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The Lie of the Land

Challenging Received Wisdom on the African Environment

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Desertification | Narratives, Winners & Losers

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Introduction

The story of 'desertification' can be read in several ways. In this chapter, I document the history of the concept, and argue that it has less to do with science than with the competing claims of different political and bureaucratic constituencies. 'Desertification' is perhaps the best example of a set of ideas about the environment that emerge in a situation of scientific uncertainty and then prove persistent in the face of gradually accumulating evidence that they are not well-founded. This 'stickiness' of ideas has important implications for policy.

Although the word 'desertification' has been widely used since the 1950s, an ill-defined, changing set of definitions has been used as shorthand for the concept, and hence the range of ecological and other processes included within its bounds has constantly shifted.[1] At the risk of adding to the confusion, in the rest of this paper I use the term 'desertification', without inverted commas, to mean the generally received wisdom that dryland environments are being rapidly degraded (reduced in long-term economic productivity) by a varying mix of natural and human factors. Because this is largely a narrative construct, I refer in places to this as the received desertification narrative, in Emery Roe's sense (Roe, 1991). As will be clear, I am sceptical about the narrative; the aim of this chapter however is not to show whether or not certain processes are happening (although I summarize recent evidence about this), but why a particular set of poorly researched ideas has been so influential, and why the received desertification narrative has persisted as a beacon to policy in the face of so much counter-evidence about its key premises. In doing so I ask the question as to who are the winners and losers from the received narrative, and whether a better counter-narrative is available.

[1] Glantz and Orlovsky (1983) review more than a hundred definitions of desertification; the number has certainly increased since.

time. Most of the evidence for ecological degradation derives from the last two decades, corresponding to a decline in the rainfall.

New realism

These data, the reservations of most dryland scientists about the received narrative of desertification, and a changed leadership at UNEP, have led in the last five years to a new realism about desertification, although two strands of thought – the one based on the old alarmism, the other linking dryland degradation much more closely to soil erosion and productivity variations due to the rainfall variations – now coexist uneasily. Desertification was debated at the Earth Summit in Rio, and chapter 12 of *Agenda 21* is devoted to it (UN, 1992). The analysis still uses some of the old figures about different categories of land loss, but gives climatic variation as a cause on an equal footing with human activities. Dryland populations and especially poverty are now central to the analysis and to the solutions. The measures proposed are closer to the ground, more modest, and admit considerable uncertainty. Improved information and understanding, better soil conservation and afforestation, a poverty focus and a search for alternative livelihoods, as well as drought preparedness, are among the recommended solutions, and there is a stress on participation and environmental education. The need for changes in national policy in order to provide a better enabling framework and incentives for the activities of herders and farmers is fully recognized.

Following *Agenda 21*, an international Convention to Combat Desertification was signed in 1994, with a stress on improving the livelihoods of dryland inhabitants. The presence of experienced researchers in the preparations for these negotiations, and the changing wider climate of opinion about desertification, has meant that the concepts enshrined in the new draft convention are far removed from the simplistic formulations of the received narrative.

There are few scientists or international administrators now who would defend the received narrative of desertification, although it lingers on in many government departments in dryland areas and some development agencies, and is often raised as a critical issue in project formulation in dry areas. A simple idea, adorned with powerful slogans, proves remarkably hard to change, even when shown to be patently inaccurate.

Desertification as development narrative

Two general points should be made about desertification before entering a wider discussion. First, an interest in understanding the received narrative about desertification does not imply a belief that there is no problem of land degradation in the drylands. On the contrary, it is

arguable that the received narrative about desertification has for many years stood in the way of more effective approaches to soil erosion and land degradation generally, by focusing attention on poorly defined problems and misguided solutions. There are potentially serious environmental problems in the drylands, especially soil erosion. The desertification debate has distracted attention from them, and one aim of understanding it better is to return attention to more urgent problems and more realistic solutions.

The second point is about historical relativity. It is certainly no accident that both periods of intense discussion about the encroaching Sahara started in or shortly after periods of drought. In West Africa, French concern about desertification started in the context of low rainfall in several years between 1905 and 1920, especially 1913, a major drought and famine year (Mortimore, 1989: 13). The surge of interest in desertification and the intense UN and other donor activity in the 1970s and 1980s started during perhaps the driest decades of this century. In such conditions, it was easy for civil servants, colonial administrators, foresters and journalists to assume that Africa was drying up. The whole desertification debate shows that it has been hard even for some researchers to distance themselves from the effects of a single year's rainfall. If cyclical variability in rainfall in the drylands now produces a period wetter than the last two decades, many of the obvious physical manifestations of desertification will disappear under an excellent grass cover and productive millet fields. It is important that concern for dryland environmental problems does not disappear with them.

