
ANNUAL REPORT

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INTERNATIONAL INSTITUTE
FOR ENVIRONMENT AND
DEVELOPMENT





INTERNATIONAL INSTITUTE FOR ENVIRONMENT AND DEVELOPMENT

IIED, a nonprofit foundation with offices in London and Washington, D.C., undertakes policy studies on issues of concern to international institutions, national governments and nongovernmental organisations.

At present, IIED is especially concerned with the issues of future energy, the development of sufficient shelter and clean water for mankind, the rational management and exploitation of marine and polar resources and the environmental consequences and sustainability of social and economic development, especially in the Third World.

IIED runs an environmental information unit for the media, called *Earthscan*. It also operates a *Joint Environmental Service* of technical advice and assistance (together with the International Union for the Conservation of Nature) and maintains close working contact with institutions and nongovernmental organisations working in similar fields around the world.

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IN MEMORIAM SIR JOHN GALWAY FOSTER

John Galway Foster, prominent international lawyer, government official and longtime Conservative Member of Parliament, died on February 1, 1982 in London after a brief illness.

As co-chairman of IIED from 1975-1980, Sir John was a very active member of IIED's Board—always ready with shrewd judgments on the general strategy of the Institute and more particularly on the international legal aspects of IIED's policy studies.

Sir John, a Queen's Counsel in 1950, was knighted in 1964. As John G. Foster, he became well known to Americans during his service in the British Embassy in Washington, D.C., and on General Dwight D. Eisenhower's staff in Europe, where he held the rank of Brigadier. From 1951 to 1954, Sir John served as minister in Sir Winston Churchill's first post-war government as parliamentary under secretary of state for Commonwealth Relations. Elected to Parliament from Northwich, Cheshire in 1945, he continued to sit in the House of Commons until retiring in 1974.

The Institute will miss Sir John greatly, not only for his friendly help and counsel, but also for his inexhaustible fund of anecdotes.

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*deceased



BEACON IN A DARKENING WORLD

The year 1982 is the tenth anniversary of the foundation of the International Institute for Environment and Development. In its present form it was an offshoot of the Stockholm Conference on the Human Environment, which had as its keynote book *Only One Earth* written by our first President, Barbara Ward, with Rene Dubos. The Institute was designed to be a small nongovernmental organisation that would monitor the efforts of national and international authorities to develop the earth's resources in a way that could be sustained, even while giving higher standards of living to the rapidly increasing masses of the poor.

The Institute has maintained its role as a global monitor, warning of misdirections and mistakes, and seeking to get the agreement of far more powerful bodies to mend their ways. This is not a popular line of activity, and the Institute has no weapons to enforce its warnings, except the power of an informed and concerned public opinion. Communication of the results of our studies to an informed public remains, therefore, at the heart of our work.

On this anniversary we are publishing a review of the first ten years of conscious management of the global environment, *Down to Earth: Environment and Human Needs* by Erik Eckholm. The foreword by Barbara Ward is the last essay she wrote before her death in May 1981. This is not a comfortable book. It records that many of the pledges given at Stockholm have been unfulfilled. It warns of the dangers that lie nearer and nearer ahead—the creeping deforestation of Africa, the loss of fertile soil by erosion throughout the Himalayan watershed, the growing pollution of water supplies, and the increasing pressure of millions of jobless whose disease-hoarding shacks mushroom on the fringes of overgrown cities.

But it is not enough to warn of impending disaster; there is also a duty to give prudent and practical advice to those who seek to avert these disasters. In the past year the Institute has made a special effort to put its skills, experience and action-oriented research at the disposal of those, particularly in developing countries, who are trying to improve their environmental practices. In 1981-82 the Institute has also begun to expand its field of policy analysis and monitoring from national and international authorities to private sector institutions. In conjunction with the International Union for Conservation of Nature and Natural Resources (IUCN) in Geneva, we have established a Joint Environmental Service that will undertake consultancy assignments designed to help developing countries adopt more conserving patterns of development.

This is an additional example of the way in which a small Institute, such as ours, can widen its circles of in-

fluence by co-operating with like-minded bodies. Other examples are to be found in this report, especially under the heading of *Joint Ventures*. The most recent example is Earthscan USA, an expansion of IIED's media features service to our Washington office under the joint support of IIED and the World Wildlife Fund/U.S.

We believe that this is the sort of activity that Barbara Ward foresaw for her fragile, newly born Institute when she described it as an "eggshell armed with sledgehammers." But it is difficult at the best of times to keep the eggshell afloat financially and operationally. Indeed, in these days of world recession, the task has become increasingly onerous, but as Barbara wrote in her last book, "we have the duty to hope."

The need for awareness of these problems as the mainspring of action in meeting them grows daily. It is for that reason that we have launched an appeal for the Barbara Ward Fund to keep this Institute growing and active, a living memorial to her life's work and a beacon of hope in a darkening world.





THE INSTITUTE'S PROGRAMMES

As we look forward to the future, we look back with pride at the accomplishments of the Institute during the past year. It is our belief that 1981-1982 has been an extremely critical time in the Institute's life. The death of our former President and guiding star has been followed as she would have wished—by a burst of new activity. A full description of our accomplishments in each of the Institute's programme areas during this period are highlighted in the body of this report.

The Institute has also used our tenth anniversary year as a special time for critical self-examination and planning for the future. This exercise has led the IIED in a number of new directions—not all directly within the current range of our programmatic activities. Over the next three years, IIED anticipates some expansion in its work on a broader range of important environment and development questions in connection with the Barbara Ward Memorial Fund. A select number of these new project or programme ideas linking the work and findings of 1981-1982 with the Institute's plans and ambitions for 1982 and beyond are described in the *New Directions* section.

SUSTAINABLE DEVELOPMENT

In its past work in this field, especially in studies of the environmental performance of consulting firms and bureaucracies in development aid, IIED has identified the need for an "honest broker" function on environmental matters and between client, development funder and consultant.

What is sustainable development, and how is IIED helping countries and governments evolve strategies for it?

Sustainable development is a phrase that is gaining wider currency in the early 1980s. Quite simply, it is the process of improving the living conditions of the poorer majority of mankind while avoiding the destruction of natural and living resources, so that increases of production and improvements in living conditions can be sustained in the longer term.

Sustainable development means careful choice of the appropriate size and design of a dam, for example, and its proper integration into a river basin's development. It means reforestation of critical erosion-prone areas as an integral part of rural development. It means devoting resources to the better design or maintenance of the world's irrigation systems, almost half of which are today adversely effected by salinity or alkalinity due to bad drainage. It means integrating such social factors as public health and family planning into schemes that are too often still planned in single-purpose or blinkered fashion simply as civil engineering projects.

IIED tries to help people and governments consider the sustainability of their development efforts in a number of ways. The Institute's five-year programme of studies in this area has been described in past annual reports. Initially, the Institute focussed upon major development financing agencies, both bilateral and multilateral, whose resources for planning and institutional support give them very considerable leverage in encouraging better and more ecologically aware development practices, but whose own performance in this field has often been lamentable.

This work has resulted in a *Declaration of Environmental Procedures and Policies Relating to Economic Development* (February 1980) being signed, and the establishment by the signatories (which in 1981 transferred more than \$15 billion in concessional development financing to Third World countries) of a Committee of Development Financing Institutions on the Environment (CIDIE). This Committee has met several times and now has invited observers from a number of bilateral agencies to their meetings. They are developing a programme of studies, guidelines and training designed to increase the environmental sensitivity of their own employees as well as national governmental

officials and the clients and consultants they use, so as to increase the sustainability of the development process.

In April 1982 the Development Assistance Committee of the Organisation for Economic Cooperation and Development (OECD) convened a meeting to discuss the capacity of the twenty-six OECD members to promote more sustainable development. The position papers presented to these governments acknowledged the work of the IIED in this field and drew heavily upon IIED findings.

Also in 1981-82, an IIED study commissioned by the European Community on the European Development Fund and the Environment bore fruit. A number of its recommendations are being incorporated into the procedures of the Community's main development aid institution, including establishment of a centre for environmental review within the European Development Fund.

The main IIED project completed during 1981-82, now being prepared for publication under the title *Conserving Development*, was a comparative study of the legislative, regulatory and management capacities for environmental protection of four very different developing countries: Ghana, Malaysia, the Sudan and Venezuela. Its strategic conclusions are aimed at developing countries' planners, their advisers and officials in the development aid agencies. They are already proving valuable to the International Union for Conservation of Nature and Natural Resources (IUCN) and institutions in a number of developing countries that are examining ways of implementing the principles of the *World Conservation Strategy* (published by the IUCN in 1980) that has been widely endorsed by governments and international agencies.

In its past work in this field, especially in studies of the environmental performance of consulting firms and bureaucracies in development aid, IIED has identified the need for an "honest broker" function on environmental matters and between client, development funder and consultant. As reported last year, exploratory discussions have been held with a number of agencies and governmental representatives as to the desirable nature and location of such an activity. This is, obviously, a particularly sensitive area in the development planning and design process, and it was inevitable that any progress in establishing such a facility would be slow. IIED studies in this field have so far been focussed on the North American situation. The Institute is now seeking support to expand its studies of ways to improve the environmental advice and design of consulting firms who cover European practice, while maintaining a dialogue in forthcoming conferences on the subject in Europe and in Houston, Texas in late 1982.

Evolving a possible “honest brokerage” role in this field will, it seems, only be possible when there is a more clearly focussed demand for such services. In 1981-82 the bulk of IIED’s work on strategies for sustainable development was devoted to the establishment, with the IUCN, of an environmental advisory service. This *Joint Environmental Service* is described below under *Joint Ventures*. The main purpose of this service is to help developing countries build their own capacity to manage their environments. One result of this service—apart from strengthening laws and institutions and improving expertise in making environmental assessments of development projects and strategies—seems likely to be a demand for impartial advice and help in agreeing and monitoring the terms of reference of consulting organisations that they employ. Just what the institutional nature of this “honest brokerage” function might eventually be remains unclear, but its potential value is being increasingly recognised.

The IIED working team is led by Brian Johnson, and in 1981-82 included Waafas Ofosu-Amaah and Henry Gruppe (Washington), John Horberry (Boston/MIT) and Nora Liechtenstein (London). IIED work in this field was sponsored in 1981-82 by USAID and the U. S. National Park Service.

Careful management of critical erosion-prone areas, like this terraced farming village in Nepal must be an integral part of rural development.



HUMAN SETTLEMENTS: IMPROVING THE HABITAT OF THE POOR

Since its beginning back in 1977, IIED's Human Settlement Programme has sought to bring central issues of development policy involving housing and human settlements to the attention of the world community, and especially to that of governments and aid agencies.

A third or more of Third World people do not have a home that gives them security and basic protection from disease and the vectors that cause disease. Most rural and many urban households have no piped water; indeed, they are lucky if uncontaminated water is available within easy reach. Most have no latrine or, if they have one, it is often so badly designed and maintained that it is in itself a serious health risk. They have no electricity. They live three, four or more persons to a room. And in many cities, since no legal house is within the poor majority's means, they are forced to live on illegally occupied or subdivided land.

Despite the fact that some governments and aid agencies are giving more attention to these problems, when measured against need, they make little impact in most nations. The priority given to helping the lowest income groups improve their housing and living conditions remains low. Those projects and programmes that are implemented only rarely include the active participation of the groups for whom they are intended. The result is a continual mismatch between what is needed and what is produced. And rarely do the programmes recognise the link between poor housing conditions and lack of an economic base.

