

The Rationale of Common Property in the Development Context

SOOFIA MUMTAZ and DURR-E-NAYAB

Much of the debate on the modernisation of the common property regimes deals with the problem of the rationality of these regimes. Justification for the policy to be followed in planning change for such arrangements is given according to the divergent view points of development scientists on the subject. This paper advocates rethinking of some of the fundamental concepts involved in the examination of the contexts where external intervention is to take place for the purposes of development, if a meaningful inter-disciplinary approach to development is to emerge. It invokes Godelier's treatise on the historic and social logic of real, rather than formal rationality, to highlight the bias inherent within, and limitedness of, the general understanding of the concept of formal rationality, or its focused, rather than holistic treatment in socio-historic terms. The case of the Chaprote forest in the Nagar valley of Northern Pakistan is presented to illustrate the historical and cultural rationality of traditional communal arrangements from the local consumption and conservation points of view, and the functioning of a logic within such arrangements which is relative and specific to the context in question. The variance between the thrust of external intervention, and the local potentials for managing and exploiting local resources is thus emphasised. Some recommendations for developing traditional regimes within the local and larger socio-historical context are made in conclusion.

A variety of differential individual and collective rights continue, in much of the developing rural world, to define the terms and manner of exploitation of one or more natural resources (forest, cattle, range, water, fish etc.) by a defined user group. The definition of the user group, and the rights of this group over the given resource(s), are recognised as having been traditionally sanctioned and protected by custom. The policy to be followed in planning change for such arrangements (or common property regimes as they are referred to in current literature) continues to be the subject of divergent opinions among development scientists.

Much of the debate on the modernisation of common property regimes deals with the problem of the rationality of these regimes and consequently the method and thrust of external interventions. Justification for bringing about particular changes, and the manner in which proposed changes need to be brought about within the socioeconomic conditions of given regimes is accordingly given. Ironically

Soofia Mumtaz and Durr-e-Nayab are, respectively, Senior Research Anthropologist and Staff Anthropologist at the Pakistan Institute of Development Economics, Islamabad.

Authors' Note: We would like to acknowledge the assistance of Anjum Fatima and Rukhsana Malik in obtaining the clarifications sought during a later field trip in May, 1992.

however, the concept of rationality itself, in most of the literature (particularly economic) continues to remain biased or inadequately defined. Some social scientists, primarily anthropologists, argue in favour of the logic of traditional regimes and against interventions that have failed and/or caused ecological destruction because they were in opposition to communal concerns and implemented without involving the local populations [Cernea (1985); Agarwal (1986); Dani *et al.* (1987); Acharya (1989); Hopkins (1990); Fisher *et al.* (1990); Mingtao (1990); Freudenberger (1991); Perera (1991) etc.]. Others, particularly economists, either judge common property regimes to be outright "irrational" [Bell (1972); Davis (1971); Ruthenberg *et al.* (1974); Johnson and Libecap (1982)]; or "rational" in so far as they have assured a long term survival of the societies in question [Livingstone (1985); Runge (1981, 1985, 1986); Bromley and Chapagain (1984)]. In either case, the focus of the analysis remains either exclusively or primarily on the "economy" of the society.

The basis of the conviction of those who view common property regimes to be "irrational" is either the perceived propensity within these regimes to over-stock [Ruthenberg *et al.* (1974); Davis (1971)]; or because of the liability of personal interest to clash with cooperative rules. Both these reasons are seen as the cause of environmental mismanagement. Privatisation of the regimes is consequently recommended so that their productivity can be increased. The economists who regard common property regimes to be "rational" have come to this conclusion on the basis of empirical evidence that the individual free rider behaviour (i.e. the profit motive) assumed by economists who recommend privatisation of common property regimes on that basis, does not dominate in these regimes. The existence of the profit motive in non-capitalist market systems is not necessarily denied. The absence of its dominance is explained by distinguishing between individual and collective rationality. The motive of individual profit is either believed to be superseded by the strategy of collective long term survival [Livingstone (1985)]; or a distinction is made between common property and the open access institution (an arrangement where no rules are viewed as regulating access to resources). The free rider behaviour is attributed to the latter institution. [Runge (1985, 1986); Bromley and Chapagain (1984).]

Whereas we support Runge, and Bromley and Chapagain, in their criticism of the economists who assume the dominance of the free rider behaviour in common property regimes, and the contention of the former that the famous "prisoners dilemma" game cannot be applied to these regimes; and we agree with anthropologists that the relevance of earlier and existing socioeconomic conditions cannot be ignored for the purpose of the future development of a given society; we would like to pose the question of the rationality of pre-modern societies within a more holistic context. We would like to invoke Godelier's exposition of the historic

and social logic of the real (rather than formal) rationality (1969). We seek as such to define the problem of rationality within the perspective of the socioeconomic formation of a given society, and the manner in which societies have undergone transformation in the course of history. The approach of external interventions that would be logical within such a framework can thus be identified.

Where the human and ecological future of such a large part of the world is at stake, and an inter-disciplinary team of experts are involved in influencing policy, it is necessary to break the insularity of different disciplines. A more rigorous and objective analysis of the fundamental concepts involved in the examination of the contexts where external intervention is to take place for purposes of development is not only called for, but can also rightfully be justified.

In this paper hence, we will highlight the bias inherent within, and the limit-
edness of the concept of rationality as understood in most economic literature; or its
focused rather than holistic treatment in socio-historic terms. We thus seek to draw
attention to the intransigence of the definition of rationality as used by Hardin
(1968) whose *Tragedy of the Commons* started the debate; by Crowe (1969) who
advocates the development of technical responses to the problems facing
humankind; and particularly by economists who find common property regimes to
be "irrational". Having presented Godelier's treatise as argument against the validi-
ty of the general understanding of the concept of formal rationality; and the logic of
transcultural and transhistoric rationality; we will present the case of the Chaprote
forest in the Nagar valley of Northern Pakistan.¹ This case seeks to illustrate not
only the historical and cultural rationality of traditional communal arrangements
from the local consumption and conservation points of view, but also the function-
ing of a logic within such arrangements which is specific to the cultural configura-
tion in question. As such, the rationality of the latter regime is not revealed as a
variant of the monetary market system where the means and ends of an action can
be quantified. Rather, the difference between the rationality of the society in ques-
tion and that of the monetary market system, to use Dalton's words (1961), appears
as one of kind rather than of degree. Our analysis will thus highlight the variance
between the thrust of the external intervention; and the local potentials of the
former system for managing and exploiting local resources: and intervention, which
in Chaprote as in so many other cases: [Hoskins (1979); Makhijani (1979); Aguilar
(1982); Agarwal (1986); Horowitz (1989); Freudenberg (1991); etc.] resulted in
the eventual failure of the new management arrangement. In conclusion we will
make some recommendations for a *modus operandi* that would be meaningful for
the development of traditional regimes within the local and a larger socio-historical

¹The data on which the analysis of the value and manner of exploitation of the Chaprote forest by the local populations is based was collected during fieldwork for a larger study conducted in the Chalt-Chaprote area of Nagar over a period of five months in 1989-90.

context.

DEFINING RATIONALITY²

More than two decades ago (1969), Godelier demonstrated the futility of following a speculative and absolute definition of rationality, and the myopia of judging any relationship in any society with reference to this *a priori* notion, as though the said definition of the concept were unconditional, and constituted the very essence of human nature. Such an exercise, he illustrated, could only belong to the realm of ideology and lead to a misconception of reality and related problems, regardless of the intentions of the author, or the refinements he/she might incorporate. In order to be scientific, he noted, it is not possible to accept the finality of a concept that precedes and outlives the socioeconomic systems that have emerged, existed and disappeared in the course of human history; or one that pretends to be a permanent human trait.³ Rather, the scientific quest for rationality should recognise the existence of the rationale of any society to be contained entirely within the concrete structures of its social life, which are potentially capable of being explained by whomsoever studies them scientifically.

