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Land Tenure Systems and Social Implications of Forestry Development Programs

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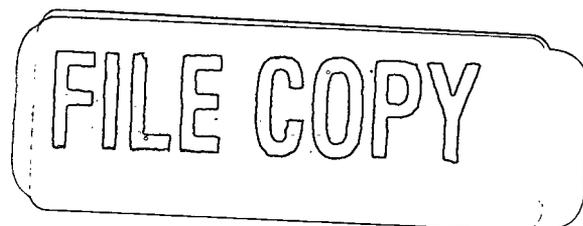
April 1981

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LAND TENURE SYSTEMS AND SOCIAL IMPLICATIONS

OF FORESTRY DEVELOPMENT PROGRAMS

This paper discusses some social correlates of the design and the implementation of forestry projects. The cultural/ behavioral variables associated with forest development are rarely examined by social scientists. Yet these variables are of crucial relevance to the design and the implementation of such programs. Recent concerns about energy and fuelwood production are sharpening the cultural awareness of technical developers and foresters alike with respect to the sociological and behavioral dimensions of their projects.

The Hill Farming Technical Development Project, undertaken in 1978 in Pakistan - Azad Kashmir-with assistance from the World Bank, is a case in point, notably with respect to the role of land tenure systems and their sociological implications. This case is analyzed in the present paper, together with some relevant experiences from other forestry projects. The emphasis is accordingly placed on those social-operational issues confronted by this pilot forestry development program which may be relevant to similar situations elsewhere in the developing world. Particular attention is paid to the lack of congruity between assumed and actual land tenure systems.

Further, the paper reviews and discusses the set of social and economic issues involved in the basic policy question of subsidizing or not subsidizing reforestation programs.

Alternative development strategies , involving mobilization of small and/or larger farmers, are suggested, with particular sociological consideration of the potential roles of farmers' self-help strategies, of institutional issues, forestry cooperatives and of beneficiary participation for partial cost recovery of forestry plantations.

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INTRODUCTION

0.1 This paper discusses some social aspects related to the design and the implementation of social forestry development projects. The cultural and behavioral variables associated with forest development are rarely discussed by social scientists; only a few recent anthropological and sociological studies confront these issues directly (Hoskins, 1979; Kunstadter et al., 1978, Briscoe 1978). 1/ Yet these variables are of crucial relevance to the design and the implementation of such programs. Recent concerns among technicians and politicians about energy and fuelwood production are sharpening the cultural awareness of developers and foresters alike (see Spears, Yudelman, 1979; Spears, 1980) of the need to pay attention to the sociological and behavioral dimensions of forestry projects.

0.2 The Hill Farming Technical Development Project, undertaken in 1978 in Pakistan - Azad Kashmir with assistance from the World Bank, is a case in point. The emphasis in the following discussion is, therefore, placed on those social-operational issues confronted by this pilot project which may be relevant to similar situations in other developing countries. Examples from other countries or projects will be given when appropriate. Particular attention will be paid to the lack of congruity between assumed and actual land tenure systems, and to the functions of subsidy policies, farmers' participation and self-help and of partial cost recovery considered in a given socio-behavioral setting.

1/ References cited are listed at the end of the paper.

I. THE CHALLENGE: POPULATION GROWTH AND FUELWOOD CONSUMPTION

1.1 Given the high rate of population growth (around 3 percent per annum), fuelwood usage in Azad Kashmir represents by far the largest need to be met by reforestation. A prime cause of the large scale deforestation which has taken place over the last 20 years is the local shortage of fuelwood. But deforestation is not merely an environmental, economic or a technical problem. It is a sociological and a behavioral phenomenon. In addition, the general general shortage of timber for construction and general use in Pakistan (Draper et al., 1978) is also exerting a strong pressure to over-exploit the natural forests in order to maintain a minimum essential flow of timber into the national economy.

The Dimensions of Deforestation

1.2 Population pressure has accelerated the deforestation process considerably. Under customary rules, the people of the area are entitled to remove deadwood, branches, and noncommercial species without payment, primarily for personal consumption. The exception is those areas declared by the Forest Department to be closed for rehabilitation purposes. Closed areas cannot, however, exceed 25 percent of a forest block at any time. In practice, they are well below this maximum, thus slowing down the rehabilitation process.

1.3 Similarly, in actual practice the loosest interpretation is given to the expression of this customary right. Virtually all trees within several miles radius of habitations are debranched more than permissible by silvocultural recommendations. In many locations, debranching has reached the stage where only the top 10 to 20 percent of the crown remains. Outright

topping of trees also occurs, with the consequent death of the tree. In the Chir pine areas, long thin vertical slices of the bole of the tree are removed at stump level to be used like a candle for home lighting purposes. These practices are significantly depleting the value of the forest resource. Roadside avenue trees are similarly molested. In the Mirpur district, for example, miles of avenue trees were being uniformly hacked to death, and a large proportion had already been removed.

1.4 Adverse effects on forest resources are also occasioned by grazing. This is generally exercised without adequate control and extends to nomadic populations who enter from the Punjab and the North West Frontier Province to herd their livestock in the Azad Kashmir Alpine rangeland during the summer season.

1.5 The abuse of customary rights and of the concessionary agreements granted for timber effectively limit the role of the Forest Department (FD) as the agency of government in the exercise of management of the forest. The resultant situation is one in which the Department is in open conflict with a high proportion of the population. At the time of the appraisal of the Hill Farming Project it was reported that there were more than 50,000 cases of forest offenses pending in the courts. This amounted to about one family in six being involved in a reported forest offense and is directly relevant to many farmers' reluctance and/or suspicions regarding participation in development schemes managed by the Forest Department.