However, a misreading of climatic variability is not enough to explain the tenacious hold of the received desertification narrative on the minds of politicians, civil servants, aid administrators and some scientists. The persistence of this narrative, in the face of considerable scientific scepticism from the start, and accumulating evidence to the contrary, requires some explanation. Clearly the narrative meets a need, and provides a useful discourse for someone. In the remainder of this chapter I argue that the received narrative of desertification provided a convenient point of convergence for the interests of three main constituencies: national governments in Africa, international aid bureaucracies, especially United Nations agencies and some major bilateral donors, and some groups of scientists.

National governments

National governments in Africa in the 1970s were searching for a justification to maintain their preeminent position in rural development, and to rescue an ideology, already failing at that time, of authoritarian intervention in rural land use. 'Desertification' was the crisis scenario they used to claim rights to stewardship over resources previously outside their control (cf. Roe, 1995).

The Stebbing controversy of the 1930s, with its roots in French

colonial botany of the previous decades, took place at a time when France, having recently completed the conquest of the Sahelian countries, was setting up and seeking to justify a large and highly centralized natural resource management bureaucracy on the French metropolitan model. The assumption that local herders and farmers had such inefficient systems of land use that they were destroying the land was, at the very least, a convenient one at such a moment. Periods of drought reinforced that perception for outside observers unused to the great inter-annual variability of the Sahelian climate. It is perhaps significant that it was in general soldiers, administrators and foresters (the most military of civil servants in the French system) who argued the desertification case most strongly, and geographers, geologists and other scientists who were most sceptical.

It seems likely that renewed alarmism about desertification in the 1970s owed something to the same factors. The governments of many African countries, recently independent, were recasting their bureaucracies at this time to give them more extensive and centralized powers over the administration of natural resources, and over the inhabitants of the drylands, especially the pastoralists who were seen as subversive of national unity. The droughts of the early 1970s, the worst since 1913, made the landscape look degraded enough for such claims to be plausible to many outsiders. Unwise speeches by senior international figures, about the threat desertification posed to the very existence of some African dryland countries, added to this legitimacy.

Desertification justified increasing control by natural resource bureaucracies, such as the planning, forest and wildlife or national parks services, over land, and those within and without such services who benefited by such arrangements were among the most vocal in support of national anti-desertification plans. The UNCOD Plan of Action made improved land-use planning central to its recommendations, and envisaged a large extension of control by central planners over rural land use. According to the Plan

> . . . a comprehensive land-use plan would assign all sections of the area to particular uses, such as crops, livestock, game ranching, forests, biosphere reserves, recreation . . . where planners determine that a section of land is critically endangered or has become unsuitable for human activities, they should propose a degree of protection, ranging from complete withdrawal to limited uses which promote natural recovery. This is particularly important in areas recently subject to severe degradation under the impact of human activities. (UNCOD, 1977a: 11–12)

There were little more than perfunctory nods in the direction of the logic of existing land uses, and local participation in planning.

Pastoralists came in for special blame. Although the UNCOD Plan of Action performed a delicate balancing act between those (mainly governments) who wished to settle pastoralists, and those who con-

sidered mobility an advantage in using extensive and variable rangelands, national plans to combat desertification generally took a simpler view: pastoralists were prime culprits in the 'tragedy of the commons', structurally unable to manage the land conservatively; their goats were especially damaging and they themselves lopped and felled trees indiscriminately; and their irrational attachment to livestock numbers and unwillingness to sell animals quickly led to overgrazing in the fragile marginal dry environments of the desert edge. This 'mainstream view' (Sandford, 1983) underlay most national plans about the rangelands and their extensive pastoral economies in the 1970s and 1980s, and to some extent still does. The desertification narrative provided governments with an internationally accepted excuse to be nasty about and to pastoralists.

In extreme cases, the desertification narrative, with its implicit threat to the survival of whole dryland economies, was used to justify politically authoritarian actions. Senior politicians sometimes found it convenient to invoke desertification in support of their activities. In 1984, President Kountche of Niger used the need 'to fight against the advancing Sahara' as the context in which he cracked down on merchants who stole food aid and to sack 30 traffic police. In 1985 he went further: calling on citizens to step up their fight against the advancing Sahara desert, he shelved plans to liberalize the domestic political system. 'We cannot talk politics on an empty stomach', he announced (Warren and Agnew, 1988).

Aid bureaucracies

The desertification narrative was also a useful justification for calls for increased aid flows. The need for increased funding for anti-desertification measures was a constant theme of governments, especially in Africa, during the 1970s, and when the UNCOD Plan of Action was not implemented, the blame was put on inadequate funding rather than inadequate ideas. In the 1970s, following the Stockholm Conference, environmental arguments began for the first time to make real progress in international negotiation, and Southern governments and international organizations were not slow to seize on them to argue for more aid.

