Dryland Networks Programme

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Combatting Desertification: Setting the Agenda for a Global Convention

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Combatting Desertification: Setting the Agenda for a Global Convention

Camilla Toulmin

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COMBATTING DESERTIFICATION: SETTING THE AGENDA FOR A GLOBAL CONVENTION

Introduction

This paper considers the current debate regarding desertification and ways to improve natural resource management in dryland regions of the world, in the light of the forthcoming negotiations for an International Convention to Combat Desertification. Paying particular attention to Africa, it examines the various definitions of desertification, and the data used to monitor its incidence. Past experience with anti-desertification programmes are briefly described before turning to possible actions at national and international levels which would promote more secure and sustainable ways of making a living for people in these risk-prone dry lands. Such actions are then discussed within the context of the Convention on Desertification, proposed in Agenda 21 and agreed by the UN Conference on Environment and Development in Rio in 1992. The paper outlines the current timetable for negotiation of this Convention, and associated protocols, and the commitments which may be demanded of donor and recipient nations.

PART 1: DESERTIFICATION - DEFINITIONS AND CAUSES

Definitions of 'desertification' have been numerous and the subject of hot debate. The definition proposed in 1991 by UNEP's Desertification Control/Programme Activity Centre (DC/PAC) took it to be:

> **land degradation in arid, semi-arid and dry sub-humid areas resulting mainly from adverse human impact**

This definition incorporates a number of processes which lead to the impoverishment of soils and vegetation, where human activity has been the main contributory factor. Examples include the loss of soils through erosion, and continuous cropping on land without replacing soil nutrients. The definition noted above acknowledges that adverse human impact is the primary cause of desertification, although such impact will be aggravated by the characteristics of dryland climates. For example, soil erosion from cultivated land in tropical drylands can be particularly high because at the start of the rainy season, storms

are very intense, producing much rainfall runoff at a time when fields are bare of vegetation.

Subsequently, a broader definition of the causes of desertification has been drawn up and agreed within the context of Agenda 21. This takes it to be:

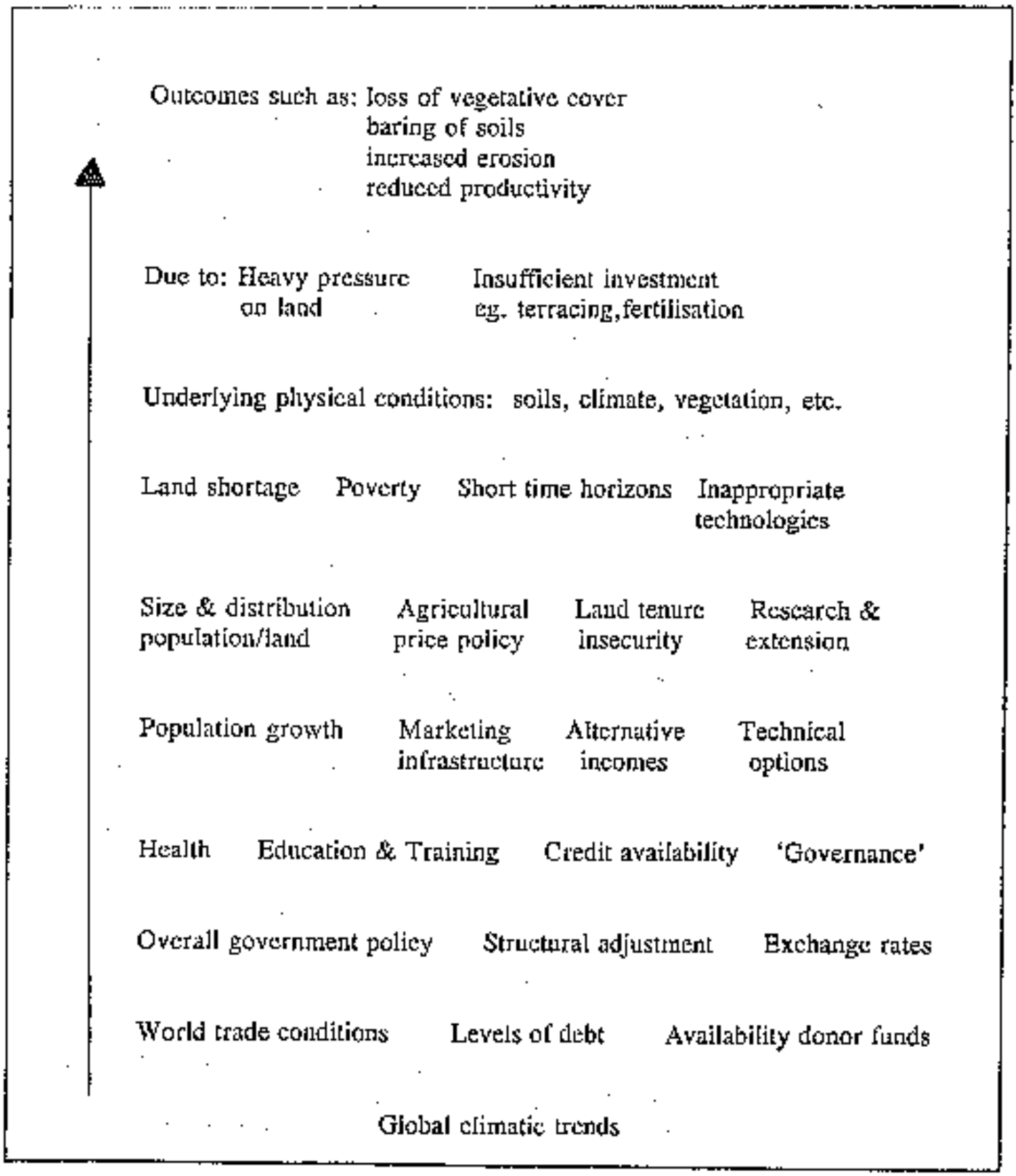
> **land degradation in arid, semi-arid and dry subhumid areas resulting from climatic variations and human activities**

Differences between the above two definitions are significant, since causation in the latter case is split between climate and human influences. The implications of accepting the latter definition are twofold: first, it reduces the strong emphasis placed on addressing anthropogenic factors, and second, it opens up the possibility of claims being made by countries suffering desertification that these processes have been engendered by climatic change.

A helpful way of understanding the causes of degradation is to 'construct a multi-level set of explanations' (UNEP, 1991). Elements of such a set of explanations are presented in Diagram 1, below. Immediate causes include such factors as methods of land use (eg. exposing soils to greater risks of erosion by removing vegetative cover). Indirect causes at the national level include land tenure, the policy environment within which farmers and herders operate, the effectiveness of institutions for resolving conflicts over land, and the skills and approach of research and extension agencies. At the regional and international levels, a further set of contributory factors comes into play, such as trade and aid policies. Appropriate responses to dealing with these factors are outlined in the final section of this paper.

The politics of definitions: In the past few years, a number of writers have argued for abandoning the term 'desertification' on the grounds that it combines too many different kinds of process which need to be distinguished and dealt with separately. For example, the term 'desertification' currently includes the salinisation of land within irrigation systems, which is a very different kind of problem from that of soil erosion in dryland areas. Use of the term 'desertification' has led to muddled thinking and its confusion with 'desert advance'. Since 1984, the term has also been widened from arid and semi-arid lands to cover problems of degradation in the sub-humid zone.

