

## **GEOGRAPHY 6402 Spring 1998**

Mondays, 3.30-6.20 p.m.

### **Comparative Environmental Studies: The cultural and political ecology of marginal environments**

Department of Geography, University of Colorado, Boulder, Spring 1998

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### **Class Theme and Purpose**

A concern for the relationship between nature and society has been one of the pillars of geographic inquiry, and has also been an important bridge between geography and other disciplines, in particular anthropology. By the 1960s this area of inquiry was referred to variously as "human ecology" or "cultural ecology". Over the last decade certain forms of inquiry within this tradition have increasingly referred to themselves as "political ecology."

Much (though not all) of the empirical work within these two traditions has been conducted in social and physical environments that might in some sense be called "marginal." They have been areas of environmental fragility, aridity and resource constraint; areas of socio-economic poverty; regions of indigenous populations and local communities confronting rapid modernization and commodification, etc. Work in these environments has been concerned to understand the main forces determining how resources are used, the strategies that people use to manage those resources, and (in those bodies of work that have also had a development focus) the possibilities for finding alternative resource management strategies to address, variously, problems of poverty, environment or (less so) growth.

The first purpose of this seminar is firstly to review these bodies of writing and a number of the critical themes that they have raised in order to build frameworks that allow (i) a more complete understanding of the nature of marginal environments; and (ii) comparisons of causative processes and relationships across those environments. In particular we will look at: frameworks for the comparative analysis of nature-society relationships across different environments; notions of environment, ecology and history within cultural ecology (and more recent reflections on those themes); explanatory frameworks within political ecology; the use of the concept of human agency at household and organized levels; the implications of

new frameworks in ecology; and the ways in which these changing frameworks of analysis have also led to a rethinking of environmental history - a rethinking which in turn has profound implications for contemporary understandings of the environment and the links between environment and development.

These themes are related a rethinking of the Environment and Behavior (E&B) Program within the Universities' [Institute of Behavioral Science](#) (an E&B web page is 'in press'). For the week of February 2nd, the seminar will take advantage of the visit to the E&B program of [Professor Billie Lee Turner](#), Director of the George Perkins Marsh Institute at Clark University, and will join an E&B programmatic discussion about interdisciplinary and comparative frameworks for analyzing marginal environments.

The second purpose of the seminar is to take these frameworks to the level of two separate regions where the course convenors conduct their fieldwork: namely the Andes and Sahelian West Africa. This will allow both an interrogation of nature-society relations in those regions and also a critical examination of the frameworks themselves.

In these different senses, the seminar is very much a research seminar. It is perhaps especially appropriate for graduate students intending to do comprehensive examinations (doctoral examinations) in cultural and political ecology, or - though less so - in either Latin America or Africa. Because of the research nature of this seminar, participants are encouraged to prepare papers directly related to the theoretical and/or empirical themes in their own areas of research. For those of you outside the seminar, we welcome comments on the readings and themes therein.

## Linked activities

The course convenors have also attempted to link the class to activities related to this year's [Annual meetings of the Association of American Geographers at Boston, March 24-28th](#).

Participation in these activities is not essential for the class, but we hope will enrich the experience for students. The first is a joint student conference on the 23-24th of March at [Clark University](#), in [Worcester Mass](#), where Clark and Boulder graduates working on Nature-Society issues will meet to discuss their work, their frameworks of analysis and their views on the field. The second is a [double session at those meetings arranged by the convenors](#) on Environmental Histories and Access to Resources in Africa and Latin America which will address many of the issues raised in the course, and allow students to see other researchers' perspectives on frameworks of analysis.

## Course requirements

Students will be assessed in three areas: their participation in class (including paper presentation and pre-class comments); a proposal and initial review of literature for their longer research paper (due February 2nd); and a final research paper that should be of near publishable quality (due May 6th). By the Sunday before each class, students should submit by email to all the group a one page comment on the readings.

