

IDS Bulletin

Transforming Development Knowledge

ARCHIVE COLLECTION

Volume 49 | Number 1A | April 2018

INCLUSIVE PEACE AND SECURITY

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This article has been reissued as part of *IDS Bulletin* Archive Collection Vol. 49 No. 1A April 2018: 'Inclusive Peace and Security'; the Introduction is also recommended reading.

Globalism Versus Villagism: Food Security and Environment at National and International Levels¹

Susanna Davies and Melissa Leach

Introduction

Perceptions of the trade-offs between the pursuit of food security and environmental protection at the household or village level differ widely from those at national and global levels. Many poor rural producers exploit natural resources to achieve food security, and they do not distinguish between environmental and food security objectives. Their livelihood strategies are characterised by a continuous process of balancing immediate and longer-term needs. In stark contrast, at higher levels, institutional, political and economic distinctions are made between food security and environmental protection. Policy and planning options to integrate what are seen to be conflicting objectives are elusive. This paper examines how the globalist perspective has come about; looks at some of the ways in which it operates; explores how it might be brought closer to a villagist approach and the problems associated with bridging the gap.

Where a convergence of food security and environmental interests exists, it has come about through a focus on vulnerable groups and their access to food, and the realisation that conservation cannot be achieved by ignoring the people who are dependent on natural resources for their livelihoods. But links between the environment and food security occur at national and international levels, as well as at local ones. Moreover, interactions **between** levels are of crucial importance to the overall picture.

Current debates tend to deflect attention from these linkages, although they have been examined in the context of sustainable agriculture by Conway and Barbier [1990]. The environmental problems which poor people face, and the conflicts which arise from disputes about control over natural resources, are almost invariably highly localised. Conversely, the burgeoning international environmental agenda is dominated by concern with 'global environmental change'. Issues such as climatic change, tropical deforestation, biodiversity and transboundary pollution are discussed in terms which have little direct bearing on local livelihoods. This gap between 'globalism' and 'villagism' on environmental policy

agendas risks ignoring crucial trade-offs with food security objectives.

At the global level, food security and environmental concerns are experienced quite differently by north and south. Not surprisingly, global discussions of the two issues are couched in contrasting terms. Food insecurity is overwhelmingly a problem of poor nations and an issue with which developed countries are rarely directly concerned. North/south relations tend to be characterised by dependence of the south on the north for food aid and other resources, often in emergencies, and by northern instruction and policy prescription. In contrast, global environmental concerns are often discussed in terms of interdependence and the need for north/south cooperation to resolve common threats [WCED 1987]. In extreme cases, such as the much vaunted destruction of Brazilian rain forests, the north experiences dependence on the south for its survival [Myers 1984], in ways that are ironically reminiscent of the Latin American dependency theorists [see Frank 1969].

Nevertheless, the imposition of northern agendas dominates north/south environmental relations. The sense of dependence, coupled with increasing resources being made available within aid budgets to protect the environment, has stimulated a re-emergence of policies of what Adams [1990] has called 'ecological managerialism' imposed on developing countries. A characteristic of this approach is putting environmental concerns above people. And since food insecurity is not an issue which directly affects the populations of the north, except in extreme circumstances of war or natural disasters, environmentalists' concerns do not need to take account of people's food security.

This article first discusses these separate approaches to food security and environmental protection in recent historical context. While contemporary local level approaches now recognise that the concerns are shared, separatism still characterises national and international policy agendas. Some linkages between food security and the environment at international and national levels are then examined, showing that the agendas and needs are quite different from those at local level. The gap between vulnerability to food insecurity or environmental degradation and the responsibility to decide policy, characterises north/

¹ This article is based on a longer paper, Davies, S., Leach, M. and David, R., 1991, 'Food security and the environment: conflict or complementarity?' *IDS Discussion Paper No. 285*, IDS, Brighton.

south relations as well as those between government and vulnerable groups within developing countries. At the national level, resource, timing and planning constraints often faced by developing country governments compound this problem. The resulting policy trade-offs are often made at the expense of local livelihood securities.

Parallel Planning and Policy-making

The rise and fall of environmental and food security concerns in the south has been something of an historical see-saw. It is only in recent years that they have shared a prominent position at the top of development agendas.