Diagram 1: The Multi-Level Set of Causes of Desertification



The variety of definitions used and spread in geographical coverage are probably attempts to try and mobilise extra funding for desertification and increase the number of potential beneficiary nations. Unfortunately, this broadening of the term has eroded its meaning, increased doubts amongst donors about what is at issue, and reduced funding available for combatting desertification through global level programmes. In the last five years, the terms of the debate have changed from **'combatting desertification' to 'improving natural resource management in dryland regions'**. This is more than just a change in terminology, and has helped shift attention to the institutions responsible at local and national levels for managing how natural resources are actually used.

However, for better or for worse, the Earth Summit has breathed new life into the near moribund term 'desertification', as a result of pressure at Rio from African countries for account to be taken of their specific needs. For the purposes of this paper, desertification will be used interchangeably with dryland degradation. 'Action to combat desertification' will be taken to mean 'promoting more effective natural resources management in dryland regions'. It will focus on sub-Saharan Africa and exclude degradation of irrigated land due to salinisation.

Drought, Dessication & Degradation

It is important to distinguish between several processes which are closely linked and often confused (Warren & Khogali, 1992):

* drought - a period of one or two years with rainfall well below average,

* desiccation - a process of aridification resulting from a dry period lasting on the order of decades, and

* dryland degradation - brought about mainly by methods of land use in delicate environmental conditions, involving a persistent decrease in the productivity of vegetation and soils.

These different processes must be looked at separately since each one has different policy implications. For example, drought requires rapid provision of food, establishment of early warning systems, storage and forms of insurance. Desiccation, by contrast, requires a more complex series of responses which might include helping people to adapt farming and livestock systems to drier

conditions, or supporting a spontaneous movement of populations to wetter areas. As for dryland degradation, policy responses range from legislative changes on tenure regulation, and energy pricing to encourage substitution of gas for fuelwood, to developing appropriate means for retaining soil and water in a given watershed (ibid).

This three-fold distinction is helpful but we also need to clarify the term 'degradation', itself. This is usually defined in terms of reduced productivity of soils and vegetation (as above). However, we need to ask several associated questions:

* how much of this degradation is significant, in terms of its impact on people's ability to make a living?

* what are the relative costs of this degradation in comparison with the costs of conservation or rehabilitation?

* which resources within the micro-environment are of particular concern to us (top-lands, slopes, or valley bottoms), in terms of needing our priority attention, because of the role they play within people's production systems?

We may find, for example, that rates of soil erosion are high on slopes, but that this erosion provides valuable soils and nutrients for production systems that utilise valley bottom lands. Equally, the costs of reducing degradation in terms of the opportunity cost of output forgone of crops or animal products may be very high in relation to reduced levels of soil erosion (Abel & Blaikie 1989).

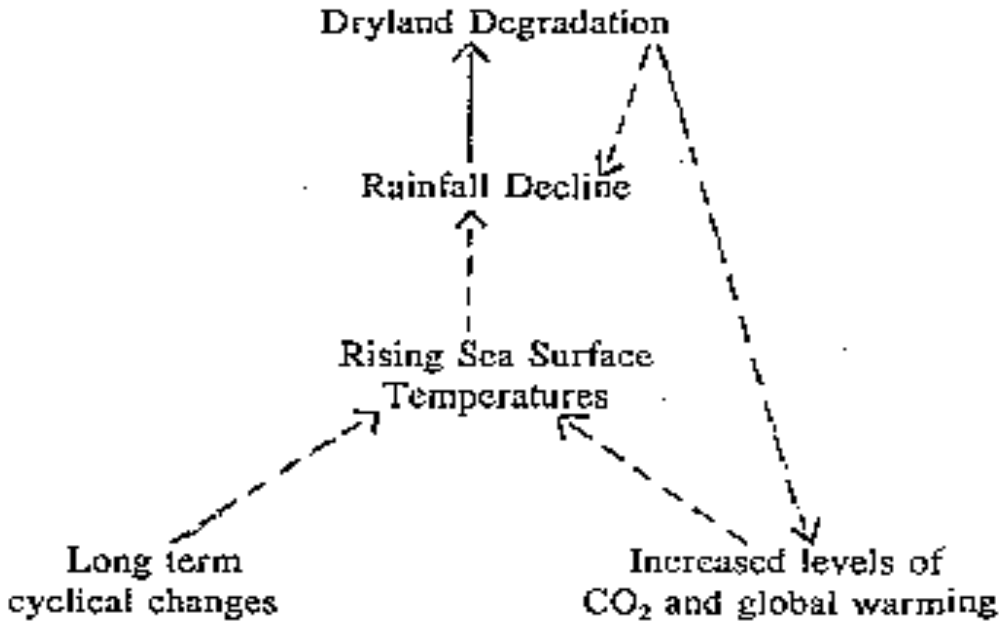
Desertification and Desert Advance

In the public mind, and that of many decision-makers, desertification and desert advance continue to be confused. It is still asserted by some that 'the desert is advancing at 5 km a year'. The image is powerful, despite the lack of clear evidence for its support. Work from the Sudan (Helldén, 1991) shows the absence of any such advance, in the sense of sand dunes shifting inexorably southwards. Instead, it is shown that patterns of vegetation are highly dependent on rainfall, so that the desert 'advances' and 'contracts' depending on precipitation in that particular year (Tucker et al.,1991).

Desertification and Climate Change

There are four important questions to examine here about which we know little (see Diagram 2):

Diagram 2: Climate and Desertification



———> commonly accepted linkages

---------> hypothetical linkages

i) Has climatic change increased desertification? Parts of dryland Africa have suffered a major downwards shift in rainfall availability in the last 25 years, in comparison with previous decades. The lesser rainfall and its greater variability have increased vulnerability to natural resource degradation, since it becomes less easy for ecological and social systems to withstand stress. Elsewhere in Africa, there is less clear evidence of declining rainfall.

ii) Does adverse use of land (baring of soils, loss of vegetative cover, etc.) have a 'feedback' effect on local or regional climate? If so, then drought and degradation may produce desiccation. Climatologists are generally cautious about the existence of such linkages. Any such effect is thought to be of minor importance, and greatly overshadowed by the possible effects of global climate change on these regions.

iii) Are induced global climate change and global warming responsible for recent periods of drought in Sahelian Africa? Increasingly climatologists seem to be of this view. For Sahelian West Africa, this is based on the role thought to be played by warmer sea surface temperatures (SST) in the southern Atlantic and their impact on the strength of the rainfall front across the Sahel. The pattern for other parts of Africa is less clearly understood. Rising SST in the southern Atlantic may be the result of global warming, heating of the northern oceans being less marked due to the screening effect of sulphate pollution (Hulme, pers. comm.). However, an alternative hypothesis is still being investigated, which posits the existence of long term cyclical changes in ocean temperatures, of uncertain duration, unrelated to global warming and about which we know little. As far as the future is concerned, the Inter-governmental Panel on Climate Change reckons that continued global warming will produce higher temperatures, less moisture availability in the Sahel, due to increased storm intensity, greater runoff and increased rates of evaporation.

iv) Does dryland degradation have an impact on global climate systems? If this were the case, 'desertification' would need to be re-defined as a global problem, similar to tropical deforestation, since failure to control the problem would have damaging effects on all nations of the world. Such a hypothesis is based on the role played by vegetation within the dry tropics, in terms of storing carbon dioxide. A loss of grassland and trees in this region could lead to increased CO_2 emissions (such as through bush fires), and reduced capacity to lock-up carbon dioxide, and thus a rise in overall CO_2 levels. However, there is no evidence to date to demonstrate that desertification plays a role of such significance within either local or global climate systems.