The unique aspect of this programme is its close partnerships with institutions in both the North and South. In assessing Third World governments' housing, land and settlement policies and the extent to which these reach their population with improved housing and living conditions, IIED works with the Centre for Urban and Regional Studies (CEUR) in Buenos Aires, the Institute of Development Studies (Mysore, India), the Faculty of Environmental Design (Lagos University, Nigeria), the International Institute for Development Research (Allahabad, India) and the Department of Architecture (Khartoum University, the Sudan). Following its work in assessing seventeen Third World governments' response to housing and settlement problems between 1977 and 1980, this network of institutions assessed twelve additional national government housing programmes during 1981-82.

While in the first phase, the concentration was on the larger and more populous nations; in this second

phase, the focus has been on relatively small and less populous nations: Bhutan, Fiji and Papua New Guinea in Asia; Togo, Central African Republic, Somalia and Sierra Leone in Africa; Yemen Arab Republic and People's Democratic Republic of Yemen among the Arab nations; and Panama, Paraguay and Costa Rica in Latin America. The reason for choosing such relatively small and less populous nations is that their needs and the special difficulties they have in formulating and implementing realistic housing and settlement policies is little studied. Yet about half of all Third World nations have less than 5 million inhabitants. As in the previous work, regional reports will be produced by our collaborating institutions while IIED staff will synthesise all twelve national reports to highlight facts and draw comparisons and conclusions for policymakers.

IIED and its collaborating institutions have also continued their work on the present and potential role of small towns and intermediate settlements in the development process. During 1982, detailed regional studies were in progress in five areas (two in India, one each in the Sudan, Argentina and Nigeria). The purpose of these studies is threefold. The first is to establish the link between the evolution of the settlement pattern, the economic base (and the natural resource base that underpins it) and the social structure. The second is to investigate the housing and environmental problems in the settlements of each region. The third is to test existing theories on the role of small towns and intermediate settlements in development against the findings of the regional studies.

Despite the fact that in most Third World nations the majority of the urban population lives outside cities of 100,000 or more inhabitants—and will continue to do so at least for the next twenty years—there is incomplete information as to what role secondary urban centres will play now and in the future if governments are seeking to spread social and economic development more widely. More and more Third World governments are seeking to decentralise urban and industrial development away from their major cities (or city). Most attempts to do so in the past twenty years have met with little success and have often been implemented at considerable cost to the national economy.

In 1983, IIED and its network of collaborating institutions would like to be able to offer governments and agencies some guidelines as to how the growth and development of "intermediate" settlements may be boosted and housing and living conditions there improved without heavy economic costs.

IIED staff have analysed the extent to which the

major multilateral aid agencies have supported projects aimed at improving housing and living conditions and the size of the settlements that are the major beneficiaries of such aid. In fact, only a very small proportion of multilateral agency funds—no more than 9 percent—support projects such as low cost housing, site and services, slum and squatter upgrading, water supply, sanitation, and building materials projects. And the small proportion that does go to these desperately needy areas is heavily concentrated in national capitals and large cities. During 1982, a detailed report for Asia was completed, complementing those published for Latin America and for Africa in previous years, and syntheses of the research findings were published in *Habitat International* magazine.

The Human Settlements Programme continues to sponsor seminars, symposia and conferences on housing and settlement issues in collaboration with other institutions. During 1982, the programme is sponsoring seven events including a third symposium on Territorial Settlement in the Southern Cone of Latin America (in collaboration with the Latin American Social Science Council, the Catholic University of Chile and the Planning and Environment Research Centre); the second seminar on Environment and Urbanisation (in collaboration with the Comision Interamericana Formacion Ciencias Ambientales, the Latin American Social Science Council, and the United Nations Environment Programme, Mexico); the third meeting of the Group on Urbanisation in Latin America (in collaboration with the Inter-American Foundation, Centro Tepoztlan and the Consejo Nacional de Investigaciones Cientificas y Tecnicas, Mexico); a seminar on the training of urban and regional planners in Latin America (in collaboration with the United Nations Centre for Regional Development, the Inter-American Planning Society, the Centre for Urban and Regional Studies and the Latin American Social Science Council); and a meeting of European research groups involved in issues relating to Third World housing and settlement problems (in collaboration with Groupe de Recherche et d'Echanges Technologiques and Bouwcentrum International Education).

The Human Settlements Programme's work is directed by Dr. Jorge E. Hardoy from CEUR, Buenos Aires (Senior Fellow), with David Satterthwaite and Silvia Blitzer (Research Associates). The programme is sponsored by the Canadian International Development Agency, the Swedish Building Research Council and the Swedish Agency for Research Cooperation with Developing Countries.

The Institute's Human Settlements Programme works with national governments and local university research teams to improve living conditions of the urban poor.

James Pickerell/World Bank



ENERGY

Conservation: The Fifth Fuel

Nearly every government now regards energy conservation as the largest single energy resource: the "fifth fuel" that can provide more relief from the stresses of high fuel prices, and provide it more rapidly and permanently than investing in oil, gas, coal or nuclear power.

While there may be broad agreement that the conservation resource is large—in developing as well as developed countries—there is much less certainty on how to "mine" it.

In most developed countries the view that higher fuel prices and market forces can do the trick has regained ground in the past year or two. Financial help for conservation investments has tended to fall off. Consequently, the enthusiasm of governments in promoting energy conservation (as well as renewable energies and other substitutes for oil) has also dwindled.

Naturally, this change has been bitterly opposed by the many who feel that market forces alone are not sufficient. Yet surprisingly, perhaps, the arguments about

which are the best conservation strategies cannot be resolved even in Organisation for Economic Cooperation and Development (OECD) countries with their rich sources of information because there is still only the sketchiest of outlines available about how energy is used in such important sectors as housing, offices, schools and other buildings, as well as large parts of industry.

Without good data on energy use at a sectoral level, governments' hands are tied. They cannot measure the progress of energy conservation (or lack of it) from year to year, monitor the effects of policies, compare national performance with that of other countries or set targets for the future. Nor can they tell whether higher fuel prices—or what other policy measures—actually work.

Energy conservation—such as more efficient cooking stoves—is vital to Third World countries who are dependent on scarce fuel resources.



Energy: The Cost of Transition

In the past year much of IIED's work on energy conservation has focussed on this information base and its policy implications. The area we have looked at most closely is housing because it is a major and politically sensitive energy use sector. Moreover, it has great potential for energy saving since it is a sector that is in the front line for important "new" technologies such as solar heating.

One of the Institute's studies collected a wide variety of information related to energy use in the housing stocks of six of the member countries of the European Economic Community (United Kingdom, Germany, Ireland, Belgium, Holland and Denmark). It found many serious gaps in the information base so vital to sound energy and conservation policies and helped to lay the groundwork for a major analysis of energy conservation by the European Commission's Joint Research Centre, Ispra, Italy, which funded the study.

The second main area of the Institute's conservation work has been the development of computer models and associated data for understanding in detail the use of energy in the entire housing stock of the United Kingdom (U.K.). Our aim is not just to estimate how much energy could be saved overall and at what cost by various conservation measures (several studies have already done this), but also to examine how costs and savings differ by type of housing (e.g., privately owned or rented vs. publicly owned), which fuels would be saved and how these fuel savings vary between winter and summer. Determination of where the largest energy savings could be made is important for targeting effective conservation policies. Fuel savings and their timing are vital to the fuel supply industries. Insulating a loft, for example, may not only save on a family's fuel bills, it may also reduce the need for costly power stations and gas supply systems whose capacity is only essential in the depth of winter when demands are greatest. This work will be completed in mid-1982 and is supported by the U.K. Department of Energy and British Petroleum.

As an outcome of this work, IIED has made many contributions during the year to the debate in the U.K. and internationally on energy conservation and the broader reaches of energy policy through discussions in Scandinavia, France, Italy, Belgium, Holland, West Germany, the European Commission, the OECD and the United States.

The Institute is studying the environmental and economic effects of the commercialisation of firewood in developing countries.

The lessons learned may be vital to effective land use planning.

Less visible than the rich man's oil crisis of the 1970s was the cost to poor countries as the kerosene alternative to cutting trees for fuel became prohibitively costly. Meanwhile, populations have continued to grow at a rate that will double in fifteen years. Most of this population is concentrated in urban areas that are supplied by a rural fuel source such as firewood. To help policymakers plan to meet the demand for fuel in developing countries and the effects of firewood scavenging and denudation, the Institute has embarked upon a series of special studies. The incentives, hindrances and cost disparities between various substitute fuels—oil, solar power, crop wastes and wood—will be analysed.

The first of these studies focusses on the process of commercialisation of fuelwood, whereby demand for wood—often in urban centres to which rural people have been rapidly migrating—may reach out into remote areas that previously only served local inhabitants with wood fuel as a "free" good. Some of the effects of this commercialisation on the environment—deforestation, soil erosion and consequent desertification



Energy Technology Transfer: Can All Sides Benefit?

—are all too obvious, especially in Africa. But its other costs are more subtle. The present Third World phenomenon of commercialising fuelwood has not been understood, analysed or quantified. Indeed, studies of fuelwood and charcoal markets are practically non-existent.

The lessons learned may be vital to effective land-use planning—for example, locating fuelwood belts, plantations, charcoal production and forest conservation—as well as to well-informed choice of investment in alternative sources of fuel.

IIED's fuelwood commercialisation project will begin casework in Kenya in 1982 in collaboration with the Beijer Institute of Stockholm. The project is due for completion in 1983-84.

During the spring of 1981, the energy and development team worked with the International Fund for Agricultural Development (IFAD) to provide an internal briefing on the relevance of energy development to the agency's work to improve food production among the rural poor. In fact, apart from fuelwood, the relevance of the majority of new and renewable energy sources is of marginal significance in this sector. The team also helped in the preparation of energy guidelines for use by IFAD identification and evaluation teams and in the preliminary drafting of its position paper for the United Nations Nairobi Energy Conference.

In conjunction with El Colegio de Mexico, IIED held an international symposium on "Energy Strategies for Subsistence Agriculture" in early July in Mexico City. Funding was provided by the Dutch and German governments and El Colegio de Mexico. A report of the symposium containing a review and analysis of the problems of energy in subsistence agriculture together with eight country studies is being published by Westview Press, Colorado under the title "Energy in the Transition from Rural Subsistence" (Eds. Wionczek, Foley, van Buren), and a Spanish edition by El Colegio de Mexico.

Technology transfer means quite different things to a solar scientist in a developing country, an entrepreneur and a government policymaker.

Over the past two years, scores of international studies and a major U.N. conference have deflated much of the enthusiasm for solar energy and other renewable energy sources that was so prominent in the late 1970s. Because of the structure of demand already in place in much of Europe, the U.S. and Japan, it is unlikely that solar energy will play a dominant role in satisfying total energy demands in the next ten years. This is particularly evident if one compares the results that can be achieved with more efficient use of conventional sources.

This is not the case everywhere in the world today. In developing countries that have not yet fully electrified their economies, renewable technologies could produce a more immediate impact. However, this new generation of renewable energy technologies can be very capital-intensive. Moreover, it is controlled to a large extent by the research labs and industrial firms of the North. Is it possible that a new deal could be found for the transfer of energy technology to the South from the North, a transfer to developing country control not just of finished goods, but of solar energy know-how, production facilities and servicing networks? Could such a new deal also serve as a means for Northern solar industries to bridge the interim period between initial product development and full-scale commercialisation in their home markets?