Grades will be determined as follows:

- Class participation: 35%
- Background note on dimensions of marginality: 15%
- Final Research Paper: 50%

## Readings:

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**Core Text** (in bookshop): [Peet R.](#) and M.Watts 1996. *Liberation Ecologies: environment, development, social movements*. London: Routledge. Reviewed by Simon [here](#)

Recommended: Special issue of the *Geographical Journal*, 163(2), July 1997. Reprint available for \$5 including postage from the Royal Geographical Society (email Gwen Lowman, editor: [g.lowman@rgs.org](mailto:g.lowman@rgs.org)) There are only 50 copies left! Also check the [related conference website](#) and [review of the conference](#)

Check the Cultural Ecology Newsletter of the Association of American Geographers (<http://www.cwu.edu/~geograph/cult.html>)

Check also the [Anthropology and the Environment](#) Section of the American Anthropological Association, with its many links, and the Society for Applied Anthropology's [Environmental Anthropology Project](#). There is no single journal for cultural and political ecology. Practitioners publish in many places. The [Journal of Human Ecology](#) comes close to being a cultural ecology journal (although few geographers publish here), and the web [Journal of Political Ecology](#) is worth consulting.

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**Week 1:** Introductions.

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**Week 2:** Informal meeting to discuss students' research frameworks.

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**Week 3:** Frameworks for comparative analysis of nature-society relationships in marginal environments

Batterbury, S. Forsyth, T and Thomson, K. 1997 "Environmental transformations in developing countries: hybrid research and democratic policy" *Geographical Journal* 163(2): 126-132.

Leach, Melissa, Robin Mearns and Ian Scoones. 1997. *Environmental entitlements: a conceptual framework for understanding the institutional dynamics of environmental change*. IDS Discussion Paper, 359. Brighton: Institute of Development Studies. (Text is on internet: <http://www.ids.ac.uk/eldis/envids/dp/overview.html>). The IDS Environment Group's [programmatic statement](#) is also of interest, although it has been temporarily withdrawn from the Web. See also [Simon's review of the conference on environmental entitlements](#).

Kasperson, J., R. Kasperson and B.Turner (eds.). *Regions at Risk: comparisons of threatened environments*. Tokyo. United Nations University. (chapters 1 and 11).

Peet, R. and Watts, M. Watts, 1996 "Liberation Ecology" pp. 1-45 in R.Peet and M.Watts 1996 *Liberation Ecologies: environment, development, social movements*. London. Routledge.

Turner B.L and Benjamin, P. 1994 "Fragile lands: identification and use for agriculture" in V Ruttan (ed.) 1994 *Agriculture, Environment and Health: sustainable development in the 21st century*. Minneapolis. Univ. of Minnesota Press.

Vayda, Andrew P. 1983. *Progressive contextualization: methods and research in human ecology*. *Human Ecology*, 11(3):265-281.

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**Week 4:** Comparing marginal environments: critiquing a proposal (meeting with the E&B program and [Professor B.L.Turner](#))

E&B. 1997. *Sustainable livelihoods and globalization: policy options for marginal environments*. Mimeo. University of Colorado, Environment and Behavior Program.

Each others' background note on dimensions of marginality in students selected research environment.

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## Week 5 Ecology, cultural ecology

There is a handout entitled [Cultural Ecology and its critics](#) by Simon. See also [Benjamin Orlove's class on cultural ecology at UC-Davis](#) (Orlove makes use of Julian Steward's anthropological framework, and there are many useful notes and handouts here).

Barrows, Harlan 1923. Geography as human ecology. *Annals, Association of American Geographers*, XIII(1): 1-14.

Butzer, Karl W. 1989. "Cultural ecology." pp. 192-208 in Gary L. Gaile and Cort J. Willmott (eds.), *Geography in America*. Columbus: Merrill Publishing Co.

[Ellen, R.](#) 1982 *Environment, subsistence and system: the ecology of small scale social formations*. Cambridge, CUP. (Chapters 3, 4, 6, 7, 8)

Headland, T. 1997 "Revisionism in ecological anthropology" *Current Anthropology* 38(4): 605-630.

Sauer, Carl O. 1981[1956] *The agency of man on earth*. pp. 330-363 in Carl O. Sauer, *Selected Essays 1963-1975*. Berkeley: Turtle Island Press.

Turner, B.L. 1989. "The specialist-synthesis approach to the revival of geography: the case of cultural ecology." *Annals of the Association of American Geographers*, 79(1):88-100.

Turner, B.L 1997 *Spirals, bridges and tunnels: engaging human-environment perspectives in geography?* *Ecumene* vol 4 (2): 196-217

[Zimmerer, Karl S.](#) 1994. "Human geography and the "new ecology": the prospect and promise of integration." *Annals of the Association of American Geographers*, 84(1):108-125

See also a useful summary in Milton, K. 1996. *Environmentalism & Cultural Theory*. London: Routledge. (chapter 2 - Culture & Ecology).

