

# Approach



Top           Cleared slopes and road used for carrying timber - Northern Areas, Pakistan  
*Vaqr Zakaria*

Bottom       Road damaged by debris in Yunnan, China  
*Cai Yunlong*

## Chapter Two

# Approach

### **Approaches to Evaluating Land Policy**

As already stated, the main goal of this project is the evaluation of the impact of land policy on land management by resource users and its subsequent effects on environmental outcomes and livelihoods. The results would, in intention at least, then be communicated to policy-makers who would have rational grounds for improving their land policies in the light of any policy recommendations. However, there are three important challenges to the fulfilment of this goal, and they are central both to the way in which this study is written as well as to our approach to analysing policy and recommending change.

- Proving the policy effect. There are difficulties of providing unambiguous, empirical proof of the policy effect upon environmental outcomes (with a few evidence-based exceptions). They have implications for the scientific justifications for environmental policy, suggesting that these may often have shaky foundations, and that other social and ethical criteria, in addition to environmental ones, may be added.
- Competing criteria for evaluation. Plural definitions and criteria exist for evaluating environmental outcomes, particularly the definition of land degradation. While an individual may place one definition above others, our view is that this does not imply acceptance of conventional assumptions about single authoritative criteria. There are links between knowledge, science, and policy-making (mostly concerning the environmental justifications for policies that also have socioeconomic impacts) that must be examined.
- The rational model of policy-making. This dominant model of policy-making assumes that truth talks to power, and that policy-makers listen to truth (particularly scientific truth) and adopt policies that are in the public good. It is often assumed that policies are not substantially captured or affected by professional and political interests. There is so

much literature and evidence that policy does not work in this way that alternative approaches, which are more realistic and helpful, must be explored.

## **Proving the Policy Effect on the Environment**

The dominant and conventional method of undertaking research of this type is to identify positive scientific evidence of the difference in environmental outcomes between a policy and no-policy situation. This can be done by making a with-without comparison in different locations during the same period in time or a before-after comparison in the same location at different points in time, or by comparing the outcomes of two different policies either at different locations or at different periods of time. That all other conditions are equal has to be shown to exist to some tolerable degree, and then the differences in environmental degradation must be assumed to be due to the policy effect. This method is the toughest in terms of standards of proof, is respected by other scientists, and is most likely to be accepted by many of the audiences of this study. However, there were some substantial reasons why this method could only produce convincing evidence of the policy effect in a few cases. There are three major obstacles to the successful use of this method.

- One of the most important obstacles to disentangling the policy effect is the impact of socioeconomic change that operates in the same locations and over the same period as the policy effect. For example, in the Hindu Kush-Himalayan region, population growth, rapid urbanisation outside the mountain areas, economic liberalisation programmes, the increasing importance of non-agricultural incomes for rural populations, and labour withdrawal from the agricultural sector due to out-migration are all known to be important elements of environmental and socioeconomic change, and to be highly spatially variable. However, they may have more important impacts upon environmental management than the policy effect in which we are interested. It is difficult to know with any degree of certainty.
- The second difficulty is that policy is often a shadowy process, fitful in implementation, and sometimes it never really leaves the paper on which it is written. For example, national environmental strategies involve a long drawn-out process in which it is impossible to be clear-cut about the effects of that policy. The implications of a single policy tend to be diffuse over time, between sectors and between policies. In other instances, the policy may involve a distinct change in the behaviour of resource users, but only for a period that is insufficiently long for any discernible environmental effect to occur. For example, at

present, there are total logging bans in Pakistan, India and China, and, although they are not completely adhered to, they have resulted in an abrupt change in behaviour. Nonetheless, the actual environmental impact of this policy is quite complex and not as clear-cut as might be imagined. Trees are still cut, probably at a much lower rate than before, but lie *in situ* and are only sometimes transported to road- or railheads in anticipation of the lifting of the ban, or of the possibility of illegal export from the area. In some areas in more remote locations, trees will continue to be cut by local farmers because policing is sparse or chooses to look the other way (e.g., in some states of northeast India). However, the whole process is of comparably short duration and spatially diverse from the point of view of affecting any verifiable indicators of environmental change.

- Finally, the complex and ill-understood nature of anthropogenic environmental change in the Hindu Kush–Himalayan region creates difficulties in two ways. The first is in the unambiguous identification of the policy effect. The second is that the scientific justification of land policy, based upon assumed cause-and-effect relations between land use and land degradation, is often shaky, and, therefore, the authority of policy-making institutions, based as it is partly on scientific knowledge, sometimes may rest on questionable foundations. This latter point will be discussed in more detail, particularly in Chapter 8. Partly, the complex process of sorting out anthropogenic processes in land degradation is a general problem and there is a sizeable literature concerning the historical difficulties that scientists have had in assessing the degree of degradation in a variety of different ecological settings outside the Hindu Kush–Himalayan region. For example, the semi-arid tropics, particularly in sub-Saharan Africa, have been the site of the ‘overstocking controversy’. An impressive story of overgrazing and degradation of rangeland was built up over many years to the extent that it shaped many environmental policies and seemed impregnable. Indeed, any attempt to oppose it often met with hostile responses. Yet, today, the scientific assumptions on which the reality was constructed are less authoritative and have been contested by stakeholders. Anthropogenic causes of vegetational and geomorphic change in the semi-arid range are still debated, but they do appear from today’s vantage point to be much less decisive than previously thought. It is clear that a similar rewriting of the anthropogenic role of environmental change in the Hindu Kush–Himalayan region has been under way for 15 years or so. An explanation of the causes of environmental change and land degradation, in particular, anywhere in the world, is usually complex, multivariate, largely site-specific and not fully understood in a scientific sense. While there has undoubtedly been some progress in