Yields and Costs

1.6 The demographic and economic underpinnings of the fuelwood crisis are very relevant. To maintain the needed supply of fuelwood, far reaching changes are required -- not only to relieve local/social pressures on existing forests but also to increase the productivity of forests. About 1,500,000 Azad Kashmir residents in 1972, or 300,000 families, relied entirely on fuelwood for cooking and for heating purposes. The current population growth of approximately 3 percent per annum will roughly double the population by the year 2000, assuming that significant outmigration does not take place in the interim and will thus magnify the needs for fuelwood and construction poles.

1.7 The current average yearly consumption of firewood per family is estimated at 2 to 4 tons a year. A quantitative assessment 1/ of the scale of reforestation needed in Azad Kashmir to provide an adequate fuelwood supply estimated that the yearly usage of fuelwood is about 800,000 tons. With the best practices known at present, foresters can grow fuelwood trees giving a yield of about 5-6 tons/ha/year (equal to 100 ft. to 140 ft. acre/year). To produce 800,000 tons per year, therefore, the equivalent of 133,000 to 160,000 ha of fully planted and well managed fuelwood plantations will be needed to meet requirements (i.e., $\frac{800,000 \text{ tons}}{6 \text{ tons/ha}}$ require 133,000 ha. or $\frac{800,000 \text{ tons}}{5 \text{ tons/ha}}$ require 160,000 ha). In acres, this means roughly between 330,000 to 400,000 acres of fuelwood.

1/ Made by Mr. Sidney Draper, forestry expert, World Bank, to suggest the order of magnitude of the problem.

1.8 The costs of establishing fuelwood plantations are currently running at about Rupees 2,000/acre. On this basis, a program of approximately 300,000 acres would incur expenditures of upwards of Rupees 600 million if full costs were to be borne by the government of Azad Kashmir. Such a sum is far beyond the government's fiscal capacities.

1.9 The government, therefore, needed to examine the extent to which the private users of the fuelwood, the beneficiaries of any investment, should contribute towards these costs. In short, a social or, in other terms, a private users' approach to the problem had to be developed.

Environmental Effects

1.10 The other highly significant aspect of the problem arising from deficits of fuelwood (and of fodder) is the serious downgrade in the environment. This occurs through widespread soil and water loss, manifested in loss of areas of cultivation, damage to road infrastructure, and excessively high siltation rates in reservoirs and dams. This aspect is of public concern. Its importance fully justifies public actions and costs borne by the government with the objective of halting the environmental decline and then gradually reestablishing an environmental balance.

Choosing an Approach

1.11 If it is to be assumed that the government is to foot the bill, the magnitude of the outlays involved in meeting both the private and the public needs is daunting. Nor does past experience indicate that successful programs can be secured simply by the government paying all costs on behalf of the

intended beneficiaries. The best assessment to date is that both public and private types of program are most likely to succeed if local residents and farmers are active participants in designing local programs, and if they accept a clearly defined set of responsibilities for their maintenance, including some measure of self-help contribution.

1.12 At the time when the pilot Hill Farming Project was prepared, it was therefore thought that the most likely successful strategy would be a blending of the private users, or social, approach with the public approach. The objective was to ensure that both private and public needs were met through a set of coordinated activities which were to provide the much needed fuelwood (and fodder) and at the same time protect the environment.

II. DEVELOPMENTAL ASSUMPTIONS AND PROJECT DESIGN

2.1 A Two-Stage Strategy To address the constraints outlined in the preceding section, a two-stage approach was adopted. Under the first stage, the Hill Farming Project was prepared for a three year period mainly as a pilot project for integrated rural development in Azad Kashmir. It was to contain a significant forestry development component, but also a crop farming component (maize and pulse crops), a livestock and fodder development component, a vegetable component, apple orchards, and other activities. The Project was also to test out, under field conditions, new technical solutions that might be incorporated in one or several follow-up projects of a greater magnitude in Azad Kashmir. The total cost of the Hill Farming Project was to be about US\$4 million. The second stage would consist of one or more follow up project(s) which would implement on a large scale the solutions tested out in the pilot scheme.

2.2 The strategy of the forestry component of the Project was designed to experiment with solutions addressing both the technical and the social aspects of developing forestry resources. Specifically, the project was to finance a pilot program of fuelwood plantation. This was to test not only improved tree species and planting techniques under field conditions, but also to develop suitable social strategies for involving local people in the planting, protecting, and maintaining of the reforested areas. Community acceptance of the obligations involved in replanting denuded areas, and in protecting the new tree blocks, was to be crucial for the success of the project.

2.3 The forestry component provided for establishment trials for fast growing tree species, particularly addressing the fuelwood problem, for the genetic improvement of existing tree species and the creation of four project nurseries. With seedlings produced from these nurseries, the project was to develop fuelwood plantations in four areas dispersed throughout Azad Kashmir: Patika, Kotli, Hajira, and Bagh. These amounted to a total of 3,000 acres. The nurseries were also to produce tree seedlings for sale at low prices to the area farmers.

Assumptions about Land Tenure: the Role of Shamlat

2.4 The assumptions about the tenurial status of the land to be reforested under the project played an important role in the project conception and design. The experimental planting of fuelwood on the 3,000 acres was supposed to take place mainly on community land (Shamlat), and also a much smaller portion on government and private land. The emphasis on community land was intended to conserve a flow of benefits (mainly fuelwood), primarily to the smaller farmers who constituted the great majority of these communities. Project planting on government, and on limited private, land was expected to demonstrate to the farmers the benefits of fast growing tree species, and thus to induce more tree-planting by the farmers on their private lands.

2.5 A professional sociological analysis of the land tenure system in Azad Kashmir was not undertaken during the preparation of the Hill Farming Project. According to the explanation given at that time by various officials, Shamlat land was regarded as community land. The various village communities would have decisionmaking authority over it, and implicit rights to share in

the use of it. The Project Appraisal Report used a working definition, according to which Shamlat is "land generally left uncultivated, owned jointly by a number of families." Quantitatively, the Appraisal Report assessed the Shamlat area as a major resource, totalling approximately 325,000 acres. This is equal to no less than 60 percent of the total cultivated farm area in Azad Kashmir, which is about 500,000 acres, and more than twice the size of the combined nonarable farm areas.

