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OVERSEAS DEVELOPMENT ADMINISTRATION
ELAND HOUSE
STAG PLACE LONDON SW1E 5DH

Telephone ~~01-273 3000~~ 01-273 0409

From the Minister

18 August 1989

C D Powell Esq
Private Secretary
10 Downing Street
LONDON SW1A 2AA

COP o/r

CDP
24/8

Dear Charles,

INTERNATIONAL ENVIRONMENTAL ISSUES

File with Wm
In your letters of 28 July and 2 August to Stephen Wall about the Prime Minister's talks with Sir Crispin Tickell, you invited views and advice from Departments concerned.

Stephen Wall is responding on the idea of a speech on environmental issues by the Prime Minister at the United Nations General Assembly in the autumn.

We have the following comments on other points which concern the Overseas Development Administration:-

Your letter of 28 July: First Point

We agree that more should be made of work on environmental economics. ODA has commissioned, and plans to have ready by the middle of next year, a practical manual on how environmental concerns are incorporated into the economic appraisal of aid projects. A workshop of interested economists hosted by the Overseas Development Institute is planned for the turn of the year to discuss progress. This will help to identify gaps in current research work, and highlight any new areas worth considering.

The ODA is paying for a study to identify and quantify the causes of environmental degradation in Nepal, to estimate their costs and suggest policy approaches to alleviate future damage. This study is already proving useful to the Nepalese in their planning. Mrs Chalker wants to consider similar studies in other developing countries.

/Second Point



Second Point

Earmarking funds for environmental research can have a perverse effect if it discourages environmental work within existing disciplines. That said, ODA is currently examining areas for further research, subject to resources being available, most obviously in relation to climate change. ODA's primary focus has been on forestry. Spending on centrally funded research in 1988-89 was £840,000 and will exceed £1.25 million this year. Many of our bilateral forestry projects also have a research component. Subject to resources being available, we also plan £3.3 million of additional forestry research over a three year period.

The ODA is exploring with the Meteorological Office and the DoE the possibilities for increasing developing country participation in climate research.

Fourth Point

We agree that more work is needed on the environmental implications of population growth. The link between environment and population growth should be looked at as part of the IPCC process, although none of the working groups have yet done so. There is a limited amount of work in hand elsewhere on the subject, but there is no overall agenda. The World Bank may be best placed to set it up at present in conjunction with the UN Population Fund (UNFPA) and UNEP. We might want to consider whether, as part of the process to strengthen UNEP, we should encourage them to take the lead, in due course.

Bilaterally, we are arranging an international conference here on Flooding in Bangladesh, for December.

Your letter of 2 August: First Point

It is certainly ^{True} time that positive domestic action strengthens our hand when promoting international and developing country activity.

Second Point

Ministers agreed a paper just before the Paris Summit on the UK Position on an International Climate Fund, which was forwarded to 10 Downing Street by Myles Wickstead on 12 July. A further copy is enclosed. The paper and annexes set out the case for using and developing existing institutions and so resist pressure for a separate fund.

I am copying this letter to recipients of yours.

Yours sincerely,

David Hope

(D J Hope)
Private Secretary

UK POSITION ON AN INTERNATIONAL CLIMATE FUND

Problem

Following his attendance at the Helsinki Meeting to review the Montreal Protocol on CFCs and in the light of the PM's seminar on climate change, the Secretary of State for the Environment wrote to the Prime Minister making certain proposals. In reply the Prime Minister agreed that we should develop "a robust and defensible position for ourselves, and as far as possible an agreed position with other donor countries, on proposals which are increasingly coming forward from elsewhere for climate funds to help developing countries".

2. The proposition of a CFC fund is already under review following the Helsinki meeting in May. The Intergovernmental Panel on Climate Change (IPCC) is tasked with looking at response strategies, and has called for papers to be submitted by 15 August on the financial implications. President Mitterand is likely to raise the issue of a climate/environment fund during the Paris Economic Summit.