universalising some of the key relationships between land management and soil loss and productivity, there are still formidable unsolved problems in developing effective predictive modelling, especially in non-temperate environments (Biot et al. 1995).

The problem of understanding the causes of environmental change is a particular issue in the Hindu Kush–Himalayan region. The literature on this subject is voluminous (see Ives and Messerli 1989, the Proceedings of the Mohonk Conference, and continuing review and research in such journals as *Mountain Research and Development*). The importance of man-made environmental degradation in the region has been a source of wide debate, and, indeed, has given rise to what is known as the theory of Himalayan environmental crisis. Briefly, this asserts that anthropogenic or accelerated erosion is a serious and general problem and is driven by population growth of humans and livestock leading to deforestation. Extension of cultivation on to steeper slopes, clearance of forest for agricultural purposes, and unsustainable use of the forest for fuelwood and fodder have been the major land-management practices that have caused accelerated erosion, sedimentation of river beds, and increasingly severe flooding downstream. The evidence for such a crisis has been as voluminous as it has been ambiguous, for scientific and technical and epistemological reasons. The Hindu Kush–Himalayan region has for most, but not all, localities high natural erosion rates; however, the anthropogenic contribution (including policy effects) is often difficult to separate. For example, recent work by Carson (1985), Ramsay (1987) and others has suggested that rapid orogenesis and associated down-cutting by rivers in many parts of the Hindu Kush–Himalayan region may be responsible for much of the mass wasting and high rates of sedimentation. These and other related findings substantially tipped general opinion for a while against the theory of anthropogenic causation behind the Himalayan environmental crisis. However, the authors of this study are more cautious and, as will become apparent in the following discussions, take the view that there are environmental problems in the Hindu Kush–Himalayan region — in some areas, for some people and for some of the time — that, sometimes, these are serious, and that they are recognised as such by most of the major stakeholders (e.g., Jodha 1995).

In addition to the more general problem of assessing the credibility of the theory of environmental crisis, there are problems that make tracing the policy effect rather more difficult. The measurements of both dependent variables (erosion indicators) and independent variables (natural and anthropogenic causes) have to be made through a period of time that is long enough in order to be able to indicate change in their status, and this has been problematic in the Hindu Kush–Himalayan region. For example, there is a high degree of uncertainty over the evidence about recent deforestation,

and there is some counter evidence that forest cover may have improved in some locations (even if not in condition and composition) (Byers 1987; Gilmour and Fisher 1991; Ives and Messerli 1989). Bearing in mind that forestry departments in different countries in the region make claims — to manage forests so that their extent and quality do not decline in future — that are based on measurements of actual or potential forest decline, this uncertainty has considerable policy implications.

In spite of these difficulties in finding persuasive proof, there are instances in which the footprint of policy can be identified when it has been long established and profound (though not necessarily beneficial). Examples in this report include the Great Leap Forward in the early 1960s in China; the property reforms away from communal control towards the responsibility system in Yunnan Province, China during the 1990s; the nationalisation of forests in Nepal from 1954; illegal clear-felling in violation of forest plans in Pakistan; and the existence of the Indian Forest Service in managing some forest areas, sometimes for over 100 years. These are, in the approach taken by this study, policy outcomes and, even if they were not intended, they were shaped by policy. It is interesting to note that all but the last example were unintended consequences — a general point to which this report will return. However, excepting these and a few other cases, hard proof of the policy effect was impossible to obtain, either because the data did not exist, or because the standards of proof were too high in a complex and multivariate reality. The view of the authors of this report was to use the conventional methods for demonstrating environmental effects of human action whenever it was persuasive and could show convincing results, but to employ much less rigorous methods for most of the analysis.

There are also implications of these difficulties with scientific proof for policy-making. Many land policies are claimed to rest upon scientific foundations, but these are as uncertain as those that underpin the theory of Himalayan environmental crisis. The assumed justification of much land policy in the Hindu Kush-Himalayan region, as well as elsewhere, is that the state has the responsibility and right to manage the environment based on scientific principles of management that operate above the competing interests of users. The problem arises when sometimes these scientific principles cannot be proved to operate using conventional positivist standards of proof. Thus, forests are being gazetted, shifting cultivation and timber extraction banned, environmental laws passed, and national parks and bioserves established, all with far reaching socioeconomic and cultural implications for resource users, but often with scientific justifications that do not reach standards of proof commonly claimed for rational policy-making.