For the aid agencies, desertification seemed in 1977 an ideal theme for their activities, since it was seen to lie largely outside the political arena (unlike poverty, land distribution or birth control, all raised during UNCOD, but sidelined because of their controversial nature), without powerful losers. As in the case of national governments, desertification provided a crisis narrative enabling aid agencies to assert rights as stakeholders in the drylands. The scale and nature of the perceived threat provided a perfect justification for large, technology-driven, international programmes of the sort large multilateral aid agencies thrive on and which were then becoming popular: the UNCOD Plan of Action included five huge international programmes of this sort,

which needed an international agency to manage them. They provided an excellent flagship programme for UNEP, a new UN agency struggling to find a niche.[10]

The famines of the early 1970s, which captured enormous attention in the media and in aid agency thinking, also contributed to this. The trouble was that famine had inconvenient political ramifications, and was regarded as a political minefield by donors. There was no major programme, no UN Plan of Action, to combat famine for this reason. Desertification, on the other hand, was seen as related but politically safe, and a lot of the feelings of guilt, and the energy and resources, of donors, were channelled into desertification as a surrogate for doing something about famine.

Scientists

For some scientists also, desertification provided a shot in the arm. In the 1970s, ecologists were just beginning to realize they could be involved in policy, and this seemed an ideal issue to ride, since it promoted the image of ecology as useful and not politically sensitive. The US range managers' view – that most African pastures have been degraded from the desirable climax vegetation by overgrazing – was supported by the desertification argument, and such people played a key role in USAID rural projects at that time. Remote sensing, in its infancy, could perhaps provide the answers, without too much need for difficult and lengthy ground work, and desertification provided a justification for large-scale funding for the development of remote sensing in Africa.[11]

Scientific research, especially social science involving lengthy fieldwork, was always seen as inconvenient by the proponents of desertification in government and aid agencies: too long, too detailed, too likely to come up with complex stories with no clear message. Even after the proper research began to appear, such as the Lund University Sudan data from the mid-1980s onwards, the main international organizations involved in desertification, like UNEP, ignored a counter-narrative they found inconvenient.

Conclusion: a counter-narrative?

To explain the desertification narrative in terms of the convergent interests of governments, aid agencies and scientists is not a form of

[10] In fact, none of these projects were funded, donors doubting UNEP's ability to manage them.

[11] One of the most important stimuli to the development of both remote sensing and the desertification debate in Africa was a satellite image during the 1971 drought in the Sahel of a square of green amid the sand; enquiry showed this was a fenced state ranch at Ikrafane in Niger, destocked early in the drought to provide grass for the President's cattle. On this basis, fenced ranches were widely promoted by the US aid community as the answer to both desertification and famine.

conspiracy theory; it is an attempt to explain policy outcomes which are otherwise baffling. The desertification story is a particularly interesting example of this because the received narrative persisted in the face of rapidly mounting scientific evidence that it was inaccurate, and that the policies it suggested did not deal effectively with dryland degradation. We may explain this by understanding who were the main winners from the received narrative, and what they won: a measure of legitimacy in making decisions over dryland resources. The fact that in general these decisions, when they were not irrelevant, were inefficient, and often quite harmful to sustainable dryland management, is beside the point. The narrative established the right of the winners – national governments, aid bureaucracies and some scientists – to participate in these decisions and to try to impose their view. In terms of institutional logic, these were important gains.

There were also a clear set of losers from this narrative, although they did not pack much of a punch: dryland farmers and herders, whose own control over resources was whittled away by central planning, land tenure reform, ranches and other good ideas from governments, the aid agencies and outside consultants.

It is the fate of development narratives to be replaced by counter-narratives which in their turn are replaced by counter-counter-narratives. In the case of the drylands, there is already the outline of a persuasive counter-narrative, more attuned to the concerns and strengths of the losers, more plausible, more participatory, based on better science, and more likely to result in better land management. This counter-narrative combines ideas about indigenous technical knowledge and customary institutions, including common property management rules; it points to recent studies showing the high productivity of extensive nomadic pastoralism, and the excellent adaptations farmers and herders in the drylands have made to the vagaries of dynamic, event-driven ecosystems.[12] Such a counter-narrative is a much more accurate and useful construct about what is happening in the drylands than the desertification narrative, and deserves to replace it. There are indeed many signs that this counter-narrative is taking over in the aid bureaucracies, although it has not yet got far with governments.

Such a new narrative is in part a serious attempt to engage with the views and experience of the herders and farmers who actually make the everyday decisions about land use. So far, the counter-narrative has largely been driven by researchers and by the increasing activism of dryland inhabitants. Researchers, who come out of the story of desertification with tattered banners, have a particular responsibility this time to get the science right and to ensure that the policy outcomes reflect a more just and efficient distribution of rights and responsibilities.

[112] See for example: Behnke *et al.* (1993), Scoones (1995), Sandford (1983), Swift (1988).