STOCKHOLM ENVIRONMENT INSTITUTE

Poverty and Vulnerability Programme
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Political ecology of vulnerability

Political ecology fuses the understanding of culture common in anthropology with the analysis of the political economy, and environment as a third dimension. Political ecology focuses on the social relations that shape resource management and poverty. Methods emphasize cross-scale analysis and narratives—the rich 'stories' of relationships between people and with their environments.

Introduction

Political ecology emerged during the 1970s as a method of fusing cultural ecology – anthropologists' empirical studies of local environmental practice – with cross-scale analysis of the political economy (Escobar 1999a). In other words political ecologists, at the outset, were interested in how national or global economic or legislative processes impacted upon local environmental practice, whilst at the same time challenging Malthusian ideas of overpopulation (Bryant 2001). The strength of this approach was that it offered scholars a way to make sense of the 'non-place-based' forces (such as the practices of transnational corporations) over 'place-based' activities such as agricultural production (Ibid.). The key issue was and remains the necessary analysis of interactions between actors and processes occurring at different spatial scales.

Over the past 35 years political ecology has evolved (in theory, although not in practice) from an inherently structuralist mode of class analysis involving 'chains of explanation' between the exploited poor in a given locality and the normally distant exploiters (Blaikie and Brookfield 1987) towards what has been described as 'progressive contextualisation' (Bryant 2001). This means two things: first, an acknowledgement that exploitation takes places as much at the sub-district or household level as it does at the global-local interface; second, an acknowledgement that different groups of people define knowledge, ecological relations, and resources in different ways and at different times. One of the primary objectives of post-structuralist political ecology is to examine discourse: in other words to interrogate received wisdom and established environmental and scientific 'truths'. It attends to how environmental knowledge is produced, represented and contested.

Its mode of analysis is inherently historical. Political ecologists examine differing narratives or story-lines (Adger et al. 2001, Hajer 1995) to flesh out the political strategies of differing stakeholders – for example how governments, multinationals, and environmentalists act when dealing with issues such as acid rain, ozone depletion or famine (Hajer 1995, Davis 2001, de Waal 1997, Litfin 1994). A discourse, then, is an area of language use expressing a particular standpoint and related to a certain set of institutions or epistemic communities (Forsyth 2002: 183) concerned with a limited range of objectives (Peet and Watts 1996: 14). In short, discourse is an articulation of knowledge and power (Escobar 1999b).

Defining political ecology

At the heart of political ecology lies the notion that politics should be 'put first' in the attempt to understand how human-environment interactions may be linked (Bryant 1998) p80. It positions people, places and practices in relation to broader processes of social and economic change at the local, global and intermediate scales (Jarosz 1996). Political ecology does not constitute a coherent theory but conforms to a specific mode of enquiry that identifies contextual sources of ecological change, questions of access, and political ramifications of environmental alteration. Important are the social origins of degradation, the plurality of perceptions and definitions of ecological problems (Peet and Watts 1996: 5).

Linking political ecology to vulnerability

It has been argued that vulnerability comes from a loss of resilience. Resilience is often weakened by external or non-place-based forces acting on the capacity of local communities to cope with the prospect or actuality of problems such as drought, crop failure or cash shortages. Such external forces might include the impact of structural adjustment policies, the impact of conflict, the impact of commodity price fluctuations, the impact of tariff or trade policies, or the impact of global environmental change. The aim of political ecology is to contextualize vulnerability at the local scale with any external or local pressures or drivers that may have an influence on, for example, access to nutritious and affordable food or viable seed.

Important also are ‘time-series’ data sets to generate a picture of how vulnerability increases or decreases over time. Political ecology, with its deeply historical mode of analysis, is able to inform on the genealogy of narratives concerning the environment, identifying power relationships supported by such narratives (Stott and Sullivan 2000: 2)

As Michael Watts (2000: 164) has argued: “Political ecology has the great merit of focusing on the social relations that shape practice, and in its sympathy with the poor and exploited it addresses the plight of the vulnerable: both their abilities and their constraints.” Political ecology, moving on a from a purely structuralist approach to various aspects of vulnerability, has begun to consider carefully both resilience and adaptive capacity as part of the whole schema of *differential* vulnerability to natural hazards, risk and environmental change within which we are all implicated.

Method of analysis: case studies.