Proposed UK line

3. The UK should say publicly that we

- accept in principle that developing countries do not have sufficient resources to solve their own local and regional environmental problems let alone to contribute to solving global environmental problems at the speed or on the scale likely to be necessary;
- accept in principle that developing countries may have different priorities (reflecting their own economic and environmental circumstances and objectives) from those of developed countries which can afford to take action now to deal with concerns about global environmental matters;

- reject the notion that developed countries should make financial amends to developing countries for past global environmental pollution, but accept that developed countries will need to be prepared to channel additional resources (private and public) to developing countries. External resources are needed in order to reinforce the latter's ability to address environmental issues and to ensure that the priorities for action include things of global as well as local importance;
- reject the notion that additional institutions are needed and instead press for help normally to be channelled through existing multilateral and bilateral funding arrangements. Any action needed to adapt existing machinery should be taken within the framework of the agreed protocols to be negotiated under the Climate Convention proposed by the UK in May;
- will determine the scale of the UK's own contribution to a global effort in the light of:-

our domestic public expenditure priorities,
the response of other developed countries,
the evolution the further scientific and economic
work which is in train
and our bilateral relations with key developing
countries.

(Ministers should bear in mind that, if the UK is to play a lead role in the formation of policy and decisions on action, it will need not only to be skilful in its presentation, but will also have to be prepared to make a fairly substantial contribution on top of anything that the private sector will be willing to contribute through its own investment strategies. The Secretary of State for Foreign and Commonwealth Affairs has accordingly included an element for this in his PES bid.)

Rationale

4. The issues arising from concern about global climate change present a new challenge to the world community. The challenge is made much more complicated by the high degree of uncertainty which surrounds predictions about the effects, especially at the regional level. However, it is apparent that action only by countries already convinced of the need, will not be sufficient to slow down the build-up in greenhouse gases and the destruction of trees and other organisms which absorb and lock up carbon for long periods. The predictions of the existing global climate models show that responses are needed even before the models have been perfected if unacceptable levels of warming are to be avoided. Thus worldwide cooperation is required to confront a truly global environmental issue - one where the costs and benefits of action do not respect national or regional frontiers.

Argument

Summary

5. This paper looks at the developing countries' capacity to join in that cooperative action and at their likely willingness to do so in view of their other priorities for their limited resources. It concludes that additional external resources will be required to ensure that developing countries take action within the time frame required. Those resources will need to be spread over a wide range of environmental problems. Calls for "compensation" (the notion that developed countries should make financial amends to developing countries for past environmental pollution which has reduced future development options) should be rejected. The paper makes the case that resources should be applied not only to climate change but to the related global environmental issues; depletion of the ozone layer and loss of genetic resources. It looks at possible sources for external finance and concludes both the public and private sectors have roles to play. It goes on to examine the existing aid channels for tackling environmental problems. It looks at the possibilities for strengthening and adapting these to make a more effective contribution to resolving the full range of problems. It

reaches the view that existing institutions should be able to cope. It thus rejects the case for a new general global environmental (or climate change) fund administered by a new institution.

Constraints on developing countries

5. Developing countries are characterised by heavy reliance on natural resources, poverty and burgeoning population pressure. The resource base is often fragile. Poverty and population pressure are themselves causes of local environmental degradation which in turn exacerbates both. Where population pressures are increasing faster than peoples' ability to adopt new resource use patterns, marginal lands are often made unproductive. Poverty limits peoples' capacity to invest in change or to take the risks inherent in doing so. Developing countries' ability to grow out of this vicious spiral is often restricted by foreign exchange shortages and heavy debt burdens. They even find it difficult to finance investments with obvious short-term national benefits. To the extent that immediate national priorities, for example reforestation and rational energy policies, have spin-offs for climate change, developing countries can be expected to play their part in global action. However, the global good will not be a primary motivation for their decisions.

Differences in perception and developing countries willingness to tackle global climate change

7. Developed countries view the possible dangers posed by global climate change with the greatest concern. They have the resources required to take the action on their own behalf which is justified by the current state of scientific knowledge. They are conscious that policy decisions need to be taken early if the full impact of possible adverse climate change is to be avoided. They recognise the need to reduce the scientific uncertainties as rapidly as possible and have put considerable effort into the Intergovernmental Panel on Climate Change (IPCC) where Britain is playing a leading role. Other industrial countries are likely to welcome the work on environmental economics we will be advocating at the Paris Summit as another important step in tackling uncertainty.