## **Competing Criteria for Evaluation of Environmental Change**

It is notoriously difficult to define and measure land degradation. Choices are based on methodological, epistemological and, ultimately, ideological grounds, and their exploration in this report is not a mere academic exercise but has direct policy implications. Queries include degradation for whom? Using whose criteria? How much does a given rate of degradation matter? Over what time period? How much is anthropogenic, and in principle, avoidable? So much for the difficulty; however, a view on what definition(s) to use has to be taken.

There is, of course, a common sense view of degradation that is shared by many scientists, forest department officers, and informed observers alike; and is constituted by a number of key scientific and socio-economic assumptions; and may also be supported by mind pictures of extreme evidence of degradation (e.g., landslides, clear-cut forests, bare soil, gullies, and so on). Yet, such a common-sense approach has not been a reliable guide in the past. Literature abounds with examples of soil conservation officers and authors from the colonial and post-colonial periods in Africa and Asia pronouncing serious and terminal degradation caused by unwise land use on the part of farmers and pastoralists. These common sense views have been challenged for two reasons. The first is methodological, with the result that visual evidence of degradation is taken in lieu of scientific evidence. This is understandable since scientific data are usually not available. Indicators of anthropogenic erosion have attracted increased criticism. Landslides are a case in point, where they may be viewed as natural (they would have occurred anyway irrespective of current land use) and part of a stock-and-flow model, in which there are always landslides in evidence, but they heal either through natural processes if left alone or through remedial action on the part of resource users. Recent literature has suggested the idea of resilience and the possibility of reversibility. This study is not denying that there may be serious environmental problems in the Hindu Kush-Himalayan region; however, there are plural definitions of what they are, the universal generalisations on which much policy relies are no longer safe, and criteria other than conservation and scientific management must be considered.

The second reason for challenging the common sense view is epistemological and focuses on whose definition of degradation counts in the policy-making process. The definition of land degradation used here is a 'decline of the potential of land to a lower rank, meaning a permanent reduction (except at prohibitive cost) in the ability of land to produce value in the future' (adapted from Blaikie and Brookfield 1987). The controversy

arises chiefly through what constitutes value and what decline means to different people. Definitions incorporate all manner of scientific, professional, economic, cultural, and social assumptions and, in policy formulation and implementation, it is usually those definitions of land degradation that are held by powerful actors in land policy that prevail. Typically, these include career professionals in forestry, agriculture, conservation, international consultants, and some multilateral and bilateral aid agencies. Definitions of land degradation and the degree to which it is a problem to be solved by policy vary between them and, in some cases, contradict each other. However, most of these powerful actors, in at least four countries of the Hindu Kush–Himalayan region (Pakistan, India, Nepal, and Bangladesh), who shape land policy, share various versions of the Himalayan environmental crisis. It is this powerful theory that both depends on and, also, drives particular definitions of land degradation. However, there are significant variations of definitions between different actors. Here are three examples.

- Various scientists have framed the problem of land degradation principally as one of soil loss from slope failures of various kinds brought about by deforestation, inadequate terrace design, and so on; however, farmers may be more interested in the problem of changing soil-nutrient status and crop yields and attribute slope failures and soil loss to reasons other than their own actions. Indeed, farmers may sometimes deliberately cause landslides, and often turn existing ones to their advantage.
- Deforestation of hill slopes was, and still is, considered a symptom of development rather than degradation by land revenue departments in Nepal and India, provided that cleared land was (is) used for agriculture and generated (generates) revenue for the state.
- The conversion of single-canopied, mature sal (*Shorea robusta*) forest to multi-canopied, coppiced secondary forest by local farmers would be considered degradation by most professional foresters, but it is considered as environmental enhancement by farmers who extract a greater volume and diversity of forest products after conversion, and as a conservation-neutral event (depending on the technical details of the forest management in question) by some soil scientists.

The approach taken by this study to what is land degradation is a plural one, so that a number of definitions are accepted provisionally as different and potentially of equal value. However, this is not a relativist position (any definition and explanation of land degradation is as good as the next). All definitions and assumptions about environmental change will be tested against their relevance to the long-term sustainability of the livelihoods of

the 140 million inhabitants of the region. This rests on scientific understanding about land degradation that is mediated by the degree of uncertainty and disagreement about the issue; and, also, based on lay views from various resource users. The judgement, therefore, does not take at face value bureaucratic and professional justifications of particular land policies, which rest on seemingly scientific and non-political assumptions, but interrogates them in terms of the socioeconomic and cultural impacts of policies based on which criteria of justice and ethics also have to be weighed against claims of environmental conservation. In other words, the issue of whose definition of land degradation counts remains in the forefront of this evaluation of land policy in the region.