In the aftermath of the famines in 1972/73, the World Food Conference [in 1974] restated the case for greater food production. At more or less the same time [1972], the idea of 'sustainable development' was first adopted at the Stockholm Conference on Human Environment, in an attempt to combine the dual policy objectives of economic development and environmental conservation and/or regeneration. No explicit link was made between food security and the environment in either instance. Policy formulation has continued along parallel tracks since the early 1970s.

This process has been mirrored at the national level in developing countries, where much energy has been put into the elaboration of national food strategies, in an attempt to tackle the production, exchange and consumption dimensions of food insecurity in comprehensive national food plans [see e.g. Lipton and Heald 1984]. Little attention was paid to environmental issues in the elaboration of these documents. Many of the policy instruments promoted have few direct environmental consequences, particularly those which focus on storage, exchange and nutrition. But the central theme of needing to increase food production and to diversify exploitation of natural resources, often in increasingly marginal areas, clearly does have implications for the environment, which are not addressed. This failure to consider environmental issues has been borne out by a parallel planning exercise in the elaboration of national environmental plans. Equally, these rarely addressed food security issues directly.

The famines in Africa of the mid-1980s, triggered in part by successive years of drought, shifted food security planners' attention away from medium-term strategies towards short-term response. This took the form of emergency food aid. As a response to famine, international food aid (and the literature about it)² took no account of the environment at all. Indeed, for the recipient developing countries, there was no environmental impact. For the food aid donors

(principally the US and to a lesser extent, the EEC and Canada), environmental costs were neither acknowledged nor measured in this context.

Nevertheless, environmental concerns and policies returned to the development agenda after a post-colonial lull. The preoccupations of northern environmentalism were increasingly exported to the south, stimulated by the globalism which had gained ground since the 1964 International Biological Programme and 1970 Man and the Biosphere Programme. In the north, the search for solutions (either technical or fiscal) was informed by the perception of the polluter as someone who could either afford to pay (be taxed or fined) or switch to an alternative activity [Pearce *et al* 1989]. Transported to developing countries, the polluter pays philosophy found disquieting resonance with the view of rural people as taxable, excludable resource degraders which underlay the colonial legacy of preservationist environmental policies [Beinart 1989, Wilson 1989]. When the 'polluter' is always poor and hungry, this philosophy conflicts with the pursuit of individual food security.

Shared Concerns

Since the late 1980s, the idea that conservation (or regeneration) of the natural resource base is an essential prerequisite for future development of poor countries has gained currency [WCED 1987]. This has been informed to a large extent by the fact that since the mid-1970s, drought has been a major contributory factor to food insecurity and natural resource degradation [Downing *et al* 1989, Willhite *et al* 1987, Watts 1987]. From the food security side, the recurrence of famine in Africa in the 1970s and 1980s has lent impetus to attempts to look beyond crisis-driven food security towards longer-term policies which promote sustainable food production and which do not degrade the environment. Interestingly, there is greater pressure from northern governments on poor farmers in developing countries to pursue sustainable agriculture, than there is on northern farmers to do so.

On the environmental side, the mid-1980s saw growing acceptance of the costs of preservationist approaches to conservation for local people, and the emergence of new perspectives on the relationship between environmental protection and economic growth. The World Conservation Strategy [IUCN 1987] emphasised that environmental protection, if it was to succeed, had to take account of those people who depended directly on the environment for their livelihoods. The problem was no longer seen to be simply one of wilful degradation, but rather as one of degradation by subsistence. Shifts at the conceptual level have not, however, been pursued with much vigour on the ground.

² See, for example, Thomas *et al* 1989, for a review of the literature concerning food aid to sub-Saharan Africa.

The idea of 'sustainable development' gained wide currency with the publication of the report of the World Commission on Environment and Development [WCED 1987]. Though seemingly self-evident, the concept has proved ambiguous and controversial and has attracted much discussion [Chambers 1988, Redclift 1987].³ The 'sustainable development' debate has, however, engendered some partial re-evaluations within policy-influencing agencies. Within the conservation movement, organisations such as the International Union for the Conservation of Nature [IUCN] now claim to take account of the needs of local people. Yet as Adams [1990] points out, this is a modification, not a transformation, of historically-rooted environmentalist perspectives. At the planning level, conservation agencies still tend to favour northern environmental interests (e.g. in the preservation of rare bird species) over local needs, when they conflict.

