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2. Survey Plan for Timber Resource Assessment in Northern West Pakistan (1969).
3. Fundamentals of Photo-interpretation and Photogrammetry (1972).
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13. Forest Management in Himalayan, Karakoram and Hindu-Kush Region of Pakistan (1990).
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15. Forest Policy, Administration and Management in Pakistan (1993).

**REVIEW AND  
ANALYSIS  
OF FOREST  
POLICIES  
OF  
PAKISTAN**

ABOUT THE AUTHOR

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**Abeed Ullah Jan**

**REVIEW AND ANALYSIS OF  
FOREST POLICIES OF  
PAKISTAN**

**ABEED ULLAH JAN**

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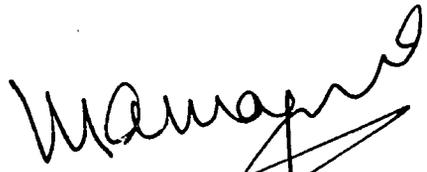
In the nineteenth century when the Forest Policy was first framed in Pakistan, the main objective was to manage the forests for the production of wood. Little concern was shown for maintaining a balanced ecosystem and an environmentally acceptable landscape. Although the principle of sustained yield was flouted, the forests were plundered to feed the war machines of World Wars I and II. Thus at independence, Pakistan received a very dilapidated forest resource and forest policies that were not entirely applicable.

From 1955 onwards, Forest Policies have been launched to increase wood production in the country on one hand and to protect watersheds, range lands, fauna and flora on the other. The impacts expected from these policy changes have not been achieved for a variety of reasons which have been dispassionately discussed, reviewed and analysed by the author. This analytical discussion provides the basis as well as justification for the scope and direction of the 1991 Forest Policy directive.

The author has taken the lead in drafting the Forest Policy of 1991. This document considers the scientific establishment of tree crops, their management, harvesting and utilization while emphasizing the integration of watershed management, biological diversity, environmental degradation, and desertification programmes which rely on sustained afforestation/reforestation effort.

I place on record my sincere appreciation to Mr. Abeer Ullah Jan, Inspector General of Forests for his excellently written book which critically analyzes Forest Policies, assesses their results, and pinpoints bottlenecks and hurdles which hindered their smooth implementation.

I hope that a corps of dedicated foresters, involved with the common man, and appropriated adequate funds by representatives of the people successfully implement and achieve the goals of the 1991 Forest Policy directives.



Lt. Gen. (Retd)  
(ABDUL MAJID MALIK)  
Minister for Food, Agriculture  
and Cooperatives

Islamabad  
December, 1992

## FOREWORD

Forestry is a time consuming, long gestation enterprise. Unlike agricultural crops, which are sown, raised, harvested and utilized in 4 - 6 months time, trees require decades and in some cases centuries to mature and to be ready for harvesting. Mistakes committed in their treatment and management are difficult to detect and expensive to rectify. This calls for long term planning and strict implementation. For example; any programme of afforestation requires collection of seed during the first year, raising of nursery in the second year and availability of plants in the third year. If funds are not provided during the fourth year, the time, efforts and money spent during the first three years will go to waste or at least be poorly utilized.

2 Forestry, therefore, requires rational policy, realistic planning and strict adherence to the stated objectives, pre-determined goals and actions supported by political will, sufficient resources, efficient organization, problem oriented research and intensive training to achieve the goals of conservation and sustainable development.

3. This book on the subject of "**Review and Analysis of Forest Policies of Pakistan**" is an attempt to compile the existing knowledge at one place, highlight the deficiencies of the previous Forest Policies and draw lessons for effective implementation of the 1991 Forest Policy to achieve better results. If I succeed in conveying this message, I shall feel happy to have served the cause of this profession which has given me bread, butter and status. In any case, I believe this book will be useful for libraries, officers under training in the institute and practical foresters in the field.

(Abeed Ullah Jan)

Inspector General of Forests

December 2, 1992

## CHAPTER NO. 1

# **HISTORICAL BACKGROUND**

## INTRODUCTION

Pakistan inherited a meagre forest resource in its western wing in 1947 when India and Pakistan were carved out of the British empire as two independent states. Despite having a weak base, the country remained self-sufficient in wood and wood products until 1971 because the shortfall in West Pakistan was offset by the excessive supplies in East Pakistan. With the cessation of East Pakistan and the creation of Bangladesh the supply of wood and wood products to Pakistan from Bangladesh dwindled. Although some attempts were made to increase the forest area in Pakistan after 1971, the efforts have had limited success due to the arid climate in most parts of the country, the low priority assigned to forestry in the planning process and consequent inadequate funding. Today Pakistan's forest resource is inadequate to meet her needs.

Pakistan is, mainly, a dry country, approximately 51% of the area is arid with a rainfall of less than 10" (250 mm) per annum and a 60 day dry, hot spell in May, June and July when temperatures reach more than 120°F. Consequently, tree growth is extremely limited in this region. Bushes and grasses grow in this arid zone but they are devoured by the millions of heads of livestock, particularly goats and sheep, which are the main stay of people who live in this region. Approximately 37% of Pakistan is semi-arid where rainfall ranges between 10" and 30" (250 -750 mm) per annum. In this part of the country tree growth is possible but the area is mostly utilized for rainfed agriculture since marginal agriculture gets preference over tree culture in a food deficit country.

Only 12% of Pakistan (16% if Azad Kashmir is included) is sub humid. This area is located in the Himalayas,

Karakoram and Hindu Kush mountain ranges. It is extremely well suited for tree culture because of climate, topography and soil conditions. About 20% of this region is already under dense, productive natural coniferous forests.

### SITUATION BEFORE 1947

Hazara, Malakand, Muree Hills and Northern Areas had dense forests prior to 1947. Most of these forests were located along the frontiers of the then British Empire in the northwest portion of the Indian sub-continent bordering Afghanistan and Kashmir. The border tract was mostly comprised of tribal territories and constituted a buffer zone between British and Russian influences on the two sides.

The terrain in the northern parts of Pakistan where natural forests occur is mountainous, means of communication are still under developed and sources of livelihood are scarce. Forests were and still are the main source of livelihood. People derived income from the sale of timber and from the jobs created by forest operations. People enjoyed unlimited rights in many forests. These rights were granted to them lavishly during the period of colonial rule. Several considerations lead to these grants but three of the most important are mentioned below:

- i) The colonial masters wanted to enlist the co-operation of tribesmen living in settlements near forests and, therefore, generously granted them rights in forests and the adjoining crown lands.
- ii) The economy of local people was and still is agro-pastoral. People kept large herds of goats, sheep, cattle, camels and buffaloes and grazed them freely. Restricting grazing or prescribing grazing areas was perceived as denying local people their livelihood and this posed problems for the colonial lords.

Grazing restrictions can still create an explosive situation if any measure of control is imposed on local people.

- iii) Due to limited human and livestock populations and extensive forest and range areas at that time, the exercise of generous rights did not pose a serious threat to forest conservancy.

For the purpose of exercising rights, forests were divided into two categories, namely Reserved Forests and Guzara Forests. The people lived in the valley where flat land, adjacent to perennial streams, was utilized for raising agricultural crops and fruit orchards. The slope from the valley bottom to the hill top was, in those days, covered by dense forests. The portion of a forest adjacent to a big habitation was declared as a Guzara forest where the ownership of land and of the trees standing there on was vested in the people either individually or jointly as family ownership or as village shamilat (common property). The British Government, however, retained the right to receive a seignorage fee at a fixed stumpage rate for every tree felled in the Guzara forests for domestic or commercial purposes. The purpose of this fee was to maintain legal claim to the forests so the rights could be revoked if such an action were necessary to safeguard the interest of the British Empire. The forests growing away from habitations and towards the mountain top were notified as Reserved Forests and they were properly demarcated with boundary pillars and delineated on 1": 1 mile and 1": 4 miles maps.

In order to pacify the local population, a similar seignorage fee was applied to sales from Reserved Forests. These measures worked to the satisfaction of local people who exercised unlimited rights in Guzara forests and to conserve an adequate proportion of forests by prohibiting all acts in Reserved Forests except those permitted through separate notifications.

## **IMPACT OF IMPORTANT EVENTS AFTER 1947**

When Pakistan was created in 1947, it was faced with hordes of problems ranging from a weak economy, to inadequate administrative structure and an enormous influx of refugees. The situation remained fluid and uncertain and nobody thought of forests or forestry for a few years.

To develop the country, a First Five Year Plan was prepared and launched in 1955 but it did not place much emphasis on forestry. A small provision of Rs.39.1 million was made in the Plan, more than half of which was for East Pakistan (now Bangladesh).

### **INDUS WATER TREATY IN 1960.**

Forestry was emphasized for the first time in 1960 when the Indus Water Treaty was signed with India and as a consequence large areas were colonized in the Punjab and Sindh Provinces with the new irrigation facilities. According to a policy decision taken by the Government in 1962, it was mandatory to earmark 10% of the irrigable area in the new barrage areas for raising trees in the form of block plantations with the help of irrigation water.

### **MERGER OF ERSTWHILE STATES IN 1970'S.**

Forestry received another boost in 1970 when the erstwhile states of Dir, Swat, Chitral and Amb were merged into NWFP. The control of the forests in these areas was taken over by the NWFP Forest Department and the forests were brought under scientific management through the implementation of regular management plans. Roughly about one million ha. of forest land was added almost overnight which increased the forest area of Pakistan to about 3 million ha.

## **LINEAR PLANTATIONS.**

As a result of a policy decision in 1962, the control of road side and canal-side strips was transferred to the Provincial Forest Departments from the Communication and Works (C&W) and Irrigation Departments respectively during the 1970's to utilize them for raising linear plantations for amenity purposes. About 17000 ha. of land was, thus, added to forest area on which beautiful avenues of trees have been raised to provide shade and reduce dust and noise on roads, canals and railways.

## **LAND REFORMS.**

Land reforms were introduced in Pakistan, first in 1960, and again in 1972, to reduce the influence of big land owners, to discourage absentee land lordism, and to boost agricultural production by distributing land among landless tenants (haaries).