8. Conversely, developing countries view unwelcome changes in the global climate as the result of action by the industrialised countries who have become rich in the process. Developing countries tend to believe that industrialised countries should pay for solving the problem. They are particularly suspicious of any solutions which appear to block their own pathway to development through traditional industrialisation and economic growth. Most developing countries do not consider global climate change as a current priority and regard uncertainty as a reason for delaying action. They have not shown much enthusiasm for the IPCC. They are much more preoccupied with the present economic difficulties facing them and with more immediate threats to their environment. These latter include urban and industrial pollution (particularly in Asia and Latin America), toxic waste (a political problem in Africa), deforestation and soil erosion. Even where developing countries concede that the potential cost of global climate change to their populations will be enormous, they are unwilling or unable to invest heavily in precautionary action. This may be perfectly rational if they believe they can generate sufficiently rapid growth today more easily to afford action tomorrow.

9. The division between industrialised and developing countries is not clear cut. To the extent that they are known the views of individual countries are in Annex A.

Encouraging cooperation

10. Given the different view-points and stages of development it is apparent that precautionary action to minimise risks will be acceptable to industrialised states but not to developing countries. To achieve the worldwide action required in the face of scientific uncertainty, industrial countries must expect to contribute to the costs involved for developing countries. Such external help will need to be additional to existing aid flows which are used to finance investments which countries regard as a higher priority for creating wealth or reducing poverty. In any case, the solutions to their central development priorities—such as poverty, excessive population growth and lack of economic growth—can contribute to the reduction of global warming.

11. Respect for the priorities of developing countries does not mean that the industrial world must concern itself with the whole of the developing countries' agenda. A skilful combination of help with local environmental concerns and resources for global environmental programmes, could provide the basis for constructive partnership between developed and developing countries. Such a partnership should minimise the risk of prompting the developing countries to press for some kind of compensation for the consequences of past pollution caused by the developed countries. In essence the advocates of compensation are seeking agreement to a retrospective version of the 'polluter pays' principle. Acceptance of their case would have wide ranging and unwelcome implications.

Scope of Cooperative Action: Climate or Global Environment Focus?

12. The arguments for help with respect to one global environment issue, climate change, apply equally to others where environmental costs and benefits do not respect national or regional frontiers. There are two other current issues of this kind. One is depletion of the ozone layer by CFCs, which has effects not only on climate but which could be successfully tackled as part of a programme to prevent climate change. The other is loss of genetic diversity through the destruction of genetically rich areas such as tropical forests, wetlands and coral reefs. Conserving all three would help to lock up carbon, and, in the case of mangroves, would help protect low lying areas from more frequent storms expected through global warming, so again a climate connection can be adduced. Nevertheless, both ozone depletion and genetic diversity are important global environmental issues in their own right. Those wanting a new environmental funding mechanism will pray them in aid. By recognising their importance from the outset, the UK can enhance its green credentials and ensure that the debate about funding mechanisms is not side-tracked by arguments about the scope of the issues to be covered.

Sources of External Finance

13. Four possible sources are available; private sector investment, international taxes and levies, the proceeds of "debt-for-nature" swaps and aid programmes.

14. The private sector is unlikely to opt voluntarily, to use more expensive technology for investments in developing countries, especially if the environmental reasons for so doing remain unproven. Similarly, developing countries will be reluctant to bring in and enforce the legislation required to compel private sector action unless it can be made financially attractive for them. Nevertheless, there is scope for persuading industry that offering environmentally friendly technology to developing countries will allow companies to gain an advantage in markets of future significance.

15. Internationally agreed earmarked taxes or levies are a possible funding source which is already under discussion for tropical timber. More generally, however, the UK has traditionally been against hypothecating revenue and international agreement would in any event be extremely difficult.

16. The Prime Minister's meeting on 19 April considered the possible role of debt-for-nature swaps and concluded that voluntary swaps might have a role to play, but that it would be wrong for the taxpayers of developed countries to bear the costs of writing off commercial debt.

17. The remaining source of additional external resources is international aid. This has the advantage of being able to tackle village level projects which are unlikely to be of interest to international investors.

Development aid channels

18. Any additional public resources to be mobilised by the developed countries must be effectively delivered. There are essentially three options;

- greater use of existing mechanisms,
- a new fund covering all environmental issues,
- or a new fund limited to problems not covered by existing institutions.

The choice between them depends on their likely success in persuading developing countries to join international action, their acceptability to donors, the range of issues to be tackled and the coverage and effectiveness

19. Annex B lists the key underlying issues in developing countries, global environment problems and the local environmental concerns of the third world. It describes current efforts being made to deal with them. It also identifies work not at present being handled by existing institutions. The most notable deficiencies identified are:

- consideration of the global environmental implications of energy choices.
- consideration of the national and global environmental implications of transport and industrial sector policies;
- developing country scientists are insufficiently involved in research on climate change which makes it unlikely that their Governments will take the conclusions seriously;
- efforts to conserve genetic resources are very modest and are split amongst a number of agencies;
- no research is underway on the methane implications of different agricultural systems;
- environmental monitoring is in its infancy in developing countries;
- no work has yet begun on helping countries investigate strategies for avoiding CFCs although financial resources have been offered for this.