There has been some reappraisal within international agencies such as the World Bank and FAO. Agencies and departments concerned with environment have tentatively begun to consider the poverty/food security angle, while those dealing with food security have been forced to address environmental concerns,⁴ and some linking initiatives have been established (for example the FAO/SIDA Forests, Trees and People Programme). However, these re-evaluations too often remain at the level of rhetoric rather than of practical application.

There have also been changes within those parts of the northern 'Green Movement' with a more explicitly political profile. Organisations such as Friends of the Earth and Greenpeace have begun to lobby on Third World environmental issues, both by addressing problems which are of major concern to developing countries (e.g. biomass fuel scarcities) and by pointing out differences in how northern and developing countries experience 'global commons' issues such as tropical deforestation. However, their campaigns rarely address the question of food security directly.

The concept of sustainable livelihood securities, which has emerged within the sustainable development debate, represents the most explicit attempt to link food security and environmental concerns. It focuses on local people's ability to act in an environmentally-sustainable way, and on removing the constraints which prevent them from taking the long-term view in conserving their resource base in which, it is argued, they have a vested interest for food security and other reasons [Chambers 1988]. This approach is, however, firmly grounded in local-level concerns; parallel concepts dealing with national and international level issues have not emerged. The concept of sustainable livelihood securities has been justifiably criticised for

failing to take account of the importance of the influence of the wider national and international political economy on local livelihood securities [Redclift 1987].

Differing Agendas and Needs

The International Level

Despite the fact that global environmental concerns are principally aired by certain northern industrial countries, it is developing countries which are likely to experience the dramatic effects of global environmental change most severely. In many instances, these effects will directly reduce their ability to produce food. Three areas of conflict and/or complementarity arising from global environmental problems and food security in developing countries illustrate the different concerns of north and south.

i Global Warming and Food Production

The case of global warming provides a good illustration of possible linkages between global environmental change and food security. Despite a lack of scientific understanding of precisely what it will mean for agricultural production and the distribution of costs and benefits between countries and geographical regions,⁵ productive capacities in some developing countries, already vulnerable to food insecurity, are likely to decline. Two examples illustrate possible effects.

Firstly, if temperatures rise by the projected two degrees (with concomitant declines in rainfall), many parts of the Sahel — already at the margin for millet cultivation — will no longer be able to produce food crops. Conversely, the wheat belt will move north, enabling higher production in temperate zones. There are, however, numerous complicating factors including: the unsuitability of some northern soils for cereal cultivation; greater variation between dry and rainy seasons in the Sahel; and changes in the movements of parasites harmful to crops [Monier 1990]. Secondly, if sea levels rise, low-lying countries such as Bangladesh, Egypt, Indonesia and Thailand are amongst those at risk of losing large areas of crop land.

Even if **global** food production increases as a result of global warming,⁶ the geographical distribution of production increases will be concentrated in developed countries and will not automatically compensate food insecure countries. This is because, firstly, the cost of imports will not necessarily decline as production rises if, for example, northern governments employ price

³ There is a growing literature on this subject: see, for example, IPCC, 1990. Parry *et al* 1988.

⁶ Some projections show an average increase in world production of 10 per cent for some crops [Monier 1990].

³ See also Adams, 1990, Bartelmus, 1986, Dixon and Fallon, 1989.

⁴ See WFC, 1988a, 1988b, Jagannathan, 1989.

support policies or if adapting to new conditions increases the costs of production. Secondly, if production of cash and food crops in developing countries also declines, their food deficits will increase, whilst the ability to pay for imports declines. Thirdly, technology developed in the north to deal with climatic change will not necessarily be relevant to the south and affected poor countries are unlikely to have independent technology developing capacities.

ii Trees for Food Exchanges?