Under the land reforms of 1960, the owners were required to surrender land in excess of 1000 acres if it was rainfed agricultural land or 500 acres if it was irrigated agricultural land. This ceiling was further reduced to 500 acres of rainfed land and 120 acres of irrigated agricultural land under the 2nd Land Reform of 1972.

Since large land owners preferred to retain agricultural land, they surrendered woodedlands and wildlands for obvious reasons. Consequently, large chunks of wildland and wooded land surrendered by the big land owners were resumed by the respective Provincial Governments and handed over to their respective Forest Departments for management. Such areas, called Resumed Lands, have been notified as protected forests under the Pakistan Forest Act, 1927. Under this arrangement, about 100,000 ha. (8000 ha. in Punjab, 57000 ha. in Sindh and 35000 ha. in NWFP) were added to forest areas.

## **SPECIAL AREAS.**

Special provision exists in the Pakistan Forest Act 1927, the Hazara Forest Act 1936 and the Punjab Chose Act 1900 for the Forest Department to take over the control and management of private lands if erosion or landslides from such lands are likely to cause damage to vital structures of public importance like roads, bridges, canals, historical sites etc. Such lands are treated by the Forest Departments at public expense to rehabilitate them with vegetative cover and engineering devices. Such areas are known as Section 16 if taken under the Hazara Forest Act 1936, Section 38 areas if taken under Pakistan Forest Act 1927 and as Chose Act areas. Normally, such areas are taken for 10 years. At the end of this period, the land is either released to the owners or the Forest Department's control is extended for another term of 10 years. This explains fluctuations in forest area figures depending upon how much area is with the Forest Departments at a particular point in time.

## **CROWNLANDS.**

During British colonial rule, the question of land tenure was established through a land settlement proceeding process. In areas having natural coniferous forests like those of Hazara in NWFP and Murree Hills in Rawalpindi, settlement proceedings were conducted as early as 1930 and wooded areas were classified as Reserved Forests, Cantonment Forests, Municipal Forests, Guzara Forests and Communal Forests on the basis of land ownership. In the first three categories the ownership was vested in Government whereas in the later two categories, the ownership rights were vested in private individuals or village communities as a whole.

Elsewhere in the country, Government owned lands were termed crownlands. When these were entrusted to the Forest Departments they were called State Forests in Balochistan

(notified under Balochistan Forest Regulation, 1890) and unclassified forests in Punjab.

The legal classification does not necessarily include areas which have tree growth. In fact a forest is a piece of land which has been designated as a State Forest, Reserved forest, protected forest, cantonment forests, municipal forest, unclassified forest, Guzara forest, Communal forest, section 38 area, Chose Act area irrespective of the fact whether trees and bushes are growing there or not. Contrary to this situation, there may be a dense growth of trees on small or large areas, either publicly or privately owned, which have not been assigned a legal classification in the categories described earlier. These areas are not considered forest nor are they taken into consideration while computing forest areas for calculating a national average.

### **EVACUEE PROPERTY.**

During 1947, mass migration of population took place across the border in East and West Punjab resulting in vast areas of lands left behind by the migrants. Such lands, particularly near the international border and along the Chenab and Ravi rivers, were allotted to the forest department for raising trees and to increase the area under forests. These lands are treated and managed as Protected or Unclassed Forests depending upon the provision of Pakistan Forest Act 1927 notifying their status.

### **WATERSHED MANAGEMENT.**

Mangla dam was completed in the seventies and Tarbela dam in the eighties. These are multi-billion dollar investments which are dependent, for their useful life, on proper land use in the catchment areas of the Himalayas and Karakoram regions in Northern Pakistan. Consequently, a phased programme of planting barren hill slopes; terracing of fields; preventing

erosion through the construction of check dams, slit traps and gully plugging; consolidating stream banks with live spur; and planting of forest trees on steep slopes and fruit trees on easy slopes was started in 1975 in Hazara (NWFP). This programme used commodity assistance of wheat, sugar, tea, milk powder and butter oil provided by UNDP under the World Food Programme (WFP) as food for work. The programme was a great success due to its acceptance by the hill farmers and, therefore, it was extended to Dir and Swat Districts in Malakand Civil Division of NWFP in 1980. Five years later in 1985, a similar project was started in Muzaffarabad District in the areas adjoining in Azad Kashmir. More than 200,000 ha. of young forests have been raised so far with WFP assistance. These programmes have raised the forest area by 2% in NWFP and 1% in Azad Kashmir.

## CONCLUSION

Under the programmes and actions described above, forest area has increased gradually both landwise and tree cover wise. The forest area figures have however, shown declines in some years which are due to the return of private forested land to the owners after treatment under the Forest Act, Hazara Act or Chose Act. However, these declines impact forest acreage and not forest cover. Real decreases in forest acreage are rare and are due to allotment of forest land to Ex-servicemen for agriculture and other purposes or the transfer of forest area to non-forest organization such as army.