## **Rational Model of Policy-making**

There has been a great deal of rethinking about policy and policy-making, including environmental policy, over the past 20 years; particularly over the last five. Many of the directions challenge accepted objectives and norms of policy-making. A few, interesting and emancipatory though they might be for some readers, start from premises that are so far removed from most audiences of this report that there is not much point in using them since they do not readily convert to constructive comment. However, there is one model of policy-making that is still dominant in many circles but which this project does not, unreservedly, adopt. It is the rational model of policy-making, and the reservations that the writers of this publication have about it have important effects upon the conclusions reached. The importance of this approach to policy will be demonstrated later in this section.

The rational model of policy-making is as follows.

- The scientist (e.g., from forestry, hydrology, geomorphology, and pedology) identifies the degree and causes of land degradation (e.g., land use or deforestation) in a particular area and its impacts (e.g., accelerated erosion, declining crop yields).
- Objective and generalised truths about the state of the environment in terms of land degradation and human interference are generated.
- The impact of human actions, including those mediated by policy, on these rates of erosion/indicators of degradation are identified according to some reasonably persuasive experimental design.
- These findings are presented to policy-makers.
- Policy-makers accept the findings and improve land policy in the light of them.
- New policies alter the way in which farmers use and conserve their natural resources, and the policy cycle starts again.

This is a simplified and naïve version of the rational approach to environmental policy-making, but it captures much of what policy-makers claim to do. It is an apolitical process in which expert knowledge is dominant and is, therefore, usually wielded by a policy elite of scientists, a handful of senior professionals from the departments of agriculture, forestry or wildlife, and international consultants. As empirical evidence from this report shows, policy simply does not happen like this. Politics imbues every scientific fact and rational action: bureaucratic and professional agendas frame policy problems and policy implementation. New scientific research fails to reach policy-makers' ears or is merely disregarded. Some have called the links between science and policy 'mutual construction' (Barnes and Edge 1982; Shackley and Wynne 1995; Jasonoff and Wynne 1997). Different agendas in land policy are contested — some reach the pages of policy documents and stay there, but never live on to the implementation stage. This study therefore develops its own modifications to the rational approach, and avoids ending up with yet another set of technical recommendations that do not take into account alternative understandings about both policy-making and land management.

## **Analytical Concepts**

This research used four analytical concepts that provided the basis for a distinctive research framework.

### ***Policy as process***

Land policies, like any others, seldom have all the effects intended by the policy-maker, and often have unintended ones. Policies are shaped by political coalitions, pressure groups and compromise, and all have histories that are both national and local and which vary greatly throughout the Hindu Kush–Himalayan region. Implementation occurs in different and varied ways that come from the professional and cultural agendas of implementing agents (revenue officials, senior forestry professionals, forest rangers, police, and so on). Each of these agents has a professional view and style regarding implementation. For example, foresters are usually trained to grow trees, often in single species' stands and plantations, but are not trained to be social foresters whose main task is to help communities manage multispecies' forests for their own subsistence use. Therefore, it might be expected that, to a degree, a community-forestry programme may be implemented reluctantly and in a style that is only participatory on paper and not in practice. This will have considerable environmental implications. Therefore, it is seldom a straightforward matter of accepting social/community forestry as a number of specific intentions that can be traced on the ground, because those intentions are interpreted in all sorts of ways or, sometimes, are disregarded altogether. To take another example,

policy-makers in the finance ministries of a number of countries in the Hindu Kush–Himalayan region may take a view that cadastral survey and individual titling allows maximisation of land revenue and extension of cultivated land into pasture and forest. Therefore, they may not take kindly to forest conservation and to measures that limit the extension of cultivated land. In both cases, the professional views and styles of the main people involved are important and affect the policy as implemented on the ground.

As we have mentioned above, policy is also interpreted 'at the interface' (Long and Van der Ploeg 1989) by the major stakeholders (e.g., farmers, pastoralists and other resource users), and outcomes may include poaching, prosecution, or connivance in certain infringements. This research should, therefore, study policy on the ground, as actually experienced, not just on the statute book. Thus, this approach will avoid a naïve, legalistic acceptance of policy — just accepting what a policy document says and its objectives and its policy instruments as the rational outcome of scientific information used for the public good. It must also be acknowledged that the formal substance of land policy is important and will be the initial starting point and focus of our approach. However, even at the policy-making stage, various stakeholders will interact politically, make representations, and stake claims. Even more so, stakeholders in government and civil society will determine the outcome of policy, as it unfolds, on the ground.