2.6 Given such an understanding of Shamlat, it was then quite logically assumed that fuelwood planting under the project on Shamlat land would:

- (1) require community consent;
- (2) promote and allow for direct community participation; and
- (3) eventually produce tangible benefits for the communities involved.

2.7 The general assumption was that the small farmers in Azad Kashmir, particularly those with little land and, implicitly, less access to firewood, would be the primary beneficiaries of project planting on land belonging to the communities.

Assumptions About Farmer Involvement

2.8 At the project design stage, it was anticipated that the involvement of farmers in this reforestation program would take four main forms:

- (a) making village community lands available for fuelwood plantations;
- (b) volunteering plots of privately owned nonarable land for forestry plantations;
- (c) providing support for protecting the tree seedlings and for enforcing the temporary closing of reforested areas to indiscriminate grazing; and

- (d) contributing towards the costs of reforestation by certain payments for seedlings, by labor contributions, or through other forms of assistance.

2.9 The actual innovation embodied in the project's forestry component was of both a technical and a social nature. On the technical side, the project departed from the routine approach of having the Forest Department plant only on government land, attempting this time to involve the farmers' lands. It designed a new approach. Under this, the state foresters would attempt to induce planting on nongovernmental land as well, to introduce fast growing species, to expand the total area under fuelwood, and thus to respond to the growing needs of the small farmer for wood for heating and cooking.

2.10 As to the role of the farmers themselves, the project was to promote a change in farmers' land use strategy for nonarable areas. Farmers were currently emphasizing fodder production and grazing, whereas the project proposed to convert some nonarable lands to fuelwood growing*, and sought the direct participation of farmers in its implementation. In sum, the project was setting objectives that partly required a modified productive behavior. The question was: would the target farmer population respond as expected?

* The project included other components in order to compensate for the conversion of certain grazing land into forest through intensified fodder production.

III. A SOCIAL ANALYSIS OF PROJECT IMPLEMENTATION

3.1 The following discussion of the social analysis of the project implementation process focuses on seven main themes: the progress of the project since 1978; the objectives of the social analysis; the impact of forest tenure systems and of social stratification; the historical cycle of community land circulation from partitioning through appropriation to privatization; the response of the farmers to fuelwood planting; the lack of a legal framework and its significance; and the developmental options and alternatives suggested as a result of the social analysis.

Project Progress

3.2 The actual implementation of the Hill Farming Project began in 1978. Given the experimental nature of the project, supervision of the implementation process paid more attention to its socio-cultural aspects than was usually the case in comparable Bank-financed projects. Social analysis has in fact been undertaken three times during implementation. It has served to draw attention to several essential social issues regarding the strategy of forestry development in the current pilot project. These issues have direct relevance to the preparation of the proposed large scale follow-up programs.

3.3 With respect to physical targets, the progress of the forestry component of the project was quite satisfactory. The reforestation target of the first year was accomplished: fuelwood trees were planted on 500 acres of identified land and the first project nurseries were established successfully. The positive support received by the forestry component from farmers

involved was quite significant. This was especially so given the rather unfortunate tradition of suspicion and conflicting relationships between farmers and the Forestry Department. While the objective in the first year of the project was to plant 500 acres exclusively on government land, the project staff succeeded in identifying 100 acres of community and private land in addition to the 400 acres of government land, which were relatively easy to find. As reported by the project staff, the owners and users of the private and community land agreed to dedicate the land for fuelwood plantation, although no formal contract was signed.

3.4 The second year of the project had an increased planting target of 1,250 acres. Other landowners came forward and volunteered their nonarable lands for tree plantations. After reviewing the available areas, the project's forestry staff tentatively identified for planting about 750 acres of community and private land, and 500 acres of government land. This was a much larger proportion of nongovernment land than that of the most optimistic assumption at appraisal stage. The nurseries created by the project produced most of the planting stock, about 585,000 tree seedlings, needed for the planting in the second year.

3.5 The implication of this progress was that if it was feasible to identify and plant with fuelwood large areas of nongovernmental land, then prospects for a large scale follow-up reforestation project were really good. The positive response of the farmers under the pilot project suggested that there was potential for incorporating significant tracts of private and community (Shamlat) land into the fuelwood production circuit. It was

therefore necessary to assess and to understand the mechanism and implications of this progress, which was faster than had been anticipated at appraisal.

Objectives of Social Analysis

3.6 The social analysis of the implementation of the forestry component of the project was accordingly undertaken to ascertain whether or not the identification of land for fuelwood plantation was in tune with the initial social, technical, and economic assumptions, and whether or not it was likely to lead to the expected distributional benefits. It is noteworthy that the social analysis was initiated to examine the successful advancement of the project, rather than being triggered by a "crisis" situation or by a lack of progress.

3.7 The social analysis was designed with the following five main objectives:

- (a) to ascertain the socioeconomic status and the motivation to favorable participation in the project on the part of the farmers to be reached by the reforestation component of the project;
- (b) to ascertain the tenurial status of the lands involved in the project in the first two years, and to estimate the likely beneficiaries, bearing in mind the initial assumptions of the project;
- (c) to assess the social procedures used in project implementation, in other words to observe and to analyze the communication patterns set up between the project staff the farmers involved in project planting;
- (d) to derive conclusions about the adequacy of the experimental social strategy of the pilot project for promoting changes in the land use patterns; and
- (e) to formulate development alternatives, if needed, and guidance for further action, and for preparing the large scale follow-up project.

3.8 The time available for generating social and cultural information was relatively limited. 1/ The field work accordingly had three focuses: (1) on interviews with farmers participating in the project and with farmers who did not participate; (2) interviews with implementation staff, particularly forest officers at range and district levels, forest guards, and conservators of forests; and (3) analysis of the customary land tenure system, legal provisions germane to land tenure, and inheritance patterns.