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## Week 6 Frameworks in political ecology

Political ecology may be defined as a broad, ecological politics: a politics of the environment. Geographers working in developing countries began by using the term in a rather more narrow sense: "regional" political ecology dates back to the work of Piers Blaikie in the 1980s. RPE provides explanations for environmental problems using "nested" analytical scales. It also emphasizes struggle and resistance, access to resources, and commodification processes. In the mid 1990s, "regional" political ecology began to be criticized for its inattention to complex political processes, particularly by [Peet & Watts](#), and most recently by Middleton & O'Keefe. Bryant's work, developed from the UK, also stresses political processes as vital for understanding environmental problems and their resolution. His work is somewhat at odds with the post-structuralist critique presented by Peet and Watts (Peet & Watts combine Marxism with much on the 'social construction' of the environment; Bryant merely identifies political 'actors' of different types). A "preliminary" bibliography of political ecology is given [here](#).

[Handout on political ecology by Ben Orlove \(see syllabus wk.22\)](#)

[Blaikie, P.](#) and [Brookfield, H.](#) 1987 *Land Degradation and Society*. Oxford. MacMillan. (chapter 1)

[Bryant RL](#) & Bailey S. 1997 *Third world political ecology*. London. Routledge. (Intro., Chaps 1, 2 and Conclusion)

Bryant, R.L. 1997. Beyond the Impasse: the power of political ecology in third world environmental research. *Area* 29:1-15

Blaikie P. 1996. Understanding Environmental Issues. Pp. 1-30 In Stocking M. & S. Morse People and Environment. London: UCL Press.

Durham, W. 1995 "Political Ecology and Environmental Destruction in Latin America" pp. 249-264 pp. In The Social Causes of Tropical Deforestation in Latin America. Ann Arbor. University of Michigan Press.

Escobar, A. 1996 "Constructing Nature" pp. 46-68 in R.Peet and M.Watts Liberation Ecologies: environment, development, social movements. London. Routledge.

Greenberg JB & Park TK. 1994. Political Ecology. Journal of Political Ecology (internet : <http://dizzy.library.arizona.edu/ej/jpe/>)

Grossman, Larry 1981. The cultural ecology of economic development. Annals of the Association of American Geographers, 71(2):220-236.

Middleton, N & O'Keefe, P. 1998. Disaster and Development: the Politics of Humanitarian Aid. London: Pluto Press. (chapter 1).

Peet, R. and Watts, M. Watts, 1996 "Conclusion" pp. 260-269 in R.Peet and M.Watts 1996 Liberation Ecologies: environment, development, social movements. London. Routledge.

[Rocheleau D](#), Thomas-Slayter B, Wangari E (eds.) 1996 Feminist Political Ecology. Routledge. (Intro. and Conclusion).

### **Week 7:** Agency, adaptation: households, individuals and possibilities

Human adaptation to environmental, social, and technological constraints formed part of Julian Steward's initial formulation of cultural ecology back in the 1950s, and can also be seen in work on natural hazards (eg. Kates). If we see humans as adaptive, conscious and proactive (rather than as powerless victims of circumstance), then a richer consideration of adaptation (which is itself a problematic concept) leads us to consider humans as 'agents'. This notion appealed to the great cultural ecologists like Robert Netting, and Paul Richards, who vigorously championed the abilities of small-scale traditional farmers to overcome constraint and to seek out opportunities.

Bennett, John W. 1969. Northern Plainsmen: Adaptive Strategy and Agrarian Life. Chicago: Aldine.

[Carney J](#) 1996 "Converting the wetlands, engendering the environment" pp. 165-187 in R.Peet and M.Watts 1996 Liberation Ecologies: environment, development, social movements. London. Routledge.

Denevan, William M. 1983. Adaptation, variation, and cultural geography. Professional Geographer, 35:399-407.

Kates, Robert W. 1971. Natural hazards in human ecological perspective: hypotheses and models. Economic Geography

*read with*

Hyden, G., Kates, R. and Turner, B.L. 1993 "Beyond intensification" in Turner, B.L., Kates, R. and Hyden, G. (eds.) 1993 Population Growth and agricultural intensification: studies from the densely settled areas of Africa. Gainesville. University of Florida Press

Long, Norman 1992. "From paradigm lost to paradigm regained? The case for an actor oriented sociology of development" in Long N. and A. Long (eds.), Battlefields of Knowledge: The Interlocking of Theory and Practice in Social Research and Development. London: Routledge.

