pressures.
- That it is always possible to come up with technological fixes to all our development-related environmental problems.

It is noteworthy that for most development and environmental issues, the principal obstacles are no longer the inability to identify suitable remedial measures. The predominant barriers are instead the lack of popular and political will to act, as well as in the prevailing skewed socioeconomic and politicocultural structures of inequalities and dependencies.

From this standpoint, people's movements the world over - as represented by community action groups - have a definite and decisive role to play, both in generating the necessary popular and political will to act, and in bridging the gaps created by existing structures of inequalities and dependencies. As articulated by Anwar Fazal, Director of the IOCU Regional office for Asia and the Pacific, *«The Third System - the citizens action groups - must take up the challenge and act together, as we cannot rely on the First System - the governments - or the Second System - the corporations - to adequately deal with the plethora of development-related environmental concerns confronting us ».*

In fact, the Brundtland Report unequivocably recognises the crucial part people's movements worldwide can play in realising the goals of sustainable development. As Gro Harlem Brundtland, Chairperson of the World Commision on Environment and Development, writes in her foreword to the Brundtland Report, *« Our message is directed towards people, whose well being is the ultimate goal of all environment and development policies. Unless we are able to translate our words into a language that can reach the hearts and minds of the people, young and old, we shall not be able to undertake the extensive social changes needed to correct the (existing) course of development».*

Environmental issues and concerns are an integral part of the personality of the international consumer movement as represented by IOCU. The concept of a clean and healthy environment is embodied in both the eight consumer rights and the five consumer responsibilities advocated by IOCU.

Further, at the recent 12th IOCU World Congress in Madrid, Spain, 15-20 September, 1987, a resolution on the Brundtland Report was unanimously adopted. The resolution, inter alia, reiterates that a degraded and a deteriorating environment poses a serious threat to the very process of development, and emphasises that environmental issues and concerns have a direct and significant impact on consumer health and welfare.

What can IOCU members on their part do to promote sustainable development from a consumer perspective? In this context, many relevant activities are already being carried out by IOCU members, while several others are at various stages of planning. Some of these initiatives include :

- Working towards the adoption of an international convention which binds parties to pursue policies aimed at promoting environmental protection and sustainable development.
- Urging the United Nations to transform the recommendations of the Brundtland report into a comprehensive UN action plan, with suitable provisions for various follow-up activities at national, regional and international levels.
- Lobbying their respective national governments to adopt development and environmental policies that coincide with the proposals contained in the Brundtland Report.
- Using the concept of *« Our Common Future »* as the theme for the 1988 World Consumer Rights Day.
- Establishing an informal working group to develop a concrete agenda for action based on the consumer concerns expressed in the Brundtland Report.
- Continuing to expand and fortify ongoing activities that have a bearing on sustainable development being undertaken by IOCU members themselves, as well as those being undertaken by members of the many community action networks that IOCU is closely associated with, such as the Pesticide Action network, International Coalition for Justice in Bhopal, Coalition Against Dangerous Exports, No More Bhopals Network, Health Action International, Seeds Action Network, etc.

NGOs in general and IOCU members in particular must collaborate and pool their skills and resources in their common quest for formulating strategies to meet our real needs and reserve our common future by promoting a paradigm of sustainable development which facilitates the formation of integrated, self-reliant, ecologically sound, economically viable, socially just, humane and culturally appropriate societies, wherein «informed participatory decision making » dictates the direction and pace of development policies to be pursued.

In the ultimate analysis, as the Brundtland Report vividly notes, *«... our children will inherit the losses. We borrow environmental capital from future generations with no intention or prospect of repaying. They may damn us for our spendthrift ways, but they can never collect on our debt to them. We act as we do because we can get away with it: future generations do not vote; they have no political or financial power; they cannot challenge our decisions... but the results of the present profligacy are rapidly closing the options for future generations».*

Time is of the essence and the time to act is now - before, God forbid, we stretch the limits of the environment to a point of no return, by which time it might be too late for any kind of remedial action to rectify the situation. We are all in this together for better or for worse — we will either stay afloat together or sink together depending on what we choose to do together.

In conclusion, I would like to summarise six crucial factors relating to sustainable development in the form of an «ACTION» package, each one representing a particular priority area for action :

«A» is for appropriateness. We must be constantly evaluating if development policies are appropriate using three criteria - whether they foster self-reliance and liberation of the masses, whether they reduce existing inequalities and dependencies, and whether they promote man's harmony with the environment.

«C» is for conscientisation. We must be undertaking campaigns to generate the critical awarenes necessary for creating the political and popular will to act to bring about suitable changes in existing trends, attitudes, knowledge, perceptions, practices, structures and value systems. The process also involves making people aware of their rights, responsibilities and capabilities.

«T» is for tactics. We must move away from a fragmented « react and cure » approach to an integrated « anticipate and prevent » approach. We have for too long been relying on tactics beased on « after-the-fact repair of damage», like reforestation, reclaiming desert lands, rebuilding urban environments, restating natural habitats, rehabilitating wildlands, redefining development policies, etc. We also must learn from past experiences and remember not repeat previous tactical mistakes.

«I» is for information. We must systematically collect and disseminate relevant information, as only a well-informed populace can meaningfully participate in decision making processes at all levels of decision making.

« O » is for overall costs. We must adopt a long-term and holistic, not short-term and piecemeal, basis for assessing the overall costs - vis a vis the projected benefits - of a particular project or development policy, including feasibility, viability, appropriateness, need, safety, socioeconomic impacts and environmental implications.

« N » is for networking. We must continue to seek out, link
up and work with other like-minded community action groups, be it at the local, national, regional or global level. The combined clout of citizens groups networking on issues of common concern will enable us to better cope with the issue(s) at hand in a more competent, cogent and collaborative manner which promotes greater solidarity, trust and above all a hope for a brighter common future.

The Gospel of Global Efficiency

On Worldwatch and other Reports on the State of the World

by Wolfgang Sachs*

It's raining reports about the state of the planet. The Gaia-Atlas and the Worldwatch Institute's *«State of the World»* are circulating in more than a dozen languages, the Annual report of the World Resources Institute stands in easy reach of enlightened UN officials, and environmentalists across the world hail the report of the Bruntland Commission as high-level testimony to their claims.

I should show gratitude and relief. It is true, the curtain of silence is finally pulled away from the global survival crisis and a series of data and tables reveal the vast panorama of today's threats and perils. The evidence is indeed undebatable. Also the appeal for urgent responsible action has been long overdue and cannot but command consent. Conversion is indeed indispensable. Yet my admiration for the reports is increasingly stained with mistrust in their effects. The proposed policies of resources management, I am afraid, ignore the option of intelligent self-limitation and reduce ecology to a higher form of efficiency. Such a reductionism, I claim, implicitly affirms the universal validity of the economic world-view and will eventually spread further the Westernization of minds and habits, a cultural fall-out that in the long run also endangers the overall goal of sustainability.

More out of Less

Each of the 80 odd Worldwatch papers, for example, paints a picture of the global state of affairs which looks roughly as follows. On the one hand we see how more and more people with increasing needs for food, shelter, health care or energy, are demanding to be recognized, as the population grows and some inequality is levelled. On the other hand we are shown how economies squander their potential to meet these demands as they deplete resources, ruin the environment and drive up costs. The available means are diminishing, while needs become more pressing : what looms large in the picture is a global sustainability squeeze. Fossil fuels, for instance, use up in one year what took a million years to produce, overburden the atmosphere with carbon dioxide, and prove to be more costly than investing in saving energy. The misuse of water supplies deprives humans, animals and plants of a basic means of survival, pollutes the earth's reserves for a long time to come, and new water works carry a multi-billion dollar price tag. Examples abound. Fortunately enough, the Worldwatch people say, the picture is not completely gloomy, but shows a streak of light in the distance. Shifting to less harmful means and concentrating on efficiency signals for them the way out of the dilemma. Renewable fuels and fine tuning through conservation and careful management are typical responses which point to the desired target: resource efficiency. Indeed, if one were to suggest a motto to be engraved above the entrance of the Worldwatch Institute, the obvious choice would be *«More Out Of Less»*.

1 will not doubt the necessity of this approach nor will I quarrel with the soundness of the alternative solutions suggested. But I would like to draw attention to a hidden reductionism which turns ecological politics from a call for new public virtues into a set of managerial strategies. As with a pair of pliers where pressure is relieved by yielding the grip of both parts, there are two possibilities to move out of the dangerous squeeze between growing demand and insufficient means: to consider an enlightened restraint of demand on the one hand and to deal diligently with the available means on the other. The world watchmen, however, highlight only the second alternative and allow the first alternative to sink into oblivion. In their reports, they alert to the efficiency of means, elevating the rules of micro-economics to imperatives for national (and even global) policy. Certainly, by doing so they spearhead the transition form a output-centered to an input-centered economy where not all resources are lavished on boosting the GNP but utilized with utmost efficiency in order to obtain growth without slag and dross. Under the new prescriptions, economies are supposed to «work out » until they reach overall fitness, instead of simply putting on more muscle until they break some record, as in the decades after the war. Optimizing, not maximizing is the order of the day, and both engineers and economists take renewed pleasure in their trade puzzling out the minimum input for each unit of output.

Yet, disregard for the first alternative - to consider an enlightened restraint of supply-oriented demands -traps the world watchmen into the economic world-view. In such a perspective, each society puts production highest on its list of values and seeks the good life through expanding and accelerating the economic apparatus. As the reports rarely question the predominant position of the economy in society, they implicitly take for granted that the world's cultures converge in the steady desire for more material production. This prejudice bars the way to examing closer - even for the overdeveloped countries of the North ! - a politics of intelligent self-limitation, which attempts to adapt level, volume, structure and velocity of production/consumption to society's overarching goals. Failing to do that,

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the reports seem to consider less commodity-intensive, less professionalized, less speedy societies inherently deficient. Since they are unable to imagine diverse cultures that intentionally live on intermediate levels of material demand, they cannot but make the economic outlook appear as *the* natural mode of human living. Consequently, the view on the globe they propose continues (in the tradition of « development ») to assume that all circumstances have first to be judged according to the imperative of production, be it even environmentally rational production. Ecological politics, however, which take the steady growth in demand for granted, and limit themselves to propagating efficient means, fall into the trap to push, in the name of ecology, for the further rationalization of the world.

Resources Everywhere

The myopia of conventional economists has become proverbial. While staring at the role of capital and labour, they ignore many other sources of wealth and well-being: from the unpaid labour of women backing up the world of production, to the silent workings of nature replenishing water, nutrients and energy. Eco-developers set out to overcome this tunnel vision; they prospect the broad range of life-supporting factors to assure the sustainability of yields over the long term. Through their glasses, numerous things and actions which so far had been taken for granted as part of ordinary life acquire a new, dramatic significance: they change into valuable resources. Cow dung for example, kindled by the Senegale peasant to heat water in the cooking pot, suddenly becomes an energy resource; the scrap metal used by a Peruvian squatter to build an annex to his hut, takes on the dignity of a recoverable input; Kenyan women cultivating village fields are discovered to be human resources for boosting food production. Under Worldwatch eyes, more and more parts of the world assume a new status, they are disembedded from their local context and redefined as resources.

In what new light, however, do actions, things and people appear when they are redefined as « resources » ? Obviously they acquire importance because they are considered useful for some higher purpose. They count not because of what they are but because of what they can become. They are stripped of their own worth in the present in order to be strip-mined for somebody else's in the future. A resource is something that has no value until it has been made into something else. Whatever its intrinsic value, it fades away under the claim of superior interests. For more than 100 years the term «resource» has been used to survey the world for useful inputs into industry. Consequently, perception has been trained to look at forests and see lumber, at rocks and see ore, at landscapes and see real estate, at people and see human resources. To call something a « resource » means to place "it under the authority of production. The old-fashioned synonym for « resources » reveals clearly how language can impart destiny: what can you do with «raw-materials» except finish them in a manufacturing process ? But not just any productive use can make something a resource. While the peasant in Gujarat may use cow dung to fertilize his plot, it becomes a resource only in the framework of national production. It is in national (or global) accounting books that resources are specified, measured and assessed according to their relative productivity; it is the capacity to boost GNP that constitutes a resource. Calling something a resource endows it with the availability to be exploited for the national interest.

In a non-economic perspective, things often have a meaning which makes them resistant to unlimited availability. For instance, in a Hindu village there is always a holy tree or a sacred grove which is untouchable. Gods are said to reside in their shadow; to cut them as timber would deprive the village of mighty protection. Consider another example. From Bolivia to ancient Germany, mines were regarded as wombs of Mother Earth where metals grow in slow gestation. Entering this underground world with its mysteries meant crossing a threshold into a domain which does not rightfully belong to man. Responsibility and care were required, and rituals were performed in order to ask for the Mother's generosity. Cooperation of nature also had to be obtained by the Nort-American Cree when they went hunting deer. For them, animals were not game out there to be killed, but had to be convinced, in a dialogue of rites and offerings, to present themselves to the hunters. Indeed, hunting was an exchange between animals and man that was governed by friendschip, coercion or love, like an ordinary human relationship. In sum, understanding trees, rocks or animals as animated beings in a wider cosmos where each element possesses its separate but related identity, entailed intrinsic limits on exploitation.

Labelling things as « resources » takes off whatever protective identity they may have and opens them for intervention from the outside. Looking at water, soils, animals, people in terms of resources reconstitutes them as objects for management by planners and for prizing by economists. Even if they are renamed «resources» in order to maximize their efficient use, because of the cultural fall-out from the all-embracing economic cloud, it will, in the future, be much more difficult to have any intrinsic respect for them.

Never Enough

The clock, we are warned, shows five minutes to twelve. Or even less. Be it Gaia, Worldwatch or Brundtland, they set off the alarm and seek to alert us against the threat to the survival of the planet. The message is fully credible. But the conclusion is highly double-edged: «securing survival» is the proclaimed target for all responsible planning. However, has there ever been a society whose primary concern was survival? Probably not. Nomads might have fled droughts, Florentine citizens may have hidden from the plague, soldiers in Verdun might have mobilized their last reserves, but when has ever been proposed that society's structure should be geared towards securing survival ? Of course, previous cultures never deliberately neglected the requirements of survival, but neither did they pay them much attention. Whatever their customs and rule, whatever their obsessions and fantasies, the conditions of physical existence were met in the course of the culture's pursuit of higher goals. Survival was nothing else than the by-product of greater achievements. It was not an explicit concern, but a given banality. Yet, precisely in the historical epoch where riches have been amassed as never before, ecodevelopers from all four winds raise their voice and call upon people and governments to put survival first.

A glance into the various Worldwatch papers and yearbooks recalls the most recent part of the story how plenty

vanished and scarcity asumed command. A short time ago it could be taken for granted that the great cycle of evaporation, condensation and precipitation fully replenished our sources of water, but overpumping for irrigation, which makes the water level drop, and pollution from industry, which renders it unsafe, have today turned fresh water into a scarce good. Since time immemorial, legions of insects and worms have renewed the topsoil, but pesticides and overuse of marginal land now accelerate the rate of erosion. And so it goes for global rainfall (forests), sun radiation (ozone hole) or temperature (greenhouse effect). Plenty turned into scarcity as industrial and agricultural production were intensified and generalized around the globe. The threat to survival is the result — one is embarrassed to state the obvious — the increasing identification of the good life with the availability of material products. Scarcity, therefore, is one side of a coin whose reverse side is called open-ended production.

An emerging tribe of eco-experts, however, defines its field of expertise by focusing the spotlight on the first side of the coin leaving the second in the shadow. As the World Resources Institute programmatically states on the first page of its 1987 report : *« The global environment is an interconnectd web... The human race relies on the environment and therefore must manage it wisely».* Clearly, the *« therefore »* is the crux of the matter : the scarcity of what was one plenty is sealed and meant to be the base for a new type of management. While the supposition in the statement holds true for all cultures, its conclusion highlights the hidden axiom of the economic world-view: there will be no boundaries to material progression. It is only when this axiom reigns that water, air and soil become and remain scarce. Taking the scarcity of natural riches for granted, however, is the base for the eco-developers intervention : it becomes his task to monitor and manage what has now turned into a scarce resource. And it will require all his professional skill to steer a course along that optimal level of exploitation which does not jeopardize the sustainability of future growth. To rally around «survival » happens only in a society which is driven by the imperative of continuously testing the limits of nature. Any other couldn't care less.

By putting on the glasses of micro-economics, i.e. the technique for selecting the most efficient means for a given end, eco-developers cannot escape the axiom of infinite growth. Since the time of Jevron and Walras, means are for the economist principally insufficient; their scarcity appears as part of the natural order of things and no longer as caused by some particular, transient constellation where ends happen to outstrip means. Instead, the presumptuous expectation of 19th century Europe that wants, along the supposedly linear course of history, will continuously expand rendering means notoriously insufficient, has entered the nature of things as an implicit axiom, whenever economists seek to make the best out of so-called scarce means. They will never tell you what ends you will finally achieve « managing wisely » your means; for them ends are faceless, they have only one, just formal character: they are infinite.

For the economic world-view, needs will always become claims on material production. Well-being, in this perspective, is recast as well-having. Society's welfare, therefore, depends in the first place on material output. Setting out to manage «global resources», world watchmen imply the world-wide victory of this specifically modern outlook as a *fait accompli.* What separates them from the conventional economist, is their straightforward recognition of environmental limits to production; what ties them nevertheless to the economic world-view, is the failure to appreciate cultural limits to the predominance of production, cultural limits that render production less important and consequently relieve also environmental pressure. For them as well as for the conventional economists, nature's riches are doomed to be insufficient, because both the affluent and the improverished part of the world will inevitably grow in their attachment to material growth. The many different ways to the good life are implicitly reduced to the one single racetrack towards a higher standard of living. If societies always expended all their energies on pushing production, there would never have been the strikingly coloured fabrics in Senegal, nor the extravagant Moghul gardens in India, nor any gothic cathedral in France. As diverse as these societies haved been, they had, nevertheless, one thing in common : they aspired to something other than producing and spent their surplus on whatever grand design. The West has decided to spend it on multiplying output; eco-developers tacitly accept that formula for the entire globe.