Policies turn out in all sorts of unintended ways: sometimes in a dramatic and environmentally disastrous manner (for example, the Great Leap Forward in China, or the nationalisation of forests in Nepal, both of which wreaked havoc with forest resources) and sometimes they have little actual impact at all (presumably, an unintended outcome). The research required to understand these informal processes is both difficult and time-consuming. It requires a deep understanding of the politics of the administration involved and of the face-to-face contacts with ground reality. Also, the evidence for the politics of policy is often anecdotal and sometimes may not be convincing in terms of positivist science, but, nonetheless, it is still important in tracing the impact of policy upon environmental change. However, in cases where commentaries, critiques, research studies, and key informants are available, this research aims to move beyond a formalistic treatment of land policy and to be able to explain how the policy process has proceeded. Using the ideas of Long and van der Ploeg (1989), this report focuses on intervention practices as they evolve and are shaped by the struggles between different participants, rather than simply on intervention models and the ideal-typical constructions. Interviews of key personnel, knowledgeable civil servants, village leaders, and politicians have been important in this approach. Most of the country

studies have built on focus group discussions, workshops, and other interactive dialogues with stakeholders. Thus, much of the evidence of the informal aspects of policy-making is anecdotal and qualitative.

In summary, some key differentiating descriptors of the rational and new ways of policy analysis are given in Table 2.1.

Table 2.1: Some characteristics of conventional and new approaches to policy analysis	
Conventional	New
Normative Rational Authoritative Implementation: separate from policy State functionaries and target populations	Process Political Negotiated Implementation: part of policy Actors with their own projects

The advantages of this approach to policy are as follow.

- It goes beyond the narrow legalistic description of policy, which is not an adequate description of the independent variable.
- It avoids the inflexible normative approach to policy and the usual list of (unrealistic) policy recommendations.
- It indicates what the realistic opportunities and constraints are to land policy in a given political and administrative situation.
- It taps into recent policy discourses concerning the legitimacy, realism, and efficiency of policies based on unexamined scientific and political claims that attempt to regulate the environment.

There are also disadvantages that must be addressed. They are that readers of this study may instinctively reject this approach as too arbitrary, aimless, and at the mercy of political forces that subvert any rational intention. As one commentator put it, there is an understandable desire to 'rescue policy from the indignity of politics' and to somehow enforce the rational model that gives back the power of decision-making and executive capacity to the policy-maker and professionals in the various sectors. The answers that we would give to this view are as follow. Firstly, it must be stated that a sense of direction and executive agency and a belief that policy can and should be made for the public good must both be kept firmly in view. Secondly, stakeholders (and claimants to be stakeholders) in the Hindu Kush-Himalayan environment will and should have a political stake in the formulation of policies that affect them, and that a model in which the state and its policy elites predominate brings with it many dangers. These are that their claims (based on science) are often not as sound as believed or,

sometimes, just plain wrong; that they may put some stakeholders above others and inadvertently become political; that if vital interests (in this case, livelihoods that derive from natural resources) are sacrificed without negotiation and compensation, policies are costly, if not impossible, to implement; and, finally, that policies may well contravene notions of justice and fairness. These arguments address some of the issues involved in current debates about good governance. We see little reason to exclude environmental policy issues in the Hindu Kush–Himalayan region from these debates.

### ***Stakeholders***

The approach does not envisage a simple, one-step analysis of links between policy and environmental outcome. Instead, it recognises that there are individuals and institutions that lie between land policy and environmental outcomes. These can usually be identified as the various land users, other interested parties, policy-makers, and implementers themselves. Policy-makers and other interested parties shape policy and its implementation as part of a long drawn-out process; and land users adapt their ongoing land-use practice to new policies, as they experience these policies on the ground. Therefore, all the major stakeholders in the four areas of land policy have to be identified with their agendas, objectives, and action spaces. In some cases, in which political forces have shaped (or blocked) policy and the ways in which it operates on the ground, the report discusses these.

The identification of stakeholders has been derived empirically. Usually in each country they are drawn from the following groups: international professionals associated with multilateral and bilateral aid donors; senior civil servants; politicians and people with informal political power (e.g., local leaders of various kinds); hill farmers and pastoralists; local-level bureaucrats, government employees, and forest rangers, who implement land policies at the local level; business and trading interests; timber contractors and the timber industry; in some countries, the environmental or 'green' intelligentsia (particularly in India where they are able to exert its power through the free press there); social movements and informal political organisations; and, non-governmental and community-based organisations. Their powers in policy-making vary enormously from country to country.

There may be other important players that have an inadvertent role in affecting land policy on the ground, but who are not strictly speaking stakeholders (e.g., the military, as is the case of the Chittagong Hill Tracts in Bangladesh, the North West Frontier Province in Pakistan and in some of the

hilly areas of the eastern hill states of India). Clearly, the reality of insurgency and military activity has profound effects upon land policy and must be acknowledged. Also, there are other policy areas that have contingent impacts upon land policy in unforeseen ways (e.g., transport policy, road construction, and hydroelectric projects).

The advantages of identifying stakeholders in land policy are as follow.

- The focus is widened from policy and environment to include people who exercise choice in ways often overlooked and unpredicted.
- Future interested parties in land policy, and their likely reactions to it, can be identified, and a more politically realistic policy developed.
- Ethical and political issues regarding environmental rights can be clearly identified.

