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# THE ENVIRONMENT

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# 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

by
Brian Johnson
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# Preface

Since January 1977, IIED has been conducting a research program on the environmental policies and programs of major development aid organizations. The first of IIED's studies in this field, a report on environmental procedures and practices in nine multilateral development agencies, was completed in 1978 and published in book form as "Banking on the Biosphere?" (Lexington Books, New York, 1979).

This study aroused considerable interest and IIED, as a result, decided to conduct a parallel policy review in relation to six bilateral aid agencies. This "assessment project" began in May 1978 with the agreement and support of the aid agencies of Canada, the Federal Republic of Germany, the Netherlands, Sweden, the United Kingdom and the United States.

## Aims and Scope of the Bilateral Assessment Project

The study's aim was to assess the extent to which policies, procedures and programs of the six bilateral agencies promote sustainable, environmentally sound development; to examine the constraints to improved environmental performance in these agencies; and to recommend changes that might be necessary to remove or substantially reduce these constraints. The authors of the study aimed at making practical recommendations that would be politically realistic as well as environmentally significant. The co-directors of the Bilateral Assessment project were Ambassador Robert O. Blake, IIED Senior Fellow who worked from IIED's Washington office, and Brian Johnson, IIED Senior Fellow who worked from IIED's London office.

## Project Methodology

In consultation with the six national aid agencies being studied, IIED recruited an affiliated project team in each of the countries concerned. These were:

Canada: North-South Institute, Ottawa
Institute for Environmental Studies, Dalhousie University, Halifax
Federal Republic of Germany: International Institute for Environment and Society, Berlin
Netherlands: Institute of Social Studies, The Hague
Sweden: International Rural Development Center, Swedish University of Agricultural Sciences, Uppsala
United Kingdom: Overseas Development Group, University of East Anglia, Norwich
United States: Natural Resources Defense Council, Washington D.C.

These teams carried out the bulk of the research, documentary study, headquarters interviewing, and visits to field offices and projects of the agencies concerned. IIED personnel handled coordination of work, sharing of findings and experience between the teams, and preparation of this final overall report.

The research technique mainly consisted of the following steps:

Background papers describing the organization, scale, and scope of activity of each agency were written as briefing documents by the affiliated project teams in September 1978.

In each agency, interviews were conducted with personnel at all levels and extensive documentary materials were examined.

Most of the team members could draw on previous experience in the field, but for some of the countries concerned, the affiliated project teams made additional field visits to assess the actual impact of selected projects. Team members from the United Kingdom went to Swaziland, from Sweden to Tunisia, and from the United States Mali, Indonesia, Bolivia, Peru, and Liberia. In addition, IIED staff visited Jamaica, Guyana, Senegal and Mali in the course of the project.

To the extent that time allowed, specific fields of assistance activity were looked at in more detail by the national teams. IIED, however, did not insist on conformity in selecting these sectors.

By spring 1979, most teams had produced an interim report and, at a later stage, drafted recommendations for discussion. Subsequently, each team produced a final report on its aid agency containing recommendations. One team suggested guidelines on environmental policy for its agency.

IIED's final comparative study is based on the findings of the affiliated project teams. Recommendations in this report also reflect IIED's broad experience in this field. The members of IIED's affiliated project teams deserve great credit for their dedicated work with the six agencies studied. The authors also wish to thank officials at all levels of the aid agencies of Canada, the Federal Republic of Germany, the Netherlands, Sweden, the United Kingdom and the United States for their cooperation at all stages in the project. IIED is, however, solely responsible for both the observations and recommendations made in this report.

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The authors of this report wish to extend particular thanks for the invaluable help given them by IIED's President, Baroness Jackson of Lodsworth, DBE, Thomas Hoffmann, Nora Liechtenstein, and Todd Bartlem. They also wish to thank Liz Carlile, Shelley Dobyns, Selina Marks, Catherine Nesbet and Nancy Shepherd for their untiring work in administrative support for this lengthy and complex project and their unfailing cheerfulness in typing successive drafts.

## Bilateral Development Aid and the Environment

### Summary

At the end of a decade in which international concern has arisen sharply at the depletion, misuse and overuse of world resources, there is a high level of public and official interest in the impact of aid programs on developing countries' environmental resources. This new interest caused the development aid agencies of Canada, the Federal Republic of Germany, the Netherlands, Sweden, the United Kingdom and the United States to sponsor the present study.

The IIED and the six national research teams that carried out this study found that there is general consensus in the aid agencies studied as to the meaning of "environment" in the context of development problems. This represents a major change from the confused position of only three or four years ago.

The most important feature of this consensus is that environment is now beginning to be seen not as an additional subject, the examination of which has to be added woodenly on to traditional development considerations. Rather this is increasingly seen as a whole new approach to development which gives greater weight to the sustainability of results and to the costs of destructive side effects of projects.

However, one major finding of this study is that this new view, however widely accepted theoretically, has still made too little impact on the orientation and design of the projects or practical development policies of the agencies studied.

Recognizing that each nation's aid program is bound to have particular priorities which reflect that country's broad political, economic and socio-cultural relations with recipients of its aid, the comparative report finds that:

1. There is a need to define more thoroughly environmental and natural resource objectives and concerns in the context of aid programs as a whole. None of the six agencies has to date related these issues in an integrated fashion to its total aid objectives, including aid to the world's poor or the need to preserve and where possible rehabilitate the Third World's resource base.

2. The most urgent attention should be given to helping developing countries build up their own capacity to study and manage their own environmental problems. This effort should be closely related to donor efforts aimed at fostering greater environmental concern in these countries.

3. There is a need to encourage and fund a much higher level of conservation and rehabilitation projects commensurate with the rapidly increasing needs of recipient countries. Resources available for environmental enhancement projects, especially in the fields of forestry, soil and water conservation are still minute when compared to support for traditional economic sectors such as roads, communications, and central electrical power generation and distribution. They are also minute compared to Third World needs. The argument that aid for natural resource development is not forthcoming because it is not a high priority within recipient countries is rapidly weakening as these countries discover how their economic future may be foreclosed by erosion, siltation, flooding, or deterioration of public health, such as another epidemic of project-induced disease like bilharzia or malaria. Fortunately several agencies are rapidly increasing their efforts in support of fuelwood production, other renewable energy sources, soil conservation, and pesticide management. However, the combined present impact of these nascent efforts is still almost negligible.

4. Policy documents which are produced in each agency to govern project design and execution frequently lack adequate attention to environmental implications. Positive policy instruction as regards sound environmental as well as economic design is as important as are procedures for routine examination. Review of agency policies for environmentally sensitive sectors, e.g. for forestry, water resources, human settlements, hydro dams, river basin development schemes, etc., appears essential.

5. In only three of the agencies studied was there a clearly defined focal point for environmental responsibility. A framework for systematically checking on environmental implications is essential.

6. Procedures to ensure that projects are systematically screened for environmental impact and where necessary subjected to environmental examination are also needed. In only one of the agencies studied do they exist. Environmental considerations are often not incorporated into the initial conception and design of projects. Thus, often unnecessary environmental damage, or lack of protection and enhancement, is built into project design. Elaborate procedures are not required to ensure an adequate level of environmental sensitivity in project design and planning.

7. There is a strong case for greater multilateral cooperation in the utilization of donor country resources in these areas. Certain donor countries are strongly endowed with professional and technical expertise to help prevent this environmental backlash. But these are often the ones which for many practical reasons concentrate their aid in other areas.

The report makes more detailed recommendations to improve donor agencies' performance in each of these seven areas.

# I. INTRODUCTION

The impact of public development aid to Third World countries upon the world's environment has recently become the focus of new interest and attention. This comes at the end of a decade in which worldwide concern emerged over the depletion, mis-use and over-use of world resources. This new focus has begun to influence considerably the thinking and programs of the aid giving agencies of the six nations studied, namely Canada, the Federal Republic of Germany, the Netherlands, Sweden, the United Kingdom, and the United States, as it has other national and multilateral aid programs.

Significantly, there is consensus in the six agencies studied on the need to integrate a broad concept of "environment" into thinking and planning in development problems and priorities. In the minds of most (but not all) of the officials of these agencies, it is clear that a broad, "holistic" interpretation of the concept is not only acceptable but necessary.* This recognition by officers of the holistic nature of the concept "environment" is an important step ahead.** We also found growing recognition of the importance of emphasizing the interconnectedness of all facets of development and of rejecting any notion that the "environmental concerns" can merely be considered one more "add-on" to be planned for in the economic development process.

* The term environment as used in this report is synonymous with human environment: the biological and physical components which exist and processes which operate on the earth's surface and in its atmosphere, and which have direct or indirect influence on humans. The phrase environmental effect: a change in the environment resulting from human action. Environmental impact: the net change in human well-being resulting from an environmental effect; the environmental impact of a development scheme is the difference in well-being between implementation and non-implementation of the scheme.

** Almost all "environmental" problems can be defined under other headings, especially resource use, public health and amenity. What gives the word "environment" relevance is its meaning of total surroundings implying inter-connectedness. Thus, the word "environment" means, for example, resource use associated with a dam or a housing project.

The wide, theroretical recognition of the importance of integrating environmental sensitivity into development planning and practice is scarcely surprising. The rise in the late 1960's and early 70's of ecological interest, concern, and knowledge in industrial countries led to the United Nations Conference on the Human Environment at Stockholm in 1972. The fact that this was a world conference encouraged poor countries as well as rich to begin to examine interrelationships in their development activities. Countries began to focus on the importance of improving the long-term sustainability of their development efforts and of minimizing the damage and waste caused by unplanned or unpremeditated side effects.

Since Stockholm, development agencies have begun to be more worried about the viability of their development programs from a natural resource viewpoint, a concern fostered and strengthened by destruction of tropical forests and the erosion of whole watersheds in, for example, Nepal and other Himalayan countries. There has also been a sharp increase in public awareness of the environmental hazards of developing countries having to place greater reliance upon marginal lands as the result of rapid population growth and demographic redistri-bution. These concerns came to be reflected in the broad commitments to environmentally sound development and to resource conservation projects that may be found among the policy declarations of all of the six aid agencies studied. This rhetorical commitment, with exceptions, has not been quickly matched by effective action.

## Incorporating the Environmental Dimension: Each Country's Unique Situation

From the outset of this project, I.I.E.D. has recognized two fundamental conditions which must govern recommendations for change in this area. The first is the need for donors to take into account the attitudes to environment found in recipient countries as well as the need to assess these countries' capacity to comprehend and to begin to manage their own environmental problems. This is a *sine qua non* for all real progress in improving the environmental performance

of development aid, and accordingly is dealt with first among the aspects discussed in this report (Chapter III). The second is the truism that each donor country can move towards achieving environmental sensitivity in its development aid only within the limits of and in the context of its unique constitutional and organizational framework, administrative traditions, foreign policy objectives, special relationships with recipient countries, particular capabilities in the supply of aid, and, above all, its domestic consensus on the importance of environmental conservation and natural resource problems. Because these differences are so important in determining what happens to an aid program, we have examined with some care the constitutional, organizational and cultural influences which define the context in which these efforts to improve the environmental quality of development aid must take place.