It will be very important to establish the primary causal relationships between degradation and climate change at local and global levels, since not only will this affect the negotiating positions of different countries involved in the Convention on Desertification, but it will also help identify which measures are appropriate, to be taken by whom. Taking Diagram 2, if the link between rise

in SST and global warming from rising CO_2 levels is established, there is a case for compensation to be paid by those primarily responsible for CO_2 emissions towards those suffering adverse rainfall patterns. If, by contrast, long term cyclical changes in ocean temperatures are shown to be the cause of rising SSTs, this absolves the industrialised countries of particular blame. If increased degradation in dryland regions is demonstrated to play a significant role in raising CO_2 levels, then countries suffering from such degradation will be in a stronger negotiating position to demand payment from other countries, to 'bribe' them to reduce degradation and hence reduce their impact on global warming. Were it to be proved that rainfall changes in the last two decades were primarily the result of local degradation, there would be a much stronger onus on governments of those countries to encourage appropriate changes to land use practices.

There is an urgent need for a reassessment of the evidence on these different relationships. The past few years have made available new climate data and results from modelling exercises, at local and global levels. The evidence provided by such exercises and conclusions reached however are far from consistent. It would be very valuable to bring this material together and examine the balance of evidence concerning the possible linkages outlined above.

Current Trends in Desertification

There are various sources of data on trends in desertification, ranging from global surveys and the analysis of satellite transects, to local level studies of environmental change. Here, we will examine the evidence from these differing sources and the contradictory results they offer. There is little agreement concerning the magnitude and incidence of desertification, in part because of disagreement over what parameters are actually to be measured. The processes making up desertification are not always easy to detect. For example, declining crop yields might indicate the exhaustion of soil nutrients, but such a decline might equally be due to poor rainfall, pest attacks, conflicting labour demands at weeding or harvest, and so on. Similarly, different studies define their terms in differing ways, as can be seen below. Some refer to areas currently suffering from some form of degradation, while others may include areas potentially at risk from desertification, which evidently casts a far broader net.

As with all information gathering exercises, a tradeoff exists between gaining better data and the greater expense involved. Similarly, there is a tradeoff between accuracy and scale (Warren & Khogali, 1992). As will be seen below, a number of detailed case studies provide us with valuable understanding about environmental change and people's responses in a given locality. The major problem concerns how to draw broader conclusions from these site-specific studies for the region as a whole, and to reconcile the contradictory evidence provided at local and at macro-levels.

Global Data Sets

There are two main global data sets which have been used to provide data on desertification, summarised in Table 1. The first comes from the Global Assessment of Soil Degradation (GLASOD) programme carried out at the University of Wageningen for the FAO. It attempts to estimate the incidence and severity of soil degradation by continent, based on the informed opinion of scientists and technicians. Data is presented at 1:10 million and hence gives only broad orders of magnitude about the scale and incidence of soil degradation.

The data used by UNEP in its recent assessment of desertification worldwide combines GLASOD data with that from the International Center for Arid and Semi-Arid Land Studies (ICASALS) at the Texas Technical University. These figures cover both soil degradation and areas suffering 'vegetation degradation' but no accompanying soil degradation. Vegetation degradation is taken as a change in the composition and level of vegetative cover, such as where perennial grasses have been replaced by annuals, or where forest land has been cleared for cultivation. Not surprisingly, the ICASALS estimates of desertification produce a far higher figure for the area affected than does GLASOD alone, since almost all African rangelands have experienced 'vegetation degradation' of this sort. A comparison of the GLASOD and ICASALS data sets is shown below. From this it can be seen that using GLASOD figures, 19.5% of drylands worldwide are said to be suffering from desertification, while using the ICASALS definition and figures, this rises to 69.5% of all drylands.

Table 1: Status of desertification worldwide (UNEP, 1991)

	Million hectares	% of total drylands
1. Degraded irrigated lands	43	0.8
2. Degraded rainfed crop lands	216	4.1
3. Degraded rangelands (soil and vegetation degradation)	757	14.6
4. Drylands with human-induced soil degradation (GLASOD) [i.e. 1 + 2 + 3]	1,016	19.5
5. Degraded rangelands (vegetation degradation without soil degradation)	2,576	50.0
6. Total degraded drylands [i.e. 4 + 5]	3,592	69.5
7. Non-degraded drylands	1,580	30.5
8. Total area drylands excluding hyper-arid deserts [6 + 7]	5,172	100.0

For Africa, the vegetation degradation included within the ICASALS data is very largely a result of a shift in rainfall isohyets across much of the continent which has meant that perennial grasses have been replaced by annuals across a wide swathe of the Sahel. In the absence of soil degradation, does this change in vegetation class signify degradation? Supporters of this data argue that land which has experienced such 'vegetation degradation' may be potentially more vulnerable to soil erosion in future. Others would argue, by contrast, that inclusion of this land is highly misleading. For example, land which has been cleared of trees and scrub for cultivation is said to have undergone degradation, even where soil erosion has not occurred and useful output has increased. Similarly, accepting this method of assessment would

mean that bush encroachment of grazing lands constitutes an improvement in vegetative status, despite the reduced utility of the land as a consequence and the reduction in animal output associated with this encroachment. Some would argue that the only purpose of including 'vegetation degradation' figures within the total, has been to magnify the apparent scale of the desertification problem in the hopes of raising additional funds.

Severe doubts have been raised about both GLASOD and ICASALS data sets, their accuracy and the purposes to which they may usefully be put. As noted earlier, the issue of what data to collect, at what scale and what cost depends greatly on the policy framework within which such data are to be used. At the global level, such 'data' as exist seem mainly aimed at alerting the world community to the importance of different environmental problems. Little credence is given to the accuracy of the figures presented and they serve little useful purpose in terms of planning what should be done.

Warren & Khogali's study for UNSO/UNCED sets aside statistics and relies more on a qualitative assessment of changes in soil erosion, deforestation, pressures on land, etc.. (Warren & Khogali 1992, see table 2). The merit in this approach is the explicit recognition that data are so imperfect as not to warrant their presentation.

Regional and Local Studies

A series of studies are now available which examine environmental change in various dryland regions, which provide evidence at odds with that of macro-level surveys (Hanan et al. 1991; Helklen 1991; Mortimore 1989; Tiffen 1991).

Studies of environmental change at the local level, often carried out over many years, demonstrate the resilience of physical and associated pastoral and farming systems in the face of substantial rainfall variability. Certain features of these systems tend to protect the resource base from over-use. In the pastoral case this is because at the crucial moment when damage to grass cover might be done (in the mid-rains, when grasses are flowering and setting seed), livestock are usually spread out over a very large area at low stocking rates. In the *farming case, as human population densities rise and natural resources become* scarcer, there is a tendency for institutions and markets to adapt, conferring tighter definitions of property and rules of access, making resources more valuable and hence more profitable to protect and conserve.

Table 2: Assessment of Changes in Dryland Environments (Warren & Khogali 1992)

Tentative estimates of changes in the dryland environments of the Sudano-Sahelian countries, 1985-1991

- = worse; -- = much worse; 0 = much the same; + = better;
Drought = Drought; Desiccate = Desiccation; Erosion = Soil Erosion;
Deforest. = Deforestation; Range = Range Degradation;
Limits = reaching limits of available land.

