

ENVIRONMENT

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Timothy O’Riordan, “*The Politics of Sustainability*,” pp. 29-50

- Sustainability appears to be accepted as the mediating term designed to bridge the gulf between ‘developers’ and ‘environmentalists’. Its beguiling simplicity and apparently self-evident meaning have obscured its inherent ambiguity. Its survival attests to the fact that developmental interests now recognize that much more serious attention must be paid to incorporating a thorough understanding of environmental processes into project investment calculus, if for no other reason that failure to do so may result in environmental side-effects that carry economic losses. But the perseverance of the concept goes far beyond that. Developers now realize that under the guise of sustainability almost any environmentally sensitive program can be justified. They thereby seek to exploit the very ambiguities that give sustainability its staying power. Similarly, environmentalists abuse sustainability by demanding safeguards and compensatory investments that are not always economically efficient or socially just. It may only be a matter of time before the metaphor of sustainability becomes so abused as to be meaningless, certainly as a device to straddle the ideological conflicts that pervade contemporary environmentalism. Once the notions that underlie sustainability are politicized, the concept is effectively devalued. 29
- Sustainability is a much broader phenomenon, embracing ethical norms pertaining to the survival of living matter, to the rights of future generations and to institutions responsible for ensuring that such rights are fully taken into account in policies and actions. The first two of the four premises of sustainability outlined above, those pertaining to knowability and homeostasis, apply to the concept of sustainable utilization. The latter two, which embrace a more bioethical perspective with implications for a great variety of rights and obligations, impinge ore directly on the notion of sustainability. Sustainable utilization is a prior condition for sustainability, but not a sufficient one. The analysis which follows asserts that sustainable utilization is manageable and politically acceptable because it is safely ambiguous. Sustainability, on the other hand, is politically treacherous since it challenges the status quo. Paradoxically, the objectives of sustainable utilisation cannot be met without incorporating the principles of sustainability—hence the confusion of misunderstanding that has grown up around the sustainability debate. 30
- [sustainable utilization means] “ensuring utilization [does] not exceed the productive capacity of exploited species, reducing sustainable yields to sustainable levels, reducing incidental take, maintaining the habitats of exploited species, carefully allocating timber concessions and limiting firewood consumption, and regulating the stocking of grazing land.” [IUCN, 1982]. Ref. listed is: International Union for the Conservation of Nature (1980) *World Conservation Stretegy*, Geneva: IUCN. 36
- “It sees sustainable development as achievable by securing more and more sustainable livelihoods for the critical group of the poor, thus stablising use of the environment,

enhancing productivity and establishing a dynamic equilibrium, above the sustainable livelihood line, of population and resources. It seeks to create and maintain conditions in which poor people are less poor and see and work for themselves in sustainable development.” Chambers, R. (1986:13) “Sustainable Livelihoods: An Opportunity for the World Commission on Environment and Development,” Brighton, England: Institute of Development Studies, University of Sussex. 38

- For sustainability to become implanted in the political culture, the character of developmental and resource management institutions will require reform and remodeling. Opposition to such reforms is ideological and structural. Sustainability is not regarded seriously by those who really count, namely those at the top of political structures and those who control the flows of national and international capital. The promotion of sustainability implies a reorganization of agency alignments and priorities which cuts across the prejudices of those at the top. The full application of sustainability also demands new arrangements for budget-sharing and cross-organisational responsibilities that are deemed unacceptable or unworkable by those who benefit and operate through existing arrangements. By contrast, sustainable development, especially where it can be shown that thoughtless mismanagement of ecological systems can result in economic disaster and unprofitable capital investment, is now visualized as an appropriate way forward. But the pursuit of sustainable development is simply not enough. 39
- Marxist theory and method, divorced from orthodox dogma, still represents one of the most fertile intellectual traditions in which to locate ecological ideas, based as it is upon both the social construction of nature and the ‘naturalisation’ of human consciousness (Schmidt, 1971; Smith, 1984).

A Marxist view of the environment needs to encompass a number of closely related, but separable, issues. In the first place it needs to address the issue of the way nature is transformed under capitalism, and the implication of this process for developing countries today. In this context the question of commodity production is of paramount importance, and distinguishes Marxism from both neo-classical and Radical Ecology perspectives, as we shall see. Second, Marxist approaches to the environment are necessarily concerned with the distribution of environmental costs and benefits, not simply from a ‘welfare’ standpoint, but because the distributive effects of environmental change have important implications for the kinds of social movements which are likely to merge from ecological degradation. Third, Marxists are concerned about the ideological content of environmental ideas, and their relationship both to bourgeois process of legitimation and to central Marxist concepts such as alienation and the class struggle. 59

D. Deadman and R. Kerry Turner, “Resource Conservation, Sustainability and Technical Change,” pp. 67-101

- The sustainability concept has both national and international dimensions. International economic interdependence is increasingly the norm, with the majority of industrialized economies dependent to a significant degree on continued supplies of industrial minerals and metals originating from developing economies. 67

Schramm, G., and Warford, J. (eds.) (1989) *Environmental Management and Economic Development*, Washington, DC: The World Bank.

“Introduction,” G.S. and J.J.W., 1-6

- ...more often than not development and protection go hand in hand. 2

“Environmental Management and Economic Policy in Developing Countries,” J.J.W., pp. 7-22

- ...the success of policy interventions depends heavily on behavioral issues and on the prospects for changing behavior. 14
- ...subsidies have encouraged the excessive use of pesticides, which has not only increased the exposure of individuals to toxic substances, but also led to more resistant strains of mosquitoes and to a resurgence of malaria in many parts of the world. 15
- Coordination and control of natural resource use in order to mitigate its external effects - in particular to impose incentives that effect several sectors - may require the creation of agencies with wide-ranging authority over certain aspects of the operations of functional ministries in a particular region. 19

“Environmental and natural resource accounting,” Sala El Serafy and Ernst Lutz, 23-38

- True income is sustainable income. 24
- True income may be thought of as the maximum amount a recipient can consume in a given period without reducing possible consumption in a future period. 24
- The essence of the concept of income is the maximum amount a person can consume during a certain period and still be as well-off at the end of the period as he or she was at the beginning. 25

“Marginal opportunity cost as a planning concept in natural resource management,” David Pearce and Anil Markandya, 39-55

- A sustainable development path occurs only if the ecological boundary has shifted. Mechanisms for doing this include the application of relevant technology, management of renewable resources to secure higher natural yields, investment in assimilative capacity, recycling, and a switch to borrowing from exhaustible resources such as oil and coal. 44
- Opportunity cost refers to the best alternative use to which particular resources could be put if they were not being used for the purpose being costed. 46

“The Environmental basis of sustainable development,” Norman Myers, 57-68

- ...economic development can be an important contributing factor to growing environmental problems in the absence of appropriate safeguards. 57
- Hundreds of years are required to renew a mere 25 millimeters of soil, or the equivalent of 400 tons of soil per hectare. Yet an erosion rate of 50 tons per hectare per year is all too common in developing countries. The loss can be made good only by using increased amounts of chemical fertilizer. This heroic use of technology soon leads to declining returns: nitrogenous fertilizer put on eroded soil is often only one-third as effective as it is on uneroded soil. 60
- Slash-and-burn agriculture accounts for more deforestation than all other agents put together. Farmers who practice shifting cultivation are usually forced into this destruction by pressures over which they have little understanding or control. These pressures are generated by factors such as the maldistribution of land in established

farming areas and lack of access to agronomic technology and credit systems. The farmers are no more to be blamed for felling the forest than soldiers can be held responsible for starting a war. 64

“Economic Incentives for sustainable production,” Robert Repetto, 69-86

- [Degradation of natural resources] Remedies...must include changes in economic policies and incentives to promote sustainable resource use by large and small enterprises and households, and to channel economic and demographic growth into activities that raise incomes while preserving important natural resources. 69
- ...export crops, with some exceptions such as ground nuts and cotton, tend to be less dangerous to soils than basic food crops. Many export crops grow on trees and bushes that provide continuous canopy cover and root structure: coffee, cocoa, rubber, palm oil, and bananas can be quite suitable for the hillsides where they are often grown. 72
- The use of pesticides in agriculture poses serious health and ecological risks, especially in developing countries. Farmers, farmworkers, their families, and consumers are extensively exposed, either in the field, by using contaminated containers, or by consuming contaminated food. Acute poisonings are common, and little is known about the effects of chronic exposure on people with such common health problems as anemia, liver abnormalities because of parasitic diseases, or reproductive disorders. The effect of pesticides on the immune system may exacerbate health problems in populations in which infectious diseases are prevalent. Intensive pesticide use also creates significant ecological problems. Fish in irrigated rice paddies, ponds, and canals have been destroyed. Throughout the world pest populations have resurged and new pests have emerged as pesticides have killed off their natural predators. More than 400 pests have become resistant to one or more chemicals, and the number is growing exponentially. 73
- ...many governments in developing countries provide heavy subsidies to farmers who buy pesticides. 73
- Policy changes can do much to promote conservation and simultaneously raise the economic benefits...83

“Deforestation in Brazil’s Amazon region,” Dennis Mahar, 87-116

- ...the main proximate causes of tropical deforestation worldwide are small-scale agriculture, commercial logging, fuelwood gathering, and cattle raising. The underlying causes, however, include poverty, unequal land distribution, low agricultural productivity, rapid population growth, and various public services. 87

“Managing the supply of and the demand for fuelwood in Africa,” Jane Armitage and Gunter Schramm, 139-171

- Outside of the limited areas protected as national parks or forest reserves, uncontrolled exploitation of remaining forest resources is commonplace in most countries. 139

“Multilevel resource analysis and management: The case of watersheds,” John Dixon, 185-200

- Economic analysis has a key role to play in examining the interactions of different parts

of the watershed system - land and water resources, people, organizations, and institutions. Economic analysis requires that most variables be expressed in monetary terms. 190

- The government may need to provide incentives to promote interministerial cooperation in order to facilitate project implementation. 198

McNeely, J., Miller, K., Reid, W., and Mittermeier, R. (1990) *Conserving the World Biological Diversity*, Washington, DC: IUCN, WRI, WWF, and The World Bank.