# PAKISTAN MEAN ANNUAL RAINFALL

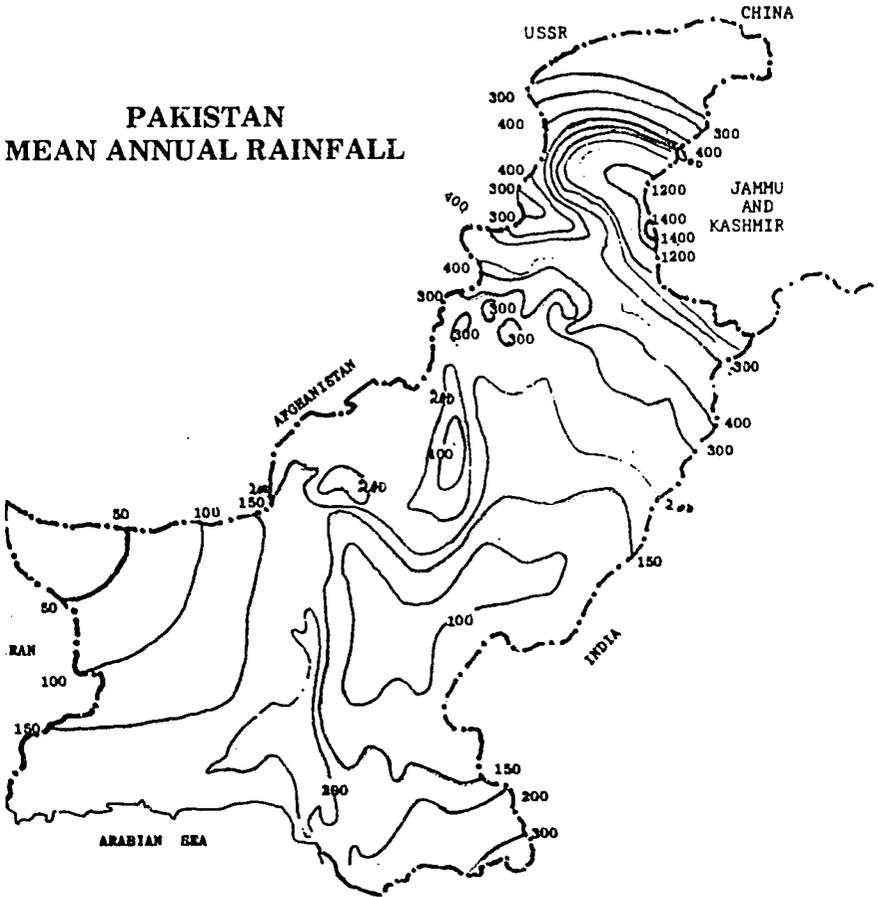


Fig-1.1

## MAP OF PAKISTAN

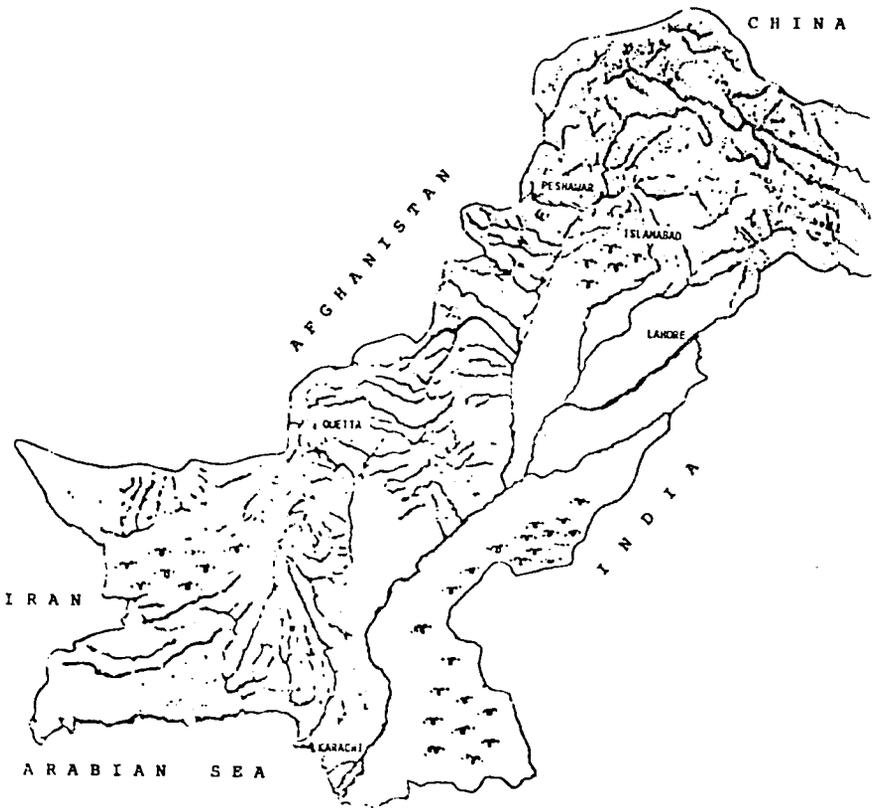


Fig-1.2



## CLIMATE ZONES OF PAKISTAN

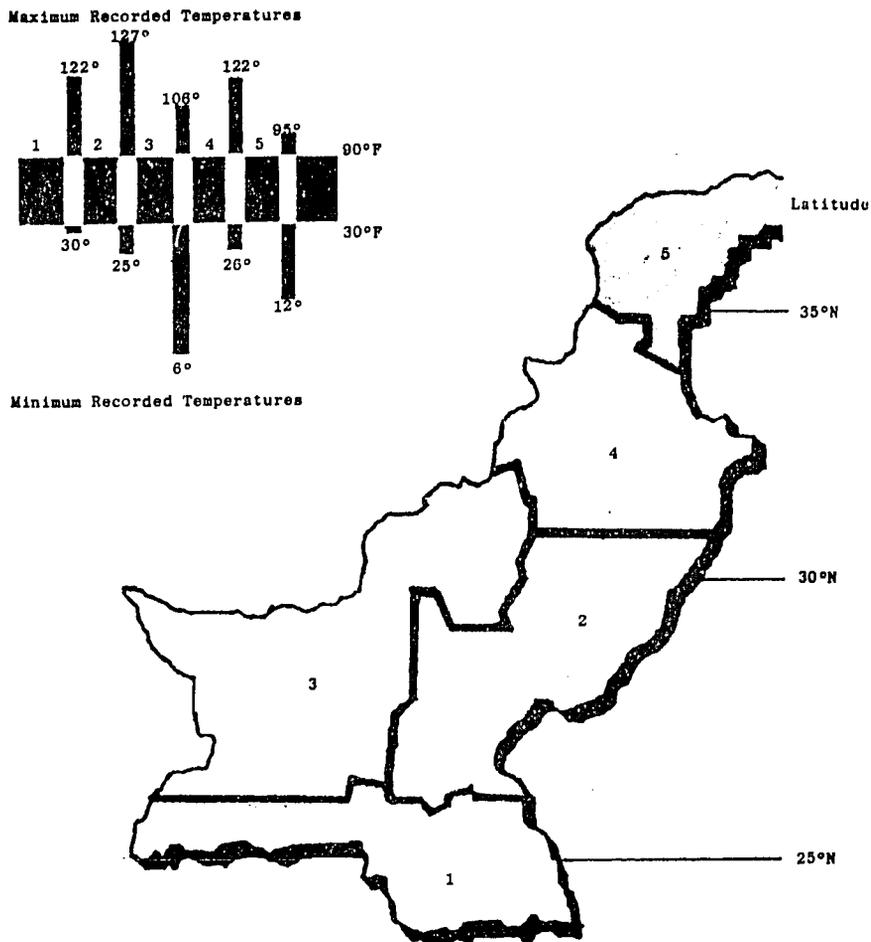


Fig-1.4

# Area Under Forest

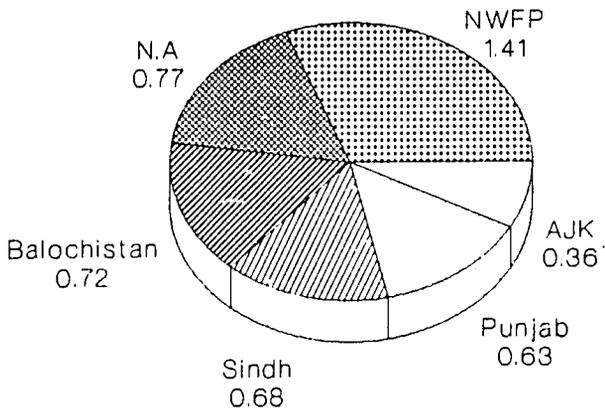


Fig-1.6: Area Under Forests.

# Area by Forest Types

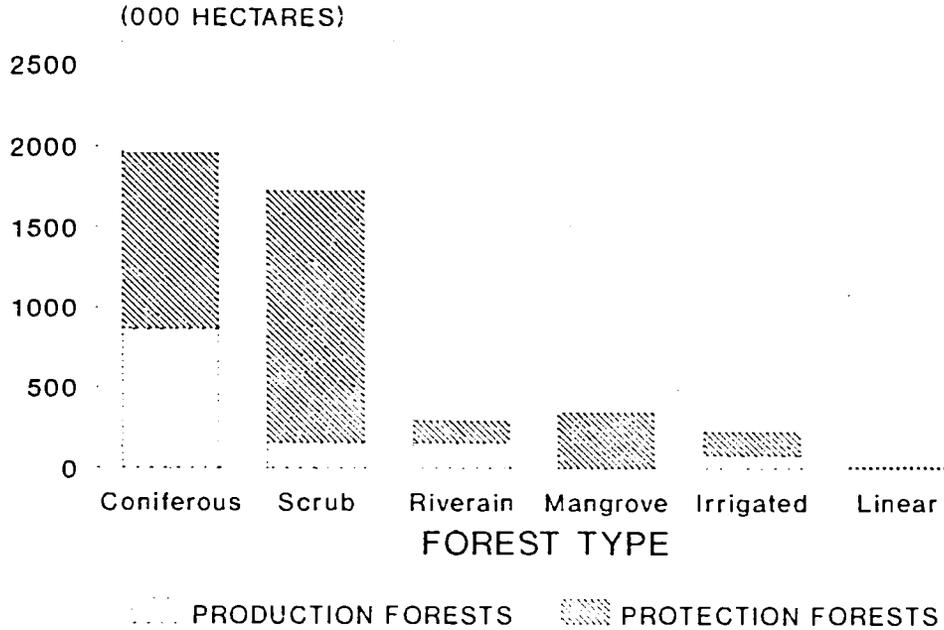


Fig-1.6: Area by Forest Types

# Himalayas Kara Kuram & Hindu-Kush Mountain Ranges in Pakistan

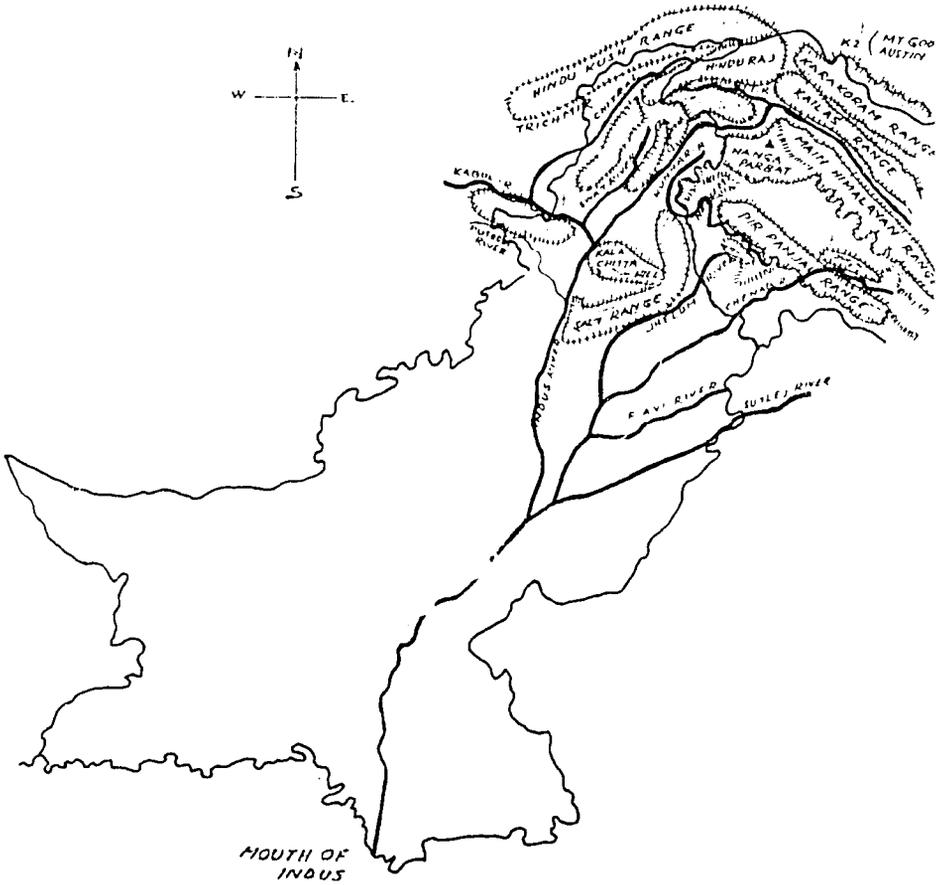


Fig-1.7

## **CHAPTER NO. 2**

# **EVALUATION OF FOREST POLICIES**

### **INTRODUCTION**

Forest Management in Pakistan has passed through several stages before and after independence in 1947. Past policies have played a key role in the current status and trend of forest resources. It would, therefore, be worthwhile to evaluate forest policy statements which have guided the management and influenced the development of forest resources in the country. This discussion could be helpful in appreciating the trends in the policy statements leading to the one announced in 1991.

### **FOREST POLICY OF 1894**

The policy of 1894 was framed for British India where forests occupied more than 25% area and the human and livestock populations were very low, urban development was slow, and levels of wood consumption were also very low. The main objectives of the policy were to conserve the existing forests or manage them to preserve the physical and ecological balance. The overriding criteria however, was the fulfillment of the needs of local communities. Over exploitation occurred in some regions during the world wars or in cases of natural calamities like the earthquake of Quetta in 1935 but broadly speaking, the policy achieved its goals.

However, this policy was not relevant for the new State of Pakistan which inherited forest cover over less than 2% of its territory. The existing policy neither contemplated the increase of forest area nor did it emphasize sustained harvest from the

existing forests. Furthermore, it excluded the private forests from its ambit.

These deficiencies were recognized in the Pakistan Forestry Conference held in 1949. The conference guidelines provided an improvement upon the Policy Statement of 1894.

## **FOREST POLICIES FOR PAKISTAN**

### **FOREST POLICY OF 1955.**

Pakistan is a forest deficit country. Forest Policy of 1955 was the first bold statement which recognized the scarcity of forest resource and assigned higher priority to forest development and forest production with equal emphasis on non tangible benefits of forest resource. The salient features of the Policy were -

- ▶ Forestry should be assigned higher priority and more funds should be allocated for increasing areas under forests;
- ▶ Forests should be classified on the basis of their utility;
- ▶ Intangible benefits of forestry should get preference over tangible (economic) benefits;
- ▶ All forests should be scientifically managed under approved working plans;
- ▶ Forest area should be increased by reserving 10% of land and water in colony (new cultivation) areas for raising irrigated plantations;
- ▶ Timber and fuelwood yields may be increased by growing trees along roads and canals;

- ▶ Sound management be ensured in private forests through legislation and Government assistance; and
- ▶ Necessary powers be obtained to control land use and conserve soil under a coordinated programme.