The United States--The Agency for International Development (AID)

AID is the world's largest development aid organization, with a permanent professional staff of over five thousand, or eight thousand if one includes local employees of field missions. Its budget, $3.2 billion for fiscal year 1979, remains the largest of the six agencies studied, and its staffing is proportionally far larger than that of the other agencies studied. This is in large part due to the fact that AID has field missions in all countries where it works. AID is separate from but takes foreign policy guidance from the State Department.

Among the agencies studied, AID is unique in several respects. First, for constitutional reasons, going back to the separation of powers among branches of the U.S. Government, AID is unusually sensitive to the views of Congress. Thus, when Congress shows an increasing interest in the environmental aspects of American aid, AID responds.* This Congressional interest has served to push AID towards more rapid incorporation of this dimension into its programs. It would, however, be unfair to indicate that AID did not already have

* This does not, however, means that Congress has been particularly generous in funding aid programs in general (the real value of American aid has gone down steadily in the past decade) or in mandating the financing of resource conserving and environment protecting projects in particular.

a strong inclination in this direction: it did, and does, and these outside influences mainly serve to catalyse and focus attention on the need for systematic incorporation of sounder environmental procedures.

Second, AID works on the basis of, and is bound by, a body of formal regulations on environmental matters. This reflects the strong American trend towards adopting quite specific regulations to control many environmental aspects of governmental operations. The United States is unique in having a law requiring an environmental review of proposed government actions.

Third, only AID (and to some extent ODA) among development assistance institutions have networks of field missions, staffed by qualified and experienced people, many with twenty to thirty years experience in developing countries. This level of field staffing gives AID in particular the capacity for detailed dialogue wih these countries on environmental issues.

Fourth, AID is less involved than other national aid programs in promoting the donor country's narrowly defined commercial, industrial, and financial interests. This is in part a reflection of the mutual wariness between American business and American bureaucracy. This relative distance between AID and the U.S. private sector does not characterize, however, one major area. There are close relations between AID and American agriculture, and the Food for Peace program plays a large part in AID's total program.

A fifth unique feature of AID's operations, and one which also reflects the U.S. constitutional and political system, is the easy access which AID provides the interested public to detailed information on the aid process, including environmental aspects of its work. Closely connected is AID's unique responsiveness to the organized attention of the non-governmental community on environmental questions. This is a generally creative if wary relationship. AID officials understand and accept the "adversary process" whereby policies may be challenged from within and outside the U.S. government. It is a process which keeps the large and often muscle-bound bureaucracy more alert.

A sixth factor which makes AID different from most of the other agencies is its strong instinct to be experimental in approaches to development problems which--although at times AID may appear "trendy"--gives it the habit of reacting positively to newly-defined developmental needs. Also characteristic is AID's comparative flexibility of doctrine and program. For example, the agency was able to switch with relative ease in the early 1970's to a commitment to concentrate aid on the poorest sector of recipient populations and in particular upon the rural poor. The fact that AID has not since 1973 funded any significant number of industrial projects is one indication of its commitment to a "poorest of the poor" strategy. Associated with this attention to the poorest is a growing concern in AID with the negative impact that the poorest people in these countries inevitably have on their fragile and marginally usable environments.

A seventh factor is AID's extensive experience in "institution building," particularly in Latin America. Giving this kind of help is one of the most important among environmental priorities, and it is an area in which AID can continue to make a particular contribution.

One trend inside AID is disturbing from the environmental viewpoint: our study has revealed that AID is losing its previously strong capacity to give good technical advice in the field, as technicians tend to be displaced by planners. Though AID still contains professionals of a very wide variety of disciplines, it is increasingly an organization of planners and economists whose success tends to be measured by their capacity to handle the paper work and master the procedural hurdles which must be crossed to achieve a rapid commitment of money. The trend away from technical assistance is rightly of concern to some senior officials as it, inter alia, reduces field capacity to cope with natural resource problems. It is, to some extent, offset by new efforts to increase "in house" environmental awareness through training, a subject discussed later in this study.

## The United Kingdom--The Overseas Development Administration (ODA)

The relevant institutional and operational characteristics of the Overseas Development Administration are described next, not because the British program is second in size of budget to that of the U.S.A.,

which it is not,** but because in a number of ways it embodies the institutional style in greatest contrast to AID's. Other agencies studied appear to fall, in terms of constitutional and organizational arrangements, somewhere in between these two styles.

Compared with AID's relation with the Congress and non-governmental groups, ODA is relatively insulated from both Parliamentary and non- governmental scrutiny. This is not a peculiar characteristic of ODA as such. It is true of the whole British system of government. In fact, however, Parliament does follow the work of ODA quite closely through its Select Committee on Overseas Aid (now Foreign Affairs), but that Committee has not yet focussed specifically upon environmental issues or upon natural resource problems. Nor does it have the capacity of a U.S. Congressional committee to require procedural or policy changes.

As might be expected, the great bulk of British aid goes to former colonial territories. Relations with recipient governments tend to be informal--to some degree still familial, with many of the advantages and disadvantages that family relationships generally imply. The continuing close links between the British private sector and these countries must also be borne in mind, as British firms have long histories of involvement in the resource development of ex-colonial territories.

From the environmental and natural resource viewpoint, Britain is in a particularly strong position because she has accumulated a quantity of data and expertise on environmental and natural resource problems in many parts of the world, which is unmatched by that of any other of the six countries included in this study. This expertise is available to ODA through a variety of officially supported technical research and service institutions such as the Centre for Overseas Pest Research, the Land Resources Development Centre, or the Tropical Products Institute. However, as many of the most experienced people in these organizations were recruited in the colonial period and must soon retire, this tends to be a depreciating asset.

** The British aid program employs approximately 400 professionals (technical experts and administration) in London and 150 dispersed in five development divisions or regional offices around the world. Total British official development assistance expenditure in 1978 amounted to £$1.21 billion of which no more than a third is committed as bilateral project aid.

ODA officials have a high degree of professionalism, independence and self-confidence. They know how to resist outside pressures from whatever quarter when they choose. ODA has professional overseas personnel deployed on a regional basis in Development Divisions but it has steadily decreased its field staffing. Indeed, over the years, but particularly recently, the constant pressure for staff cutbacks is a constraint that touches every consideration of ODA policy. During 1978/79, ODA was involved in de-employment of staff from overseas developing countries. This reflects a particular pressure to absorb budgetary cuts as much as possible through limits on staffing, so as to reduce to a minimum reductions in financial commitments to recipient countries. This tendency, appearing most laudable in accountancy terms, could be short-sighted if it results in redirecting British aid towards large-scale projects which require less governmental supervision and management and which tend to be capital intensive (usually involving aid tied to the export of British industrial goods). In fact, Britain's major difficulty in attempting to reorient its development aid towards work which will help to secure the natural resource base of recipient countries is that so large a part of British aid is requested to renew the existing economic infrastructure of a country: a task to which Britain readily--and understandably--acceeds as it means additional orders for British industry. Of course, other donors face the same problem.

Canada--The Canadian International Development Agency (CIDA)

CIDA has a relatively large number of officers (just under a thousand) in relation to its annual budget ($1.2 billion in 1979). It is independent of the Department of External Relations, although some 50 of its employees are stationed in Canadian embassies in developing countries. The Canadian aid program has grown rapidly: CIDA was formed as a separate agency only in 1968. Like some other national aid programs, especially those of Sweden and the Netherlands, it suffers from problems normally associated with rapid expansion, such as a high rate of personnel turnover, a lack of continuity in the management of projects and, as a result, a relatively poor institutional

memory which has implications for environmental performance. The creation of the International Development Research Centre (IDRC) in 1970 which was intended to buttress CIDA's innovative capacities, has certainly been of considerable benefit to the Third World, though it is not clear that CIDA has taken full advantage of some of the opportunities indicated by the IDRC.

Other characteristics of the Canadian agency which, in the broader context, have tended to govern its environmental performance are a relatively high level of centralization (CIDA has a very limited field staff); a very considerable orientation to infrastructure projects where Canada has particular expertise (40% of Canadian bilateral aid in 1977 was committed to transportation and power projects, largely involving the use of Canadian equipment); caution in committing funds to projects in new areas of activity; and commitment to aid a large number of countries. A final major feature of Canadian aid is its reliance upon private consulting firms for advice in the elaboration and execution of its projects. In general CIDA is well served by its consultants, the quality of Canadian consultancy in the transport, power, and forestry sectors being notably high.

Federal Republic of Germany

Germany's aid giving structure is more complex than those of the other five countries studied. The overall coordinator and policy maker for the total German aid effort is the Bundesministerium fur Wirtschaftliche Zusammenarbeit (BMZ). The project work itself is carried out on behalf of the BMZ by various agencies. They are physically and administratively independent. The two most important agencies are mentioned below.

One agency, the Kreditanstalt fur Wiederaufbau (KfW) is a capital aid agency which makes loans along the lines of the World Bank. It does its field work largely through consultants. The other agency is the Gesellschaft fur Technische Zusammenarbeit (GTZ), an agency which gives technical assistance and has a substantial number of

people working in developing countries. This pattern of separate German aid agencies was established in the days of relatively simple single-focus capital and technical cooperation projects. This presents today sometimes problems for the division of aid between the GTZ and KfW, especially as they both move towards more integrated projects, particularly for rural development; this latter trend reflects a progressive shift of German aid towards a "basic needs" strategy.

As for the institutional conditions which govern the Federal Republic's aid program's environmental performance, administrative overhead in relation to project commitment compares favorably from the narrow viewpoint of personnel costs with that of the other five agencies studied, with the exception of the Netherlands (D.G.I.C.). However, as will be stressed at various points in our report, this feature of low staffing in relation to delivered aid may not be advantageous, particularly from an environmental point of view. Germany draws, for additional staff for its bilateral aid, upon a wide variety of national scientific and technological institutions and universities.

The shift of German aid from a clear industrial and engineering orientation towards a focus on the problems of the poorest, especially in rural areas, is impressive. This shift has occurred more rapidly, in response to top level policy pronouncements and commitments in international fora than in any of the other countries studied except the United States.

From an environmental point of view, the BMZ and its two subsidiary agencies, together with various other decentralized elements of the German aid program, are more closely watched by the Bundestag than are any of the other aid programs studied except AID. Indeed, the KfW is guided by a non-mandatory cabinet resolution on "principles for assessing the environmental impact of federal actions" (1975) and a "catalogue of environmental project assessment criteria of the KfW." These in principle commit the agency to a relatively comprehensive consideration of environmental aspects of its development projects.

The Netherlands--Ministry of Foreign Affairs, Directorate General for International Cooperation (D.G.I.C.)

Of the development aid agencies studied, the D.G.I.C. is a special case from a constitutional and organizational point of view. While the Dutch aid agency is integrated in its practical operations within the Foreign Ministry, a considerable proportion of the Netherlands' aid program is managed by other institutions.

The Dutch Aid Ministry itself has overall responsibility for the management of the aid budget, which represents the equivalent of US$ 1.8 billion or 1.5 percent of the Netherlands' GNP. The D.G.I.C. has generally not developed much specialist in-house expertise, but prefers to make extensive use of specialized outside expertise available in the Netherlands and, increasingly, in the developing countries. However, such a decentralized and fragmented structure makes it difficult to establish and implement uniform and coherent procedures and practices especially where environmental considerations are concerned. the D.G.I.C. itself is run by an extremely small staff. Approximately thirty desk officers administer a bilateral program with an annual value (1979) of approximately one third of the total aid commitment. Although Dutch bilateral projects rose from 200 in 1971 to about 1,100 by the end of 1977, D.G.I.C. staffing both at headquarters and in the field increased by just a little over one quarter.