There are converse arguments to be made regarding the penalisation of developing countries by the effects of global warming, particularly those which are custodians of the world's remaining tropical rainforests. Global warming could conceivably offer new opportunities for these countries to exploit natural comparative advantages, by producing carbon dioxide absorbing vegetation to reduce greenhouse gases. Replanting 700 million hectares of forest has been suggested to balance carbon emissions, coming mainly from the north [Marland 1988]. Such suggestions understandably anger Third World governments. Yet carbon-fixing could indirectly assist food security. 'Trees for food' exchanges between differently affected regions could be envisaged as a logical outcome of global warming.⁷ Although perhaps appealing at the level of global abstraction, the distributional problems arising from this — admittedly hypothetical — scenario are enormous, particularly for national governments in developing countries and their food insecure populations.

iii Environmentally-conscious Aid Flows

A principal influence of environmental concerns on food security in developing countries originates with the growing preoccupation of international aid agencies with environmental issues. Under pressure from their northern funders, they have attempted to 'green' their international image since the mid-1980s. In this respect, the lack of clarity about linkages between environmental protection measures and food security carries dangerous implications for developing countries. A major concern is that environmental objectives will be pursued with real costs to other international aid flows; notably those directed towards poverty alleviation and, by extension, improved food security, with negative effects at national and local levels.

Environmentally-inspired northern legislation may also alter the quantity and composition of aid flows to the south. As over-production and the development of new technologies have altered biotic resources,

increasing pressure is being put on northern governments to legislate against the intensive use of chemicals and fertilisers in agricultural production. This could prove to be a double-edged sword for developing nations. On the one hand, increasing production costs of imported staples could severely jeopardise national food security in developing countries which have become reliant on food imports from the north. On the other hand, agricultural exporting developing countries may be prevented from selling their produce to richer nations because they fail to reach environmentally acceptable standards [Runge and Nolan 1990].

The costs of improving environmental practices for global benefit tend to be accounted for in aggregate terms. Although it is increasingly realised that developing countries require some form of incentive or even compensation for reducing environmental degradation, the distribution of costs borne *within* those countries is rarely considered by global planners. This cannot be dismissed as a purely internal or national level problem: much of the decision-making about internal distribution of costs will be made on the basis of aid availability and donor/government negotiations about its use.

This situation is exacerbated by parallel planning and execution structures within the international agencies concerned. Typically, environmental programmes originate in environmental departments. Meanwhile, food security issues are discussed within agricultural, food policy and health departments. There is often remarkably little coordination between these departments and this, coupled with the fact that they work through different national ministries, inhibits consideration of the mutual implications of food and environmental policies.

The National Level

In seeking to pursue policies which protect the environment and which promote — or do not compromise — food security, national governments in developing countries face resource, planning and political constraints. Four aspects of the environmental and food security trade-offs which may be faced by such national governments are considered here.

i Cash Crops

The promotion of export crop production to fuel economic growth (of either the centre or the periphery) has been a central plank of economic policy in many developing countries since colonial times. Cash crops have been seen as a means of enhancing food security by exploiting natural comparative advantages: at a national level to earn foreign exchange, and at a household level, to produce a surplus for sale.

⁷ An environmentally-conscious coal burning power station in the United States recently tendered a 'carbon sequestration project' which was won by CARE to implement an agroforestry project in Guatemala, with a supposed range of (food security enhancing) benefits for the local population.

Cash crops are often argued to have a negative effect on food security by displacing food crops, exploiting scarce resources (fertile land, inputs, investment in agriculture) and perpetrating dependence on the north (e.g. when the terms of trade between cash crop exports and food crop imports decline). However criticisms of these arguments from a food security angle [see Maxwell and Fernando 1989] emphasise that it is not export crops *per se*, but the particular relations of production under which they are sometimes grown, that can undermine national and household food security.

Cash crops have also been criticised from an environmental point of view [Hines and Dinham 1984, Redclift 1989, Vanegas 1986]. There might therefore be trade-offs in terms of the depletion of the natural resource base for a government which pursues an export crop development policy, at least in part to assure food security. There is, however, a dearth of hard data to substantiate the overall environmental effects of cash crops and little consensus has been reached. Repetto [1988] and Barbier [1987], amongst others, argue that traditional export crops (e.g. oil palms, coffee, cocoa) tend to have, if anything, less deleterious effects than basic food crops (e.g. maize, sorghum, millet) because of their greater ground coverage. Again, it is important to consider not only the direct environmental effects of export crops, but also the policy contexts and relations under which they are grown. For example, if national strategies encourage men to grow cash crops so that women's seasonal food crops are marginalised on to easily erodible land, the (indirect) negative environmental consequences can be serious.