	Drought	Desiccate	Erosion	Deforest.	Range	Limits
Benin	0	-	-	-	-	-
Burkina Faso	+	0	--	-	--	--
Cameroon	+	0	-	0	-	0
Cape Verde	0	0	--	-	-	-
Chad	-	-	-	-	0	0
Djibouti	0	0	0	-	0	-
Ethiopia	-	-	--	-	-	0
Gambia	0	0	-	-	--	--
Ghana	0	0	-	-	-	-
Guinea	0	0	-	-	-	-
Guinea Bissau	0	0	-	-	-	0
Kenya	0	0	-	-	-	-
Mali	+	0	-	-	-	0
Mauritania	-	-	--	--	-	--
Niger	+	0	-	-	-	0
Nigeria	+	0	-	-	-	-
Senegal	-	-	-	--	--	--
Somalia	-	0	-	-	-	0
Sudan	-	-	-	--	-	-
Tanzania	-	0	-	-	--	0
Togo	0	0	--	-	-	-
Uganda	-	-	-	0	-	-

These studies present a very different picture to that painted by some observers of the dryland scene who have argued that we have reached a state of permanent environmental crisis, bringing levels of resource degradation across large parts of Africa which it will be almost impossible to reverse.

There is a pressing need for researchers and policy-makers to understand the results and implications of detailed field level studies. Such studies do not assert that no degradation is occurring, nor that it is of negligible importance. Rather, they emphasize the need to take a localised approach, examining the nature of degradation in that context and its major causes, so that appropriate solutions can be found in collaboration with local people. These studies also emphasize the dynamic nature of relations between human societies and their physical environment, and the adaptiveness of economic, social and institutional patterns in the face of environmental change. The final section of this paper outlines an agenda for activities at national and international level to support a local-level approach to dealing with dryland degradation and to build on the creative adaptiveness of local populations.

PART 2: LESSONS FROM PAST EXPERIENCE

Anti-desertification work has been undertaken at four levels: global, regional, national, and local.

The Global Level

At this level, the main agency concerned has been the United Nations Environment Programme (UNEP), through its Desertification Control Programme Activity Centre DC/PAC. This was established in 1978 following the UN Conference on Desertification, held in Nairobi in 1977. Its initial aims included:

* to assist countries to formulate plans for combatting desertification,

* to stimulate and coordinate action within the international community,

* to assess desertification at a global level and develop a methodology for assessment, in cooperation with national, regional and international institutions,

* to create and coordinate training on desertification control.

An external review undertaken in 1990, reconfirmed the validity of the principles contained in the Plan of Action to Combat Desertification, but identified a certain number of shortcomings in the Plan itself, which had hindered its implementation. These included its lack of focus, the very ambitious goals set and omission of socio-economic factors (UNEP, 1991). Other reasons given for the poor performance of DC/PAC include a lack of effective guidance by staff, their insufficient organisation and inadequate personnel (UNEP/GC.16/1990). Governments and donors are also criticised for having failed to give due priority to anti-desertification activities, while other events such as chronic drought and warfare in many dryland countries greatly hindered effective action on the ground.

The experience with the Consultative Group for Desertification Control (DESCON) is symptomatic of how DC/PAC has been viewed by donors. It was established by UNEP to help raise money in support of the global plan of action to combat desertification, but has failed to mobilise more than a tiny fraction of the sums hoped for. Instead, almost all funds for desertification activities are channelled through bilateral agencies, to individual countries, or through multilateral bodies such as UNSO, or the World Bank, with greater practical experience in natural resource management projects.

UNEP's Desertification Control programme is now under new management which, it is hoped, will provide far stronger and more effective leadership in this field than has been the case in the past.

The United Nations Soudano-Sahelian Office (UNSO) focuses on 22 countries of Africa who are particularly susceptible to drought, and thus has been particularly concerned with anti-desertification activities. Originally established in 1973 to cover countries of the Sahel, it subsequently was expanded to include a number of other less drought-prone countries who hoped by these means to have access to increased donor funding through UNSO. For many of its early years, UNSO's funding was largely allocated to projects, of which infrastructural investment took a major share. More recently, UNSO has shifted a larger share of resources into non-project work. This includes the development of national plans for combatting desertification, and encouraging donor coordination to avoid the proliferation of different plans (such as National Environmental Action Plans, National Conservation Strategies, Tropical Forestry Action Plans, National Plans for Combatting Desertification, National Development Plans, and National Plans for the Management of Natural

Resources, to name but a few). Being a small organisation under the umbrella of UNDP, UNSO has not been responsible for the implementation of projects directly, these being managed on the ground by a range of organisations, with UNSO providing limited technical advice and support. Consequently, while some projects have been widely acclaimed, others have not performed so well.

Other international agencies have played a major role in natural resource management activities, such as the World Bank, IFAD, and FAO. Limited space within this paper precludes a discussion of their respective merits and weaknesses here.

Regional Programmes

The Comité Inter-Etats de Lutte contre la Secheresse au Sahel (CILSS) was established in the wake of the 1973 Sahelian drought and now comprises 9 member states (6 francophone, plus Gambia, Guinea-Bissau and Cape Verde). Its initial aims were to coordinate activities to reduce the vulnerability of its members to drought and famine. The Club du Sahel was set up in parallel in 1976 to coordinate the programmes undertaken by the main donors to the region (France, USA, Canada, Germany and the Netherlands, and the major multilaterals involved - UNSO, World Bank).

The CILSS experience has been mixed. In collaboration with the Club du Sahel, it has helped generate aid flows per head of the Sahelian population that outstrip any other region of the developing world. Together they have provided for a regular exchange of views, ideas, and project experience amongst the different countries and donor agencies and have contributed towards some coordination of donor aid flows, though this remains far from perfect, largely due to competition between donors. Currently, CILSS is undergoing major restructuring under pressure from the main donors, which will slim the organisation very substantially, and allocate funds much more clearly to specific activities, rather than more general budgetary support.

On a more positive note, since 1989, the CILSS/Club programme has pursued a series of activities based on the main themes highlighted by the Regional Encounter at Ségou, Mali in May 1989, which brought together people from government, donor organisations, and local peasant and herder groups. As a result, comparative studies are now being undertaken on such issues as land tenure, decentralisation, and cereals policy in many of the member states, with

the aim of prompting reflection by national governments and donors on policy options in this field, and ultimately, it is hoped, changes in direction.

The CILSS/Club recently negotiated with its respective members a charter on food aid, which provides a potentially useful example for the proposed Convention on Desertification. Experience from negotiation of this charter, however, demonstrates the long time required to identify and reach agreement on the obligations undertaken by each party. They are also in the process of negotiating a charter on environmental aid, which would try and coordinate the environmental activities of different donor agencies, and to harmonise project approaches, particularly in relation to local-level natural resource management in the Sahel (known as Gestion de terroir). However, a major weakness of CILSS remains the fact that they can merely propose to national governments, but have no powers of implementation.

On the other side of the continent, the Inter-Governmental Authority on Drought and Desertification (IGADD) brings together 6 members (Ethiopia, Sudan, Somalia, Kenya, Djibouti and Uganda). Since its establishment in 1986, a variety of factors have prevented it playing a major role within the region. These factors include the appalling levels of conflict within and between its member states, the lack of a comparable support body to the Club du Sahel, and weak direction within IGADD concerning its priorities and quality of work. In the last year, with a new director in place and additional donor support, there are hopes that IGADD may be able to carry out a more substantial programme. Few donors seem willing as yet to discuss seriously the establishment of a Club de la Corne/ Horn Club, similar to the Club du Sahel. Yet this might be highly valuable in supporting IGADD in its formative years.