In 1982 the IIED published *Solar Energy Technology Transfer: The Problems and Opportunities*, the final report of its eighteen-month study on solar energy technology transfer. It shows that energy technology transfer is as much a *problem* as it is a solution. Part of the problem is the difficulty of distributing the benefits from the transfers. Technology transfer means quite different things to a solar scientist in a developing country, an entrepreneur and a government policymaker. It means something quite different again to an established Western company. IIED's study focusses not on energy supply or demand patterns in the immediate future, but on the long-term issues affecting the availability of new energy technology supplies for the developing countries.

The final report includes a review of promising new technologies, an analysis of Northern solar science and commercial entities as possible suppliers of solar technology to the Third World, and an examination of

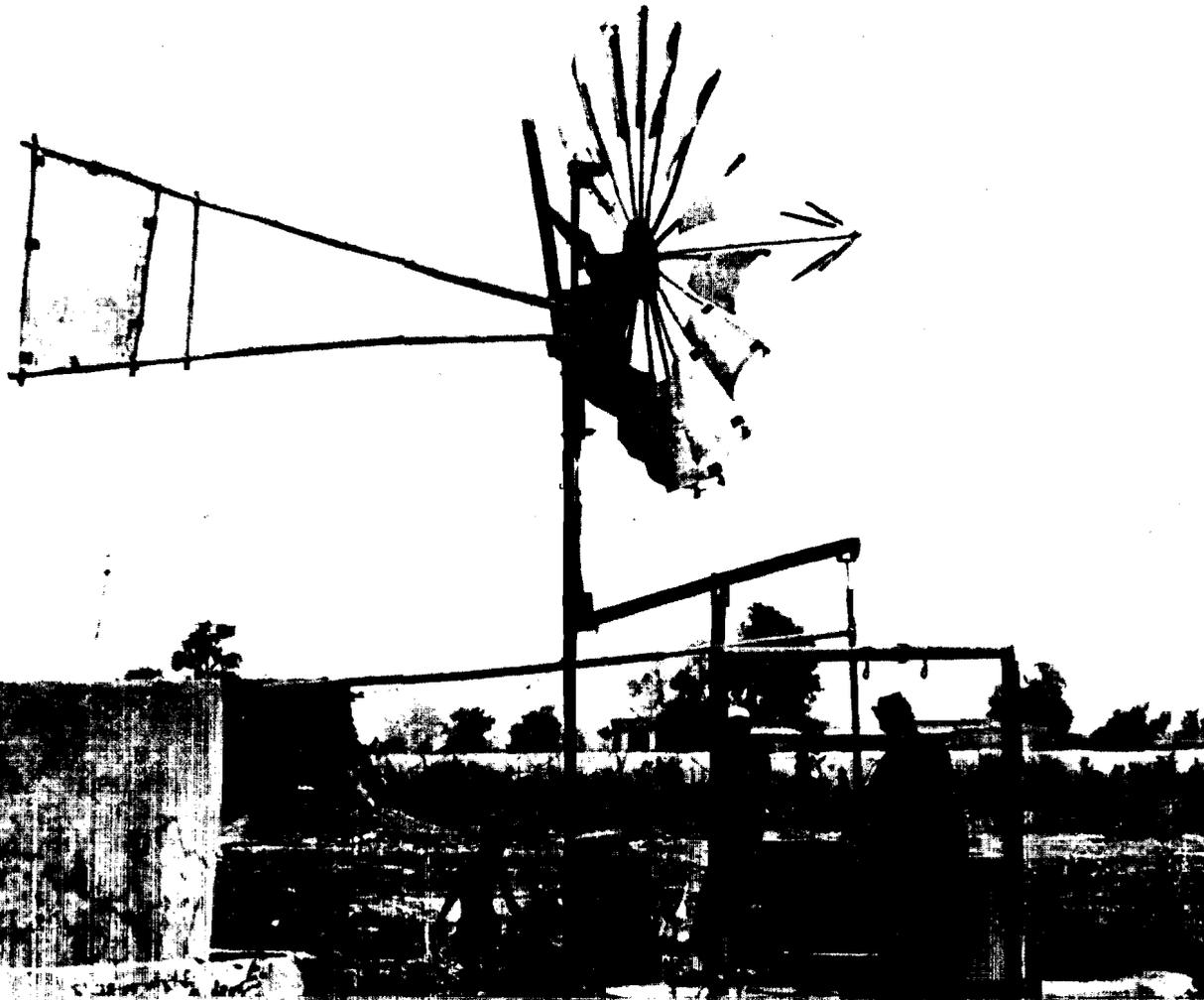
eight developing countries as potential solar technology users. The IIED report formulates a number of recommendations for government officials, research scientists, entrepreneurs and officials in international institutions.

To test the practical application of its findings, IIED will, in 1982-83, be convening a series of small workshops bringing together private sector businessmen and investors from developed and developing countries to define in greater detail how they can contribute to increased renewable energy use in projects that are developmentally sound.

The Institute is engaged in the current debate amongst policymakers about what is the most appropriate energy source to fit local energy needs—low technology like this windmill or more traditional sources.

The IIED Energy Programme was funded from a variety of sources. The Institute's work on the costs of transition is being funded by the Swedish International Development Agency (SIDA). IIED's solar energy technology transfer project has been funded jointly by the Dutch Foreign Ministry, the U.S. Solar Energy Research Institute (SERI), the German aid agency (GATE), the French Solar Energy Commission (COMES) and the Special Fund for Science and Technology of the U.N. Development Programme.

IIED's energy project team is led by Gerald Leach, whose own work focusses on conservation and substitution. Ariane van Buren and Gerald Foley have focussed upon the costs of energy source transition. The solar energy project team consists of Anil Agarwal (IIED Associate Fellow based in New Delhi, formerly Assistant Director of Earthscan), Thomas Hoffmann (IIED General Counsel) and Todd Bartlem (Research Associate). The IIED Energy Programme was backed by consultants in both the developed and developing countries. The project team for the renewable energy workshops will be Todd Bartlem and Thomas Hoffmann.



U.S. Agency for International Development

MANAGEMENT OF MARINE AND POLAR RESOURCES

Though quite different in scope and nature, these two fields of work are both concerned with the management of resources where territorial ownership or control are problematic.

The Institute's policy studies concerning marine and polar resources are grouped together here to stress one central common characteristic. Though quite different in scope and nature, these two fields of work are both concerned with the management of resources where territorial ownership or control are problematic.

This characteristic of managing resources in what is more or less of an international "common" or shared resource inevitably shapes the approach of both fields of study. It also renders their findings of potential importance not only to the present managers or exploiters, but also to others who may have some future need of, or claim upon, the resources in question.

Marine Programme

The collapse of many major fisheries and the increasing interest in expanding fisheries (including new and hitherto unexploited resources) needed to feed a protein-hungry world poses a fascinating complex of questions. These questions involve the marriage of the disciplines of economics, political science and biology. But the key question that needs to be answered first concerns feasible strategies that permit sustainable utilization at the most basic scientific level.

The Marine Programme at IIED (a joint programme with IUCN) has been set up in an attempt to answer just these questions. The initial work of the programme has been focussing on several case studies where valuable fish resources have been damaged, possibly irredeemably. The programme is analysing these failures and trying to develop the necessary scientific apparatus, which, if used, would make such failures less likely. Put in its simplest form, the group is studying different types of marine ecosystems to determine what are the limits beyond which the system can no longer produce sustainable yields. The team has a mix of skills in the disciplines of mathematics, economics, ecology and computer science as the work is concerned mainly with the analysis and interpretation of data.

Interestingly, there are many parallel problems in other areas of resource management. One such parallel to marine systems where slower growing, more valuable fish stocks tend to be replaced by the faster growing and less valuable species occurs in tropical moist forests. Here hardwoods, like mahogany and rosewood, are replaced by less valuable balsa and bamboo trees as forest exploitation proceeds. The group is trying to discover ways in which such degeneration processes may be slowed, avoided or stopped altogether.



Davis / U.S. Agency for International Development

One major concern of the study has been the need, well recognised in the developing world, to manage renewable resources in the absence of substantial research programmes. The group has developed a form of risk analysis that enables estimates of levels of sustainable yields to be made in a context of very limited data. The technique for the "management of uncertainty" has been used by the United Nations Food and Agriculture Organisation (FAO) in assessing the potential of hitherto unexploited marine resources.

While much of the early work of the programme has concentrated on basic scientific questions, in two areas the science is already sufficiently well based to permit management problems to be examined in an integrated way, using both economic and biological analysis. One such study by IIED for the European Economic Community (EEC) has examined the policy implication of reopening fisheries on stocks that have previously been depleted. A second has examined ways in which developing countries may expand their own fishing industry, while benefiting distant water fleets to exploit the same resources.

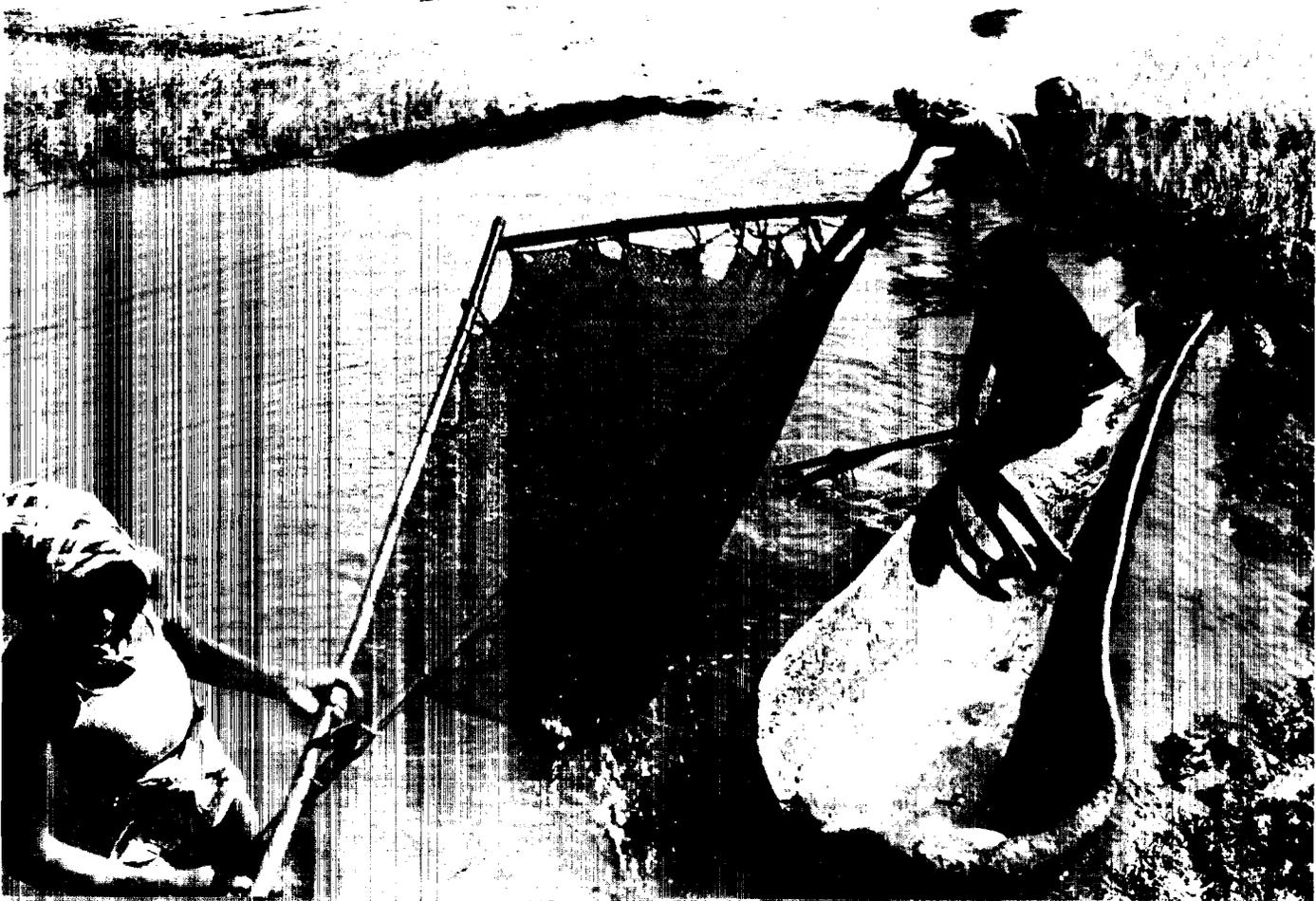
IIED's Marine Programme has pioneered new techniques to estimate levels of sustainable fishery yields when only very limited data is available.