Netting, Robert 1993. *Smallholders, Householders: Farm Families and the Ecology of Intensive, Sustainable Agriculture*. Stanford: Stanford University Press.

Richards, P. 1985. *Indigenous Agricultural Revolution: Food and Ecology in West Africa*. London: Hutchinson.

[Watts, M.](#) 1983 "On the poverty of theory: natural hazards research in context" pp. 231-262 In K.Hewitt (ed.) *Interpretations of Calamity*. Boston. Allen and Unwin.

## **Week 8: Agency, adaptation: collectivities and constraints**

This week looks at constraints on adaptation and human agency, and at institutional formations.

Bebbington, Anthony J. 1994. Theory and relevance in indigenous agriculture: knowledge, agency and organization. pp. 202-225 in David Booth (ed.), *Rethinking Social Development: Theory, Research and Practice*. Essex: Longman Scientific and Technical.

Bryant, R. and S. Bailey 1997 "Grassroots actors" chapter 7 in Bryant RL & Bailey S. 1997 *Third world political ecology*. London. Routledge.

[Ellen, R.](#) 1982 *Environment, subsistence and system: the ecology of small scale social formations*. Cambridge, CUP. (Chapters 10 and 11)

Ellen, R & Fukui, K (eds.) 1996. *Redefining Nature: Ecology, Culture & Domestication*. Oxford: Berg. (Selected chapters, including [this one](#) I think (?) or [some here](#)?)

Moore, D. 1996 "Marxism, culture and political ecology" pp. 125-147 in R.Peet and M.Watts 1996 *Liberation Ecologies: environment, development, social movements*. London. Routledge.

Rangan, H. 1996 "From Chipko to Uttaranchal" pp. 205-227 in R.Peet and M.Watts 1996 *Liberation Ecologies: environment, development, social movements*. London. Routledge.

[Thompson, M.](#) 1997. Security and solidarity: an anti-reductionist framework for thinking about the relationship between us and the rest of nature" *The Geographical Journal* 163(2): 141-149 [Abstract](#)

## **Week 9: Rethinking environmental histories**

[Environmental History resources](#)

[Ecology Resources](#)

Environmental history is primarily associated with work on landscape and ecological transformations in North America and Australasia. Yet cultural ecologists have also been working on long-term environmental changes, and tracing through the historical evolution of human impacts is a vital element in understanding today's human-environment relations. What might a 'new environmental history' look like?

Arnold D & Guha R 1995 *Nature, Culture, Imperialism: Essays in Indian Environmental History*. Delhi.

Butzer, Karl W. 1990. The realm of cultural-human ecology: adaptation and change in human perspective. pp. 685-702 in B.L. Turner, William C. Clark, Robert W. Kates, John F. Richards, Jessica T Matthews, and William B. Meyer (eds.), *The Earth as Transformed by Human Action: Global and Regional Changes in the Biosphere Over the Past 300 Years*. Cambridge: University Press.

Chapman, G & Driver, T (eds.) 1996 *Timescales and Environmental Change*. Routledge (see chapters by Leach & Fairhead, and introduction/conclusion)

Forsyth, T. 1996. *Science, Myth and Knowledge: testing the theory of Himalayan environmental*



Degradation in Thailand. *Geoforum* 27:375-392

Griffiths T & Robin L eds. 1997 *Ecology & Empire: Environmental history of settler societies* Edinburgh: Keele University Press (selected chapters)

Kates, Robert, B.L. Turner, and William C. Clark 1990. The great transformation. pp. 1-18 in B.L. Turner, William C. Clark, Robert W. Kates, John F. Richards, Jessica T. Matthews, and William B. Meyer (eds.), *The Earth as Transformed by Human Action: Global and Regional Changes in the biosphere Over the Past 300 Years*. Cambridge: University Press.