The Sahara-Sahel Observatory (best known by its French acronym OSS) aims to be a mechanism for improved contact, information sharing and collaboration between the three regions bordering the Sahara desert (CILSS, IGADD and the north African Maghreb). Since its launch in 1990, the OSS has been perceived as a high-level political initiative on the part of France's President Mitterand, with little reference to the needs and priorities of people within the three regions concerned. Its very close association with the French government has made it more difficult for it to gain support from a broader set of donors, such as the OECD member states. It has also met with some reticence from CILSS and IGADD who perceive it as a potential competitor for funds. Consequently, its achievements to date in terms of practical collaborative work have been less than hoped for. This is a pity, since there is useful work to be done in learning from experience in the different regions of dryland Africa, and spanning the

language barrier between the largely Francophone Western and Anglophone Eastern Sahel.

Bilateral Aid to Desertification Control

Much aid in this field has gone through bilateral channels, for a range of activities including: research on technical and socio-economic aspects of desertification; projects to engage in anti-desertification measures - such as tree planting, soil and water conservation, and range management; and support to broader programmes of policy analysis and change, such as through reform of land tenure codes, natural resource planning, land-use plans, and so on.

It is not possible within this paper to review bilateral programmes for combatting desertification. Instead, two examples will be taken for discussion which highlight useful approaches and particular difficulties encountered.

Two bilateral aid programmes: The PACILSS (Germany) and SSE programmes (Norway)

German aid has been supporting the CILSS through its Programme Allemand/CILSS since 1980. Most of its work has concerned the development of a pilot projet - the PATECORE (Programme d'Aménagement des Terroirs et de Conservation des Ressources dans le Plateau Central) - based in Bam province of central Burkina Faso. This project is putting into practice many of the approaches now advocated for sustainable natural resources management:

* an emphasis on people's participation in design, implementation and evaluation of activities,

* simple technologies for raising productivity and stemming soil erosion, building on indigenous knowledge and perceptions,

* taking an integrated approach to environmental management.

In addition, PATECORE has played a valuable role in coordinating activity by a range of governmental, bilateral and NGO projects within the province, encouraging collaboration on projects, joint training exercises, and establishment of a basic documentation centre. German aid also funds a number of other major programmes for natural resource management, such as those with the World Bank.

Norway's Sudan-Sahel-Ethiopia programme has been operating since 1985, when 1 billion NKr was set aside for a broad programme of support to NGOs, researchers and multilateral organisations working to reduce vulnerability to drought and famine in the region. In West Africa, the main recipient has been Mali. A recent evaluation of the programme provides a detailed and thoughtful assessment of the difficulties met in encouraging collaboration between the various organisations funded by the SSE and learning from each other's experiences. It also notes the difficulties in achieving more participative approaches to resource planning and management, whether by NGOs or the larger donor agencies.

Bilateral programmes are likely to continue to provide a major channel for funds and technical assistance to countries suffering from drought and degradation. Hence, it is particularly important to achieve more effective coordination between the various donor agencies, to reduce duplication, harmonise approaches and learn from each other's successes and failures. In the last section of this paper, constraints on more effective donor coordination are discussed.

National Level Anti-Desertification Activities

At this level, the main forms of activity have involved the establishment of an 'anti-desertification' unit and formulation of plans for combatting desertification, though these are often no more than a shopping list of projects to be put up for donors to fund. Definition of National Plans of Action to Combat Desertification have been required of all CILSS member states. Many countries have also been put under pressure to undertake a host of other planning exercises, such as National Environmental Action Plans, Tropical Forest Action Plans, and National Conservation Strategies. There has been no evaluation of the many and various national planning exercises undertaken, in terms of the opportunity cost in time, resources, and personnel involved in relation to the end-product. Concern expressed by several governments and donors to coordinate the various planning exercises being proposed would suggest that there is currently an over-production of plans. However, in the absence of any assessment of the uses to which plans have been put and of the process itself, it is difficult to judge the marginal utility of each additional plan.

Changes in national policy are being discussed in a number of Sahelian states, in particular regarding reform of tenure, and decentralisation of government administration, which it is hoped will set a new pattern of incentives for the

management of natural resources. It is still uncertain what changes will be made in practice to regulations over resource tenure in many Sahelian countries, and whether such changes would ever be effectively implemented on the ground. Other African countries are also overhauling their land tenure legislation to address problems of increasing conflict between different resource users.

Changes in a variety of economic and agricultural policies (such as abandoning subsidised distribution of chemical fertiliser) have been largely the result of structural adjustment programmes, rather than clearly linked to achieving more sustainable resource management. There has been little assessment to date of the consequences of structural adjustment programmes on the environment in Africa's drylands.

Commitment of resources by governments to their more marginal arid regions is often low, for political and economic reasons. Even where, as in Kenya, a Ministry has been established with a particular mandate for marginal drylands, its negotiating strength in relation to Ministries of Agriculture, Finance, Energy and Trade tends to be very weak. Several governments have set up committees aimed at improving coordination amongst state structures and donors, such as the National Committee for Combatting Desertification in Burkina Faso. It is unclear exactly how effective this has been.

Local Level Anti-Desertification Activities

A large amount of work at local level has been carried out by herders and farmers to help reduce their vulnerability to drought and food shortage. Much of this has gone unrecorded, since it has happened outside any given development project. There is a tendency to assume that the actions taken by many millions of producers in Africa's dry belt have been largely negative, in their environmental effects. Clearly this is true in many places, but elsewhere, considerable ingenuity has been invested by local farmers, for example in developing methods for soil and moisture conservation, managing effectively forest, pasture and farmland around their community, and diversifying crop and livestock production to protect themselves from risk (Mortimore 1989; Toulmin 1992).

Elsewhere, work by NGOs, governmental agencies and donors have provided valuable examples of how more successful management of resources can be achieved. A considerable body of 'success stories' has now been built up, which documents some of the key ingredients contained within these projects

(Rochette 1989; Shaikh et al 1988; Conroy & Litvinoff 1988; Harrison 1987; Critchley 1991). These are summarised by Chambers (1988) and include:

* a flexible learning process approach, which allows projects to change course,

* putting people's priorities first,

* providing secure rights and gains for the poor,

* staff calibre, commitment and continuity.

Such lessons are now being incorporated by some donor agencies into projects currently underway, though it is clearly not so easy to ensure the successful replication over a very broad region of project approaches which work well at a small scale.

PART 3: WHAT ROLE FOR THE CONVENTION?

Background to the Convention

The call for an International Convention on Desertification developed from the dissatisfaction felt by African countries at the way in which desertification had been treated during the United Nations' Conference on Environment and Development preparatory process. Consequently, a substantial period of the final Prepcom meeting in New York (spring 1992) was allocated to discussion of this issue. At the Earth Summit in Rio, a formal commitment was made to negotiate and agree a Convention by June 1994, and it was acknowledged that such a Convention would pay particular attention to African countries.

In New York, January 1993, arrangements were made regarding the negotiation process and the establishment of a secretariat and officers to oversee the preparation of the Convention. The Intergovernmental Negotiating Committee for a Convention to Combat Desertification (INCD) Secretariat has now been established in Geneva, and is headed by Mr Hama Arba Diallo. The Chairman for the negotiations is Mr Bo Kjellén. Five negotiation sessions have been agreed, starting in Nairobi in May/June 1993, followed by Geneva in September 1993, New York in January 1994, and Geneva in March 1994, with agreement and signature in Paris in June 1994.