There are two further areas where the group is having some appreciable impact. The first is in assessing the status of the great whale populations managed by the International Whaling Commission (IWC). Here mathematical techniques developed at IIED form the basis for much of the analysis performed by the IWC Scientific Committee.

The second is in developing the scientific basis for management of the Southern Ocean. Here the group has concentrated not only on the interaction between the depleted whales and krill, but has also been involved in planning the future scientific work necessary for assessing the potential of krill as a major fishery resource.

The main programme is directed by Dr. John Beddington, with research assistance from Justin Cooke, Simon Northridge and Chris Brindle. William de la Mare is a visiting fellow.

The funding for this programme comes from IUCN, the World Wildlife Fund/International (WWF/I) and WWF/U.S. In addition, financial resources for particular subprojects have been provided by the Commission of the European Community, FAO, the Peoples Trust for Endangered Species, the Centre for Environmental Education (CEE) and Greenpeace.



Mark Edwards/Earthscan

Polar Resource Management

Natural resources are, of course, at the heart of most national interests in Antarctica and the possibility of exploitation brings with it serious environmental implications.

In its implication for future resource management, the clash between Britain and Argentina over the Falklands/Malvinas is but the tip of an iceberg. The IIED has been studying the problems involved in resource management in this area since 1976.

The whole Antarctic continent is subject to jurisdictional uncertainty. Seven countries have territorial claims in Antarctica, three of which overlap. Another seven countries demonstrating close interest in the area neither maintain a claim of their own nor recognise those of others. The uncertainty does not end here. All fourteen countries are parties to the 1959 Antarctic Treaty under which the continent is administered today. This Treaty is challenged by other members of the international community who are mindful of the way in which the deep seabed beyond national jurisdiction has been declared the common heritage of mankind. In 1981-82 one of these outsiders—India—sent an expedition to Antarctica.

Natural resources are, of course, at the heart of most national interest in Antarctica and the possibility of exploitation brings with it serious environmental implications. In 1980, the Institute produced a study entitled *The Management of the Southern Ocean*, which looked at the political, legal, biological and economic problems inherent in harvesting krill, a small shrimp-like pelagic crustacean found in abundance in the Southern Ocean surrounding the Antarctic continent. This report has been heralded as a uniquely comprehensive analysis of these problems. An IIED team continues to investigate the biological issues, and its leader is a member of the U.K. delegation to the meetings of the Convention on the Conservation of Antarctic Marine Living Resources that has been established to manage this fishery.

Since 1980 the Institute has turned its attention to Antarctica's mineral resources, chiefly oil and gas. A growing number of countries are now undertaking seismic work on the Antarctic continental shelf with a view to evaluating the area's resource potential. All the indications are that the shelf may harbour rich reserves of oil and gas, although serious technological problems remain to be solved before this could be extracted.

At the beginning of 1982, the Institute completed a study on the management of Antarctic mineral resources under the sponsorship of two U.S. government agencies. The U.S. and its partners in the Antarctic Treaty are now engaged in a series of negotiations to establish

a framework for the possible exploitation of Antarctic minerals. This report was primarily designed to assist the U.S. government in evaluating the possible management options available.

After an extensive review of the resource base and potential environmental implications, five different politico-legal approaches to the central problem of jurisdiction were examined in detail. The report has aroused considerable interest amongst the Treaty decisionmakers, and in U.K. circles it is thought that it may also throw some light on future administrative arrangements for the Falklands/Malvinas. The report is now being adapted for a wider audience and will soon be published as a monograph.

In its future work in this area IIED will be looking at some of the issues involved in widening public understanding of the Antarctic Treaty system. It will also continue to monitor Treaty developments, in particular the talks on minerals.

The Arctic

In an attempt to stimulate more responsible and informed public discussion of Arctic issues, IIED intends to present an overall view of the region and its problems.

The Arctic is rarely thought of or discussed as a whole. Not only is it divided along national lines, but the different aspects of this region are considered in isolation from one another. No comprehensive view is taken of the Arctic's oil and other minerals, its native peoples, environment, fisheries, wildlife conservation, role in sea and air transport, strategic and military importance or issues of sovereignty.

In an attempt to stimulate more responsible and informed public discussion of Arctic issues, IIED intends to present an overall view of the region and its problems. The initial product is intended to be an Earthscan briefing document for journalists. This may be followed by a paperback book for industry, governments and other decisionmakers.

The Polar Resources Programme is directed by Barbara Mitchell (London). Lee Kimball (Washington office) follows polar resource and Antarctic Treaty developments and is a member of the U.S. delegation to Antarctic meetings. The Institute's polar resource policy studies have been supported by the General Service Foundation, the U.S. Environmental Protection Agency (EPA) and the U.S. National Oceanic and Atmospheric Administration (NOAA).

EARTHSCAN



Kay Muldoon / World Bank

Issues Highlighted in the Past Year: Renewable Energy and Water

The growing demand for fuelwood causes soil erosion, desertification and reduces agricultural potential, while dung and crop wastes go as fuel for fires rather than fertilisers for fields.

More and more, issues of environment and development are becoming issues of energy. Energy issues were a major focus of Earthscan activities in 1981-82. Half the world relies on firewood, charcoal, animal dung and agricultural wastes for cooking and heating. Today, more than 100 million people cannot get enough wood for their minimum energy needs; another 1 billion suffer shortages. By the year 2000, more than 2.3 billion rural people will need to be provided with cooking fuels to replace firewood.

But already Third World nations are bearing debts that threaten the stability of the world banking system, due mainly to their oil import bills. In the countryside, the growing demand for fuelwood threatens environmental stability and agricultural potential while overcutting causes erosion and desertification and dung and crop wastes go as fuel for fires rather than as fertiliser for fields. With wood scarce and oil dear, where will the energy for development come from?

Over 1981-82, Earthscan organised a major media programme on the "new energies," centred around the Nairobi UN Conference on New and Renewable Sources of Energy (UNERG) in August 1981. This programme began with a press briefing seminar at the Hague in cooperation with TNO (the Netherlands Association for Applied Scientific Research). Speakers included Dr. Soedjatmoko, rector of the United Nations University, who described the relationships between food and energy; IIED Senior Fellow Gerald Leach, who doubted

whether the new and renewables could find a place in the Third World before they were proved in the North; UNERG Secretary-General Enrique Iglesias, who spoke of the limited goals of his conference, which he saw mainly as a consciousness-raising exercise; Professor David Hall of Kings College, London, who reviewed optimistically the possible uses of plant-based fuels; and Jose Lutzenburger, Brazil's leading environmentalist, who outlined the social and environmental problems caused by his country's fuel-alcohol programme.

The seminar briefed twenty-eight journalists from twenty-one countries. The Third World journalists visited some of the Dutch laboratories, workshops and field trials devoted to the new energies. The seminar was funded by the UN University and by the Department of Economic and Social Information (DESI), Geneva.

With financial support from DESI in New York and the Development Forum in Geneva, Earthscan prepared two briefing documents for the seminar. Two covered fourteen new and renewable energies. A third covered fuel alcohol, its potential, its drawbacks and the "fuel vs. food" controversy that surrounds it. They were produced in a version for journalists in time for the seminar and later published as paperbacks. The two on the fourteen energy sources were combined in a folder with a booklet produced by Development Forum and distributed at the UNERG Conference. All the briefing documents were distributed to Earthscan's global network of over 500 journalists.

Access to clean water and adequate sanitation is fundamental to human health and economic development.

Following the seminar, the UNERG secretariat provided support for an information programme during the Nairobi conference itself. Six press lunches were held, journalists were taken on two field trips in Kenya and daily news stories were distributed over the Reuters wires to a group of Earthscan subscribers. Earthscan also produced a seventy-page guide for journalists to fifty-six UNERG conference documents, giving each document a rating ranging from one to five stars, indicating its usefulness to journalists. However, the guide proved to be so popular with delegates and nongovernmental organisations, as well as with journalists, that the UNERG secretariat paid for the printing of 500 extra copies in mid-conference.

Earthscan's guide and briefing documents were widely described both by the press and UNERG delegates as the clearest and most concise documents at the conference. Earthscan has collected over 100 pages of clippings from top newspapers that resulted directly from its energy programme.

Following the Nairobi meeting, Earthscan decided to continue its energy programme by focussing on some of the very few new technologies that can be of immediate use to Third World countries. Two additional researchers on the Earthscan staff began by looking at gasification by partial combustion (producer gas). They will also study small hydroelectric projects, the use of solar cells to recharge batteries, solar crop drying and water heating. Their reports will go to governments, aid agencies, NGOs and journalists. Earthscan is also developing an information programme, funded by the Swedish International Development Authority (SIDA), on the global fuelwood crisis, with a major emphasis on solutions and alternatives.

Logging Efforts for Clean Water

Earthscan has followed up its support of the 1980 launch of the International Drinking Water and Sanitation Decade with an information programme monitoring the progress of the Decade. Earthscan briefing documents on the Decade in general, and on water and sanitation in India, Kenya and Colombia in particular, were combined and published as a 148-page paperback. A special Earthscan bulletin, *WaterLog*, was started to keep journalists, NGOs and others interested in the Decade in touch with the latest developments. Over 350 journalists and experts in the field have asked to receive it, and the list is growing rapidly. Earthscan has recruited Sumi Krishna Chauhan of the *Hindustan Times* (India) to coordinate the programme.



Mark Edwards/Earthscan

Earthscan News Service: Feature Service

Earthscan continues to produce regular weekly features in English that are distributed to over 120 newspapers in sixty countries; most of these are translated into French, Spanish, or both, depending on regional interest. Editorial director Lloyd Timberlake visited Poland shortly before martial law was declared and returned with the only hard statistics to be published in the West on the lethal industrial pollution of southern Poland. This material was published in major European newspapers and scientific journals and was the subject of radio interviews. With support from the International Planned Parenthood Federation, Timberlake and photographer Mark Edwards visited Bangladesh to collect photo-articles and increase Earthscan's growing library of development photographs.

Information on important environment and development issues is spread via Earthscan's global network of print and media journalists.