Always Rational

Throughout the Worldwatch papers, one frequently meets persons of a particular virtue. The utopia of a sustainable world appears to be populated by a fairly recent version of *homo sapiens,* the efficiency-conscious individual. When it comes to collecting glass-bottles in separate containers, to replacing open fires with stoves, to introducing minimum tillage in place of soil-breaking plowing, or to installing drip irrigation instead of canals, all these suggestions, as reasonable as they may be, propagate the gospel of efficiency. Amory Lovins provided a striking illustration of the eco-developer's mood when he presented his audience with two light bulbs. Both lights were equally bright, although the conventional model uses 75 and the new one only 18 watts. He explained : *« We should get used to seeing the purchase of an electricity-saving device like constructing a tiny power plant in the home. The new bulb, in fact, is producing 57 negawatts, i.e. unused watts. And the saved electricity can be sold to another client, making new power plants superfluous ».* Indeed, this could nicely express the efficiency ethos in a nutshell: *«produce negawatts!»*

Undoubtedly, the message is charming in its elegance. And this tends to blur the shift from the housekeeping to the efficiency ethos. Good housekeeping is the traditional ideal of subsistence-oriented households. What is there not collected, preserved and reused ! Food is stored, tools are carefully maintained, furniture is handed down from generation to generation. Necessary possessions are fully used, while outside purchases are kept to a minimum. Each coin is turned over twice before it is spent, each transaction is carried out prudently, sometimes even with misgivings. However, the point of good house-keeping is not economizing for the sake of investment, but saving for the sake of independence. Choice of an efficient means has nothing to do with keeping expenses down, but aims at obtaining a higher return in order to liberate funds for further investments. Saving, in contrast, intends to keep market involvement at a low level in order to shield the domestic economy against pressure from the larger economy. Efficiency looks for opportunities, saving looks for security. While the former implies infinite progression, the latter derives from a sense of

enoughness. Both attitudes can easily conflict as soon as a gain in efficiency would require money; the Indian peasant may, therefore, prefer to burn piles of cow dung, which involves no money expense, rather than buy a biodigester, though it uses less cow dung to obtain the same amount of heat.

More fundamentally, the peasant might not want to care at all, because he has other preferences in life. After all, the efficiency imperative demands leaving nothing idle and selecting - in terms of money, effort and environmental consequences - the least costly way to achieve a goal. Our peasant, however, might not be happy with the waterproof roof the development agency provided, and replace it with the traditional roof of leaves and branches which requires major repairs each year. After all, this roof repair is the occasion of the village's week-long festival ! He is ready to be effective but not efficient. Since people are not fools, they will always intend to be effective and act so as to achieve a certain result. Yet efficiency can be way off, because the activity is embedded in a web of other concerns. They may for instance use long hours every day to carry out customary visits to family members or spend most of their money on elaborate festivities. The call to efficiency disrupts the other priorities which deflect or retard the (technically) one best way. Actions are often over-determined and serve a host of purposes; to turn mere effectiveness into efficiency means to delete the other concerns and to privilege the naked means-end relationship. Once that privilege is erected, means count only as means; any consideration of context, quality, style or esthetics tends to become irrelevant. The model of rational choice, in fact, is based on the assumption that means have been purified of any context, since they are considered to be interchangeable according to the highest return and calculable according to a single yardstick, generally either money or energy. Efficient behaviour spreads at the expense of culture-guided behaviour; it undermines non-economic notions of the good and proper life.

Certainly, interpreting the state of the world chiefly in terms of «resources», «management» and «efficiency» may appeal to planners and economists. But it continues to promote development as a cultural mission and to shape the world in the image of the West. The reports do more than simply propose new strategies; they also tell people how to see nature, society and their own actions. The more their language is adopted around the globe, the more difficult will it be to see nature in terms of respect and not as a resource, society in terms of the common good and not of production, and action in terms of virtue and not of efficiency. To put it in a nutshell : they promote the sustainability of nature and erode the sustainability of cultures. And this, for sure, will not benefit nature either.

Cultural Norms, War and the Environment

Constraints on Military Disruption of the Biosphere : an Overview

by Arthur H. Westing*

Introduction

1945 ushered in the most momentous period in all human history for two basic reasons. The first of these -the dawn of the atomic age - was impressed upon the world by a brief series of cataclysmic events : the explosions at Alamogordo, Hiroshima and Nagasaki. The second of these was an occurrence of more subie and diffuse, though equally grave, nature : an increase in human numbers that for the first time went beyond the global carrying capacity.

Both the nuclear problem and the environmental problem have become progressively worse over the four decades since 1945 despite a slowly growing public awareness of their vital importance. As a result, today the two most immediate threats to humankind are military devastation on the one hand and environmental exhaustion on the other, both on a world-wide scale. Moreover, each of these two threats is reinforced by the other.

The growing dimensions and interlocking nature of these awesome environmental and military dilemmas are suggested below; touched upon next are the social forces that have permitted this human flirtation with selfdestruction. Not only is the urgent necessity for reversals of the nuclear arms race and of the over-exploitation of nature pointed out, but evidence is also presented that the evolution of cultural norms that will be required to bring about these reversals is at least feasible. Noted next is the connection between the public and its governments and the role of international organizations. Looked at then are the functions of a number of societal institutions in bringing about the changes in human attitude and behaviour that will be necessary in order to avoid environmental and thus human disaster, whether by military or civil means. Examined especially are the roles in influencing public opinion of mass media and formal education, of international law, of religion and of individuals and citizen groups. Actions necessary for achieving non-violent conflict resolution within the context of a sustained balance between humans and nature are considered elsewhere (chapter 10). Sources of general background information for this chapter are also provided elsewhere.

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The environmental threat

The human species, *Homo sapiens,* has inhabited the earth for perhaps 300 thousand years. Total human numbers at any one time remained below 1000 million until about 1850, and have been increasing dramatically ever since then (Westing, 1981a). Indeed, between 1850 and 1945, the end of World War II, the global human population more than doubled, reaching the then unprecedented total of about 2300 million.

Even though some 50 million people were killed during the six years of World War II -the largest number of fatalities of any in human history- population growth had become so rapid by the mid-twentieth century that the world was, in fact, confronted by 150 million more individuals in 1945 than had existed in 1939 (Westing, 1982). Given even the technology of today, the world can benignly support no more than perhaps 2500 million people at a standard of living to which the peoples of the world rightly aspire, in other words, at a standard comparable to that of the two dozen or so developed nations (Westing. 1981d; 1988).

Between the end of World War II and today the human population has fully doubled once again, to about 5000 million. And despite all of the scientific and technological advances of these past four decades, more people by far than ever before in the history of the human species are today undernourished; more by far than ever before are inadequately housed; and more by far than ever befor are without access to clean water. The three major renewable natural resources - forests, grasslands and fisheries - are, on a world-wide basis, now being utilized faster than their rate of natural replenishment (Brown *et al.,* 1987: Holdgate *et al.,* 1982; Mathews *et al.,* 1986). This disastrous process of overexploitation continues relentlessly (Brouwn & Jacobson, 1986). Nevertheless, the human species permits its global population to continue to increase by 230 thousand people per day, that is to say, to add in numbers the équivalant of one Sweden every 37 days.

In considering the magnitude of the over-population of the human species, one must not lose sight of the relentless inroads, both quantitatively and qualitatively, that this one species makes on the other species with which it shares the earth. In 1850, humans plus their livestock accounted for about 5 per cent of all terrestrial (non-marine) animal life on earth, when measured in terms of biomass, in a terrestrial habitat that was fully occupied (Westing, 1981 c; 1981d). By 1945, humans plus their livestock had grown sufficiently in

numbers to take over about 10 per cent of the world's terrestrial habitat. This process of replacement has continued, and thus today humans plus their livestock have substituted for more than 20 per cent of all terrestrial wildlife. Within another extraordinarily brief period of four decades or so the human numbers will have inexorably doubled one again, and (given past trends) the same will have occurred with the livestock numbers. Thus, in less than four decades from now, humans plus their entourage of domestic animals will have replaced fully 40 per cent of all terrestrial wildlife on earth - with the inevitably concomitant and tragic extinction of numerous species of wild plants and animals.

To recapitulate, the human species is dependent for its well-being and very survival on a continuing exploitation of the natural resources of the earth. First, its food and various other necessities of life must be harvested on a renewable basis; and second, its multifarious waste products must be disposed of - that is, discharged into the environment - in a safe fashion. Humans are unfailingly dependent upon freshwater, soil and mineral resources, all of them limited (scarce) resources which are distributed most unevenly throughout the world. During past times, human demands have often outstripped the *local* availability of such crucial natural resources. And for the past several decades - and despite great advances in technology - human demands have finally outstripped even the *global* availability of some of them. In yet another selfdefeating action, human use of the atmosphere for the disposal of ever increasing amounts of municipal and industrial waste products (air pollutants) is now also occurring at a rate faster than decomposition and dissipation can accommodate such discharges.

The military threat

There are several obvious connections between war and the environment. Given the highly uneven distribution among nations of various natural resources of vital importance, and the increasing world-wide shortfalls of some of them, it should come as no surprise that wars of plunder or aggrandizement have frequently been, and continue to be, fought (Westing, 1986). As a second connection between war and the environment, it is clear that natural resources are consumed in large quantities in the preparation and pursuit of wars. (It must also be noted here at least in passing that intellectual resources are in huge measure devoted to preparation for war, and it is readily arguable that if these were devoted at least in part to coping with environmental and other human necessities, the felt need for many wars would be diminished [Westing, 1984]). It is not only clear that warfare is destructive of resources, but it is additionally demonstrable that such environmental disruption is in this century) becoming an ever more prominent aspect of warfare (Westing, 1980, chap. 1 ; 1981. Moreover, not only does nuclear-weapon testing exert an adverse effect ont the human environment, but nuclear war might be so environmentally disruptive as to actually threaten human civilization as a whole (Pittock *et al.,* 1985-86), the import of which is dealt with below.

The link between humanity (e.i., humanness or the quality of being human) and war is an intimate one. For many millennia now, and perhaps from very earliest times, humans have functioned in discrete groups. These groups are formed and held together by ties of kinship, language, religion, forceful leadership and various accidents of geography and history. These functional groups into which the human species is divided have waged wars against each other for at least the past 9000 years, that is, at least since the Neolithic Age (Ferrill, 1985, p. 20; Roper, 1975). More than a dozen wars are in progress at this very moment, a state of human affairs certainly comparable to any moment in time during this century (Westing, 1982) and probably comparable to any moment in time since at least the Bronze Age.

The many tens of thousands of wars have been initiated by one human group or another with a complete awareness of the inevitably associated killings and other deaths, maimings, property destruction, population displacements and miscellaneous suffering, and of the frequently associated rural devastation. Whereas the desirability of avoiding or alleviating calamities *within* group has long been accepted (and fairly generally adhered to), human practice to date has demonstrated no true commitment by a group to extending such acceptance to the species as a whole, and only rarely with any consistency to one or more other groups.

The acceptability of war

Much has been written about the ultimate causes of war of the extent to which human aggressiveness and its translation into societal bellicosity (the propensity to wage war) are learned characteristics as opposed to innate ones. To the extent that bellicosity is a learned attitude *cum* behaviour, or one imposed upon society by how humans live, there remains the possibility that this trait can be counteracted through education, perhaps in conjunction with a change in life-style or social system.

The suggestion has been put forth that bellicosity is largely a product of civilization. Thus, it appears that the more primitive a society is, the less the likelihood for it to be bellicose (Broch & Galtung, 1966; Eckhardt, 1975). Moreover, it seems that the rise of the state might not have occurred without a combination of natural-resource limitations and the acceptance of war as an appropriate means for achieving societal aims (Carneiro, 1970; Cohen, 1984). A trend of increasing bellicosity has been discerned through time; and a similar, presumably related, trend of increasing bellicosity has been discerned with reference to societal structure, from nomadic hunter-gatherer societies to sedentary agricultural societies and further to urbanized societies (Eckhardt, 1982).

It is clear that over the past nine millennia or more war has been widely recognized as a successful societal strategy in the acquisition of needed or desired natural resources as well as of status and power. This has led to the suggestion that martial attributes and bellicosity might well have been selected for in the human species, and thus reinforced during this time.

Even if individuals within a group are not themselves aggressive or bellicose by nature or nurture, their leaders might well be. Indeed, these very traits might help propel people into positions of leadership. Such leaders can then depend upon thoroughly widespread tendencies towards group loyalty (often to point of chauvinism) and towards other-group distrust (often to the point of xenophobia) to overcome any individual feelings within the group that are antithetical to war. They can especially depend upon the strong human urge to group conformity (Eckhardt, 1982).

Most of the numerous civilizations and societies about which we know - past and present, primitive and advanced - have, on the one hand, been consistently bellicose in action and, on the other, primarily patriarchal or patricentric in structure. This congruence has led to the suggestion that masculine traits are the cause of war (Brock-Utne, 1985; Divale & Harris, 1976; Easlea, 1983; Eisler & Loye, 1983; 1986; Garcia, 1981; Reardon, 1985). The masculine traits or ethos referred to include especially aggressiveness, competitiveness, toughness and chivalry. And, indeed, the few apparently matriarchal or matricentric societies that have been described are said to have displayed a tendency to shy away from bellicosity (Fromm, 1973, pp. 167-68). Thus, it may well be that gender structure is the single most relevant feature of society to be revised in order to achieve a less bellicose way of life, a subject persuasively argued by Held (see chapter 4). She suggests that men's aggressive and non-caring tendencies would be mitigated if mothering activities were more equally shared between the sexes. She further suggests that international relations would become more nearly pacifistic if women were to become more centrally involved in the affairs of state, this improvement owing to their more holistic approach to problem-solving and their more non-violent approach to conflict resolution.

A certain amount of rhetoric to the contrary, it is overwhelmingly clear from human actions that war has long been, and continues to be, an accepted and routine human endeavour for the resolution of inter-group conflicts. The concepts and mechanisms for non-violent conflict resolution have been eloquently presented, described in scholarly detail and are widely known; nonetheless, they are just as widely ignored or even denigrated.

As noted earlier, warfare has caused much grief and suffering over past centuries; and also much environmental disruption, especially in recent decades. However, the human species *per* se was never until this century in danger of extermination. That former condition of safety - which had lasted and been taken for granted for so many millennia - began to disintegrate four decades ago and has perhaps by now disappeared. Albert Einstein captured the human predicament with uncanny precision within less than a year of Alamogordo when he stated that *« The unleashed power of the atom has changed everything save our modes of thinking and we thus drift toward unparalleled catastrophe » (Times,* 1946).

In summary, some combination of inborn and externally imposed factors, the latter including the structure of society and the huge mismatch between human population numbers and availability of natural resources, will unfortunately continue to provide the support and impetus for the acceptability of wan Nevertheless, it has now become imperative that the human instinct for self-preservation be aroused into action against the ever growing threat to human civilization of nuclear annihilation, whether directly or via environmental disruption. The difficulties in achieving such arousal are cogently presented by Falk (see chapter 5). He suggests that to overcome the existing state of nuclearism will require a strengthening of the currently incomplete legal condemnations of nuclear war and nuclear weapons. But - as falk goes on to explain - it becomes crucial that such strengthened legal norms rest on a foundation of appropriate cultural norms. Some signs do exist that these latter norms are emerging, but such tendencies must be diligently nurtured because, in fact, they can be seen to go counter to the prevailing pro-nuclear norms.

The acceptability of environmental degradation

It has long been widely accepted - and essentially without question - that humans have supreme authority over the earth and all of its other living things, both plant and animal. This concept of dominion is deeply ingrained in Western civilization (Callicott, 1982; Passmore, 1980; Toynbee, 1972; White, 1967), and is, at least now, also widely accepted by all of the other major civilizations (Passmore, 1980, chap. 1; Zaidi, 1981). Thus, the earth and the fauna and flora it supports are simply treated by society as human property. The state owns and jealously guards all of the natural resources within its limits of jurisdiction, at present collectively amounting somewhat less than half of the global surface. The state in turn establishes the extent of individual (and corporate) property rights regarding the natural resources under its control.

As property, the natural resources, both non-living and living, are extracted, harvested or otherwise used as the owner (whether governmental or secondarily, individual) sees fit. Few cultural norms have restricted such use other than those that serve to prevent immediate overt harm or danger to fellow citizens. Thus, the use by an owner of his or her natural resources to their exhaustion or other detriment has, by and large, been a socially acceptable and legally permissible activity.

When needed natural resources were or became unavailable to individuals or states, these entities have traditionally coped with this dilemma - and still do - in one or more of the following ways : *(a)* by obtaining them from areas beyond any national jurisdiction; *(b)* by purchasing them from other individuals or states; *(c)* by plundering them from another state; or *(d)* by forcibly annexing another state or portion thereof.

Any incentive which might exist for preventing or minimizing the degradation of privately or nationally owned natural resources has been based far less (if at all) on ethical principles or other cultural norms related to the rights of non-human living things than on short-term human self-interest(often to the point of greed). Moreover, when it comes to commonly owned (shared) resources - and especially when it comes to those resources beyond any national jurisdiction - strong and in practice largely unchallenged cultural pressures actually exist for their exhaustion (Hardin, 1968). Again, it has now become imperative that the human instinct for self-preservation be aroused into action against the ever-growing threat to the human species of environmental exhaustion. It is here that Western civilization can perhaps benefit from the more egalitarian perspective attributed to women (Merchant, 1980; Zimmerman, 1987); from the more nearly usufructuary traditional native North American attitudes towards nature (Callicott, 1982; Cronon, 1983, chap, 4; Rogers, 1975); and, with special reference to warfare, perhaps even from those of the early Israelites (see appendix 4.1).