An international panel of experts on desertification has been set up to help with the work of the Secretariat and provide guidance on technical issues. Two working groups are to be established during the first negotiating session in Nairobi, which will deal with the structure and content of the convention in more detail. A series of case studies have been commissioned from four African countries - Botswana, Mali, Tunisia, and Uganda. These studies are meant to demonstrate how to initiate a 'bottom-up' planning process for more sustainable patterns of resource management and use, and the nature of commitments required at national and international levels to support such processes. The agenda for the Nairobi meeting has now been drawn up and will begin with a four day period of information sharing to clarify issues related to desertification for those involved in the negotiation process. A meeting of NGOs has been planned for June 1993, to provide a forum for discussing how NGOs can feed their own skills and experience into the negotiation process.

It is widely felt that the timetable for negotiating this Convention is tight and will provide a major challenge to the INC Secretariat to come up with a Convention which is workable and appropriate. Most observers hope for a general framework convention to be agreed by June 1994, complemented by a special protocol for Africa, ready or nearing completion.

What Hope for Increased Aid to Africa?

Stable or falling levels of aid for Africa: Economic and political conditions in the developed world and elsewhere provide little hope of a substantial increase in the availability of aid for Africa. Continued economic stagnation and high levels of domestic unemployment in the OECD countries provide a discouraging background against which to launch any major new development initiative. Conflict and political upheavals in Eastern Europe and countries of the ex-USSR are seen to present a major threat to world stability and, hence, will call for increasing flows of finance and other resources from the main donor nations. There is a certain fatigue amongst donors and the general public regarding Africa and the problems it faces, and an unwillingness to continue to channel funds without requiring major changes in how such funds are managed. Some donor countries argue that African countries will need to justify receipt of current levels of aid, by adopting the conditions set out by donors. Should such changes not be forthcoming, donors might actually cut current funding levels.

However, there are several important factors to keep in mind which relate to the possible consequences for Africa, and the rest of the world, of continued environmental degradation in dryland regions and declining aid flows. These include:

i. The distinctive characteristics of Africa's dryland regions, in terms of the people and cultures who have made their homes in these regions over many generations and the vegetation and wildlife they support;

ii. The very real level of need amongst dryland peoples of Africa, in terms of their vulnerability to food shortage and famine. Despite the variability of climate faced by people living in these areas, a substantial population depends on such resources. They offer the prospect of being able to support people in future, if they are handled right. This requires a re-thinking of how development takes place, with greater involvement of local people in the definition and design of projects, and a marriage of internal and external skills;

iii. The political consequences of continued impoverishment amongst Africa's poorest countries and their sense of having been abandoned by western donors;

iv. Continued impoverishment will provide even greater pressures for migration within Africa from poorer to richer countries, and from Africa to richer regions of the world. Acceptance and integration of large numbers of migrant populations impose major costs on all societies, and render them potentially less stable.

Overall, there appear to be few grounds on which to expect a major increase in available development funds for desertification control or other activities. There are likely to be only marginal increases in financial flows, and continued pressure on recipient governments to demonstrate commitment to donor conditions. Donors themselves are more concerned to raise the quality not the quantity of existing programmes funded, paying greater attention to a range of environmental, and social aspects associated with development interventions.

What Form for the Convention?

There are several forms which might be taken by the Convention, in terms of its structure and content. The form most widely discussed concerns a general

framework convention and associated protocols, dealing with different regions. Given pressures of time, it would be most realistic to aim - by June 1994 - for progress on a single protocol, covering Africa, in addition to the general framework convention.

If drawn up along the lines of the Framework Convention on Climate Change, the Desertification Convention would consist of a set of general principles, agreed objectives, and a series of legally binding commitments to move towards such objectives. It would also include details of the bodies responsible for overseeing the Convention. The global framework convention would need to outline the global interests at stake in addressing the resource degradation problems of dryland regions of the world. Such interests include the distinctive characteristics of dryland ecosystems, their flora, and fauna, and the particular people and cultures who depend on these resources. Possible interests relate to hypothetical linkages between desertification and climate change, whereby it is asserted by some observers that dryland degradation will exacerbate processes of global warming. Further clarification of these linkages is crucial.

The design, negotiation, and agreement of regional protocols could then take place either concurrently or subsequently, depending on the availability of time and difficulties in reaching consensus. Given the priority placed on Africa, considerable effort is likely to finalise a protocol for this continent by June 1994 or soon thereafter. Far lesser pressure is evident from other regional groups for similar agreements.

Links between Conventions: Discussion within the Desertification Convention inevitably overlaps with several other issues which are themselves the subject of international negotiations, such as climate, trade, and biodiversity. Decisions must be made about when and where these issues and their relation to desertification will be properly dealt with. It may be tempting to avoid discussion of these issues within the Desertification Convention negotiations, on the grounds that they are being dealt with elsewhere. Many developed countries are also unwilling to acknowledge the relevance of issues such as trade to the desertification debate. However, it is neither realistic nor will it serve the longer term goals of the convention if such issues are avoided and a narrow environmentalist view is taken of desertification.

In principle, conventions need to minimise the degree of overlap between their respective areas, and possible contradiction between treatment of a given issue in different conventions. In most cases, contact and discussion between the people and institutions involved with each convention should be sufficient to

cope with potential problems. The main issue over which this kind of overlap is likely to pose considerable difficulty concerns trade and the GATT. Linkages between the Convention on Desertification and other negotiations are also important because of the possible bargaining strategies employed by different parties. For example, it is conceivable that developing countries will use their blocking power within the Convention on Climate Change in order to lever more favourable terms out of the Convention on Desertification.

A Protocol for Africa

As mentioned earlier, priority is being placed on the development of a protocol for Africa, given pressures of time, and the political commitments made at Rio in favour of African nations. There are several questions outstanding regarding the design of such a protocol, such as:

i. Is it realistic to negotiate such a protocol at the same time as the framework convention? For example, the protocol will need to refer to elements of the broader convention which themselves will be in the process of negotiation. A concurrent process of negotiation may be possible if the framework convention is sufficiently general and uncontentious to raise few worries amongst the parties. But in such a case, the African protocol will need to make up in detail for the bareness of the framework convention. Considerable dissatisfaction is likely if both framework convention and African protocol lack substantial content. Given pressures on time, might it be better to retain the option of going for a framework convention by June 1994, of a fairly general nature, and adopting a binding resolution to complete the African protocol within the next 18 months?

ii. Does it make sense to have a single protocol for Africa, or would it be better to have a series of regional protocols? Such regions could comprise, say, the North African and Maghreb region, Eastern Africa and the Horn, West Africa, and southern Africa. Arguments in favour of such an approach include the greater degree of specificity which could be developed within a given protocol and take account of existing regional groupings (such as the CILSS/Club du Sahel relationship). While it would seem that African governments wish to retain a single continental protocol, some thought might be given to the advantages and drawbacks of other options.

iii. How best to design the elements within such a protocol? What commitments should be considered from the various parties? Do we have any models on which to judge the appropriateness of different commitments, and the ease by which they might be monitored? The four national case studies from Africa which have been commissioned by the INC Secretariat are meant to provide valuable material for consideration within the African protocol, in terms of the range of issues to be considered. Thought could also usefully be given to existing agreements (such as the Sahel Food Aid Charter) to identify whether this kind of agreement can provide a useful model.