Briefing Documents/Paperbacks:

Earthscan published three briefing documents over the past year in addition to the energy reports. *Mud, Mud*, a paperback written by Anil Agarwal and funded by the UN's Habitat Centre for Human Settlements, outlines the enormous potential for earth-based building materials. It quickly became the bestselling Earthscan paperback of the year, with requests for copies coming in from all over the world. *Habitat—Five Years After*, surveyed housing in seventeen nations containing 60 percent of the Third World's population. Written by Jorge Hardoy and David Satterthwaithe of IIED, it found that very few Third World countries had begun to implement the recommendations they had agreed upon at Habitat, and that housing for the world's poorest had gotten worse rather than better. The third briefing document, *Stockholm Plus Ten*, analyses what environmental progress has been made in the decade since the 1972 UN Conference on the Human Environment. Produced in a paperback edition as well, it looks at twelve specific case studies, discusses the effectiveness of the United Nations Environmental Programme (UNEP) and looks to the environment issues of the future. The briefing document was part of an Earthscan information programme news-pegged to UNEP's Stockholm anniversary activities. All the briefing documents are available in French and Spanish as well as in English.

A Special Book

Earthscan provided logistical, editorial and promotional help for Erik Eckholm's new book *Down to Earth: Environment and Human Needs*, a compelling statement of the new "people-based" environmental thinking that has emerged in the decade since the UN Stockholm Environment Conference. The foreword was Barbara Ward's last piece of writing and the volume seems likely, both from its content and from public response so far, to emerge as a signpost document between thinking on "conserving development" in the 1970s and in the 1980s.

Newsletters

Two new newsletters have been introduced to keep Earthscan's network informed of recent developments. *Earthscan News* is aimed at journalists, while the *Earthscan Report* goes to funding agencies, governments and some NGOs interested in Earthscan's activities. The *Earthscan Bulletin* continues to carry shortened versions of features and briefing documents to NGOs and to television and radio networks.

Kay Muldoon/World Bank



Earthscan Washington

In March 1982, Earthscan opened a North American bureau in the Washington office of IIED. Its launching and activities are referred to in the *Joint Ventures* section of this report.

Plans for 1982-83 include information programmes on desertification and the conservation of wild genetic resources. Briefing documents will cover commodities, tropical moist forests, the Arctic, and include a series on energy technologies. A training workshop for Indonesian journalists and broadcasters is also being organised.

Support for Earthscan

Earthscan has received funds from UNEP, the Netherlands Foreign Ministry, the World Bank, the Swedish International Development Authority, Development Forum (via DESI), UNICEF, the U.S. Forest Service, the World Wildlife Fund/U.S., the UN University, DESI (Geneva), the UNERG secretariat, the U.N. Centre for Human Settlements and the International Planned Parenthood Federation.

On 1 April 1982, Earthscan's staff included: director, Jon Tinker; deputy director, John Austin; editorial director, Lloyd Timberlake; assistant director, Kath Adams; energy programme manager, Gerald Foley; assistant energy programme manager, Geoff Barnard; bulletin and languages, Dominique Side; Washington bureau chief, Athleen Ellington; outreach, Liz Carlile; secretaries, Shana Magraw, Jacqui Craw, Sally Davies and Tonona Taylor.

JOINT VENTURES

It has always been the aim of the IIED to work, wherever possible, through cooperative links with other organisations around the world.

It has always been the aim of the IIED to work, wherever possible, through cooperative links with other organisations around the world. In a sense, almost all of IIED's policy study projects are collaborative ventures with other institutions to a greater or lesser degree, as will be seen from the above account of the Institute's main programme areas, especially in human settlements. With the IIED Board's encouragement, the Institute's management expects this trend to continue. In fact, 1981-82 saw two new joint ventures launched: one is the *Joint Environmental Service* established between IIED and the International Union for the Conservation of Nature and Natural Resources based in Gland, Switzerland; the other is an Earthscan unit in the IIED's Washington office under joint sponsorship of the IIED/Earthscan and the World Wildlife Fund/U.S. Other joint ventures, established in previous years, have continued to yield important results. The following is a brief account of the two new ventures and of continuing joint activities.

In all of its cooperative activities, the IIED strives for a balanced concern for development and for the conservation of the environment.

The Joint Environmental Service *IIED with IUCN*

The service will have a European headquarters in Gland, Switzerland, a North American headquarters in the IIED's offices in Washington, D. C. and a focal point for both recruitment and operational support in IIED's London headquarters. An agreement, signed by the chief executives of IIED and IUCN in January 1982, committed the two organisations to conduct joint consultancy work principally with governments of developing countries and international development financing agencies, in support of the ecologically-based "conserving development" of the IUCN's World Conservation Strategy. It was recognised in forming the Joint Environmental Service (JES) that joint projects between the two institutions could combine the economic, social and institutional expertise of IIED with the natural science expertise of IUCN. Multidisciplinary teams from IIED and the IUCN could help developing countries to strengthen their own capacity to plan and carry through environmentally sound development schemes and projects.

The goal of the JES, as at present conceived, will be to help developing countries create or strengthen institutions, legal frameworks and methodologies that will improve their ability to employ environmentally sound land-use planning and environmental assessment of



proposed development schemes and projects. It will approach this goal by:

- *Providing consultants* to national and international development financing institutions and technical assistance to borrowing or recipient countries;
- *Undertaking policy research* in the form of case studies and situation analysis; and
- Helping developing countries and development assistance agencies to *support and evolve the education and training programmes* that provide conceptual and practical education in the need for multidisciplinary approaches to the physical development of territory.

One of IIED's strengths is its ability to collaborate with developing country institutions to provide technical assistance, policy analysis, education and training.



Alain Proff / World Bank

Earthscan's Washington Bureau

The U. S. and Canadian governments, along with the North American nongovernmental organisations, have a very great impact on global development and environment activities. With this in mind, Earthscan has opened a North American office to reach the media, legislators, policymakers, business and industrial leaders, aid agency officials and concerned citizens in the United States and Canada.

With support from the World Wildlife Fund/U.S. and UNEP, Earthscan inaugurated its Washington bureau in March in IIED's Washington offices. American journalist Athleen Ellington, former London editor of the *Earthscan Bulletin*, became bureau chief. During the short period the office has been operating, Earthscan material has appeared in the *New York Times*, *Boston Globe*, *Miami Herald*, *Baltimore Sun*, *Newsday* (Long Island), *Omni*, *Science* and *Smithsonian*. James Buckley, U. S. Under Secretary of State for Security Assistance, Science and Technology, wrote that he was using the Earthscan briefing document *Stockholm Plus 10* to help plan the U. S. position at UNEP's Session of a Special Character in Nairobi, and U. S. Council of Environmental Quality Chairman, Alan Hill, distributed the same document to members of the Administration's Global Issues Working Group.

The European Programme *IIED with the Institute for European Environmental Policy*

What distinguishes the European Community from any other intergovernmental organisation is that it possesses its own institutions for creating legislation. Unlike other intergovernmental meetings, which may result in a high-sounding declaration of principles or promises of action that for one reason or another may then not be followed up, deliberations within the European Community must pass the acid test of legislation, applicable not just in one country (with the possibility of easy repeal or amendment if it proves unworkable) but in ten countries. The process may be slow—though the European ban on the import of whale products shows how quickly the machine can move if necessary—but it is solid.

Policymaking in the European Community is thus becoming increasingly complex, the result not only of political forces in one member state but also of the interplay between the different member states. Anyone wishing to follow the evolution of Community policy in order to guide and influence it must, therefore, follow developments in several countries simultaneously, as well as in the institutions of the European Community itself. European policymaking is neither what is done by

U.S. Agency for International Development



IIED endeavors to fulfill its role as a global environmental monitor in order to enhance the living conditions of the world's poor as well as to ensure the earth's resources are exploited on a sustainable basis.

the European Community nor the sum of the policies of the member states—it is a much more dynamic process.

In order to be involved in this process the Institute has, since April 1980, been running a joint venture with the Bonn-based Institute for European Environmental Policy (IEEP), thereby providing IEPP with a London office to complement its other offices in Bonn and Paris and providing information about environmental policy development in Britain, particularly in both Houses of Parliament. The London office is also responsible for managing a number of research projects that provide extra data for illuminating the environmental debate in Europe.

One study conducted in 1981 was commissioned by the European Conference of Ministers of Transport (ECMT) and concerns foreseeable trends in freight transport, taking into account environmental constraints. This will be published and presented at a Symposium in Madrid in 1982.

Another study compares the public inquiry in England and the *enquête publique* in France as forms of public participation in environmental decisionmaking. It will be published in 1982. A third study concerns the overall effect of the environmental policy of the European Community on Great Britain.

The general principles of policymaking that this joint IIED/IEEP venture is studying also have implications for the aid and development policies of the member states of the European Community. The lessons learned in one field thus help IIED in another field.

Nigel Haigh directs the London office of the European Programme. In 1981-82 he was assisted by Gertrud Weber.

IIED Environment/Development Lecture Series

In the United States, the Institute's Washington office hosts a luncheon lecture series that focusses on international environment and development topics. These luncheons have come to serve as informal occasions for government policy staff members (from the World Bank, Agency for International Development, State Department, Environmental Protection Agency and the Congress) to meet their counterparts in the private sector (nongovernmental environment and development groups, foreign embassies, universities and business organisations).

Speakers are invited by the Institute to use the luncheon as a forum to present their views about current international events or conferences, major reports or legislation related to global environment.

Speakers at IIED's 1981-82 series included:

- *The Hon. James L. Buckley*, Under Secretary of State for Security Assistance, Science and Technology on "International Environmental Issues" prior to the UNEP Session of Special Character, commemorating the tenth anniversary of the Stockholm Conference.
- *Dr. Nyle C. Brady*, Senior Assistant Administrator, USAID, discussed "Agricultural and Natural Resources Research and the Environment."
- *The Hon. Alan Hill*, Chairman of the President's Council on Environmental Quality, discussed the Reagan Administration's creation of the Global Issues Working Group to follow up the Global 2000 report.
- *The Hon. John H. Chafee*, a Republican senator from Rhode Island and chairman of the Subcommittees on Resource Problems and Environmental Pollution of the Senate Committee on Environment and Public Works, discussed current environmental legislative issues.



Todd Bartlem / IIED

James Buckley, Under Secretary of State for Security Assistance, Science and Technology, appeared as a guest speaker during IIED's 1981-1982 luncheon series.

Cooperative Activities with the London Business School

In London, IIED and the London Business School held a joint briefing on the implications of environmental impact assessment as an emerging requirement for European industry. The briefing, held in November 1981, was addressed by Sir David Orr, chairman of Unilever Ltd. It included presentations from a senior official of the Directorate General for Environment and Consumer Protection of the European Community (Brussels), Dr. John Lawrence, Director of Imperial Chemicals Industries, Ltd. (ICI), Brixham Laboratory, and Mr. Geoffrey Larminie, General Manager of British Petroleum's (BP) Environmental Control Centre. It was attended by a wide range of representatives of British business and university departments and centres. The event received underwriting support from the Directorate General of the European Community for Environment, Consumer Protection and Nuclear Safety (ECECP), British Petroleum, and from Imperial Chemicals Industries Ltd.

IIED and the World Conservation Strategy (WCS)

As a follow up to the publication of the WCS in 1980, various countries are now preparing their own conservation strategies. During 1981-82 IIED has cooperated closely with WWF/International and the International Union for Conservation of Nature and Natural Resources on how this work can be fostered and accelerated.