The mechanism for change

To recapitulate, a point in human history has finally been reached at which the well-being, and perhaps even survival, of the human species itself is threatened by both civil means - that is, rampant over-population - and military means -

that is, nuclear holocaust. The question before humankind, then, is whether nine millennia or more of complacency towards, if not active acceptance of, warfare and environmental abuse can be overcome in time. Are human inner drives or culturally imposed norms sufficiently flexible to be changed into ones that will permit, not to say ensure, patterns of social behaviour of sufficient benignity and common sense to prevent disaster?

First, one must accept the conclusion of various scholars that the bellicosity of the human species is largely a product of social rather than genetic circumstances (Dunbar, 1985; Eckhardt, 1982; Kemp, 1987); and moreover, that human abuse of the environment is largely a product of misguided anthropocentrism and ignorance (Catton, 1980; Ehrenfeld, 1978; Ehrlich & Ehrlich, 1981 ; Leopold, 1949; Marsh, 1864).

Second, the cultural norms that underlie the prevailing martial and anti-environmental behaviours of the human species, although modest in their breadth, do have a long cross-cultural history, a theme thoroughly developed by Best (see chapter 2). He points out, moreover, that the codes of martial behaviour that would prevent damage to the human environment appear to rest largely upon a variety of self-serving foundations rather than upon altruistic, religious or ecological ones. Nonetheless, Best concludes that the traditional norms provide an adequate basis from which could emerge the codes of restraint necessitated by the exigencies of today. Indeed, it is clear that such norms are not immutable, but, in fact, display societal differences (Galtung, 1981; Levine, 1975; Toynbee, 1972); and, moreover, have evolved considerably over the years (Boulding, 1983; Glacken, 1967; Stone, 1972; Thomas, 1983). The USSR provides an example of a society that has undergone major social transformations during this century, among them a growing respect for nature, the details of which are developed by Khozin (see chapter 3). He emphasizes the Soviet awareness of the needs for a reversal of the arms race and for international co-operation in environmental protection in order to establish a sound basis for the betterment of the human lot.

Third, public opinion - and thereby presumably, in time, cultural norms - is subject to change through the vehicle of such societal institutions or forces as the mass media, schools, the arts, citizen groups, both professional and lay, and even individuals. Moreover, changes in public opinion in both East and West translate into changes in government policy, the latter a *sine qua non* for human survival. The revised cultural norms will then provide a stable basis for the formalities of international law necessary for non-violent and environmentally sound intra-national and international relations (Ferencz, 1985; Schachter, 1977).

Governments and international organizations

It is a now widely accepted principle that national governments should act not only in the best interests of their citizenry, but actually on behalf of their citizenry; and, therefore, that concomitant legal mechanisms should exist for transmuting public will into governmental policy and action. And, indeed, the major powers of today do function in more or less close conformity with that ideal.

On the other hand, a variety of social forces in both East and West prevents a full realization of the concept of a government acting in conformity with the will of its citizenry. Thus, there always exists at least some level of adversarial relationship between a people and its leadership. Moreover, even though a government may function in conformity with the public will, one cannot overlook the fact that it has a certain ability to mould that will through the control it exerts (in both East and West) over the domestic mass media, schools, and other societal institutions and forces. And, of course, it must be stressed that many governmental decisions are simply stupid (Janis, 1982; Tuchman, 1984).

There is no denying that the best interests of a government - that is, of its leaders and bureaucrats - may differ in various respects from those of its citizenry. However, countering the advantages a government has in the relationship with its citizenry are such more or less subtle factors as the innate intelligence, reasoning ability, spunk and mettle of the human species; and the information that reaches a people of one country through its various interactions with the peoples of other countries. But the most encouraging factor by far in this apparent dilemma is that when it comes to the abolition of nuclear war there should be no doubt for anyone at any level that the interests of government and people coincide fully and with equal urgency. Although such interests coincide just as fully when it comes to global overpopulation, at least in the long run, this might well not be so obvious from the standpoint of the relatively privileged leadership of a country, making an amelioration of this problem a more formidable educational challenge.

In considering the role of international organizations in the shaping of cultural norms, a distinction must be drawn between intergovernmental agencies (e.g., the United Nations Environment Programme; Food and Agriculture Organization of the United Nations) and non-governmental organizations (e.g., the International Committee of the Red Cross; Greenpeace). Intergovernmental agencies, of which there exist a few hunderd, are for all practical purposes limited in their actions to the desires of their sovereign member states and by the bureaucratic lethargy of their secretariats (Bennett, 1984; Goldblat, 1986). These agencies can rise above their co-ordinating and meeting-ground functions only to the extent that a skilful and dedicated secretariat tactfully nurtures aspirations that have been enunciated by the world community. Non-governmental organizations, of which there exist a few thousand, are to a greater or lesser extent independent of the influence of governments. These organizations often attempt, more or less subtly and more or less successfully, to assume the role of a societal conscience.

Mass media and formal education

Public opinion against nuclear war must be reinforced through the mass media (newspapers, magazines, radio, television) (MacBride, 1980; Manoff, 1984) as well as through the schools (elementary, secondary and higher) (Brock-Utne, 1980; Eckhardt, 1987; Markusen & Harris, 1984), so that the citizens and leaders of both today and tomorrow fully recognize the vital importance to the human species of categorically rejecting the use of nuclear weapons and thus even their possession. A recognition of the absolute inadmissibility of nuclear war - and thus also of the absolute inadmissibility of the nuclear weapons themselves - must be reinforced in as many ways as possible so that such attitudes simply become part and parcel of the human ethos.

The press and other news media would seem to be in a good position to keep the public informed on such vital is-

sues as national security and environmental protection; and, thereby, to play a role in shaping public opinion in these matters, often presumably in a more or less adversarial relationship with the government. However, it is difficult for the news media of a nation to challenge their government, whether libertarian or authoritiarian, as is made amply clear by Rubin (see chapter 8). He demonstrates that the mass media are, for various reasons, remarkably pro-governement in the USA, the USSR, and elsewhere in the world. He concludes that it might well require some catastrophe to shake them out of their conformity.

It seems clear that formal education often fosters competitive, hierarchical, non-questioning and anthropocentric attitudes, a matter that Brock-Utne develops at some length (see chapter 7). She recommends curricular restructuring in ways that will counter such learning, thereby laying the foundation for an egalitarian, non-militaristic and pro-environmental society.

The establishment of a pervasive cultural norm against nuclear weapons and war should not be as difficult as it may at first appear because the immensely anti-social and anti-ecological nature of nuclear weapons is already widely perceived among both the peoples and governments of the world. Public opinion polls in both nuclear-weapon and non-nuclear-weapon countries have consistently revealed a widespread, and by some measures growing, antipathy towards their use (Vapitanchik & Eichenberg, 1983; Kramer *et al.,* 1983; Oudsten, 1985; Yankelovich & Doble, 1984-85). In the intergovernmental arena, 133 or more non-nuclear-weapon governments (81 per cent of them), including a considerable number that could readily produce nuclear weapons, have to date formally renounced such weapons through joining the 1968 Nuclear-weapon Non-proliferation Treaty and in other ways. And 113 nations have declared as a guiding principle that the human environment must be spared the effects of nuclear weapons. At the non-governmental level, all Soviet physicians now swear to work for the prevention of nuclear war and some 7000 US scientists and engineers (and a considerable number of Japanese and British ones as well) have to date pledged to not work on weapon programmes they judge likely to trigger a nuclear war.

The mass media (Friedman, 1983; Schoenfeld, 1980; Sellers & Jones, 1973) and schools (Emmelin, 1977) have an equally important, although considerably more difficult, task in bringing home the crucial importance of protecting the human environment from degradation. But here again the situation is less than hopeless because public concern is both widespread and in places growing (Dunlap, 1987; Harcourt *et al.,* 1986; Leonard & Morell, 1981; Mitchell, 1980; 1984).

International law

Various multilateral treaties are in force today that serve to constrain military disruption of the human environment. An indication of the strength and pervasiveness of the underlying environmental norms can be gleaned from : *(a)* the number of such treaties, the central focus of which is environmental (rather than human) protection; *(b)* the severity of their structures; and *(c)* the levels to which they are supported.

To a certain extent such treaties also have the effect of reinforcing these norms, a subject explored by Stone (seen chapter 6). He stresses the potential value of such feedback not only in strengthening and clarifying the norms in question for the parties involved, but also as an aid to attracting new parties into the fold. Stone goes on to explain the several normative foundations upon which environmental protection treaties and other such legislation can rest.

Thus, at least 95 nations of the world, or 56 per cent of them, have to date agreed not to take any deliberate measures which might harm certain natural areas of outstanding universal value. And 67 or more nations, or 39 per cent, have to date agreed not to employ means of warfare that would cause widespread, long-term and severe damage to the natural environment. A number of other treaties serve to constrain military disruption of the environment through restrictions on certain weapons, targets or theatres or in other ways, but their central focus is human rather than natural.

Finally, some importance must be attached to such intergovernmental pronouncements as the 1972 Declaration on the Human Environment or the 1982 World Charter for Nature.

Religion

The question arises of the extent to which the religious norms of a people influence their cultural norms relating to war and the environment. It is concluded here that the answer in either domain may well be hardly at all. Indeed, it appears that the influence flows largely in the opposite direction.

As to martial norms, by way of example, the Shinto religion of Japan and the Islamic religion of the Muslims are clearly militaristic in their origins and essence and, indeed, the associated societies have a history replete with warfare (Ferguson, 1977). On the other hand, the Christian religion of Western civilization and the Buddhist religion of central and east Asian civilizations are strongly pacifist in their origins and essence. Indeed, one of the central tenets of Christianity is that « Blessed are the peacemakers, for they shall be called sons of God » (Matthew 5 : 9). And the very first of the five precepts of Buddhism teaches that «1 untertake to observe the rule to abstain from taking life » (Conze, 1959, p. 70). Nonetheless, the associated societies have records of military activity unsurpassed in magnitude and ferocity.

As to environmental norms, it has been suggested that the callous and increasingly detrimental approach to nature which has been a hallmark of Western civilization through the centuries finds its roots in Christianity (White, 1967). Presumably taken as an unquestioned article of faith in this regard is that humans shall *«be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth »* (Genesis 1 : 28).(1) On the other hand, it has been suggested as well that the roots of the despotic approach to nature in Western civilization can be traced with equal cogency to its Greek heritage (Passmore, 1980).

The Islamic religion also teaches that humans have dominion over the environment (Zaidi, 1981). According to the Muslim *« Recital» (Koran* 14 : 32): *« It was Allah who made the heavens and the earth. He sends down water from the sky with which He brings forth fruits for your sustenance. He drives the ships which by His leave sail the ocean in your service. He has created rivers for your benefit, and the sun and the moon, which steadfastly pursue their courses. And He has subdued to you the night and the day... »*

In the Far East, the traditional Chinese Taoist philosophy is one of harmony with nature *(Tao Te Ching 1 : 34):*
The way [Tao] is broad, reaching left as well as right.
The myriad creatures depend on it for life yet it claims no authority.

(1) It is interesting to note that the governing body of Massachusetts in the seventeenth century specifically cited this biblical passage (Genesis 1 : 28), supported by two comparable passages elsewhere (Genesis 9 : 1 and Psalms 115: 16), as the legal basis for land ownership in the colony (Cronon, 1983, p. 63).

However, this harmonious philosophy has not prevented environmental abuse in China on a grand scale (Tuan, 1968). Moreover, Japanese civilization has permitted a despoliation of nature in the East surpassing that in the West despite its intimate relationship with Shintoism, a religion clearly noted for its nature worship (Huddle & Reich, 1975; Kelley *et al.,* 1976).

Thus it seems clear that both the interpretations of religious dogma and the actual religious practices which are associated with the major societies on earth essentially reflect the cultural norms of those societies rather than shaping them. On the other hand, the nuclear threat has begun to elicit a revived interest in the pacifist tenets inherent in some of the major religions, for example, in certain groups or denominations of Roman Catholics (Kim, 1985; National Conference, 1983; Russett, 1984), Buddhists (Ikeda, 1985) and Protestants (White *et al.,* 1986).

Individuals and citizen groups

The potential importance of the mass media and schools in shaping and reinforcing anti-nuclear and pro-environmental norms has been emphasized above. Perhaps equally important in these matters are such other shapers of public opinion — and presumably thereby of cultural norms — as the arts (essays, fiction, poetry, theatre, painting, etc.), and religious, professional, scientific and other citizen groups.

Although «popular culture» has generally upheld the militaristic sentiments prevalent in society as a whole, « high culture» has, especially during this century, had a strongly anti-militaristic and pro-environmental bias, a matter throughly examined by Marsh (see chapter 9). She demonstrates that the arts - particularly literature, poetry and painting - have a distinct contribution to make in relation to war and the environment. This is so because they engage not only the intellect, but the imagination and emotions as well. Indeed, poets and other writers act to substantial extent as the conscience of their nations, a phenomenon (as Marsh shows) especially widely accepted in the USSR.

Professional norms, as reflected by professional codes of conduct such as the 1983 Soviet physicians' oath or the 1984 scientists code, are also of greater or lesser importance in contributing to societal attitudes.

Perhaps the extent of the power of individuals and citizen groups can best be appreciated simply by recalling the more or less influential nature of such items, events, and actions in recent history as : *(a)* Pablo Picasso's 1937 *Guernica* (Bruckner *et al.,* 1984, p. 88-89; Keegan & Darracott, 1981, pp. 200-201 ; Silva *et al.,* 1963, pp. 63-64); *(b)* Rachel Carson's 1962 *Silent Spring (Carson,* 1962; Lutts, 1985); *(c)* Stanley kubrick's 1964 *Dr. Strangelove* (Kubrick, 1964; Suid, 1985-86); *(d)* the US Catholic bishops' pastoral letter in 1983 on war and peace (Kim, 1985; National Conference, 1983; Russett, 1984); *(e)* the work since 1981 of the International Physicians for the Prevention of Nuclear War (Humphry, 1985; UNESCO, 1985); *(f)* the work of peace groups, especially in the West (Kaltefleiter & Pfaltzgraff, 1985; Salomon, 1986; Wittner, 1984); *(g)* the development of the feminist movement (McAllister, 1982; Zimmerman, 1987); and *(h)* the progress of various unofficial exchanges across ideological barriers (Cracraft, 1986).

Conclusion

In closing, it is hoped and expected that the people - and, through the people, the handful of nuclear-armed governments - will renounce the use of nuclear weapons for any purpose whatsoever, including deterrence or retaliation - and thereby obviate even a perceived need for their possession. This *must* be done owing to the profoundly disruptive nature of nuclear war; it can be done owing to the ever-growing awareness at all levels that nuclear war threatens the very existence of human civilization. Moreover, the potential for disaster is so grave that even unilateral renunciations are called for. There is the further hope and expectation that, given such an immensely civilizing act as nuclear disarmament, humans will then be able to come to grips with the similarly serious predicament of having exceed the global carrying capacity for their species. And with these two giant steps behind them, the people might then in due course even be able to learn to resolve all of their international conflicts through non-violent and equitable means (see chapter 10).

References

Bennett, A. L. 1984. *International organizations: principles and issues.* 3rd edn. Englewood Cliffs, New Jersey: Prentice-Hall, 498 pp.

Boulding, K. 1983. Conditions and prospects of global demilitarization : reflections on values, science, war and peace : what signs of hope? *Bulletin of Peace Proposals,* Oslo, 14:351-354.

Broch, T. & Galtung, J. 1966. Belligerence among the primitives : a re-analysis of Quincy Wright's data. *Journal of Peace Research,* Oslo, 3:33-45

Brock-Utne, B. 1980. Disarmament education in Norway : an action-oriented case study. *Bulletin of Peace Proposals,* Oslo, 11 : 288-295.

Brock-Utne, B. 1985. *Educating for peace : a feminist perspective.* New York : Pergamon Press, 175 pp.

Brown, L. R. & Jacobson, J.L. 1986. *Our demographically divided world.* Washington: Worldwatch Institute Paper No. 74, 54 pp.

Brown, L. R. *et al.* 1987. *State of the world 1987: a Worldwatch Institute report on progress toward a sustainable society.* New York: W.W. Norton, 268 pp.

Bruckner, D.J.R.,Chwast, S. & Heller, S. 1984. *Art agains war: 400 years of protest in art.* New York : Abbeville press, 128 pp.

Callicott, J.B. 1982, Traditional American Indian and Western European attitudes toward nature: an overview. *Environmental Ethics,* Athens, Georgia, 4: 293-318.

Capitanchik, D. & Eichenberg, R.C. 1983. *Defence and public opinion.* London: Royal Institute of International Affairs, Chatham House Paper No. 20, 98 pp.

Carneiro, R. L. 1970. Theory of the origin of the state. *Science,* Washington, 169 : 733-738.

Carson, R. 1962. *Silent spring.* Boston: Houghton Mifflin, 304 pp.

Catton, W. R., Jr. 1980. *Overshoot :* the ecological basis of revolutionary change. Urbana: University of Illinois Press. 298 pp.

Cohen, R. 1984. Warfare and state formation: wars make states and states make wars. In : Ferguson, R. B. (ed.). *Warfare, culture, and environment.* Orlando, Florida: Academic Press, 417 pp. : pp. 329-358.

Conze, E. (ed.). 1959. *Buddhist scriptures* [translated from the Sanskrit & Pali by E. Conze]. Harmondsworth, UK: Penguin. 250 pp.

Cracraft, J. 1986. Unofficial thaw in the cold war. *Bulletin of the Atomic Scientists,* Chicago, 42(5) : 20-22.

Cronon, W. 1983. *Changes in the land: Indians, colonists, and the ecology of New England.* New York: Hill & Wang, 241 pp.