Godelier illustrates how economic rationality in pre-modern societies is only an aspect of the total social rationality, based on the internal rapport of economic and non-economic structures. Economic activity in these societies, he notes, simultaneously constitutes a particular domain (production, distribution, and consumption of material goods) as well as a particular aspect of all human activity that does not, as such, belong to this domain but whose functioning engenders the exchange and usage of material means. The "rationality" of economic behaviour of the members of such societies is thus an aspect of a larger rationality which is fundamental to the functioning of these societies. There is therefore no absolute ("en soi") economic rationality, nor any final form of economic rationality.

Since one can neither *reduce* the economic rationality of a society to formal principles, nor *deduce* it from these principles, the formal definition of economic is not only incapable of defining its object, but is also practically useless for analysing the real problem it poses itself: that of the *best form of organisation* of the economy, within the framework of a given society (*ibid.* 1969).

²The excerpts from Godelier's works have been translated by the senior author from the originals in french.

³In later works (1978, 1980, 1984) Godelier emphasises the absurdity of the universal application of the general principles of the monetary market system by pointing out that the capitalist market system (the rationality of which system is universally applied) developed as recently as the eighteenth century in Western Europe, whereas the history of human social existence (and the diverse material and social forms of human adaptation to specific eco-systems that emerged, evolved, and disappeared in the course of this history) spans over a period of fifty millennia or so.

The manner in which a society conceives of its relationship with nature, and the network of relations which develop within and between societies, Godelier has elaborated (1984), are reflective of the most operational means historically evolved by that society, to enable it to survive socially as a whole (the material and ideological aspects of the society being part of this social whole). Economic behaviour in pre-modern societies is not necessarily distinguished from non-economic behaviour. The economic rationality of the society is thus only a part of, and specific to, each type of society.

The domination by, and incorporation within the monetary market system, of pre-modern societies (particularly since the encapsulation of these societies within the modern nation states that emerged in the post colonial era) represents only one, and a unique historical phase. Although the uniform and impersonal integrated world economic order tends to diffuse individualistic and impersonal values and attitudes among formerly quasi-autonomous societies, operating on the basis of inter-personal face to face communal relations, neither the response nor the consequent transformation and future evolution of pre-modern societies, as a result of this exposure can be, nor expected to be, homogeneous. The unilineal theory of evolution, Godelier recalls (1980) has been abandoned for almost a century now.

The passage from one socioeconomic formation to another, whether a historic necessity or pure contingency, entrains the decomposition of the elements of the former system; the disappearance of certain elements; the appearance of certain new ones; and the potential for the recombination of the elements of the older system in new combinations on the basis of earlier forms of social existence [Godelier (1981)]. Part of this process is unintentional. Human thought and action, Godelier points out (1984) has only a partial role to play in determining the structure and the course of evolution a society will follow in history. Nature and properties born unconsciously of the human will during the development of the network of relations constituting a given society, also have a role to play.

Having identified some of the main arguments of Godelier's treatise with respect not only to the error inherent within the formal concept of rationality which constitutes the basis of economic thought, and which by its very definition is constrained from explaining the structural reality of non-Western societies; but also the content and manner of historical transformation that societies undergo; we may now present the case of the Chaprote forest in the Nagar valley of Northern Pakistan in order to be able to illustrate the rationality of the local configuration which defines the terms and social logic of the manner in which the resources of this forest are exploited. We may thus be able to highlight the relativity of the concept of rationality with reference to the society concerned, and the conservation of the environment inherent in the manner of its exploitation. Some recommendations for external interventions can thus be made on the basis of earlier forms of

production and social existence. The reasons which so often lead to the failure of the recommendations suggested by so many development scientists can also thereby be highlighted.

THE CASE OF THE CHAPROTE FOREST

The Chaprote forest constitutes one of the natural resources upon which the inhabitants of the Chalt-Chaprote area depend for their subsistence. The forest, its resources, and the manner in which these are perceived and exploited, are part of an integrated system of social, ideological, and material means which enable the populations, who have access to these resources,⁴ to ensure their social survival. As part of an inter-connected system of rights over accessible natural resources, and accompanying social relations, the forest is valued (among other nominally exploited resources) not only as a source of fuelwood and timber by defined sections of the surrounding populations; but the more inaccessible summit of the forest is also perceived as the abode of supernatural forces; and the smoke of the leaves of the juniper trees, as the source of inducing trance among the mediums who communicate with the supernatural forces. Because of the communal and specialised uses of, and rights over the forest, and its contribution towards the locally conceived manner of socioeconomic sustenance, the local user groups seek to ensure access to, and perpetuation of the social forms and rights which enable a satisfaction of their perceived needs, and as such, their existence as a society.

The Chalt-Chaprote area, situated in the Nagar valley of the Gilgit district in the Northern Areas of Pakistan became part of the Federally Administered Areas in 1972. The political transformation of the regime and contiguous changes in household strategies and inter-household dynamics affected local requirements, allocation, and access to natural resources. The direct effects of altered terms of access to the forest became the cause of its massive depletion.

We may identify the resources of the forest, and the strength and value of these resources for the local population. Traditional use rights can then be traced in order to understand the terms of access to forest resources before and since 1972. The variance between local potentials and excesses engendered by the political transformation of the regime and the implication of these changes for development experts can thus be identified.

RESOURCES OF THE FOREST

The Chaprote forest is a natural conifer forest that can be divided into two

⁴The non-user groups have defined rights over the natural resources in the vicinity of their own habitat on which they depend for their subsistence.

zones: the Pine zone; and the Juniper zone. The former occupies altitudes ranging between 2500–3500 meters, whereas the latter stands at approximately 2200–2800 meters. The area of the forest under relatively dense cover is estimated to extend over 3.5 square kilometers⁵ while about 14.5 square kilometers have a patchy and lower cover⁶ [Bass (1987)]. Ninety five percent of the species of which the Pine zone of the forest is composed, according to Gohar (1990), is Spruce (*Picea smithiana*) locally known as *Jrooch*, while the Blue Pine (*Pinus Wallichiana*) or *Kail* contributes roughly 4 percent of the stand. Some of the other species which collectively constitute the remaining 1 percent are: Birch, Willow and Ash. In the Juniper zone, Juniper (*Juniperous macropoda*) or *Chilli* constitutes roughly 80 percent of the stand, while Wild Almonds (*Prunus amygdalus*) or *Hamar*, and Pine Nuts (*Pinus Gerardiana*) or *Chilgoza* constitute about 10 percent each of the rest of the stand (see Table 1).

The trees of the Pine Zone are primarily used as a source of timber; tree paper; and less frequently for the fabrication of agricultural and domestic implements. Timber is taken periodically (a few logs to 2-3 trees at a time),⁷ particularly for construction of houses and/or pens for livestock, but also occasionally to build shops, bridges and *Imam baras*.⁸ Tree paper is taken from *Jrooch* trees and is used to line the roofs of the modern style houses that have recently come into vogue; or to preserve melted butter. *Jrooch* wood, like that of *Kail*, the other hard wood tree, is also used (along with apricot trees grown on privately cultivated land) to make ploughs and is carved into a variety of implements for domestic use by adult males of the household or by the local carpenters. Because this zone contains resources that have had restricted or specialised uses, and is moreover believed to be inhabited by supernatural forces, the highest elevations of the Pine Zone have been less frequented by the community at large. The trees of the Juniper zone are primarily used as a source of fuelwood which is the foremost resource of the forest exploited on a regular basis (about twice to three times a week).⁹ Some of the trees of this zone may also be used as a complementary sources of fodder (see Table1). Leaves of the Juniper trees are burnt by mediums for inducing trance, and purifying pens and habitat. The use of the smokeless *Jrooch* wood for illumination has been aban-

⁵There has been no stock mapping of the forest by either government or non-government organisations. Exact density of the forest has not therefore been ascertained.