### **FOREST POLICY OF 1962.**

Important developments took place between 1955 and 1962 which influenced the land use, land tenure, economy and forestry in the hills and plains. A few instances of these developments are mentioned below:

- ▶ Several dams and barrages were constructed in the Punjab and Sindh and an intensive irrigation net-work was extended to new areas. Therefore, conservation of soil and water in the catchments through proper watershed management assumed greater importance and high priority.
- ▶ The control of NWFP Forest Department was extended to the princely States of Dir, Swat, Chitral and Amb. Similarly, scientific management was extended to virgin forests in the Neelum Valley of Azad Kashmir and logging operations were started in Chilas Valley of Northern Areas.
- ▶ The gap between supply and demand increased resulting in a staggering bill for the import of wood and wood products. The situation was likely to be aggravated further with the increase in population and rising standard of living.

For these and similar other developments, the Forest Policy of 1955 was further revised to frame a bold and forward looking Forest Policy of 1962. Its salient features are reproduced below:

## **Forests**

- ▶ It is necessary to re-orientate the administrative organizations of Government-run forests so that these forests become progressive commercial concerns with emphasis on production and regeneration.
- ▶ The Forest Departments should immediately undertake a study for quicker and better utilization of forest products with the aid of scientific processing so that the present period of exploitation is shortened.
- ▶ With a view to increasing forest cover, the Provincial Government should transfer to the Forest Department, after necessary examination, sizeable forestable Government owned rukhs in West Pakistan. All lands along the canals, roads and railways should be properly afforested and exploited under regular working plans.
- ▶ A province-wise plan, with the objective of meeting national needs, should be drawn up for all types of government forests in the Provinces.
- ▶ The Government take note of the increase in requirements of land for agricultural production but feel that agricultural production must go hand in hand with forest development. The irrigation plantations may be included in new colonization plans.
- ▶ Both the Provinces, particularly West Pakistan, should draft a legislation to secure a national effort for the regeneration of the tree wealth of the country. Each holder of a specified area of land should be required to grow a specified number of trees.
- ▶ One of the major problems of government forests in both the Provinces (East & West Pakistan) is the

question of rights which permit indiscriminate grazing, removal of trees and breaking of land. The Guzara Forests of West Pakistan have been progressively denuded of tree growth. The Government, therefore, direct that the Provincial Governments should progressively undertake the acquisition of these rights.

- ▶ The Government feel that considerable possibilities of afforestation alongwith river banks exist. They, therefore, direct that the Provincial Governments, in consultation with the Flood Commission should survey the riverain lands of West Pakistan and prepare programmes for management of river banks and forests on behalf of the owners.

## **Watershed Management**

In order to improve watershed management in West Pakistan, Government had taken the following decisions:-

- ▶ The Forest Department must assume direct responsibility for proper soil conservation measures within the government-owned forests.
- ▶ A watershed management and rehabilitation programme may be drawn. For this purpose survey of entire watershed should be undertaken to form a basis for development programmes
- ▶ The gradual shift of hill populations should form a definite part of colonization plans
- ▶ Supply of electricity, wherever possible, should be arranged. Subsidy on kerosene oil stoves should be considered.

- ▶ Terracing for purposes of soil conservation may be subsidised.
- ▶ Legislation may be considered to impose higher taxation on highly eroded areas which are not reclaimed or afforested within a specified time.
- ▶ Efforts should be made to encourage the development of cooperative societies for soil management.
- ▶ Encouragement of fruit trees on private farmlands in the biggest possible manner should be undertaken.
- ▶ Surplus commodities made available under aid programme may be used for the purpose of subsidy.
- ▶ All goats should be eliminated from the hill areas in a progressive plan covering not more than three years.
- ▶ Pilot projects already prepared for selected areas such as Bhur-Ban, the hinterland of Islamabad and the Mangla Dam catchment area should be put into operation as quickly as possible.

### **Farm Forestry**

- ▶ Farm forestry should be the concern of the existing agriculture departments in non-project areas and of the Agriculture Development Corporations in the Project areas.
- ▶ In order to encourage farm forestry, research in quick growing commercial crops should be undertaken and suitable tree species recommended for each ecological zone. Research should also be undertaken on shelter-belts and wind-breaks and pilot projects started on agricultural farms.

- ▶ Pilot projects should also be introduced for the cultivation of trees on saline and water-logged lands.

## **FOREST POLICY OF 1980**

Since the wider scope of forest policy of 1962 involved different departments, i.e. Forest, Agriculture, Soil Conservation and Agriculture Development Corporation, it was difficult to assign clear cut responsibilities, co-ordinate their activities and evaluate their performance. This difficulty was further accentuated by lack of expertise for raising trees in the staff of Agriculture, Soil Conservation Directorate and Agriculture Development Corporation.

Other difficulties were also realised during implementation of the 1962 Policy. These included the limited scope for forestry development on the State-owned forest lands and financial and other constraints. The need to extend tree plantation outside forest boundaries was, therefore, felt. It was also recognized that the farmlands provided about 90 percent of fuelwood and 50 percent of timber consumed in the country, whereas public forests produced only 10 percent firewood and 50 percent of timber. Therefore, it was felt that the potential of farmlands could be further developed and, consequently, another set of policy guidelines was issued in 1980, as a part of the National Agriculture Policy. These guidelines include:

- ▶ a bigger thrust on the planting of fast-growing tree species in areas outside forests;
- ▶ development of compact fuelwood plantations in areas of wood scarcity and watersheds through public motivation and incentives;
- ▶ making effective motivational arrangements to involve people in mass scale tree planting activities and nature conservation;

- ▶ management of wildlands in accordance with their potential for optimum utilization in various forms, including recreation and wildlife;
- ▶ forest harvesting on scientific lines departmentally or through the public sector corporations to avoid waste and to improve utilization;
- ▶ increased production of industrial wood to gradually meet the full requirements of wood-based industries;
- ▶ coordinated/integrated development of forestry and wood-based industries;
- ▶ well-planned, integrated and coordinated forestry development at provincial and national levels;
- ▶ promoting wildlife conservation consistent with other land uses and ensuring that wildlife values are preserved and enhanced;
- ▶ scientific approach for the management of wildlife through wildlife surveys, research and management plans;
- ▶ encouraging the creation and development of national parks with a view to preserve an example of each of the country's major eco systems with its endemic fauna and flora intact, and to develop those areas for public recreation and education; and
- ▶ production of medicinal herbs in wildlands.

## IMPLEMENTATION OF POLICY STATEMENTS

The implementation and impact of policy statements of 1955, 1962 and 1980 in terms of their objectives, implementation strategies and results are set out below:

### FOREST POLICY 1955

<u>OBJECTIVES</u>	<u>METHODS PROPOSED</u>	<u>RESULTS ACHIEVED</u>	<u>PROBLEMS</u>
- Preserve & utilize forests for benefit of nation.	High priority for forestry in national development plans.	High priority was not given.	Adequate funds were not provided
- Sound management in privately owned forests.	Government legislation, adequate staff and financial assistance.	Partially achieved. Control of private (Guzara) forest was transferred to Forest Department in Hazara (NWFP) whereas in Rawalpindi District. (Punjab) technical advice was provided to Guzara committees headed by Deputy Commissioner.	Jurisdiction.
Soil and water conservation at vulnerable sites.	Obtain powers to control land use.	Forest Act 1927 and Chose Act 1900 provided adequate powers but were not used to the desired extent.	Responsibility of Soil Conservation Dept. large number of small farmers involved and lack of funds.
Public support for forest conservation.	Education, motivation and demonstration.	Tree plantation campaigns were arranged with available resources.	Financial and organizational constraints.
Classification of State forests.	Classify on basis of utility & objective.	Task accomplished.	
Emphasis on commercial role of forests.	National integrated economic policy	Not done (except through classification).	Productive forests are located in different Provinces i.e. NWFP, AJK and N.A which are deriving maximum financial return from forests.
Increase forests on irrigated lands.	Reserve 10% of colony land/water of trees.	Partially implemented. Only 3% land provided for tree plantation.	Priority always given to agriculture. Spare water not available.

<u>OBJECTIVES</u>	<u>METHODS PROPOSED</u>	<u>RESULTS ACHIEVED</u>	<u>PROBLEMS</u>
Increase linear plantations.	Raise trees on canal-sides, along railways & on waste lands.	Partially done. Road-sides and canalsides are still under the control of C & W and irrigation departments in Sindh.	Departments compete for jurisdiction on land.
Increase community plantations.	Support cooperative village plantations.	Not achieved.	Cooperative spirit in agriculture field poor.
Work forests on sustained yield basis.	Manage all forests under approved working plans.	Achieved to the following extent: NWFP - 66% Punjab - 88% Sindh - 44% Baloch - 14%	Low only in Balochistan where plans not needed because tree growth is sparse.
Long-term and scientific management of forests.	Properly constituted & trained forest service.	Service exists but it is relatively small.	Financial constraints.
Maintain wildlife in forests.	Provide protection, living space, etc. to wildlife.	Law enacted and some protected areas designated.	Financial constraints low priority and low expertise.

## NATIONAL POLICY ON FORESTS 1962

### STATE FORESTS

Re-orient state forests on commercial concerns.	Maximize production through working plans.	Working plans prepared but increased production required more inputs which were not provided.	Financial constraints.
Shorten maturation periods & quicken exploitation.	Utilization of forest products; plans for faster regeneration.	Quick-growing species plants.	—
Increase forest cover.	Transfer state <u>rukhs</u> & canal-side land to F.D; afforest & manage through working plans.	Partially done; transferred in 3 provinces but reverted to Irrigation Deptt. in Punjab.	Jurisdictional problems.
Plant roadsides.	F.D. assist Public Works Deptt. and local councils until it can assume this task itself.	Highway planted with trees.	Union Councils lack funds & sufficient land along council roads for planting.
Meet national needs.	Province-wise plans for all types of state forests.	Not done.	Lack of funds, low priority and organizational constraints.