Divale, W. T. & Harris, M. 1976. Population, warfare, and the male supremacist complex. *American Anthropologist,* Washington, 78 : 521 -538. [Cf. *ibid.* 80 : 110-118, 279-386. 665-673; 81 : 349-351].

Dumbar, R. 1985. Sociobiology of war. *Medicine & War,* London, 1 :201-208.

Dunlap, R.E. 1987, Polls, pollution, and politics revisited : public opinion on the environment in the Reagan era. *Environment,* Washington, 29(6) : 6-11, 32-37.

Easlea, B. 1983. *Fathering the unthinkable: masculinity, scientists and the nuclear arms race.* London : Pluto Press, 230 pp.

Eckhardt, W. 1975. Primitive militarism. *Journal of Peace Research,* Oslo, 12:55-62.

Eckhardt, W. 1982. Atrocities, civilizations, and savages: ways to avoid a nuclear holocaust. *Bulletin of Peace Proposals, Oslo.* 13: 343-349.

Eckhardt, W. 1987. Task of peace education : a value theory of peace ducation. *Bulletin of Peace Proposals,* Oslo, 18:63-71.

Ehrenfeld, D. 1978. *Arrogance of humanism.* New York: Oxford University Press, 286 pp.

Ehrlich, P. & Ehrlich, A. 1981. *Extinction: the causes and consequences of the disappearance of species.* New York: Random House, 306 pp.

Eisler, R. & Loye, D. 1983. «Failure» of liberalism : a reassessment of ideology from a new feminine-masculine perspective. *Political Psychology,* New Brunswick, New Jersey, 4 : 375-391.

Eister, R. & Loye, D. 1986. peace and feminist theory: new directions. *Bulletin of Peace Proposals,* Oslo, 17 : 95-99.

Emmelin, L. 1977. Environmental education at university level. *Ambio,* Stockholm. 6: 201-209.

Ferencz, B. B. 1985. *Common sense guide to world peace.* London: Oceana Publications, 112 pp.

Ferguson, J. 1977. *War and peace in the worlds'religions.* London: Sheldon Press, 166 pp.

Ferrill, A. 1985. *Origins of war: from the Stone Age to Alexander the Great.* New York: Thames 5 Hudson, 240 pp.

Friedman, S.M. 1983. Environmental reporting : problem child of the media. *Environment,* Washington, 25(10) : 24-29.

Fromm, E. 1973. *Anatomy of human destructivess.* New York: Holt, Rinehart & Winston, 521 pp.

Galtung, J. 1981. Social cosmology and the concept of peace. *Journal of Peace Research,* Oslo, 18: 183-199.

Garcia, C. 1981. Androgyny and peace education. *Bulletin of Peace Proposals,* Oslo, 12:163-171.

Glacken, C. J. 1967. *Traces on the Rhodian shore : nature* and culture in Western thought from ancient times to the end of the eighteenth century. Berkeley : University of California Press, 763 pp.

Goldblat, J. 1986. Role of the United Nations in arms control: an assessment. *Arms Control,* London. 7 : 115-132.

Harcourt, A. H., Pennington, H. & Weber, A.W. 1986. Public attitudes to wildlife and conservation in the Third World. *Oryx,* London, 20 : 152-154.

Hardin, G. 1968. Tragedy of the commons. *Science,* Washington, 162:1243-1248.

Holdgate, M. W., Kassas, M. & White, G.F. (Eds). 1982. *World environment 1972-1982: a report by the United Nations Environment Programme.* Dublin: Tycooly International, 637 pp.

Huddle, N. & Reich, M. 1975, *Island of dreams : environmental crisis in Japan.* New York: Autumn Press, 351 pp.

Humphrey, J. 1985. Development of the physicians' peace movements. *Medicine & War,* London, 1 :87-99.

Ikeda, D. 1985. New waves of peace toward the 21st century: Buddhist approaches to peace. *Bulletin of Peace Proposals* Oslo 16:185-195.

Janis, I. L. 1982. *Groupthink: psychological studies of policy decisions and fiascoes.* 2nd edn. Boston : Houghton Mifflin, 361 pp.

Kaltefleiter, W. & Pfaltzgraff, R. L. (eds). 1985. *Peace movements in Europe & the United States,* London: Croom Helm, 211 pp.

Keegan, J. & Darracott, J. 1981. *Nature of war.* New York: Holt, Rinehart & Winston, 276 pp.

Kelley, D. R., Stunkel, K. R. & Wescott, R. R. 1976. *Economic superpowers and the environment: the United States, the Soviet Union, and Japan.* San Francisco: W.H. Freeman, 335 pp.

Kemp, G. 1987, Biology of non-violence. *Medicine & War,* London 3 • 181-190.

Kim, S. S. 1935. US Catholic bishops and the nuclear crisis. *Journal of Peace Research,* Oslo, 22:321-333.

Kramer, B. M., Kalick, S. M. & Milbrun, M. A. 1983. Attitudes toward nuclear weapons and nuclear war: 1945-1982. *Journal of Social Issues,* New York, 39(1) : 7-24.

Kubrick, S. 1964. *Dr. Strangelove : or, how I learned to stop worrying and love the bomb,* Hollywood, Calif. : Columbia, 35 mm B & W film, 93 min.

Leonard, H, J. & Morell, D. 1981. Emergence of environmental concern in developing countries : a political perspective. *Stanford Journal of International Law,* Stanford, Calif., 17: 281-313.

Leopold, A. 1949. *Sand county almanac: and sketches here and there.* New York: Oxford University Press, 226 pp.

Levine, L. D. (ed.). 1975. *Man in nature : historical perspectives on man in his environment.* Toronto : Royal Ontario Museum, 133 pp.

Lutts, R. H. 1985. Chemical fallout: Rachel Carson's *Silent Spring,* radioactive fallout, and the environmental movement. *Environmental Review,* Denver, 9:210-225.

Macbride, S. 1980. Mass media's role in the search for disarmament.
Bulletin of Peace Proposals, Oslo, 11 : 229-233.

Manoff, R. K. 1984. The media: nuclear secrecy vs. democracy. *Bulletin of the Atomic Scientists,* Chicago. 40(1) :26-29.

Markusen, E. & Harris, J. B. 1984. Role of education in preventing nuclear war. *Harvard Educational Review,* Cambridge, Mass., 54 : 282-303.

Marsh, G. P. 1864. *Man and nature : or, physical geography as modified by human action.* Cambridge, Mass.: Harvard University Press, 472 pp., 1965.

Mathews, J.T. *et al.* 1986. *World resources 1986: a report by the World Resources Institute and the International Institute for Environment and Development.* New York: Basic Books, 353 pp.

McAllister, P. (ed.). 1982. *Reweaving the web of life : feminism and nonviolence.* Philadelphia: New Society Publishers, 440 pp.

Merchant, C. 1980. *Death of nature : women, ecology, and the scientific revolution.* San Francisco: Harper & Row, 348 pp.

Mitchell, R. C. 1980. *Public opinion on environmental issues : results of a national public opinion survey.* Washington : US Council on Environmental Quality, 49 pp.

Mitchell, R. C. 1984. Public opinion and environmental politics in the 1970s and 1980. In: Vig, N.J. & Kraft, M. E. (eds). *Environmental policy in the 1980s: Reagan's new agenda.* Washington: CQ Press, 377 pp.: pp. 51-74.

National Conference of Catholic Bishops. 1983. *Challenge of peace : God's promise and our response.* Washington : US Catholic Conference, Publication No. 863, 103 pp.

Oudsten, E. den. 1985. Public opinion. *SIPRI Yearbook,* London, 1985:31-38.

Passmore, J. 1980. *Man's responsibility for nature : ecological problems and Western traditions. 2nd* edn. London : Duckworth, 227 pp.

Pittock, A.B. *et al.* 1985-86. *Environmental consequences of nuclear war, I. Physical and atmospheric effects. II. Ecological and agricultural effects.* Chichester, UK : John Wiley & Sons, 2 vols (359+523 pp.).

Reardon, B. A. 1985. *Sexism and the war system.* New York : Teachers College Press, 111 pp.

Rogers, E. S. 1975. The Indian and the European : two views of the land. In : Levine, L. D. (ed.). *Man in nature : historical perspectives on man in his environment.* Toronto : Royal Ontario Museum, 133 pp.: pp. 90-109.

Roper, M. K. 1975. Evidence of warfare in the Near East from 10,000-4,300 B.C. In: Nettleship, M. A. *et al.* (eds). *War, its causes and correlates. The* Hague: Mouton, 813 pp.: pp. 299-343.

Russett, B. 1984. Statement of the American Catholic bishops: a moral-theological critique of nuclear deterrence. *Bulletin of Peace Proposals,* Oslo, 15: 197-204.

Salomon, K. 1986. The peace movement: an anti-establishment movement. *Journal of Peace Research,* Oslo, 23: 115-127.

Schachter, O. 1977. *Sharing the world's resources.* New York: Columbia University Press, 172 pp.

Schoenfeld, A. C. 1980. Newspersons and the environment today. *Journalism Quarterly,* Athens, Ohio, 57 : 456-462.

Sellers, L. & Jones, D. W., Jr. 1973. Environment and the mass media. *Journal of Environmental Education,* Washington, 5(1):51-57.

Silva, A. de, Simson, O, v. & Hinks, R. 1963. *Man through is art. I. War and peace.* London: Educational Productions, 64 pp. + 20 pl.

Stone, C.D, 1972. Should trees have standing? toward legal rights for natural objects. *Southern California Law Review, Los* Angeles. 45: 450-510. Also: Los Altos, Calif.: William Kaufmann, 103 pp., 1974.

Suid, L. H. 1985-86. Hollywood and the bomb. *Air University Review,* Maxwell Air Force Bade, Alabama, 37(2):103-109.

Thomas, K. 1983. *Man and the natural world : changing attitudes in England 1500-1880.* London: Allen Lane, 425 pp.

Times, N.Y. 1946. Atomic education urged by Einstein. *New York Times* 1946 (25 May): 13.

Toynbee, A. 1972. Religious background of the present environmental crisis : a viewpoint. *International Journal of Environmental Studies,* London, 3: 141-146; 157-158.

Tuan, Y.-F. 1968. Discrepancies between environmental attitude and behaviour : examples from Europe and China. *Canadian Geographer,* Montreal, 12:176-191.

Tuchman, B. W. 1984. *March of folly: from Troy to Vietnam.* New York: Alfred A. Knopf, 447 pp. + 24 pl.

UNESCO 1985. UNESCO prize 1984 for peace education. Paris: UNESCO, 60 pp.

Westing, A. H. 1980. *Warfare in a fragile world: military impact on the human environment.* London: Taylor & Francis, 249 pp. [a SIPRI book].

Westing, A. H. 1981a. A note on how many humans that have ever lived. *Bio Science,* Washington, 31 : 523-524-32 : 6.

Westing, A. H. 1981b. Environmental impact of conventional warfare. In: Barnaby, W. (ed.). *War and environment.* Stockholm: Royal Ministry of Agriculture, Environmental Advisory Council, 154 pp.: pp. 58-72.

Westing, A. H. 1981 c. How much of this land is our land? *Environment,* Washington, 23(6) :5,44-45.

Westing, A. H. 1981d. World in balance. *Environmental Conservation,* Geneva, 8:177-183.

Westing, A.H. 1982. War as a human endeavor: the high-fatality wars of the twentieth century. *Journal of Peace Research* Oslo 19:261-270.

Westing, A. H. 1984. The arms race versus environmental and human welfare. In: *Ponències.* Sant Cugat del Vallès, Spain: Universitat International de la Pau, 248 pp.: pp. 173-177.

Westing, A. H. (ed.). *Global resources and internatonal conflict: environmental factors in strategic policy and action.* Oxford : Oxford University Press, 280 pp. [a SIPRI book].

Westing, A. H. 1988. Our place in nature : reflections on the carrying capacity for humans. *International Conference on Environmental Future,* Edinburgh, 3: forthcoming.

White, C.D. et al. (United Methodist Council of Bishops). 1986. *In defense of creation: the nuclear crisis and a just peace.* Nashville, Tennessee: Graded Press, 96 pp.

White, L., Jr. 1967. Historical roots of our écologie crisis. *Science,* Washington 155: 1203-1207.

Wittner, L. S. 1984. *Rebels against war: the American peace movement, 1933-1983* 2nd edn. Philadelphia: Temple University Press, 364 pp.

Yankelovich, D. & Doble, J. 1984-85. Public mood: nuclear weapons and the U.S.S.R. *Foreign Affairs,* New York, 63 : 33-46.

Zaidi, I. H. 1981. On the ethics of man's interaction with the environment : an Islamic approach. *Environmental Ethics,* Athens, Georgia, 3:35-47.

Zimmerman, M. E. 1987. Feminism, deep ecology, and environmental ethics. *Environmental Ethics,* Athens, Georegia, 9:21-44.

Cultural norms in relation to war and the environment: select bibliography

Aichinger, P. 1975. *American soldier in fiction, 1880-1963: a history of attitudes toward warfare and the military establisment.* Ames : Lowa State University Press, 143 pp.

Beker, A. 1985. *Disarmement without order: the politics of disarmanent at the United Nations. Westport,* Connecticut: Greenwood Press, 212 pp.

Best, G. 1980. *Humanity in warfare: the modern history of the international law of armed conflicts.* London : Weidenfeld & Nicolson, 400 pp.

Boyer, P. 1985. *By the bomb's early light: American thought and culture at the dawn of the atomic age.* New York: Pantheon Books, 411 pp.

Brians, P. 1987. *Nuclear holocausts : atomic war in fiction, 1895-1984.* Kent, Ohio: Kent State University Press, 398 pp.

Brock-Utne, B. 1985. *Educating for peace: a feminist perspective.* New York: Pergamon Press, 175 pp.

Caldwell, L. K. 1984. *International environmental policy: emergence and dimensions.* Durham, N. Carolina: Duke University Press, 368 pp.

Cohen, A. & Lee, S. (eds). 1986. *Nuclear weapons and the future of humanity.* Totowa, New Jersey: Rowman & Allanheld, 508 pp.

Dowling, D. 1987. *Fictions of nuclear disaster.* Iowa City: University of Iowa Press, 245 pp.

Easlea, B. 1983. *Fathering the unthinkable: masculinity, scientists and the nuclear arms race.* London : Pluto Press, 230 pp.

Falk, R.A. 1983. *End of world order: essays on normative international relations.* New York: Homes & Meier, 358 pp.

Ferguson, J. (ed.). 1972. *War and the creative arts: an anthology.* London: Macmillan, 380 pp. + 57 pl.

Ferguson, J. 1977. *War and peace in the world's religions.* London: Sheldon Press, 166 pp.

Ferguson, R.B. (ed.). 1984. *Warfare, culture, and environment,* Orlando, Florida: Academic Press, 417 pp.

Frei, D. 1984. *Assumptions and perceptions in disarmament.* New York : UN Document No. UNIDIR/84/10, 321 pp.

Frolov, I. 1982. *Global problems and the future of mankind.* Moscow: Progress Publishers, 311 pp.

Glacken, C.J. 1967, *Traces on the Rhodian shore : nature and culture in Western thought from ancien times to the end of the eighteenth century.* Berkeley: University of California Press, 763 pp.

Harries, M. & Harries, S. 1983. *War artists: British official war art of the twentieth century,* London: Michael Joseph, 310 pp. + 32 pl.

Held, V. 1984. *Rights and goods: justifying social action.* New York: Free Press, 327 pp.

Held, V., Morgenbesser, S. & Nagel, T. (ed). 1974. *Philosophy, morality, and international affairs.* New York : Oxford University Press, 338 pp.

Keegan, J. & Darracott, J. 1981. *Nature of war.* New York: Holt, Rinehart & Winston, 276 pp.

Khozin, G. 1979. *The biosphere and politics.* Moscow: Progress Publishers, 229 pp.

Koistinen, P.A.C. 1980. *Military-industrial complex: a historical perspective.* New York: Praeger, 170 pp.

Lifton, R. J. & Falk, R. 1982. *Indefensible weapons: the political and psychological case agains nuclearism.* New York: Basic Books, 301 pp.

Marsh, R. J. 1986. *Soviet fiction since Stalin: science, politics and literature.* London: Croom Helm, 338 pp.

McNeill, W. H. 1982. *Pursuit of power: technology, armed force, and society since A.D.* 1000-Chicago : Unitersity of Chicago Press, 405 pp.

Merchant, C. 1980. *Death of nature : women, ecology, and the scientific revolution.* San Francisco: Harper & Row, 348 pp.

Passmore, J. 1980. *Man's responsibility for nature: ecological problems and Western traditions.* 2nd edn. London: Duckworth, 227 pp.

Schachter, O. 1977. *Sharring the world's resources.* New York : Columbia University Press, 172 pp.

Smith, M.J.,Jr. 1980. *War story guide: an annotated bibliography of military fiction.* Metuchen, New Jersey: Scarecrow Press, 437 pp.

Stallworthy, J. (ed.). 1984. *Oxford book of war poetry.* Oxford University Press, 358 pp.

Stone, C.D. 1972. Should tress have standing ? : toward legal rights for natural objects. *Southern California Law Review,* Los Angeles, 45: 450-501. Also: Los Altos, Calif.: William Kaufmann, 103 pp., 1974.

STONE, C.D. 1985. *Should trees have standing ? revisited: how far will law and morals reach ?: a pluralist perspective. Southern California Law Review,* Los Angeles. 59 : 1-154.

Stone, C.D. 1987. *Earth and other ethics: the case for moral pluralism.* New York: Harper & Row, 320 pp.

Vagts, A. 1959. *History of militarism : civilian and military,* rev. ed. New York: Meridian Books, 542 pp. + 8 pl.

Westing, A. H. (ed.). 1986. *Global resources and international conflict: environmental factors in strategic policy and action.* Oxford : Oxford University Press, 280 pp. [a SIPRI book].