Forest Tenure Systems and Social Stratification

3.9 The social analysis first sought to ascertain the main legal land tenure systems operating in Azad Kashmir both on forest land and on land that was potentially usable for reforestation purposes. Three basic categories were identified:

- (a) Khalsa, or Crown land, which belongs to the state and is accordingly government land; under Khalsa land there are two categories of forests: (i) demarcated and (ii) undemarcated 2/.

1/ The three field visits of the author, each of about two weeks duration covering social aspects of forestry and other project activities, were made to Azad Kashmir in March and in October 1979, and in April 1980. Before and after the field visits, additional time was used to study documents relating to the history of the project, its preparation and its implementation.

2/ The official definitions of "demarcated forest land" and "undemarcated forest" valid in Azad Kashmir date from 1930 (see "The Jammu and Kashmir Forest Regulation Act" No. 2) and are as follows:

"Demarcated Forest means forest land or waste land under the control of the Forest Department, of which boundaries have already been demarcated by means of pillars of stone or masonry or by any other conspicuous mark, or which may hereafter be constituted as a demarcated forest;

"Undemarcated Forest means and includes all forest land and waste land (other than demarcated forest and much waste land as is under the management and control of the Revenue Department), which is the property of the Government and is not appropriated for any specific purpose."

As a rule of thumb, the demarcated forest areas are high density and better quality forests, while the undemarcated forest areas are low density forests, often located between the demarcated forests and the cultivated lands.

- (b) Shamlat land itself, which derives its name from the concept of "getting together" and is land belonging to the village communities: the uses of these lands are varied, including grazing areas, forest areas, sites for village public buildings, village graveyards, and so on; and
- (c) Malkiat land, which is privately owned; ownership rights on this land are recorded in the Revenue register and are validated by it.

3.10 The social stratification of private (Malkiat) landowners ranges over a broad spectrum. In addition to a large number of smallholders (about 65 percent of the total) there is a significant group of farmers with medium size holdings and a smaller group (less than 5 percent) which controls large or very large holdings. More precise information on forest holdings for the entire Azad Kashmir is not available as the Agricultural Census of 1972 recorded only arable lands.

The Historical Cycle of Partitioning-Appropriation-Privatization of Community Land

3.11 Given the critical importance of the land tenure pattern for the strategy of the project, special attention has been given to (1) an in-depth analysis of the status of Shamlat land and (2) to ascertaining the social mechanism of community decision-making and the profit-sharing procedures resulting from investments in forestry development. This assessment led to the identification of significant differences between the legal/formal status of the land and the de facto situation. This finding has important consequences for the implementation and impact of the project.

3.12 Given both the existing social stratification of forest landowners in Azad Kashmir and the coexistence of several tenurial systems on forestry land, the social issues which arise refer to the distributional consequences of project investments in forestry development. The sociological analysis revealed that the elicitation of farmers' cooperation with the program has led to formerly unanticipated consequences in the flow of benefits to various social groups.

3.13 Contrary to expectations, Shamlat land appeared not to be truly community land in the cases examined during field work. Significant changes have taken place gradually over time in most of Azad Kashmir. These have resulted in a dual and a divergent status: while, legally, Shamlat continues to be considered community land, in real life it is operated and used as private land. This finding is bound to modify the assumptions about the project's developmental consequences that were made when the planting of Shamlat land was originally planned.

3.14 Specifically, the limited interviews carried out with farmers in different villages and districts produced two main findings: (1) that there is a discrepancy between the official (legal) and de facto status of Shamlat; and (2) that usufruct benefits from the so-called Shamlat land accrue to precisely identifiable individuals, rather than to communities as structured groups.

3.15 How did this major change in the forest tenure and land tenure system come about? Essentially, it accrued over a long period of time and is not yet fully completed. The social analysis attempted to identify the casual mechanism and the intermediary stages of this transformation. Reconstructing

the social and political processes which have led to this change, it appeared that Shamlat land was, indeed, historically and initially, allocated to villages for communal use for their grazing and fuelwood needs. Subsequently, the following tripartite cycle of processes occurred, leading from informal partitioning through appropriation to eventual privatization:

- (a) informal partitioning of Shamlat, for use among certain village families whose lands adjoined the Shamlat areas. The Shamlat plots so partitioned were proportional to the amount of cultivatable land of the respective family farm, and numerous small and more remote farms were excluded from this process.
- (b) progressive appropriation of Shamlat by these families. Rights to Shamlat became transferable through inheritance (or sale of fractions of the cultivatable areas, which carried with them rights to proportionate fractions of the Shamlat plots. At the same time as these procedures were becoming increasingly prevalent, Shamlat still formally maintained its status as community land and was not entered in the Revenue records as belonging to private families. In consequence, the families concerned did not have to pay land taxes on "their" Shamlat plots.
- (c) gradual privatization of Shamlat: since 1974, when the tax on land was abolished in Pakistan, the pressure has increased to have Shamlat plots entered in revenue records in the names of the families who appropriated them, thus validating them as privately owned lands. The interested families use various

forms of pressure to obtain such re-registration of lands, in spite of existing legal regulations.

3.16 The historical cycle of partitioning-appropriating-privatizing of community land developed at different speeds in various districts of Azad Kashmir. It is reported that the status of land registration and tenure differs, for instance, in Mirpur district from, for example, Poonch district. Some areas and communities still maintain pieces of Shamlat as truly community possessions.

3.17 In its main lines, however, the historical cycle described above seems to be an ongoing one. For instance, current regulations continue to permit, under certain circumstances, the transfer of areas of Khalsa (Crown) land to village communities, where it should become community land. Slower or faster, however, the processes analyzed in the preceding paragraph develop. Thus yesterday's piece of Khalsa land becomes, through transfer or through encroachment, today's Shamlat land, which, in turn, is likely to become tomorrow's Malkiat land.