<u>OBJECTIVES</u>	<u>METHODS PROPOSED</u>	<u>RESULTS ACHIEVED</u>	<u>PROBLEMS</u>
Halt decrease in fuel reserves on state lands in dry belts.	Pilot projects to support proper afforestation programme.	Not done.	Lack of funds, low priority and organizational constraints.
Develop forests hand-in-hand with agriculture.	Raise irrigated plantations in new colony plans.	Partially done. Instead of 10% only 3% area was provided. Water not spared.	Competition between agriculture and forestry for land and water.
National effort for regeneration of tree wealth.	Legislation for growing specific number of trees on private land.	Legislation passed in Punjab but not implemented.	Most areas had more than 4 trees/acres prescribed in law.
Reduce indiscriminate grazing, felling, & distribution of land due to local rights.	Provinces study how to acquire rights or manage forests through F.D. on behalf of villagers.	NWFP Province considered acquisition unnecessary; Punjab took no decision.	Resistance from people feared.
Increase afforestation on river banks.	Provinces prepare management to tree planting programmes for river banks.	Not implemented due to current landuse of agriculture.	Priority to non-tree land uses.
Prevent indiscriminate grazing.	Pilot projects to determine grazing regimes and management techniques.	Done.	No problem.
Prevent indiscriminate grazing.	Ask Union Councils to prevent grazing.	Not implemented.	Union Councils reluctant or powerless.

### **WATERSHED MANAGEMENT.**

Improved watershed management.	F.D take responsibility for soil conservation in state forests.	Erosion not a serious problem in State Forests.	No problem.
Improve watershed management.	Provinces give responsibility for soil conservation on private lands to ADC or to a special organization.	ADC operated in limited area.	Organizational problems.
Improve watershed management.	Responsible organization prepare a detailed watershed management programme.	Only FD made watershed management programmes for some of its areas.	ADC was not organized for this job.
Improve watershed management.	Agriculture Depts. and ADC's take up farm forestry.	F.D. started farm forestry in 1985.	Unclear why Agriculture Department or ADC could not take up watershed management.

OBJECTIVES

METHODS  
PROPOSED

RESULTS  
ACHIEVED

PROBLEMS

Encourage farm forestry.

Research & pilot projects of quick-growing commercial rates & shelterbelts pilot projects for tree growing on saline & waterlogged lands.

Being done: by P.F.I. Work started by Forest Departments.

No problem.

**RANGE MANAGEMENT.**

Involve public in range land development.

Government support by land, water and allocation; tubewells; technical advice; marketing etc.

Not done.

Unclear. Probably due to lack of interest, direction and grazing pressure.

Promote proper pasture & social development.

Pilot projects in different zones, including tribal region.

Successful upto projects stage.

Lacked follow up efforts after project stage. Also greater number of livestock.

▶ Survey rights.

Not done.

Public resistance.

▶ Distribution leasing of government land to people and providing incentives.

Not done.

Fear of losing land to lessees; land management more important than land distribution.

▶ Establish tribal ranges.

Not done.

Lack of people's cooperation.

▶ Provinces put single agency in charge.

Created range management circles in Punjab and Sindh.

Funds and trained staff.

**SOIL CONSERVATION**

Reduce soil erosion & increase crop returns in N. & NW. sub-montaneous areas.

Water, Conservation contour bunding, high-intensity and multi-cropping, rotations.

Not done.

Agriculture Department is not well organised in the mountainous region.

▶ Provide terracing machinery, small dams, extension services, credit, land consolidation, research co-operatives, landuse laws, etc.

Not done.

Organization and financial resources not available.

▶ Use surplus commodities from US PL480 & other programs.

Not done.

PL480 funds were used for research only.

▶ Involve ADC or setup new coordinating board.

Not done.

ADC operated in small area.

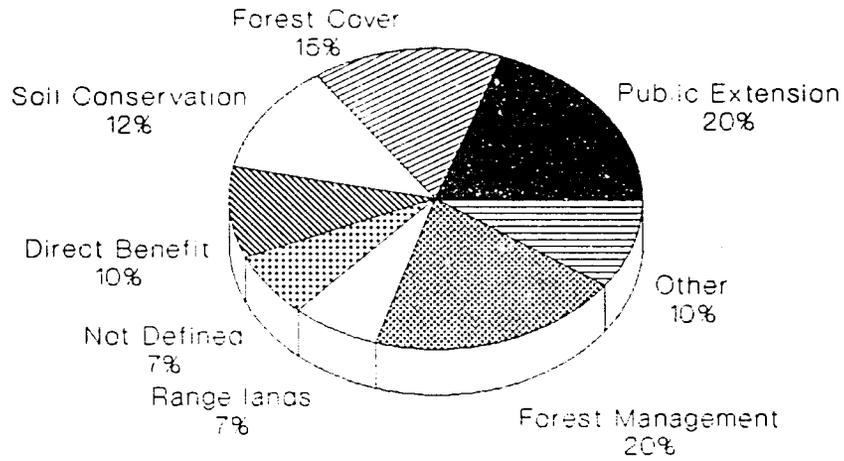
# FOREST POLICY 1980

<u>OBJECTIVES</u>	<u>METHODS PROPOSED</u>	<u>RESULTS ACHIEVED</u>	<u>PROBLEMS</u>
To increase per capita consumption.  Ensure adequate supplies of wood for industry to reduce import bill.	High priority for forestry in National Development Plans.	High priority was not given.	Adequate funds were not provided.
Deforestation & faulty agriculture silting up major reservoirs.	Develop fuel plantations on waste-lands through motivation and incentives.	Being done under watershed programmes in Hazara, Malakand and Azad Kashmir.	WFP grant is available but counterpart local funding is a problem.
Over-grazing leading to wind & water erosion and malnutrition of livestock.	Involve people in tree plantation & nature conservation through motivation.	Being done.	Socio-economic constraints.
Increased Harvests	Harvest on scientific basis through public corporations.	FDC set up in NWFP and AKLASC in Azad Kashmir.	Initially progress was slow. Resistance due to vested interests.
Increased Productivity.	Increase production of industrial wood.	Being done through farm forestry projects.	Management & financial constraints.
Better coordination with private sector.	Coordinated development of forestry & wood-based industries.	Being done through seminars for wood producers and wood users.	Organizational and funding constraints.
Better inter-agency coordination.	Well-planned & coordinated forest development at provincial & national levels.	Forestry Sector Master Plan is being prepared.	Lack of priority and funding.
Protection of wild fauna.	Promote conservation and appreciation for wildlife.	10 National Parks, 84 Wildlife Sanctuaries and 78 Game Reserves have been established.	Social/ Organizational / financial constraints.
Better management.	Develop and implement scientific management through surveys, research & management plans for wildlife.	Being done over limited area.	Financial constraints.
More Natural Areas.	Develop parks for conservation, recreation, education & research.	Ayuhia National Park has been set up in NWFP and Lehri Nature Park has been established in Punjab.	Funds and staff.
Development of wild-land.	Periodic survey & evaluation.	Not done.	Funds facilities & staff not available.

<u>OBJECTIVES</u>	<u>METHODS PROPOSED</u>	<u>RESULTSS ACHIEVED</u>	<u>PROBLEMS</u>
Increased wildlife populations.	Manage wildlands in accordance with their potential.	Not done.	Funds, facilities & staff not available.
Rural income generation.	Production of medicinal plants.	Utilization and research underway.	Use of artificial products in medicine. Indifference of practitioners of indigenous system of medicine.

The forest policies of 1955, 1962 and 1980, the extent of their implementation, their results, unsuitability of prescriptions and difficulties faced in implementation have been clearly identified in this chapter. These lessons will form the basis for evolving a rational and feasible policy for the future.

# Types of Policy Objectives 1955/1962/1980 Policies

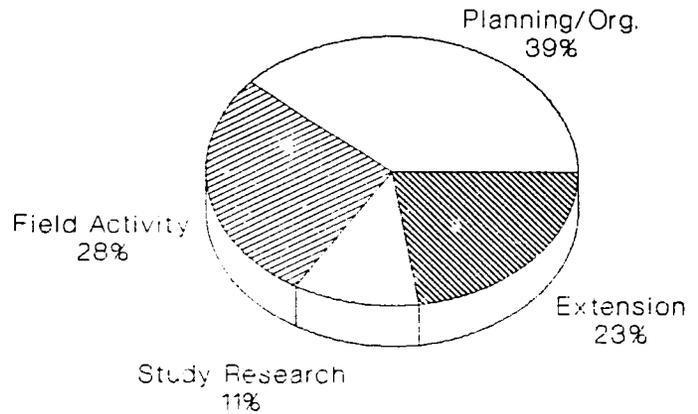


% of Stated Objectives in 3 Policies

Fig-2.1

# Types of Method Employed

## 1955/1962/1980 Policies



% of proposed Methods in 3 Policies

Fig-2.2

# Changes Methods Employed 1955/1962/1980 Policies

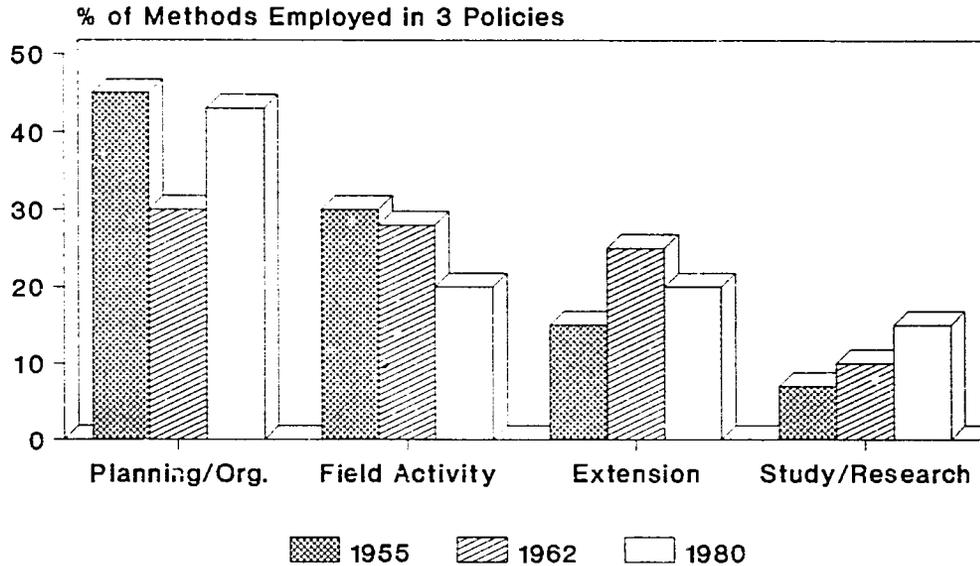
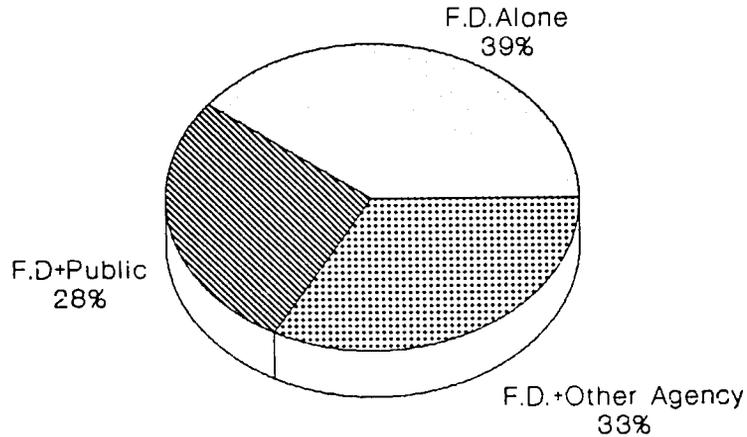