Leach M and R. Mearns (eds.) 1996 *The Lie of the Land: challenging environmental orthodoxies in Africa*. London. James Currey. (chapters 1 and 6)

O'Connor J. 1997. What is Environmental History? Why Environmental History? *Capitalism Nature Socialism* 8(2) 3-29

Rocheleau, D, Steinberg, P. & Benjamin P. 1995. Environment, Development, Crisis & Crusade: Ukambani Kenya 1890-1990. *World Development*. 23:1037-1051.

Tiffen, M, Mortimore M, Gichuki F. 1994. *More People, Less Erosion*. Chichester. Wiley.

### **Week 10** Adaptive dynamics in the Andean environment

Brush, S. 1982 The natural and human environment of the central Andes." *Mountain Research and Development*, 2(1): 19-38

Knapp, Greg 1991. *Andean Ecology: Adaptive Dynamics in Ecuador*. Boulder: Westview. (chapters 1, 3, 9).

Mayer, E. 1987 "Production Zones" pp. 45-84 in S. Masuda, I. Shimada, and C. Morris (eds.) *Andean Ecology and Civilization*. Tokyo. United Nations University Press.

Murra, J. 1987 "El Archipelago Vertical Revisited" and "The limits and limitations of the Vertical Archipelago in the Andes" pp. 3-20 in S. Masuda, I. Shimada, and C. Morris (eds.) *Andean Ecology and Civilization*. Tokyo. United Nations University Press.

Harriss, O. 1987 "Ecological duality and the role of the centre" pp. 311-335 in S. Masuda, I. Shimada, and C. Morris (eds.) *Andean Ecology and Civilization*. Tokyo. United Nations University Press.

Orlove, B. and Guillet, D. 1985 "Theoretical and methodological considerations on the study of mountain peoples: reflections on the idea of subsistence type and the role of history in human ecology" *Mountain Research and Development* 5(1): 3-18.

Yamamoto, N. 1987 ""The ecological complementarity of agropastoralism: some comments" pp. 85-100 in S. Masuda, I. Shimada, and C. Morris (eds.) *Andean Ecology and Civilization*. Tokyo. United Nations University Press.

Treacy, J. 1989 "Agricultural terraces in Peru's Colca Valley: promises and problems of an ancient technology." pp. 209-229 in Browder, J. (ed.) *Fragile Lands of Latin America: strategies for their sustainable development*. Boulder. Westview Press.

### **Week 12** Andean regional political/cultural ecologies

Bebbington, Anthony, Hernon Carrasco, Lourdes Peralbo, Galo Ramon, Jorge Trujillo, and Victor Torres 1993. *Fragile lands, fragile organizations: Indian organizations and the politics of sustainability in Ecuador*. Transactions, the Institute of British Geographers, 18:179-196.

Bebbington, Anthony 1996. "Movements, modernizations and markets" pp. 86-109 in R.Peet and M.Watts 1996 *Liberation Ecologies: environment, development, social movements*. London. Routledge.

Bradby, B. 1982 "Resistance to capitalism in the Peruvian Andes" pp. 97-132 in D. Lehmann (ed.) *Ecology and Exchange in the Andes*. Cambridge. CUP.

Lehmann, D. 1982 "Introduction: Andean societies and the theory of peasant economy" pp. 1- 26 in D. Lehmann (ed.) *Ecology and Exchange in the Andes*. Cambridge. CUP.

Painter, M. 1995 "Upland-lowland linkages and land degradation in Bolivia." pp. 133-168 in M.Painter and W.Durham (eds.) *The Social Causes of Tropical Deforestation in Latin America*. Ann Arbor. University of Michigan Press.

Zimmerer, Karl S. 1991. *Wetland production and smallholder persistence: agricultural change in a highland Peruvian region*. *Annals, Association of American Geographers*, 81:443-463.

Zimmerer, K. 1996 "Discourses on soil loss in Bolivia" pp. 110-124 in R.Peet and M.Watts 1996 *Liberation Ecologies: environment, development, social movements*. London. Routledge.

### **Week 13** Andes in crisis? Andes as a marginal environment

Bebbington, A. J. forthcoming "Sustaining the Andes: social capital and rural regeneration in Bolivia" *Mountain Research and Development*. (June 1998) [Abstract](#)

Bebbington, Anthony 1997. Social capital and rural intensification: local organizations and islands of sustainability in the rural Andes. *The Geographical Journal*, 163(2): 189-197. [Abstract](#)

Forsyth, T. 1998 "Mountain myths revisited: integrating natural and social environmental science" *Mountain Research and Development* (forthcoming, June 1998).