Farmers' Response to Fuelwood Planting

3.18 The gradual change in the tenurial status of community land into private land has had several consequences on reforestation activities. To secure Shamlat or private land for forest plantation, the project has had to secure the support of individual farmers, who are the relevant decisionmakers under these circumstances. For the time being, no community decisionmaking process, and/or community administration/protection of plan-

tations, are involved. Benefits are therefore bound to accrue to the individuals involved, rather than to the community.

3.19 An analysis of the social composition of the farmers who offered their private (Malkiat) land for project reforestation, and of the farmers who are in real control of the plots of nominally Shamlat land, reveals that it is the larger landholders who tend to take advantage of the project forestry component. This finding is contrary to the initial assumptions on which the project was based. It appears that the tracts of Shamlat land being offered for planting--and assumed by the project to generate benefits for village communities--have surreptitiously changed their tenurial status, and in fact are managed on a strictly private basis. Their de facto owners hope to get their "Shamlat" lands planted at full government expense, and without making any repayment commitments.

3.20 Currently, the government bears all the costs of the fuelwood planting program. These costs comprise four main items: (a) the cost of seedlings (including the establishment of nurseries); (b) cost of labor for planting and filling in; (c) cost of transporting plants; and (d) protection costs over several years (i.e. wages for guards). The project cost assumption for planting is of Rupees 1,300 per acre. 1/

3.21 Interviews with farmers indicated that the wealthiest landowners, who do have the economic resources to contribute, at least in part, towards the costs of establishment and protection of trees, have not done so, nor,

1/ This figure excludes the costs of annual maintenance and protection between planting and harvesting, which is estimated at Rp 600-700/acre per tree crop rotation.

in their present thinking, do they intend to do so in the future. For instance, at one of the project's reforestation sites, the main contribution to the 100 acres (75 private and 25 Shamlat) planted in the first project year was made by one influential family of six brothers-landowners, of whom only one is an "almost" full-time farmer, while the others are absentee landlords operating shops and small enterprises in Muzaffarabad and owning lands operated with tenants in other villages as well.

3.22 Another landowner, who offered about 125 acres of land for planting in the second project year, flatly refused to contribute any payment, arguing that the government should provide for the citizens. A third large farmer, who also wanted his 56 acres planted also in the second project year, requested in particular government-paid watchguards to protect the proposed plantation. Protection against fodder and grass cutting by adjoining small farmers seems to be an additional advantage expected by the larger farmers, because once the private or Shamlat nonfarm land is tree-planted, it will also be protected, thus restricting the access and customary rights of smaller farmers to collect grass, tree branches, etc.

3.23 Interviews with numerous farmers in the area revealed that their attitudes vis-a-vis reforestation of their lands and cooperation with the Forest Department are differentiated along socio-economic lines. Virtually all farmers interviewed realized the severity of current and foreseeable shortages of fuelwood, and were supportive of reforestation efforts. But the smaller farmers are currently more hesitant to actually accept project planting on their lands than are the larger farmers, for reasons which will be mentioned

below. At the same time, the smaller farmers appeared more prepared to contribute towards the costs of project planting than did the larger farmers.

3.24 The hesitations of the smaller farmers stem from their suspicions (1) that they may lose possession or control over their land to the government once it has been planted with trees by the Forest Department, and (2) that they may be deprived of access to fodder collection and grazing, which is critical for them. Most of the smaller farmers interviewed indicated that they would, if they could, offer small plots for project planting, provided they receive convincing assurances that the Forest Department will not alienate their lands and that they will be able to cut grass for their cattle. The noncontiguity of these plots would raise technical difficulties for the Hill Farming project and the Forest Department in undertaking the planting.

3.25 Thus, it would seem to be in the interest of the small farmers to develop some flexible, yet clear, pattern for contractual arrangements, addressing the technical difficulties of planting on small plots as well. On the other hand, it appears necessary to relax the project's requirement for tree-blocks of a minimum of 50 contiguous acres adjusting the requirement more appropriately to the socioeconomic circumstances of very fragmented land ownership.

3.26 The larger landowners have displayed a consistent positive response to the project, except for not being willing to participate in contributing to its costs. Being confident in the political power that they are wielding, they do not regard tree-planting by the Forest Department as a threat to their ownership on land and trees, and tend to manipulate available project

opportunities and resources to their benefit. This attempt is facilitated by the current absence of a legal framework which would define the obligations, not merely the rights, of the farmers whose land is being reforested through government contribution.

Lack of Legal Framework

3.27 Indeed, the effects of changes in the de facto tenurial systems on the planting program are also compounded by the fact that the government appears to lack a clear legal framework in which to cast the relationships with those farmers willing to cooperate in project forestry planting.

3.28 During the social analysis of project implementation, it appeared that project staff have difficulties in communicating with farmers, more specifically in:

- (1) explaining to the farmers that there is no hidden threat to their lands, while not being able to put in the farmers' hands written assurances to that effect; and in
- (2) requesting the farmers to promise an (unspecified) contribution towards cost repayments now or at tree-harvesting time, while not having a contractual framework for definite and acceptable commitments binding both sides participating in this activity.

3.29 The absence of a contract format increases the hesitancy of smaller farmers in particular. At the same time it offers a huge loophole to the large landowners whereby they can avoid immediate or later contributions. The Azad Kashmir forest legislation does not have provisions of the type contained, for instance, in the 1936 Hazara Forestry Act, in the North West Frontier Province of Pakistan, which maintains the ownership rights of the farmer while vesting the right to manage their forests in the Forest Department and ensuring a certain mechanism (although a controversial one) of cost recovery.