Concern about the environmental implications of development assistance is increasing and has begun to influence the activities of Dutch bilateral development cooperation. Whereas awareness of the issues involved has been demonstrated in several recent policy papers on Dutch development cooperation, little progress has been made to date in formulating the requisite policy instruments for the implementing of policy intentions. This does not mean that nothing has been accomplished in the recent past. Ecological considerations have been taken into account in some projects, often as a result of individual initiatives by agency staff or because of heightened environmental awareness among executing personnel. But while awareness of the importance of these considerations has increased, much remains to be done in systematizing the incorporation of environ- mental concerns into Dutch bilateral development cooperation activities.

The high degree of interest in the Netherlands' Parliament and among the Dutch public in general about environmental aspects of development is clearly helpful to the agency in achieving improved environmental performance. Moreover, the quality of ecological expertise

to be found in a number of institutes and universities (such as the Royal Tropical Institute, The National Institute of Nature Management, the Institute of Social Studies, the International Institute for Hydraulic Engineering and Nature Management, and the National Herbarium) remains high. The D.G.I.C. has opted for a decentralized organizational structure for project handling whereby the regional desks enjoy considerable scope in shaping the program activities annually agreed upon. Systematization of environmental concerns within the regional desks, however, should have more attention since expertise in this area seems to be fragmented and dispersed within and between bureaus. The central difficulty for the Netherlands is how to ensure proper orchestration of technical expertise in projects which, as in other aid agencies, increasingly attempt an integrated approach to developmental problems.

Sweden--The Swedish International Development Authority (SIDA)

SIDA's 1979 budget totalled approximately US$ 1 billion of which approximately half was committed to bilateral projects. This agency employs about 400 professionals in Stockholm and 80-100 in its fourteen field offices. SIDA has a unique constitutional relationship to the legislature and the rest of government. As one of several quasi-autonomous authorities managed by their own administrative boards, SIDA has a relatively high degree of independence from the Foreign Ministry. This relative institutional independence is reflected in the independent outlook of SIDA officials. SIDA must work very closely with the overseas representatives of the Foreign Ministry because of the modest scale of its own field staffing.

Because of Sweden's international political posture and its lack of recent colonial connections, Sweden has tended to direct a very high proportion of aid (approximately one third) to multilateral channels and to focus its bilateral aid on relatively few countries. This is done both for foreign policy reasons, for example when Sweden wishes to support a particular government, and also to achieve maximum economic impact. The latter objective, in practice, has dictated a shift towards relatively large-scale industrial projects, a movement

which appears to contrast with the insistence in Swedish policy statements on the importance of meeting the basic needs of poor people and on protecting the environment. It should, however, be pointed out that a substantial part of the Swedish aid effort in terms of time and personnel is still focussed on rural development of various kinds.

Like most of the other aid agencies, SIDA turns to a number of national institutions, including universities and consulting firms, for technical advice on projects rather than maintaining a substantial body of in-house expertise.

The unique feature of Swedish development aid--giving bilateral financial support to multilateral projects ("multi-bi" projects)--represents an attempt both to support and to draw upon the high accumulation of expertise in international agencies, especially the specialized agencies of the United Nations. This approach, which is logical from the viewpoint of the broader Swedish desire to support international organizations, also provides extra encouragement to the specialized agencies to examine environmental priorities in the course of technical cooperation with developing countries.

## Common Problems as They Affect Environmental Performance

So far we have focussed on differences among the six agencies and how these give direction and flavor to their aid programs--particularly the environmental aspects of these programs. There are also common problems which effect environmental performance. For example, all the agencies on different scales are at present undergoing reorganization. In some cases (as in the Netherlands and possibly Canada) this realignment is of extraordinary importance and scope and may have major significance for the direction of the development program. In other cases, it is a natural characteristic of government departments where reorganizations are seen as a means of shifting permanently employed officials to more suitable jobs. In all cases, reorganization could theoretically provide a vehicle for incorporation of new environmental policies and procedures, although when reorganizations stem from budget cuts, as they often do at the present time, this is more difficult.

Another common problem among the agencies examined is a general shortage of staff which often leads staff to consider themselves overworked.

The traditional approach of minimizing staff in relation to delivered aid can be shortsighted in that it may lead to the selection of projects of high political impact but low, or indeed negative, long-term effectiveness. Staffs typically also claim that they lack time to examine projects carefully, inter alia, for environmental soundness. Furthermore, budget cuts make it difficult for agencies to add additional personnel to already depleted staffs to handle environmental problems.

A third general problem is that economists and planners are increasingly coming to dominate aid agencies, and are increasingly depended upon to look at and judge complex, multi-sectoral projects with important environmental implications. Often their training and experience in making multi-sectoral judgements, particularly on the ecological and sociological consequences of one activity upon another, are inadequate. They tend to base their judgments on their own limited sectoral disciplines which often makes them incapable of appreciating the need for adequate management of environmental affairs.

These factors, when added together, appear to be the true cause of much of the inertia that has kept rhetoric on environment and development from being translated into effective action. We found that when busy and technically uncertain administrators have been told by senior political officials, as they have in all six agencies, to take environmental and resource factors into consideration in development projects, some reacted in much the same way:

--they tended to label environmental standards as "add ons;"

--they tended to resent or ignore orders to apply such standards;

--they tended to look for ways to avoid assuming responsibility for the environmental soundness of projects (there has been a resultant tendency for responsibility for environmental assessment to fall through the cracks);

--they tended to avoid discussing special environmental problems with developing country officials on the grounds that this could involve "interference in domestic affairs";

--they tended to resist projects for natural resource conservation or rehabilitation as being too complex and not cost effective;

--they tended to claim that aid receiving countries did not want environmental inputs into their projects.

Effective Leadership: The Key to Introducing Environmental Sensitivity

Despite some determined bureaucratic resistance, the outlook for increasing environmental sensitivity in the six agencies is far from bleak. Experience has shown that initial uncertainty, inertia, and resentment have been overcome by effective and timely leadership by someone at or near the top. Specifically, on the basis of our experience with multilateral as well as bilateral aid programs, we believe that things begin to fall into shape when:

(a) general environmental doctrine is translated into technically understandable project criteria, consistent with development experts' understanding of "sound practice";

(b) definite responsibility for the application of environmental criteria is assigned to persons with authority, accountability, professional credibility and top-level backing;

(c) help in identifying and solving technically difficult ecological problems is made available to responsible generalists and

(d) agencies begin to succeed in efforts to make their officers aware of environmental considerations and to convince them of the importance of these considerations for the achievement of sustainable development.

The problem of ensuring the higher priority now needed for the funding of natural resource projects has yet to be solved but will also, we are convinced, depend on leadership.

It is in recognition of these common constraints and opportunities that we make certain general recommendations. We list them here so that subsequent discussions can be analyzed in their light.

First, responsibility should be assigned to a focal point in every agency for ensuring that environmentally sensitive projects are singled out and their environmental soundness assessed at every stage in the project cycle.

Second, organizational arrangements made to ensure greater attention to environmental (including especially natural resource) considerations should as far as possible be built into the existing structure and be based on existing institutional traditions. Unfamiliar organizational units should preferably not be created, for dealing with environmental problems.

Third, addition of staff for the checking of environmental soundness should be no larger than absolutely necessary, and a minimum of additional paperwork should be generated.

Fourth, environmental policy and doctrine should be clearly enunciated and then translated into definite, simple, technically understandable criteria for evaluating projects. These criteria, to the extent possible, should be so closely related to what is generally understood as professionally "sound practice" that they will not soon be considered "environmental add-ons."

Fifth, special help must be made available, either "in house" or through contract, to officers responsible for environmental and natural resource projects, to help them analyze techically difficult problems beyond their competence.

Sixth, all development agencies should offer staff training which recognizes the need for environmental sustainability in relation to development in general. Training should stress the inter-disciplinary approach to environmental problems and should emphasize the importance of conserving natural resources.

Seventh, and most important, every possible means should be used to help aid receiving countries to identify and understand their own environmental and natural resource problems, and to enable them progressively to solve them.

## II. ENVIRONMENT AS AN ELEMENT IN AGENCY POLICY

All of the six agencies agree on the importance of providing clear policy direction on environmental matters. Each has, in the post-Stockholm period, produced a policy statement on the environment which emphasized its importance in relation to the agencies' development objectives. Yet so far none has been totally successful in defining these objectives holistically in the overall context of the major practical and conceptual problems faced by that agency. All should now define how best to help utilize the resource base of developing countries on a sustainable basis; how best to give effective aid to the poor in the rural and urban sectors; and how better to identify and present opportunities offered by alternative solutions to problems of development.

That the six agencies have not been able to draw these obviously related elements together into one picture--an effort which could help to illuminate each agency's development objectives for themselves--seems to be symptomatic of an important problem: environment--despite many broad statements regarding its key role in the development process--is still seen to be an "add-on" or side issue by many of those in charge of development policy formulation, rather than as the milieu within which development takes place, and the unifying concept that it could be.

In Britain, various ministerial statements have been made about the general importance of environmental concerns and their compatibility with development objectives. However, a policy paper on treatment of the environment produced in 1973 had been buried in the files and in the minds of administrators, and was only unearthed late in the study: a fact which itself suggests that need for consideration of a new overall environmental policy directive for ODA.

In Canada, sector guidelines plus a series of documents have been produced by the Policy Branch of CIDA, which several years ago conducted a vigorous analysis of relationships between environment, basic needs, and self-reliance strategies under the general rubric

of "eco-development." These papers certainly raised awareness of environmental questions in the Agency, though using the umbrella word "eco-development" to describe these relationships appears to have produced some confusion and misunderstanding. Moreover, the concept of "eco-development" is considered by many CIDA officers to be too theoretical for actual program planning. With the exception of an incipient "eco-development" project in El Salvador, there has been little tangible spin-off from this effort. Thus, a widely-accepted and integrated perspective on how environmental protection and improvement should be incorporated into CIDA's work has yet to emerge.

In the German aid agencies, despite the recent focus of official attention on the basic needs of the poorest and on the need to employ alternative technologies to meet them, and despite official commitment to environmental concern, the status of environment among the other major policy concerns of these agencies remains unclear. The same is true in the case of the Netherlands.

Sweden does not lack general commitments to environmental action nor to the relatedness of environmental issues to other new areas of concern such as basic needs of the poorest or alternative technology. The problem there, as will be discussed later, has been the realization of such policy commitments in action.

Even in the case of the United States, where environmental concern is very visible, AID's various policies remain fragmented. AID's environmental regulations state the main policy lines only very briefly, and there is no overall policy paper which discusses the relationship of the environment to other AID objectives. There are good statements by AID officials to Congress, but even these fail to cast a broad enough net.