Fig-2.3

# Parties involved in Implementation 1955/1962/1980 Policies



% of Objectives in 3 Policies

Fig-2.4

# Changes in Parties Involved

## 1955/1962/1980 Policies

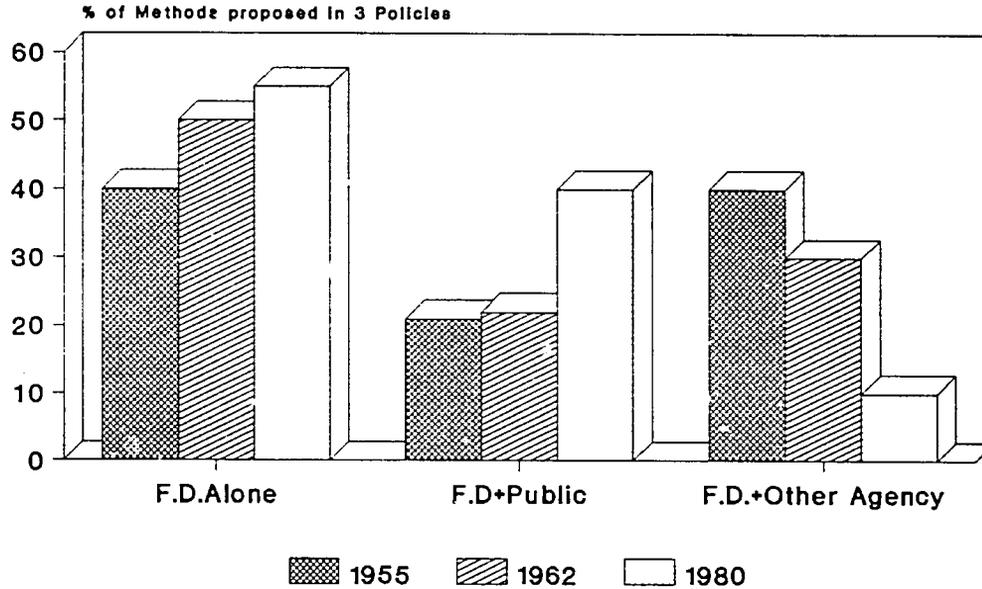


Fig-2.5

# Implementation Rate by Method

## 1955/1962/1980 Policies

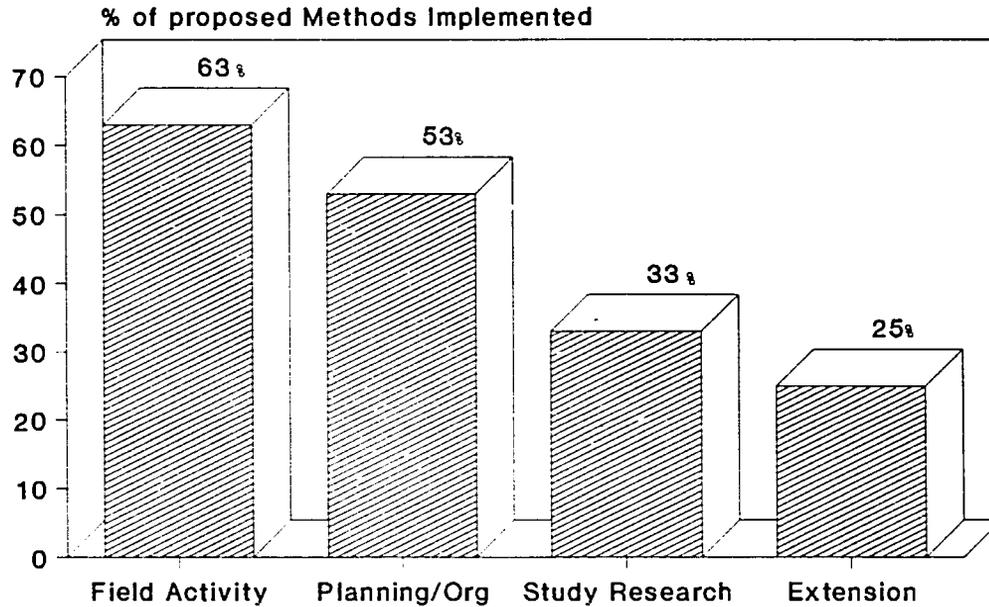


Fig-2.6

## Implementation Rate by Parties Involved 1955/1962/1980 Policies

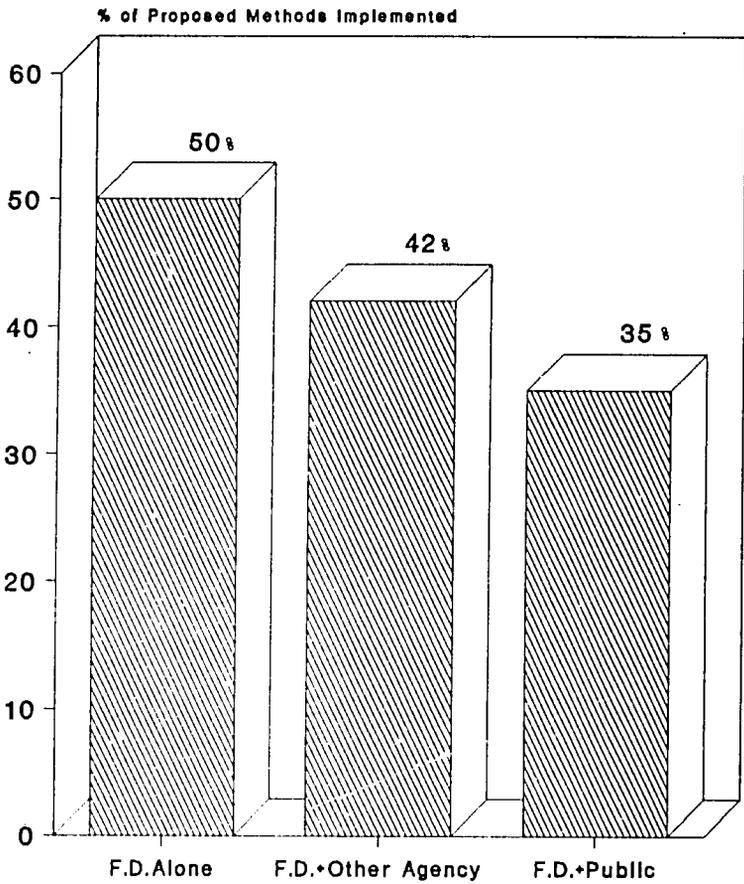
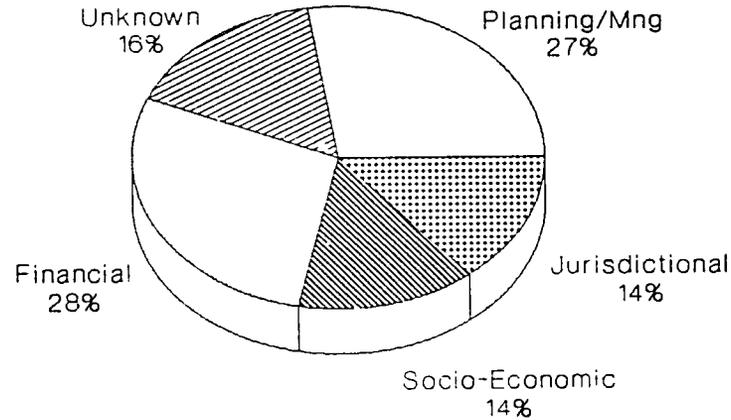


Fig-2.7

# Constraints Encountered

## 1955/1962/1980 Policies



% of proposed Methods in 3 Policies

Fig-2.8

# Forestry Share in Development Budget (In Percentage)

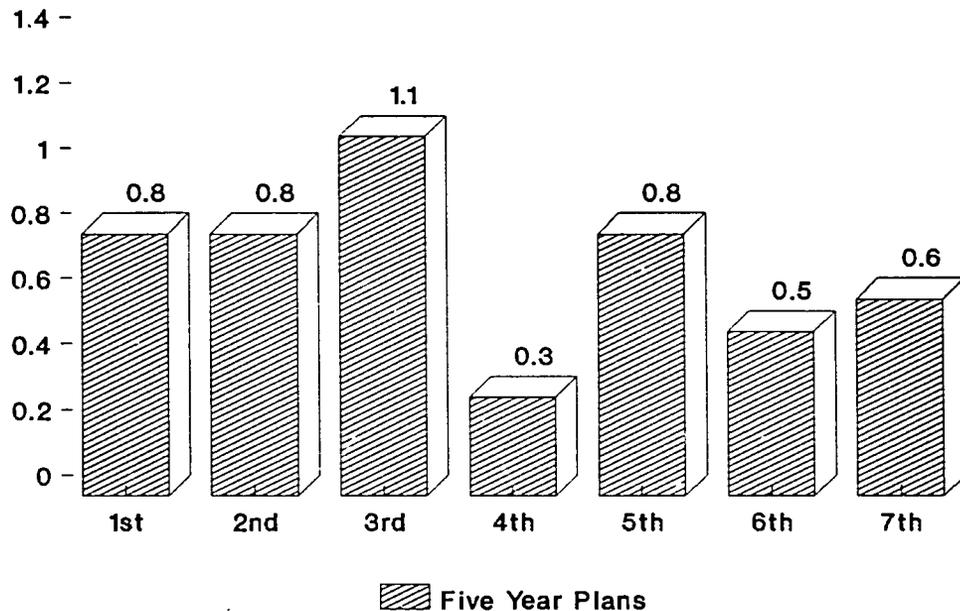


Fig-2.9

# Forestry's Budget Released

(In Percentage)

