

Editorial: Environmental Change, Development Challenges

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The late 1980s saw a phenomenal growth of international concern over the global environment. It has begun to influence politics both in industrially advanced countries and in the newly democratising countries of Eastern Europe. Recognising that the roots of this concern are not new, this **Bulletin** addresses its twin aspects in the context of developing countries and at different scale levels. On the one hand, environmental change poses significant challenges for development policy and practice. On the other, the development process itself presents challenges for sound environmental management.

During autumn 1990, a series of seminars was held at IDS (see Appendix), culminating in the annual 'closed season' conference in December, which focused on a broad but selective range of issues linking environmental and development studies. These meetings marked the beginning of a new environment programme at IDS, and were intended to help shape an agenda for future research in this area at the Institute. This **Bulletin** brings together a selection of the papers presented during the closed season and concludes with pointers towards some key challenges for development research. The contributions convey some of the inherent complexity and diversity in environmental issues from a wide range of social science perspectives.

Throughout this rewarding exercise, we have been mindful of the Institute's particular capabilities and strengths, as well as some of its limitations, in understanding what environmental change in developing countries means for the development process. As we approach the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, 20 years on from the Stockholm Conference on the Human Environment, we must continue to ask searching questions as to what an institute of development studies can offer developing country citizens, governments and policy-makers, international donor and local organisations, in meeting the challenges they face as a consequence of environmental change. Do these challenges stem from heightened awareness or from increasing real rates of change, or from both, and in what rough proportions? And if it is awareness at least as much as real trend, then on whose part, northern agencies or local people? Most importantly, how can improved understanding through applied research both inspire and inform

policies to bring about positive change? These are some of the questions we raise in the concluding paper to this collection, but to which we must return repeatedly in our future work.

Throughout the series of seminars and the closed season, a number of key themes emerged, cutting across the diverse range of issues and concerns expressed in individual papers. A synthesis of these themes is presented here. But we begin as is customary with some consideration of what we mean by the 'environment' in the context of analysing processes of development. We offer no hard and fast definition.

For present purposes, we adopt a deliberately materialist interpretation of the 'environment'. We are concerned with the long-run capacity of the natural resource base to provide source (material and energy) inputs, and to perform sink and other service functions, essential to sustaining the livelihoods of both present and future generations of people. We are by now familiar with the Brundtland Report's definition of 'sustainable development', informed by the same concern, as being 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' [WCED 1987]. Environmental degradation — a deterioration in this capacity — includes both depletion (threatening source inputs) and pollution (threatening sink and other services) processes, as Lipton [infra] terms them in his case for a classificatory analysis of environmental problems.

A changing conception of what 'environmental problems' are is well captured by the notion of the environment as 'margin'. In economists' parlance, environmental problems are externalities that fail to be accounted for in conventional analysis and assessment. Much of environmental economics in recent years has been about devising ways of internalising many of these externalities. To take a specific example: systems of national accounts can be restructured to recognise deforestation as a form of capital depreciation, rather than as a net gain in current income terms. Backed up by an appropriate fiscal regime, this goes some way towards correcting the existing perverse incentives that exist in many countries to regard forest resources as a free good.

Seen from this perspective, many 'environmental problems' are in fact economic problems. Supported

by effective lobbying and recent industry responses, the major achievement of the burgeoning literature on sustainable development from the World Conservation Strategy [IUCN, WWF and UNEP 1980] onwards has been firmly to establish this as a reality in mainstream economics and politics, by demonstrating the direct threat to economic prosperity — and in some cases survival — from non-marginal forms of environmental degradation. This may arise locally and have primarily local effects, as with some forms of accelerated soil erosion; or it may assume global proportions, with varying impacts in different places and on different groups of people, as with loss of biodiversity or threatened climate change. As groups of people and societies innovate, technologically and institutionally, to accommodate and respond to environmental change, they find ways to deal with what we regard as 'environmental' problems as an integral aspect of production efficiency. The 'margin' therefore shifts over time, as more environmental problems become internalised, and may even diminish in real terms, unless cultural perceptions also shift to define new concerns as part of an environmental margin.