## Country Program and Policy Papers

A common feature in the policy-making structure of the six development aid programs is that the geographical divisions (in the U.S. case, field missions) are from time to time required to produce country program papers. The latter are generally "in-house" papers which define in broad terms the size, focus, and purpose of the national

aid effort in a particular country and indicate how the proposed aid fits into the country's development program. At present almost none of these country papers considers the environment or the natural resource base in a fully systematic fashion, although most agencies agree that they should. Environmental considerations may be dealt with partially in one paper and be wholly absent in another, even though the environmental concerns and stresses in the two countries are just as great. A reponse that the project teams had from a few agency officials was that environmental issues were dealt with automatically under other headings in country papers, such as public health, water resources, or forestry. This may be partially true in some cases.However, if discussion of environmental problems was specifically required, officials would be forced to consider the inter-relatedness of environmental issues, in particular the long-term effects of projected actions on the resource base and human health and the side-effects of aid projects,

Progress in this regard can be expected in a number of countries. For example, the D.G.I.C. has decided that country policy papers should henceforth devote a distinct section to the state of and trends in the natural environment of recipient countries. It has been agreed that this approach should be carried further and that "ecological models" of regions should be constructed with Dutch aid on the basis of available data.

AID, in addition to requiring Country Development Strategy Statements (CDSS) which will discuss resource and environmental problems, is at present in the process of preparing country "environment profiles," as mandated by Congress. Unlike the CDSS, they are public documents. They describe the environmental and natural resource problems of a country as well as that country's intellectual and institutional capacity to deal with those problems. It is hoped that the environmental profile will heavily influence the content of the CDSS. It should also be of value not only to the country studied, but also to other agencies interested in that country's development. Several other international development agencies are making similar studies. There is a strong case for examining how the efforts of different agencies might be coordinated and unnecessary duplication avoided.

AID (like the World Bank) has still another type of general policy

paper, the sector paper which describes what AID hopes to accomplish in a given area of activity (agriculture, land reform, nutrition, population and now under preparation health and education). Likewise, a good guidance on forestry and related issues has just been released which is essentially a sector paper although not so labeled. Some of AID's sector papers are outdated and should be revised to reflect environmental and natural resource considerations.

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As regards policy statements then, the IIED's recommendation is clear: that each agency should produce and promulgate from the highest policy level an updated policy paper which enunciates the agency's general development objectives, focussing particularly on aid to meet the basic needs of the poor and relating all this to environmental and natural resource considerations. Even though this was partially done in some agencies several years ago, it should be done again. Under the deluge of subsequent directives and documents, these papers have often become buried, forgotten, or conceptually outdated.

## III. HELP FOR DEVELOPING COUNTRIES IN IMPROVING THEIR ENVIRONMENTAL MANAGEMENT CAPACITY

The six development agencies agree that efforts to help countries cope with their environmental and natural resource problems must be given significantly higher priority than is presently the case. Nevertheless, it is striking how differently the various agencies approach this problem. Clearly this is a field where aid agencies normally act upon the direct request of a government for help. However, we believe that each agency should urgently consider how it can help build up developing countries' environmental management capacities and how they can more actively encourage developing countries to seek such assistance.

Most of the agencies studied have been relatively passive in this area. The exception is AID, which increasingly often at the request of recipient governments, has made strengthening of environmental management capacity an important feature of its environmental work. The AID March 1979 report to Congress entitled "Environmental and Natural Resource Management in Developing Countries" stated that developing countries are beginning to recognize the gravity of their environmental and natural resource problems, and are also beginning to understand the relationship between these problems and prospects for sustainable development. The report notes, however, that many developing countries still lack the ability and the institutions to effectively manage development projects with significant environmental and natural resource implications. AID now plans to help developing governments identify and evaluate environmental problems and devise appropriate responses. It concludes that institutions for environmental and natural resource management must be established or strengthened in all developing countries and that developing countries' personnel must be provided with environmental training and education.

This view is widely shared, at least in theory. We found agreement that the development of effective environmental and natural resource programs within each aid receiving country ought to contain four

elements:

1. Helping the country to evaluate its environmental and resource problems.

2. Working with the country to develop an effective strategy to cope with those problems.

3. Helping the country to identify and reinforce "local capacity" to deal with specific problems.

4. Supporting or helping to create appropriate country institutions.

Despite agreement on these points, only a few agencies have helped create new institutions or strengthen existing governmental and academic institutions concerned with environmental issues. Even AID, the most active aid agency, has helped only a few countries such as Nepal, Panama, Costa Rica, Nigeria and Indonesia in institution--building. However, more initiatives are presently underway in AID. This is perhaps the most impressive aspect of its environmental work. For example, AID's $10 million watershed management loan to Panama includes funds to build up the capability of the Panamanian Natural Resources Agency (RENARE) through training, education and the acquisition of technical equipment.AID's effort in a number of developing countries to help existing institutions increase their resource analysis and planning capacity is especially important.

Besides direct institution building, AID's effort to train national resource managers is growing. CIDA likewise has a number of education plans which focus on natural resource and environmental improvement for particular projects in Malawi, Indonesia, and Kenya, plus support for two regional centers planned in Bangkok and Dakar. However, expansion of CIDA's efforts in the education area appear to have been checked by the requirement that training be given only in connection with specific CIDA projects. As the agency has few "environmental" projects or components, the Agency has been reluctant to support environmental training. This position is not totally logical given CIDA's theoretical commitment to holistic planning and execution of projects.

ODA has sponsored a variety of environmental education and training activities which include developing an environmental education

curriculum for schools in Sri Lanka, Pakistan, India and Kenya; advisory service for developing field study centers in Sri Lanka; technical training at local institutions within developing countries on monitoring techniques and integrated pest control; a course on resource management for overseas officials at Aberdeen University; British Council courses on pollution problems in the Third World; a course on environmental impact assessment for overseas personnel run jointly by the Monitoring and Assessment Research Centre at Chelsea College, London and courses at the Project Appraisal for Development Control Unit at Aberdeen University; and the secondment of teachers to developing countries to give courses on ecology and environmental sciences. A number of the ODA promoted development projects contain a training element. Where relevant, these projects contribute to the UNESCO Man and the Biosphere Program and the Action Plan on Desertification. Most activities in environmental education and research are the responsibility of the Environmental Advisor who, among his many other duties, is expected to initiate and design training projects.

The German aid agencies have also devoted increasing attention to environmental training and institution building. For example, the GTZ incorporates involve institution building and strengthening of local capacity as a components in German pesticide projects. It also supports the Arab Center for Drylands and Arid Zones (ACSAD).

Little of detail can be said in a general survey such as this about help that may be given to Third World countries in developing research capacities on natural resource problems AID has gone further in these areas than other national aid programs. For example, AID is supporting several collaborative environmental research projects with developing countries under the Man and the Biosphere Program (MAB). It is also sponsoring a particularly interesting research and management training program for tropical soils which involves soil scientists from a number of countries working closely with American universities. AID recognizes, however, that it still has far to go in promoting collabor- ative research on environmental and resource problems.

From a number of field trips conducted both by the national study teams and IIED, we found that a surprising amount of environmental

data is often available in developing countries, along with competent individuals capable of undertaking environmental assessment, monitoring or post-project evaluation work. These individuals have too often been ignored by recipient government departments and bilateral and multilateral development agencies and consequently have not been as involved as they should have been in development project work. Bilateral programs could take a most important initiative in supporting and building upon existing indigenous strengths and capacities.

A major recommendation of this report is that aid programs do what they can to seek out experts in national scientific research institutions to help them to upgrade their knowledge and encourage their involvement in the various stages of project development. This will help raise these scientists' standing with their governments and also help them acquire the confidence and experience needed to share the task of environmental assessment and monitoring with development aid institutions. Additionally, in this work, it is vital that great care be taken to avoid an undue bias towards the aid giving countries' temperate zone experience.

## IV. THE ENVIRONMENTAL APPRAISAL OF DEVELOPMENT PROJECTS

The six agencies understandably adopt a variety of approaches to the environmental appraisal of projects at the various stages of project conception, examination, and execution. Style of assessment varies considerably. The U.S. approach of detailed procedures resulting in a formal paper at each stage of the project cycle contrasts sharply with the British approach which embodies a strong tradition of pragmatism and lack of formality where procedures are concerned. In the British case, a development project proposal is derived by an informal and often intuitive process involving ODA administra- tors and professionals, officials of recipient countries, and sometimes the staff of other agencies. Options are eliminated during this process by making complex trade-offs between burdens and benefits of different schemes,but usually without the encumbrance (or help) of detailed documen- tary study.

To a considerable extent, like the British, officers in the four other agencies observed, particularly the Canadians and Dutch, informally and without much being recorded, make many value judgments and find opportunities to reduce adverse and enhance desirable environmental impacts of their projects. Because of this informality, the outcome of this process is strongly influenced by the backgrounds and attitudes of the persons directly concerned, particularly the officer in charge of a project and the advisors he may decide to consult.

Two points of common agreement between IIED and senior agency officials in each agency about the assessment process should be stressed. The first is that the earlier in the project conception process the first assessment of environmental considerations take place, the better it is. The second is that entirely ad hoc procedures and ad hoc responsibility for applying them are not sufficient to the task of ensuring that any agency's activities are environmentally sound. Instead limited, but coherent, procedures should be established within each agency. How these tasks should be approached was the subject of less unanimous agreement.

1. Environmental Guidelines

We have already emphasized the importance of establishing criteria for evaluating environmental aspects of development projects. A common method for doing this is to incorporate such criteria in guidelines. Guidelines covering (but not necessarily particularly aimed at) environmental considerations do exist in each agency. Canada and Germany have developed specifically environmental guidelines, though in neither case are they complete in the sense that they cover all project categories with potentially signficiant environmental effects. Guidelines are in these cases designed principally to help those responsible for managing the process of conception and planning of projects. They tend to take several forms. One is the "checklist" which is generally a series of questions designed in a questionnaire format and requiring a more or less yes or no answer. Another form of guideline is more in the nature of a policy paper, discussing important points to consider in the choice and design of a project. A third form of guidance comes from the "project manual" for planners or desk officers, which, however, usually focusses on the economic appraisal for projects.

The worth of guidelines focussing on one topic, environment, has been questioned; they must be broader, even then, we have concluded from experience with a wide range of projects examined and from the field experience gained by project teams contributing to this comparative study, that while guidelines for environmental aspects of projects are a useful tool, they seldom provide sufficient guidance to ensure adequate environmental awareness and performance during all stages of the project cycle. Simple checklists are, by common consent, the least helpful aids in this respect. To a harassed administrative officer with no background in the field of environment and little guidance on weighing the various factors, a mere checklist becomes either a meaningless encumbrance or a procedure with which he can comply too mechanistically.

Guidelines for examination of a particular category of projects in their formulation stage, are most useful when they take the form

of short papers which indicate positively the factors that should be sought and examined. Such papers have the advantage of directing the attention of generalists towards elements which may change, enhance, or rehabilitate the environment. AID, for example, has prepared guidelines on housing.Likewise, some of its existing and proposed "programmatic assessments" (see p.29)serve approximately the same purpose. However, only the paper on housing was, especially designed to cover environmental questions. At the present stage of environmental awareness within the agencies under study, it does seem necessary for the papers for all the principal sectors to be reviewed from an environmental point of view and for new ones to be prepared on environmentally sensitive sectors still not covered.

Of course the existence of guidelines by no means guarantees adherence to their recommendations. For example, in the case of CIDA, the Agency's 1976 guidelines provide a reasonably comprehensive statement on environmental policy. However, the latter are rarely used as more than a point of reference, and a "benign indifference" has been noted towards projects that enhance or rehabilitate the environment of the Third World or are likely to increase the environmental management capability of recipient countries.