⁶According to the records of the Forest Department the total area under forest cover is estimated to be 9.6 square kilometres.

⁷A medium size tree yields approximately 70 small and 40 large longs on an average. Roughly 150 logs or 2-3 trees are therefore, in general, required to construct a house.

⁸Quarters wherein the *Itna Ashari* sect of Muslims, to whom the inhabitants of the Chalt-Chaprote community belong, meet to commemorate their sectarian rites and rituals.

⁹An average size household of 8.6 persons requires about 20 maunds (750 kgs.) of fuelwood per month.

Table 1

Composition of the Chaprote Forest

| S. No. | Altitude in Meters | Local Name | English Equivalent | Botanical Name | Rotation Period/Yrs | Nature of Wood | Percent of Stand | Prime Use |
|---------------------|--------------------|------------|--------------------|----------------------------------|---------------------|----------------|------------------|---------------------|
| Pine Zone | | | | | | | | |
| 1. | 2500-3500 | Jrooch | Spruce | <i>Picea smithiana</i> | 170-200 | Hard | 95 | Timber/Tree Paper |
| 2. | | Kail | Blue Pine | <i>Pinus Wallichiana</i> | 150-200 | Hard | 4 | Timber |
| 3. | | Joun Jeen | Birch | <i>Detula Tiles</i> | 10-20 | Soft | 1 | Firewood/Fodder |
| 4. | | Beeyu | Willow | <i>Salix Alba(spp.)</i> | 10-20 | Soft | 1 | Firewood |
| 5. | | Kasunar | Ash | <i>Sraxinus Xentho-zyloiders</i> | 10-20 | Soft | 1 | Firewood/Fodder |
| Juniper Zone | | | | | | | | |
| 6. | 2200-2800 | Chilli | Juniper | <i>Juniperus Macropoda</i> | 10-20 | Soft | 80 | Firewood/pens/smoke |
| 7. | | Chilgoza | Pine Nut | <i>Pinus gerardiana</i> | 50 | Hard | 10 | Firewood/fodder |
| 8. | | Hamar | Wild Almond | <i>Prunus amygdalus</i> | 10-15 | Soft | 10 | Fierwood/Oil |

done since the village was electrified in the early 1970s.

Among resources only nominally and occasionally exploited, on account of their scarcity; the labour required to exploit them; and therefore their limited domestic use; are: medicinal herbs, cumin, mushrooms and minerals, particularly Red Chalk (*Storax*) or *Salajeet* believed to cure rheumatic pains. Minerals and mushrooms are now exploited primarily for sale in the market by the less affluent economic strata of the community. The exact strength of these resources has not been documented. The frequency and degree to which they are used however, may be estimated by the average quantity exploited by different economic strata in the Chalt-Chaprote area across the sample of 45 households (see Table 2).¹⁰ The wild life of the forest can be categorised into edible (*hallal*) and inedible (*haraam*) (see Table 3). This source, for which no record of exact number per species exists either, has never been a reliable source of subsistence for the community.

Table 2

*Average Quantity and Market Price of Nominally Exploited
Resources by Economic Strata*

| Economic Strata | Mushroom | | Tree Paper | | Cumin Seeds | | Medical Herbs | |
|-----------------|----------|----------|------------|---------|-------------|---------|---------------|---------|
| | Quantity | Rate | Quantity | Rate | Quantity | Rate | Quantity | Rate |
| Rich | - | - | - | - | - | - | - | - |
| Middle | .15kg | Rs 328.8 | 3.8kg | Rs 59.6 | 0.2kg | Rs 38.4 | 0.40kg | Rs 38.8 |
| Poor | .054kg | Rs 78.5 | - | - | 0.36kg | Rs 2.14 | - | - |

Table 3

The Wildlife of the Chaprote Forest

| Edible | Inedible |
|------------------|----------|
| Chakor/Remchakor | Eagles |
| Dove | Crows |
| Pegeon | Bear |
| Duck | Cheetah |
| Patridge | Jackal |
| Deer | Fox |
| Markhor | Wolf |
| Rabbit | Snake |
| | Mongoose |

¹⁰The market price of these resources fluctuates remarkably, depending on the season when these are sold, and their quality. Mushrooms for instance, have been sold for as little as Rs 500 per kg. to as much as Rs 1700 per kg. *Salajeet* on the other hand can be sold for Rs 55 per kg. on an average. One maund (or 37.5 kgs.) of *salajeet* may hence fetch upto Rs 2200.

A population of over 6200 people, according to the 1981¹¹ District Census Report of Gilgit, live in the Chalt-Chaprote area. The average annual population growth rate of the inter-censal period of 1971–1981 is shown as 4.4 percent in the 1981 Census for the Gilgit district. This is 1.3 percent more than the national average. At this rate, the present population of the community that exploits the resources of the Chaprote forest should be close to 9956.2 persons.

RIGHTS TO FOREST

The Chaprote forest and its resources are not perceived as belonging to any individual, lineage or authority. Rather, a complex set of rules (despite changed material conditions) are seen as determining access to forest and other natural resources (such as alpine pastures, sources of water, uncultivated land etc.) which have been exploited by the local populations since their first settlement in the area.

Chaprote lies between altitudes 2000 – 2200 meters. It is said to be the oldest village of the Northern Areas. Its settlement dates back 1600 years. The hamlets of Parkot, Barakot, Chukbir, Das, Gaibah, Khanaiji, Domokot and Rahbot Bala are collectively perceived as belonging to Chaprote village. The nucleus of the village lies in Parkot (which is about 500 meters higher than the Chalt area), while the other hamlets are seen as off-shoots of this nucleus. The hamlets are scattered along the slopes of the mountains over an area of 178 sq. kms. [Gohar (1990)] or 4400 acres (1981 District Census). They vary in size from an average of 20 – 30 households. The average size of the household (which may be extended, joint, or nuclear) is 8.6 (9181 District Census and AKRSP reports).

By virtue of their primary settlement in the area and their physical proximity to the forest, which continues to constitute a fundamental source of sustenance in given social and ecological conditions, the inhabitants of all the constituent hamlets of Chaprote perceive of themselves, and are perceived by others as reserving in conformity with custom, priority rights over the forest and its resources. This means that without the forest being the private property of anyone in particular, the inhabitants of Chaprote, regardless of ethnicity and/or economic strata, are viewed as senior claimants to forest resources. The recognition of priority rights of the inhabitants of Chaprote over others attributes a prerogative to this group to prevent and/or include others from access to the resources of the forest. Such rights are believed to have existed and managed through communal council¹² since the first settlements in

¹¹The decennial Census scheduled for 1991 has not taken place. The figures of the last Census are therefore used to project population.

¹²An informally constituted council of reputed villagers reportedly settled intra- and inter-communal disputes. The disputes settled by this body included extra communal encroachments on the traditional use rights of the defined user group over the forest. Since the establishment of the Mirdom, disputes viewed as contraventions against the State came to be settled by the Mirs, while inter-household disputes involving contraventions other than those against the State, continued to be settled by the communal council. This body was constituted informally at the village level for the purpose. It did not always include the same individuals.

the area, before the hegemony of the Mirs was established in the region.