Policies to Deal with Risk and Uncertainty

Given the variability in conditions faced by those living in dryland areas, parties to the Convention should consider how best to create conditions of greater certainty at local, national and global levels.

i. At local level, people need firm rights to manage and control access to the resources upon which their livelihoods depend. Many of the problems of environmental degradation in dryland regions have been caused by a lack of clarity regarding who controls access to resources, and contradiction between customary rights and those provided by modern legislation. It is now recognised that local users are likely to be the best managers of resources, as their own survival and that of their descendants depends on using land sustainably. While more assured rights are a necessary condition for more sustainable development in dryland areas, they are not a sufficient condition. Other conditions include: reasonable economic returns to labour and investment in land improvement; provision of basic needs; development of local institutions; and the adaptation of technologies appropriate for a given locality.

ii. At national level, the greatest challenge is to develop a framework within which decision makers of all sorts face greater certainty. This framework needs to guarantee reduced vulnerability to the erratic physical environment in which people live, and greater certainty regarding the performance of institutions, markets and structures that affect their ability to make ends meet.

iii. At global levels, the world community should consider ways to provide a parallel framework of greater certainty regarding protection from adverse physical conditions, and the performance of global institutions, markets and structures.

Possible Commitments for Donors and Recipient Nations

The Convention and its related protocols will incorporate a certain number of elements to be negotiated and agreed by the various parties. These elements will then become legally binding, and will need to be monitored in some form. Here it is assumed that the framework convention will outline the global rationale behind our common interest in assuring more sustainable patterns of resource use in dryland regions of the world. As noted earlier, this will need to refer to the distinctive qualities of dryland ecosystems, the species they harbour, the peoples and cultures they support, and their possible role in assuring global climatic stability.

Regional protocols would then be able to go into far greater depth regarding the particular obligations which donor and recipient nations feel are important. With a focus on addressing problems at local level, encouraging a bottom-up planning process, and emphasizing the role of institutions, incentives and tenure, these protocols need to be firmly anchored in reality, in contrast to the top-down national and regional planning exercises of the past two decades.

There is need for greater discussion and contact between the various parties to the Convention, to understand more clearly their respective viewpoints, and the constraints under which they are operating. African governments need to provide their own views of what commitments they feel to be their priorities. Open discussion would help avoid the presentation of unrealistic 'shopping lists' of commitments to be demanded of the other parties.

Donor Nation Commitments

There are various fields within which commitments might be considered concerning the quality and delivery of aid, non-financial flows (for example, technology and research), and broader economic policy (for example, trade).

i. Quality and delivery of aid.

As discussed earlier, a large increase in aid is not likely to be forthcoming. Instead, most observers speak of trying to ensure the more effective use of existing funds.

a. Aid coordination - It is widely accepted that greater coordination of donor activities and their aid programmes at a national and/or regional level, would be a good thing, in terms of avoiding duplication of work, possible contradictions in approaches and wasteful use of recipient country manpower. However, better coordination of aid may be difficult to achieve because it is often not in the interests of the various parties. Recipient governments may benefit from a lack of coordination amongst donors, since this allows certain activities to be double-funded. Effective donor coordination could also tighten greatly the imposition and monitoring of donor conditionality. As far as donors are concerned, it is unrealistic to expect a high degree of donor coordination because of the political strategies followed by each donor nation, their differing interests, and the interplay of institutional politics and competition amongst donors. Thus, a commitment to greater coordination is likely to be honoured more in the breach than in the practice.

Bilateral aid is likely to continue to be the main source of funds for development activities. As a result, a certain degree of competition amongst the different agencies will remain inevitable. There may be some positive aspects to this competition. Since donors are often very sensitive to how their activities are perceived and want to demonstrate 'success stories', this can provide a stimulus to better performance in their aid programmes.

b. Changes in aid delivery - such changes include increasing the flexibility of aid funding to allow for changes in conditions, greater definition of programme activities by local people, and allocation of funds on a longer term basis, so that longer term planning is possible. In general, agencies are moving in this direction, although the speed with which this is possible is often constrained by their own administrative and budgeting procedures. Further progress needs to be made in this direction.

c. Shift towards multilateral spending - There have been some calls for the establishment of a desertification fund, attached to the convention, for financing of activities in this field. The adverse experience and perceptions of DESCON (the financial mechanism established after the 1977 UN Conference on Desertification) make it highly unlikely that donors would be in favour of re-establishing this kind of facility.

ii. Non-financial flows: Research and technology development

Dryland environments present certain problems for conventional methods of research and technology development, due to their high variability and physical heterogeneity. It is now recognised that successful technology development must rely on a more collaborative partnership between local people and outside professionals (researchers, extension officers, project staff). Achieving such collaboration will have major implications for the kind of research undertaken, methods used, and professional hierarchies. Incentives will be needed to achieve a shift in how professionals perceive themselves, from being 'the expert' to promoting reflection, analysis, and experimentation with local people. There is a growing body of evidence which shows how this might be done. Donors should consider how best to support such a shift in research and extension practice, within their own research establishments and those receiving their financial support.

Appropriate methods for monitoring resource productivity and degradation in dryland regions need to be developed. In order to avoid a supply-driven programme, the allocation of resources to data collection, mapping and GIS must consider how this information is used in practice. Compatibility also needs to be sought between different monitoring methods, and information storage techniques.

Ultimately, the main aim of supporting research and technology activities must be the development of endogenous capacity to identify research priorities, and to carry out programmes appropriate to the needs of local people. Currently, the national systems of agricultural research in many parts of Africa are in a greatly weakened state. Attention could be given to the means by which collaborative programmes of research in the field of desertification control would support more substantive capacity development in these countries.

iii. The broader economic context: assuring sustainable drylands development

It is now widely accepted that problems of desertification and land degradation in dryland regions are largely the result of socio-economic factors and policies and, hence, their solution must be found also largely in this domain. Experience from earlier years of desertification control activities, involving major tree planting programmes and other technical 'solutions' has demonstrated the flaws of ignoring the broader social, economic, and political framework. This is not to say that technical issues are not also important. It

is essential to develop appropriate forms of technical intervention. However, technical approaches by themselves will not provide the solutions required.

If socio-economic, and institutional factors are now accepted as the most important in providing the 'enabling environment' needed by rural producers, this imposes a major obligation on national government structures to identify key areas of policy where change is required and commit themselves to making those changes. The obligations to be undertaken by recipient nations within the context of this Convention, outlined in the next section, provide examples of what might be required.

Extension of this argument from national to international levels imposes parallel obligations on donor nations to examine areas of policy where these clearly damage the ability of dryland peoples to assure themselves a reasonable livelihood. Neither in the developed nor developing world are nation states impermeable entities. Economic conditions in one country cannot be isolated from the impact of decisions made and processes occurring elsewhere.

This raises a certain number of problematic issues, such as the effects of international trade policies, and of agricultural policies within developed countries on developing nations (dumping of surplus, etc.). It is necessary to identify much more clearly the actual impact of different trade and other policies on livelihoods within different dryland regions. For example, there are strong grounds for thinking that dumping of European and North American surplus produce may be damaging dryland producers. Examples from the Sahel include the impact on pastoral herders of cheap frozen meat imports dumped on coastal West African states, and the effects of dumping wheat flour on local grain prices within the Sahelian region. It would be useful to get a clearer picture of the extent of damage and the distribution of benefits and costs of such practices. On the basis of the results from research carried out, developed countries could commit themselves to addressing problems caused by these various practices on dryland producers, within a given time frame. The negotiation of a Food Aid Charter for the CILSS Region of West Africa provides a useful model on which such commitments might be based.