- ...the protected areas will succeed in realizing their conservation objectives only to the extent that the areas themselves are effectively managed, and to the extent that the management of the land surrounding them is compatible with the objectives of the protected areas. This will typically involve protected areas becoming parts of larger regional schemes to ensure biological and social sustainability, and to deliver appropriate benefits to the rural population. 12
- Government agencies, local communities, and conservation organizations all need information to enable them to manage their biological resources more effectively. 13
- Universities, research institutions, and non-governmental organizations need to be strengthened so that they can help governments assess their biological resources. Closer working relationships should be established between museums and other taxonomic-oriented institutions and those concerned with conservation of biological diversity. 14
- ...specify how conservation of biological resources can be integrated with development more effectively and identify the linkages with other related issues facing humanity. 14
- ...those who benefit from biological resources should pay more of the costs of ensuring that such resources are used sustainably. 14
- Approaches useful primarily at the national level include charging entry and other fees to national parks, levying charges for ecological services, collecting special taxes, building funding linkages with large development projects, returning profits from exploitation of biological resources, building conditionality into concession agreements, seeking support from the private sector, and establishing foundations for conservation. 15
- New partners in conservation need to be found, involving all ministries, departments and private institutions that are directly dependent on biological resources. 15
- Those seeking to conserve biological diversity need to be able to identify the legitimate self-interests of rural people, and design ways of ensuring that the interests of conservation and community self-interest coincide. 21
- ...valuation is...a fundamental first step. It informs planners, resource managers, and local people about how important biological diversity may be to national development objectives, it demonstrates how important an area is for the biological resources it contains, it reveals common interests in conservation among various sectors, and it facilitates comparison of costs and benefits of different development proposals. The second step is to determine how these species and areas can be conserved. It is here that economic incentive and disincentives can play their important role in ensuring that the benefits suggested above are in fact delivered to the community, and that the community in turn is enabled to protect the resources upon which its continued prosperity depends.

- ...the benefits of protecting natural areas are in practice seldom fully represented in cost-benefit analyses because the social benefits of conserving biological resources are often intangible, widely spread, and not fully reflected in market prices. In contrast, the benefit of exploiting the resources supported by natural areas are often easily measured. Hence, cost-benefit analyses usually underestimate the net benefits of conservation or, equivalently, overestimate the net benefits of the exploitation alternative. 48
- ...national parks have boundaries. By their very nature, as being legally established units of land management, national parks have limits on the ground, often marked by fences or other physical manifestations of authority. Yet nature knows no boundaries, and recent advances in conservation biology are showing that national parks are usually too small to effectively conserve the large mammals, birds of prey, or trees they are designed to preserve. 49
- In most countries, those responsible for managing wildlife and protected areas are poorly paid, have insufficient opportunities for advancement, lack specialized training, and have low prestige. 52
- The close link between rural development and conservation of biological resources demonstrates that action in either area alone will not solve the problem. The following major policy components might be included in such integrated action: - to promote cross-sectoral collaboration, the various institutions should share information, develop agreed common objectives, and seek to define problems in the same way. - the many economic and financial benefits of integrated rural development, linked with conservation of biological resources need to be quantified and brought to the attention of policymakers. - institutional reform and improvement may be required as part of good design and implementation of integrated sectoral development plans and programs. - new legislation may need to be formulated consonant with the socio-economic patterns of the target group of people or institutions and the natural resource needs, both to institute disincentives and to insure that incentives carry the power of law. - policies and legislation in other sectors need to be reviewed for possible application to conservation of biological resources and community involvement in such work. - the rural population needs to be involved in the design and follow-up of plans and projects, not simply their implementation. 55
- Preparing a sub-national conservation strategy involves government agencies, non-governmental organizations, private interests, and the community at large in analysis of natural resource issues and assessment of priority actions. 56
- ...economic incentives should be used to enable people to behave according to their own enlightened self-interest, and sound government policies should be designed to ensure that conservation is indeed in their self-interest. 59
- ...local cooperation is essential for the long-term success of conservation efforts. 73
- Universities, research institutions, and NGOs need to be strengthened so that they can help governments assess their biological resources. Information centers should be developed at appropriate levels to ensure that the information is available where it is needed, whether in a single area (such as a national park), in a country or region, or at the

international level. 80

- The international agencies with an interest in the conservation of biological resources, including development aid agencies, governments, the UN system, and various NGOs, should collaborate to prepare global overviews on the status and management of biological resources. 81
- Habitats can be considered ecologically sensitive areas if they: - provide protection of steep slopes, especially in watershed areas, against erosion; - support important natural vegetation on soils of inherently low productivity that would yield little of value to human communities if transformed; - regulate and purify water flow (as valley forests and wetlands often do); - provide conditions essential for the perpetuation of species of medicinal and genetic conservation value; - maintain conditions vital for the perpetuation of species that enhance the attractiveness of the landscape or the viability of protected areas; or - provide critical habitats that threatened species use for breeding, feeding, or staging. 84
- Determining objectives is best done as part of a process of consultation involving those who will be affected by how a resource is to be managed, so both managers and consumers should be involved in the process. 105
- In order to build sustainable relationships between rural people and their resources, local communities must be provided with the tools with which they can build their own conservation action. 105
- Incentives may also be required to encourage countries to seek outside support for conservation action, and to afford bio-diversity an appropriately high priority in development assistance programs. 106
- Strategies and action plans can be every useful in preventing an agreed agenda for attention by various institutions and individuals. They are most successful when they are generated by those who are closest to the problems, and who are involved in implementing solutions. 109
- Experience has demonstrated conclusively that action plans - whether for an area, a species, a nation, or a region - need to be developed in the closest possible collaboration with those who are most directly affected by the action proposed. 109
- ...to consider national parks and other protected areas within the context of the general pattern of land use of areas that surround them, and to design and operate them in ways that are acceptable to local people and bring benefits to them in the short as well as the long-term. 111
- It appears that the most useful unit of analysis is the local rural community, because these are the units most directly dependent on the resources available within a fairly circumscribed area for most of their requirements (with many technological and energy inputs from afar). 113
- ...policies must permit and foster the development and persistence of sustainable local production systems, encourage the search for means of increasing their contribution to human needs, and encourage innovation and the development of alternative methods of use of biological resources. 114
- Developing patterns of local resource use that are sustainable and that enhance the

resource base will require that: - appropriate systems of management responsibility are established within local communities; - the benefits and costs of biological resource use that are normally external to the market be measured and incorporated into economic models and into the public consciousness; - **the substantial knowledge possessed by human cultures regarding the use of their local resources be maintained and enhanced as the basis for further development; and** - science and economic be applied to the identification of new values (products, foods, commodities) that might accrue to local people as a result of biological resource conservation (including factors such as marketing and trade that will ensure the sustainability of resource use). 114

- ...in some cases, community development activities are already being planned or implemented in communities in or near areas important for conserving biological resources, in which case elements to promote changed behavior toward conservation can be incorporated in the development project with little additional cost. 118
- ...conservation needs to pervade all rural based activities; it is not something that happens only in national parks and other protected areas. Therefore, economic incentives aimed at encouraging rural people to conserve biological resources outside of protected areas can be very cost effective in terms of conservation achievement. While such incentives may not bring funding to the conservation agency, they may enable the agency to be more effective in managing protected areas. 118
- ...universities managing demonstration natural areas for research might be one appropriate model. 125
- Tourism can bring numerous socio-economic benefits to a country, in terms of creating local employment, stimulating local economies, generating foreign exchange, stimulating improvements to local transportation infrastructure, and creating recreational facilities. 129
- ...the success of agricultural development will often involve linkages with natura areas important for biological diversity. 129
- Agricultural development projects that incorporate means of protecting the larger ecosystem within which agricultural communities survive and flourish are far more likely to succeed than those that are too narrowly based. Such considerations will often involve ensuring that the relevant communities are given management responsibility for the natural areas upon which their continued prosperity depends. 130
- ...numerous sectors need to be involved in managing natural habits. Thus, national parks departments should be joined in habitat management by a wide range of other institutions to represent all interests. 132
- Local support for protecting natural areas must be increased through such measures as education, revenue sharing, participation in decisions, complementary development schemes adjacent to protected areas, and, where compatible with conservation, access to resources. 132
- New approaches to linking protected areas to surrounding lands are required if the appropriate benefits are to flow to society, involving a wide range of government and private institutions in managing natural areas of various management categories. 132

Blackwell, J., Goodwillie, R., and Webb, R. (1991) *Environment and Development in Africa: Selected Case Studies*, Washington, DC: The World Bank.

