

# End Piece: Challenges for Social Science Research

Melissa Leach and Robin Mearns

The articles in this *Bulletin* have covered a wide variety of issues related to environment and development, and have illustrated diverse perspectives, as well as common themes. This end piece looks forward from the *Bulletin* and the discussions which led up to it towards future directions for environment-related research and development. Currently, critical issues related to local livelihoods and poverty are being marginalised amidst the plethora of environmental change concerns. Outlining some reasons for this concern, we argue that local livelihoods and poverty alleviation must be the focus of attention. This poses a number of challenges for social science research.

The example of global climate change provides a useful entry point. Global warming is currently the focus of an impassioned international debate. Reports such as the recent study published by the World Resources Institute (WRI) emphasise that the accumulation of greenhouse gases in the earth's atmosphere is a shared global responsibility [World Resources Institute 1990]. Industrialised country efforts to reduce emissions would be to no avail if developing country emissions through projected increases in energy consumption and changes in land use continue to rise. Both developed and developing countries should thus be bound by the proposed international climate convention, currently in deliberation and intended to be ready for signature at the United Nations Conference on Environment and Development (UNCED) in 1992.

The Centre for Science and Environment (CSE) in India has recently judged this a case of environmental colonialism [Agarwal and Narain 1991]. CSE claims that developed countries, responsible for the vast proportion of accumulated greenhouse gas emissions, seek to perpetuate global inequalities in the use of the earth's environment and resources by blaming developing countries for their more rapidly increasing contribution to global warming. The WRI report has been accused of juggling figures, of failing to distinguish the third world's 'survival' emissions to maintain basic levels of energy services from industrial countries' 'luxury' emissions to run fleets of private cars, and of political not economic motivation. Industrial countries should not preach to the Third World until their own house is in order. The proposed climate convention could put serious brakes on the development of Third World countries by limiting

their ability to produce energy from fossil fuels and undertake some key agricultural and livestock developments which reduce forest cover and/or produce methane. Heated discussions within new non-governmental organisation networks, such as the Kenya-based Climate Network Africa [KCO 1991], indicate how far views in developing countries differ from northern industrial interests. Developing countries are highly concerned at their underrepresentation in global climate negotiations and the terms on which they might be asked to participate in systems of international ceilings, taxes or tradable permits.

Micro-level concerns within developing countries rarely find a voice in this debate, despite frequently-made observations that poor people in developing countries may experience the **consequences** of global warming especially severely, whether in zones at increasing risk from flooding, or from periods of drought leading to increased crop failure and livestock mortality. But the missing local dimensions extend further. Land degradation and deforestation, of global concern because of their carbon releases, are of more direct and immediate consequence to local livelihoods based on natural resources. The consequences of these processes are already highly visible and are perhaps more potentially damaging environment/development problems than most other forecast consequences of climate change, such as sea-level rise or increasing frequency of high magnitude weather events. Measures proposed to mitigate global warming, such as large-scale afforestation to fix carbon dioxide, will also directly affect local livelihoods, and for the worse if attempted without due regard for locally felt priorities. As Gerald Leach emphasised in his autumn seminar on global warming, land use strategies should aim primarily to improve the sustainability of rural livelihoods, and must involve local participation. However measures designed to reverse land degradation, improve soil quality and increase farm yields — such as agroforestry — can also have the effect of fixing large amounts of carbon in above-ground biomass and soils.<sup>1</sup>

The example of global warming illustrates several points. Firstly, global environmental change takes on

<sup>1</sup> Leach, G., 1990, 'The greenhouse effect and development priorities'. IDS Environment Seminar, 1 November.

a different character at different levels as well as in different places. Issues common to all levels may be relevant in quite different ways; for instance trees may be carbon fixers to global planners, but sources of critical food and soil-conserving products to rural people. Secondly, local environmental concerns encompass a range of issues which global problem definitions tend to marginalise. Thirdly, concern over sustainable livelihoods is severely under-represented in current international discussions. The same could be said for a host of other issues on the international environmental agenda. Discussions of biodiversity tend to focus on the loss of a global 'common heritage' rather than on the indigenous plant genetic resources which poor farmers already use in upgrading local crop varieties. International debates more often link the destruction of rainforests to losses of global biodiversity than to the socio-economic circumstances of the people living in and around them.

Questions of 'global environmental change' are dominating current research and policy discussions, as illustrated by the build-up to UNCED 1992. Global environmental issues such as climate change, ozone depletion and loss of biodiversity are obviously pressing concerns which justify major commitments to research and policy formulation. However, because of the danger of marginalising local issues, there is a strong case for orientating a substantial body of policy-oriented research effort towards local people's own perspectives on environmental change. In this, questions of poverty and sustainability must take centre stage, as the two articles in this *Bulletin* which discuss research agendas for the 1990s emphasise.