I will discuss four case studies that will provide some indication of how political ecologists analyse socio-ecological relationships: i) Piers Blaikie’s (1985,1987) work on land management processes as well as wider social and economic constraints that have contributed to soil erosion in Africa; ii) Jack Kloppenburg’s (1988) work on the cultural and economic factors that have shaped the development of hybrid corn and biotechnology in the United States; iii) Karen Litfin’s (1994,1995) work on the political and social background to the ozone debate; and iv) Mike Davis’s (2001) work on colonial practices in India that were an important causal factor of the late-nineteenth century famines, or at least of their severity.

i) Soil erosion in Third World countries was seen in the conventional (colonial) view as an environmental problem caused by irrational (peasant) land uses and overpopulation, with the solution found in involving peasants in market (capitalist) economies. Blaikie criticises this position. Blaikie’s method is a scalar approach that begins with the smallest decision-making unit - the household. The household is immersed in two kinds of social relations: local relations of production and exchange relations with the world market. In both spheres, "surplus is extracted from cultivators who then in turn are forced to extract 'surpluses' ... from the environment .... and this in time and under certain physical circumstances leads to degradation and/or erosion" (Blaikie 1985: 124). For Blaikie underdevelopment rather than 'peasant ignorance' lies at the heart of what is better phrased as a poverty-nature syndrome. To demonstrate his hypothesis, Blaikie relies heavily on linkages between one scale of analysis and another: "Frequently a comprehensive enquiry into land management will require an approach which employs a nested set of scales: local and site-specific where individuals and small groups make the relevant decisions; the regional scale involving more generalized patterns of physiographic variation, types of land use, and property relations and settlement history; the national scale in which the particular form of class relations give the economic, political and administrative context for land-management decisions; and the international scale, which, in the most general manner, involves almost every element in the world economy, particularly through the commoditization of land, labour and agricultural production" (Blaikie and Brookfield 1987: 68).

ii) Kloppenburg’s work considers the broad social implications of evolution of hybrid corn and plant biotechnology in the United States. Kloppenburg traces the historical transformation

of the seed from a public good produced and reproduced by farmers into a commodity that is a mechanism for the accumulation and reproduction of capital (Kloppenburg 1988). Considered are the 48 years of plant breeding history following the development of hybrid maize in 1935. Kloppenburg asks the following questions: Can such yield increases have been achieved without a complex constellation of far-reaching socio-economic changes rippling throughout the agricultural sector? Is yield increase the only objective to which agricultural plant sciences should be directed? What realities are masked by the language of "success" and the prevailing ideology of the language of plant breeding? In other words Kloppenburg investigates both the broader socio-economic context of seed development, together with the triumphalist discourse of plant biotechnology, to reveal that behind the apparent success of new seed technology lies considerable social upheaval, such as mass-urbanization and a radical redistribution of the economic benefits of farming.

iii) Litfin's study (1994, 1995) investigates the corporate, state and environmentalist reactions to the proposed ban (that became instrumental in the 1987 Montreal Protocol) on CFCs once it was discovered that CFC and other halons were linked to ozone depletion. Through her research, which draws much from Rachel Carson's seminal work on the proposed banning of DDT (Carson 1962), Litfin argues that scientific 'truth' is far from value-neutral, but invariably linked to stakeholder interests. In this case the interests of governments – especially France and UK- in retaining chemical production at a time of high unemployment. Analysed also are the interests of chemical multinationals in retaining market leadership both in CFCs and alternatives such as HCFCs and their later struggles to prevent the proscription of methyl chloroform and carbon tetrachloride (Litfin 1994: 141).

iv) Davis's whole project, entitled 'Late Victorian Holocausts', uses the 'chains of explanation' approach to investigate the political and economic background to late-nineteenth century famines in India, Brazil and Morocco. I will discuss the Indian case studies which draw much from Amartya Sen's seminal account of twentienth century famine in India and Bangladesh (Sen 1981). The conclusions are also broadly similar: that famine in India in the late 1880s had little to do with shortages of food *per se*, but with the failure of Lord Lytton, the incumbent administrator, to stockpile grain or to interfere with grain market price fluctuations at a time (1877-78) when merchants preferred to export a record of 6.4 million hundredweight of wheat to Europe rather than relieve starvation in India (Davis 2001: 31). Davis fleshes out the contrasting story-lines of the colonial administrators in their attempts to deny the existence of widespread famine with those of teachers, doctors and missionaries who sought to bring evidence of the 'late Victorian holocausts' to the wider public.

What remains common to all case study methods employed by political ecologists is the ubiquity of <u>cross-scale analysis</u> and the <u>emphasis on narrative</u>, rather than descriptive, modes of explanation. However, it can be seen that the 'chains of explanation' approach has not been neatly replaced by discourse analysis as some have suggested. Rather, both methods remain in the analyst's 'toolbox'. What has changed in contemporary practice is the move, as stated previously, towards "progressive contextualization" where there is an acknowledgement that exploitation takes place as much at the sub-district or household level as it does at the global-local or local-national interface; and where there is an acknowledgement that different groups of people define knowledge, ecological relations, and resources in different ways and at different times. Methodologies designed to tease out socio-ecological linkages must seek to engage with this level of complexity.

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Other relevant briefing notes

- Vulnerability, global environmental change and food systems (overview of vulnerability concepts)
- Vulnerability assessment and mapping (use of indicators)
- Resilience and vulnerability
- Vulnerability toolkit (overview of range of tools for vulnerability assessment)
- Agent based modeling of vulnerable food systems
- Choosing methodology

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