- ...sustainable development is, in essence, a process of change in which the exploitation of resources, the direction of investment, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations. 6
- Development projects can be designed to meet economic and environmental objectives. 8
- Application of aspects of welfare economics to problems of resource depletion may, given the complexity of ecological as well as economic linkages, give rise to surprising policy prescriptions. 8
- projects that build from local knowledge are the only way technical change can come about. Local farmers know enough to recognize what is better, to seize on it, and to use it. 9
- The lack of an environmental orientation may be attributed...to three factors: (1) failure to appreciate the interlocking nature of projects (externalities to particular projects are internal to the development program), (2) failure to understand the long-term implications of program success and widespread replication, and (3) an inability to gather sufficient hard data to make such an assessment. 30
- ...sustainable development does not just relate to whether a particular project will continue after donor withdrawal, but whether the development path chosen will be sustained from the environmental resources of the region. 49
- ...planners need to recognize the importance of government policy in ensuring sustainable development. 49
- ...success can be a powerful educational tool to ensure continuing adherence to sound environmental practices in the study area as well as encouragement of such practices elsewhere.57
- ...the very success of the project in terms of its contribution to development eventually led to it being copied and expanded and replicated. At that point the environmental weaknesses, until then not an issue, came to the fore. 110
- ...high technology systems to maintain environmental improvements, or to protect the environment from damage as a result of agricultural or industrial activity, will not work in the long-run. 111
- Projects aimed at environmental control and improvement must have the support of local people if they are to be firmly established and maintained. 111
- ...planners misread the situation, thinking that the local council can speak adequately on behalf of the farmers - which it could not. 112
- Projects that meet the following conditions are likely to succeed environmentally: (1) They take a broad, long-term, and all embracing view of the development process. (2) They use technology that is appropriate, affordable, understandable, and serviceable. (3) They have the confidence and support of the group whom they aim to help. In other words, they have a successful 'internalization' strategy. (4) The controlling agencies can examine in a relatively disinterested manner the inputs, methods, and technology adopted

in the project. 114

- [Failure] Donors have a vested interest in the method of development and in the materials use (types of chemicals, machinery, etc.). 114
- Many of the keys to environmental successes or failures are, in fact, identical to the factors that control the general success or failure of any project. 114

Oldfield, M., and Alcorn, J. (eds.) (1991) *Biodiversity: Culture, Conservation and Ecodevelopment*, New York: Westview Press.

Molly Bower Kux, pp. 295-316.

- The Wildlands and Human Needs program (of the WWF) supports work with local people to improve their livelihoods and involve them more directly with protected areas from which they have been excluded. The goal of this approach is to generate support for reserve protection from local people by improving economic productivity outside the protected area. p.301
- Strength identified as contributing to enhancement of the program's credibility were: providing support for existing and new local institutions and innovative programs, tackling issues identified by local communities as important to their survival and well being, and involving local experts and institutions in the preparation (and hopefully in the implementation) of reserve area management plans. p.302
- A serious overall constraint identified in all five of the countries visited was national legislation that restricted local communities from using resources within the protected areas. p.302
- In Kenya's Amboseli National Park, compromise between an important national industry and local needs, with benefits to both, was the basis for the strategy that was worked out with difficulty over 15 years. In return for economic benefits (income from accommodation of migrating wildlife on their lands, new jobs, a supply of water for livestock from the park) Maasi landowners agreed to strict protection of a new 480km² park. p.302-3
- Protected areas may or may not receive the same priority as roads, schools, or other development activities.
- In the final analysis, local priorities and decisions may be the most important ruling factor in maintaining living resources. If actual control at the local level is non-existent, so too is responsibility. One can detect a certain pattern of resource deterioration that emerges from various studies, workshops, and field observations in many development countries. It is characterized by strong governments where most decisions about land-use are made in capital cities by sectorally oriented like ministries that do not consult with each other or with local governments or with local people; the result has been conflict and confusion over land and water use. p.308
- The key elements in the success of future conservation efforts abroad include: enlightened national and international economic development policies, decentralized responsibility to encourage building on proven traditional resource management techniques, and maintenance of existing (at the very least) living conditions for economically disadvantaged people. If advances are not made in these areas, investments in more

conventional conservation approaches in the developing countries of the tropics may themselves be unsustainable. p. 311

Braatz, S., Davis, G., Shen, S., and Colin, R. (1992) *Conserving Biological Diversity: A Strategy for Protected Areas in the Asia-Pacific Region*, Washington, DC: The World Bank.

- ...setting up comprehensive and well-managed protected area systems is likely to be the most practical way to preserve the greatest amount of the world's biological diversity and the ecological process that define and mold it. Ix
- Enforcement is likely to be a long-term solution to the protection of parks and reserves, particularly in poor and densely populated areas. Consequently, the successful management of protected areas will depend ultimately on the cooperation and support of local people. It is not justifiable to ask communities within or adjacent to a conservation area to bear the costs of protection without providing adequate alternative means of livelihood. Xi
- Investment in the region would generally be more effective through conservation measures that have an impact beyond protected areas. Such measures include supporting policy change, promoting linkages between small holder development and conservation, mobilizing financial resources, strengthening institutional capacity, and developing model projects. Xii
- ...three critical elements of any project to protect biodiversity: improving the policy environment; meeting local needs by integrating conservation and development; and finally, mobilizing the financial resources needed to support these initiatives. 23
- Subsidies for agricultural inputs such as pesticides and chemical fertilizers can also lead to overuse, with resulting loss in beneficial insect predators, fish and other forms of wildlife. 24
- Unless local people gain economic benefit from the protected area or are compensated for their loss, there is little likelihood that effective long-term protected area conservation can be achieved. 26
- Assessing biodiversity in relation to past and present land and resource use offers an opportunity for maintaining and restoring biological diversity in threatened areas. Consequently, special efforts must be made to understand the history of human impacts on the distribution of species, habitats, and ecosystems, notably the different ways in which people value, use, manage, and affect biodiversity. 26
- Most ICDPs try to stabilize land use outside park boundaries and to increase local incomes, with the ultimate objective of reducing the pressure for further exploitation of natural resources within protected areas. ... All of the projects are based on the premise that protected area management must reach beyond traditional conservation activities inside park and reserve boundaries to address the needs of local communities outside. 26
- Only a relatively small number of parks and reserves in developing countries attract the very large numbers of foreign tourists that are needed to generate substantial foreign exchange earnings and make significant contributions to national economic development. 29

- Three major objectives have been identified as critical to any program for protecting biological diversity: modifying policies with adverse impacts on biodiversity, reconciling the needs of local people with the need to protect areas, and ensuring the sustainability of investments. 44

Mikesell, R. (1992) *Economic Development and the Environment: A Comparison of Sustainable Development with Conventional Development Economics*, London: Mansell.

- National self-interest also limits the willingness of countries to assist others in achieving a condition of sustainability, except when it is in the donor's interest to do so. 17
- ...a national commitment to sustainable development will be largely confined to the resources of the nation or possibly to regions within nations. 17
- Sustainable development is not achieved by policy statements of government officials or by officials of the World Bank. Sustainability must be embodied in particular projects and programs, and in the criteria for evaluating and selecting projects. 23
- Although it is not possible to embody all the attributes of sustainable development in a single project or program, it should be possible to design a project that is consistent with the sustainability of the value of the natural resources used in the project. This means that the productivity of the resource would be maintained over time, either by renewing the resource or by investing in other capital assets an amount equal to the capital value of that portion of the resource that has been depleted by the construction and operation of the project. 23
- Sustainable development in agriculture calls for fewer and smaller irrigation dams in favor of replacing old systems, and multipurpose dams should make agriculture rather than power their primary function. 29
- Sustainable development is not premised on a no-growth condition, nor does it require that wealthy nations forgo per capita growth to permit developing countries to survive. 33
- Sustainable development also broadens conventional development objectives by including the preservation of the natural resource base to enable future generations to carry on at least an equivalent level of current economic activity. 34
- Sustainable development is a revolutionary political and social concept. It will not succeed without the conviction and participation of the masses of people who must bring it about. Gaining that conviction and participation is a more important challenge for external assistance agencies than providing capital and technical assistance. 146

R. Michael Wright, "Recommendations", pp. 524-535.

Wells, M., Brandon, K., and Hannah, L. (1992) *People and Parks: Linking Protected*

Area Management with Local Communities, Washington, DC: The World Bank, The World Wildlife Fund, and The United States Agency for International Development.