Consider the example of irrigation systems. It is often said that without proper drainage, irrigation can lead to environmental problems such as waterlogging and salinisation. But these are first and foremost economic problems: they threaten the livelihoods of those dependent on by now unproductive land; and waste scarce investment capital already spent as well as demanding new investment in land reclamation. Lipton's article in this **Bulletin** discusses the possibility of achieving the complementary objectives of poverty alleviation and environmental protection by means of policies that aim to substitute employment for environmental degradation. He cites as one example Wade's work on substituting managerial skills for water in canal irrigation [Wade 1980].

The papers included in this **Bulletin** fall into three broad groups, in addition to this overview and the end piece discussing future research challenges. The first two are position papers which had their origins in speculations as to where research on environment and development should be heading in the 1990s. Lipton considers the progress made in understanding poverty and the steps necessary to reduce it, and argues for a classificatory analysis of environmental problems in much the same way, to advance our understanding of their role in relation to poverty alleviation. A guiding research theme is suggested by this preliminary analysis: that of substituting employment for environmental pollution or depletion, as a twin strategy to fight poverty and non-sustainability in the same operation. Chambers argues for a different methodological revolution, aimed at revising what we think we know of people's own environmental management practices, by fundamentally changing behaviour on the part of rural development

professionals. He presents some of the challenges involved in moving from a disabling to an enabling state, to allow people to take the long view in managing their local environment.

The next three papers all deal with sustainable rural livelihoods and environmental change as seen from local perspectives. Although drawing on evidence from three very different regions, they share a common concern with local institutions for natural resource management. Drawing on experience from the West African forest belt, Leach criticises current approaches to 'women and environment' and articulates an alternative approach that uses 'gender' as a useful proxy for a range of differentiated interests between groups of resource users. The dynamic social relations between them emerge as a key factor in understanding the character of 'decisions' about resource use and local innovations in resource management.

Mearns considers shifts in contemporary understanding of pastoral land management systems, and outlines an approach that focuses on the patchiness of key resources in the landscape, and on specific tenure arrangements developed to ensure herders' access to them. The potential of such an approach for informing appropriate forms of land tenure policy reform is assessed in the challenging context of the contemporary economic transition in Mongolia under perestroika. Also concerned with the management of change in pastoral society, this time in East Africa, Swift examines the various institutional structures in Boran society that have evolved for managing food security and natural resources, and argues for an approach to development policy that builds on and 'empowers' such customary institutions.

The final pair of papers express more macro-level concerns. Green focuses on the interactions between macroeconomic structural adjustment policies and national ecology strategies, and provides empirical support with recent experience from Namibia's agricultural sector. Contrary to most approaches to this problem which aim to develop guidelines for environmental policy more or less deductively from a mix of structural adjustment and neoclassical microeconomics. Green shows how an alternative, inductive approach would build up from local and national ecological issues to the formulation of national-level strategies. Brown and Daniel address the issue of environmental provisions in mineral investment contracts, and raise issues of international law and negotiations between transnational corporations and developing country governments.

Six cross-cutting themes emerged from discussions during the seminars and conference, and are reflected in the articles in this collection. The first is the importance of diverse perceptions, in the broad sense of significant important cultural reference points in

conceptualising environmental change. Understandings of the environment may derive from different historical and cultural frameworks, and be non-commensurable in terms of the problems raised and the kinds of solutions considered possible. This issue was raised during the seminar series with consideration of the gulf that exists between indigenous views of change in a rainforest environment and the views of northern-based conservation organisations.¹ We return to this point in the conclusion of this **Bulletin**.

The second theme highlights the fact that in any given context there will be variation in how environmental change is experienced. Different groups of people value different resources, and the social distribution of costs and benefits of changes which affect such resources is highly uneven. This gives rise to diverse and often conflicting priorities, even if one can agree on a common scale. One aspect of this is that one person's environmental problem may be another's livelihood, which is why we prefer to speak here of environmental change. A number of the papers tackle this problem by means of a broad political economy perspective, paying attention to 'winners and losers' from changes in resources access and policy changes that affect natural resource management, so as to devise appropriately targeted incentives to 'compensate the losers'.