As of 1885, the Chalt-Chaprote area (along with Bodalus, Shitandas, Bar, Torpatodas and Dododa, which collectively constitutes the Shinbar area) was lost by Hunza and became part of the Nagar principality. The control of this area henceforth shifted to the Mir of Nagar. In terms of access to the means of production, this transfer however, did not imply any fundamental change. Like the Mir of Hunza before him, the Mir of Nagar continued to recognize the senior rights of the Chaprote villagers and secondary rights of the neighbouring village. As the local aristocrat and as revenue collector, first for the Dogra Maharaja of Kashmir (of which state the principality was a tributary) and subsequently as the local tax collector for the British government (1889 – 1947) and the government of Pakistan (1947 – 1972), the Mir (along with his family) not only extracted labour and *malia* (revenue) on agricultural produce (part of which they were authorised to appropriate) from the inhabitants of the State but he also had privileged access to forest resources.

In view of the authority they exercised, the Mirs furthermore granted their administrative staff access by priority to forest resources (as part compensation for services rendered). Occasional such concessions, particularly the hunting of wildlife, were also granted by the Mirs to regional aristocrats and functionaries of the state. In addition, the state could take timber from the forest for public works, such as the construction of bridges. Thus, with minor modifications, a range of individual and collective rights defined the usufruct of forest resources before and during the Mir's period. As head of the principality, the Mir was recognised as the controller of forest resources. Internal dissensions as well as sanctions imposed by the British and Pakistan governments for the use of forest, such as the compulsion to obtain permits for felling wet wood, the use of only bushes and deadwood as fuelwood; the prohibition to light fires in the forest; the unrestricted hunting of wildlife that was feared as becoming rapidly extinct etc. were referred to the Mirs for resolution and implementation. The prime role of the Political Agent posted in the district was to ensure that the sovereignty of the state was not endangered.

Given however, the distinction in rights of the senior and secondary user groups; the small size of the population that exploited the forests; and a closed subsistence economy; demand on timber for construction was low. Houses were primarily built of stone in the traditional style. Rugged communication and transportation facilities moreover, prevented any over depletion of forest resources and transgression of the primary and secondary collective or individual rights over these resources. Cutting of trees was reportedly selective and in general took place under the supervision of the *rakhas* (or guards) of the Mirs. Thefts were rare, and if occurred were usually to counter the exploitative authority of certain Mirs and/or of their staff. The offense in such cases, if detected, was punishable by extraction of

labour and/or confiscation of an animal head from the offender. In general, there was little restriction on access to timber which was occasionally and sparingly exploited. Under these circumstances, the stock of the forest was guarded in tact, and natural regeneration, which was substantially larger than local use, enabled the forest to grow.

For sustained supply of the main resources of the forest exploited regularly (i.e. fuelwood and wood for illumination) proximity to the forest was important under prevailing communication conditions. Since the inhabitants of Chaprote were closest to the forest (which was the criteria for primary rights over natural resources), they were able to exercise their priority rights. Successively distant villages were obliged to depend, either partially or totally on such resources in their immediate vicinity.

FOREST MANAGEMENT UNDER GOVERNMENT JURISDICTION

The dissolution of the principality of Nagar and abolition of the Mirdom (along with state taxes on agricultural produce) in 1972 saw a fundamental alteration in the terms of access to forest resources. Henceforth, the forest came to be considered state property and its management was entrusted to the Forest Department of the Northern Areas of the Government of Pakistan. Irrespective of traditionally observed senior rights of the Chaprote villagers, all villages in the vicinity of the forest now had equal right to forest resources. The seriousness of altered relations however, became apparent only as developments accompanying this arrangement gained momentum.

The construction of the Karakorum Highway and connection of the hitherto isolated and peripheral mountain areas to the more central lowlands; the building of link roads between the Highway and remoter areas; the expansion of the market system; the supply of electricity and piped water; introduction to mechanised agricultural technology etc. resulted in a visible incorporation within the political economy on the one hand, and fostered a construction boom on the other. The growing interest in building bridges, shops, public buildings and private housing etc. placed a high demand on timber.

Timber for construction of houses could be had against permits issued by the Forest Department rather than the Mir. The quantity of timber to be sanctioned was estimated by the employees of the Forest Department after inspecting the construction site. The arrangement, although deemed cumbersome on account of applicants having to make several trips to Gilgit town (sixty kilometers away) where the headquarters of the Forest Department were located, and wait a considerable length of time until the red tape could be compiled with, was not an immediate cause of resentment. The appreciation of the new regime for having brought an end

to the increasingly exploitative authority of the Mirs was able to withstand the irksome regulations.

The alienation of the traditional user group from the forest resources, with the conversion of interpersonal face to face communal relations into impersonal management by employees of the state however, eventually became the cause of a massive plundering of the forest. The official break up of the traditional system; exposure to the rationality of a market economy; and resultant weakening of some intra-communal relations; encouraged private profiteers, and a few among the local community to indulge in excessive depletion of the forest. The latter were only nominally guilty of excesses as compared to the unprecedented scale on which timber, not meant for commercial exploitation, was extracted from this limited resource by private profiteers.

Under government management, the forest was to continue primarily to meet local consumption needs. Occasional sale of timber to contractors for public works was permissible. Such requests however, were not to be entertained beyond a five mile radius. The price of timber moreover, remained government controlled. Under these conditions, the construction boom encouraged the creation of a huge black-market privileging the influential among the indigenous population over the rest. The latter used their permits to acquire timber for sale. Contractors, transporters, and lower-ranking forest officers on the other hand, indulged in indiscriminate and unrestricted depletion of the forest by outright theft and/or extraction many times the sanctioned amount.

According to official estimates, 4000 metric tons of fuelwood and 160,000 cft. of timber was extracted from the Chaprote forest, the latter against permits issued during the years 1982–87. The amount however, is judged to be manifold this figure. The indigenous population believes the forest to have been reduced to one-fourth the area it covered before the government takeover in 1972.

THE INDIGENOUS SYSTEM OF FOREST MANAGEMENT

In reaction to the rapidly depleting forest under government management, the members of the community organised an action forum. Such a process was facilitated not only by the tradition of communal council prevalent in the area, but also the formation of village-level cooperatives called Village Organisations (VOs) constituted by the Agha Khan Rural Support Programme two years earlier, for the implementation of their development programme in the Northern Areas. Encouraged and supported by the structure of the VO's the former senior user group invited the villagers of Chalt in early 1985 to form an alliance with them for collective action. The Chalt villagers were invited in recognition of their traditional secondary rights over forest resources (now facilitated by improved communication) and as a strate-

gy to broaden the base of, and support for effective action.

An *Islahi Committee Baraye Tahaffuz-e-Junglaat* (Reform Committee for the Conservation of Forests) came into being as a consequence. A body of 38 members, headed by a president and a secretary, was elected from all the constituent hamlets of the Chalt-Chaprote villages for the purpose. The Committee was entrusted the task of appraising the Chief Conservator of Forests and the Deputy Commissioner in Gilgit of the situation, and of impressing upon them to grant the local community, represented by the *Islahi Committee*, control of the forest in exercise of their traditional rights.