IV. LESSONS FOR FUTURE DEVELOPMENTAL OPTIONS

4.1 What were the main conclusions derived on the basis of the social analysis, in view of the demographic and the economic constraints facing fuelwood production in Azad Kashmir, as described in the first section? Was this analysis conducive to certain corrections in the ongoing project, to better meet the project's initial assumptions? Did it help also to formulate any new alternative development options for eliciting genuine farmer participation, for meeting the enormous costs to the government of a large scale forestry program, for using and strengthening the institutional structures at village level on which such a program could rely?

4.2 The social analysis of the pilot fuelwood reforestation component, as summarized in the preceding pages, did suggest several valuable lessons. Some of them could be taken into account immediately in the ongoing project - and they were indeed taken into account - while others are being used for preparing the subsequent large scale follow-up program in Azad Kashmir. In addition, certain sociological lessons derived here might be pertinent in the case of similar forestry projects in other countries of the developing world, where the socio-cultural variables were comparable. The following discussion outlines both short and long-term adjustments based on the social analysis. It pays particular attention to self-help and to options substituting full subsidies with cost-sharing approaches, to behavioral and environmental considerations, and to the utilization of local government bodies or of cooperatives as institutional supportive structures for forestry plantation, protection and management.

Short Term Adjustments

4.3 Given the differences between the assumed and the actually operative land tenure systems in Azad Kashmir, it was recommended that Project Management reconsider the areas identified for fuelwood planting during the following years of the project. The recommendation was to limit project financed planting on "Shamlat" land and on private land, and thus to avoid turning the pilot project into a full "giveaway" program, until a cost sharing system could be devised and implemented.

4.4 This recommendation was in fact applied immediately. The Project Manager revised the tentative identification of land tracts for second year plantings. Only 25 acres of Shamlat land, and 375 acres of private land, were planted by the project, instead of the 800 private acres initially identified. The Khalsa lands planted, however, were increased from 400 to 850 acres. The selection of the private lands for planting was made more consistent with the orientation of the project towards the smaller farmers. This revision was instrumental in limiting considerably the diversion of project benefits to farmers outside the target group.

Long Term Strategies

4.5 While short run adjustments were immediately feasible, the solution to the basic issue that emerged strongly from the social analysis is to be constructed during the preparation of the subsequent large scale program. A refined strategy, adapted to the real circumstances of tenure and of social stratification, needs to be worked out. To begin with, this requires the preparation of a new legal framework, that would legally redefine the system of

socio-economic and institutional relationships between the Forest Department and the farmers with respect to forest planting, protection, management and benefit distribution. Such a new legal framework would also provide the confidence needed for more intense participation by the small farmers in the fuelwood planting program, would encourage more the tree-planting behavior of farmers and will also lay the foundations for a partial cost-recovery approach.

4.6 A clear lesson emerging from the social analysis is the need to prepare a standard contract, spelling out the economic incentives and the ownership issues clearly. This would guarantee to the farmer the ownership of land and of trees planted by the project and/or by the Forest Department, and would also specify the farmer's partial payment responsibility to the government. Such procedures would cast repayment in feasible and reasonable terms and would help introduce new production behavioral patterns, would relax the fears of the small farmers about alienation of their land or products if planted by, or with the help of, the Forest Department and would take care more systematically of their fodder needs for their livestock.

4.7 An alternative, and more refined, option derived from the social analysis is to work out and apply differentiated repayment models and proportions for the various categories of farmers, given the existing social stratification, depending on the size of their land to be planted by the program. This would open up the reforestation program supported by the government to farmers with larger holdings as well. At the same time, it would preserve equity considerations by ensuring differential repayment quotas from these farmers in line with their economic strength.

Subsidy, Self-Help, and Cost Recovery

4.8 The sociological implications (and pre-conditions) of the social forestry approach with emphasis on self-help and partial cost recovery are extremely important. They are also relevant to many projects beyond the specific example of Azad Kashmir. Arguments cut both ways, as a significant amount of subsidy is inevitable. For example, the consistent promotion of self-help and partial cost recovery in Azad Kashmir may be hindered if other agencies, such as WAPDA, which is concerned with planting for watershed and environmental protection, were to implement a full subsidy policy. Such a competing approach would be likely to reinforce paternalistic expectations and apathetic attitudes among farmers towards replanting trees, and may undermine attempts to generate more responsible participation.

4.9 On the other hand, experience to date indicates that forestry project components involving local participation should invariably involve some subsidy as well. There are two important reasons why some subsidies are legitimate:

First, many small farmers are unable to provide the total inputs needed, given the relatively long-term (6-12 years) period before the first harvesting. Long term investment in trees are competing with farm activities and resource uses giving more immediate results. Nor would deferred repayment credit be appropriate, because of the risk factor and its often low financial return;

Second, environmental stability benefits, both local and off-site, would be shared by other beneficiaries then strictly the project's target group.

4.10 The levels of subsidy being provided in different forestry programs should therefore vary according to the degree of farmer participation and government policy towards subsidies. A sound developmental approach would

require, however, that the cost of replanting of the plantations in future years would be financed from revenues generated by the initial (subsidized) investment.

4.11 In the case of the Azad Kashmir follow-up large scale forestry program, the developmental option to be pondered is whether or not the environmental protection considerations, typically underlying reforestation programs, should override the criteria for a socially sound program in which participation by beneficiaries in both costs and benefits are equitably distributed. These considerations do not appear to be mutually exclusive. The objections to the fully subsidized "giveaway" approach, as inducing paternalistic expectations, are not merely sociological. They are also financial. Apart from the social equity and distributional aspects, a large scale fuelwood planting program could not be feasible without some sharing of the costs as estimated in para 1.6 and 1.7. This is because the government of Azad Kashmir simply would not have the necessary resources to sustain such a program without any cost recovery mechanism.

Institutional Support: Village Councils

4.12 The social analysis of the Hill Farming pilot project recommended another development option as well: that of using the new local (village and village clusters) government bodies recently created in Azad Kashmir as an institutional supportive structure for promoting community woodlots.