However, we judge existing bilateral or multilateral institutions as capable of being strengthened or adapted to handle these deficiencies.

20. Use of multilateral channels for some of the additional funds will require agreement by other donors and by recipients, but is essential for significant coordinated action. In any case, only multilateral channels can provide sufficient political visibility to ensure developing countries accept that additional resources are being made available. Agreement to alter existing mandates or create new ones could most easily be reached

under the umbrella of a Climate Change Convention. Where the remits of weaker multilateral institutions require adaptation or extension, careful work will be needed to ensure that they could realistically be expected to handle the tasks satisfactorily.

21. Use of existing channels will avoid the delays and additional overheads inherent in the establishment of new institutions. It is also likely to make best use of the scarce analytic expertise available for environmental problems. Nevertheless, increasing their tasks does imply re-examination of the general donor approach of severely restricting the increase in the administrative budgets of multilaterals.

22. Those who favour a new environmental funding mechanism do so because of a political assessment that it is the best way to convince countries that resources are truly additional. A new Fund would presumably aim to supplement the relevant activities of existing organisations and fund new types of programme. However, its supposed additionality could be largely illusory if existing aid institutions responded by running down their own spending on programmes which could be picked up by the new body. Forestry and energy efficiency are obvious examples. The net result might even be an overall switch of emphasis away from environmental concerns. Thus a wide-ranging Fund might not meet the political requirement.

23. A new Fund has the grave disadvantage that it could be seen as acceptance of the 'compensation' argument. If it were handled by a new institution, that would add to the complexities of the international aid machinery and to the difficulties of coordination. Moreover, depending on voting arrangements, a new institution might well reduce donor's influence over the handling of multilateral aid.

24. If, after consideration, there were found to be some highly specialised activity or concern not capable of being handled satisfactorily by present institutions, then some limited new funding mechanism might be required. This could be negotiated in the framework of individual protocols to a Climate Change Convention.

Scale of UK Contribution

25. The UK must be prepared to contribute additional resources itself if proponents of an environment/climate change fund are not to win the day. The size of that contribution will depend on domestic public expenditure priorities, the response of other developed countries, the evolution of the further scientific and economic work which is in train and our bilateral relations with key developing countries. There are initial signs that some countries, certainly including the Japanese, Dutch and Norwegians, are prepared to produce additional resources for these purposes.

26. ODA's existing multilateral and bilateral programmes already include a good deal of expenditure which serves these environmental objectives, along with others. Because it is multi-purpose, it is not possible to quantify precisely the amounts dealing with issues related to climate change. More will be needed to help implement our forestry initiative and do more in energy efficiency and CFC substitution. The Foreign Secretary has included a bid for £15 million, £40 million and £90 million in the three Survey years among his other Public Expenditure bids. Such expenditure would be justified in its own right, but would also help to fend off pressure for a less cost-effective UK contribution to a Climate Change Fund as part of our overall effort.

CLIMATE CHANGE: VIEWS ON THE NEED FOR FINANCIAL ASSISTANCE

1. At the London Ozone Layer Conference in April, China proposed a global fund to supply technology and assistance to developing countries to enable them to phase out the use of CFCs. India supported this proposal. The need for financial assistance to developing countries was further discussed at the first meeting of Parties to the Vienna Convention for the Protection of the Ozone Layer (and its Montreal Protocol) in Helsinki in early May. A Working Group was established at that meeting "to develop modalities for [international, financial and other] mechanisms, including adequate international funding mechanisms which do not exclude the possibility of an international fund." The Working Group will report to the second meeting of the Parties, in London in 1990. Norway's offer at the Helsinki meeting to contribute to a world climate fund (see below) probably provided the stimulus for calls in subsequent international meetings for a climate fund rather than a fund linked directly to CFCs and the Ozone Layer.

2. The following have made public offers to contribute to a world climate fund:

Norway

At the Helsinki meeting of Montreal Protocol Parties in May, Norway offered to contribute 0.1% of GNP (approx \$100m) a year to an international climate fund under the auspices of the UN, provided matching contributions are made by other industrialised countries. This position was repeated at an OECD DAC meeting on the environment in June in a statement which stressed the need for others to match the offer.