In the U. K. the strategy has resulted in a major review of all components of the U. K.'s environmental policy. Domestic concerns have been addressed by other U. K. agencies, but the U. K.'s foreign environmental policy has been reviewed closely by IIED's London staff, and a report about it will be published in late 1982.

Intensive crop production can have negative as well as positive effects on the environment. The Institute plays an important role in fostering discussion and debate on environment and development questions.

Edwin G. Huffman/World Bank



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NEW DIRECTIONS

From G. B. ...

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Energy

The main future thrust of the IIED energy group will be toward energy policy studies for developing countries, with a concentration in "crucial nodes of ignorance." A hierarchy of studies is envisioned that range from generic studies of demand, through areas of rapid transition (new technologies), to the fundamental and more intractable problems of energy for the rural poor. A further phase of work that the Institute's energy team is being encouraged to explore is the assessment of the longterm competition between land use for energy production through "biofuels" and land use for food production.

Human Settlements and Housing

The Institute's Human Settlements and Housing Programme plans to conduct more detailed case studies of problems faced by development agencies in getting housing help of the most cost-effective kind to the maximum number of the very poor. The group also aims to clarify, and bring greater support to, the vital role played by nongovernmental organisations (NGOs)—both indigenous and external—in improving shelter and related basic services. Many of the most familiar yet deadly hazards to health are often lodged in the actual structure or immediate surroundings of the dwelling place. Making housing and planning professionals more aware of their role in improving health and guarding against disease in settlement planning, construction and maintenance is another new field which the Institute is anxious to explore.

Harnessing High Technology for Development

An entire range of new technologies, including microelectronics, biotechnologies and advanced engineering systems for ocean mining, have the potential to affect almost all fields of human endeavor and certainly pose serious social and economic questions for the developing world. IIED's study of renewable energy technology transfer has focussed attention on how developing countries are trying to target their scarce scientific and human resources in areas of rapid technological change. How these new technologies will affect developing country industry, agriculture and education for better or worse will depend to a great extent on how well these countries are able to choose among the available alternatives, adopting those that seem most promising to local needs and local solutions.

IIED is in the preliminary stages of organising an international symposium on harnessing high technology for development, to be held in late 1983 or early

1984. The goal of the conference will be to evaluate the impact of emerging high technologies on the developing world, especially as it affects Third World scientists and policymakers. In the symposium we will analyse the potential of some of these technologies, how the Third World might gain access to them, and what would be needed to absorb them successfully.

Business and Resources

IIED has been working in the past year on a business and resources programme it hopes to launch in 1982-83. The programme will operate initially in the United States but the concept may be extended later to Western Europe. The overall purpose of this programme is to present private companies with some implications for them of recent insights and studies concerning global resources and trends. Most links between the environmentally concerned and business have in the past been backward-looking or have emphasised areas of anticipated conflict. Consideration of the implications of the recent spate of global studies has hardly begun.

IIED is well placed to act as an international "middleman" in this area, and to initiate a useful dialogue among academics, private industry and national science planning specialists. Such a dialogue might help to clarify the environmental needs and aspirations of developing countries as they may affect business and, at the same time, emphasise the potential of business to help solve some of the Third World's resource management problems. The programme is also being designed to identify the constraints and limitations on private sector initiative and hence to highlight those global resource problems that are simply too big or intractable to be solved without both national and international action.

Environmental Management

Here, a programme of future work is envisaged in support of the objectives of the World Conservation Strategy, and in close collaboration with the Conservation for Development Centre of the IUCN. Activities under this heading will include: ■ country visits to encourage individuals and institutions to undertake the drawing up of national conservation strategies; ■ further development of environmental guidelines for both development projects and whole sectors of activity, designed for use by both national and international development funding and executing agencies; and, ■ monitoring progress on environmental management measures in trade and aid negotiations, for example negotiations for the third Lome Convention of the

European Community.

Under the heading of environmental policy studies, IIED is planning a major collaborative research and policy exploration on tropical forestry, entitled "Tropical Forestry and Foreign Policy: A Programme of Comparative Research and Development of Possible Initiatives." Also under the rubric of environmental policy management studies, the IIED is considering studies of how coastal states in developing countries may be helped to undertake new responsibilities for the protection and management of their recently acquired 200-mile exclusive economic zones offshore while protecting their vital estuarine and coastal living resources in the course of development. It is hoped in this project to review alternative types of coastal zone management for a group of developing countries.

Finally, in the course of the next few years, IIED plans to develop collaborative links with both the IUCN,

IIED will continue its work with institutions in both developed and developing countries who share its common concern for development that is environmentally sound and economically sustainable.

the International Planned Parenthood Federation (IPPF) and other NGOs to ensure that family planning is incorporated in national health programmes and in regional and national conservation strategies.

Applied Mathematical Ecology

IIED has since 1979 established an important reputation as a leading international initiator in the field of applied mathematical ecology. In the past, work in this area has been largely confined to studies relevant to the management of fisheries and marine mammals. IIED is now discussing an association with other centres so as to apply mathematical modelling techniques to problems of pest control and major disease eradication programmes. It seems likely that some major conceptual breakthroughs of profound importance to pest and disease management may be possible through these techniques. Work in these areas would mainly be applied to Third World regional or national problems, but could also clearly be of importance to developed country agriculture.



Thomas Sennel/World Bank

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FINANCE

The effectiveness of IIED depends upon people and funds. Over the years, IIED has moved from being an Institute primarily financed by unrestricted grants to one that is dominated by the restricted funding of projects. In common with similar organisations, the Institute attempts to recover its administrative overhead costs from such restricted income. However, this is not always possible—either because sources of fundings, such as the United Nations, only allow a small overhead or because projects incur more direct costs than originally estimated.

In 1981-82 those two factors have combined in IIED to great effect. During the year, the overhead recovered from projects was lower than anticipated and several projects ran over their direct cost budgets for good and substantive reasons. As a result, the unrestricted fund reserve has been seriously eroded.

The Future Prospects

Fortunately, there are good reasons to be optimistic on both fronts. In 1981-82, the Institute has spent far more time than before in a rigorous internal evaluation and planning of its work programme. As a result, there are now a series of planned project initiatives in place and funding prospects for them are encouraging. The projects will provide a significant part of the 1982-83 administrative costs. The unrestricted fund raising has now been split into two separate activities. First, the Institute's annual corporate appeal will be expanded to meet recurrent costs. Secondly, IIED has now launched the Barbara Ward Fund.

A Vote of Thanks

Finally, we must thank those who have continued to show their appreciation for our work by providing us with financial support. The unrestricted fund received \$280,650 of income in the financial year 1981-82. For this support, the bedrock of our institution, we thank the following.

Unrestricted Funds

Amax Foundation
American Express
Foundation
American Telephone and
Telegraph Company
Robert O. Anderson
The Atlantic Richfield
Foundation
Avery International
AZL Resources, Inc.
Bankers Trust Company
Chase Manhattan Bank, NA
Conoco, Inc.
Corporate Property Investors
Cummins Engine Foundation
Dresser Industries, Inc.
Exxon Corporation
General Electric Company

Halliburton Company
Litvus
Mitchell Energy and
Development Corporation
New York Times Company
Foundation
Reynolds Metals Company
Foundation
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Development Authority
Texaco Philanthropic
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The World Bank
Zapata Corporation

Restricted Funds

On the restricted fund, we thank the following organisations for their support of our project activities:

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Appropriate Technology International \$ 24,182

ASSESSMENT, U.S. (WASHINGTON)

U.S. National Park Service 20,133

BUSINESS PROJECT

Council on Environmental Quality 9,500

EARTHSCAN 1981

United Nations Environment Programme 85,000

United Nations Childrens Fund 10,000

United Nations Department of Economic and Social Information 22,682

United Nations Conference on New and Renewable Sources of Energy 20,000

United Nations Centre for Human Settlements 15,000

United States Department of Energy 24,322

Netherlands Government 3,000

180,004

EARTHSCAN 1982

United Nations Environment Programme 20,000

United Nations Environment Programme Special Session 30,000

United Nations Conference on New and Renewable Sources of Energy 36,000

United States Forestry Service 15,000

Netherlands Government 107,684

Swedish International Development Authority 303,495

The World Bank 29,500

International Planned Parenthood Foundation 3,000

544,679

DOWN TO EARTH

United Nations Environment Programme 60,300

Food and Agriculture Organization 500

60,800

EARTHSCAN WASHINGTON

World Wildlife Fund/U.S. 20,000

United Nations Environment Programme 30,000

50,000

EARTHSCAN APPROPRIATE TECHNOLOGY

Appropriate Technology International 35,420

ENERGY THIRD WORLD

European Atomic Energy Authority (ISPRA) 12,749

Netherlands Government 804

International Fund for Agricultural Development 17,078

El Colegio de Mexico 10,483

41,114

ENERGY CONSERVATION PHASE I

Social Sciences Research Council (Grant Cancelled) (2,250)

ENERGY CONSERVATION PHASE II

British Petroleum Company 9,900

European Atomic Energy Community (ISPRA) 25,125

U.K. Atomic Energy Authority 26,278

61,303

ENERGY SOLAR

German Appropriate Technology Exchange 15,000

United Nations Development Programme 20,000

French Solar Energy Commission 10,355

45,355

EUROPEAN PROGRAMME

European Cultural Foundation 48,716

Nuffield Foundation 13,872

World Wildlife Fund/U.K. 6,882

Organisation for Economic Cooperation and Development 1,701

71,171

HUMAN SETTLEMENTS

Canadian International Development Agency 165,886

Swedish Agency for Research Cooperation with Developing Countries 71,224

Swedish Council on Building Research 57,637

294,747

NATURAL RESOURCES IN ANTARCTICA

United States Environment Protection Agency 158

National Oceanic and Atmospheric Administration 467

General Service Foundation 14,000

14,625

MANAGEMENT OF MARINE LIVING RESOURCES

World Wildlife Fund International and International Union for the Conservation of Nature and Natural Resources 29,545

Peoples Trust for Endangered Species 43,175

Centre for Environmental Education 45,000

Greenpeace 19,990

137,710

WORLD CONSERVATION STRATEGY

World Wildlife Fund (U.K. Appeal) and the Nature Conservancy Council (U.K.) 18,000

OIL POLLUTION

Hellenic Shipping 10,000

TOTAL RESTRICTED FUNDS

Assessment, U.K. 24,182

Assessment, U.S. 20,133

Business Project 9,500

Earthscan 1981 180,004

Earthscan 1982 544,679

Down To Earth 60,800

Earthscan Washington 50,000

Earthscan Appropriate Technology 35,420

Energy Third World 41,114

Energy Conservation Phase I (Grant Cancelled) (2,250)

Energy Conservation Phase II 61,303

Energy Solar 45,355

European Programme 71,171

Human Settlements 294,747

Natural Resources in Antarctica 14,625

Management of Marine Living Resources 137,710

World Conservation Strategy 18,000

Oil Pollution 10,000

\$1,616,493

Barbara Ward Fund

"In the last days of her life Barbara Ward, Baroness Jackson of Lodsworth, told some of her family and closest friends that she wished any tribute to her to be in a form that would enable others to continue the work to which she had devoted her life.

In accordance with this wish, her family, friends, admirers and associates are planning an appeal to establish a Barbara Ward Fund. The Fund will be used to continue and extend her lifework for the betterment of the poorer majority of mankind and the preservation of the environment of this small planet, which for the last ten years has been carried out mainly through the International Institute for Environment and Development under her presidency."