Wittner, L.S. 1984. *Rebels against war: the American peace movement, 1933-1983.* 2nd ed. Philadelphia: Temple University Press, 364 pp.

Zars, B. Wilson, B. & Phillips, A. (eds). 1985. *Education and the threat of nuclear war.* Cambridge, Mass. : Harvard Educational Review, 166 pp.

The *following text is the second part of a discussion paper dealing with questions related to voluntary work in a ECC context. The Secretary General of Volonteurope describes the development of voluntary action and the way it is perceived by the community and by consumers, professionals, organizations and government in various European countries.*

Which Work Ought to be paid ?

(Part II)

The interest of employment and unions

Voluntary work has been a very great force for job creation in the service sector.

Developments in society proceed at a certain pace, needs and problems arise, professional provisions react, but this comes so much later, that a gap exists and volunteers will fill it and provide the service, later to be recognised and often turned into a pain provision.

Children's playgrounds for 2-4 year olds: the government did not want to accept responsibility for it, the Children's Stamp Foundation subsidized it and parents started it, and now over 10,000 paid people and 40,000 volunteers are working in that field, even creating new schools for it. This was less than ten years ago. (The Netherlands).

in Belgium volunteers first started a service to bring hot meals to housebound people (Eten op Wielen - in England, Meals on Wheels, in The Netherlands, Tafeltje dek je). After a while, it was taken over by local government and done by paid people. (In England and The Netherlands it is still voluntary work).

Again, in Belgium, initiated by volunteers, a centre was started for parents whose children were in hospital and who did not have the money for a hotel to be near them. This service has been taken over by the hospital. The volunteers move on : they start another centre at the next hospital until that is taken over, and so on.

Toy libraries, where one borrows toys, have been started in many places by volunteers: at some these are changed into a professional service, in others they are still run by volunteers.

There is a long standing discussion going on about whether this procedure is the right way round. Some people say: if something is necessary one has to convince government of this, and they are responsible for making that provision. Ideally this might be so, but more often than not governments are not very willing to make yet another provision. They argue: we pay a lot for existing provisions, let them widen their field, or improve their quality of working and fill this gap.

When volunteers build something new, once it is clear that there really is a need for the new provision, government cannot lag behind. This procedure is the concept most strongly stressed by the Belgian platforms, but it happens everywhere.

As we have seen, not all volunteer associations want this. Some take on new work in new fields, but they want money to make it possible, they do not want it to be turned into a professional service. (Pubblica Assistenza in Italy).

At the moment, this job creating capacity of volunteers is less of course, as there is less public money to spend. But it is still continuing, even in the countries with large cuts in public spending.

The opposite trend is a great worry at the moment : paid posts being filled by volunteers. The crudest way is for paid workers to be made redundant, and then with benefit but without a salary, to be asked back to do the same work as volunteers.

Unions, professionals and others are so concerned about this possibility that the prevalence of incidents of this kind is strongly exaggerated. But to get the facts straight, statistics are necessary, showing first not only how often paid work is being replaced by unpaid work, but secondly how often volunteers who are doing the work satisfactorily are replaced by paid staff and sent home.

This worry is something everybody agrees on, except maybe governments who look for ways to save money and preserve services. Volunteers do not want to be misused in work which should be done by paid workers; professional unions want to preserve jobs.

The most blatant incidents incurring protests from volunteer bureaux(1), volunteer associations (sometimes called Platforms in The Netherlands and Belgium), etc. include advertisements for volunteers which ask them to work full time and have professional certificates. (Libraries, schools, information centres).

The effect on volunteers' employment is something which is seldom taken into consideration: the pleasing aspect of volunteer work is the low threshold; everybody who is suitable can participate; no qualifications like certificates are necessary. When interesting work is being offered to the public, and when so many unemployed professionals are around, the latter will get the volunteer post and not the suitable volunteer. The quality of available volunteer posts is being diminished.

With industrial relations problems (discussion about labour conditions, wages, etc.) there is concern that volunteers will break strikes. This concerns particularly the health sector.

* General Secretary, Volonteurope (Committee to Encourage Unpaid Voluntary Action in Countries of the European Community), This study, first apperared in *Volonteurope Journal,* n° 5, n,d,

In Great Britain, agreements have been made by The Volunteer Centre, voluntary organizations and trade unions that volunteers will not do the jobs of paid workers in case of strikes. There are also agreements with unions that patients wilt not suffer. In Milan, a strike in the hospitals was very cruel indeed. A volunteer from Publica Assistenza said that she was in complete sympathy with the strike as the workers got no proper wages at all, but that the way it was conducted was just terrible : bleeding patients were put on the floor and the nurses went out. In that case, the volunteers did help to prevent suffering.

This is always the weak spot for volunteers : when they see somebody in need the prevailing argument will always call for help. But, apart from this extreme case, volunteers do not want to be used to break strikes.

Trade unions differ greatly from one country to another, but the prevailing aim will always be to preserve employment. With volunteers, there is no argument, they do not want to take anybody's paid post. (2)

But lately, with changes in policy, a great need has been felt for clear boundaries between what should be paid, and what should be unpaid, work. Alas, these could not be defined.

The same work can be paid in one case and unpaid in another. A school janitor in a city occupies a paid post, but in a village volunteers (parents) do that kind of work for the school. Differences between city and village and, even more, between one country and another are great.

At the two extremes there is agreement about which work should be paid or not. On the one hand, work which needs a long education (doctors) is paid. Work which is unpaid includes friendly visiting, collecting money, membership of boards. In between is a large area where work is being done by both volunteers and paid people : youth work, information giving, infant care, helping. An attempt has been made to differentiate as follows: in youth service the time-consuming, one-to-one support is given by volunteers; the intensive, technically complicated work is done by professionals. But often the matter of employment is a more prevailing argument than the content of the task.

Another way of approaching this problem is to look at the organization in wich the job is being done. One could say that volunteer associations, and everything that is being done by them, can be accepted as volunteer work - as long as the paid supporter is not threatened ! This is agreed policy in Belgium.

Yet another approach is through the legal conditions of the work. The Federation of Unions in The Netherlands (FNV) tried to approach it in that way. In the constitution « labour » (paid work) is defined. It has at least the following elements : a hierarchy (somebody giving orders), one must not send a substitute to do a job, payment. When this situation exists, all elements are regulated: a worker does not only take orders, he/she has something to say. The wage must be at least the minimum wage etc.

This does not help to differentiate between voluntary work and paid work, as the legal boundaries were not meant to be used this way, and are not relevant: in paid work, a team can decide what to do, as in a volunteer project. Volunteer work is not mentioned in the constitution, so there is no legal base for it anyway.

The Dutch Platform held discussions with the unions, after they disqualified volunteers by saying: «One cannot count on volunteers». The Dutch Platform pointed out the place volunteers already have, what they do, and urged the adoption of a realistic policy which should not defend paid work by disqualifying volunteer work.

In Sweden, when a need is defined for certain care for the elderly, the unions decide what kind of work is involved and what level of payment is required, and then the work is apportioned. That way work, which in all other European countries is volunteer work, for example being hostess in a day centre where old people come to play cards, is paid work. The Red Cross only lately has returned to hospitals with volunteer activities and self-help groups for women with mastectomies recently got recognition. But it is not official policy.

Yet another approach is to have committees testing every case. A Dutch example : a new law, not yet passed but tried out, called the WOAU (Law on unpaid work for people with unemployment benefit), requires regional committees to give permission to unemployed people, who get a benefit, to do volunteer work. They test the post, to make sure that unfair competition does not occur and paid work is not eliminated. These committees comprise unions, benefit agencies, employers, and after lobbying of the Platform, also volunteers. But everybody has a veto, so if only one of the committee does not like something, it can be stopped. Positive aspects : the regional level is better then national, people are more inclined to find solutions and identify themselves with the unemployed. It is better than nothing and it is a compromise to make at least something possible. Negative aspects: the punishment is inflicted on the wrong person. The possible misuse is made by the employers, the organizations, not the unemployed, as he/she is not going to earn anything. The punishment however, when not obedient, is taking away the benefit of the individual, the unemployed person. This is wrong. Unemployed people might be made redundant twice: first from paid then from unpaid work. It does not prevent the post from being filled, as a volunteer without benefit (elderly, housewife, youth) can do it without difficulty.

Volunteer work in the profit sector as a step up to paid work is another problem. Printing, odd jobs, recycling projects can make a profit by using unpaid labour, which causes unfair competition. In some countries a certain term is allowed to try and make a new entreprise profitable keeping benefit at the same time.

Among all these discussions it must not be forgotten that some European countries have no unemployment benefit at all : people just have to rely on the family. (Mediterranean countries).

With the present rate of unemployment, the whole concept of work is being reconsidered. A society cannot make such a large part of its citizens second-rate and call them unproductive. Some volunteer movements are explicitly working on this aspect: «Union Against Working Ethos», « Action Unpaid Work », etc. The changes they want are very fundamental: to abandon all links between work and pay, everybody to have a basic income, and everybody to be a volunteer.

It would already make a great difference if social security payements were not linked to wages, but to some capital factor (VAT, investments, etc.). As long as paid people «pay» for the benefits of the unpaid, the relationship between the two groups will remain bad.

And last but not least on this subject : the right to have a job is a basic right, even if it cannot be realized. But the right to volunteer work is just as basic. Volunteers often forget this and make room the moment a paid worker claims their job.

But if they have great satisfaction from it, they have a right to the job. They are at the moment not protected. A union for volunteers has been tried here and there, but so far not much interest has been shown. People, who sometimes in their paid job stand by their rights, just do not like to do so for volunteer work. They want to carry out the activity and not bother about rights. Maybe this will change?

In the personal life of people one sees combinations of paid work, volunteer work in spare time and household work. All is fine when all three are equally shared in accordance with people's choices.

The point of view of professional organizations

Professional institutes are under pressure to reduce their budgets. If volunteer organizations claim to do jobs which seem to be similar, the danger is that the government will say: «If you need more people, why not use unpaid workers, see such and such a volunteer service». This happened in neighbourhood care and the home help service.

This was handled by carefully describing what volunteers and professionals are actually doing and it appeared that they do not do the same job. On the local level this has been worked out between them, but national bodies want to take a firm stand and call volunteers competitors in the same field.

Another approach to the same problem is that the same kind of professional home help organizations take control of the situation by themselves attracting volunteers for certain additional jobs. They sometimes even claim the whole co-ordination of care at home, including the long established volunteer groups who do the same.

Co-operation, not absorption, with these groups on an equal basis is the earnest wish of volunteers.

Large professional organizations, like hospitals, have different approaches to the matter of unpaid volunteers. In general, they would rather pay everybody to simplify the management. But, because it has advantages for the services to be given, sometimes volunteers are admitted. This can be handled as follows. 1, The professional organization makes a deal with a volunteer association which will usually be a traditional volunteer group (for example the red Cross) or, 2, the professional organizes the volunteers directly and appoints a paid worker to do this. If both models exist in the same organization, together with self-help groups, trouble can be expected if this is not very carefully carried out.

Sometimes new democratic rules apply which enable clients, paid staff and volunteers to be included on the board. First you have to find volunteers who are agreeable? The management usually does not encourage this.

In the interests of management sometimes the distinction is made as little as possible between paid and unpaid by creating a similar working relationship and making a kind of « contract » for the volunteers, to ensure their co-operation. This contract idea is not very productive. It has no legal basis, so it cannot help either party in case of differences, and it wants to ensure things in the wrong way. Volunteers come because they engage themselves, they will not let a patient down, or the other people in the group (self employment and group control, as mentioned before). It soon makes volunteers feel exploited when they have to sign a contract like that.

Another danger for the professional organization is when, by inviting volunteers, the paid staff feels very threatened.

A better approach is to make a list of things both parties agree on: rights and duties on both sides, but not too minutely defined. Dependability of volunteers is better ensured by good support and working conditions. Demands can certainly be made, but in a general agreement inside a project with all members.

The « concept of care » of the organization is very important for its view on volunteers. An institution with a medical conception, treating old people with the aim of rehabilitating them and returning them home, will have the atmosphere of a hospital, and volunteers will have a definitely additional position, with clear task divisions. When the concept is to make things for the inmates as pleasant as possible, as it will be the last place where they will live, a more social approach is made, more like a house, a home Volunteers then become an integral part of the life in these homes, people nearly forgetting who is paid and who is not, as in the English hospices (placesfor terminal care). One can say : the more emphasis on the medical, the less room for volunteers; the more emphasis on recreation, education, social rehabilitation, etc., the more room for volunteers. The same applies to prisons: where they are considered mainly for punishment and revenge, no volunteers are admitted. Where they provide re-education, discussion groups run by volunteers are sometimes allowed, helping prisoners to keep in touch with the outside world.

Volunteers are sometimes selected to fit the organization, not the client. A social worker interviewed volunteers as if they were professionals. The most important point seemed to be, to fit in the organization. But a builder, very suitable for befriending a client also in the building trade, was rejected. « He did not fit in the team ». What hobbies a person has is sometimes more important than verbal capabilities.

The danger of overinstitutionalization

In order to stop the undesirable aspects of over-institutionalizing one would have to examine all the elements one by one, to find out how one can hold on to and create a sound organization. Only very seldom does someone try to tackle this problem, everybody is so busy with the work itself. Perhaps it is possible to aid one another; for the elements at stake will probably always be the same.

The organizational elements to be considered very carefully for their side effects are as follows :

- getting legal status
- getting a subsidy and becoming publicly accountable
- getting paid staff
- deciding on the tasks of paid staff (support or executive)
- deciding how much regulation is required in the organization
- setting criteria for clients
- agreeing new collective bodies
- making long-term planning
- mergers.

In sound situations it is a question of navigating between two dangers. Either there is «too much » (Illich), or «too little » organization with disintegration and degeneration. Sometimes there should be less, and sometimes more, organization. Steps should not be taken lightly for there is no way back.

Professionalizing is always dangerous because the danger of overorganization will always be lurking.

On the other hand, if you do not have somebody with enough time and qualities to start something, no development is possible.

Appointing a paid worker was sometime a set-back. When a volunteer project was going smoothly, the authorities looked upon it with a sympathetic eye and allowed a professional worker. The result was that the volunteers felt themselves excluded. The pleasant work was taken from them. It was plain they were thought not good enough.

Professionals are often not trained for this situation. They learn to help, but not to support others to do so, and certainly not support volunteers when they work differently, without systematic plans etc.

Sometimes the introduction of a professional means a different style of working: less improvising, more regulation of details. Again, it takes a lot from both sides not to get frustrated, as one party (the professional) is supposed to be right as he/she has been trained for the job.

A volunteer remarked : « We just sit and wait. That project leader will no doubt move on after three years». Volunteers sometimes walked out. Afterwards you think: «Why did let it happen ? »

Examples : A creativity centre in which the teaching was taken over by paid workers - the volunteers who preceded them had even been fully qualified; or service centres where a new project leader had managed to reduce the large number of existing volunteer activities to nil in three months ! Errors made:

- remuneration went to tasks already performed satisfactorily and not to the gaps in provision already identified
- take over instead of support
- new norms, new styles
- they had no understanding of the relativity of professional schooling
- employed a project leader simply because they were entitled to not because they needed one.
- employing a professional social worker in cases where a secretary would have sufficed

Volunteers must be more aware of their rights to their work, although they are not paid to perform it. Moral rights are equal to legal rights.

On the other hand «under» organization is the other drawback. If you want to achieve something, you have to get organized, there is no alternative to that. Having a regular co-ordinator can make all the difference. But the aim of the project must prevail. In this way professional workers have a servicing function, something they were not motivated for when they chose their profession (for the rest the practice of the work must never be totally separated from co-ordination, for then the professional worker gets estranged in his turn). Before becoming professional workers, they should have had some experience as volunteers(3).

«When one starts paying people, the dangers of institutionalization and bureaucratization lurk. The institution itself will absorb more and more energy. Long (and paid) discussions on development of expertise, democratization, co-operation, voting procedures, etc. take more time. You are kept very busy indeed, but not with the position of your clients...» (Battered Women's Report).

If one does not want professionals to take over all of the welfare work, one should enlarge the function of the consultant. Many volunteer associations, for instance in educational work for the protection of nature, youth work, women's work, the execution thereof rests in the hands of volunteers, the only paid people are consultants. The association has sufficient grip on the internal consultant not to let him/her take over. But the supporting functions are badly needed. One paid worker supports large numbers of active volunteers.

The subsidy regulations which promote unnecessary institutionalizing must be removed. It ought to be possible for small projects not to have to obtain legal status, for in that case they are harder to dissolve should this be necessary. When an initiative has worked well for a number of years, the people concerned can cease work even though it has been very successful indeed. As soon as an official foundation or charity is formed, this will not happen. Then it can go on simulating life. Dissolution can be a creative act. In Holland we now have a limited legal status.

Forced mergers with other organizations can be a bad thing seen from the problem at stake. By mergers you will be forced into a further institutionalizing stage. The benefit of the authorities who like a general view precedes here the interest of the work.

New regional bodies for mental help are being created. Some work well, some not. If not, clients have no say at all. They cannot chose the treatment they want, they have to wait for team decisions or waiting lists. The larger and more complex the provision, the less power for clients. Large amalgamations of professional groups with different disciplines permit discussions on task divisions (between social workers and psychologists etc.). Open, flexible functioning must be expressly demanded, otherwise it is prevented by the structure itself.

An example from Belgium: some schools want to preserve high standards of education. This means that many pupils are expelled. Then « Homework Projects » are created to help those children. These schools try to find a balance between being open and flexible and having a good and thorough programme — between over- and under-organization.

We must find ways of assembling the signals about organizational functions and dysfunctions of those executing the work and of the consumers. This may concern volunteers or other executives in the lowest levels of the organization. If this could be satisfactorily achieved, you would get a wealth of valuable signals to adjust the way the work is organized.