2. Preliminary Screening of Projects to Determine Environmental Sensitivity

It may not, of course, always be obvious when projects are first conceived which ones present environmental dangers and which ones present opportunities for environmental enhancement. Very often this requires careful review, sometimes more than once. How then are project officers, field staff and technical advisors to identify those projects with potentially signficant impacts and flag them for detailed environmental scrutiny?

A first step which seems essential is to narrow the field of projects which do require detailed environmental examination. This has been done, in a formal way, only by AID. A widely-held misconception is that AID's formal environmental assessment procedures are applied to

all, or virtually all, development projects. In fact, a wide range of AID projects enjoy "categorical exemption" from the environmental review process. This happens when a project falls into categories of assistance judged to be without a signficant impact upon the environment. Initial responsibility for identifying environ- mental impacts rests upon field missions, which must decide in an "initial environmental examination" (IEE) whether formal assessment is required. This procedure, after three years of operation, is undergoing major review aimed at making it a more sophisticated, less "yes or no", response to the question of whether further environmental assessment is necessary. AID is now attempting a screening procedure which will identify environmental problems and will indicate how, when, and by whom they should be analyzed and resolved. These new procedures for preliminary screening are being closely observed, and training efforts are underway to show officers responsible for their preparation how they can be used.

SIDA provides another example of the problem of ensuring that environmental guidelines are actually used. SIDA committed itself in the 1974/75 budget proposals to formulate environmental guidelines, but so far these have not emerged. Field examination in Tunisia, where a substantial SIDA program exists, should that neither broader or better information on environmental impacts of its SIDA projects nor alternative approaches which might reduce environmental impacts or enhance a natural resource have been presented. Nevertheless, the mere existence of this unfulfilled requirement may well have had an indirect impact: a number of SIDA projects in Tunisia are directed to environmental improvement or restoration, e.g. reforestation projects, sewage system construction, provision of drinking water, and the restoration of Lake Tunis.Even in this case, the lack of specific and detailed guidelines as to how environmental questions should be handled resulted in environmental assessment being "little more than an expression of awareness."

Turning to guidance provided by project manuals, some officials of the British and Canadian aid agencies felt that the project manual for planners or desk officers (in the U.K. case the key document is "A

Guide to the Economic Appraisal of Projects in Developing Countries") should be amended to incorporate new insights on how to cope with potential environmental problems. Both ODA and CIDA are particularly aware of this need and have asked the national team to prepare specific guidelines for the Agency. A similar review would seem to be required in the case of the Swedish, Dutch and the German aid programs.

3. Environmental Assessments of Specific Projects

AID is the only agency studied which has established formal procedures for assessing projects singled out for environmental review. That does not mean that no assessments have been done by the others. All of the agencies exhibited examples of environmental assessments made as an integral part of a project design document. Some appeared to be adequately thorough, others obviously too cursory. One cause of this patchiness is the absence (except in AID) of persons with designated responsiblity to ensure that environmental assessments are carried out adequately and with the backing to do so. In other agencies, where departments or individuals have been assigned the responsibility for assuring environmental matters, they appear to have neither the central location nor status to ensure that this is done.

Despite its clear commitment to thorough assessment of environmentally sensitive projects, AID has so far conducted only twenty-five formal environmental impact assessments. Field visits tend to confirm a few impressions about the quality of these assessments. One is that some of them have tended to be too lengthy and overly theoretical, making them less valuable than shorter, more practical reports. AID is seeking to generate not only more succinct reports but also ones which take a fresh look at the a project in relation to policy objectives and, where appropriate, suggest alternative approaches in project design. AID is also involving local specialists more frequently in the assessment process. A major problem with some types of projects is scarcity of consulting organizations with an appropriate mixture of technical and country-specific knowledge to prepare well-rounded assessments. AID appears to be on

the right track, however, in analyzing, streamlining, and increasing the flexibility of its procedures.

Should the other aid programs follow the U.S. in requiring separate documentary procedures for environmental assessment? The five other agencies do not think so, given the present overload of paperwork and their different bureaucratic traditions. They believe, and we agree, that the need is not for producing a particular kind of document but rather for assuring a sound assessment process. The stress of this report thus lies on the need to set up better, more comprehensive mechanisms for environmental sensitivity in project design, tighter environmental surveillance in the project execution process, and, perhaps most important, training and support for institutions in developing countries which can take responsibility for environmental management.

Another creative way to identify and plan for environmental impacts, which is being tested by AID, is the "programmatic assessment" for a given category of project. Programmatic assessments are, in effect, road maps which show a well-trained generalist how he or she can assess a certain kind of project on a step-by-step basis; what data he or she needs to acquire, and where to get special technical help. In the course of carrying out this procedure, certain information must be recorded and evaluated. AID has prepared programmatic assessments of its pest management program and has one in preparation on malaria control. Other sectors lined up for AID's programmatic assessments are rural road construction, irrigation and housing. As a result of these assessments, for many kinds of projects, the need for outside expertise and the necessity for formal assessments of individual projects can be reduced. Broader use of programmatic assessments should dispell some mystery regarding environmental assessment and generally improve project design criteria. A second important benefit of this approach is that the findings can be more readily shared among donors.

4. Upgrading Assessment Expertise

So far we have discussed how to improve and better use "in-house" assessment expertise. The problem of upgrading expertise also extends

to consultants and contractors, who in practice do most of the assessment work in all the agencies studied. We found examples in each agency of work done by consultants which was dangerously deficient from an environmental viewpoint. No agency had yet devised ways to cope with this problem. We recommend, as a priority area for further investigation by all agencies, the establishment of procedures to examine the terms of reference and quality of work of consultants used for the environmental appraisal of projects, and the formulation of means to train or at least to brief consultants on environmental procedures.

5. Environmental Monitoring

From an environmental point of view, the monitoring of the implementation of projects is particularly essential.* Monitoring is not simply a matter of collecting and analyzing scientific and other data. It entails a continuing wide-ranging review of the interaction of a project with the physical, social and cultural milieu in which it is taking place and correction of mistakes discovered. To monitor (as the dictionary definition of the word reminds us) means also to caution or give warning. This in turn implies easy access between those with monitoring responsibilities and those in charge of projects.

In every one of the six agencies, there was broad agreement that more environmental problems were the result of bad project implementation than of faulty conception or design. None of the agencies, however, has really begun to cope systematically with this problem, and we strongly recommend that each one establish appropriate protective procedures as soon as possible. It is generally recognized that far more effort is concentrated upon project preparation and on keeping

* Here we use the word "monitoring" in the broad sense of meaning the overseeing of the proper implementation of a project. "Monitoring" is often used in the more technical sense of meaning the setting up and use of a system of base line studies necessary to determine how a particular project is progressing environmentally, i.e., is water quality deteriorating? Or has soil erosion decreased? This process we consider to be a part of the larger process we call "monitoring".

funds flowing to developing countries than upon checking on the quality of project execution and upon evaluating the results. There are strong political reasons for avoiding the appearance of inappropriate interference once a project has been turned over to the recipient, but these problems can be overcome if handled correctly.

The project teams identified two main causes of environmental problems during the implementation stage. The first--which is also a problem of project preparation—is failure to accumulate base line data, especially social and ecological data, and to check operations against them. The second is inadequate supervision during the implementation phase. Classic examples of where adequately designed projects fail in execution, with environmentally disastrous consequences, are found in road projects financed by one or more agencies where large labor gangs are inadequately controlled and supervised. As a result, soil from road cuts is often carelessly dumped in a way which destroys precious farmland. Other problem areas involve forestry projects where young saplings are not properly protected from neighboring villagers scavenging for fuelwood or where livestock penetrate reforestation areas; soil and pasture projects where destruction results from badly managed rangeland projects; and irrigation projects where deterioration of soil quality results from salination because of ill-controlled irrigation, or where unwise application of chemical pesticides destroys soil bacteria.

It is unfortunate that AID's current revision of regulations, while reflecting an effort to improve assessment techniques, still fails adequately to recognize the centrality of the need in environmentally sensitive projects for continuous environmental monitoring and study during the implementation phase.

The Dutch, who take a rather different line from other donors on the question of environmental assessment, tend to believe that much environmental damage results from the fragmented institutional organization of aid and from the desire of both donors and recipients to seize upon a discrete and "doable" piece of work with insufficient regard to that project's impact on other farming activities in other aid projects. The Dutch, therefore, see monitoring as an integral part of project

management and reject any notion of a separate monitoring function.

CIDA's monitoring problems seem to stem particularly from lack of field experience among many CIDA officials, and from the Agency's large degree of centralization and lack of field missions. SIDA, like other agencies studied, has done little in the way of environmental monitoring, except on an ad hoc basis.

In none of the agencies studied is there a system for the collection, analysis, and dissemination of information on how well projects are being or have been implemented environmentally. Audit activities so far are confined to financial accounting. Sometimes some environmental assessment information is available in obscure documents, or from the knowledge and memory of officials involved. However, in all the aid programs studied, there is a record of serious deficiency in institutional memory. In the case of long-term projects, monitoring responsibility is often passed from one set of officials to another, and information necessary for proper monitoring gets lost in the shuffle. We believe that all the agencies must give further thought to how the lessons learned in carrying out a project can be made available to other interested people. This is a recommendation we would like to stress as it applies to all aspects of environmental and resource analysis.

Collection of scientific baseline data which will indicate what is really happening to the physical environment of a given project presents special problems. In the case of the British aid program, although there are notable exceptions, the collection of ecological data is still rare. Likewise, constant ecological monitoring is not often conducted. However, there are important and interesting exceptions. For example, the ODA through its Center for Overseas Pest Research (COPR), has monitored applications of endosulphan on non- target organisms in Botswana, where it is being used to control the tetse fly. Similarly, the British are making an investigation there into the long-term effects of DDT upon soil productivity and the effect of pesticides on tropical crop ecosystems. One problem faced by ODA is that monitoring criteria have been often excessively vague, particularly

for environmental effects. Criteria should be clearly established in the early stages of a project. They should derive from the project's goals and should include environmental indicators.

Ecological base line data collection and monitoring studies may often be elaborate and costly (as was the case with the endosulphan monitoring, which has been plagued by many difficulties). The scale of monitoring should be regarded as a normal component of the operating costs of projects. Professional staff (including those in scientific units) should not have to make a special case to embark on a monitoring scheme. Even costly monitoring can be justified in larger schemes and in those with especially severe environmental consequences. In smaller schemes, it appears from British experience that a few simple, inexpensive, and timely measurements can provide valuable ecological indicators. For example, simple procedures exist for assessing rates of soil loss, gauging stream flow, and measuring the level of vegetation cover and the distribution of key vegetation species.

The failure to carry out ecological or any other monitoring of aid projects is often attributed to the reluctance of agencies to interfere in the affairs of a recipient country. But if development agencies believe, as the authors of this study do, that improved programs would result from improved monitoring procedures, further efforts should be made to promote understanding of the benefits that the recipient country would get from such work, and to involve recipient country officials in the monitoring process. In case where a recipient country has been tactfully reminded of the importance of monitoring or involved in the process, results have been excellent.