- Conflicts of interest have thus arisen in many areas of the world between protected areas and local people. Traditional approaches to park management and enforcement activities have been unable to balance these competing demands. p.ix
- One of the most challenging tasks for ICDP (integrated conservation-development projects) managers is to promote development activities that not only improve local living standards but also lead to strengthened management of protected areas. p.x
- ...very careful thought needs to be given at the design stage as to the following question: what are the anticipated linkages between the planned realization of social and economic benefits by the people living *outside* the park or reserve boundaries and the necessary behavioral response the project seeks to achieve to reduce pressure *inside* the boundaries. p.x
- Partnerships between conservation and development organizations and between these organizations and government agencies are proposed as essential for the success of ICDPS. p.xi
- All ICDPS must eventually face the test of whether they have strengthened the ability of protected areas to conserve the species and ecosystems the areas were established to protect. It is possible for a project to have successful social and economic development components without being an effective ICDP. p.xi
- This means that innovative, well designed ICDPS that constructively address local people-park relationships at carefully selected sites are an essential element in the conservation of biodiversity, and therefore of sustainable development efforts. p.xi
- ...growing awareness of the complexity of the links between poverty, development, and the environment has led to a search for ways to link conservation with development, make "sustainable development" work, and make conservation people-oriented. p.2
- Most ICDPS aim to stabilize land use outside protected boundaries and to increase local incomes, in order to reduce the pressure for further exploitation of natural resources in the protected area. p.3
- ICDPS have received considerable attention among conservation organizations, international development agencies, national governments, and private foundations. ICDPS have been funded or implemented by many of these organizations. p.3
- Relationships between the project and the park managers have proved to be key factors determining a project's effectiveness. 10
- ...an ICDP consists of conservation activities, in parks or in fully protected zones of multiple-use areas, and development activities, outside traditional parks or inside the human-use zones of multiple-use areas. p.11
- At multiple use areas, there are far greater opportunities to balance - and establish linkages between - development and conservation. p.11
- Assessments of the projects for this study were strongly influenced by an appreciation of the subtleties in local context, many of which came apparent only from site visits and interviews with project staff and members of the local communities who were expected to benefit from the projects. p.15

- The development process must not only be economically and biologically sustainable, but also conserve the ecosystem of the protected area. To satisfy this exacting requirement, explicit *linkages* between project's development components and conservation objectives are needed. p.25
- ...adequate knowledge of local social, economic, biological, and cultural factors that shape resource-use patterns is an essential prerequisite to using economic development to change these patterns to more park-friendly activities. p.28
- ...when appropriate national policies are absent, the ability to sustain even successful projects is doubtful. The larger policy environment was perhaps the most important factor affecting project success or failure. p.28 (W.B. Report in 1988)
- One subset of the ICDP development component can be identified, with rather more modest goals. The aim here is to compensate local people for economic losses caused by the establishment of a protected area; provide substitutes for resources to which access has been denied, such as meat, timber, and grazing land; or provide alternative sources of income through new economic activities. p.30
- Compensation is relatively simple, at least in theory, and could be in cash payments, goods or services. These could be provided in exchange for agreements by local people to relinquish their formal rights of access and to respect the conservation goals of the protected area. Substitutes can be targeted on specific resource uses. For example, if the protected area was formerly used as a source of fuelwood, woodlots outside the boundaries might provide an adequate substitute. If a traditional park was formerly used to graze livestock, water points (in arid areas) or stall-feeding (in wet areas), for example, could be substituted. p.30
- Agricultural development may principally benefit small holders - but the rural landless may represent a greater threat to the park. p.31
- More generally, projects need to challenge the convenient and widespread - but totally unsupported - assumption that people made better-off by a development project will refrain from illegal exploitation of a nearby park in the absence of the negative incentive provided by more effective penalties. Such an expectation is naive; there is an inescapable and widespread need to strengthen guard patrol and impose penalties on those conducting illegal activities in parks. This is not inconsistent with ICDP concept when such enforcement activities are integrated with genuine local development efforts and serious attempts to improve local people-park management communications through education campaigns. p.31
- During project design, very careful thought must be given to the anticipated linkages between the social and economic benefits for people living outside protected area boundaries and the needed behavioral responses to reduce pressure on resources inside the boundaries. 31
- Nature tourism can generate benefits for conservation at several levels: by providing an economic return to the nation, it can justify setting aside large areas of land for conservation; entry fees can generate substantial funds to support management; and tourist expenditures (on lodging, transportation, food, guides, and souvenirs) can be an important source of income for communities nearby, compensating them for a loss of

- access to traditional resources and giving them an incentive to conserve the wildlife. p.34
- In general, all spending by visitors - on transportation, food, lodging, or even park entry fees - goes directly to the central treasury or to private corporate interests that have been granted concessions. p. 34
 - Our preoccupation with hopes that tourism will catalyze local support or change public attitudes seems to be self-defeating since the benefits from tourism were overplayed both by government and tourist organizations... The concept of selling the idea of a national park from the benefits to the local people from wilderness-oriented tourism has not been successful and is unlikely to have any positive impact within the next decade. p.36 (Mishra 1984, 203, 207).
 - Even if the vast conservation benefits potentially available from nature tourism could be realized, it is important to remember that only a small minority of protected areas attract significant numbers of visitors. p. 36
 - Local participation has been described as "empowering people to mobilize their own capacities, be social actors rather than passive subjects, manage the resources, make decisions, and control the activities that affect their lives" (Cernea, 1985, 10)
 - The project is a catalyst to stimulate self-reliance among the poor and underprivileged. p.42
 - Two principle approaches to organizing and sustaining community participation in projects can be identified from the literature: employing agents of change and building local institutions. Their (agents of change) task is to foster grassroots participation and build local institutions. p.44
 - Trusting relationships frequently have been developed with local people and their leaders, many of whom had been suspicious and distrustful, if not openly hostile when the projects began. p.45
 - It has been argued that participation through institutions or organizations is more likely to be effective and sustained than individual participation. p.45
 - ICDPS are based on the principle of mitigating such conflicts of interest by promoting alternative income sources and education programs. But the conflicts cannot be expected to disappear, and the general need for strict enforcement appears inescapable. p.47
 - projects adopting a participatory approach have made important progress in winning the trust and confidence of skeptical local populations and eliciting the participation of community members in project initiated activities. p.47
 - These long periods are also likely to be accompanied by a continued escalation of threats against the protected area that the project is trying to conserve. p.47
 - ...participation can facilitate a more cooperative relationship between protected areas and local people and thus make enforcement more humane and acceptable. p.47
 - ...agencies need to change from a purely enforcement orientation to one substantially more sympathetic to communities living in and around parks. This will require not only changes in attitude at all agency levels but also completely new skills in such areas as communication, extension, education, and mediation. 51
 - Many donors have become increasingly interested in funding ICDPS as part of their expanding environmental mandates and growing interest in links between conservation

and development. p.53

- For ICDP design and implementation, the above factors point strongly to the need for partnerships between different types of organizations - between development and conservation NGOs and between NGOs and government agencies. The need for such partnerships is one of the strongest conclusions to emerge from this study. p.54
- Indexes for ICDP effectiveness must therefore include key ecological features, as well as the more familiar social and economic development variables. p.55
- Attempt to identify any causal links between changes in conditions inside protected areas and project initiatives outside -in particular the extent to which changes inside are attributable to project activities as opposed to exogenous events and processes. p.55
- ...one-hostile relations between park personnel and local communities have improved substantially because of the mediation of project personnel. p.56
- ...linkages may not be readily apparent even though vital preparatory work is going on to build trust and goodwill locally and therefore provide a basis for future linkages.
- The argument that conservation will automatically be strengthened by improving the living standards or increasing the incomes of people outside park boundaries is appealing - and the principle justification for ICDPS. However, the case study analyses demonstrate that this argument is simplistic and that project needs to establish explicit linkages between their development components and their conservation objectives. p.57
- Many of the factors leading to the loss of biodiversity and the degradation of protected natural ecosystems originate far from park boundaries. p.60
- This leads to the conclusion that innovative, well designed ICDPS at carefully selected sites that constructively address local people-park relationships are essential to the conservation of biodiversity and thus to sustainable development. p.61
- Partnerships provide a basis for effectively addressing the challenge that distinguishes ICDPS from all other conservation and development projects: the need to link socioeconomic development with biodiversity conservation. 63
- ...the sustainability of project benefits depends strongly on the effective participation of local people. It means participation in decision-making, in problem identification, in project design and implementation, and in project monitoring and evaluation. This approach views local development as a process rather than a product, with project personnel performing a facilitating role. 63
- Without operational independence (institutions and network of field workers), achieving ICDP goals and sustaining benefits once a project has finished will be difficult. 64

David Western, "Linking Conservation and Community Aspirations", pp. 499-511.

- Conservation must be embedded in local communities if it is to flourish as a voluntary rather than coercive effort. 499
- ...biodiversity's strategic value is useless unless conservation assures local communities' security. 502
- ...localized conservation can draw on the deep knowledge, traditions, ethics, and adaptive practices of rural communities intimately linked to the land and nature. 504
- ...the answer hinges on the degree to which conservation fulfills local aspirations, and on

whether links between the two can be made and strengthened. 505

- ...development itself can lead to conservation. 507
- Empowerment, participation, awareness, education, these may be essential ingredients of community based conservation, but they seldom provide the yeast that can raise community members' lives above the material and physical hardships that stand in the way of conservation. 507
- Making and reinforcing the link between communities and conservation involves several other factors. These include biological and socio-economic monitoring, enforcement, and arbitration procedures. 509
- The end result ultimately must be measures in terms of real conservation improvements, not empowerment, participation, tenurial rights, or any other surrogate measure. 509

Shirley Strum, "Lessons Learned", pp. 512-523.