A struggle of almost two years followed. As a consequence of several petitions sent to the authorities, a dual system of vigilance, that of the Forest Department and of the *Islahi Committee* came into force during this time, and some restraint against issuing fresh licenses to contractors was observed by the Forest Department. However, simultaneous failure to take action on applications of members of the community resulted in cutting down of trees by the latter in transgression of regulations. As a consequence of the ensuing conflict, the Deputy Commissioner, in recognition of the damage done, and in view of suspected embezzlement of funds allocated for the conservation and regeneration through planting of this resource, overruled the non-compromising stand of the Forest Department and granted the *Islahi Committee* permission to take over the management of the forest. The authority of the government staff was thus suspended in 1987 and all commercial exploitation of timber or felling of wet wood prohibited forthwith. The barrier already erected at the initiative of the *Islahi Committee* in 1985, a little before the official checkpost in Chalt across the only service road that leads out of the area, was given legal sanction. Any illegal passage of timber outside the area is thus checked. Defaulters (detected either in the forest, community, or at the checkpost) are liable to confiscation of stolen timber as well as a fine of upto Rs 1000.

Surveillance of the barrier on a voluntary and rotational basis by members of the community during the two years long struggle against the Forest Department has been entrusted to the custody of (first two and now) one local guard (or *chowkidar*) by the *Islahi Committee*. Communal vigilance acts as an additional deterrent to theft. The monthly salary of the *chowkidar* is met by the fines imposed on occasional defaulters and/or donations collected on a rotational basis from different hamlets of the Chalt-Chaprote community.¹³

Access to the resources of the forest remains based on traditional use patterns. Timber for domestic use is sanctioned by the *Islahi Committee*. The

¹³Soon after the takeover by the local community, applicants for timber were required to pay a fee of Rs 50 increased subsequently to Rs 100 and Rs 150 per tree. This fee was also to contribute primarily towards the *chowkidar*'s salary. Some of it reportedly was also to meet the costs of communal works, such as construction of *Imam baras*, water channels etc.

requirement (which has escalated in the last decade with a tendency towards modern housing) is estimated as earlier on inspection of the construction site. The obligation to apply for timber acts as a measure towards controlling excessive depletion. Although the sale of timber outside the community is forbidden, a few surplus logs may exchange hands within the community. Initially wood already felled by the Forest Department was sanctioned against applications for timber. Since the exhaustion of this reserve, old and dying trees are reportedly marked off by the *Islahi Committee* for the purpose. All applications for timber and all members of the Chalt-Chaprote community, regardless of ethnicity, economic strata, or status of earlier versus later settlement in the area, are now given equal rights and importance for access to forest resources.¹⁴

A number of rules have been chalked out by the *Islahi Committee* for the management and exploitation of the forest on the one hand, and a constitution has been framed to define the terms of office, authority and duties of the *Islahi Committee* on the other. Although no effort or provision for reforestation has been made among the rules laid down by the *Committee* it is prohibited to drag or roll felled tree(s)/logs down the mountains as a measure against destroying the upcoming saplings and thereby arresting natural regeneration. In general, the performance of the *Islahi Committee* is judged satisfactory by the local community. The *Committee* is not entitled to any material compensation nor is the community under any social obligation to the *Committee* as a result of the responsibilities with which the latter has been charged. Any exploitation of the community by members of the *Committee* on account of the authority the latter exercise is hence, largely curtailed. Moreover, the fact that the *Committee* is an elected and representative body, with membership from all ethnic groups and economic strata from the former senior as well as the secondary user groups, and contains individuals with different levels of social integrity, the possibility of any large scale or systematic malpractice, such as unauthorised sales or theft of timber or embezzlement of fines collected from defaulters etc. is held in check.

Contrary to the belief generally prevalent in the community however, the management of the forest by the *Islahi Committee* is an interim arrangement. The fact that the area forms part of the Federally Administered Areas of Pakistan, the issue remains to be resolved in accordance with the law. In recognition of this stipulation, the *Islahi Committee* has incorporated clauses within the constitution that guarantee participation of the community by intermediary of the representative body in the event of a final resolution of the conflict in accordance with government regulations.

¹⁴Period of settlement in the region is significant for rights to other renewable resources, such as uncultivated land.

On the basis of the rights to forest in the Chalt-Chaprote area under different regimes, we may comment upon the social logic of different arrangements and make suggestions for better management, conservation and development of the resources of the forest.

EFFECTIVENESS OF TRADITIONAL MANAGEMENT SYSTEMS

Traditional arrangements for managing the use, availability, and conflicts associated with the forest formed part of a local system of socioeconomic sustenance. These arrangements contained aspects of the material, ideological, and social forms conceived and developed by the local populations as the best answer to their existence as a group in given ecological conditions. The effectiveness of traditional arrangements was inherent in that they were part of the locally conceived system of sustenance, and as such were logical to the context in question. The manner in which the uses and rights of access to the Chaprote forest were perceived and managed, thus represented a social logic beyond the material value of its resources. Within this integrated network of relations the material aspects were not separated from the non-material aspects. The belief in, and the perceived necessity to interact (through intermediary of the mediums) with the supernatural forces believed to inhabit the summit of the forest, and the custom of offering sacrifices for protection against malevolent forces for instance, contributed as much to the social existence of the local populations as did the relations pertaining to the exploitation of the resources of the forest for material subsistence.

Rights over the resources of the forest were based on the fact of residence and distance from this resource, rather than the criteria of ethnicity, lineage, or economic strata etc. Such an arrangement reflected the manner in which the utility and rights of access to natural resources in the immediate vicinity of the local populations were socially formulated. It also answered the difficulty of commuting over long distances for the exploitation of these resources in the rugged landscape. A distinction between the specialised exploitation of the Pine, as compared to the Juniper zone; and between the senior and secondary user groups, regardless of ethnicity and economic strata, ensured a satisfaction of the needs of all sections of the senior user group; and obliged all sections of the secondary and non-user groups to depend partially or totally on their immediate vicinity for the satisfaction of these resources (depending on the distance from the forest). Such an arrangement limited the extent to which the forest was exploited. These stipulations enabled perceived communal needs to be met and simultaneously permitted the processes of natural regeneration to flourish. The network of relations pertaining to the forest thus subscribed to a rationality specific to the society in question. Within the total social logic of the regime there was no dominant or even latent prevalence of either the

profit motive nor any liability for the existence of the formal concept of rationality.

The traditional arrangements for exploiting the forest recognised the respective common rights of the senior and secondary user groups. Simultaneous provisions enabled certain differentially defined individual rights to be exercised. The Mirs (and members of his patrilineage) for instance, had privileged and unrestricted access to the resources of the forest. Similarly, the state to which the former principality was a tributary was recognised as the authority exercising the right to impose restrictions on the use of forest resources (see p. 269) as well as the right to take timber from the forest for public works without the possibility of denial or objection. The access of the administrative staff of the Mir; and the regional aristocrats and functionaries of the state to forest resources, particularly the hunting of wildlife, was subject to the Mir's approval. These rights however were singular in that they privileged certain individuals (whether they were part of the traditional user group or otherwise) to the resources of the forest.