Netherlands

At the UNEP Governing Council in May, the Netherlands announced she was ready to contribute up to 250m Guilders £72 million to a world climate fund, when such a fund is established. We understand the aid Minister would prefer to spend these resources which are already in the aid budget through existing mechanisms. The resources were provided for projects to help developing countries avoid contributing to the greenhouse effect.

3. At the UNEP Governing Council in May, the following countries commented on proposals for a world climate fund:

Mexico

Bilateral transfers were not enough. Financial resources should be channelled through the UN.

FRG

A working group should be established to consider the matter, as in the case of financial assistance under the Montreal Protocol on Substances that Deplete the Ozone Layer.

Brazil

Technology should be transferred at cost.

France

Low key call for financial resources to compensate affected countries.

India

Not concerned about the mechanism for the transfer of financial resources; the main problem was to ensure the transfer took place.

Paris Economic Summit

4. We understand Japan will announce a contribution of up to \$150 million over three years for forestry projects to be channelled through the International Tropical Timber Organisation.

5. Papers prepared for the Paris Summit include:-

A. Canadian paper

"Environment and the Economic Summit: a Canadian Perspective" does not mention the proposal for a climate change fund but suggests the Summit could

"call upon international financial institutions to develop new and innovative ways to help developing countries and strengthen their capacity to achieve environmentally sound development".

In private discussions Canadian aid officials have explained they would prefer to work through existing institutions but that the Foreign Ministry is making provision to contribute to a fund for political reasons.

B. French Thematic Paper III

Referring to the emission of greenhouse gases, the Thematic Paper notes reduction in CO emissions

"would obviously call for far-reaching global measures in the energy and other industrial measures... Economic inducements should be developed to facilitate these evolutions."

In a reference to The Hague Declaration the Thematic Paper notes the Declaration signatories

"emphasised the need to provide some assistance to those countries on which decisions taken to protect the atmosphere would prove to impose a special burden, in view of the level of their development and actual part in the deterioration of atmosphere."

C. German Paper

A German paper on "Protection of the Earthly Atmosphere" makes no mention of a climate change fund. The paper is primarily concerned with tropical forests. It advocates a "new institution" along the lines of The Hague Declaration and notes

"In view of the global threats to the earth's atmosphere and their causes, the summit countries bear special responsibility vis-a-vis the international community. Acting in solidarity with developing countries and in collaboration with international institutions, they must take the decisions and measures needed to protect the earth's climate and atmosphere."

In recent private discussions aid officials have confirmed they would prefer to work through existing mechanisms rather than a climate fund. The call for a new institution seems to be aimed at giving political impetus to the Tropical Forestry Action Plan which is at present informal process.

6. OECD

The Communique issued at the conclusion of the Ministerial Council held on 31 May and 1 June states

"Ministers agree that cooperation with developing countries is essential for the solution of global environmental problems. The OECD will evaluate relevant policy experience in Member countries. On the basis

of the information, the Organisation will seek to co-ordinate policies among member countries with a view to the design of innovative approaches by development assistance institutions to environmental protection and natural resources management; and the integration of environmental considerations into development programmes taking into account the legitimate interests and needs of developing countries in sustaining the growth of their economies and the financial and technological requirements to meet environmental challenges."

7. Other soundings

Representatives of both the Swedish and American aid agencies have indicated they do not favour a separate climate fund. The Americans were noticeably non-committal when the subject arose at the UNEP Governing Council.

ENVIRONMENTAL PROBLEMS, ACTIVITY BY EXISTING INSTITUTIONS AND FUNDING GAPSSUMMARY

ENVIRONMENTAL PROBLEMS AND EXISTING AND POTENTIAL FUNDING MECHANISMS

UNDERLYING CAUSES

POPULATION: UNICEF, UNFPA, IPPF and many multilateral and bilateral aid agencies.

POVERTY: All aid programmes.

DEBT AND FOREIGN EXCHANGE CONSTRAINTS: IMF, World Bank, London and Paris Clubs.

GLOBAL ISSUES

CLIMATE CHANGE:

Carbon dioxide	Most existing aid agencies. Coordination by World Bank
Nitrous oxide	Most existing aid agencies.
CFCs	World Bank, ODA and other bilaterals.
Methane	Agricultural research institutions, and aid donors.
Monitoring	UNEP, WMO, World Bank.
LDC participation in research	IPCC, UNEP.