- Two things are certain about community based conservation: It is possible, and it is difficult. 512
- The involvement of governments in community-based conservation often generates new conflicts, since the interests of governments seldom coincide with community interests. 514
- Outsider can stimulate and facilitate local participation and skills. They also may have to do what locals cannot for themselves in the interim; help create dialogue within and between communities and link communities to the outside. These roles should change over time, as projects develop and people acquire their own skills. 515
- ...no matter how great the necessity for long-term planning, communities need to see acceptable short-term benefits in the interim if CB is to succeed. 519
- ...helping to ensure cultural survival and actual diversity through community-based efforts could itself be a technique for conserving biodiversity. 520
- [CB programs] attempt to redress inequities, albeit modestly, and contribute mechanisms that allow the community voice to be heard beyond the conservation context, on many issues. 522

R. Michael Wright, "Recommendations", pp. 524-535.

- If CB is to succeed, it must always address local problems that communities feel directly and remain rooted in their local reality and values. 524
- Conservationists should undertake an active search for innovative partnerships that build on the enormous diversity of traditional knowledge and unique conservation solutions. 525
- Confidence comes from success built on existing activities that are locally tested and culturally calibrated. 527
- Capacity building requires programs with sufficient time for consensus to emerge, access to timely information, an appropriate scale of activities, and funding to strengthen local capacities. 526-7
- Government's most fundamental role in CB is to establish a civil context that allows free and open participation in the political process by all levels of society. 527

- CB requires unprecedented collaboration--horizontally, often between competing institutions, and vertically, through institutions at different levels of society. 530
- A supportive institutional environment is a necessary condition for village-level conservation to prosper. 530
- Because community initiatives are often stimulated by crisis, mediation and conflict resolution skills are particularly relevant. 530
- Strengthening of institutions should favor preexisting institutions rather than the creation of new ones. 531

Marshall Murphee, "The Role of Institutions in Community-Based Conservation", pp. 403-427.

- For communities to act as effective agents of conservation, they must be structured so as to accommodate internal differences for collective goals. 403
- If the objective is community-based conservation, proprietorship in some significant form must be in place or projected into the community itself. 406
- If the community is to serve as a viable principle of social organization in the contemporary world, it must be institutionalized in a way that allows effective interaction with external institutional actors. 414
- CB schemes can play an important role in strengthening the development of effective institutions of local governance. 419
- ...donor funding should further community interests rather than buy the donor a stake in the community's resources. 421
- Donor funds also can enhance a community's bargaining position with private entrepreneurs, who also can be a source of capital inputs. 422
- They [international environment actors] seek to introduce long-term conservation directions into societies governed by short term needs and development imperatives p.423
- I think that a complete analysis and understanding of the project would reveal that whatever successes it achieves will be the result of a symbiosis of government, NGOS, local communities and big game hunters (P. Fry, 1991) 424

Daniel Bromley, "Economic Dimensions of Community-Based Conservation", pp. 428-447.

- The economic dimension of CB centers around the search for new institutional arrangements that will align the interests of local people with the interests of non-local - and often distant - individuals and groups seeking sustainable management of particular ecosystems. p.429
- Economists are interested in the choices that people make, given the context in which individuals find themselves at a particular moment. 429
- Incentive compatibility is established when local inhabitants acquire an economic interest in the long-run viability of an ecosystem that is important to people situated elsewhere. 429
- ...local individuals can become part of a system of community-based conservation if they are given an interest in the benefit stream flowing from the newly managed biological domain. 432

- Prices and costs are simply artifacts of the prevailing institutional structure that indicates which factors of production must be paid for and which can be obtained free of charge. Hence, "cost" is a function of underlying legal arrangements. 432
- Community-based conservation is an effort to assign rights and duties to local communities so that they behave in certain ways with respect to particular biological resources. The rights come in terms of the secure expectation that local management in the interest of biological conservation will be rewarded in some way. The duties come in terms of the obligations that local groups agree to undertake in order to reap the benefits of biological conservation. p.433
- Economic instruments for biological conservation cannot be regarded in isolation from the legal regime that makes those economic instruments both relevant and binding to economic agents. p.435
- Where compulsion is necessary to realize conserving activities, then the domain of choice for individuals is constrained. p.435
- Conservation is enhanced to the extent that local people can be vested with a long-run interest in resource management. p.437
- This management, in addition to concern for the nature and extent of natural resource use, also would be concerned with mobilizing and implementing investments in these resources. Such investments, in all probability, would constitute joint property among the co???? of the regime. p.439

“Are Community-Based Conservation Projects Designed or Discovered,” F. Seymour, pp. 472-496.

- The long-term sustainability of projects, depends on national-level political support and local level political empowerment. p.495
- Donors and the intermediaries that they support can play a facilitative role through support for alliance building, strengthening of intermediary institutions, diagnostic research, study tours, and meeting and conferences. p.495

Biodiversity Support Program (1993) *African Biodiversity: Foundation for the Future—A Framework for Integrating Biodiversity Conservation and Sustainable Development.*

- The shift has occurred as recognition has grown that local cooperation, participation, and management are crucial to achieving both short-term develop. results and long-term sustainability.103
- According to Paul (1987) community participation is the process "whereby people act in groups to influence the direction and outcome of development programs that will affect them." p.103
- Participation may be thought of as the deliberate action of the people and government to respond jointly in the formulation, planning, and implementation of a strategy to satisfy a particular need. p.103
- In the development of national strategies, for example, participation must come from those professionals who can identify and classify the biological resources that exist in the various habitats of the countries and who can then assist in defining clear objectives for

their conservation and use.104

- In cases where the management of a protected area is weak, pressures of growing populations, widespread poverty, and unsustainable land-use practices outside the protected area boundaries can cause people to engage in illegal and destructive encroachment within protected areas. 104
- The future viability of protected areas in Africa appears to hinges on the cooperation and support of local people. This cooperation and support, in turn, depends on whether the areas can provide local communities with benefits that are sufficiently concrete for people to want to maintain the areas reserves. 104
- ...representation of relevant local groups on site management committees of reserves can greatly facilitate communication of project objectives and activities to the people, promote a participatory feeling, and eliminate misunderstanding. 106
- Any future strategies for conserving biodiversity in Africa must be extended to include the biodiversity on the 96 percent of land outside of protected areas. 106
- The paucity of other good examples of participatory conservation and development projects in Africa is due, in part, to a limited understanding of the process that leads to effective participation and, impart, to the difficulty in achieving genuine participation. 106
- Efforts to involve local people in the conservation of biodiversity in Africa will not succeed in the long-term unless local people perceive those efforts as serving their economic and cultural interests. 106-7
- Participation commonly refers to some aspect of involvement of local populations in the design, implementation, and evaluation of projects. To initiate such a process, it is necessary to determine the primary stakeholders in the project - individuals and groups with a vested interest in the outcome of the project. 107
- Participatory approaches can have numerous and diverse objectives, operational strategies, and results. 108
- Any truly participatory effort will have stakeholders defining and assessing problems and opportunities, ascertaining the various options available, defining the implications of those options, and making decisions as to what option(s) to pursue. 108
- Strong private sector involvement is important to sustain programs, as well as to initiate new ones. p.82
- Biodiversity conservation and use can enable the development of local communities and their nations. p.82

Fox, J. (ed.) (1994) *Spatial Information and Etnoecology: Case Studies from Indonesia, Nepal, and Thailand*, East-West Center Working Papers, No. 38.

- McNeely (1993,249) argues that building community involvement in managing protected areas requires a combination of incentives and disincentives, economic benefits and law enforcement, education and awareness, employment in the protected areas and employment opportunities outside, and enhanced land tenure and control of new immigration: "The key is to find a balance among the competing demands, and this will usually require a site-specific solution." p.24

- Whenever possible, enforcement should be administered by local people (McNeely 1993, 256). p.25

Munasinghe, M., and McNeely, J. (eds.) (1994) *Protected Area Economics and Policy: Linking Conservation and Sustainable Development*, Washington, DC: The World Bank.

“An Introduction to Protected Area Economics and Policy,” M.M. and J.M., pp. 1-11

- In purely economic terms, the production of a good is economically justified when the total benefits exceed the total cost; this must include the so-called external costs of dealing with pollution and environmental degradation. 2
- Conflicts between protected area management and local economic development are intensifying in many parts of the world, demanding new approaches to protecting biodiversity as well as the rights of people who live in and around the protected areas.
- ...the further economic development proceeds, and the more widespread the market system becomes, the greater will be the need for governments to establish protected areas as part of the official development policy. 3
- ...once the economy starts to grow, natural resources begin to be perceived as a capital stock which could be drawn upon to finance development and to provide a cushion against economic shocks. 3
- ...as economies develop further and reach a mature stage, political support for protection of natural areas increases, but by this time much biodiversity may have been lost. 3
- ...income from tourism could contribute significantly to the better management of protected areas, and outweigh the disadvantages of tourism (which can be significantly reduced by ecologically sustainable practices). 6
- A partial solution would be to devolve control of the protected areas to local communities, although it is essential that this process be backed up by a legal and policy framework empowering local communities to assume responsibility and authority for natural resources management and land management contracts with representatives of the government. 7
- Protected areas can meet the needs of society only if social analysis is fully integrated with economic and ecological-biological analyses in their application to protected areas. Areas will not be protected unless their management is acceptable to the local communities and they themselves are involved in, and benefited by, their existence. 9
- Compromises and solutions between conservation and development issues are site-specific approach is the best hope of a culturally appropriate solution. 9
- ...analysis would entail establishing local use of a protected area and identifying local needs and preferences as a means of providing incentives towards positive acceptance of any burdens or limits put on local communities by others in the process of their land being “protected”. 9
- Like all forms of tourism, nature-based tourism should not degrade the resource and should contribute actively to sustainable development. 9