—Letter to *The Times of London*
July 24, 1981

This letter announced the establishment of a Fund to continue the work begun by the Institute's late President. A Committee of her friends has been established to make this Fund a reality. Among its members are Prime Ministers Trudeau of Canada and Gandhi of India, Former British Prime Ministers Callaghan and Heath and former Chancellor Willy Brandt of the Federal Republic of Germany.

The Institute's co-chairmen, Robert O. Anderson and Abdlatif Y. Al-Hamad, are members of the Fund's Appeal Committee along with IIED Board members Robert McNamara, Maurice F. Strong and James Rouse.

By June 1982, more than \$2 million had been pledged to the Fund for two principal purposes:

- To reinforce the IIED as a centre of excellence in policy study, and
- To raise the impact of its findings through its work in helping policymakers, writers and broadcasters the world over more clearly understand and promote sustainability in development.

Further information on the Fund is available from the Institute. Contact William Clark in the Institute's London office or David Runnalls in Washington, D. C.



John Austin / Earthscan

In 1982 Barbara Ward, IIED's former president, was awarded the United Nations Environment Programme's first Decade Medal for Environmental Leadership. Here Mostofa K. Tolba presents the award posthumously to her son, Robert Jackson, Jr., in London.

EXTRACT FROM THE ACCOUNTS

For the year ended 31st March 1982

The accounts as set out form a part of the certified accounts of the Institute. Full accounts can be made available, upon request, by the Administrator at our London or Washington address.

The accounts were certified by Wright, Fairbrother & Steel, Chartered Accountant, 50 Bloomsbury Street, London WC1B 3Q and Fox and Company, 1220 19th NW, Washington, D. C. 20036.

BALANCE SHEET AT 31ST MARCH 1982

<u>1981</u>				
\$	FIXED ASSETS	\$	\$	\$
18,766	Fixtures and Fittings			23,972
2,077	Investments			28,729
	Future Committed Grants Receivable			
	Restricted			794,100
<u>893,657</u>				<u>846,801</u>
914,500				
	CURRENT ASSETS			
	Grants Receivable			
235,761	Restricted	357,069		
15,000	Unrestricted		357,069	
17,197	Sundry Debtors and Prepayments		18,921	
—	Money Market Funds		3,239	
<u>87,944</u>	Cash at Bank and in Hand		<u>258,740</u>	
355,902			637,969	
	Less: CURRENT LIABILITIES			
25,057	Unrealised Profit on Exchange		15,436	
53,257	Sundry Creditors and Accruals		128,411	
100,000	Bank Loan		100,000	
<u>6,607</u>	Note Payable		<u>5,051</u>	
<u>184,921</u>			<u>248,898</u>	
<u>170,981</u>				<u>389,071</u>
1,085,481	Net Current Assets			1,235,872
	Less: DEFERRED REVENUE			
	Restricted			794,100
<u>893,657</u>				<u>441,772</u>
<u>191,824</u>				<u>441,772</u>
	Represented by:			
	Fund Balances			
107,867	Unrestricted			10,590
83,957	Restricted			422,614
—	Barbara Ward Fund			8,568
<u>191,824</u>				<u>441,772</u>

INCOME AND EXPENDITURES

Year to 31st March 1982

1981	INCOME	BARBARA WARD FUND	UNRESTRICTED FUND	RESTRICTED FUND	1982 TOTAL
\$		\$	\$	\$	\$
1,422,809	Grants	—	280,650	1,616,493	1,897,143
<u>30,859</u>	Miscellaneous & Gifts	<u>32,728</u>	<u>32,717</u>	<u>22,366</u>	<u>87,811</u>
<u>1,453,668</u>		<u>32,728</u>	<u>313,367</u>	<u>1,638,859</u>	<u>1,984,954</u>
EXPENDITURE					
532,390	Experts (staff)	14,084	115,064	382,323	511,471
154,742	Consultants (and travel)	—	5,122	291,097	296,219
173,410	Secretarial	6,975	38,347	122,607	167,929
—	Indirect Payroll Costs	—	40,590	—	40,590
6,361	Temporary Secretarial Staff	—	3,402	3,931	7,333
14,506	Translation Services	—	—	11,682	11,682
159,202	Travel (staff)	2,980	33,349	103,599	139,928
63,440	Printing and Stationery	—	12,485	67,539	80,024
12,216	Reports and Publications	—	8,365	5,691	14,056
22,860	Audiovisual and Photocopying	—	3,840	19,921	23,761
39,159	Seminars	—	3,389	67,243	70,632
53,116	Telex and Telephone	91	29,809	34,332	64,232
25,484	Post	—	15,394	17,771	33,165
12,056	Office Supplies	—	8,052	11,224	19,276
30,140	Sundries	30	9,028	24,845	33,903
2,985	Non-Expendable Equipment	—	3,461	4,926	8,387
65,251	Rent and Rates	—	118,117	—	118,117
1,200	Buenos Aires Office Expenses	—	—	33,685	33,685
1,582	Insurance	—	2,320	—	2,320
10,866	Legal and Professional Fees	—	13,504	—	13,504
21,190	Audit and Accountancy	—	13,823	—	13,823
—	Bad Debts	—	1,844	—	1,844
6,097	Depreciation Fixture & Fittings	—	4,097	6,225	10,322
226	Improvements to Premises	—	—	—	—
8,706	Interest	—	18,803	—	18,803
—	Overheads Charged to Projects	—	(239,352)	239,352	—
<u>1,417,185</u>		<u>24,160</u>	<u>262,853</u>	<u>1,447,993</u>	<u>1,735,006</u>
<u>1,453,668</u>	Income As Above	<u>32,728</u>	<u>313,367</u>	<u>1,638,859</u>	<u>1,984,954</u>
36,483	Surplus (Deficiency) of Income over Expenditure	8,568	50,514	190,866	249,948
—	Restricted Fund Deficit Charged to Unrestricted Fund (1981-\$10,837)	—	(147,791)	147,791	—
141,770	Balances of Funds at 1.4.81	—	107,867	83,957	191,824
<u>13,571</u>	Adjustment for Prior Years	—	—	—	—
<u>\$191,824</u>	Balance of Funds at 31.3.82	<u>8,568</u>	<u>\$10,590</u>	<u>\$422,614</u>	<u>\$441,772</u>

OFFICERS AND STAFF LIST

May 1981-April 1982

<i>President</i>	William Clark		Diana Page*
<i>Treasurer</i>	Harry Parish		Robert Luke*
<i>Vice President and Director of North American Office</i>	David Runnalls	<i>Administrative Staff</i>	Louis Keezing
<i>Administrator and Financial Officer</i>	Richard Sandbrook		Katherine Brown
<i>Programme Director</i>	Brian Johnson		Lynne Russell
<i>General Counsel and Secretary</i>	R. Thomas Hoffmann		Meilin Sun*
<i>Director of Public Affairs</i>	Cathryn Dickert Scoville		Susan Winch*
<i>Senior Fellows</i>	John Beddington	<i>Auditors</i>	Annie Petrie
	Robert O. Blake		Susan Mitchinson
	Jorge E. Hardoy		Kate Partridge
	Gerald Leach	<i>Counsel</i>	Jane Bicknell
	Nigel Haigh (jointly with IEEP)		Melanie Patterson
<i>Associate Fellows</i>	Anil Agarwal (Centre for Science and Environment, New Delhi)		Elena Schubert
	David Aradeon (University of Lagos)		Fox and Co. (U.S.)
	Omer el Agra (University of Khartoum)		Wright, Fairbrother & Steel (U.K.)
	R. P. Misra (University of Mysore)		Arnold and Porter (U.S.)
	Oscar Yujnovsky (Centre for Urban and Regional Studies, Buenos Aires)		Bates, Wells & Braithwaite (U.K.)
<i>Visiting Fellows</i>	Erik P. Eckholm*	EARTHSCAN	
	William de la Mare	<i>Director</i>	Jon Tinker
<i>Research Associates</i>	Todd Bartlem	<i>Washington Bureau Chief</i>	Athleen Ellington
	Ariane van Buren	<i>Project Team</i>	Kath Adams
	Nora Liechtenstein*		John Austin
	Barbara Mitchell		Liz Carlile*
	Waafas Ofosu-Amaah		Sally Davies
	David Satterthwaite		Dominique Side
<i>Consultants</i>	David Baldock		Lloyd Timberlake
	David Barnhizer		Shana Magraw
	Brian Grenfell		Jacqueline Crow
	Henry Gruppe*		Geoffrey Barnard
	Chris Hand		Gerald Foley
	Sidney Holt		Sumi Chauhan
	John Horberry*		Suzanne Turvey
	Lee Kimball		John McCormick
	Martine Lafontaine		Tonona Taylor
	Malcolm Lillywhite*		
	Richard Macrory		
	Colin Moorcraft		
	Irene Hunter		
	Dorothy Myers		
	Patricia Kelly		
	Ian Barrett*		
	Ron Stegall		
	Haruki Tsuchiya*		
	James Sebenius		
<i>Research Assistants</i>	Silvia Blitzer		
	Justin Cooke		
	Fiona McAllister*		
	Gertrud Weber*		
	Simon Northridge		
	Christopher Brindle		
	Simon Pellew		

*No longer on IIED'S staff in April 1982.

IIED PUBLICATIONS 1971-81

The State of the Human Environment

- Only One Earth.* Barbara Ward with Rene Dubos. Published by Andre Deutsch and Penguin Books, UK; W. W. Norton and Co., USA, 1972. •
- The Home of Man.* Barbara Ward. Published in the U.S. by W. W. Norton and Co.; in Canada by McClelland and Stewart and Editions La Presse; in Britain by Andre Deutsch and Penguin; in Italy by Mondadori; in Mexico by Fondo de Cultura Economica, 1976. •
- Progress for a Small Planet.* Barbara Ward. Published by W. W. Norton and Co. in USA; Maurice Temple-Smith and Penguin in UK, 1979. •
- Down to Earth: Environment and Human Needs.* Erik Eckholm with a foreword by Barbara Ward. Published by W. W. Norton and Co., USA; Pluto Press, UK, 1982. •

Marine and Polar Resource Management

- The Management of the Southern Ocean.* Barbara Mitchell and Richard Sandbrook, IIED, 1980. £2.50, \$5.00. ■
- Report of the IUCN Workshop on Marine Mammal/Fishery Interactions at La Jolla, California.* IUCN, prepared by R. J. H. Beverton, FRS and J. R. Beddington, IIED, 1981. £3.00, \$6.00. ■

Energy

- A Low Energy Strategy for the United Kingdom.* Gerald Leach, Christopher Lewis, Frederic Romig, Ariane van Buren and Gerald Foley, IIED and Science Reviews Ltd., 3/4 St. Andrew's Hill, London EC4V 5BY; Humanities Press Inc., Atlantic Highlands, New Jersey, US, 1979. £7.50, \$15.00. ■ •
- Solar Energy Technology Transfer: The Problems and Opportunities.* Anil Agarwal, Todd Bartlem and Thomas Hoffmann, IIED, 1982. ■
- A Chinese Biogas Manual: Popularising Technology in the Countryside.* Editor: Ariane van Buren, Intermediate Technology Publications Ltd., 9 King Street, London WC2E 8HN in association with The Commonwealth Science Council, 1979. £1.95, \$3.90. ■ •
- Biogas Training in China: A First Exchange with Developing Countries.* Report on the First International Biogas Training Seminar in China. Prepared by Ariane van Buren, IIED, 1980. £10.00, \$20.00; published as *Biogas Fertilizer Systems*, UNEP, P.O. Box 30552, Nairobi, Kenya, 1981. £3.00, \$6.00. ■ •