DEPLETION OF THE OZONE LAYER: World Bank, ODA and other agencies.

LOSS OF GENETIC DIVERSITY: FAO, World Bank, IUCN, UNESCO and other UN agencies CITES, IBPGR.

DEFORESTATION: TFAP, ITTO, existing donors.

LOCAL ISSUES

DEGRADATION: Existing aid agencies.

POLLUTION: Existing aid agencies, Basle Convention, FAO, UNEP.

INSTITUTIONAL CAPACITY: Existing aid agencies.

UNDERLYING PROBLEMS

POPULATION: The global population is currently 5 billion and is expected to stabilise somewhere between 8 and 14 billion depending on success in persuading the people of developing countries to adopt family planning. Success will depend on acceptance of individuals that they do not need large numbers of children to provide security in old age and is therefore closely tied to progress in poverty alleviation and sustainable economic growth. Thus all aid programmes may be said to contribute to slowing population growth. International programmes specifically targetted on the objective include those of the UNICEF, the UN Fund for Population Activities and the International Planned Parenthood Federation and most bilateral donors also contribute. There are no gaps to fill but programmes could be increased in scale.

POVERTY: The poor lack access to sufficient resources. They cannot invest the time and capital required for long-term sustainability and frequently live off environmental capital, which results in increasing degradation of sensitive areas. All aid programmes have poverty alleviation objectives so again the question is one of scale rather than gap filling.

DEBT AND FOREIGN EXCHANGE CONSTRAINTS: affect some countries' abilities to use their own resources for environmental protection though there is no guaranteed link between the relief of debt or foreign exchange shortages and positive environmental action. In some cases, notably in Africa countries have mined their forests on a short-term basis to earn the foreign exchange needed for debt servicing and the initial stages of structural adjustment. Carefully targetted structural adjustment programmes, international debt initiatives and negotiations in the London and Paris Clubs provide adequate mechanisms for dealing with the debt burden, although Latin American countries would argue that inadequate resources have been made available.

GLOBAL PROBLEMS

CLIMATE CHANGE: The cause of global warming is greenhouse gas emissions whose effects are made worse by the loss of carbon sinks particularly through deforestation, loss of forests and changing land use patterns are of special significance in developing countries and are dealt with below.

Greenhouse gases come from a number of sources. In developing countries the following gases are important:

Carbon dioxide. Net emissions and their sources are unknown but apart from burning of fuelwood (the primary heat source in the third world) and destruction of forests as land is cleared emissions must come from the same sources as in the developed world - thermal power generation, industry and transport. All 3 sectors receive large amounts of bilateral and multilateral aid but so far little thought has been given to greenhouse gas emissions in the environmental appraisal of projects although donors and recipient governments are increasingly concerned about energy efficiency.

The Energy Sector Management Assessment Programme (ESMAP) of the World Bank provides a framework for the assessment of energy policies at the national level and for encouraging efficient generation transmission and distribution of electricity. ESMAP does not at present include global environmental aspects in its analysis. ESMAP assessments can influence all donor agencies via ESMAP coordination meetings and individual recipients via World Bank participation in aid consultative groups. To the extent that efficient systems save resources, increased emphasis on carbon efficiency should be welcome to developing countries. However energy sector projects are a cause of much commercial competition amongst donors so strengthening the ESMAP process should be accompanied by donor agreement, probably in the Development Assessment Committee of the OECD, to environmental standards for energy projects. While the mechanisms exist, the scale of investment needed to make developing countries power sectors as efficient as those of industrialised countries or to encourage switching to fuels producing less carbon dioxide would be enormous.

In the UK 20% of carbon dioxide emissions are the result of industrial uses of fossil fuels and a further 20% comes from the transport sector. We are not aware of any analysis having been done for developing countries but both sectors are of increasing importance especially in Asia and Latin America. Nor are we aware of any international policy analysis of the sectors similar to the World Bank's ESMAP, although again donors provide significant sums for both transport and industrial development. While mechanisms do not currently exist there seems little reason why the World Bank, which is not only the biggest lender but also the centre of donor environmental expertise, should not be encouraged to look at the global environmental

impacts of current developing country transport and industrial policies. The UN Industrial Development Organisation (UNIDO) might also have a role to play. Again commercial pressures would require donors to reach agreement on guidelines for aid. Investments in greater combustion efficiency in industry and transport might be expected to pay for themselves but the initial costs could well be unacceptable to capital starved developing countries who might require additional aid to adopt green technology.