“Economic and policy issues in natural habitats and protected areas,” M.M., 15-49

- The concept of sustainable development encompasses three major points of view:

economic, social and ecological... 16

- [Economic approach to sustainability] This concept defines the maximum flow of income that could be generated while maintaining or increasing the stock of assets or capital that yield these benefits. 16
- The social concept of sustainable development is people-oriented, and seeks to maintain the stability of social and cultural systems, including the reduction of destructive conflicts. 16
- ...there is a growing body of empirical evidence showing that an insignificant overlap exists between groups who benefit most from the loss of natural habitats, and those who bear the cost. 20
- Transfer of capital, knowledge, and technology from the developed to the developing nations are essential to enable the developing countries to share in the effort of protecting the “global commons” are which natural habitats is a major element. 25
- ...biodiversity conservation problems may be better addressed by adopting an approach that is less capital-intensive, but that can be implemented over the long-term. Projects should be developed based on a reflection of local needs and perceptions that can be modified to meet changing conditions. 27
- [conservation-development projects] These projects aim to achieve their conservation goals by promoting development and providing local people with alternative income sources that sustain rather than threaten the flora and fauna in natural habitats. The projects are based on the premise that protected area management must reach beyond traditional conservation activities inside park and reserve boundaries to address the needs of contiguous local communities. 27
- ...hostel relations between park personnel and local communities have become substantially more amicable as a result of project personnel performing a mediation role. 27
- [ICDP case study projects have shown] - winning the trust and confidence of local people, - eliciting the participation of community members in project-initiated activities, - starting institutions for local resource management decision-making. 28
- Real participation is best achieved by confidence-building and conflict resolution measures that entail a genuine and realistic apportionment of decision-making power. 28
- The establishment of an environmental economic framework facilitates the incorporation of environmental economic concerns into conventional economic analysis, thereby improving decisionmaking at the economy-wide, sectoral, and micro-levels. 29
- A review of ICDPs suggest that, if such programs constructively address people-park issues and win the trust and support of local communities, they can play an important role in sustainable development. 29

“Conservation, protected areas, and global economic system: How debt, trade, Exchange rates, Inflation, and Macroeconomic policy Affect Biological diversity,” Clem Tisdell, 51-80

- Western economists claim that human desire for economic goods is infinite. 54
- ‘We advocate a line of action which requires that economic growth and environmental protection go hand in hand. There are two aspects to the relationship between economic

growth and environmental protection: While they are mutually contradictory, they also are mutually complementary. Economic growth does bring along environmental problems, but it can also strengthen man's hand in tackling these very problems whose successful solution will, in turn, create more favorable conditions for economic growth. This fact has been fully borne out by the experiences a number of developed countries have gained in improving their environment.' (L.G. and L.W) 61

- The world has become a global village from an environmental point of view. Economic activities in a single country often have direct environmental impacts or consequences for other countries. 63 Liu Guonguang, Liang Wensen, 1987, *China's Economy in 2000*, Beijing, New World Press.

"Conservation in the Big Picture: Development Approaches for the next decade," Kirk P. Rogers, Richard E. Saunier, 69-80

- 'A realistic view is that growth in income and an expansion of economic opportunities are necessary preconditions of human development. Without growth, the social agenda...cannot be carried out. Although growth is not the end of development, the absence of growth often is.' (UNDP, 1991) 74
- The report of the World Commission on Environment and Development (1987) correctly identifies two major prerequisites to making development sustainable: (a) that conservation is a necessary part of development; and (b) that development is required if conservation is to be possible. 75
- The resolution of disputes involves several parts of an ongoing response. The first step in the response is that we understand the existence of the different and continually changing needs of billions of people. ... Second is the concept of holism - of the interrelatedness of our world. 75
- Positive efforts at the resolution of disputes must now be undertaken by conservationists both as participants and as arbiters. If conservationists do not care to participate in such ventures, conservation will lose out. 75
- ...[goals and methods of integrated regional planning) formulation of development strategies over a well-defined space, identification of priority areas and activities, and identification of project ideas that are compatible with one another and with the socioeconomic and cultural characteristics of the region. 76 United Nations Development Program, 1991, *Human Development Report 91*, UNDP, NY

"Socioeconomic and Ecological Prospects for multiple use of protected areas in Africa," Walter Lusigi, 81-90

- Protected areas should be able to contribute substantively to the welfare of the surrounding populations, and the surrounding populations should be able to assure the survival of the protected areas in the long run. 82
- Obstacles to economic development are the meagerness of resources, the poor condition of infrastructure, and a generally unfavorable climate. 83
- The monitoring and evaluation of project implementation and physical impact would be done by measuring the interventions at the terroir level (inputs) and assessing the impact

on the land, the natural resources, and the agricultural productivity and production (output). These outputs are: an increase in soil resources, soil fertility, vegetative cover, fodder production, agricultural productivity and production, seedling production, tree planting, and organic fertilizer use. 89

- The monitoring and evaluation of the socioeconomic impact implies measuring how the social organization of the community has changed through project implementation in terms of - effective establishment of terroir management committees; - representation of all social groups in the committees; - better awareness and greater commitment of the communities; - effectiveness of the committees in solving internal conflicts and in dealing with community partners; and - successfully establishing the limits of the terroir, finalizing the land use plan (zoning), redistributing land, negotiating the contract, and mobilizing people for the implementation phase of the management plan. 89

“Making investment (Aid) work to develop institutionally sustainable programs,” Simon Metcalfe, 91-97

- The possibility for establishing integrated resource management depends, in part, on linking people to an authority that is functional and linked reciprocally to a spatial and temporal system of authority from household, villages, districts, regions, and beyond. 92
- This goal can be achieved by uniting the local authority for natural resources to other authorities in specific use and access zones. 92
- Developing countries can be deeply threatened by having to rely on finance, science, project management, and supervision from outside the country. 94
- A development strategy that begins with the need to develop the capacity of local agencies of a country to implement its own projects and programs is investing in institutional sustainability. 94
- ...‘outside assistance can be given in ways that offer inducements to local effort if the amounts are manageable, the procedures supportive, the kinds appropriate, the pace of expansion flexible, the approach experimental, and the expectations reasonable. 95

Uphoff, N., 1986, Local institutional development, an analytical sourcebook with cases, rural development committee, Cornell university, Kumarian press.

“Rattan management for sustainable livelihoods and forest conservation: the case of Kerinci-seblat national park, Indonesia,” S. Siebert, J. Bellsky, K. Rauf, 125-132

- ...simultaneously protecting biodiversity and the rights of people who live in and around protected areas is the paramount conservation challenge throughout the world. 126

“Starting resource accounting in protected areas,” M.D. Cacha, 151-159

- In developing economies, market prices are even more distorted with the extremely uneven distribution of wealth and access to resources. 153

“The Economics of Global Ecotourism,” F.L. Fillion, J.P. Foley, A.J. Jacquemot, 235-252

- Depending on the region, ecotourism appears to account for some 40-60 percent of international tourism. 239

“Sustainable Tourism Development,” K. Lawrence, 263-272

- The theory that economic and environmental goals are not mutually exclusive has become prominent in recent research literature. It has been suggested, in fact, that they are mutually beneficial and interdependent. 263
- For tourism development to be truly sustainable, it must be based upon environmental and social attributes. 264
- Long term, sustainable development “must depend upon a partnership and balance between economics, the environment and social values and benefits” (British Columbia Task force of Environment and economy 1989, Sustaining the Living Land, British Columbia, BCTFEE, p.16) 265
- Sustainable development can only be achieved if social and environmental impacts are in balance with economic goals. 265

“The economics and the role of privately owned lands used for nature tourism, education, and conservation,” C.L. Alderman, 273-317

- ...private reserves generate substantial local employment, this being particularly true about reserves that cater to nature tourism. 291
- The long-term survival of these reserves as protected areas could be fostered by developing links between the reserves and government agencies and nongovernmental groups. 291
- The economic success of private reserves is often dependent upon nonconservation-related factors such as accessibility, management, and the political situation of the country in which they are located. 292

“Parks Tourism in Nepal: Reconciling the social and economic opportunities with the ecological and cultural threats,” M.P. Wells, 319-331

- Powerful arguments for conservation can be developed when the economic benefits from protected areas exceed the costs, as appears to be the case in Nepal. However, this does not guarantee the survival of protected area networks. 320

“The economic feasibility and ecological sustainability of the Bonaire Marine park, Dutch Antilles,” J.C. Post, 333-338

- Ideally, every protected area should become ecologically sustainable and economically feasible for the community and for the individual so that everybody complies voluntarily with the regulations pertaining to the protection of the protected area. 334

Pimbert, M., and Pretty, M. (1995) *Parks, People, and Professionals: Putting Participation into Protected Area Management*, New York: United Nations Resource Institute for Social Development and The World Wildlife Fund for Nature.