Beware of new welfare work. The offer creates the demand. There are never enough social workers, mother's helps, etc. New work forms like volunteer initiatives and self-organization become more important — so types 4, 5 and 6 give a greater guarantee of nearness, they are less estranging, whereas improper interests - those of the new institutions and their paid staff - get less chance to hide what is really necessary for the people one works for or with, the consumer. Small is indeed beautiful(4).

The point of view of government and ministries

The following observations depend on administration as such, less on different political preferences. The latter will be described in the next chapter(10).

Public service tried in the past to guarantee the quality of provisions by introducing training and education for workers in this field and set criteria for examinations and certificates.

The result was indeed an improvement of quality, but also the negative side-effects of professionalization occurred. The government became the (unintentional) protector of the profession.

Having unpaid people around as volunteers in the same services weakens some presumptions. And, very often, the first reaction to introducing volunteers is: «But who will

This policy was not very productive. Professionals were in some cases introduced, not because of a need coming from the kind of work, but from the need of government to be accountable for public spending. «Volunteers can be excellent, but, as they have no certificate, this quality cannot be guaranteed, »

Some departments have taken opposite positions. They subsidized volunteer work because of its qualities.

To avoid all misunderstanding : availability of training, for volunteers, is a very good thing.

Another development: in the years behind us, a lot of new initiatives got a chance and could develop. The result was a pluralistic, colourful picture, difficult to control by government.

Lately, in many countries, the government has taken initiatives to bring organizations, both voluntary and statutory, together for more efficient operation.

Voluntary organizations warned that efficiency is not the same as effectiveness : for the latter one needs to be close to the client, speak the same (different) « languages », have different « nest smells ». To be effective, it might be better to have many services, to give a client a chance to chose.

But larger scale provisions came into being. It had both positive and negative effects. Bureaucratization was increasing and volunteer organizations nearly disappeared from view.

In some countries national Platforms for voluntary work came into being: bodies in which volunteer organizations give the point of view of the volunteer's work a voice. These Platforms consist mainly of national volunteer associations and other organizations working with volunteers, meeting in an assembly, and a small number of staff to support the initiatives of the Platforms. Only in Great Britain has the Platform a large number of staff. In other countries the government has not given the Platforms much working capacity. They act however as a counterpart to government policy towards volunteer issues.

Initiatives undertaken by some Platforms:

- recognition of equal value of volunteers and professionals
- recognition of the value of volunteer work by co-operation on an equal basis of volunteer organizations and professional organizations
- facilities for volunteer work controlled by the volunteer organizations
- a budget for training to spend by the volunteer association
- no misuse of volunteers (e.g. to save money)
- a right for everybody to do volunteer work.

Decentralization is another development which has had an effect on volunteer organizations. Decentralization is the policy in all European countries: the administration is so complicated, some things are best dealt with on a local level.

Locally, all organizations applying for public money are forced to make more explicit planning for long periods, to have meetings about it and to go into competition with professional services for the same money. It is clear that it is an unequal competition.

Local government is sometimes sympathetic towarda volunteer organizations, but sometimes they want to open up traditional, mostly religious, organizations, which use public money for services, sometimes eveh demanding certain democratic structures.

Some governments look on the number of unemployed people, especially young people, and think: «Plenty of things to do for the community, why not let them do it, it keeps them of the streets». Storms of opposition was the answer, especially to the element of duty Whieh was Introduced . « If people receive benefit, let them to something for it » : The reaction said that it was the other way round; society should offer young people proper careers and a future, the fact that so many young people did not get that basic perspective in life puts the obligations on the lap of society, not on the young people. It is even more wrong to call this volunteer work.

Another objection: the simple link between jobs-to-do and unemployed people is a simplification far removed from real social structures. But, on the other hand, many small initiatives have sprung up where people are creating their own work, paid or unpaid. From these projects the request goes to local government : « Give us facilities, give us permission! and we shall do the best we can with the situation ».

One misconception hurts rather; it is when a minister says « 1 am going to put volunteers on a job ». No minister can put one volunteer anywhere. Volunteers can only put themselves. Why not ask them?

The best public argument for volunteer work, and its being unpaid, is just this fact: people who work for nothing, cost no money, and that has to be encouraged. The general public's applause for volunteers might be for what they do, but both volunteers and professionals are afraid that it is because they are cheap.

One misunderstanding remains: cheap; yes - but without costs; no. At one international conference, organized by Volonteurope in The Netherlands in October 1983, a resolution was carried which was sent to all governments of the European Community. It said in short : « You applaud us, but you do not grant us the minimum facilities to work with. Even the most basic costs are not met, or are withdrawn ».

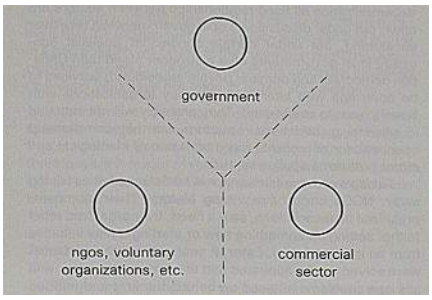
It remains a vulnerable field : a lot of public money is tied up in buildings and salaries. Extras have long ago been stripped from the budgets. Now the small budgets for volunteer activities are being cut. In this way large numbers of active people will stop their work for the community and only the middle class ladies will be able to afford volunteer work. Back to the old times and images.

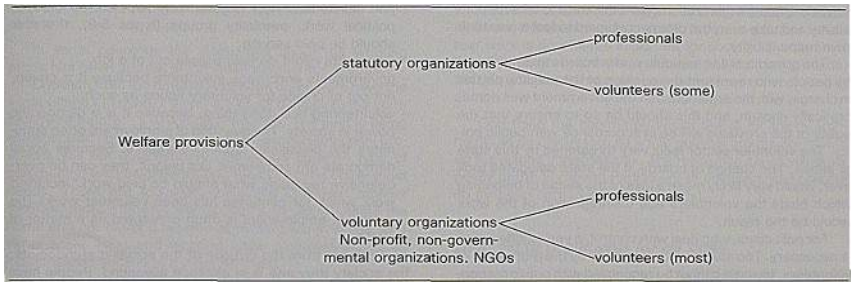
Political

Before discussing political views, some important distinctions have to be mentioned.

The broad field of welfare provisions, including health and education, can be either statutorily or voluntarily organized. « Statutory » means state controlled, with boards appointed by the state, and « Voluntary » means with private boards. The latter however often get state subsidies and have to accept some amount of public influence. Within the statutory sector there are volunteers, but most volunteers are found in the voluntary sector, ranging from large NGOs to small local groups. Many NGOs however are completely professionalized (more in northern than in southern countries). Services are organized differently in the European Community countries: some services (youth service, social work) are in one country organized by the state and in another by private organizations. In some countries the same service can be either voluntary or statutory (Germany). There are strong political standpoints about these differences,

The three main areas are : government (acting out political decisions), the commercial sector, and the NGOs - the non-governmental, non-profit sector, or the volutary organizations, in France, la vie associative.





The problem with the discussion on volunteering policy is that it is sometimes immediately linked to voluntary organizations, which confuses the issue. Especially in discussion with English or American people, sometimes when the words « volunteer work » are mentioned, the reply concerns «voluntary organizations», and reactions to the subject of volunteering are sometimes considerations about the voluntary field. An example : An expert commission of the Council of Europe proposed a charter for volunteer policy. The Greek members objected to the mixing up with « voluntary organizations », and rejected the proposed charter. The next draft, made by the Greek delegate, attempted to clarify this distinction» (5).

After this small clarification of the differences between statutory and voluntary, linked to government and NGOs, I introduce three main areas which are closely linked to three mainstreams in political parties : social democrats, Christian democrats and conservative liberals. At the right and at the left there are many more parties, sometimes important, but they show variations on the same theme. In Europe parties differ from country to country and, even within one party, differences of opinion are found.

This analysis is therefore only done in an ideal/typical way, to be applied to reality with great care. The sources are the many conferences of Volonteurope, in which politics were so far not as such on the agenda but were entering into every other subject.

Usually a dichotomy occurs, for instance a profit sector versus a non-profit sector, but for our discussion it is more fruitful to define three areas. Each sector opposes two others.

The boundaries between these sectors differ greatly in each country and have a lot to do with political standpoints on where they should be, and how they have developed historically. For instance, in a totalitarian state the government would absorb the two other sectors.

Political accents can be (loosely) linked to the scheme : the social democrats expect much from the government, the Christian democrats from the NGOs and the liberals and conservatives from the commercial sector. Positive expectations of one sector also include a shrewd suspicion of a possible growth of the other sectors.

A political view against volunteering is therefore mixed with the standpoint towards the NGOs. Volunteer action within the voluntary sector seems the lesser-controlled part within the NGO sector.

The key issue is the control

A few general observations.
Control as such is a responsibility of government but some parties push this responsibility further than others,
A few examples of dilemmas.

Decentralization. A policy of decentralizing the organization of services is seen in most countries. This is not only a matter of principle but also of management: issues are too complicated to be handled from one central point. But with decentralization all fixed relationships between sectors are newly put under discussion. Local government will take over subsidizing, but under certain conditions. Socialist controlled local governments take a stronger stand than Christian democrats and demand private (subsidized) services to be open and with internal democracy (organizations with boards open to everybody). They probably will not succeed in influencing the internal structure, but they can demand openness for all «clients » and omission of ideological and moral pressures applies to them.

Taking over by public service is sometimes felt as wiping away. NGOs often have a long history. Their members, organized in associations, saw a need, they organized relief (either setting up something new or starting a new initiative from an existing base). Later, it seemed that the problems were solved, until it appeared that this was not the case, and still new problems showed up behind the first and needed attention. Some organizations want the state to take responsibility and take over, but others continued to feel it was their own responsibility.

The government sometimes wants boards to be replaced by people who represent the position of the political parties in charge, with the argument that the government was democratically chosen, and this should be so to ensure that the policy of the provision will be in accordance with public policy. The volunteer sector feels very threatened by this state of affairs. The change of boards, if the state delegates took over, would very likely mean a loss of the sense of belonging which binds the volunteers and disintegration of the work would be the result.

For politicians, who deal with control, a very subtle policy is necessary. Too much control will destroy the motivation of volunteers, too little cannot be reconciled with public responsibility. It must be made clear that, for people motivated by religion or another ideology, the nourishment within the organization of that motivation is an absolute necessity for continuing the work. A salary can never buy that kind of motivation.

A. Social democratic view

In the social democratic view the state should look after its members, especially those in need. The responsibility of us all is carried out by the state, supported by the citizens and, to do this, provisions have to be created, or are made by NGOs and subsidized. In the latter case, when NGOs make the provision, the state wants to influence how it is run. The provision, a hospital for instance, should be open to all citizens, give good quality, and not impose (religious) ideologies. The last point is of course a constant reason for battle (church schools, neutral schools, socialist schools).

When strong changes come about as in Greece, where a socialist government came after a military (among others) regime, the position of voluntary organizations becomes problematic.

For instance, in Scandinavia the social democratic policy had the result that officially, for a long time, volunteer work, as known in the other European countries, did not exist.

In the Ninth Sociological World Congress in Sweden a fringe meeting was organized for researchers in the volunteer field. The Swedish claimed that they « had no volunteers», only parents' associations, co-operatives, etc.

When somebody works for only an hour in a community centre, he/she should be paid by the hour. A Danish director of an old people's home said : « If I were to invite volunteers to visit the inmates, the professionals would go on strike ». But slowly the concept of volunteering is coming back. Self-help volunteer service is increasing and a great number and variety of local services, done by volunteers, blossom, but under the heading «free time activities».

Social democratic views on volunteer work are close to those of the national labour unions. But on the other hand it appeals to socialists, that people really and concretely show solidarity with others, not only by paying taxes, but by involving their own time and dedication. And somehow in some way it even seems democratic to control your own well-being, and not to delegate it to professional institutes. Here is also a conflict in aims: on the one hand, provisions obtained from large investment by society are badly needed, and, on the other hand, these provisions get out of the control of their consumers, who feel sometimes manipulated. Is a volunteer service a kind of better alternative?

Some views:

- part of volunteer work is good : self-help, interest groups, political work, mentality groups (types 5-8), the rest should be paid service.
- volunteers might do paid people out of a job.
- governments encourage volunteers because it is cheap, not out of choice for voluntary action as such.
- volunteering is a good thing, because it is a democratic power in society. The question of employment often dominates the discussion about volunteers. Because social democrats are sometimes like unions, they can be over-defensive regarding what should be paid work, including work which for centuries has been volunteer work. The matter of employment is often presented as a matter of quality.

Criticism from the outside of the socialist standpoints: the society they see is in essence alienating. People have only a brotherhood via the long route through paying taxes, but not directly. «Fighting for your own rights» is good, but it divides society into different interest groups, which again alienates the community as a whole.

With regard to welfare state provisions, services create their own demands on them while professionals call on them to help with their problems. Clients/consumers are in a weak position because of the strong position of the statutory welfare services, even if created by well meaning intentions to help people. (The Illich discussion)(6). The argument that professionals are always best for you can be questioned.

B. Christian democratic views

The Christian democratic standpoints are traditionally in favour of the NGOs as an intermediate area between the individual and the state. The state has its own responsibility, but more important is the community, the network of private organizations in which personal solidarity is expressed. When a group of people start an association and provide services for their own members with their own money there is no problem. But this is hardly ever possible, even volunteer services need public money, and the groups, which volunteers want to give a service to, are often in another category : drug addicts, sick, poor, foreigners, etc. In that case the discussion as described arises, sometimes leading to a very drastic takeover by professional, even statutory, services, with the argument that the quality of the provision is at stake.

The links with the commercial world are less problematic, for traditional associations, than are those with the state. Large foundations are set up by companies and support mostly traditional volunteer work, including new initiatives, but seldom including activities which aim at a change of the structure of society. There is a wide range between the conservative, even the reactionary, in this sector, and the modern and flexible. To put a label on it either way does not fit reality. As so many of these NGOs are supported by Christian ideologies, the links with the Christian democratic parties are many. The resolution of the European Community Parliament on volunteer policy (see Annex) was an initiative of the Italian CDU delegate. In the question of this paper, «Which work ought to be paid? », Christian democrats follow the tradition of the NGOs : it is valuable to do something for your neighbour just for the love of God, or just out of chanty. It is part of your duty as a citizen and a Christian. There is sometimes even some resistance to putting emphasis on the value volunteer work has for the volunteer him/herself: to learn things, to be in contact, to get satisfaction. Sometimes - not often - there is even resistance against refunding for out-of-pocket expenses for the same reason.

In some countries the discussion about the working ethos has been started in Christian democratic groups.

Criticism from the outside : Christian democrats have the « lost village » in mind. «If only we could go back to the community as before... » which can never be. The past is being romanticized and, besides, breaking down professional provisions will not automatically restore an agrarian type of community, with neighbours and family helping out in most needs. There are too many objective changes: smaller families, more mobility, women going to work outside the home and not being a reserve army for care at home, and larger-scale living and working sites. Volunteering in an industrialized society is a different thing.

C. Liberal/conservative standpoint

Liberals have a great preference for private, non-governmental voluntary organizations. It is the opposite standpoint to that of the socialists: The less state control, the better. They also like the « do it yourself » approach of volunteering. No bullying by the state nor by the professionals either. But, on the other hand, conservatives have sometimes great admiration for technical progress, also for services. They admire new technology in health and welfare provisions. In that light there is no place for « social amateurs ». Volunteer work is appreciated in opposite sectors to those stated by the socialists: not so much the fight-for-your-rights kind of groups, but the helping of other persons. Sometimes the first kind (action groups) is not even accepted as volunteer work at all. There are no objections to people working for nothing; the advantages for themselves are stressed. A special aspect is the sponsoring, or the support from companies, of volunteer actions. In America this is a very widely accepted thing, less so in Europe, where some groups are afraid that the aims of the companies might not be identical with their own, companies might support them to keep the population quiet and docile-
Causes with a strong emotional appeal stand a good chance of sponsorship: children, handicapped, severe illness. Critical groups, aimed at changes in society, stand little chance. Owing to withdrawal by governments of subsidies, long standing suspicions about money from companies are being reconsidered and a lot of groups are glad of the help.

Criticism from the outside of liberal/conservative thinking is that it is too optimistic. This policy will mean that people in a bad position will be left in the cold when public responsibility for the total population is left to the incidental initiatives of groups who have not enough public accountability.

Other liberals, like the progressive liberal parties, have a special interest in matters concerning the change of the position of labour in society, changing of labour ethos, etc, and therefore are in favour of volunteering, but with as little public interference as possible, because bureaucracy is like a disease: you catch it before you know it.

Summing up

The people who fight for volunteers sometimes wonder about the fellow travellers they have and it makes this issue all the more interesting : from totally different quarters volunteer work is considered important for society. The committee of Volonteurope displays different political backgrounds, but this does not hamper the committee from co-operating at all.

One thing the committee would like is for these arguments to be discussed, as some political groups are mixing up the issues unnecessarily. The resolution about volunteer policy of the European Parliament (a political body) has not so far been carried out. (See Annex).

Short list of arguments for ail sides

Arguments for payment of time
- one is sure of somebody, people cannot just say they will not come
- certainty of continuity, especially if more hours per week are in question
- family agreement to frequent absence more easily obtained
- if the work is done in an officially recognized environment, the state should take financial responsibility
- it permits a functional, businesslike relationship with clients/consumers
- it shows appreciation
- it is for the client a right, not a favour
- one can make easier demands
- it gives paid employment.

Arguments against payment of time
- when a volunteer does his/her work in a personal relationship, it is felt to be contrary to payment. It is something like adoption, or friendship
- the kind of work does not suit payment: visiting, organizing, clubs, etc.
- it is different anyway from professional services: more flexible hours, open at night, time is not money
- it is different from a society which is totally mercenary
- the volunteer has another income and does not need payment. Or the volunteer has a regular job for which payment by the hour would be too expensive for the association anyway

- it would be impossible to pay for all volunteer work in society
- if this idea of payment for all volunteers were to be pushed through, the services would drop severely
- new work can only grow if it is done by volunteers, if necessary, co-ordinated by a paid person
- a functional relationship can be created by other means, like a payment for the organization (a donation).