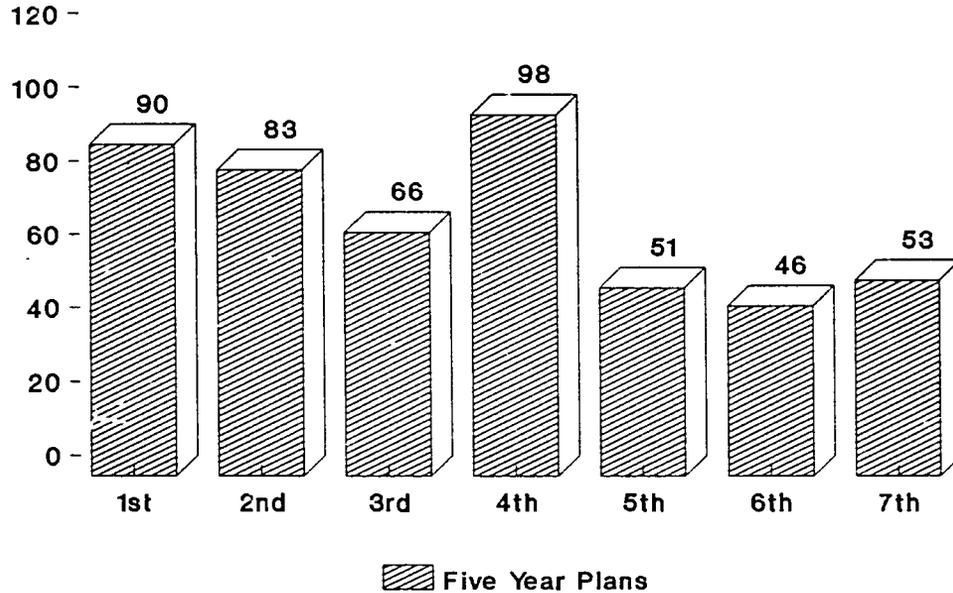


Fig-2.10

# PROJECTED AREAS IN PAKISTAN

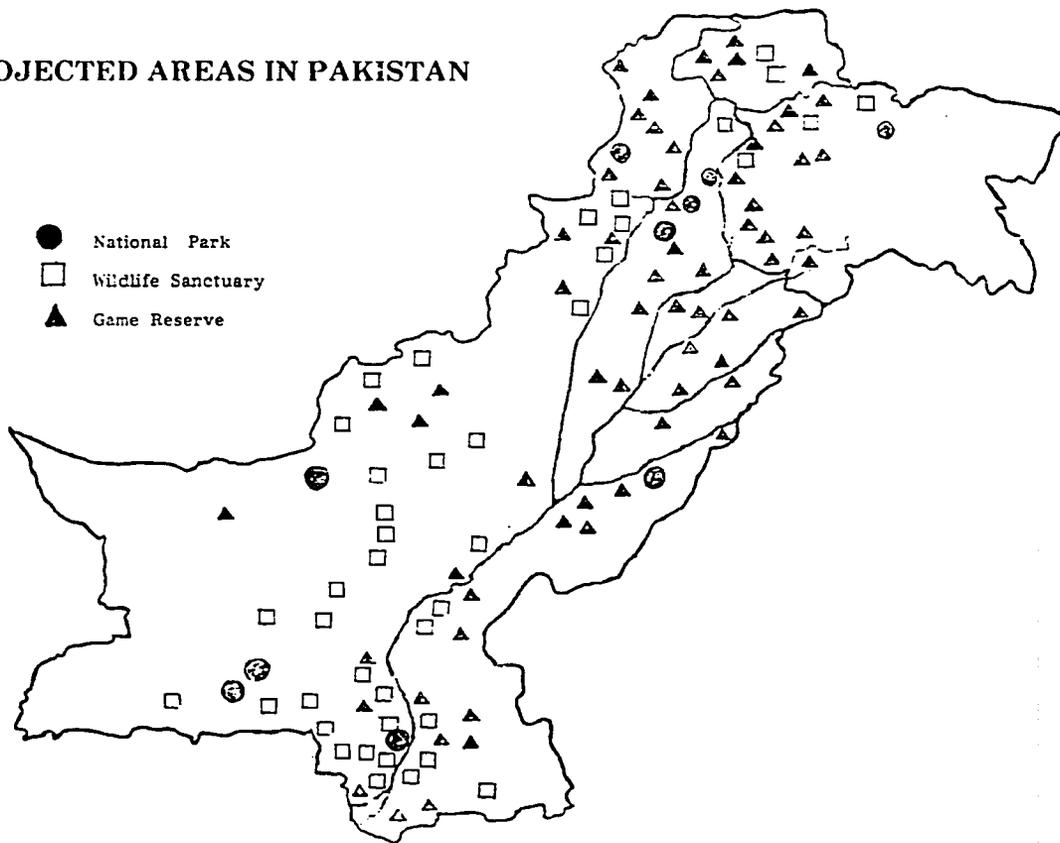


Fig-2.11

**TABLE NO. 2.1**  
**PLAN'S PROVISION**

(Rs. in million)			
Plan	National	Agricultural	Forestry
1st (1955-60)	4,863	461	39
2nd (1960-65)	10,606	695	87
3rd (1965-70)	13,206	822	140
4th (1970-78)	75,544	4,140	216
5th (1978-83)	153,210	6,067	1223
6th (1983-88)	305,000	12,350	1623
7th (1988-93)	350,000	12,310	1927

Source: Planning Division. Provincial APD's.

TABLE NO. 2.2

PROVISION OF FUNDS FOR FORESTRY

(Rs.in million)

Plan	Plan Provision	Funds Released	Ratio between plan provision and funds released
1st (1955-59)	39	35	1:1
2nd (1960-65)	87	72	1:1
3rd (1965-70)	140	92	1.5:1
4th (1970-78)	216	212	1:1
5th (1978-83)	1223	629	2:1
6th (1983-88)	1623	749	2:1
7th (1988-93)	1927	1018	2:1

**TABLE NO. 2.3**

**FOREST AREA COVERED BY WORKING PLAN**

(000 ha)

Province	Forest Area	Area Covered by W. Plan	Percentage
Punjab	552	448	88%
Sindh	668	583	87%
NWFP	1081	718	66%
Balochistan	716	100	14%
Provincial Total:	3017	1563	52%
Azad Kashmir	380.4	280.0	74%
Northern Areas	944.2	57.5	6%
Grand Total:	4341.6	1900.5	44%

Source: Provincial Forest Department.

**TABLE NO. 2.4**

**LIST OF NATIONAL PARKS**

Province	No.	Name	Area (ha.)
Punjab	2	Lal Sohanra Chinji	37,426 6,095
Sindh	1	Kirthar	308,733
NWFP	2	Ayubia Chitral Gol	1,684 7,750
Balochistan	3	Hazarganji- Chiltan Hingol Dhrun	13,166 165,004 167,700
Northern Areas	1	Khunjerab	226,913
Capital Territory	1	Margalla	14,786
Total:	10		949,257

**TABLE NO. 2.5**  
**WILDLIFE SANCTUARIES**

Province	No. of the Sanctuaries.	Area (ha.)
Punjab	23	827,464
Sindh	33	63,062,380
NWFP	7	54,370
Balochistan	14	855,494
Azad Kashmir	1	810
Northern Areas	5	185,521
Capital Territory	1	7,000
Total:	84	64,993,039

**TABLE NO. 2.6**  
**GAME RESERVES**

Province	No. of game reserves	Area (ha.)
Punjab	19	2,415,100
Sindh	13	1,120,683
NWFP	19	157,186
Balochistan	7	247,541
Azad Kashmir	8	50,953
Northern Areas	9	238,640
Capital Territory	1	69,800
Total:	76	55,132,848

## **CHAPTER NO. 3**

# **PAKISTAN'S FOREST POLICY (1991)**

## **PRINCIPLES OF POLICY FORMULATION**

The Principles of Policy as enumerated in Chapter 2 Sub Section (1) of the 1973 Constitution of Pakistan are reproduced below:-

"The Principles set out in this Chapter shall be known as the Principles of Policy, and it is the responsibility of each organ and authority of the State, and of each person performing functions on behalf of an organ or authority of the State, to act in accordance with those Principles in so far as they relate to the functions of the organ or authority".

All policies of the Government including Forest Policy draw strength and authority from these Principles of Policy as enshrined in the Constitution.

## **GENERAL PRINCIPLES OF A NATIONAL FOREST POLICY**

The purpose of a national forest policy is to enumerate basic principles and goals for the conservation and development of forest resources in the country to meet social, economic and ecological needs. These needs could include raw materials for commercial use, goods and services for the society, or environmental benefits. The policy statement is necessary to:

- (a) Obtain optimum benefits from the forest resource on a sustainable basis;

- (b) Fix short and long term goals and identify strategies to achieve those goals; and
- (c) Promote and ensure cooperation between government and private agencies having land-use responsibilities that affect forestry activities directly or indirectly.

## **NATIONAL FOREST POLICY FOR PAKISTAN**

### **NEEDS**

The national forest policy is guided and influenced by the social, economic and environmental needs of a country, both present and future. These needs and principles in the case of Pakistan are:-

- (a) Pakistan's mainstay is agriculture which is dependent on canal irrigation. Sound management of watersheds should, therefore, constitute the basic objective of forest policy.
- (b) Because of inadequate forest resources, Pakistan must concentrate on developing new plantations. For this purpose, all internal and external sources should be mobilised to achieve tree planting goals.
- (c) The country is heavily populated and faces an energy crisis. Since there is little scope to increase the area of state forests, agro-forestry programmes should be of vital concern to meet fuelwood requirements. An integrated approach, which entails afforestation of fuelwood and fodder crops along with agriculture crops on farm lands, should constitute a cardinal principle.