- Internationally accepted criteria for defining protected areas (IUCN, 1994) now recognize a wide spectrum of categories ranging from strictly protected nature reserves to managed resources in protected areas. The inclusion of a category that allows the sustainable use

of resources in protected areas is particularly noteworthy in this context. In this new credo, it is implied that protected areas should be managed in ways that sustain both local livelihoods and the conservation of nature. p. 2

- Indeed, it is when local people are excluded that degradation is more likely to occur. p.3
- Traditional organizations are resources to be strengthened, changed and developed, not ignored or suppressed. p.9
- There are, therefore, no ready-made blueprints for designing protected areas that integrate environment and development into sustainable livelihoods. p.11
- Sustainable development is not so much a specific strategy as it is an approach. p.19
- ...it is essential to seek multiple perspectives on a problem situation by ensuring the wide involvement of different actors and groups. p.19
- They [actors] should make uncertainties explicit and encourage rather than obstruct wide public debates about pursuing new paths for conservation and development. p.19
- Participation and collaboration are essential components of any system of inquiry, as change cannot be effective without the full involvement of all stakeholders and the adequate representation of their views and perspectives. As Sriskandarajah et. al. writes, "ways of researching need to be developed that combine 'finding out' about complete and dynamic situations with taking action to improve them, in such a way that the actor and the beneficiaries of the 'action research' are intimately involved as participants in the whole process (1991:14) p.19-20
- One of the objectives of rural support institutions must..be to ensure greater involvement with and empowerment of diverse people and groups. as sustainable development is threatened without it. The dilemma for authorities is that they both need and fear people's participation. They need people's agreement and support, but they fear that this wider involvement is less controllable, less precise and so likely to slow down planning processes. p.25
- There is a growing recognition that, without local involvement, there is little chance at protecting wildlife. Moreover, the costs of park management are very high if local communities are not involved in caring for the environment. p.25
- If the objective is to achieve sustainable conservation, than nothing less than functional participation will suffice. All the evidence points to long-term economic and environmental success only when people's ideas and knowledge are valued and power is given to them to make decisions independently of external agencies. p.26
- What is important is to ensure that those using participation both clarify its specific application and find ways of shifting from the more common passive, consultative and incentive-driven participation towards the interactive end of the spectrum. p.27
- Action is based on consensus and implementable changes, therefore, represent an accommodation between the different conflicting views. This action includes local institutional building or strengthening, so increasing the capacity of people to initiate action on their own. p.28
- Only by seriously examining how local communities will tangibly and immediately benefit from conservation activities will protected areas be sustainable and cost effective. The aim is to integrate development and environmental concerns by operationalizing the

concept of sustainable livelihoods for all. This can be achieved through an application that emphasizes community empowerment, enabling all people to secure their basic needs and rights, and care of the environment that sustains life in all its forms. p.29

- The professional challenge for protected area management is to replace the top-down, standardized, simplified, rigid and short-term practices with local level diversified, flexible, unregulated and long-term natural resource management practices. p.29
- Analysis, choice, experiment, project design and evaluation are conducted by and with people themselves, with outside professionals assuming a facilitating and supporting role. p.30
- Through interactive participation, people could take control over local decisions, and so have a stake in maintaining structures and conservation practices. p.30
- Such an approach would establish and develop parks and protected areas with a view to strengthening local livelihood opportunities, and then integrate these measures with nature conservation objectives. ??decision and management of protected areas should thus rely on participatory processes that seek to give more power to local communities. p.30
- Systems of participatory learning and interaction, therefore, imply new roles for conservation professionals, and these all require a new professionalism with new concepts, values, methods and behavior. p.30
- New policies must be enabling, creating the conditions for self-reliant development based more on the use of local available resources. p.33
- Despite the pressures that increasingly undermines local systems of knowledge and management, protected area management plans should start with what people already know and do well, so as to serve their livelihoods and sustain the diversity of natural resources on which they depend. p.34
- In developing protected area management schemes, increased attention will have to be given to community-based action through local institutions and user groups, e.g. natural resource management group's, women's associations, and credit management groups. p.34
- Conservation groups have begun to realize that effective reserve protection is only possible if local communities are both fully involved in protected area planning and gain direct benefits from the project. p.34
- Protected area projects seeking to provide benefits for local and national economies should give preference to informal innovative systems, reliance on local resources and local satisfiers of human needs. p.34
- If local communities fully participate in the design, implementation, and maintenance phases of projects designed to meet health, housing, sanitation, water needs revenue generating activities (e.g. tourism), the results are likely to be more sustainable and effective than those imposed by outside professionals. p.35
- In this new approach to protected area management, the initial focus should be on what people articulate as most important to them. p.35
- The goal of these grassroots initiatives is "not to conquer or vanquish the state but to forge selective alliances with parts of the state and its bureaucracy while avoiding new

clientalistic constraints. Such successful political action will gradually lead to what the excluded would view as a "better state", one where their claims and interests are taken more seriously and where authorities may be willing to tip the balance of power in their favor... In the last analysis, there may be no alternative to the joint efforts of a reformist state and a reinvigorated and organized civil society in which the excluded can make their voices heard." (steifl & Wolfe, 1994 204-5). p.39

- When local communities have been granted secure usufruct rights over neighboring forests, governments have witnessed clear reversals in forest degradation and its associated loss of biodiversity. p.40
- Building appropriate partnerships between state and rural communities requires new legislation, policies, and institutional linkages and processes. p.42
- Strong community organization and mobilization are features of a participatory process that seeks to insure that conservation initiatives serve the interests of local people. p.44

Biggs, S., and Matsuert, H. (1999) "An Actor-Oriented Approach for Strengthening Research and Development Capabilities in Natural Resource Systems," *Public Administration and Development*, vol. 19, pp.231-262.

- "The limited impact of farmer participatory research to date, and the general failure to effectively grapple with the monitoring and evaluation issue, reflect the lack of both a generally accepted conceptual framework and associated methods with which to identify, characterize and analyze farmers' own experimentation and information exchange." 233 (Okali, C., Sumberg, J., and Farrington, J. (1994) *Farmer Participatory Research*, Intermediate Technology Publications, London, p. 127.)
- Because projects are frequently working within a complex political context, project planners often ignore this question. However, it is becoming apparent that sustainable research capacity can only be developed by confronting and addressing these issues. 234
- "In both the Third World and in the West, the ethics and morality surrounding interventions in the name of 'development' are subordinated to the demands for objective measurement and the development of more rigorous instruments to evaluate success. But little attention is given to the values that inform the evaluation process or to the culturally specific contexts in which costs, benefits and risks are assessed." (Marsden, D. (1994) "Indigenous Movement," *Evaluating Social Development Projects*, Oxfam, Oxford, p.39.) 234
- A move towards 'process approaches' (Mosse *et al.*, 1998) has given projects more flexibility and opportunity to adapt and change during their lives. The idea of projects needing to be replanned as they continue is not new (Korten, 1980; Biggs, 1981), but it is attracting more attention now in process projects. 235
- "...the process of evaluation is itself an important social development tool. Participatory evaluation of self-evaluation (Uphoff, 1991) may be a powerful catalyst of social development by helping to create awareness, collective responsibility and solidarity (Moris, J. and Copestake, J. (1993) *Qualitative Inquiry for Rural Development*, Intermediate Technology Publication, London, p.43.) 236

Cain, J., C. Batchelor, and D. Waughray (1999) “Belief Networks: A Framework for the Participatory Development of Natural Resource Management Strategies” *Environment, Development and Sustainability*, 1: 123-133.

- It is widely accepted that the management of natural resources should aim to benefit all resource users as equitably as possible, within the constraint of sustainability (environmental, financial and institutional). Such multi-objective management approaches have been termed Integrated Natural Resource Management (INRM) strategies. 123

Beierle, T.C. and J. Cayford (2002) *Democracy in Practice, Public Participation in Environmental Decisions*, Washington, DC: Resources for the Future.

- Public participation is best understood as a challenge to the traditional management of government policy by experts in administrative agencies. From the late nineteenth century until the middle of the twentieth century, public administration in the United States was dominated by the “managerial” model in which government administrators were entrusted to identify and pursue the common good. 2
- As government responsibilities increased in scope and complexity, large professional bureaucracies grew to manage them. Around the turn of the century, for example, Gifford Pinchot, established a strong managerial ethos for the nascent U.S. Forest Service, which was responsible for managing vast tracts of public land. Through “scientific forestry,” Pinchot sought to serve the public interest by applying conservation policies that produced the greatest good for the greatest number for the longest time. Such a concept of social welfare maximization still drives managerialism. It is most often associated in modern environmental policymaking with the decision tools of risk assessment and cost-benefit analysis. 2-3
- “On the one hand, we have established that in order for government to be truly responsive to the incessant demands of the American people for public programs to solve private problems, rulemaking is essential...On the other hand, as an indispensable surrogate to the legislative process, rulemaking has a fundamental flaw that violates basic democratic principles. Those who write the law embodied in rules are not elected; they are accountable to the American people only through indirect and less than foolproof means” [Kerwin, C. (1999) *Rulemaking: How Government Agencies Write Law and Make Policy*, Washington, DC: Congressional Quarterly, Inc, p. 157]. 3
- According to the pluralist view, government administrators were not a source of objective decision making in the public interest but arbiters among different interests within the public. Whereas, the managerial perspective identified maximization of social welfare as the ultimate social goal, pluralism did not recognize an objective sense of the “public good.” Rather, a contingent public good was to be debated and arrived at by negotiation among interests. 3-4
- In recent years, the pluralist paradigm has come under pressure from an even more intensely participatory perspective. This “popular” democratic theory stresses the importance of the act of participation, not only in influencing decisions but also in strengthening civic capacity and social capital. Like pluralism, popular democracy

emphasizes interaction among often adversarial interests, but that interaction is viewed less as a competitive negotiation than as a way to identify the common good and subsequently act on shared communal (versus individual) goals. 4