### ***Access to land-based resources***

The most numerous stakeholders in land policy in the Hindu Kush-Himalayan region are farmers and pastoralists who earn their livelihoods from the use of a range of natural resources and from other non-agricultural income opportunities. Livelihood is the focus of the impact of the land policies upon farmers of different characteristics (e.g., gender, wealth, demographic characteristics of the household, non-farm income, and so on). Any land policy must impact upon the livelihoods of hill farmers and pastoralists in both the short and longer term. Farming households can be seen at a point in time with an array of assets and access rights (entitlements, they have since been called by Amartya Sen). Some are wealthy and some are not. Some have access to large amounts of household labour and others do not. Women may not have certain entitlements that men expect, and so on. All are faced with choices from time to time (e.g., at the beginning of an agricultural calendar) to put together a portfolio of income-earning opportunities that together make a livelihood. Some of these income-earning opportunities are provided directly by the environment that is structured by their supply from nature (fodder, fuelwood, soil nutrients). Others are regulated by social institutions (e.g., property regimes, government policy, labour-sharing arrangements, gender division of labour). Thus, each household has a pattern of access to environmental resources that is constrained by the household's own capabilities (e.g., labour power, gender division of labour, skills, capital, social capital) and a set of institutions that govern access and practice concerning land-based natural resources. These institutions include common property resource-management institutions, other forms of communal tenure, private tenure for land (and sometimes forest), forest

user groups, pastoral associations, and community-based organisations as well as government policy in the narrow sense.

A central part of this study is to trace the impact of policy upon changes in access to land-based resources by different groups (e.g., rich, middle, and poor farm households) and for different ecological zones (e.g., mountain, hilltop, hill, valley bottom, and so on). Once an understanding of how different groups access these resources (private land for agriculture, pasture, fodder, timber, other forest products, and so on) is established, then the impact of a particular policy upon these patterns of access can be clearly determined. A policy can block out and deny certain income opportunities, or alter pay-offs and, hence, incentive structures. It can also enhance opportunities for certain types of households, for men and not women, for valley-bottom and not hilltop villages. For example, blanket logging bans, which are in force in the majority of the countries studied in this report, have a set of differentiated impacts in both the short and long term on the livelihoods of various resource users: men and women, furniture-makers and logging contractors, small farmers who sell timber, farmers who rely upon the forest for subsistence purposes, and so on. It is not suggested that rights to a livelihood as envisaged by rural resource users should remain inviolate and that no restrictions should ever be put on them. Nevertheless, it is suggested that these rights should be fully recognised and, if their abrogation is to be considered in the name of public interest, the grounds must be both ethically and scientifically solid, they should be negotiated, and if compensation is the outcome of these negotiations, it should be scrupulously observed. As this report will show, many scientific claims on which policy is based are not solid; resource users' rights are not fully understood (they are not negotiated with resource users so bureaucratic routines are launched regardless); and compensation is inadequate or simply never paid at all.

In summary, the economic, social and cultural aspects of hill agriculture and forestry and their main dynamics must be understood if both the environmental impact of land policies and hill farmers' reactions and adaptations to these policies can be satisfactorily followed through.

Advantages of this concept are as follow:

- It provides an explanatory framework for the changes in access and the responses of the major stakeholders in land policy.
- It puts people, their livelihoods, and the environment that they use at the centre of the framework, rather than the agendas of governments (e.g., revenue collection, conservation, and sets of recommended

agricultural practice and land use according to professional and administrative norms).

- It helps to define land degradation in terms of the major stakeholders who use land.
- It puts ethical issues of gender, equity, and difference centre stage.

## **Environmental Changes as Policy Impact**

This concept assumes that land degradation and environmental change in general in the Hindu Kush–Himalayan region is brought about mainly by decisions and actions of individuals and informal institutions that lie quite outside government policy altogether. It also assumes that the impact of government land policy on land degradation has been patchy, depending on other more pressing issues of farmers, and often with unintended consequences on environment and people. Therefore, land policy impacts upon directions of environmental change that are already underway and powered by other demographic, economic, and social forces. It is essential that these forces are specified together with their varied environmental impacts, and that it is understood how they are modified by government policy.

Therefore, the present study will look at the policy process not exclusively from the rationalist–scientific perspective high on the agendas of governments, but from the perspective of land users themselves and the environmental impact that comes along with the policy package. It will also look at policy as it affects the society and economy, and the accompanying environmental shifts that are taking place in the mountains of the region: a narrower but more focussed area of study rather than the whole nation states encompassing the Hindu Kush–Himalayan region.

## **How to Use This Study**

This study is the central output of a large research project, funded and organised by ICIMOD. It draws upon seven country studies, some of which have been published already by ICIMOD. Much material in the country studies was used directly, particularly in Chapters 4–7. However, the overall research design, commentary, and interpretation remain largely those of the two authors. A reader who wishes to look into the details of the sectoral aspects of land policy may read Chapters 4–7 and those country studies already published, which deal with those sectors in each country in more detail. For those who are interested in the strategic and more theoretical aspects of environmental policy, Chapters 1, 2, and 8 are suggested. Those who require a short summary of the argument of the whole study are invited to read the next section. It is like an executive summary and, for those who

approach the study in that manner, we hope that it will fulfil the function of informing a busy professional reader.