The rights of the Mir (and his patrilineage) and that of the state over the resources of the forest, as well as the provision among defined use patterns which permits access to the range adjacent to the forest to members of the non-user groups as pasture for their cattle, are synonymous to what in current literature has been termed as the open access institution. This institution has been defined as an arrangement where access to resources is not regulated by any rules and where the profit motive is believed to pre-dominate see Runge (1986); Ciriacy-Wantrup and Bishop (1975). It is however our contention, as in case of the above mentioned instances, that not only may there be no conception of the profit motive in such arrangements but the arrangement is also not devoid of rules. A common property regime may make provision for certain differential individual rights to be exercised. These rights however, are permissible only for resources perceived to be surplus, under conditions which constrain their over depletion. The exploitation of the forest by the Mir and his family for instance, was constrained by the fact of limited local use for forest resources in the socioeconomic conditions prevalent at that time, and the absence of a market system. The same reasons prevented the administrative staff of the Mir from excessively depleting the forest. Access to the wildlife of the forest for hunting to the regional aristocrats and functionaries of the state was not only subject to the Mir's approval, it was also an occasional occurrence. The state to which the principality was a tributary on the other hand, respected the rights of the traditional user groups and limited exploitation of timber for public works to a radius of 5 miles around the forest. Access to the range adjacent to the forest to members of the traditional non-user group similarly, is locally sanctioned only in the summer season. Access moreover is permissible because a small number of owners of individual animals (for instance ox, or yak) avail of the facility. The distance and custom of depending on the resources in the vicinity of habitat restricts

more extensive exploitation of the range although the resource is judged surplus.

The passage of the control over the forest and its resources from the local community to the Mirs, and the payment of tribute, through intermediary of the Mirs, to different central authorities (until the inclusion of the Northern Areas Within the Federally Administered territory in 1972) did not in any radical sense affect traditional management and use relations at the local level. The Mirs protected the primary and secondary rights of the community that traditionally exploited its resources. Evolution of earlier forms of social existence thus continued without dramatic effects. The traditional regime was able to adapt to global changes not so much on account of its being "dynamic" as proposed by Dani *et al.* (1987); nor can the regime be judged "rational" only on account of its having been able to survive for such a long time [Livingstone (1986); Runge (1986)]. Rather, the absence of any fundamental change or violence in the manner in which traditional relations at the local level were affected as a result of the changes which took place at the global level, enabled a meaningful continuity of traditional relations and a natural evolution on the basis of earlier forms of production and social existence.

In contrast to the arrangements for managing the forest under traditional regimes, the management of the forest by the staff of the Forest Department implied a fundamental break from traditional practice. The new arrangement did not only disregard the customary priority rights of the traditional user groups, it also subscribed to a rationality that was alien to the local context. As such, the new arrangement super-imposed on customary practices. It legitimised a manner of forest exploitation that departed from traditional practice and suspended traditional use rights by alienating the traditional user groups from privileged access to the resources of the forest. The transformation implied a kind of violence in the manner of its affectation. This arrangement was hence inconsistent with, and as such "irrational" within the context of earlier forms of forest exploitation and accompanying social relations. The irrationality of the new arrangement manifested itself not only in material and social terms (which privileged a minority group over the rest of the community as a result of incorporation within the political economy and exposure to the new market rationality) but it also had disastrous ecological ramifications in that it created the conditions for an unprecedented plundering of the forest.

The formation of the *Islahi Committee* for managing and controlling access to forest resources is a development based on earlier social forms. It can be termed a "new" arrangement in so far as it constitutes a formally structured body charged with controlling access to the forest, and that it temporarily replaces the staff of the Forest Department (who had filled the managerial vacuum created by the abolition of the authority of the Mir and his administrative staff). In the scheme of social transformation (whether such a transformation comes about as a natural process of social evolution, or whether, in keeping with the present historical phase, it may be

an incidental phenomenon) the potential for the development of the *Committee* and the parameters of its structure, although not a replication of any earlier arrangement, did however build upon the organisational basis of the communal council which existed in the area even prior to, and simultaneous with the establishment of the Mir's rule, and the recent development of the village organisations promoted by the Agha Khan Rural Support Programme. Hence, the *Committee* is not seen as either the rehabilitation of an earlier arrangement, nor is it a completely new arrangement. Rather, in the wake of the dissolution of the Mir's authority, incorporation within the political economy, and the subsequent creation of the village co-operatives, the formation of the *Committee* was guided by a combination of elements of earlier arrangements and influences of the later developments. The perceived "success" of the *Committee* can also be attributed to its structural resemblance to traditional communal arrangements for resolving perceived local problems and its protection, though modified, of traditional use patterns. The links between earlier arrangements for managing forest resources in Chaprote and the emergence of the *Islahi Committee* and its maintenance for the management of the forest, supports Fisher's (1990) elaboration of Gilmour's (1987) hypothesis that although the condition of scarcity may pre-empt the development of indigenous management systems, sociological and physical preconditions are necessary for their development. As such, the observation [Fisher (1990)] that indigenous management arrangements are new developments is only a technicality. Earlier forms of social existence figure in, and provide the basis for the manner and the process of social transformation that takes place. The indigenous arrangement is thus a local adjustment to a new global situation which has not only shed, but also retained properties and combinations of earlier structures and the organisational influences of the more recent developments.

CONSIDERATIONS FOR EFFECTIVE MANAGEMENT

Under present conditions, what might be the guide lines for external agencies in developing a locally meaningful arrangement whereby the exploitation of the Chaprote forest could be managed; and a symbiosis between regeneration and depletion of this renewable natural resource be maintained?

Fisher (1990) has identified two components as determining effectiveness in resource management: production and sustainability. With reference to the first component he distinguishes between community and commercial forestry. In community forestry efficiency is measured by increase in the produce of resources consumed domestically, while the production of optimum biomass for marketing is taken as a measure of efficiency in commercial forestry. Sustainability on the other hand is defined by the health of a forest (indicated by the stock at various stages of

regeneration) and its relation to utilisation.

Rather than a general formula for increasing material production and conserving natural resources, the thrust of external interventions, we recommend, should be guided by earlier and existing ecological, material, and social conditions of the context in question. The specificity of each society, and the potential for its unique future evolution (despite exposure to uniform global influences) requires an analysis of each situation within its particular context, and the development of strategies for resolution of the contradictions that emerge as a consequence of the break up of the traditional system. Properties born independently of the human will, during this process of planned change, will inevitably come into effect regardless of human effort.

The Chaprote forest is too small for any large scale commercial exploitation of its resources. Despite changed material conditions, the value of the forest for the local population and the rights of access to its resources continue by and large to be perceived in accordance with tradition. The *Islahi Committee* formed in response to perceived excesses in the emerging physical and sociological conditions of the area. The content and structure of the *Committee* (in that it involves participation of a cross section of the local community); and the judgement of its performance as satisfactory by the local population indicate the logic of the arrangement in local social terms. Instead of reverting to management by the Forest Department and replacing the *Islahi Committee* by an alienated and monolithic management arrangement, the *Committee* should be given legal sanction. The constitution of the present *Committee* makes allowances for sharing management responsibilities with the Forest Department. The legalising of such an arrangement appears in the first instance to be the most meaningful strategy for managing the forest in response to existing conditions and likely future developments. Shared management is suited to checking socially functional forms from being discontinued and possible excesses within the indigenous arrangement and by external agencies from taking root. Shared management is also likely to control the predicted dissolution of indigenous management once the conditions of scarcity have been overcome [Gilmour (1987)] or the risk of the emergence and eventual dissolution of local management becoming a cyclical process in the event of future abuse which may render the resource scarce again.

Before abolition of the Mir's supremacy in 1972, there was no provision, even in theory, for reforestation or for increasing the produce of forest resources in Chaprote. Conservation and growth of the forest was inherent in the ratio of its exploitation as compared to the process of natural regeneration. The system moreover, catered to local subsistence needs. In the absence of a market there was no incentive to increase the produce of the forest nor to innovate more productive alternative sources to complement the use to which the resources of the forest were

put. Traditional use patterns not only ensured conservation (which is the only provision among traditional regimes according to Fisher (1990) but also the growth of forest resources.