ii Green Conditionality

Both food security and environmental policies in many developing countries are dependent, in part at least, upon aid flows for their execution. This is particularly true of many of the most food insecure countries. National governments are forced to respond and adapt to changes in developed countries' objectives. Policy formulation will in turn be strongly influenced by changing attitudes towards aid. As environmental concerns become increasingly important determinants of aid expenditures, there may be serious consequences for the pursuit of food security. 'Green conditionality' could develop, manifesting itself in several forms. Firstly, it could emerge in the context of food production and development of rural areas more generally, placing — at its most extreme — environmental concerns above those of improved food security.

A second manifestation of green conditionality might be an overall decline in aid flows to all sectors in some countries. This could either be as a result of discriminating against developing country govern-

ments which do not pursue environmental protection policies, or by creating a two-tier aid beneficiary community. Countries which have what are perceived in global terms to be natural resources of key global significance (e.g. Brazil), might be rewarded for conservation, whereas those which do not (including many of the most food insecure countries) could be excluded from a tranche of the aid budget.

Thirdly, indirect green conditionality may arise if project aid flows are diverted away from food security (either at national or sub-national level), towards environmental spending. In an attempt to attract the international 'green dollar', implementing agencies at national level are already tempted to highlight the environmental components of their projects, and to use environmental concerns as the basis for project identification and impact evaluation. From here, it is a short step to projects which protect and conserve the environment at the expense of local people and their food security [cf. Greeley *infra.*].

iii Resource, Timing and Planning Constraints

Planning and other internal constraints to national governments' elaboration of national food security and environmental policies, and the (hidden) trade-offs implied, must be considered against this backdrop of a changing aid climate.

The disjuncture between food security and environmental planning amongst donors tends to be mirrored within developing country governments. Whereas attempts have been made to link other development concerns to good environmental behaviour — notably through 'debt for nature' swaps — food security and the environment tend not to be linked explicitly either by the donor community or by the beneficiary governments. The linkages tend, therefore, to be indirect consequences of wider policy initiatives or aims. Similarly, conflicts arising from pursuit of policies in one or other domain tend to be unforeseen or ignored.

Governments are rightly concerned with the long-term implications of natural resource degradation not just for the sake of food security, but also for development more generally. These concerns are reflected in all national environmental strategies or plans. But many developing country governments are unable to invest in the long-term when short-term priorities are themselves often constrained by insufficient resources. Short-term crisis management of food crises forces longer-term strategic food security planning off the agenda. In contrast, despite the language of environmentalists, most of the environmental problems identified are not of a crisis nature in the sense of requiring immediate attention (unlike famine). Environmental degradation rarely, for example, threatens to destabilise governments in the way that urban food riots can. The time

preferences of national governments forcibly and inevitably conspire against the pursuit of long-term environmental practices [WCED 1987] and make the pursuit of policies which seek to integrate food security and environmental concerns difficult to execute.

To compound the resource and timing constraints, many developing country governments are faced with weak planning capacities, which can only become more stressed by policies seeking to integrate environmental and food security concerns. The difficulties associated with integrated rural development projects, attempting a multi-sectoral approach, are well known. Equally, the problems of implementing national food security plans are manifold. Adding a further dimension to this planning process would involve fundamental institutional changes which are rarely taken into account, either on the food security or the environmental side. The problem is further exacerbated by the power of taxation vested in many Ministries of Natural Resources, which is unlikely to be yielded willingly.

iv Environmentalism as a Political Tool

For all the constraints facing developing country governments, the environment can also provide them with a useful justification for pursuing certain policy aims at the expense of others. For example, governments are under pressure to improve the food security of their people, but are often reluctant to adopt policies which genuinely target the poorest. The environmental dimension to rural development is a potentially useful tool in this process, not least because of its apparent political neutrality. A stated policy of environmental protection can provide the justification for pursuing a range of other objectives. An obvious example is the acquisition of revenue through the levy of fines for resource degradation. Others include forced resettlement, sedentarisation of nomadic groups, banning of open access to key resources or destruction of indigenous management systems on the basis that they do not comply with environmental aims. Donors are often unwitting partners in such processes.