Recipient Nation Commitments

Recipient governments could usefully outline the priority commitments they feel they should make within the Convention on Desertification. The agenda up till now has been largely set by donor countries. There are four main areas in

which donors expect commitments from recipient countries. Several of these are closely inter-linked:

i. decentralisation of power, rights, and resource management from centralised administrations to local level structures,

ii. reform of land tenure and clear affirmation by government in rhetoric and practice in favour of the rights of local users to exercise control over resources and the establishment of transparent procedures for conflict resolution,

iii. liberalisation of institutional and economic systems, to permit free association and establishment of political groupings, elections, press freedom, and in the economic sphere a rationalisation of various kinds of intervention,

iv. formal recognition of population growth as an issue of relevance to the debate on assuring rural livelihoods in dryland areas, through the formulation of policies likely to promote lower levels of demographic growth, and programmes to provide the practical means for people to control fertility.

It is assumed that the policy changes outlined above will create an 'enabling' environment which will promote economic growth and provide people with greater certainty regarding institutional structures and the affirmation of their rights. There is, however, some need for caution with the speed at which such changes are demanded and questions regarding possible consequences of such policy changes.

These questions are:

i. How much decentralisation of power and administration is really feasible in a short time span, given severe constraints on the availability of staff and other resources? Decentralisation has been seen as a means by which to divest the state of its power, and cut down its budgetary requirement. However, the state also has a rightful role to play - what should this be and how much power should it exert? Decentralisation may itself require a significant body of resources, if it is to be done well. For example, land tenure reform and the attribution of rights to local populations does not absolve government of any future role in this area. Rather they must assure the rapid and fair enforcement of rights.

ii. Where decentralisation involves the devolution of power over raising and spending a significant share of funds raised within that district, this raises important issues regarding the integrity of the nation state, its role in moderating differences in income and potential between districts, and in redistributing resources from rich to poor areas. There are serious risks of better-off districts taking decentralisation to its logical conclusion, and retaining all revenue, rather than see some part of this redistributed to poorer neighbouring districts.

iii. It has been over-optimistic to assume that multi-party democracy can accommodate the opposing interests of different groups within many countries. Political traditions and sectional interests based on region, race, or creed, and outright conflict have all provided ungainly elements for moulding into a peaceful political process based on one person/one vote.

Monitoring of Obligations

The nature of commitments - for donor or recipient nations - discussed above provides considerable difficulty for easy monitoring of performance. Effective monitoring requires the identification of unambiguous targets, usually quantifiable, against which to compare actual achievements. Yet for few of the commitments outlined above would such quantified targets be easy to set. For example, how could a commitment by donors to aim at greater coordination be assessed in practice, or the degree of flexibility measured within a given aid programme? On the side of recipient nations, it is not clear how to judge adherence to a particular commitment. For example, reform of land tenure can be achieved *de jure* through legislation, but it may be far harder to achieve and measure on the ground *de facto*.

Thought must be given to careful definition of targets for monitoring. In the absence of very obvious quantifiable targets, it will be tempting to adopt indicators which themselves may produce counter-productive behaviour. Suppose, for example, that recipient nations are asked to commit themselves to the re-establishment of tree cover over a certain number of hectares within a given time period, and that non-compliance would bring the loss of funds. In such a case, the country concerned would be under pressure to get trees planted, in whatever manner, to ensure compliance. Adherence to less easily quantifiable targets, such as popular participation, would probably be passed over in favour of a top-down approach to ensure the work was done.

Regional and Global Mechanisms for Desertification Control

At the regional level, attention should be paid to the role which can usefully be played by regional organisations, and coordinating mechanisms. Cooperation at the regional level provides a forum for comparing experience and exchange of information between countries with similar environmental problems. However, as the CILSS experience demonstrates, there are clear limits to the role that such a regional organisation can play, because of its limited powers and mandate. The definition of certain specific, limited goals is essential if such cooperation is to bear fruit.

Decisions must also be made about the roles to be assigned to different international organisations and their responsibility for monitoring adherence to commitments, changes in levels of resource degradation, mobilisation and distribution of funds, and research and training activities. While there have been calls by some for a major new initiative, such as a Desertification Foundation, most people would argue for making better use of existing structures, rather than the establishment of new organisations. Many observers would wish, however, to maintain an independent secretariat to monitor adherence to the Convention, following its signature in June 1994, rather than allocate this task to an existing agency.

Desertification and the Global Environment Facility (GEF)

There has been much discussion regarding the availability of funds from the GEF for desertification control activities. Currently, it has been agreed that desertification projects can be funded where they fall within the bounds of one of the four existing areas (global warming, ozone depletion, biodiversity and international waters). This would require that a particular project activity can demonstrate clear and specific linkages which contribute towards the four main GEF areas. Hypothetical examples would include the impact of soil erosion in dryland areas on the release of soil carbonates and subsequent growth in greenhouse gas emissions. Similarly, it has been argued that loss of woody cover in dryland regions contributes significantly to a reduction in the availability of sinks for greenhouse gases. However, there is also considerable pressure for the GEF to be expanded to include desertification directly, which would involve re-defining desertification as a global environmental problem, rather than an environmental problem experienced on a worldwide scale. The distinction concerns whether the problem (dryland degradation) is, on the one

hand, caused by factors operating at a global level (such as climate change) or itself will engender effects across the globe (such as those outlined above); and on the other hand, whether the problem exists in many different parts of the world, but with no particular linkage between its incidence and global level environmental processes.

One argument in favour of expanding the GEF to incorporate desertification is that since no new sources of money are likely to become available, the GEF would be as good a source as any for funding commitments within the Convention. It provides a mechanism for review and funding which means a new institution would not be required.

The main argument against broadening the GEF to include desertification regards the dilution of the distinctive qualities of this fund, intended to provide finance additional to regular sources of development aid, and aimed at problems of a global environmental nature. It would damage the GEF's capacity to raise funds if it was seen as just another source of development funding with no clear difference from ordinary bilateral funds.

* * *

In conclusion, many of the demands being made upon national governments by the international donor community concern aspects of 'good governance', such as encouraging greater participation and democracy, rendering more effective institutional and legal structures at national level, and providing a fairer share of resources and power to ordinary people. It is likely that demands will be made upon the international community that there be some congruence between demands for better governance at national level and the way that business is done at the international level, in terms of transparency, ensuring more equitable distribution of power and decision-making, and opening developed markets to third world exports.

* * *

Topics Requiring Further Work

There are a number of further issues which could usefully be examined, to clarify their relative importance in relation to the Desertification Convention and identify areas of current ignorance. These are:

i. the importance of biodiversity within dryland regions, and the consequences of continued degradation on plant and animal life;

ii. the linkages between climate change and desertification, the evidence of dryland degradation being caused by changes to the global climate system, and possibility of feedback effects from dryland degradation into global climate change (effects from dust, albedo, loss of carbon sinks);

iii. the effect of structural adjustment programmes on environmental management within countries experiencing dryland degradation and the need for measures to minimize adverse impact;

iv. the particular needs and interests of non-African states, in relation to the Convention, and in the preparation of forthcoming regional protocols. For example, very little thought has been given to date to the position of the ex-USSR central Asian republics, their experience with desertification control programmes and their priorities for support in this field.

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