To make monitoring valuable, individuals must be designated with clear and, where possible, separate responsibilities: one to monitor projects in the field and another (preferably though not necessarily another person) to review the results.

Most important is the urgent need to train in AID recipient countries to the point where they can do most of their own monitoring and evaluation. Even so, the development agencies themselves must maintain some responsibilty for and knowledge of monitoring and must do their own post-project evaluation, as it is their responsibility to see that a project is well done and glean whatever lessons possible in order to improve future projects.

5. Post-Project Evaluation

Even more than is the case with monitoring, post-project evaluation of environmental aspects of projects is often neglected, too often because of the fear of a negative reaction from recipient countries. The failure to carry out proper post- project evaluations reflects and perpetuates a major defect already noted in the work of all the agencies studied, weakness of institutional memory and a lack of capacity to learn from the agency's own, or other agencies', mistakes. AID is studying how these problems can be overcome without generating too much paperwork. However, it has had only minimal success to date.

There are, nevertheless, some distinctly encouraging signs in some agencies. An interesting case is the major post-audit on the effects of the Aswan High Dam being conducted at Michigan University with support from the U.S. Environmental Protection Agency with the cooperation of AID. In this case, originally identified negative environmental effects of the High Dam Project may turn out to be considerably less serious than were at first believed.

Further post-project evaluation seems essential to the strengthening of all other aspects of environmental performance in the six agencies. To the extent possible, lessons learned should be shared with other AID agencies. Lessons indicated can be reported in such a way as not to embarass a country, the constraint usually cited for avoiding the generation and exchange of such information.

## V. ENVIRONMENTAL PROJECTS

That entire regions of the developing world are faced with appalling physical devastation of their mountains, forests, grasslands, and most worrisome of all, their best agricultural lands, was recognized by all the agencies we studied. The horror stories of Nepal and Haiti, of the Sahel and Northeast Brazil are well known. Less well known is the rapid and dangerous deterioration of soil and water everywhere in the developing world. All the agencies increasingly recognize the narrow limitations that this rapid deterioration of physical systems imposes on economic and social development. What we did not find in any agency, however, was adequate recognition of, or programmatic response to, the desperate need of so many developing countries to stop or control damage to their resource base, much less reverse these trends. Agencies either have many plausible-sounding reasons for inaction or ignore the problems. Some of the aid agencies do not seem even to know what they can or should do. One good way for them to start would be to focus more on what each country needs by completing the environmental profile process and then systemmatically assessing resource needs in country policy papers.

As for the national study teams, to get a better idea of what to recommend, they agreed to look generally at what individual agencies were doing to help recipient countries, through projects or by institution building, training, and research, in one or more of the classic areas of development directly related to physical systems: agro-forestry; fuelwood production, and related types of renewable energy; watershed protection;soil conservation; range management; erosion control and dry land cropping; and water resource development,* including control of waterborne diseases, irrigation and salinization. Teams also agreed to look, to the extent that time allowed, at the inter-relation of project and research and how resource management components had fit into integrated rural development schemes, colonization or resettlement projects; into efforts to establish environmentally sound cropping systems; into projects involving pesticide and fertilizer use, on new types of

* Here we refer not to provision of water or sewage systems as such although they are not environmentally unimportant, but to the impact of water delivery on the land and on human habitats.

crops and integrated pest management, and land use studies. Some teams looked at one or more of these problem areas in depth.** Here, however, we will only review the main conclusions which emerged from the teams' reports.

To begin, the teams explored the perceptions of the six agencies of what could - and could not - be done in these areas, as well as these agencies' judgment of the urgency for action relative to other programs. In theory, priority for resource management or rehabilitation projects is high. One senior Swedish official put it well: "Finding ways to halt and reverse widespread deterioration or destruction of croplands, grazing areas, and forests or other threats to the physical systems on which millions of people depend directly for their welfare is one of the great tasks faced by this generation, and each of the developed countries has a moral responsibility to do its share to help." A high-level official in AID expressed it another way: "When we look at what AID will be doing ten years from now, we find that the principle constraint to development, not only in the poorest countries, will be the unavailability of land and water due to physical deterioration. Already most of the easy projects are done and in ten years we will probably be asked to help mainly in the very marginal areas which must be used if the rapidly growing number of poor farmers are to stay on the land and feed themselves, let alone feed the people in the cities." These statements express views with which all of the agencies studied concurred.

Again, however, practice is very different in the agencies from theory. The problems which are at the root of the inaction of development agencies in the face of this challenge or, the uneven efforts and commitments observed by national teams are seen by most of the agencies to be very difficult to overcome. A British aid official explained the pessimism and relative inaction of ODA in this area by pointing out that these problems often seem to be so intractable, and to reflect such apparently

** Canada: infrastructure energy generation, water resources, fisheries, land use appraisal, forestry and agriculture, mining and manufacturing, settlements, public health, environmental training and institution-building. Federal Republic of Germany: rural development, pesticide policy, forestry, energy, water supply, and sewerage. Sweden: water sector and pesticides. Netherlands: watershed areas, or IRD. United Kingdom: IRD forestry and appropriate technology. United States: forestry, soils, pesticides, energy.

hopeless odds against significant improvement that even badly affected countries do not ask for help of this kind. A Canadian official, when asked why Canada was not doing more, cited a number of practical problems which he said often take on unacceptable dimensions in the eyes of Canadian administrators; the latter have to respond to political authorities, who routinely want to know whether projects give quick help to the countries being aided and how projects support Canadian trade. He cited community forest and soil projects as good examples of the types of projects which utilize very few Canadian products and which have high local currency costs. He noted that such projects tend to be unique and therefore require much time and expertise to design; do not produce direct economic payoff for many years, if at all; can too easily go wrong and be compounded by mistakes or inattention at any stage; and, even when successful, often benefit people other than those who do the work (he was thinking particularly of watershed protection and downstream effects).

Another vast range of difficulties rated by aid agencies derives from the stubborn fact that the central governments with which aid agencies normally work cannot ensure the success of such projects. On the contrary, too much central government intervention may jeopardize the willingness of villagers to provide the labor and protection upon which the continued success of such projects depends. The need to ensure that each project develops the slowly accrued degree of minimum community support necessary for success is a point already driven home by failures of each of the aid agencies. This slowness and uncertainty is enough to discourage most working level planners and field representatives. In the face of such problems, officials in all the agencies point out the very human tendency to turn to technically easier projects which have a greater likelihood of success and which are more ardently sought by recipient countries.

Yet in the face of this pessimism, there are indications in the six agencies of new attitudes and new success stories, and this is the theme of this chapter. We start with the United States, which has done as much as any agency in this area and, moreover, seems to have given more thought than others about direction.

United States

Executive branch recognition of the urgency and gravity of these natural resource problems reflects parallel and growing attention to these problems by American environmentalists, scientists, and a broad spectrum of interested and influential people. To some degree this is magnified through Congressional concern. The President, in his environmental messages, has twice called for greater priority for American programs to help developing countries with natural resource problems. The Congress in 1978 and again in 1979 expanded AID's legislative mandate to give assistance in these areas, and most recently has criticized AID for not doing more.

The resource conservation area that has received the most attention in AID is fuelwood production, particularly for arid areas of Africa. In the last year, both AID's Africa Bureau, and its Office of Energy have devoted more attention to fuelwood projects. The Africa Bureau has instructed AID missions there to offer fuelwood assistance and invite requests for such help. This Bureau, in cooperation with the Overseas Development Council, also held a conference to which representatives of other donor countries were invited to study the firewood problem and to coordinate programs. Yet even in Africa, there is still only one small American fuelwood project underway and another four in the advanced planning stage. Outside Africa there are only 7 fuelwood projects in the advanced planning stage. The future for fuelwood projects, however, looks hopeful. President Carter and Congress, as mentioned, have specifically called for greater efforts. AID recognizes the central importance of village support for fuelwood projects and is working on a cooperative plan whereby the American Peace Corps will provide on-the-spot help in identifying villages ready and able to support fuelwood programs as well as help in mobilizing village support.

AID is also becoming more heavily involved in watershed protection, through use of reforestation and other soil erosion control techniques. Particularly interesting projects are underway in Nepal and in Panama, where the Panama Canal's dry season operability is threatened because

of water shortages due to deforestation. In both countries a key element of these projects is training at all levels and building new resource-oriented institutions. The Nepalese project, undertaken by the ODA and the World Bank, aims at creating a new institution which will be concerned with and knowledgeable about the range of techniques (soil, forestry, water control, cropping systems) needed to ensure successful watershed management.

AID's direct commitment to and experience with agro-forestry and intercropping in the tropics is small and needs to be expanded. (In fact, of the six countries studied, only Canada (through IDRC), and the Netherlands so far support the promising International Center for Research in Agro-Forestry in Nairobi.)

A related area of activity is AID's (and the U.S. Government's) growing interest in, and commitment to, halting the destruction of the world's forests. AID (with the State Department) sponsored a major deforestation conference in 1978 which led to creation of an inter-agency task force charged with the formulation of a broad U.S. tropical forestry policy. AID has now drafted a forestry policy instruction, and its East Asia Bureau has recently convened a conference with aid receiving countries on "Energy, the Environment, and Forestry".

AID has also instructed its field missions to initiate discussions with host country officials on how the United States can help identify and achieve natural resource objectives through the AID program. All this is promising, particularly since the United States has had few institutions or individuals with experience in tropical forestry. However, the number is growing.

Soil conservation projects fall surprisingly short of what might be expected, given the U.S. Federal Government's long involvement and domestic leadership in this area. At present there are only a few major soil conservation projects underway, notably in Haiti and Indonesia. There are, however, important soil and water quality components in a number of projects. AID is to be commended for an imaginative continuing project to adapt temperate soil science to the tropics, to establish regional university centers for the study of soil science in developing countries, and to organize short and long training

courses for soil scientists at these centers and in the United States.

One area where AID has made considerable recent progress is in helping developing countries establish environmentally sound pesticide practices. AID's own export of pesticides is now controlled very conservatively on the basis of a carefully designed programmatic assessment. AID has hired a full time pesticide coordinator to supervise the environmental quality of its pesticide aid and recently appointed a pesticide technician to help Central American agricultural ministries solve their pesticide problems. Most of AID's pesticide work is done on contract by the University of California through the UC-AID pest management project. Under this project, developing countries have been helped to solve specific problems. The project has also organized valuable workshops and seminars along with longer-term training courses. AID in theory also supports use of the most modern methods of integrated pest management, but action on projects and on collaborative research and training does not yet live up to its commitments.

Looking at the natural resources development program as a whole, AID is just getting started. It has a number of small and diverse natural resource programs underway, some of them very imaginative. But not nearly enough effort is devoted to this area, either in quantitative or qualitative terms. Projects tend to be organized along classic lines of academic specialization and, except in the few cases already cited, do not yet employ the holistic and interdisciplinary approaches that are so important. Also, like all the aid-giving agencies we studied, AID still too often does not examine integrated rural development, resettlement, or range management programs from a broad enough natural resource planning viewpoint to ensure the inclusion of natural resource enhancement or protection components.

Canada

For reasons already cited, Canada has yet to launch a substantial program of natural resource management assistance commensurate with high level expressions of interest and her substantial natural resource experience, particularly in forestry. Canada has outstanding assets:

several excellent consulting firms with very considerableexperience in tropical forest development; a unique and committed agency (the International Development Research Center) for sponsoring and disseminating the results of research on developing countries' resource problems; and a considerable, if underutilized, university capacity for training and institution building--in sum, a body of people and institutions with substantial recent experience in resource management in developing countries.