At the extreme, pursuit of environmental objectives by national governments seeking to raise revenue extraction from rural areas may actually create the conditions under which environmental degradation increases. The more poor people are fined, taxed or made to divert labour from subsistence production towards protection of the environment, the more food insecure they will become, and the more they will need to degrade natural resources to survive. Although such vicious circles may be interpreted as the result of conspiracy by national governments, they are also almost inevitable 'accidental' consequences of separating environmental and food security objectives

at the planning level.

An associated problem is the tendency for many of the most food insecure nations to be weak states in the sense that they are vulnerable to internal threats to their exercise of power [Buzan 1991]. This threat often increases as food insecurity rises, most obviously in times of famine, but also if urban food prices rise or wages fall. The environmental conditionality which looms from the north takes no account of the potential political costs of conservation, particularly if it entails heightened food insecurity. Whereas strong states in the north (which tend, coincidentally, to be those setting environmental agendas) can focus on economic costings of environmental protection, for many food insecure developing countries, it may entail direct threats to the political *status quo*.

Conclusions

The importance of the linkages between food security and the environment at international and national levels lies not only in the policy trade-offs which may be made at these levels, but also in the interactions between them. Complying with international environmental agendas for tropical rain forest conservation may, for example, compromise national food security in a country heavily dependent on timber export revenues to purchase food imports. International and national level issues also interact with the local level. Government forestry policies aimed at preserving such timber reserves for future use (and meeting northern donors' conservation interests) can threaten local environmental sustainability and access to food by pushing food cropping and collection activities out of 'reserves' on to ecologically marginal land.

As well as these negative interactions, there is scope for policy interventions which improve food security and environmental sustainability at more than one level. For example, investments in rural areas which simultaneously enhance local access to food and increase food supply to urban areas are likely to be more attractive to governments than micro-level interventions with no national level spin-offs. Current research on ways of enhancing local environmental management practices which fix large amounts of carbon offers policy potential for exploiting the complementarity between local livelihood concerns and international concern about global warming.⁸

While the gap between globalism and villagism in food security and environmental debates persists, these interactions will be missed. The wider political economy which affects local livelihood concerns, hinted at in several of the case studies in this Bulletin, will remain unanalysed in terms of its relevance for policy trade-offs.

⁸ Leach, G. personal communication.

The problem-focused approach used in this article can help in the eventual identification of such trade-offs, but these can only infer policy guidelines. A clearer picture of causalities is needed to inform policy prescription. But until more research has been conducted, it is unlikely that incontrovertible causal links will be found to clarify the complementarities and conflicts under discussion.

There are already some local case studies which examine the trade-offs between food security on the one hand, and conservation of natural resources on the other⁹ and the papers in this Bulletin have contributed some interesting further examples. There is a much greater lack of research at national and international levels. The emergent recognition of the need to incorporate food security considerations into the pursuit of environmental objectives, in which respect the World Commission on Environment and Development [WCED 1987] is of note, is helping to fill this gap at a global level. Research on global environmental change may be beginning to pay more attention to food security concerns at all levels, although it is notable that 'sustainable livelihood securities' still have no voice in most discussions of international agendas.

At the national level, and additionally when considering links between national and other levels, there is remarkably little documentation. National governments in developing countries are in some senses caught between the pincers of local and national food insecurity and northern-defined environmental concerns, whilst at the same time recognising that for long-term development objectives to succeed, the natural resource base must be protected. Although most national environmental strategies stress the importance of conservation for overall sustainable development, precision about policies which protect the environment without compromising present food security needs is generally given little attention. The same could be said for national food plans and their treatment of environmental issues.

As yet, there is little indication that the trade-offs which will inevitably have to be made between long-term goals and short-term expediency are part of the national policy-making process, and little indication of emerging research which can inform them. This should be a priority, to complement our growing understanding of local level linkages between food security and the environment. In the meantime, existing evidence makes it clear that any complementarity between the objectives of food security and environmental protection will not just happen: it needs to be actively sought. If it is not, the potential for conflict is great.

⁹ Some of which are reviewed in David 1991.

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