4.13 For a relatively long period, rural communities in Azad Kashmir lacked any formal system of locally elected authority at the village level. This has deprived the local communities of adequate institutional self-

governing structures able to undertake responsibility for local projects, including village woodlots, and vested with the authority to enforce community protection of new plantations. Such local government institutions were created only recently as a result of the election of 1979 (subsequent to Project Appraisal). They consist basically of village (Dehi) councils and Union Councils (one for every ten villages).

4.14 Of course, one should not overestimate the organizational capabilities of these new institutions in their early operating stages. Nevertheless, they do open up new opportunities. Under the pilot Hill Farming Project, such new opportunities could be explored and experimented with. For instance, it was proposed that some areas of undemarcated Khalsa forest land be allocated to the elected Union Councils for planting community woodlots, to experiment whether the Union Councils, with suitable guidance, might become the community-based organizations able to mobilize labor resources for fuelwood planting, and to exert the social pressure needed for protecting the plantations. The innovative channeling of project co-financing into the development funds of the eligible Village and Union councils might enhance the potential for small social forestry schemes, as a result of the organizational back-up which these new bodies could supply. In similar circumstances in other countries (e.g., India, Nepal) the local self-governing bodies proved themselves able to promote forestry planting or other productive activities under Bank assisted projects.

Family Woodlots

4.15 If, however, community institutional structures prove insufficient, the follow-up forestry project might also consider as one of its possible strategies the family unit as the social organization directly supporting

reforestation, through a family woodlots component, in which women can take up an active interest. Referring to circumstances in other countries, (e.g., Niger) sociologists have emphasized (1978, Noronha, 1980) the potential advantages which family woodlots might have over village woodlots. This refers particularly to situations where the capacity of the village for collective action is meager; where community division resulting from social and economic differentiation is significant and where the interdependence required by community schemes can not be elicited and not everyone can be counted for to contribute his share of work; and/or where community woodlots are ill-suited in the local ecological context to serve as a vehicle for reforestation powered by local people.

4.16 Under Azad Kashmir circumstances, there are some technical constraints affecting the effectiveness of family fuelwoodlots, which should be adequately addressed. These constraints stem from the rather small areas which the family household of small farmers may make available for tree planting, and from the impracticality of afforestation by the Forest Department on such tiny plots. By setting up an adequate incentive system, however, families might be induced (and technically assisted) to take exclusive responsibility directly for planting and protecting such small farm woodlots, or hedgerow planting and avenue planting, thus increasing their confidence in their full control, at harvest, over their product and their land.

4.17 Thus, the social strategy for further development of fuelwood recommends more emphasis on the farmers' tree-planting behavior. Such behavior should not be expected to occur just "spontaneously" but could be encouraged more through improving extension work, making available more

seedlings of fast growing species, provision of other economic incentives, improving communications between the Forestry Department and the farmers. More private planting directly by the farmers would supplement the planting programs carried out by the Forestry Department, which alone can not address all the planting needs, and would result in a larger total acreage planted. It was therefore recommended that the design of the follow-up forestry project incorporate the "social engineering" provisions (e.g., para-professional social extension staffing, training, communication systems, incentives, a.o.) needed to actively elicit more direct tree-planting behavior by the farmers themselves.

4.18 Experience in various schemes for social forestry development (e.g. in Upper Volta, in Malawi, in India-Gujarat and Uttar Pradesh projects) pointed out to the special role women could play in such planting schemes (Scott, 1980; Hoskins, 1979). Given women's customarily imposed responsibility in many cultures for fuelwood collection, extension work necessary for either community woodlots or family woodlots should pay particular attention to women. No specific estimate of the women's workload in Azad Kashmir for collecting and transporting fuelwood was made, but in projects located in more or less similar conditions (e.g. Nepal) women's time for fuel collection was assessed at a total of 60 days per year. Therefore, under the follow-up project in Azad Kashmir the extension efforts for promoting tree-planting on family plots, hedgerows, etc. should be directed largely to women, whose collecting tasks would thus be facilitated. Also, under increasing scarcity of wood for domestic use, women are the first to be interested in introducing the improved cooking stoves provided under a related component of the project.

Forestry Cooperatives

4.19 Another institutional structure which could support reforestation with direct farmers' involvement is the forestry cooperative. Such cooperatives have not been yet experimented in Azad Kashmir and would require a testing period, but they might prove to be a more coherent and better defined organizational structure than the village community as a whole. An interesting development has recently occurred in the province neighbouring Azad Kashmir, the North West Frontier Province (NWFP), where a pilot program to form forestry cooperatives among Guzara forest owners is being resuscitated and implemented. The immediate objective in NWFP is to set up some 15 Forest Cooperatives over the next three years, each with a minimum of 500 acres of forest land. Each Cooperative would be vested with the responsibility of managing the forests of its members on the basis of a management plan approved by the Forest Department. The cooperatives would receive technical assistance in preparing the management plan and the services of field foresters paid for by the provincial government. No other subsidies are expected to be paid. All other forestry costs, (replanting felled areas, maintenance, extraction, etc.) would be borne by the cooperatives. Funding for the cooperatives would come from the revenue from sales of existing trees, plus credit if needed. For this purpose, cooperatives would be authorized to retain at least 40% of the revenue from the sale of trees of its members. The cooperatives would be registered under the Cooperatives law. This experiment may provide worthwhile lessons for Azad Kashmir as well.

V. CONCLUSION

5.1 The social aspects of afforestation in Azad Kashmir are relevant on a much wider geographic and social area than the case discussed here. It is now largely recognized that "many of the sectoral issues relating to [participation in afforestation] are sociological" and that "securing the cooperation of local people . . . presents formidable problems" (World Bank, Forestry Sector Policy Paper, 1978). This is why, as "an integral part of preparing and appraising forestry projects it has been increasingly necessary to include sociological studies at the village level, to ascertain the people's own priorities for development and to examine ways and means of motivating their interest in rural afforestation schemes". (Spears and Yudelman, 1979).