Yet, even Canada's forestry projects present a very uneven picture. CIDA has done some excellent, if costly,work in tropical land use and forest inventory. However, this work has too often not been followed up by CIDA after the study stage, or has been succeeded by the "mining" of the timber and other resources discovered by these studies. CIDA surprisingly has undertaken no fuelwood, community forestry, or agro-forestry projects (as distinguish from IDRC or ICRAF) despite its frequent recognition of their importance. CIDA has not done as much training of developing country foresters as it might have and has given only scattered help to countries to build institutions for natural resource research and management.

In soil and water development, many officers in CIDA have displayed a real sensitivity to natural resource constraints. For example, it supported an innovative mountain development scheme in Lesotho, which involved control of erosion caused by livestock. CIDA has apparently done some good work in dry land agriculture in a number of countries, most often in Africa. But its officials agree that all this taken together has not resulted in projects commensurate with Canada's capacities in these fields.

An important pesticide producer, Canada apparently has done little to control pesticide exports, to aid developing countries in the study of their pesticide problems (with the exception of a program in Niger), or to develop integrated pest management schemes.

It is understood, of course, that every donor agency may not have to tackle all aspects of natural resource development, research, institution building or training. But Canadian officials assented to

the view that each agency ought to have, or be in the process of acquiring, the ability to incorporate appropriate natural resource (particularly forestry and soil conservation) components into its rural development projects. The question that ought to be asked (but apparently has not asked in some areas of CIDA's policy making) is: does Canada possess a special capacity to help recipient countries in building up their natural resource management capacity in areas related to its program, and if so, is it being used?

Canada, like Britain, the Netherlands, and to a lesser extent the other aid agencies discussed here, is at present going through a major re-examination of aid priorities. It is to be hoped that the trend in Canada toward greater focus on infrastructure projects and on projects showing a clear economic return, will not lead to CIDA's ignoring projects for improving the environmental infrastructure on which economic security is so often based.

Federal Republic of Germany

German understanding of the need to include sound natural resource concepts and even components in all its integrated rural development, resettlement, and range management projects appears to be high. The need for more German natural resource enhancement and rehabilitation projects is also understood by the German aid agencies. Despite this, however, a very small percentage of the budget of the GTZ (on the order of 2%) is spent up to now on such projects. The KfW has no such projects, although some natural resource components do appear to be included. Germany has a good understanding of the problem and a good if not extensive cadre of governmental experts and consultants as well as concerned institutions. She thus has the capability, but not yet the commitment, to do much more.

In forestry, the GTZ is involved in a large number of small technical assistance projects backed up in most cases by good German technicians who tend to impose very high standards. This is a very important capacity which too many aid agencies either don't sufficiently have, or are losing. However, without larger projects where the training given by German aid can be used, the newly acquired capacity is

likely to be rapidly dissipated. German support for such projects seems hindered by strict rules against projects with high local currency requirements. Thus, there are at present no substantial German fuelwood projects. However, German aid is funding some dam and watershed projects, which contain fuelwood components. In addition there are a few small-scale projects (eight in all involving DM 37 million) in the area of reaforestation, agro-forestry, and forest management.

There are modest soil erosion control components in a number of German rural development projects. In addition, thirteen technical assistance projects (costing DM 13 million) are specifically focussed on soil conservation in tropical forest and mountain areas. All concentrate on improving cultivation techniques to avoid erosion. Similarly, there are few soil conservation projects per se. German technicians appear to have a good understanding of sound environmental principles for water development.

The GTZ supports a number of small pesticide projects involving testing, training, pesticide problem solving, and even some institution building. It also appears to maintain good controls over the pesticides whose export it finances, and it includes training and control components in almost all projects. It supports pesticide residue laboratories in six developing countries and has a number of small cooperative pesticide research programs involving developing countries. The GTZ is also strongly involved in tsetse fly control programs in Sahelian Africa. The risks and tradeoffs involved particularly in the use of insecticides in areas of both agriculture and cattle raising are still difficult to measure, and one hopes that the extreme concern for environmental damage which seems to be written into its terms of reference is actually observed.

Finally, the creation in 1978 of a new arm of the GTZ, the German Appropriate Technology Exchange (GATE) represented an important step towards greater emphasis on alternative technology projects,

many of which, especially in the energy field may be environmentally beneficial. Part of GATE's larger mandate is to concern itself generally with more conserving strategies for development.

The Netherlands

After AID, the DGIC has probably gone farther than any of the other development aid agencies studied to try to reach the rural poor through relatively integrated projects. These projects are increasingly related to a whole natural geographic region. While it may produce a number of organizational and administrative difficulties, this ecosystem approach does offer important opportunities for sound environmental management. Greater emphasis on the regional approach is a step in the right direction and the results will be eagerly studied.

The Dutch do not tend to see any component of their aid program as "environmental" . Yet they reckon that between 55 to 60 percent of their commitments are to "environmentally sensitive" projects. The main Dutch expertise on resource questions is concentrated in land (including soil) conservation. This sometimes involves planting trees, though they do not claim forestry expertise to be one of their strengths. Within the range of Dutch aid priorities, where possible they should do more to initiate whole projects aimed at erosion control, watershed management, and afforestation, in fact all kinds of projects that fight the progressive degradation of natural resources and the loss of soils.

Sweden

Although like Canada a country concerned with forestry domestically, Sweden, unlike Canada, has very little institutional capacity for studying or giving aid for tropical forestry and very few people who specialize in this subject. Little has been done regarding the environmental impacts of pesticides and fertilizers; deliveries of which have come under attack on environmental grounds. These activities are important, some $63 million having been spent in 1977 on fertilizer deliveries. Most advisory work on forestry and the implementation of most bilateral forestry projects is done by two Swedish consulting firms. SIDA has initiated only two projects in community forestry, as distinguished from the paper pulp and wood processing projects which form a major part of SIDA's program and funding.

SIDA largely finances with unrestricted funds the FAO-SIDA community forestry development program, through which FAO has played a major role in the development of community forest procedures and training throughout the developing world. This SIDA program represents a very important commitment and one with great potential for improving the environmental quality of forestry projects.

Sweden is supporting two or possibly three soil conservation programs. Also, a number of Swedish projects in Africa contain soil, water conservation, and range management components.

Despite some criticism in Parliament over the export of a particular pesticide, SIDA apparently still has no policy on control of export of pesticides or the development of integrated pest control. SIDA supported the FAO-SIDA program on alternative insecticides for locust control (1971-1978).

The Agency did not, in the past, focus its agricultural projects on an integrated approach to rural development. However, integrated rural development has received a great deal of recent attention; for examples are the CADV project in Ethiopia, the Intensive Development Zones project in Zambia and a similar project in Kenya. Recently, a document was prepared which outlines a strategy for rural development, which SIDA officials hope will radically change the direction of Sweden's agricultural aid.

The United Kingdom

ODA's practice regarding environmental enhancement projects seems to reflect not so much a specific policy commitment to this field as a progressive adaptation of traditional projects to meet problems of environmental deterioration. Happily this results in a growing commitment to environmental rehabilitation. For example, more and more rural development projects contain resource conservation components.

British performance in forestry seems to illustrate this point. There is a forestry component in an increasing number of rural development projects to the point that there has now been a rise in investment in forestry projects. These latter have grown from less than 0.2% of bilateral project aid in 1974 to over 2% in 1978. However, even this tenfold increase still represents a very modest commitment of funds in relation to developing country needs or total bilateral aid flow, especially when one considers that one or two major plantation projects, in the Sudan and Fiji, have accounted for the great bulk of aid in this area. ODA's contribution in forestry is built on the work of less than a dozen first class tropical foresters employed on permanent terms, plus two or three times that number on temporary contracts. Most of these foresters are unfortunately coming to the end of their careers. They work on a small budget decreasing due to inflation, but generally provide technical assistance of very high quality. Their best work is in forest inventory and research. Their work is usually not organized by projects. This creates a problem since their main activity is to include relatively small forestry components in larger rural projects where the impact is limited. There has been no significant increase in British commitment to fuelwood projects and given current budgetary constraints, there is no possibility of making one, despite the inclusion of fuelwood components in several British integrated rural projects.

There is a modest but growing British commitment to intermediate technology which takes the form of support for the London-based Intermediate Technology Development Group. Partly through this Group,

but also through other research centers, ODA is committed to a growing program of work aimed at incorporating a range of renewable energy techniques into both urban and rural development projects.

There are no major British soil conservation projects per se, but some British agricultural and rural development projects include good technical assistance on soil conservation. There is also some important work on post-harvest conservation, while of 'second order', it is nevertheless of significant environmental importance. There is also some good work based on the Land Resources Development Center and some but not much training for developing soil specialists from recipient countries in British universities.

In some ways, it seems fair to say the ODA's professional and technical resources for environmental conservation and enhancement are potentially the equal of any of the agencies studied. However, due to a high degree of British sensitivity to appearing "paternalistic" and due to British involvement in maintaining and expanding Third World countries' conventional economic infrastructure, Britain's professional and technical contribution to Third World resource conservation and enhancement has been scarcely commensurate with her capacity to contribute to solution of the developing world's natural resource problems. This is unlikely to change in the near future.

## Recommendations

A few general recommendations may be made in the area of natural resource protection and management.

1. The top priority which emerges is helping recipient countries to comprehend and cope with their own resource problems. It is not that these countries do not recognize the resource problems they face. They do, but their ability to tackle them often dependent to an important degree upon the encouragement and material support given by donor governments.

2. It follows, then, that aid donors must recognize the seriousness of the threat that deterioration of physical systems presents for human welfare in developing countries. This threat will be gravely compounded in the future by rapidly growing population, and will require an increasingly large commitment of donor resources if it is to be even slowed let alone reversed.

3. While each donor will respond to this threat according to his means and capa- bilities, real efforts must be made to create additional capabilities to help the developing countries cope with their declining resource base. Every developed country has a responsibility for and self- interest in doing much more.

How do we get to the stage where developed nations, and in particular the six we have studied, are in a position to do their share in natural resource rehabilitaion and to begin to make an appreciable contribution? The principal missing elements are (a) clearer concepts of what needs to be done and how to do it;(b) the mobilization of the money and the trained people needed; and (c) leadership on the national and even the international level to ensure that high enough priority and great enough "push" are applied to assure that their assistance is commensurate with their own capability as well as the rapidly growing scale of natural resource problems. Donors must also take more initiative in helping the developing countries to pinpoint problems and solutions. They must also help find new and less costly ways to plan complicated environmental enhancement projects. They must find new ways (provision of food, sale of commodities) to generate enough local currency in a non-inflationary way to cover the local costs of natural resource projects. None of the agencies studied has as yet reached this stage.

One point should be added: There is a need to avoid undue pessimism. We must remember that places such as Haiti, Nepal, and

even parts of the Sahel are the direst cases of resource management. In most countries, and in most situations, the international community already knows enough and has enough resources to give the kind of help which will substantially improve their resource future. It behoves us also to remember that less than 50 years ago, many areas of China were said to be beyond recovery due to rapid deforestation: today erosion due to deforestation in China is beginning to become a thing of the past.