- From the popular democratic perspective, participation “makes people more aware of the linkages between public and private interests, helps them develop a sense of justice, and is a critical part of the process of developing a sense of community” [Laird, F.N. (1993) “Participatory Analysis, Democracy and Technological Decision Making”, *Science, Technology, and Human Values* 18(3), p. 345]. In environmental policymaking, the popular perspective has focused attention on the role of communities in environmental protection, spawning for example, the U.S. Environmental Protection Agency’s (EPA’s) efforts at “community-based environmental protection” and the National Environmental Justice Advisory Committee’s *Model Plan for Public Participation*. 4
- Although one can chart a historical progression from managerialism to pluralism to popular democracy, all three perspectives continue to compete in contemporary debates about how environmental policy should be made and implemented. 4
- We define *public participation* as any of several “mechanisms” intentionally instituted to involve the lay public or their representatives in administrative decision making. Such mechanisms range from town meetings at which citizens express their opinions to formally mediated negotiations in which parties write regulations; they also include advisory committees, citizen juries, and focus groups. 6
- Our definition excludes some methods of participation that are important in their own right and have extensive traditions as well as legal foundations. For example, we exclude voting for elected officials, referenda, and initiatives as well as lobbying and citizen lawsuits. We also exclude less regulated methods (such as striking and picketing) and extralegal ones (such as violence). We focus on organized bureaucratic processes, not individual actions or power politics. 6
- Although our definition is narrower than it could be, it is broader than some. In particular, many analysts and practitioners distinguish between *public participation* and *stakeholder involvement*. The former term generally connotes a popular democratic notion of lay citizens’ involvement in local issues and the latter term a more pluralist notion of interest group involvement in policy-level questions. We make no such distinction here and use *public participation* as an umbrella term that encompasses diverse definitions of who the public is, how the public is represented, why the public is involved, and what the public is involved in. 6
- We evaluate public participation on the basis of contemporary claims about what it can accomplish in environmental decision making. These claims can be summarized as five “social goals” for public participation:
 - Goal 1: Incorporating public values into decisions
 - Goal 2: Improving the substantive quality of decisions
 - Goal 3: Resolving conflict among competing interests
 - Goal 4: Building trust in institutions
 - Goal 5: Educating and informing the public 6

- In this book, *success* is defined as the extent to which public participation efforts achieve these social goals. 7
- The environmental regulatory system in the United States was born of conflict between environmental and industrial interests, and conflict has persisted as the system has matured. 15
- The goal of conflict resolution is based on the argument that collaborative rather than adversarial decision making is more likely the result in lasting and more satisfying decisions, potentially averting the litigation and gridlock that characterize much environmental decision making. 15
- Considerably more public participation cases in our database produced good outcomes than produced bad outcomes. As a group, the cases were most successful in educating and informing the public and least successful in building trust in institutions. Falling in between were the results for incorporating public values into decisions, improving the substantive quality of decisions, and resolving conflict among competing interests. As an indication of the outcomes of a varied set of stakeholder processes, the case study pool gives an optimistic view of what such processes can accomplish. 33
- Many cases lacked significant outreach, either to inform the wider public or to incorporate their values into decision making, despite the fact that the active participants often were not socioeconomically representative or did not reflect the full range of relevant interests. The tension between achieving the social goals among participants and failing to engage the wider public is apparent across the case studies. 33
- Consensus requires opposing interests to work together to come to a common and acceptable solution in ways that voting and other approaches to decision making do not. Consensus-based decision making takes on aspects of internal negotiations among participants, and these kinds of cases commonly are facilitated by a third party. Recent analyses of public participation have challenged the wisdom of emphasizing consensus over the approaches to reaching a decision, and the attention to consensus here can help inform that debate. 46
- Project planners usually are faced with the choice between participants who are representative in terms of the various interests affected by an issue or representative in terms of socioeconomic characteristics (e.g., age, race education, and income). For example, participants in regulatory negotiations are selected to represent broad categories of interest groups, whereas participants in citizen juries are randomly selected to reflect the socioeconomic characteristics of an area. 67
- Choosing between the two kinds of representation is essentially a decision between instrumental and normative rationales. Interest group representatives are more likely than average citizens to wield the political influence that makes sure their input is heard and acted on. However, average citizens probably reflect broad public values more accurately. The specific goals of the process usually determine which alternative is most appropriate. 67
- Some research suggests that one of the few ways agencies can rebuild trust is by increasing public influence on decision making. In our analysis, the goal of incorporating public values, which essentially measures the public's influence, is highly and

significantly correlated with the goal of building trust. In low-trust situations, then, the public may need to be granted more influence to convince them of the legitimacy of the public participation process. 68

Adler, Peter S., PhD, Barrett, Robert C., J.D., Bean, Martha C., Birkhoff, Juliana E., Osawa, Connie P. Ph.D., Rudin, Emily B. (2002) *Managing Scientific and Technical Information in Environmental Cases: Principles and Practices for Mediators and Facilitators*, Sponsors: RESOLVE, Inc., U.S. Institute for Environmental Conflict Resolution, Western Justice Center Foundation.

- In general, there are three kinds of uncertainties that tend to arise in environmental cases: (a) uncertainties in which the measurements or observations are insufficient to bound explanation and interpretation; (b) uncertainties that arise because the measurements conflict; and (c) uncertainties over competing or fragmentary theoretical frameworks.⁹ NOTE 9: See “Resolving Science Intensive Public Policy Disputes: Reflections on the new York Bight Initiative by Scott McCreary” in *The Consensus Building Handbook* by Lawrence Susskind, Sarah McKernan, and Jennifer Thomas-Larmer, Sage Publications, 1999, pp. 829-858. 16
- Most environmental decisions have unintended consequences. For every action, law, policy or program adopted to manage a conflict, no matter how well intended, there is a real risk of unintended consequences. They are not merely calculated risks, side effects, or trade-offs. “Revenge effects” happen because new structures, devices, and organisms react with real people in real situations in ways that cannot be foreseen. 16
- Environmental disputes are rarely caused by scientific or technical information *per se*. Most often, they tend to be about (a) perceived or actual competition over interests; (b) different criteria for evaluating ideas or behaviors; (c) differing goals, values and ways of life; (d) misinformation, lack of information, and differing ways of interpreting or assessing data; and/or (e) unequal control, power, and authority to distribute or enjoy resources. 17
- ...all models have uncertainty; it is misleading to believe that a number generated by a model is a singular value that predicts a future state with absolute certainty. Stakeholders must understand (and scientists must be assisted to honestly portray) that there is a range of quantities that surround any number output from a model. This variance reflects, among other things, the assumptions of the modelers and the complexity of the natural system. Models will help differentiate answers, but will not enumerate the one true and correct answer. Models are rarely fully predictive; they are best thought of as illustrative. Models serve best when stakeholders understand that models describe ranges of options and are merely tools – albeit sophisticated tools – to aid in making informed choices. 18
- Mediators, facilitators, and consensus-builders have their own modes of thinking and problem solving and their own vocabulary. Many third parties tend to think in terms of “agreements”, “Decisions”, and “solutions” all of which somehow imply failure when there is no tangible result to a process. Managing and sometimes limiting the inherent

third-party bias for action is important. In many environmental conflicts, the right action will be no action.¹¹ NOTE 11: Some philosophies of mediation hold that parties are better served by a transformational approach to mediation (as distinguished from approaches that primarily emphasize problem solving). See, for example, **The Promise of Mediation** by Baruch Bush and Joe Folger. 19

- Insure that the conventional start-up process (ground rules, limiting topics, learning about each other's interests) is inclusive of the anticipated scientific and technical exchanges that will likely be a part of the mediation process. State the obvious: "There are policy considerations that are latent in this issue or dispute. As we negotiate, we will probably identify economic, political, social, and public policy issues within the scientific issues." Assure parties that those will be addressed (make sure to address them). 27
- Build bridges between scientists and non-scientists by helping each to understand the other's perspectives, values, and ways of knowing. Experts and lay people often talk past each other. Choreograph the proceedings and schedule time to help stakeholders understand the orientation of scientists and scientists to understand how important other ways of valuing, knowing, and deciding are. 28
- Technical experts and scientists often become infatuated with their own curiosities and with issues in their own fields of expertise. Rope-in the science so that the questions under discussion and the data and information being examined are germane to the issues at hand. Frequently, this requires that the mediator have scientists conduct a dry run of their presentation. During this dry run, continually (and ruthlessly) ask the scientist to illuminate the relevance of what they are asserting to the decisions that are in front of the group. 29
- Promote dynamic, flexible, and adaptive agreements that balance reasonable stability (which is usually needed for business stability) with flexibility and performance-based adaptability (which are needed for higher levels of environmental assurance). While it may not always be possible, try to help the parties craft an agreement that allows for change so that if they are wrong about the science, they can revisit and re-negotiate the issues. This kind of agreement-making is intrinsically difficult, especially in public health issues. Defendants and respondents usually require closure and release so that they do not have on-going liability or adverse publicity. Plaintiffs and complainants are often unwilling to concede closure because of scientific uncertainties. 31