In view of the depletion undergone by the forest under state management; the population increasing at an average annual growth rate of 4.4 according to the last census; and changes in the social structure and economic strategies being brought about as a consequence of the community's incorporation within a national political framework and a market economy (such as increasing male out migration, and introduction to new technologies), the potential for planned reforestation and eventual commercialisation of certain resources has been created. The expansion of forest cover however, cannot be planned without taking account of traditional rights of different sections of the local population over the different categories of land where reforestation is to be encouraged. The land on which the forest stands has legally become state property as of 1972. The Chalt-Chaprote community however, retain the right over the usufruct of forest resources. Reforestation on formerly forested area with communal participation is not likely to be problematic so long as the species planted cater primarily to domestic needs and the rights of access to the forest for the traditional user groups are maintained. The most effective way of undertaking such a venture would be by intermediary of the *Islahi Committee*, provided the latter is granted official recognition. The use of the joint funds of the village cooperatives (instituted by the Agha Khan Rural Support Programme) for the purpose, would favour communal commitment towards a cause meant primarily for the community in keeping with traditional use rights.

The two other categories of land to which the community has access are: *milkiat* or parcels that have been inherited or purchased by recent settlers, and as such maintained as private property; and *shamlat* or the large expanse of land between altitudes 1,500–2,800 meters that has been, or remains to be rendered cultivable by the construction of a water channel or *Khul*.¹⁵ Such land is perceived by all sections of the population who live in the immediate vicinity to be their common property. Encouraging forestry on either *milkiat* or *shamlat* land (once this land has been distributed) would be synonymous to what has been termed as farm forestry, since subsequent to distribution¹⁶ *shamlat* comes to function as private

¹⁵All households of the potential user group retain a share in *shamlat* provided they assist in, furnish a substitute, or pay for their share of the labour required to cut and subsequently maintain the *Khul* on an annual basis.

¹⁶The size of *shamlat* land to which a household is eligible, or the eligibility of later settlers in the area who had purchased, rather than inherited parcels of privately cultivated land, was a subject of discrepant opinion. Considering that development of more land for agricultural purposes is a recent phenomenon, the discrepancy of opinion, and regional variation regarding rights over potentially cultivable land, is subject to the expanse of land available, the resources of the aspiring household to exploit the land, and the political clout the household enjoys, or otherwise, in the community. These criteria determine whether a share in *shamlat* land will be granted, or otherwise, to later settlers.

property. Communal consensus, by intermediary of the *Islahi Committee*, for reserving portions of *shamlat* land (relative to productivity) for social forestry, prior to its distribution, stands a fair chance of being successful in Chalt-Chaprote. Undistributed *shamlat* land will continue to be perceived as common property with the traditional user group exercising their rights of access to this land and its resources. Members of village cooperatives, in other villages that do not have access to the forest, can play the role the *Islahi Committee* plays in Chalt-Chaprote by encouraging social forestry on *shamlat* land before its distribution.

The choice of the species of trees to be planted would by priority, have to bear resemblance to local consumption needs and the extent of depletion suffered by the forest in recent years. On privately cultivated land, it would be more appropriate to plant trees used primarily for fuelwood and fodder; while the species planted in the forest or on *shamlat* land may preferably be those used for timber.

The resources of the forest have traditionally been exploited by adult men of the household. Women have been concerned with the processing of the resources consumed within the household. With male out migration for monetary employment on the increase since the past two decades, women of the household (whose mobility is socially restricted to the immediate vicinity of the household) are obliged to depend on the fuelwood and fodder they can acquire from their immediate vicinity. They may, as an alternative, ask men of the kin group who live in their neighbourhood to furnish them with these resources either against nominal monetary compensation or by reciprocating in terms of service. Women therefore favour increase in the stock of fuelwood and fodder trees which facilitate the work they are required to undertake in the traditional division of labour by gender. The availability of these resources in the immediate vicinity would not only compensate for increased lack of domestic labour likely in future (with more men migrating out) but would also release the pressure on the already depleted forest under government management.

The planting of fast growing trees (in consideration of given altitudes) may make up more speedily for the stock of lost capital. Such species however, have been known to erode the soil [Agarwal (1986)] and will require the expertise of an agronomist for the necessary planning and technology required to prevent erosion. The supply of alternative sources of fuel (kerosene and gas for instance) however, is a measure that would not only facilitate domestic labour, but would also cut down fuelwood consumption, which at present is as much as 500 tons every month on an average, for the population of the Chalt-Chaprote area. The premises of the household moreover can also, according to local view point, thus be kept clean and the need for storage facilities eliminated. Kerosene however, is judged too expensive particularly by the less affluent of the community. Gas, if available, is likely to be adopted by almost all households belonging to the affluent economic strata and complemented with fuelwood by the less affluent economic strata, particularly in

winter. Fuelwood to be used in winter has to be stored for months in advance. The possibilities of commercialising surplus firewood (once a sustainable level of this stock has been reached in the Juniper zone of the forest) in the event of adoption of alternative sources, can in future be explored with reference to a communal sharing of returns, since the entire community has equal and traditional rights over this resource.

Both *Jrooch* and *Kail* are the prime source of timber. Although the forest has undergone massive depletion in recent years, and *Kail* constitutes only 4 percent of the stand (see Table 1) these trees are not only used in construction (which is becoming increasingly widespread) but also as a complementary source for the fabrication of agricultural and domestic implements. About thirty wet wood trees (which take an average of 150–200 years to grow under natural conditions) are felled annually for the purpose. Measures at reforestation must hence, not only give priority to replacing the stock of *Jrooch* but also the expansion of *Kail* whose stand is not only small, but also on the decrease. In addition, the exploitation of *Kail* should be suspended until such time as its stock has reached a sustainable level.

Attention may be paid to making appropriate technology available for increasing the produce, and facilitating the extraction and processing of the nominally exploited resources of the forest such as medicinal herbs, cumin, mushrooms, minerals, wild almonds etc. With due attention to maintaining a balance between production and utilisation, by intervention of the *Islahi Committee* and the issuance of permits (as for timber) if necessary, the facility of access to these resources is not only likely to increase their consumption at the domestic level, but would also provide an additional source of monetary income through sale, particularly for the less affluent economic strata of the area who exploit these resources (see Table 2). Some of these resources (for instance mushrooms and minerals) we have noted, fetch a high price in the market. The commercial use of the hitherto nominally exploited resources of the forest, or fabrications thereof (particularly by carpenters) requires not only access to appropriate technology for increasing productivity, but also the development of a market infrastructure for the sale of commercialised products.

Since the construction of the Karakorum Highway, most of the wildlife of the area has been forced to retreat into the mountains. A healthy and dense forest would furnish protection for wildlife. The consumption of edible wildlife, it may be conjectured, is not likely to go up if government restrictions against shooting wildlife continue. This reserve has not traditionally been a dependable source of food and/or income. Availability of modern hunting techniques therefore are not likely to have any significant impact on its hunting. A strategy to protect inedible wildlife (for instance wolves/foxes) who prey on, and thus pose a threat to the smaller livestock in the alpine pastures during summer however, needs to be

worked out. Not only is the shooting of such wildlife not prohibited, it is actually locally encourage. The carcass is left to rot. A taboo prevents it fur or any other product being put to further use. The development of a wildlife reserve for instance, is likely to protect extinction of edible as well as inedible wildlife.

CONCLUSION

The fallacy common to policy-makers, working within the framework of a monetary political economy, is to assume that the concepts and terminology of the latter system carry universally applicable meanings. This is so despite the findings of anthropologists, and their own experience with non-Western societies having repeatedly demonstrated that the concepts prevalent in the latter societies are to be understood with reference to associated contexts. In order for an inter-disciplinary contribution to development research to be meaningful, it is necessary to break the insularity of different disciplines and to incorporate the positions of other disciplines for a more holistic approach towards developing a society.