Requirements should always be stated

Appreciation can be shown in many ways. One is the custom of paying back all out of pocket expenses, incurred by volunteers, without any fuss.

Conclusions and recommendations

From the argument so far it is clear that there are no conclusions possible that will satisfy everybody, but the following are ventured which include as many real interests as possible.

The interest of the consumer and of the community should always prevail over all others.

The kinds of work that are mentioned, and the different interests, are only examples and can be amplified. Lists of more interests like that of emancipation etc. are found in different suggestions, also those of the authorities.

Conclusions

1. The very large field of volunteer work as a whole, in which traditional and new volunteer organizations are working, cannot be changed into paid work (type 1). This is in the interest of:
- the rights of volunteers to keep their volunteer job
- having services without having to pay for them all, even if it were desirable
- doing part of the work better.

2. Diminishing the number of paid welfare and health workers with reference to the excellence of volunteers is rejected by both professionals and volunteers and spoils good co-operation between them. Volunteers do not want to, and cannot, replace professionals. This is in the interest of:
- volunteers
- professionals
- consumers.

3. Replacement of professional posts by unemployed professionals (not paying them and calling them volunteers) is unacceptable.

This danger is only present in professional organizations (type 1). An exception could be considered for extra part-time posts for those who want to keep up their skills. This is rather unpaid work than volunteer work;

Volunteer work has at least the following traits: a low threshold (no certificates, wider age range), not full time, not with formal labour contacts.

This conclusion is in the interest of all parties, except that of the government.

4. Volunteers have always created paid work by discovering new fields, where sooner or later some paid posts came for co-ordination of administration or new tasks. This is still the case, even if lately it has been less easy. Labour unions should therefore see volunteers, not as stealers, but as creators of jobs (type 4). This is in the interest of:
- consumers
- volunteers
- the creation of paid work
- professionals.

5. Job creation for paid work for those who have fewest opportunities at the moment for a paid post can be achieved by giving preference to creating paid jobs in the fields where volunteers have been shown to work well and where the needs are increasing : help in nome, caring jobs in intramural care, educational work for women, regional small-scale public transport, odd jobs. This is in the interest of:
- the unemployed
- the community.

6. Job creation of good quality volunteer work, interesting and responsible for people with life experience or other personal qualities but without educational certificate, needs to be done. This is in the interest of:
- consumers
- volunteers.

7. Creating jobs for volunteers and paid people at the same time by letting volunteers do the executive practical work and having paid people to do administration and support.

Literacy work, nature education, information centres, services for youth, board memberships.
This is in the interest of;
- the consumers (growth of services)
- the volunteers
- people looking for paid work.

8. On an international level it is most important to consider the difference in institutionalization.

Countries that are developing often want a policy opposite to that required by people from developed countries.

The problem of overinstitutionalization, which is found in countries with a large welfare system, does not find any recognition in countries that are confronted by large demands for help which cannot be met.

In theory we could learn from each other - but in practice it appears that every community wants to have the right to make its own mistakes.

Does it help to suggest that we should look for an optimum and not pull too hard in one or the other direction, so as not to fall in the opposite pit and avoid both over - and under-institutionalization ?

Recommendations

1. Decisions about spending money should be agreed as much as possible with the people who are to be served : the consumers.

Clients should have a say in the way provisions are organized, and volunteer projects should be able to have a say over servicing or facilitating bodies which are provided for them.

Too often people's problems are defined as needs for professional provisions per se.

Provisions and facilities are very necessary, but how they are organized, including the allotment of paid posts, should be decided more by their consumers. At the moment a development in the wrong direction is apparent and should be checked. This is in the interest of:
- consumer and community
- balanced development of the work.

2. The authorities should reconsider their position and check their tendency to act as protectors of the professions as such.

This is a task the associations of professionals should be doing. Protection of quality is not always the same as demanding certificates.

This is in the interest of:
- volunteers
- the community, because it stops the process of institutionalization
- consumers.

3. Development of care in the community should be promoted above intramural care. That means that professional organizations for care at home have to learn to co-operate with volunteer organizations on a basis of equality.

(1) In England, Belgium, France, and The Netherlands there are volunteer bureaux. These are brokerages for the supply and demand of volunteer work (a kind of labour exchange). This basic task is often extended by giving publicity, advice and support, sometimes by training and sometimes by setting up new projects because supply and demand practically ever match, in number nor in quality.

(2) Professional work and paid work are of course not the same. Professional work implies special advanced training. For the argument I use them without distinction; in the discussion it can be further defined.

(3) Sometimes volunteer associations are bad for employers of paid staff, maybe for lack of experience.

This is in the interest of:
- consumers
- the community.

Diminishing intramural care without increasing integrated facilities in the community is causing great trouble.

4. The regulations for subsidizing volunteer work are too often made to fit the professional field.

Simpler and more fitting regulations should be made, and in this respect countries can learn from each other.

This is in the interest of:
- volunteers
- the community, since it is de-institutionalizing.

5. Priority for subsidizing :

a. Simple technical aids at home. A lot can be done here, self-care must be made possible;
b. support for informal care by family, friends and neighbours;
c. facilities for volunteer services, groups and associations;
d. professional, outreaching help;
e. advanced technology in intramural care.

This is important because in that way the money will benefit the largest group of people.

This is in the interest of the :
- consumers
- community.

(4) Ivan Hitch said at a conference on Self-help, Berlin, June 1984; Service is wrongly indicated when it:
1. Turns activities hitherto unpaid into paid activities
2. Draws activities, hitherto not carried out in a system of control, into formal control
3. Places new knowledge and wisdom in an educational system
4. Shapes new fields in such a way that sociologists can master them with their categories.

(5) Pothos, Draft recommendation on voluntary work in special welfare activities. Addendum I to CDSO (85) misc. 2.

(6) Ivan Illich warns of the dangers of overinstitutionalization which might have the effect of causing institutions to achieve the opposite to what is aimed at.

Annex

Resolution on voluntary work

The European Parliament,

- having regard to the motion for a resolution tabled by Mrs Gaiotti de Biase and others, on behalf of the EPP Group (Doc. 1-942/81),
- having regard to the activities of the Council of Europe in this sphere,
- having regard to the report of the Committee on Social Affairs and Employment and the opinion of the Legal Affairs Committee (Doc. 1-851/83).

Whereas

A. there is increasing interest in the importance and possibilities of voluntary work in several EEC countries,

B. this interest is growing because of increasing awareness of the negative aspects of the present organization of professional facilities (bureaucratization, alienation and specialization) owing to the present scale of unemployment and economies in the public sector and the consequent need for services,

C. voluntary work has at least the following characteristics: it is not obligatory and it is socially relevant, is unpaid and is carried out with some degree of organization,

D, most voluntary work has an independent social significance that is unconnected with existing professional services, but voluntary work also includes work to supplement and assist work in professional organizations,

E. voluntary work is to be found in all areas of society: government, recreation, services, the law, health care, care of the handicapped and the elderly, the rehabilitation of drug addicts, cultural activities, public education, restoration work and archaeological excavations, protection of the environment, cooperation on development, etc.

F. voluntary work can be said to reflect the traditional allocation of roles between men and women in that women volunteers are somewhat over-represented in the health and social services where they mainly do practical work and men are somewhat over-represented in administration and recreation sectors,

G. considering the growing number of people undertaking volutary work and that it is estimated that, in most EEC Member States, 15% of the population is involved in voluntary work,

H. the objective of voluntary work is not, however, to mask the present shortcomings in our societies (by concealing unemployment, for example),

I. voluntary work is a collective term for a large range of activities, with traditions varying from country to country, but there are similarities as regards the situation of voluntary work,

J. voluntary work can help give the unemployed some work experience,

K. voluntary work must not compete with but may complement traditional employment structures,

1. Considers that, if the expansion of voluntary work is to be supported, there must be a clear distinction in law between spontaneous, impartial voluntary activities and paid work, to avoid any risk of voluntary work being used as a means of by-passing regulations and collective agreements and increasing moon-lighting;

2. Is of the opinion that voluntary work policy must be directed towards creating an infrastructure to enable volunteers to carry out their activities. This policy should be based on the following principles:

2.1 there should be a minimum of adequate and clear rules,

2.2 volunteer work should not be used to make economies in the public sector,

2.3 the best possible infrastructure should be available for training volunteers but training should not be compulsory,

2.4 in the choice between professional staff and voluntary workers, the interests of those who require their services must be put first,

2.5 governments should never try to influence people's commitment to voluntary work by putting pressure on them (e.g. forcing young people to do community work in return for social security payments),

2.6 policy on voluntary work should take policy in related sectors, such as welfare, recreation, culture and public administration, into account,

2.7 relevant experience in voluntary work should be taken into consideration when selecting candidates for paid work;

3. Asks the Commission:

3.1 to recognize that voluntary work should be given systematic attention at European level,

3.2 to draw up a « statute for voluntary workers », laying down economic provisions for the reimbursement of expenses and whatever else might prove necessary for the performance of their duties and providing insurance cover for damage or responsibility,

3.3 to ensure that a survey is carried out in cooperation with voluntary organizations which operate in the Member States at European level, and which have the specific interests of voluntary work at heart, so that comparable data may be obtained about the extent of voluntary work in the member States,

3.4 to remove obstacles to the smooth running of voluntary work by making it attractive to more people and equally accessible to men and women. In this connection the Commission should support innovative and possibly experimental projects that would set an example at European level. This voluntary work policy should - in addition to the foregoing - give particular attention to the possibilities of:

3.4.1 setting aside funds for financing voluntary activities, giving priority to voluntary work organizations; in this, beginning with work on behalf of elderly people,

3.4.2 incorporating voluntary work in the Community programmes to combat poverty,

3.4.3 improving guidance for (potential) volunteers,

3.4.4 providing greater opportunities for the unemployed to do voluntary work,

3.4.5 including voluntary work in the Commission's forthcoming report on the long-term unemployed,

3.4.6 establishing an EEC forum for voluntary work responsible for the coordination of and research into voluntary work and the exchange of information and experiences;

3.5 to consider the possibility, on the basis of Article 118 of the EEC Treaty, of drafting a recommendation, to be agreed with the two sides of industry, aimed at establishing the broad criteria for a set of rules defining the nature and conditions of voluntary work and paid employment, bearing in mind the need to submit this recommendation to examination at local or regional level, a process in which the voluntary workers' organizations must also be involved;

4. instructs its President to forward this resolution to the Council and the Commission and to the Council of Europe and the Governments of the Member States.

Les réunions internationales en 1988

par Ghislaine de Coninck*

introduction

Pour la 40° année consécutive, l'Union des associations internationales (UAI) a établi à l'intention de ses membres un relevé statistique des réunions internationales tenues, à travers le monde, dans l'année écoulée. Le relevé détaillé pour l'année 1988 vient de leur être adressé et voici quelques commentaires complémentaires.

Il est à noter que dans ces statistiques sont prises en considération les réunions organisées et/ou patronnées par les organisations internationales reprises dans le *Yearbook of International Organizations* et dans l' *International Congress Calendar,* c'est-à-dire les assises de leurs principaux organes, congrès, sessions régionales (groupant plusieurs pays), symposiums, colloques, etc. ainsi que certaines réunions d'organisations nationales à très large participation internationale, ce que nous avons intitulé « ass. nat», dans les tableaux ci-dessous.

Sont exclues des statistiques: les réunions nationales, les cérémonies et manifestations internationales à caractère essentiellement religieux, didactique (cours) politique, commercial (foires, salons) sportifs (compétitions, tournois...) ainsi que les réunions très limitées dans leur participation ou spécifiques : sessions régulières de comités, groupes d'experts etc. particulièrement nombreux au niveau intergouvernmental; ces réunions de tiennent généralement au siège même des grandes organisations intergouvernementales à New York, Genève, Bruxelles, Rome, Vienne, etc.

Perspective générale

L'augmentation du nombre de réunions internationales relevé les années précédentes est renforcée en 1988, aussi bien en Europe que dans les autres continents. C'est principalement au nombre de réunions d'organisations internationales que l'augmentation est due.

Les différents tableaux font la distinction entre réunions nationales avec participation internationale. Le tableau 1 indique la répartition, par continent, de l'augmentation enregistrée en 1988 : + 13,9 %, soit une augmentation de 12,45% des réunions d'organisations internationales et 1,45% des réunions nationales:

Tableau 1. Répartition de l'augmentation enregistrée en 1988

Continent	Total	Réunions d'ass. int.	Réunions nat. + partic. int.
Europe	+ 8,15%	+ 7,55%	+ 0,60%
Amérique du Nord	+ 10,20%	- 0,30%	+ 0,50%
Asie	+ 1,65%	+ 1,70%	-0,05%
Amérique du Sud	+ 0,50%	+ 0,75%	-0,25%
Afrique	+ 0,60%	+ 0,55%	+ 0,05%
Océanie	+ 2,80%	+ 2,20%	+ 0,60%
Total	+ 13,90%	+ 12,45%	+ 1,45%

Le tableau 2 indique la répartition au niveau mondial du nombre de réunions internationales en 1988:

Tableau 2. Répartition mondiale du nombre total de réunions internationales en 1988

Continent	Total	Réunion d'ass. int.	Réunion d'ass. nat.
Europe	60,00%	41,00%	19,00%
Amérique du Nord	13,25%	9,80%	3,45%
Asie	12,72%	8,80%	3,92%
Amérique du Sud	5,23%	4,30%	0,93%
Afrique	4,38%	4,10%	0,28%
Océanie	44,42%	3,20%	1,12%
Total	100,00%	71,20%	28,80%

(*) Chef du département Congrès de l'UAI.

Tableau 3. Augmentation (en%) 1988 par rapport à 1987 - Continent par continent			
Continent	Total	Réunion d'ass. int.	Réunion d'ass. nat.
Europe	+ 13,70%	+ 12,65%	+ 1 ,05%
Amérique du Nord	+ 1,20%	+ 2,20%	+ 3,40%
Asie	+ 13,10%	+ 13.65%	- 0,55%
Amérique du Sud	+ 9,30%	+ 14,30%	- 5,00%
Afrique	+ 14,80%	+ 13,80%	+ 1,00%
Océanie	+ 1,30%	+ 100,00%	+ 30,00%

L'analyse par pays donne les résultats suivants, en ce qui concerne les princpaux pays hôtes de réunions internationales:

Table 4. Principaux pays hôtes de réunions internationales en 1988: % du total mondial			
Pays	Réunions d'ass. int.	Réunion d'ass. nat.	Total
USA	7,80%	2,80%	10,60%
Royaume-Uni	5,00%	4,00%	9,00%
France	5,50%	2,80%	8,30%
Rép. Féd. d'Allemagne	3,60%	2,25%	5,85%
Italie	3,85%	0,85%	4,70%
Australie	2,90%	1,10%	4,00%
Pays-Bas	2,50%	1,50%	4,00%
Suisse	3,20%	0,45%	3,65%
Belgique	2,30%	1,05%	3,35%
Espagne	1,75%	1,55%	3,30%
Canada	1,65%	0,60%	2,25%
Japan	1,25%	1,05%	2,30%
Autriche	1,50%	0,60%	2,10%
Finlande	1,45%	0,80%	2,25%
Suède	1,25%	0,35%	1,60%
Danemark	1,20%	0,40%	1,60%
Brésil	1,00%	0,50%	1,50%

Au niveau mondial le classement des villes hôtes des réunions internationales est le suivant:

Tableau 9. Principales villes hôtes des réunions d'organisations internationales; % du total mondial			
Ville	Réunions d'ass. int.	Réunion d'ass. nat.	Total
Paris	2,30%	1,60%	3,90%
Londres	2,00%	1,20%	3,20%
Genève	1,65%	0,15%	1,80%
Bruxelles	1,50%	0,40%	1,90%
Rome	1,25%	0,25%	1,50%
Sydney	1,10%	0,30%	1,40%
Washington	1,00%	0,15%	1,15%
New York	0,95%	0,10%	1,05%
Vienne	0,90%	0,20%	1,10%
Strasbourg	0,80%	0,25%	1,05%
Madrid	0,75%	1,25%	2,00%
Copenhague	0,75%	0,20%	0,95%
Stockholm	0,75%	0,20%	0,95%
Bangkok	0,70%	0,10%	0,80%
Séoul	0,65%	0,35%	1,00%
Berlin Ouest	0,60%	1,10%	1,70%
Amsterdam	0,60%	0,40%	1,00%
Singapour	0,60%	0,70%	1,30%
Tokyo	0,55%	0,40%	0,95%
Budapest	0,55%	0,20%	0,75%

Répartition par continent et pays

AFRIQUE

L'augmentation du nombre de réunions organisées en Afrique est constante, à peu près 15% par rapport à 1987; toutefois la quote part du marché mondial est statu quo: 4,38% contre 4.35 en 1987.

Les principaux pays hôtes sont l'Egypte : 9,9% du marché africain, suivi du Kenya 9,3%, Zimbabwe 8,2%, Maroc 5,2%, Sénégal, Nigeria, Côte d'Ivoire avec près de 5% chacun.

Par rapport à 1987, l'augmentation a été plus sensible en Egypte et au Zimbabwe.

AMERIQUE DU NORD

En Amérique du Nord (Canada, USA, Mexique) la forte huasse enregistrée en 1987 s'est stabilisée et consolidée en 19S8, sauf au Canada où la situation est retombée au niveau de 1986. En effet le score record noté en 1987, était dû à la conjonction de différentes grandes manifestations organisées simultanément. Au Mexique une certaine reprise est enregistrée. Comme les années précédentes il y a lieu de noter que les réunions, qui font l'objet de la présente analyse, sont en majeure partie des réunions d'organisations internationales non gouvernementales; il est bien entendu que le nombre de réunions nationales est beaucoup plus élevé que celui indiqué dans les différents tableaux; ce domaine spécifique ne relève pas du champ d'études de l'UAI.