A related problem concerns the gaps that frequently exist between vulnerability and responsibility; those who bear the costs of environmental change do not necessarily have control over decisions relating to it.² Some papers focus on differences within rural communities, such as between women and men (Leach) and groups with differential access to decision-making power (Mearns). By ignoring and ultimately eroding the capacity of local resource management institutions, while at the same time failing to assume effective responsibility for resource management themselves, government agencies may contribute to locally-felt vulnerability (Swift). Besides these local-national gaps in responsibility, national-international and north-south differences are equally relevant (Brown and Daniel).

Third are questions of scale. Distributional issues are complicated where environmental changes are concerned because costs and benefits are so often widely separated in space and time. Environmental problems are frequently of long duration, and their causes as well as their effects are attenuated over different temporal and spatial scales. Green's paper shows how this raises problems in reconciling national policy

objectives with local realities.

A fourth theme, which persistently recurred in 'closed season' discussions, is the issue of 'time preference'. Poor farmers often exhibit long time horizons, making sequential investments of labour and sacrificing present income to conserve natural resource assets for future security. Yet pressing needs, contingencies or high market rates of interest may encourage resource depletion in the short term. It could be argued that two apparently contradictory rates of time preference co-exist. The time horizons seemingly manifested in resource management decisions are of course rarely a matter of explicit preference, but reflect the social, economic, institutional and other constraints which resource managers face. Chambers addresses the changes in external regulations which would better enable farmers to take 'the long view' in which, he argues, they are interested. Lipton's argument for employment policies which simultaneously address poverty and environmental degradation is also a suggestion for reconciling short term livelihood needs with longer-term environmental objectives.

Fifthly, a range of institutional questions emerged. Leach, Mearns and Swift highlight the varied social institutions which play key roles in natural resource management at the local level, showing that an understanding of customary forms of social organisation is important in understanding local responses to environmental change. Prevailing regulatory frameworks, and whether the state acts in enabling or disabling ways, were seen as key issues at macro as well as micro levels. Questions of institutional reform then arise. This may involve supporting new coalitions of institutions with shared environmental interests.

Satterthwaite's discussion of urban environmental problems during the seminar series, for instance, suggested that the similar concerns of public health planners and community groups might provide a basis for action. New regulatory frameworks to arbitrate environmental conflicts might be needed where these transgress national boundaries, as seminar series discussions of global warming and mineral investments by transnational companies suggested. As Swift's **Bulletin** article argues, an understanding of customary institutions can provide the basis for appropriate forms of new institution building at the local level. Chambers creates a formidable challenge, calling for reorientation of bureaucratic attitudes and culture as well as regulations to assist rural people's environmental management, yet presents promising evidence of instances where this has occurred.

Finally, a number of contributions note that economic efficiency and environmental sustainability often go hand in hand. This can be assisted by technological or management innovations to overcome new environmental difficulties, be they in the industrial context of mineral production (as in Brown and Daniels' paper),

¹ Paul Richards, 'Rainforest Conservation: Science or Religion?', IDS Environment Seminar, 14 November 1990.

² This has also emerged as an important theme in a related IDS research initiative on 'Food Security and the Environment'. See *IDS Bulletin* Volume 22 No 3.

or in rural situations. Chambers and Leach both refer to innovations in agriculture, trees and the use of different micro-environments which enable rural people simultaneously to maintain their livelihoods and reduce or avoid damage to the natural resource base. Mearns shows how Mongolian pastoralists use key resource patches in ways which enhance both the economic efficiency and sustainability of rangeland management. These innovations respond to livelihood concerns as much as to those we might consider environmental, re-emphasising the frequent inseparability of economic and 'environmental' problems from the perspective of those experiencing them.

References

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