At the local level, environmental change is intimately entwined with people's livelihood concerns, and poverty alleviation must be the cornerstone of development policy. The main policy challenge is to identify environmentally sustainable approaches to poverty alleviation, especially as international agencies and governments feel increasingly compelled to reform their policies to reflect heightened environmental awareness. It is vital that such reforms do not compromise basic poverty alleviation goals, either by drawing attention away from them, by trading them off against environmental protection objectives, or by assuming on to poor people 'environmental' problems that they do not really have and then proposing cumbersome solutions to them. Yet poor people clearly do face new constraints on their activities as a result of environmental change, and poverty alleviation programmes will need to find ways of helping them to deal with these constraints on their own terms. This implies focusing research on linkages between poverty and environmental change, indirect as well as direct, and on the ways that local people themselves alter their natural resource management practices to cope with new pressures.

What methodological challenges do these concerns present? As the articles in this *Bulletin* have shown, a broad range of disciplines is relevant, and social science perspectives complement natural science approaches to local-level environmental change.

Environmental economics has provided analytical tools to assess environment and development issues. Usually grounded within a neoclassical framework, such an approach makes bold claims to provide solutions to environment/development conflicts within a market system which 'correctly' values (internalises) the environmental externalities of production and consumption decisions. However, the foundations of this method rest on rational 'consumer' choice; there is no guarantee either that this exists or that private choices will reflect the long run social opportunity cost of environmental degradation.

Furthermore, different individuals and social groups value resources and natural resource depletion in different ways. Full attention must be paid to the political economy within which natural resources are managed and used, and through which people experience environmental degradation. Questions of 'who gains and who loses' are central to issues of environmental change. Analysis of institutional arrangements focuses attention on the causes and consequences of uneven distribution of costs, benefits and control over decision making. It also highlights the relationships between different types of individual and collective action important in resource management, and critical disjunctions between people's interests and their capacities to act. As the articles by Leach, Swift and Mearns in this volume show, such resource management issues are almost invariably part of wider sets of social and political relations. Analytical attention must be paid to these and the ways they change as resource conditions alter, whether the focus is gender relations in rural households, or institutions which manage 'common property' resources. Over the last decade or two, studies of poverty, rural institutions, and political economy in 'non-environmental' contexts have greatly advanced our analytical concepts and insights. It is vital that these are applied within the current round of environmental concern, rather than let environmental preoccupations render debates about rural change narrower and shallower.

Considering environment and development from the viewpoint of people's own perceptions and priorities means appreciating how far rural people's views differ from global perspectives or those of government officials or northern aid agencies. It also means taking account of diversity within rural populations, such as between women and men, people with different levels of wealth, and different livelihood groups (e.g. farmers and pastoralists). Diverse priorities and values often

relate to 'practical' questions of resource distribution. But there are frequently conceptual gaps between different social groups' perceptions of 'environmental problems', relating to the different socio-cultural and historical frameworks within which values are formed. Local people may interpret, say, the role of forests in society or the relationship between soil degradation and the power of chiefs or ancestors in very different ways from 'outsiders'. Rural people also debate environmental changes amongst themselves, although the idioms used — often including religion and ritual — may be unfamiliar to development specialists. Such conceptual gaps need to be bridged, as engaging with local terms of debate is often crucial for proposed policy initiatives to appear credible and foster local involvement. Incorporating cultural understandings of the environment into development work in a meaningful way is a difficult but central challenge.

To capture diverse influences on and diverse experiences of environmental problems, a case-by case approach will often be needed. Such cases could investigate relationships between poverty and natural resource degradation in as diverse a range of circumstances as possible, disaggregating by different types of poverty and types of environment. But this is a starting point, not an end point, of analysis. By building up from individual cases strong causal propositions and regularities will often emerge, although these may be very different from the starting hypotheses of a more deductive approach. Outcomes of analyses which set resource management issues in their wider social context may include unexpected coalitions of interest between particular groups of people who share vulnerabilities to particular forms of environmental degradation, or unforeseen management possibilities, building on alliances of interest between local institutions.

Capturing diverse linkages requires a similarly broad range of field research methods. Qualitative methods

are a vital complement to more quantitative analyses. The interdisciplinary problem-solving approach characteristic of development studies offers some important advantages for understanding processes of environmental change and formulating policy responses. However more innovative methods such as participatory rural appraisal, as discussed by Chambers in this *Bulletin*, are proving useful for illuminating certain issues.

Ongoing, effective policy formulation to address sustainable livelihood concerns needs to be coupled to active efforts to understand local resource management processes and their changes. Participatory rural appraisal illustrates some of the many advantages of conducting this research in partnership with local people. Building and strengthening partnerships between northern and southern institutions is also vital if environmental research is not to become intellectual colonialism.

In short, the current international interest in environmental change less creates a new social science research agenda, than gives longstanding rural research concerns heightened relevance. The key challenge is to build on, and apply these to appropriate new contexts.

#### References

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