## **Summary Argument of the Study**

The study addresses five areas (forest policy; national parks, biodiversity and wildlife; national environmental strategies; agriculture; and land tenure and titling) in six countries (Bangladesh [Chittagong Hill Tracts], Bhutan, China [Yunnan Province], India, Nepal, and Pakistan). Its approach was formed around three related ideas. The first is policy as process, which examines how policy is made and takes the view that the rational-policy model of policy-making is inappropriate and simply does not explain how policy is, or should be, made. Instead, it is a more political process shaped by bureaucratic and administrative regimes (often colonial in origin), powerful environmental narratives (or sets of assumptions that are shared amongst networks of professional people in the region), and other political, commercial, and business interests. Policy, therefore, is often messy and diffuse, and outcomes often unintended. Secondly, the idea of stakeholders in environmental policy was introduced to identify the unequal distribution of political power and to draw attention to those who, although in a large majority, have little say in policy and sometimes become victims of it rather than beneficiaries. This is not to say that farmers and pastoralists in the region have a monopoly on virtue, merely that their interests and knowledge are seldom represented in policy. Thirdly, the idea of access to resources and sustainable livelihoods, treated as a material necessity and right, was used to draw attention to the inevitable conflicts that will arise in adjudicating between conservation agendas, the 140 million resource users, and other interests.

International and national environmental policies, including land policy, is seen here as a negotiation between international agendas promoted by a variety of players (multilateral and bilateral donors and international NGOs, on the one hand, and national political and bureaucratic interests and professional styles on the other). Ecological modernisation is the term used to imply a number of salient policy reforms. These include the economic appraisal and valuation of resources as the major criterion for policy; accountable, transparent institutions; full and informed citizen-participation; and the installation of the precautionary principle in decision-making in the face of scientific uncertainty. All these points pose serious challenges in any society, but especially in the Hindu Kush-Himalayan region. These agendas have been incorporated into national environmental plans and strategies as the first move towards the goal of ecological modernisation. However, they have met with only partial acceptance (primarily from new policy communities) and with, more often,

professional opposition, putting 'old wine in new bottles' and foot-dragging. New initiatives have been taken, but their cumulative impact, both environmental and social, is still quite small. Different countries have responded differently. The more powerful are able to resist international pressures; although, in India, internal pressures from intellectuals through the free press, social movements, and even political parties have been effective in pushing certain environmental agendas. In China, too, the impacts of land degrading and polluting policies have generated internal pressure for reform. It cannot, therefore, be expected that an evidence-based study on the impact of international and national environmental policies will produce much in the way of discernible impact on the ground. It is a slow process and presents severe challenges to some administrative and decision-making practices, and to the institutional means for resisting unwarranted claims by the state or other powerful interests.

Forest policy in all countries except China is dominated by Indian forestry policy, along with some of its colonial origins (which have survived to a considerable degree). It remains the best organised and substantial policy-making institution in the region, and its environmental legacy of 100 years of management of forests in much of the region is clear. Notwithstanding, it is becoming increasingly difficult to sustain the overseeing of forest working plans and to police them. Entrusting more of the management of forests to local people has become necessary for this reason, though social forestry in India is limited to certain types of forest and has moved slowly in terms of total area. Nepal's community forestry programme has been heralded a success from an environmental and (less so) a social point of view, but the actual area (and therefore environmental impact) remains small. Even in the case of participatory programmes such as these, there have been winners and losers with regard to livelihoods as a direct result of policy. In the Chittagong Hill Tracts in Bangladesh, forest policy, along with other environmental policies, contributed to what is widely recognised as a large-scale abrogation of local peoples' rights to a livelihood. The peace accord, following 20 years of hostilities, has promised rectification of this policy (which resulted in the gazetting of tribal forest land, flooding of the best paddy land, outlawing of shifting cultivation, and failure to find land for about 130,000 displaced persons). Logging bans have been in operation in all countries except one. They are, at the same time, an admission of failure of current management practices and an effective stop-gap measure that is easy to implement if somewhat leaky (but much less so than previous measures to restrict cutting) and politically fragile. In China, there are enormous amounts of legislation about forest use from at least three different levels of authority, but they are seldom, if ever, enforced. There have been cycles of reckless clear-felling, followed by assiduous replanting, to be

followed again by felling. Policy reform, in this case, is a matter of locking the door after the horse has bolted, since there is a more fundamental issue of a series of radical policy shifts that produced either extreme land degradation or effective re-forestation. Environmental policy in the conventional sense has had little impact at any time.