Mitchell, W. 1991 *Peasants on the Edge: crop, cult and crisis in the Andes*. Austin. University of Texas Press. (first and last chapter)

Preston, D, M. Macklin and J. Warburton. 1997 "Fewer people, less erosion: the twentieth century in Southern Bolivia" *Geographical Journal* 163(2): 198-205 [Abstract](#)

Preston, D. forthcoming "Post-peasant capitalist graziers: the 21st century in southern Bolivia" *Mountain Research and Development* (June 1998)

Zorn, E. 1997 "Coca, cash and cloth in highland Bolivia: the Chapare and transformations in a traditional Andean textile economy" pp. 71-98 in M. Leons and H. Sanabria *Coca, Cocaine and the Bolivian Reality*. Albany. SUNY Press.

### **Week 14** Rethinking environment and history in the Sahel *From here, readings are a little provisional - and may be slimmed down.*

The West African Sahel provides many good examples of the importance of taking a historical approach to human-environment interactions. Classic articles, like those by Piers Blaikie and Tom Bassett, show how other frameworks discussed in the course have been applied in sub-Saharan Africa.

Bassett , T. 1988. The Political Ecology of Peasant-Herder Conflicts in Northern Ivory Coast. *Annals of the Association of American Geographers* 78(3): 453-472

Batterbury, SPJ & Longbottom, J. 1996. *Social & Environmental Change in a Zarma village, SW Niger 1940-1996*. unpublished



Batterbury, SPJ & Warren, A. 1996. Environmental History & Agricultural change in Sub- saharan Africa. unpublished

Blaikie P. 1989. Environment and Access to resources in Africa. *Africa* 59(1)18-40

Croll E & Parkin D eds. 1992. *Bush Base, Forest Farm*. Routledge (introduction)

Fairhead J & Leach, M 1996. Video - [Second Nature](#). (Borrow from S Batterbury - but I only have PAL format)

Raynault C (ed.). 1997. *Societies and Nature in the Sahel*. London: Routledge (chapter by P. Delville, conclusion)

Scoones I. 1997. The Dynamics of Soil Fertility Change; historical perspectives of environmental transformation from Zimbabwe. *Geographical Journal* 163(2):161-169 [Abstract](#)

Schroeder R 1997. Reclaiming land in the Gambia: gendered property rights and environmental intervention. *Annals of the Association of American Geographers* 87(3)487-508

[Ford R. E.](#) 1992. Humans & the Sahelian Environment. *National Geographic Research & Exploration*. 8(4):460-475 (check Bob's [bookmarks!](#))

### **Week 15** Agricultural intensification and changing livelihood strategies in a marginal environment

A big debate in West Africa at present is about the paths that farmers and pastoralists take to intensify their land use or food production, using a variety of 'adaptive' strategies. Is the region able to climb its way out of food supply problems through indigenous adaptations and by extraordinary effort and innovation? Turner et al's. case studies are hopeful on this. Mike Mortimore has worked on this issue longer than anybody, and is currently (1998) finishing two new books on Sahelian agricultural intensification. He says *yes* to the question above. His work is very much in the behavioral tradition of cultural ecologists; comparative work in Kenya with Mary Tiffen (see wk. 9 above) was unusually controversial since it suggested that population growth, adaptation, markets, and colonial policy had led major environmental and social improvements over the 20th century in Machakos, Kenya. The World Bank enjoyed this argument, and it has been used to support various un-intended policy measures. Chris Reij is also an agrarian populist, who sees indigenous soil conservation efforts as innovative. Most of these authors concur that human agency is adequate to overcome constraint, although Batterbury, McMillan and Davies want to see local development interventions continue in the region, rather than leaving the work to farmers. We have found that farmers are quite able to subvert most interventions to their own ends, anyway. This may be wasteful and frustrating if you are a policy maker, of course, but it is part of everyday life in this harsh and marginal environment.