Each society is an inter-connected and unique configuration of economic and non-economic structures, relative to given ecological conditions (and the manner in which these conditions have been historically conceived and managed). The potential for the future evolution of a society moreover, is based on earlier forms of production and social existence. As such, the rationality of each society is specific to that society, and its response to the influences of the political economy within the framework of modern nation states that have emerged as of the second half of this century, is likely to be different. If the goal of development research is to ensure that people become the beneficiaries of extra local interventions, then the conditions prevailing within a given society are to be analysed with reference to the local perceptions of these conditions, and the existing potentials for future development. Rather than compartmentalising the thrust of development into the so-called, economic, social and ecological packages offered by government and non-government agencies, external interventions would play a positive role in giving priority to perceived needs and problems of the local community and plan change on the basis of earlier arrangements and their relevance to the society as a whole so as to ensure a logical continuity and sustainability of traditional systems.

Instead of the emphasis being primarily on increasing material production, commercialisation of produce must be subject to local potentials analysed in terms of local priorities. A relevance of policies to existing needs and priorities of the local population with the consensus and participation of the local community would enable the government and donor agencies to complement local knowledge of the properties, uses and management of natural resources; and to play their appropriate role of handling the emerging physical and material constraints within the system,

under modern conditions, with the necessary planning and innovative technology available to them. A meaningful contribution towards developing a society within its local and global context and the goal of maintaining the physical environment in balance, can best be met by a flexible approach in addressing diverse and changing situations, and by sharing the development endeavour with the local population.

REFERENCES

- Acharya, Harihar (1989) Jirel Property Arrangements and Management of Forest and Pasture Resources in Highland Nepal. *Development Anthropology Network* 7: 2.
- Agarwal, Bina (1986) Of Social Forestry and Other Tree-Planting Schemes. *Cold Hearths and Barren Slopes : The Woodfuel Crisis in the Third World*. New Delhi: Allied Publishers Pvt. Ltd.
- Aguiar, Filomeno V. Jr. (1982) Social Forestry for Upland Development: Lessons from Four Case Studies. Quezon City, Philippines: Institute of Philippine Culture, Ateneo de Manila University.
- Bass, Stephen (1987) Sustainable Forestry Development, International Union for Conservation of Natural Resources. Switzerland: World Conservation Centre.
- Bell, Frederick W. (1972) Technological Externalities and Common Property Resources – An Empirical Study of the U.S. Northern Lobster Fishery. *Journal of Political Economy*. 80 : 1.
- Bromley, Daniel, and Devendra P. Chapagain (1984) The Village Against the Centre: Resource Depletion in South Asia. *American Journal of Agricultural Economics* 66:5 868 – 873.
- Cernea, Micheal M. (ed) (1985) Putting People First: Sociological Variables. *Rural Development*. New York: The World Bank.
- Ciriacy-Wantrup, S. V., and R. C. Bishop (1975) Common Property as a Concept in Natural Resource Policy. *Natural Resources Journal* 15: 713 – 727.
- Crowe, Beryl L. (1969) The Tragedy of the Commons Revisited. *Science* 166: 3909.
- Dalton, George (1961) Economic Theory and Primitive Society. *American Anthropologist* 63: 1 – 25.
- Dani, Anis A., Christopher J. N. Gibbs and Daniel Bromley (1987) Institutional Development for Local Management of Rural Resources. Honolulu, Hawaii: East-West Center. (Working Report No. 2.)
- Davis, R. K. (1971) Some Issues in the Evolution, Organisation and Operations of Group Ranches in Kenya. *East African Journal of Rural Development* 4: 1.
- Fisher, Robert J., Hukum Bahadur Singh, Deepak R. Panday and Helmut Large (1990) The Management of Forest Resources in Sindhu Palchok and Kabhre

- Palanchok Districts of Nepal. Kathmandu, Nepal: International Centre for Integrated Mountain Development. (MPE Series No. 8.)
- Frendenberger, Karen Schoonmaker (1991) Mbegue: The Disingenuous Destruction of a Sahelian Forest. *Development Anthropology Network* 9: 2.
- Godelier, Maurice (1969) *Rationalite et Irrationalite en Economie – I*. Paris: Maspero.
- Godelier, Maurice (1969) *Rationalite et Irrationalite en Economie – II*. Paris: Maspero.
- Godelier, Maurice (1978) The Object and Method of Economic Anthropology. In David Seddon (ed) *Relations of Production*. London: Frank Cass and Company Ltd.
- Godelier, Maurice (1980) Memorandum Pour Une Enquete Sur le Travail et ses Representations. (Unpublished.)
- Godelier, Maurice (1981) La Theorie de la Transition Chez Marx. (Unpublished Memorandum) Paris.
- Godelier, Maurice (1984) L' Ideal et Le Materiel: Pensee, Economies, Societes. Paris: Fayard.
- Gohar, Ali (1990) Pasture Survey of Chalt-Chaprote Valley. Gilgit: Agha Khan Rural Support Programme.
- Hardin, Garrett (1968) The Tragedy of the Commons. *Science* 162 A, Nov-Dec.
- Hopkins, Nicholas S. (1990) Water-User Associations in Rural Central Tunisia. In Salem-Murdock and Horowitz (eds) *Anthropology and Development in North Africa and the Middle East*. Boulder, Colorado : Westview Press.
- Horowitz, Micheal M. (1989) Victims of Development. *Development Anthropology Network* 7: 2.
- Hoskins, Marilyn (1979) Community Participation in African Fuelwood Production, Transformation and Utilization. Workshop on Fuelwood and other Renewable Fules in Africa, Paris – Overseas Development Council, AID, November 29–30.
- Johnson, Ronald N. and Gary D. Libecap (1982) Contracting Problems and Regulations: The Case of the Fishery. *The American Economic Review* 72: 1005 – 1022.
- Livingstone, Ian (1986) The Common Property Problem and Pastoralist Economic Behaviour. *The Journal of Development Studies* 22: 2.
- Makhijani, Arjun (1979) Economics and Sociology of Alternative Energy Sources. Environment and Development Regional Seminar on Alternative Patterns of Development and Life Style in Asia and the Pacific. ESCAP and UNEP, Bangkok, 14–18 August.
- Mingtao, Zhang, Qi Yachuan, Yo Chengqun and Li Gaoshe (1990) Management of Resources for Development in Quxu Country, Tibet, China. Kathmandu,

- Nepal: Integrated Centre for Integrated Mountain Development. (MPE Series No. 7.)
- Pakistan, Government of (1981) District Census Report of Gilgit. *Population Census Organization*. Islamabad: Statistics Division.
- Perera, Jayantha (1991) Participatory Development and Self Evaluation: The Experience of Farmers at the Gal Oya Settlement Project in Sri Lanka. *Development Anthropology Network* 9: 2.
- Runge, Carlisle Ford (1981) Common Property Externalities: Isolation, Assurance, and Resource Depletion in a Traditional Grazing Context. *American Journal of Agricultural Economics* 63: 4.
- Runge, Carlisle Ford (1985) The Innovation of Rules and the Structure of Incentives in Open Access Resources. *American Journal of Agricultural Economics* 67: 2 368 – 372.
- Ruthenberg, H. *et al.* (1974) Range Development in Kenya: A Review of Commercial Company. Individual and Group Ranches Studies in Employment and Rural Development No. 4. Washington: Employment and Rural Development Division, IBRD.