Nitrous oxide: To the extent this is a product of thermal energy generation, industry and transport, reductions in output growth could be achieved in the same way as for carbon dioxide as well as by specific mitigation measures such as the gas scrubbers and catalytic converters. Halting deforestation would also help to reduce nitrous oxide emissions. Thus multilateral and bilateral agencies are tackling the problem.

CFCs: Present use of CFCs by developing countries is not well understood but it seems likely that the major use is in refrigeration rather than in aerosols, packaging or as solvents. Donors including the World Bank and the ODA, have already offered aid for drawing up CFC substitute strategies for developing countries and for their implementation. The Helsinki Meeting of the parties to the Montreal Protocol agreed to look at all possible funding mechanisms to help developing countries meet present and future Protocol requirements. Industry will need to be involved in efforts to help developing countries but it is not obvious that additional mechanisms are needed. However, if substitutes for refrigerants (which will not be commercially available until the late 1990s) prove more expensive than domestic production of CFCs, developing countries may need additional aid to make the switch.

Methane: The rice paddies of tropical countries are a major source of global methane production as are increasing populations of livestock. Given the difficulties faced in increasing agricultural yields in line with population growth in many countries, there seems little point in trying to tackle tropical agriculture early in global efforts to reduce greenhouse gas emissions. Nevertheless there is scope for research to compare methane emissions from agricultural intensification and extensification. UK and existing international research institutions have the potential to undertake this work which could be financed by the donor community who are heavily involved in agricultural development. To the extent that livestock projects

are often aimed at increasing quality rather than quantity they may help to curb emission growth. Programmes aimed at using methane produced from biomass (particularly solid waste and night soil) for domestic energy generation also have a role to play and could be stepped up using existing mechanisms.

Climate Change Monitoring: Global environmental monitoring already takes place through the Global Environmental Monitoring System programme of the UN Environment Programme (UNEP) though coverage in developing countries is poor. Current international research based on remote sensing of the atmosphere and new research studying the oceans will provide information on climate of value to all countries. Nevertheless climate modellers may need more data from the overstretched meteorological services of developing countries. Discussions aimed at strengthening the African system are already taking place. They involve the World Meteorological Organisation (WMO) and are being coordinated by the World Bank. Existing mechanisms could be used to channel the resources required.

Developing Countries Participation in Research: The Intergovernmental Panel on Climate Change is concerned at the inadequate participation of developing countries in the Panel's work to date. A meeting will be held in Nairobi in late June to identify and overcome the barriers to such participation and funds should be available from the recently expanded UNEP budget. If these prove inadequate bilateral aid programmes could be used.

DEPLETION OF THE OZONE LAYER: Measures needed to encourage developing countries to avoid the use of CFCs have been considered above.

LOSS OF GENETIC DIVERSITY: The major cause is the loss of tropical forests which are home to at least half the world's species. It has been estimated that fully protecting 0.2% of the earth's land surface in 10 'hot spot' regions of primary forest would save from extinction 7% of the earth's plants and at least a similar proportion of the animals. Other areas of high diversity include wetlands (notably mangroves) and coral reefs. Combatting deforestation in general is considered below. For climate change and local environmental degradation through soil erosion and loss of soil fertility there is no reason to pay particular attention to areas of high diversity. In fact such areas are likely to be of more value to northern pharmaceutical companies, who do not at present pay royalties on the plants

extracted, than to the developing countries in which they are situated. Current discussions in the FAO aimed at recognising the rights of people to benefit from their contribution to the exploitation of genetic diversity might alter the equation. So might assessments of tourist potential but access often needs to be limited to avoid unacceptable species loss.

At present the international systems charged with identifying or encouraging protection of key areas in developing countries are the Ramsar Convention which covers wetlands of importance to birds, UNESCO's World Heritage Convention which covers unique natural and cultural areas and UNESCO's Man and the Biosphere (MAB) Programme which is establishing a global network of ecologically important areas which are intended to demonstrate man's interdependence with his surroundings. All three have modest funding mechanisms and the MAB programme is sufficiently well regarded that ODA continues to contribute to it through NERC.