## VI. HUMAN RESOURCES REQUIRED FOR IMPROVED ENVIRONMENTAL PERFORMANCE

On no topic discussed by the six teams was there more general agreement than that increased, and increasingly sophisticated "in house" training in natural resource and environmental problems is needed for officers who will have responsibility for assuring the technical environmental soundness of projects.* The desirability of more in-house training for generalists in key positions to provide a broader understanding of environmental problems was also widely recognized. This view was expressed most strongly in AID but was echoed in all the other aid agencies. AID accepts the principle that training should be given to its principal officers periodically throughout their careers, and that this training should include information on environmental and resource problems. AID also recognizes the special realistic advantages which may arise if much of its employee training is conducted jointly with developing country planners and economists. Several interesting experiments with such joint regional seminars have recently taken place in Asia and Africa.

Another training initiative which was attempted recently in AID and found very useful was a short conference called by AID's Director, obligatorily including all his top assistants. The theme was: what will AID's program look like ten years or even twenty years from now? Discussion with outside experts from U.S. universities very quickly led to the conclusion that resource deterioration would soon become the principal constraint to development. The conference proved to be an effective way of focussing senior minds on the need to deal with the impact of growing populations on marginal lands. Other development aid agencies might consider convening similar short, high level meetings, perhaps on an annual basis, preferably to be held

* This was apart from and in addition to the recognized need to employ a limited number of technically qualified people with specific skills such as in soil conservation, tropical forest or environmental sciences generally, who can supervise the design of environmentally sensitive projects.

in a retreat atmosphere.

In SIDA, where the limited availability of professional ecological and environmental management expertise is recognized, a recent paper proposed that criteria be set specifying the level of competence to be required of planning officers in environmental matters. Unfortunately, there is no reference in this proposal to environmental requirements. It is a standing SIDA recommendation that 5% of total working time of staff should be devoted to training. A seminar on environmental matters for representatives of field offices has been planned for early 1980. Beyond this, there seem to be strong possibilities for the more systematic introduction of environmental matters into in-house SIDA training programs.

In CIDA, little has been done so far in the way of internal environmental training. CIDA officers are aware of this lack, however, and many strongly support the establishment of short training programs within the agency.

In the DGIC, the situation seems much the same. With the extreme pressure on staff and the complex structure of roles between various agencies, the establishment of some focal point for initiation and coordination will be of particular importance in developing a training program.

As regards the ODA, there is no specific in-house environmental training, though the case is made that environmental considerations are, to a substantial extent, already incorporated in the general training and orientation of staff. Here, however, as in the other agencies, there seems to be a strong recognition of the case for involving headquarters staff in natural resource and environmentally-oriented seminars in the future alongside counterparts from developing countries, as well as for using the educational facilities of the British Council to conduct regional or national seminars or courses overseas.

In the case of the BMZ, GTZ AND KfM, stress was placed on the desirability of using environmental seminars as a means of mobilizing

desk officers in all three organizations for a review of the general approach of all these agencies to environmental problems. Such seminars were seen as being useful for the planning of activities ranging from methodological change in rate-of-return calculations to improvement of data base and design criteria for projects in particular sectors. Such a process would hopefully lead to the creation of focal points for environmental responsibility in the three organizations, where at present there is only an individual in the BMZ with rather narrowly-defined responsibilities for pollution control questions.

Of the techniques proposed for environmental training, the most promising appears to be the short seminar tailored to specific regions of the world or to specific countries. Two-day or three-day environmental seminars held in field offices and focussing on the problems either of a specific country or region could be the basis of an active process of exchange between environmental advisers, field officers, and administrators on one side and developing country personnel on the other. The exercise would not simply be one of disbursing information but of discussing and debating how environmental concerns could best be understood, incorporated into project design and, where necessary, "sold" to recipient countries.

A Better Information Base

Next to the need for environmental training, the next most commonly agreed need was for improvement of information recovery systems. Development aid agencies, or at least the ones studied so far by IIED, are all aware of two weaknesses in this area: first, the lack of statistical data on projects (including environmental problems) and the associated lack of workable systems for the storage and retrieval of such data; and, second, the lack of a system for analyzing and disseminating lessons learned from project successes and mistakes. This latter weakness is common to all of the agencies studied, and obviously it has a particular importance when it comes to improving environmental performance.

The difficulties of collecting and analyzing environmental information produces an additional problem: should there be a separate facility

for collecting ecological base-line data and environmental information, or should this be fed through existing institutional mechanisms ? Apart from the philosophic view that environmental data should be regarded as part of normal statistical and information requirements, there are immense practical difficulties in trying to separate out specifically environmental statistics and data from other analysis required. For example, it is virtually impossible to state precisely what is an "environmental component" of a project and what is not. Moreover, once one has produced a separate stream of data and analysis, it may be extremely difficult to incorporate this into the economically oriented analysis which is required to test a project's overall performance. Neither the agencies studied nor IIED think a separate environmental data stream is desirable.

At present, not one of the agencies studied has a proper data collection and analysis system for its past and on-going work. The question of environmental information collection, storage, and retrieval should be seen as part of an overall deficiency of development information recall. This is certainly the view of the ODA, which includes sophisticated data gathering and research units. DGIC, too, is clear that project data and analysis should be dealt with in a holistic fashion.

The most important problem is for all the agencies is how to bring a small amount of very relevant environmental material to the attention of busy officers concerned with a particular problem. This is admittedly a very difficult problem for already paper-choked agencies.

SIDA tried, unsuccessfully as it turned out, to solve this problem in a special way. During the period 1972-76, SIDA and the Swedish Natural Science Research Council together established the Swedish Secretariat for International Ecology (SSIE) to act as an advisory body for SIDA in environmental matters, including analysis of project performance from an environmental point of view. However, due to problems of cooperation, SSIE was abolished in 1976. This is just

as well since to be fully effective, environmental analysis of projects in SIDA as elsewhere must basically be treated as an in-house function, regardless of support drawn from outside institutions.

Before elaborate new information systems are created (which in the past have rarely worked sufficiently to justify their complexity and expense), more pragmatic paths should be explored. One well-used though effective route is to set up informal networks of people in many countries working on the same problem. In the past, informal meetings held to bring together specialists, on soil, forestry, or particular crops, have helped create networks of individuals, who through mutual international contacts, keep themselves up to date on emerging problems and solutions. What seems desirable is that the technical advisory services of the agencies be better equipped to keep abreast of the operation of these networks and to tap them for findings relevant to particular development schemes.

## VII. THE NEED FOR CENTERS OF ENVIRONMENTAL RESPONSIBILITY IN EACH AGENCY

We have already strongly recommended that each agency establish a focal point with the primary responsibility for assuring the environmental soundness of projects. Only four of the six agencies studied (the BMZ, SIDA, ODA, and AID), had, at the time of this writing, established any clearly defined institutional focal point. In the case of CIDA and the DGIC, there has been a great deal of discussion of establishing such a locus. Many ideas have been aired, but no center of overall responsibility has been created or identified.

SIDA's environmental focal point has been in the Agriculture Division. But many SIDA officials are agreed that this Division has had neither the policy support, nor the breadth of mandate, nor apparently the will to generate agency-wide environmental policies or procedures.

In ODA, there is a single Environmental Adviser. However, he has been assigned such a great range of responsibilities that he has no possibility of achieving effective change in any of the areas discussed in this report.

In the case of AID, there is an Environmental Coordinator who has very broad coordinative and initiating responsibilities. There are also individuals in each major geographic division with specific responsibilities for assuring the environmental soundess of projects in their regions. The capability for auditing the environmental soundness of AID projects is augmented and buttressed by the office of the General Counsel, whose job it is to see that AID projects conform with environmental regulations. Likewise, there are officers with part-time environmental responsibilities in all field missions plus technically trained officers with solely environmental tasks in a few regional offices and missions. But despite plans and budgetary provisions for an expanded program of work in this area, the small size of this environmental staff gives the latter, like their counterparts in ODA and SIDA, a sense of excessive responsibility in relation to a still limited capacity.

What kind of a focal point, then, should be established? Here we shall focus not upon precise recommendations for how or where such focal points should be established in each agency. Such recommendations are contained in the national reports, and differ radically with the varied natures and structures of the agencies. Rather, we concentrate on highlighting six functions that we believe should be performed by an environmental focal point. They are:

1) To arrange the giving of a maximum amount of help to developing country environmental management institutions, so as to improve their capability to protect and enhance their environments.

2)To identify environmentally sensitive projects and to insure that appropriate agency officers (not necessarily in the environment focal point) assure their soundness at every stage in the project cycle;

(3)To secure adequate technical and policy guidance for officers assessing projects in all environmentally sensitively sectors of the agency's activity;

(4)To ensure that environmental experts, meaning someone knowledgeable about long-term effects and side effects of projects, is brought into the project preparation process at the earliest feasible stage (of project preparations) as well as at all other stages of the planning, implementation, and evaluation of projects;

(5)To encourage the initiation of in-house environmental training
programs and to organize and make available to headquarters and field personnel, evaluation material in a form that is readily usable;

(6)Finally, and not the least important, to conduct liaison with other bilateral and multilateral development agencies on environmental projects and programs.

Should there also be personnel specifically responsible for activating further work in the areas discussed above? It seems to us essential that there should be. Otherwise, no coordinated attempt to achieve better overall consistency of environmental performance will be possible. How such a focal point is staffed and where in the organization hierarchy it should be placed is a matter for the senior management of the agencies concerned to determine.

## VIII. LIAISON AMONG DEVELOPMENT AND AID PROGRAMS FOR IMPROVED ENVIRONMENTAL PERFORMANCE

If to date, there has been surprisingly little contact among development aid agencies on questions of environmental protection and improvement, there has been only the most spotty and inadequate formal coordination. We believe that the question of improved inter-agency communication should be addressed by every development assistance organization. The job is too big to be done alone or in an uncoordinated fashion.

One obvious forum already exists for such discussions, the Development Assistance Committee (DAC) of the OECD. Undoubtedly there could and should be discussions on environmental aspects of development aid under the auspices of this Committee. But as important as formal consultations could prove to be, more attention should be given to forming an informal network among responsible individuals so that they can help each other by passing on information on specific sectors, comparing guidelines and policy papers, and exchanging country environment profiles. There may also be some potential for exchanging knowledge and experience through joint training programs. Of course, it may be argued that bilateral development programs, representing as they do national governments, may be inhibited about sharing of knowledge, especially as this moves towards the sensitive areas of new technology and/or research and development programs with commercial potential. Nevertheless, it seems most desirable that the potential for joint training and sharing research be explored.

It also seems particularly desirable that more exchange of experience be carried out not only among the bilateral agencies but also with the World Bank and regional development banks, all, or almost all, of which have on their boards representatives of the six countries studied in this report. Some very good exchanges are already taking place between AID and the World Bank on forestry and energy, and, as indicated, a creative meeting of many donors of fuelwood was recently held.

This brings up the question of liaison concerning projects of environmental importance in a particular country. Normally, formal liaison

quite correctly takes place in the country concerned, under the direction of its leaders. But the real secret of success for all coordination efforts is to develop close informal and cooperative working relations among everyone, host country or donor, who works on the same or similar problems. In the areas we are discussing, there is little justified fear of conflict of interest.