Au niveau mondial, les Etats-Unis viennent, une fois encore, en tête de notre classement avec comme en 1987 10,60 % du marché mondial. Le Canada a 2,25% de ce marché.

AMERIQUE DU SUD

Situation également en hausse dans cette partie du monde: plus 9,3% par rapport à 1987. Au total 5,23% du marché mondial. La progression se maintient dans les pays suivants : Brésil, Cuba, Rep. dominicaine, Pérou, elle se redresse en Argentine et est en baisse au Chili, en Colombie, en Equateur. Statu quo dans les autres pays.

Le Brésil représente 26,7% du marché sud-américain, l'Argentine 13% de ce même marché; viennent ensuite dans l'ordre: Cuba, Pérou, Venezuela et Colombie.

ASIE

En 1988 le marché des congrès en Asie occupe toujours la troisième place au niveau mondial derrière l'Europe et l'Amérique du Nord, avec 12,7% du total mondial. Par rapport à 1987 une augmentation régionale de 13% a été enregistrée. C'est en Chine que la situation a eu la plus forte évolution avec une augmentation de plus de 36% en un an.
Le Japon occupe toujours le premier rang avec 17,9% du total régional; viennent ensuite: Singapour 10,3%, Inde 9,3%, Corée 8,6%, Thaïlande 8,3%, Chine 7,7%, Israël 6,5%, Philippines 6,1 %, Hong-Kong 5,6%.

OCEANIE

Une hausse exceptionnelle a été notée en Australie: + 130%. Celle-ci est due à l'organisation d'un important congrès scientifique qui a entrainé l'organisation de dizaines de réunions satellites à travers tout les pays.

De ce fait la quote part de l'Océanie dans le marché mondial a presque doublé en passant de 2,3% en 1987 à 4,4% en 1988,

EUROPE

En 1988, les congrès ont enregistré en Europe l'une des plus fortes augmentations de ces dernières années: plus de 8% de l'augmentation totale soit 58% de l'augmentation enregistrée dans le monde en 1988.

Soixante pour cent des réunions analysées ont eu lieu en Europe, les deux tiers de celles-ci étant des réunions patronnées ou organisées par des associations internationales.

La Grande-Bretagne vient en tête du classement par pays avec respectivement 9 % du marché mondial et 15% du marché européen. Viennent ensuite la France avec 13,8% du marché européen, la Rép. féd. d'Allemagne 9,75%, les Pays-Bas 6,65%, la Suisse 6%.

Parmi les pays ayant augmenté de façon significative, outre les pays repris plus haut : Danemark, Finlande, Grèce, Irlande, Norvège, Portugal, Suède et Yougoslavie.

Les autres pays sont restés plus ou moins statu quo.

REPARTITION PAR VILLES

Le tableau 5 reprend la liste des principales ville hôtes de réunions internationales. Le classement de tête n'a pas change de façon significative; Paris est toujours en tête suivie de Londres. Genève et Bruxelles. Sydney s'est intercalé dans le « top ten » à la place que Vancouver avait occupée en 1987 dans des circonstances à peu près identiques.

En ce qui concerne les réunions d'organisation internationales, le classement des villes à l'intérieur des continents s'établit de la façon suivante:

Afrique: Le Caire, Nairobi, Harare.
Amérique du Nord: Washington, New York, Montréal.
Amérique du Sud: Buenos Aires, Rio de Janeiro, La Havane.
Asie: Bangkok, Séoul, Singapour, Tokyo, Hong-Kong, Delhi, Manille, Pékin.
Océanie: Sydney, Melbourne, Canberra.
Europe: Paris, Londres, Genève, Bruxelles, Rome, Vienne, Strasbourg, Madrid, Copenhague, Stockholm et Berlin Ouest.

LES PARTICIPANTS

L'analyse des informations relatives au nombre de participants confirme les données précédentes à savoir une majorité de réunions ayant moins de 1000 participants et se situant principalement entre 100 et 500 personnes.

EXPOSITIONS

Le nombre d'expositions organisées conjointement aux congrès est quant à lui en progression certaine, avec des expositions dans 17% des cas (contre 10% en 1987).

REPARTITION MENSUELLE

Au point de vue de la répartition mensuelle l'ensemble des réunions analysées s'est réparti de la façon suivante:

Tableau 6. Répartition mensuelle

Septembre	14,4%
Juin	11,8%
Octobre	11,7%
Mai	10,8%
Novembre	8,7%
Août	8,6%
Avril	8,0%
Juillet	7,8%
Mars	7,1%
Décembre	4,0%
Février	3,9%
Janvier	3,1%

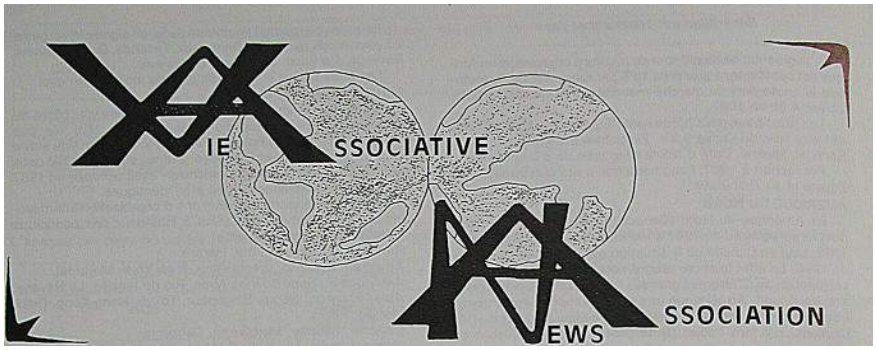
CONCLUSIONS ET PERSPECTIVES D'AVENIR

Ainsi que le démontre notre étude, l'augmentation du nombre de réunions internationales a été plus importante en 1988 que les années antérieures. Il ne semble pas y avoir de changement dans la taille des réunions, par contre une augmentation importante du nombre d'expositions conjointes a été enregistrée.

Comme toujours il y a lieu de noter que de grands événements occasionnels entrainent des mouvements de hausse dans les pays et régions où ces événements se sont déroulés.

Les perspectives pour 1989 sont encourageantes et permettent d'augurer la poursuite d'un développement constant de cet important phénomène sociologique et économique que représentent les congrès internationaux.

Bruxelles, mars 1989.



Assemblée générale des ONG européennes de développement

Les représentants de quelque 600 organisations non gouvernementales (ONG) européennes de développement se sont réunis a Bruxelles du 18 au 21 avril 1989 pour leur XVème assemblée générale.

Cette année l'Assemblée générale s'est trouvée confrontée à des défis de taille en raison des thèmes abordés, à savoir:

- Femmes et développement dans le contexte de Lomé IV
- Lomé IV
- Elections européennes 1989.

Cinq groupes de travail se sont penchés sur les thèmes suivants:

i) Femmes et dette
ii) Femmes et questions alimentaires
iii) Femmes en situation d'urgence
iv) Femmes et démographie
v) Femmes et images.

Des femmes venues de plusieurs pays ACP ont contribué aux débats.

Le prix ONG «2001» - baptisé «2001 » pour marquer le début d'une ère de convivialité dans un monde nouveau où la justice, les droits de l'homme, le bien-être et la démocratie seront une réalité au Nord comme du Sud - a été attribué pour la deuxième fois à l'occasion de la XVème Assemblée générale. Cette année, le prix a été décerné au *Dr. Duong Quynh Hoa,* une femme qui, par son grand courage, a permis au Viêt-nam de progresser énormément en matière de soins sanitaires pour les mères et pour les enfants.

Our Commun Future

A conference on *«Our Common Future - Making it Happen »* was held in Tabarka, Tunisia, November 29 - December 2, 1988, and hosted by the Environment Liason Centre (International). 130 participants met from environment and development NGOs from five continents, was action-oriented, beginning with an NGO appraisal of the Brundtland Commission Report, followed by long-term strategy plans for concrete NGO action.

For more information : ELC International, P. O. Box 73461, Nairobi, Kenya.

Debts for Forests

Debtors can exchange debt for reforestation - In October 1988, a proposal was presented for the pardoning of the foreign debt of developing and Third World countries in exchange for a commitment to preserve nature and promote reforestation. Delegates of 90 organizations representing 35 countries who participated in the meeting promoted by a Latin American group presented the proposal that was supported as part of the measures needed for solving the change in the earth's climate due to the accumulation of industrial gases in the atmosphere, caused by deforestation. The debt was defined during the meeting as an economic burden that obligates the debtor countries to explore natural resources.

(Folha de S. Paulo 10/13/88)

Sadcc door opens for NGOs

Although Sadcc has no particular formal mechanisms for non-governmental organisations to participate in its programmes of action, it encourages NGOs to use their own creativity and expertise to identify ways to support regional development goals. Officials of the Sadcc Secretariat have specifically set aside time to meet with NGOs and have briefed NGOs on major developments and possible opportunities for NGO co-operation.

The Secretariat has encouraged project work within Sadcc as well as advocacy work in the industrialised countries of the North for Sadcc's aims. It has also welcomed NGO co-ordination to assist Sadcc at both national and international levels.

Jeffrey Balch of the Southern Africa Network of Trade Alternatives (Santa) in the Southern Africa Network of Trade Alternatives (Santa) in The Netherlands takes up this theme in the following abridged report:

Already the work of some NGOs has earned the praise of Sadcc's leadership. Nordic NGOs, for example, are jointly co-ordinating through the « Nordic-Sadcc Initiative on Expanded Co-operation » to make collective demands to their governments so that good intentions are translated into effective concrete measures.

One such demand is that the Nordic governments abolish all tarriffs, taxes non-tarriff barriers on products. In this way NGOs, by joining together, can act as a direct catalyst to accelerate support for Sadcc's priorities.

Another area of Northern NGO assistance to Sadcc is that of alternative trading. At the 1988 Sacc Annual Consultative Conference in Arusha, the Senior Trade Officer within Sadcc's Industry and Trade Co-ordination Unit, Mr Marco Kassaja, welcomed plans by two Dutch NGOs to collaborate on a trade promotion project for the Sadcc region.

Among the objectives of this project, which is entitled the Southern Africa Network of Trade Alternatives, is to assist the expansion and diversification of Sadcc exports to western Europe. One proposal is to link up with Sadcc's regional Trade Information Centre in order to collect and exchange market and product data with various international contact points.

As Sadcc's methods of external co-operation develop and expand, new possibilities have emerged for NGOs in the Northern industrialised countries to initiate projects which have a regional impact in southern Africa. Now is an opportune time for NGOs to closely examine Sadcc's sectoral priorities and programme of action as a first step towards identifying possible areas of support.

Sadcc Genebank: Prospects and Problems

The Sadcc member states have signed an agreement with the Swedish International Development Authority (SIDA) to establish a regional genebank. The project idea was launched in 1984 by the Nordic countries (Sweden, Norway, Denmark, Finland, Iceland), which have one of the world's most succesful regional germplasm centres - the Nordic Genebank based in Lund, Sweden.

Setting up

The Nordic initiative to provide the Sadcc region with their own genebank will span a twenty-year donor-commitment period. The agreement has been signed between the Nordic countries and Saccar as the implementing agency. During the first ten years, all necessary funding will be assured by the foreign donors. But from the eleventh year onwards, the Sadcc members will cover the costs at annual increases of 10%. Thus by the twentieth year, the foreign donors will pull out, having provided a projected total of US$20.6 million. The Sadcc • Genebank will then be under the full financial responsibility of the Sadcc countries.

The objectives of the project are threefold: to set up the centralized regional facility and a network of local germplasm programmes to support plant research in the area; to conserve plant genetic resources which are indigenous to Sadcc; and to train plant genetic resources personnel for the region.

The Genebank will be established in Chalimbana University, near Lusaka, Zambia. According to the report of the International Board for Plant Genetic Resources (IBPGR), which held the Consultation on Plant Genetic Resources in Sadcc countries in September 1986 in Lusaka, this site was chosen because of low relative humidity and temperatures that don't rise excessively high.

It will be run by a Board composed of the chairman of the National Plant Genetic Resources Centres or Programmes of each member state which will provide policy guidelines for the project. Also, a Technical Advisory Committee will be created. It will comprise one member from the Board of Saccar (Sadcc's agricultural arm), one from the Board of the Nordic Genebank, another from IBPGR and other(s) from one or more of the remaining International Agricultural Research Centres.

The project aims to strengthen national programmes in plant genetic resources while the Genebank will provide a cost-effective base collection site for the nine countries. However, none of the external funding is earmarked for national activities. The IBPGR report notes, in fact, that Angola, Lesotho and Swaziland don't even have seed conservation facilities, underscoring just one of the many disparities between Sadcc

Sadcc: Agricultural Research

The Southern African Centre for Co-operation in Agricultural Research (Saccar) is Sadcc's regional centre for agricultural research and has as objectives to promote co-operation in agricultural research among the national agricultural research systems of the Member states; to facilitate the exchange of information among national research systems; to promote the development of the human resources necessary to man the agricultural research systems; to promote coordination of Sadcc agricultural research activities and to carry out training activities.

NGOs interested in supporting Saccar's programme can do this in assisting with feasibility studies for projects, publication of documents and via co-sponsoring of workshops in various areas.

For more information write to Saccar at the following address: *Private Bag 00108, Gaborone, Botswana.*

countries in the field of plant genetic resources.

Aside from holding the base collection of the region, the Lusaka-based Genebank will also have responsibility for working collection, central databases on indigenous and introduced plan materials, and the production of a Sadcc Genetic resources Newsletter. In addition, training - one of the key focuses of the Nordic-backed project - will be carried out at Birmingham University, the Nordic Genebank and in Lusaka.

Problems

This Nordic-Sadcc project is certainly a positive initiative to promote regional co-operation in the field of plant genetic resources and, ultimately, in plant breeding and seed production. Already, both the Nordic and Sadcc countries have numerous programmes of regional collaboration. However, there are key aspects of the project which have been left unclear. These are the ownership of the Sadcc Genebank's collections, the outside use of the duplicata, exchange of Sadcc germplasm and, very importantly, the role of IBPGR in the project. Moreover, there are some doubts about the financial viability of the Genebank once the foreign donors are phased out of participation.

If the ultimate owner of the collected material is left unclear, it will leave important questions of final responsibility and policy decisions up in the air. According to the IBPGR report, the Sadcc accessions are supposed to be duplicated in the Nordic Genebank « and other designated crop-specific genebanks in the IBPGR network», i.e. anywhere from Fort Collins to Tsukuba ! This leaves the door open for the Sadcc genetic resources to end up as inpatented plant varieties in the industrialised countries where firms would collect royalties on freely-donated germplasm form southern Africa.

What policy will govern exchange activities of Sadcc's germplasm is another question left unclear. Of the nine Sadcc countries, five members are not signatories of the FAO International Undertaking on Plant Genetic Resources, which calls for the full and free exchange of plant material.

The Undertaking is the only working international framework for good conduct in the sharing of plant genetic resources.

As for the IBPGR's role in the Sadcc project, nothing is certain. According to the September 1988 edition of African Diversity, the newsletter of the (pan-) African Plant Genetic Resources Committee, *«Sida hopes that IBPGR will be able to assist national programmes although this is not part of the IBPGR mandate».* The IBPGR is indeed anxious to participate in collection work in the Sadcc region where many indigenous millets, sorghum, forages, beans, maize and medicinal plants have yet to be collected. However, as noted above, the Nordic donors will not be funding national collecting activities. Will the IBPGR fund this and what, aside from training, will IBPGR's exact participation in the project be?

International Links

The Sadcc Genebank project should be supported- and strengthened. The best way to reinforce the importance, effectiveness and credibility of the initiative would be to upgrade the region's participation in the FAO system which governs the International Undertaking, the International Commission on Plant Genetic Resources and the International Fund. All Sadcc members should adhere to the Undertaking so as to legitimise their exchange policy in the international scientific community. Angola, Lesotho, Malawi, Mozambique, Swaziland, Tanzania and Zimbabwe should all be urged to join the Commission and give Sacc a full bargaining position with the other 91 participating nations so as to benefit the region's global links. The Sadcc countries could also reap input from the new FAO gene fund which would fill in the gap left to national programmes in their overall project.

Finally, this Nordic-Sadcc initiative provides an excellent opportunity to bring the stored germ-plasm under truly international governance. The FAO is currently establishing an international network of base collections in genebanks, in which existing genebanks from governments or private institutions are brough together under FAO's intergovernemental auspices, bringing the Sadcc Genebank under this international control would be a first step to guarantee safe storage and free access of the stored germplasm.

Abridged from : Seedling, October 1988, Vol. 5, No 5, Icda Seeds Campaign Apartado 23398, 08080 Barcelona, Spain. Tel: (34-3)3026495. *(SADCC-NGO Newsletter,* ICDA, April 1989)

New... Creations... Plans... New... Creations... Plans...

At the conference of church leaders of eastern and southern Africa held in Harare, Zimbabwe on 14-16 July 1986 under the theme *«The role of the churches in the liberation process in southern Africa»,* it was decided to establish the Ecumenical Documentation and Information Centre for Eastem and Southern Africa. This centre is now based in Harare, The purpose of Edicesa is to give an authentic voice to the churches in the region, as well as their ecumenical partners throughout the world.

Edicesa has the following functions :

- to collect, catalogue and store publications from countries in eastern and southern Africa which document South Africa's policies of déstabilisation of the region.
- to organise conferences and workshops for Christians, journalists, theologians, church leaders and church communicators from eastern and southern Africa and from beyond and for solidarity groups who are involved in the liberation process in southern Africa.
- to issue a newsletter and other publications illustrating the situation that confronts the churches in the region.
- to share information between churches in South Africa and Namibia with churches in the rest of the region and in the rest of the world.