Agricultural policy in all countries has not incorporated many environmental concerns. It has been much more concerned with issues of food security and especially the introduction of improved or high-yielding varieties. Hill particularities (niche, fragility, diversity, and remoteness) have not been substantially recognised by national agricultural research agendas and extension policy. While local, environmental knowledge has been recognised in academia, it has not been thought through and implemented in most countries, though there are small, usually foreign-financed projects that are attempting to bring farmers' and research station knowledge together. Imported conservation packages (e.g., sloping agricultural land technology [SALT]) have seldom been widely adopted. In summary, there has been little in the way of widely implemented agricultural policy in the region, and, therefore, little environmental impact. By far, it is the indigenous technologies of terrace design, cropping practice, composting, and water management — all more or less left unaffected by agricultural policy — that have driven the direction and pace of environmental change in agricultural lands (Ojha 1999; Sharma and Jodha 1992).

National parks, biodiversity, and wildlife projects and policies, perhaps, express more completely than any others the international agendas of such institutions as the World-Wide Fund for Nature, the International Conservation Union, environmental charities, and interest groups in the west. Many, with some honourable exceptions, have unfortunately adopted a neo-colonial style of exclusion and 'fortress conservation'. Much of the style of parks in the region has been adopted from the practices of the forestry services in the same country. This is made more likely since the value put on endangered species or habitats by these institutions is different from those of the people living and drawing a livelihood from the local area. Where the principles of negotiation, compromise, and the open recognition of tangible benefits from the park have not been adopted, the projects are almost always ignominious failures. Where they have been adopted (and it takes exceptional professional skills and charismatic leadership from project staff and the local people), it sometimes works well from both a social and environmental point of view. The most recent methodological innovation as part of ecological modernisation is the economic valuation of biodiversity. While intellectually attractive, it usually depends upon the assumption of enough tourists who are willing to pay for the conservation of biodiversity (and thereby generate revenue for local people who could be

then persuaded to conserve the resource). Many such sites in the region simply do not have the ability to attract tourists and eco-tourists in enough numbers to make local conservation economically worthwhile. When there are enough tourists, as in the Annapurna Conservation Area Project in Nepal, the economic valuation of nature is a viable instrument for implementing policy. The environmental impacts of the various categories of parks and protected areas in the region have been mixed; and sometimes exclusion without benefits has induced local people to poach and destroy the resource, and, in other cases, success (and the flow of visitors) has brought its own problems.

The issue of land tenure and titling are central to the three policy areas above. The history of land tenure and reform is highly heterogeneous in the region, though in many cases there has been a slow move from a variety of customary tenures to either *de jure* or *de facto* privatisation, or to state control. The latter in many countries has required extensive policing and engendered resistance over many years. Where policing was not effective, forests disappeared fast (e.g., after the nationalisation of Nepalese forests). Where the social capital, underpinning mutual trust to use resources sustainably, disappeared (e.g., in contemporary Yunnan in China after the breakdown of the commune and collective responsibility), the resource disappeared likewise. A gap constantly opens up between local institutions and the state in the rights and obligations involved in land tenure. In some areas, institutions managing common-property resources still exist and survive the encroachments of the market and the state, while in others they do not. While private tenure has been promoted by powerful international institutions, it is not clear empirically whether it has performed better environmentally than common property resource tenure. Economic theory says so, and examples of changes from open access to private property with concomitant better environmental management can be found, but the environmental impact of titling private land remains ambiguous.

The study ends with a number of specific and strategic conclusions. Both types of conclusion avoid calls for better implementation, more policing, and less corruption. While all of these are desirable, a call for them, in many ways is a symptom of systemic failures and prompts more fundamental questions about how policy is made. Strategic conclusions are that the state in almost all the countries studied is facing, in different ways, increasing pressures in policing coercive and exclusionary land policies, or in maintaining anything more than a token presence in other sectors such as agricultural extension. Decentralisation, participatory and locally developed management systems, and the development of locally appropriate 'hybrid' knowledge (the negotiation and adaptation of outside and local knowledge) will have to become more mainstream, and it is better that this inevitable

direction is assisted and channelled by state institutions, NGOs, and other local organisations before it becomes an environmental and, possibly, social disaster. The state must still have important and strategic roles to play in such policy areas as land tenure and reform, the provision of infrastructure, agricultural research, pricing policy, and national environmental plans and the coordinating roles that these imply. With regard to the process of developing a more accountable and locally appropriate style, there are both huge challenges as well as dangers. The challenges are to shift the syllabuses, training, job descriptions, career structure, and, ultimately, behaviour of many professionals at all levels from the most senior civil servant to the forest or park ranger. The training of local people, political entrepreneurs, and village-level officials is equally important. Manuals in local languages (sometimes written with, rather than for, local people), networking, local conferences, and workshops will all play their part. Issues of land degradation and sustainable production will play a part in different ways within specific social contexts. The study does not assume that greater local management will not be without dangers, and that key decisions will not need to be made, the discretion over which must be carefully weighed (e.g., whether logging bans either regional or local stay in force). There are cases, too, such as those in some of the northeastern Indian states, where state involvement in land policy has been historically slight, but current local institutions and customary tenure have lost the respect and social capital on which they depended. The study makes a number of more specific sectoral recommendations, many of which focus on accountability to stakeholders and, where possible, monitoring and evaluation undertaken independently and with client participation.