5.2 To return, in closing, to what has been a key issue discussed in this paper, the forest-land tenurial system is crucial for any reforestation strategy. The yield levels, the scale and the costs of fuelwood planting that are required in order to meet the current and foreseeable fuelwood needs in Azad Kashmir (see para 1.7), could be met probably only through an overall strategy which would promote both public and private planting and which would recognize the need to involve both small and larger farmers, without, however, ignoring the equity considerations.

5.3 Knowledge of land tenure patterns on forest lands is a key to both understanding the size and nature of land resources available for replanting and estimating the likely distribution of benefits from the replanting. In designing forestry projects, a common error is to assume that formal, legal land rules actually reflect what goes on on the ground; this error is often

conducive to misdesigning projects or to failures in implementation. Very frequently, the practices of local populations in forest exploitation are contrary to the legal prescriptions or the practices of forest authorities are not in line with customary rules accepted by the population. This aggravates the distrust between the local population and the forest authorities.

Therefore, a clear understanding of the rights and obligations of prospective participants in a forestry program is an essential precondition to obtaining any effective grass root support for the program.

5.4 The objectives of the analyzed project and of its follow-up project, of securing definite commitments of individual farmers and of village institutions (Union Councils, a.o.) to contribute towards and actively participate in private forestry, have proven to be in some conflict with other ongoing programs (which, by offering full subsidy, foster a paternalistic approach, financially unsound in the long run); in particular, the expectation that beneficiaries would enter into formal agreements with the FD for cost sharing and maintenance of the investment remains unwarranted as long as a legal framework for such agreements is not provided. This conflict could be removed through legally guaranteeing farmers' land and product ownership in exchange for their participation in the reforestation investment program. Changes in farmers' tree-planting behavior might occur only as a result of combining forestry extension work with technical assistance, adequate economic incentives and an acceptable legal framework.

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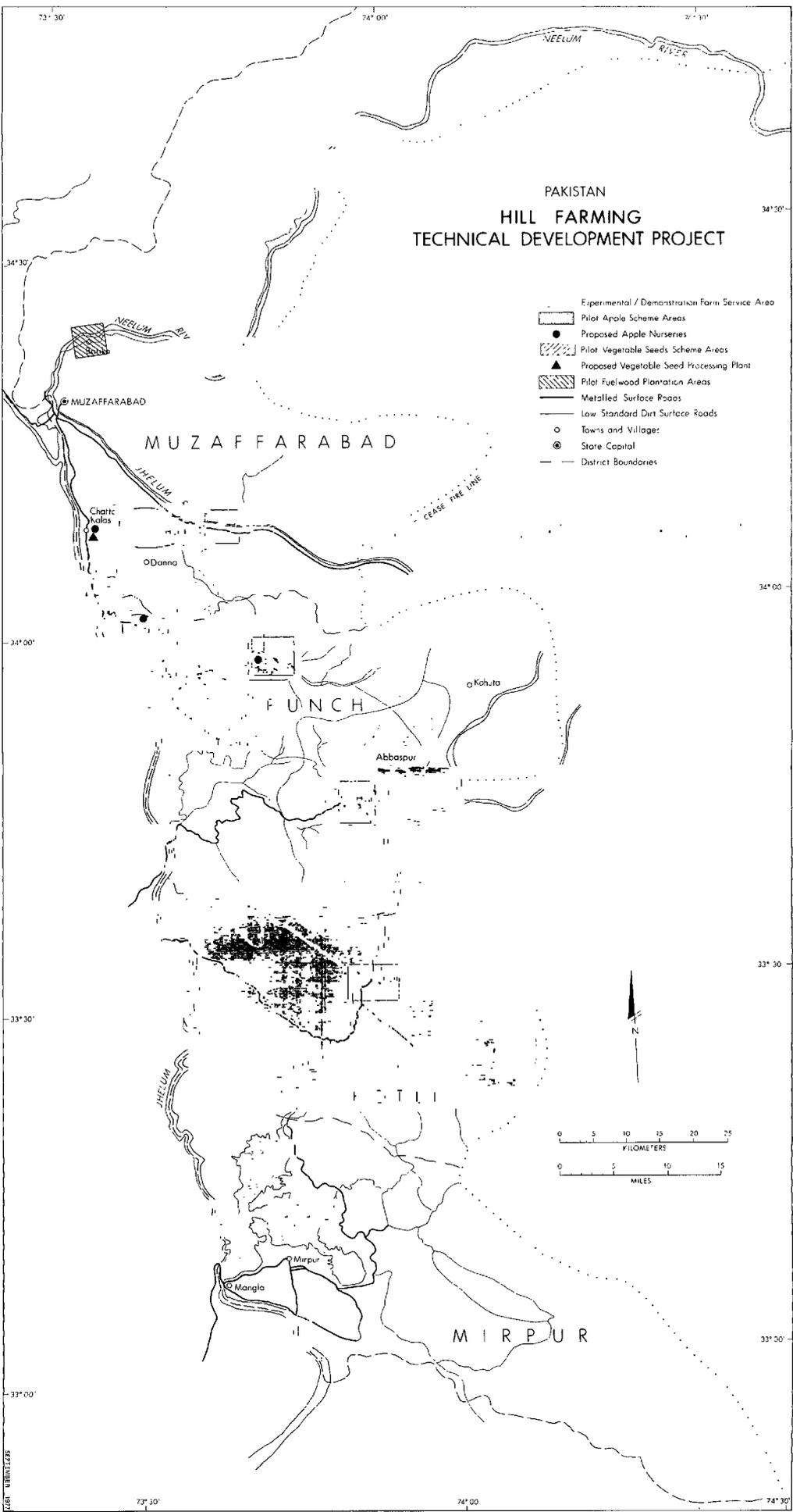
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