■ IIED • Publisher

The World Energy Triangle — A Strategy for Cooperation. Thomas Hoffmann and Brian Johnson, Ballinger Publishing Co., 17 Dunster Street, Cambridge, Massachusetts, US; Harper and Row, 28 Tavistock Street, London WC2, 1981. £14.75, \$29.50. ■ •

Coal Substitution — Other Approaches to Easing the Pressure on Woodfuel Resources: Case Studies in Senegal and Tanzania. Gerald Foley and Ariane van Buren, IIED, 1980. £2.00, \$4.00. ■

Energy-related Statistics for UK Dwellings. Gerald Leach, IIED, 1981. £4.00, \$7.00. ■

Energy in the Transition from Rural Subsistence. Edited by Miguel Wionczek, Gerald Foley and Ariane van Buren. To be published by Westview Press, 5500 Central Avenue, Boulder, Colorado 80301, USA in 1982. Spanish Edition: El Colegio de Mexico, 1982. •

1980 Schumacher Lecture. Gerald Leach as "Energy Futures. Appropriate Scales," *Resurgence*, January-February 1981; also as "Energy Futures," *Atom*, April 1981. (Xerox) £0.20, \$0.40. ■ •

Insulating British Houses — Trends, Savings and Costs. Gerald Leach; evidence to the House of Commons Select Committee on Energy Conservation, July 1981. (Xerox) £0.50, \$1.00. ■

Energy Models for Houses: Review and Comparison. Simon Pellew. Report for MSc degree, Imperial College, London, September 1981. (Xerox) £3.00, \$6.00. ■

Sectoral Energy Use Trends in the United Kingdom. Gerald Leach, International Conference on energy use management, Berlin, October 1981. (Xerox). £0.50, \$1.00. ■

Disaggregated Forecasting in the Domestic Sector. Gerald Leach, Energy Statistic Conference, Royal Society, London, November 1981. (Xerox) £0.50, \$1.00. ■

Human Settlements

- Shelter: Need and Response: Housing, Land and Settlement Policies in Seventeen Third World Nations.* Jorge Hardoy and David Satterthwaite, John Wiley and Sons, Baffins Lane, Chichester, Sussex, UK, 1981. £16.95, \$33.90. •
- Aid for Human Settlements in the Third World (including summary of current housing conditions and trends).* IIED paper, 1979. £5.00, \$10.00. ■
- Aid for Human Settlements in the Third World (update of above paper to include agency commitments for 1977 and 1978).* IIED paper, 1980. £4.00, \$8.00. ■
- Aid for Human Settlements in Latin America (including summary of current housing conditions and trends).* IIED paper, 1978. £9.00, \$18.00. ■

Aid for Human Settlements in Latin America (update of above paper to include agency commitments for 1977 and 1978). IIED paper, 1980. £4.00, \$8.00. ■

Aid for Human Settlements in Africa (including summary of current housing conditions and trends), ENDA, P.O. Box 3370, Dakar, Senegal, 1981. £4.00, \$8.00. •

Aid for Human Settlements in Asia. Silvia Blitzer and Jorge E. Hardoy. (To be published in 1982 by ENDA, PO Box 3370, Dakar, Senegal). ■ •

Agrarian and Urban Reform in Latin America. Jorge Hardoy. SIAP/IDRC Ediciones SIAP, Chenaut, Buenos Aires, Argentina, 1968. •

Urbanisation in the Americas: The Background in Comparative Perspective. Edited by W. Borah, Jorge E. Hardoy and G. Stelter. *Urban History Review* special issue, Ottawa, 1981. Spanish version by Ediciones SIAP, Apartado 27-217, Mexico 7 DF. •

Human Settlements in Arab Countries (English and Arabic). Omer El Agraa and Adil Mustafa Ahmad, University of Khartoum Press, Khartoum, the Sudan, 1981. £5.00, \$10.00. ■ •

The Development Experience of Nepal. B. S. Bhooshan, Concept Publishing Company, H-13 Bali Nagar, New Delhi 110015, India, 1979. £5.00, \$10.00. •

Post Habitat Evaluation in Sub-Saharan Africa. Vol. I: Nigeria, David Aradeon; Vol. II: Kenya, N. Gebremedhin, T. Chana and D. Lamba; Vol. III: Tanzania, S.M. Kulaba and G. Mayao. (To be published in 1982). ■ •

Human Settlements in Asia: Public Policies and Programmes. R. P. Misra and B. S. Bhooshan, Heritage Publishers, M-116 Connaught Circus, New Delhi 110001, India, 1979. £7.50, \$15.00. ■ •

Towards Alternative Settlement Strategies — The Role of Small and Intermediate Centres in the Development Process. Editor: B. S. Bhooshan, Heritage Publishers, M-116 Connaught Circus, New Delhi 110001, India, 1980. £5.00, \$10.00. •

La Asistencia Técnica y Financiera de las Agencias Multilaterales para los Asentamientos Humanos. Stuart Donelson and J. E. Hardoy, Ediciones SIAP, Apartado 27-716, Mexico 7 DF, 1980. •

Sustainable Development

Banking on the Biosphere? Environmental Procedures and Practices of Nine Multilateral Development Agencies. Robert E. Stein and Brian Johnson. Lexington Books, D. C. Heath and Co., Lexington, Massachusetts, USA; Gower Publishing Co., 1 Westmead, Farnborough Hants, UK, 1979. £13.75, \$27.50. •

The Environment and Bilateral Development Aid. The Environmental Policies, Programs and Performance of the Development Assistance Agencies of Canada, the Federal Republic of Germany, the Netherlands, Sweden, the United Kingdom and the United States. Brian Johnson and Robert O. Blake. IIED, 1980. £3.00, \$6.00. ■

Environmental Performance of Consulting Organisations in Development Aid. John Horberry and Brian Johnson. IIED, 1981. £9.00, \$18.00. ■

Conserving Development: A Study of the Legal, Administrative and Institutional Constraints to Sustainable Development in Four Developing Countries. Henry Gruppe, Brian Johnson, Waafas Ofosu-Amaah, IIED, 1981. ■

Other International Environment and Development Reports

Mobilising Technology for World Development. Edited by Jairam Ramesh and Charles Weiss, Jr. Published for IIED and the Overseas Development Council by Praeger Publishing, 383 Madison Avenue, New York, New York 10017. £3.00, \$6.00. ■

Water For All. Statement of IIED/Earthscan. Symposium on Water, in preparation for the 1977 UN Water Conference. IIED, 1976. ■

Clean Water For All. A Seminar at HABITAT. IIED, 1976. £1.25, \$1.95.

Water: Life or Death. Jane Stein. A report in preparation for the UN Water Conference, Mar del Plata, Argentina. IIED, 1977. £1.00, \$1.75. ■

Rural Water Supply in China. IDRC, 1981. P.O. Box 8500, Ottawa, Canada K1G 3H9. £2.50, \$5.00. ■ •

EARTHSCAN Earthscan Press Briefing Documents

Primary Health Care. English, Spanish, 1978. £2.00, \$5.00. ■

Drugs and the Third World. English, French, 1978. £2.00, \$5.00. ■

What Use is Wildlife? English, 1978. £2.00, \$5.00. ■

Infoterra. English, French, Spanish, 1979. £2.00, \$5.00. ■

Krill. English, 1979. £2.00, \$5.00. ■

The International Wildlife Trade. English, Spanish, 1979. £2.00, \$5.00. ■

A Voltan Village. English, French, 1979. £2.00, \$5.00. ■

Life at the Margin: the Need for Third World Rural Development. English, 1979. £2.00, \$5.00. ■

Whose Science? Whose Technology? English, 1979. £2.00, \$5.00. ■

Antarctica and its Resources. English, Spanish, 1979. £2.00, \$5.00. ■

Water and Sanitation for All? English, French, Spanish, 1980. £2.50, \$6.25. ■

Water and Sanitation in Three Countries: Colombia, India, Kenya. English, French, Spanish, 1980. £2.50, \$5.25. ■

The Gulf: Pollution and Development. English, Arabic, 1980. £2.00, \$5.00 ■

Carbon Dioxide, the Climate and Man. English, 1981. £2.50, \$6.25. ■

Habitat —Five Years After. English, French, Spanish, 1981. £2.50, \$6.25. ■

The Earthscan Guide to UNERG. English, 1981. £2.50, \$6.25. ■

Stockholm Plus Ten. English, French, Spanish, 1982. £2.50, \$6.25. ■

Tropical Moist Forests. (English only) 1982. £2.50, \$6.25. ■

Earthscan Paperbacks

A Village in a Million by Sumi Chauhan, 1979. £2.00, \$5.00 ■

Climate and Mankind by John Gribbin, 1979. £2.00, \$5.00. ■

International Trade in Wildlife by Tim Inskipp and Sue Wells, 1979. £2.00, \$5.00. ■

Antarctica and Its Resources by Barbara Mitchell and Jon Tinker, 1980. £2.50, \$6.25. ■

Mud, Mud —The Potential of Earth-based Materials for Third World Housing by Anil Agarwal, English, French, Spanish, 1981. £2.50, \$6.25. ■

New and Renewable Energies 1 (solar, biomass) edited by Jon Tinker, English, French, Spanish, 1981. £2.50, \$6.25. ■

New and Renewable Energies 2 (hydro, tidal wave, OTEC, wind, tarsands, oil shale), edited by Jon Tinker. English, French and Spanish. £2.50, \$6.25. ■

Water, Sanitation and Health —For All? by Anil Agarwal, James Kimondo, Gloria Moreno and Jon Tinker, 1981. £3.00, \$7.00.

Carbon Dioxide, Climate and Man by John Gribbin, 1981. £2.50, \$6.25. ■

Fuel Alcohol: Energy and Environment in a Hungry World by Bill Kovarik, 1981. £3.00, \$7.00. ■

Stockholm Plus Ten: Promises, Promises? The Decade Since the 1972 UN Environment Conference by Robin Clarke and Lloyd Timberlake, 1982. £2.50, \$6.25. ■

Tropical Moist Forests: The Resources, The People, The Threat, by Catherine Caufield, 1982. English, French and Spanish. £3.00, \$7.00. ■

Earthscan Audiovisual

A Village in a Million Photosheet. A poster (82 cm. × 57 cm.) with 50 captioned photographs showing all aspects of energy use in Akbarpur Barota, a village in India. £1.25, \$3.10. ■

Life at the Margin: A Voltan Village Photosheet. 24 illustrations of life in Lougsi village, Upper Volta. (Prices on request) ■

Water and Sanitation Photosheets. 121 photographs, captioned in English, French, and Spanish, illustrating drinking water and sanitation in developing countries. £2.50, \$6.25. ■

International Directory of Environmental Film Sources, 1977. A list of environmental films, with names and addresses of producers and distributors. £2.50, \$6.25. ■

Note: This is a partial listing of publications.

IIED is a 501(c)3 nonprofit organisation incorporated in the District of Columbia in the United States and is registered as a charitable trust (No. 268695) in the United Kingdom. For more details about our other publications, programs and future plans, please contact the Institute's offices in London or Washington.

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