The International Union for the Conservation of Nature and Natural Resources (IUCN), a union of conservation expertise, participates in all three programmes and could step up efforts to involve developing countries as fully as possible. IUCN could also be used to identify key forest areas and indeed will be making a special assessment of currently protected areas as part of the FAO's world wide tropical forest assessment in 1990. IUCN has produced a draft for a global convention on all aspects of genetic diversity which could provide a framework for reaching international agreement on protecting particular areas while respecting national sovereignty. In view of the sensitivities it might be better to channel any aid needed for the establishment of protected areas through an international body. The IUCN has a small project implementation branch which could be strengthened but in view of the voting structures in IUCN (which give a substantial voice to very unrepresentative NGOs) donors might prefer to channel funds through the World Bank or a UN agency.

International efforts to protect endangered species rather than habitats are organised through the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Convention on Conservation of Migratory Species of Wild Animals (Bonn Convention). The International Board for Plant Genetic Resources (IBPGR) is an internationally funded organisation which seeks to promote the collection, documentation, evaluation, conservation and utilisation of genetic resources of important

evaluation, conservation and utilisation of genetic resources of important plant species especially where traditional varieties are under threat. The IBPGR funds research carried out by others and could be strengthened by the donor community. There is a need for a system similar to IBPGR for the conservation of animal genetic resources. The FAO recognises this and is addressing the problem notably by beginning to set up regional gene banks.

DEFORESTATION: is both a global problem through its effects on climate change and genetic diversity, and a local problem contributing to soil erosion, loss of soil fertility and flooding through rapid water run off. Efforts to counter deforestation are being made in most developing countries with more or less enthusiasm and almost all donor agencies contribute funding. International efforts are coordinated through the Tropical Forestry Action Plan which operates country by country and starts with a review of forestry policies to ensure that the framework for projects encourages a sustainable approach. The TFAP has succeeded in increasing donor and recipient funding for the forestry sector as a whole. The international community is now turning its attention to giving greater priority to forestry research and to agroforestry (the integration of trees in crop and livestock farming systems). A shortage of forestry expertise is emerging as a possible brake on greater assistance for the sector but there is no doubt additional sums could be spent productively.

Recently the International Tropical Timber Organisation has emerged as another channel for forestry assistance. The UK has tried hard to get ITTO agreement to a work programme concentrating on international issues such as the structure of trade and guidelines for commercial forestry which would complement the national focus of the TFAP. In the light of major Japanese funding provided to ITTO, whose headquarters are in Yokoha, care will need to be taken to avoid duplication.

LOCAL ENVIRONMENTAL PROBLEMS IN DEVELOPING COUNTRIES

These include both problems of degradation (loss of quality in the natural resource base) and pollution (introduction of undesirable substances into the environment).



DEGRADATION PROBLEMS include dryland degradation (desertification) soil erosion, overgrazing, salinisation of soil due to poor irrigation practices and loss of soil fertility due to the removal of nutrients. All are being tackled with varying levels of commitment and success by local governments and donor agencies. More resources would undoubtedly help to combat degradation providing countries adopted sensible resource management policies. Donors and African countries are already working together to improve the policy framework. Problems are generally site specific and remedies depend on options for intensifying resource use elsewhere to reduce pressure on sensitive areas or finding appropriate technical solutions. There would be little to be gained from creating new mechanisms to deal with the problems.

POLLUTION PROBLEMS include pollution of land air and water through for example, industrial pollution, agro chemical contamination and over-rapid urbanisation. Again donors and recipients have programmes in place, are increasingly coordinating their efforts at the national level and could do more with greater resources. International mechanisms such as the Basle Convention on toxic wastes contain specific provisions for assisting developing countries. The FAO Code of Conduct on the distribution and use of pesticides and the UNEP Code on other toxic chemicals provide frameworks for assistance. New institutions would not make programmes more effective.

INSTITUTIONAL CAPACITY: Developing countries lack the legal framework, baseline data, monitoring ability and expertise to understand and address environmental problems whether global or national. Where environmental protection agencies exist they are underfunded and lack credibility or power. They are still regarded as a costly irritant by ministries planning development who fail to grasp the need for environmental sensitivity if long term sustainability is to be assured. Donors can and do use existing aid mechanisms to help increase public awareness in developing countries and to train local staff. These efforts could be strengthened. Local non-governmental organisations can provide an effective channel for increasing environmental concern and the public participation necessary for good decision making. However donors who operate largely through government to government channels are often reluctant to be seen to be funding southern environmental lobbies.