[Adams, WM](#) and Mortimore, M. 1997. Agricultural Intensification and Flexibility in the Nigerian Sahel. *The Geographical Journal*. 163(2):150-160 [Abstract](#)

Amanor, K. 1994. *The New Frontier - farmer responses to land degradation (Ghana)*. London: Zed Press

Batterbury, SPJ. 1996. Planners or Performers? Reflections on indigenous dryland farming in northern Burkina Faso. *Agriculture & Human Values* 13(3)12-22

Batterbury, SPJ. 1997. *The Political Ecology of environmental management: case studies from the Central Plateau, Burkina Faso*. PhD dissertation, Clark University. Ann Arbor, MI: [University Microfilms International](#). (my copy or - ch1, 9 reserve)

Carney, J. 1996 *Converting the Wetlands, Engendering the Environment*. pp. 165-187 in R. Peet and M. Watts *Liberation Ecologies: environment, development, social movements*. London. Routledge.

Davies, S. 1996 *Adaptable Livelihoods: Coping with Food Insecurity in the Malian Sahel*. Chichester. Wiley.

Mortimore M. 1995. *Caring for the Soil: Agricultural expansion, population growth and natural resource degradation in the Sahel*. In Reenberg A & Markussen, HS (eds.) *The Sahel: ethnobotany, agricultural and pastoral strategies, development aid strategies*. Copenhagen: Institute of Geography.

Turner, BL II, R Kates and G Hyden (ed.) 1993. *Population Growth & Agricultural Change in Africa*. Gainesville: University of Florida Press. (Introduction & conclusion)

Scoones, I et al. 1996. *Hazards & Opportunities*. London: Zed Press (about Zimbabwe)

McMillan D. 1995. *Sahel Visions*. University of Arizona Press.

Reij C, Toulmin C, Scoones I 1996 Chapter 1 of [Sustaining the Soil](#): Indigenous Soil and Water Conservation in Africa. London: Earthscan (also published as IIED Drylands Network Paper, 1996)

Schroeder, R. and Suryanata, K. 1996 "Gender and class power in agroforestry systems" pp. 188-204 in R.Peet and M.Watts 1996 *Liberation Ecologies: environment, development, social movements*. London. Routledge.

Webber P. 1996. *Agrarian Change in North-West Ghana*. Africa

## **Week 16** Hybrid research methodologies: from the Sahel to cultural and political ecology

An important aspect of the immense changes that have swept through environmental research since the 1970s is the acceptance of 'hybrid' research methodologies, that combine systems frameworks with new scientific techniques, and qualitative and locally-based knowledge- gathering. Today, in keeping with post-modern social science, research attempts to consider 'local' or unrepresented voices as an alternative to 'global' or universalizing statements about the environment. There is a need to make current approaches to political and social ecology more appreciative of biophysical reality (Allen & Hoekstra); yet also to acknowledge the social and political construction of ecological explanations (Demeritt, Descola & Palsson). Several studies demonstrate the use of hybrid research methods (Reenberg, Scoones, Fairhead & Leach).

[Allen, TFH](#) & Hoekstra, TW. 1992. *Towards a Unified Ecology*. University of Columbia Press (or related articles, eg Allen TFH & Hoekstra, TW. 1990. The Confusion Between Scale-Defined Levels and Conventional levels of Organization in Ecology. *Journal of Vegetation Science* 1:5-12.)

Batterbury, S. Forsyth, T and Thomson, K. 1997 "Environmental transformations in developing countries: hybrid research and democratic policy" *Geographical Journal* 163(2): 126-132.

Demeritt, D. 1994. Ecology, Objectivity & Critique in writings on nature & human societies. *Journal of Historical Geography* 20:22-37

Descola, P & Palsson, G. 1996. *Nature and Society: Anthropological Perspectives*. London: Routledge.

Fairhead J & Leach, M 1996. *Misreading the African Landscape*. Cambridge University Press (and articles by these authors) [Related article](#)

Forsyth, T. 1998 "Mountain myths revisited: integrating natural and social environmental science" *Mountain Research and Development* (forthcoming, June 1998).

Reenberg, A & Paarup-Laarsen B. 1997. Determinants for Land Use Strategies in a Sahelian Agroecosystem. *Agricultural Systems* 53:209-229

Scoones, I. (ed.) 1995 [Living with Uncertainty](#). Intermediate Technology Publications. (Ch 1?)

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[Cultural Ecology and its critics](#)

[Simon's review of the conference on environmental entitlements](#)

## Links

[Back to Geography Courses](#)

[All Geography Departments Everywhere](#)

[Geographical Perspectives on Natural Hazards](#) class at UBC, Canada

[Benjamin Orlove's class on cultural ecology at UC-Davis](#)