- (d) Forest policy should be dynamic so that it can adjust to changes in the pattern of wood consumption that takes place as a result of development in the country and advancement of technology. Promotion of industry must form an important component of present and future plans.

### **OBJECTIVES OF PAKISTAN'S FOREST POLICY (1991).**

Based on the considerations listed above and peculiar conditions of topography and climate, the basic objectives of Pakistan Forest Policy are:-

- ▶ Meet country's requirements of timber, fuelwood, fodder and other products and environmental needs by increasing the forest area from 5.4 percent to 10 percent during next fifteen years.
- ▶ Conserve the existing forest, watershed, range land and wildlife resources by sustainable utilisation and develop them to meet the ever increasing demands.
- ▶ Promote social forestry programmes including watershed in hills and farm forestry in plains.
- ▶ Encourage planting of fast growing multipurpose tree species in irrigated plantations, riverain forests and private farmlands to meet the industrial and domestic demands.
- ▶ Conserve biological diversity and maintain ecological balance through conservation of natural forests, reforestation and wildlife habitat improvement programmes.

- ▶ Contain environmental degradation in the catchment areas of rivers to check soil erosion and accretion of silt in water reservoirs, and to regulate water supply to increase the life span of multi-purpose dams and to mitigate floods.
- ▶ Take anti-desertification measures and rehabilitate water logged, saline and degraded lands through vegetation treatment.
- ▶ Generate opportunities for income and self employment for the rural populace.
- ▶ Promote non-governmental, (NGOs) and private voluntary organisations(PVOs) to educate masses and create public awareness for environmental improvement.

## GOALS OF FOREST MANAGEMENT

The policy objectives listed above will be achieved through the following goals of forest resource management:

- ▶ Existing forest resources shall be scientifically managed for optimum productivity to meet the local need for wood and wood products and to reduce reliance on imports.
- ▶ All forest areas will be covered by regular working plans during next 10 years. Presently 88% of the forest area is covered by working plans in Punjab, 44% in Sindh, 80% in NWFP, 14% in Balochistan, 75% in AJK and 6% in Northern Areas.
- ▶ Social forestry shall be adopted as a standard practice and extended to all farmlands to increase productivity and to improve the environment. Every farmer shall be

induced, encouraged and motivated to raise at least 10 trees per acre.

- ▶ The network of protected areas for conservation and propagation of wild fauna and flora will be increased to 12 percent of the total area of the country against 7 percent at present. The additional area should cover those ecological zones which are not adequately represented at present.
- ▶ Wildlife management plans will be formulated for protected areas, i.e. national parks, wildlife sanctuaries and game reserves. All national parks and wildlife sanctuaries will be covered by management plans during the next 10 years. (Plans for three national parks, namely Margalla Hills National Parks (ICT), Khunjab National Park (Northern Areas) and Kirthar National Parks (Sindh) are, already in hand.
- ▶ Strengthen the existing wings of forest departments dealing with range management or create development agencies such as Sindh Arid Zone Development Authority (SAZDA) to improve the management of rangelands for higher productivity of fodder. Currently, more than 50% of Pakistan's area is used as rangeland but only 12 percent is being managed by forest departments and other agencies. No infrastructure exists for the remaining 88%.
- ▶ Productivity of minor forest produce such as resin, medicinal plants, edible mushrooms and mazri shall be enhanced and their industrial utilization promoted to strengthen the economies and enhance employment opportunities in rural areas.
- ▶ Promote Sericulture Industry to provide opportunities of employment and income for the rural populace.

## **MAIN ELEMENTS OF THE POLICY RELATING TO**

### **LAND USE**

Land and water are primary physical inputs constituting important endowments of Almighty God. However, the land in public ownership which can be set aside for forestry purposes is limited. Where land in the public sector is available as in Balochistan & Sindh, it is not suitable for tree growth because of the non availability of water. In the revised policy, the emphasis has been shifted, and rightly so, from traditional forestry to social and farm forestry.

### **HILL FORESTS**

The existing pattern of forest management in the hills is traditional. Until recently, fellings mostly conformed to single tree selection systems with reforestation being entirely dependent on natural regeneration. This system is not adequate for the complete re-establishment of these forests. In the policy statement of 1991, it has, therefore, been laid out that:

- a) Forests are managed intensively and the pilot projects started in Kaghan valley in Hazara and Kalam valley in Malakand Civil Divisions are replicated at other suitable locations.
- b) Extraction from coniferous forests is limited to public sector only. Timber harvesting has already been departmentalized in four provinces and Azad Kashmir. Departmental harvesting will hopefully be extended to the Northern areas as well.
- c) Reliance is placed on artificial re-stocking of cut-over area and for that purpose central nurseries are raised from known seed sources of good quality.

- d) The existing working plans are revised to ensure multiple and integrated use of the forest resource, in conformity with wildlife conservation, other environmental and social needs.
- e) The existing road density of 2 meters per hectare be increased to at least 10 meters per hectare to facilitate timber extraction in log form.
- f) Forest operations be mechanised by installation of aerial rope-ways and skyline cranes, in particular for sites where road construction is undesirable, difficult or expensive.
- g) The jurisdictional charges of forest personnel be rationalised to make them more manageable.

### **DEGRADED WATERSHEDS**

Trees in the watershed areas make enormous contribution to the environmental stability of the fragile eco-system on one hand and play a very significant role in food security for millions of people on the other. Due to arid and semi arid conditions and erratic rainfall, the agricultural and industrial economy of Pakistan is entirely dependent on a sustained supply of water from its rivers, reservoirs and the efficient working of the canal system. Due to removal of trees and over-grazing in the watersheds, the reservoirs are being silted up rapidly. Also, flash floods cause severe damage to the vast infrastructure in the country destabilising the food delivery systems. Accelerated siltation of dams leads to loss of storage capacity, increase in maintenance cost of infrastructure, loss of electricity and decreased agricultural and industrial production. The forest policy, therefore, lays down that:

- a) All watershed projects, being a common source denominator, would be planned and coordinated by

the Federal Government but implemented through Provincial Forest Departments in their respective areas.

- b) Fodder production in the Northern areas would be included as a multiple use input in forest management. This would add substantially to the area available for extension of forests in this region.
- c) Steps would be taken to classify and inventory denuded watersheds on the basis of their susceptibility to erosion and landslides. A reforestation programme for such watersheds areas would be implemented.
- d) Grazing in reforested areas would be controlled until the newly-raised plants are fully established.
- e) Incentives will be provided to land owners to establish tree and horticultural crops on lands exceeding 30 percent gradient. This will reduce the incidence of soil erosion.

## RANGELANDS

In conjunction with trees range management is an important land use by itself. Unfortunately, adequate attention has not been given to this sector in the past. In order to overcome this short-coming, an appropriate development programme will be undertaken with emphasis on:

- a) Development of fodder tree planting programmes to increase availability of green fodder.
- b) Creation of grazing lots on an experimental basis to induce private investment by livestock owners in range-land management.

- c) Reseeding of depleted rangelands with nutritious and high yielding grasses.
- d) Encouragement of production of fodder for stall feeding to reduce pressure on rangelands.
- e) Promotion of livestock feeds from agro-industrial wastes and by-products.
- f) Encouragement of programmes which shift the emphasis from open grazing to stall feeding.
- g) Introduction of legislation to support range management agencies and their programmes.
- h) Integration of the management of range, crop and forest lands to ensure year-long optimum provision of forage and fodder to livestock.
- i) Encouragement and support for range research and its utilization through extension service.

### **WILDLIFE PROTECTED AREAS**

Pakistan has a rich and varied flora and fauna. Plants and animals, both wild and domesticated are the living entities of natural and man made ecosystems. Hence, their co-existence contributes immensely towards the welfare of human beings since they provide the material basis for life, food, clothing and fuel. Wildlife habitats i.e. forests, range-lands and wetlands have been damaged and destroyed, over the years, due to population expansion, pressures of development in agriculture and industry, and to meet other essential human needs.

The aims and objectives of the new forest policy in the field of conservation of protected areas are to:

- a) Conserve all endangered and endemic species of wild fauna and flora in particular by ensuring the survival of the critical ecosystems that support such wildlife.
- b) Arrange periodic surveys of the country's wildlife and its habitats to monitor ecological changes.
- c) Develop habitat management plans, species recovery plans and habitat improvement programmes for conservation and improvement of species of wild animals and plants.
- d) Increase investment in the wildlife sector and strengthen Provincial and local wildlife and conservation area's infrastructure for managing species and habitats. Strengthen federal infrastructure responsible for policy, management planning and implementation of international conservation conventions.
- e) Expand the existing conservation education programmes of government organisations and NGOs and create public awareness to gain support for wildlife conservation.
- f) Enlist local participation in the management of species and habitats by sharing revenues from trophy hunting with the rural populace and by promoting private game reserves.
- g) Provide federal assistance for national parks and nationally important and endangered species of wild plants and animals.
- h) Encourage private sector in captive breeding of wild animals, in particular the endangered species.

## **PRIVATE FORESTRY**

No new public lands are being allotted to the forest department in view of Pakistan's need to grow more food crops. On the other hand there has been a breakthrough in private forestry. Farmers are coming out in larger numbers to plant trees on their marginal lands and along their field bunds. In order to put more area under trees, the following measures will be adopted under the new forest policy:

- a) Vast public and private degraded, waterlogged and marginal farm lands are available in all the Provinces and Federal territories which can be developed for tree culture and fodder production.
- b) By developing water resources or through water conservation measures, selected public lands will be leased out to forest industries and other interest groups for the growing of trees or for range management.
- c) Additionally, Government will undertake to:-
  - ▶ arrange adequate and effective distribution of saplings and seeds at nominal cost;
  - ▶ promote the use of village shamlat for social forestry;
  - ▶ encourage rehabilitation of degraded forest lands;
  - ▶ consider the introduction of a forestry grant scheme, and;
  - ▶ rationalise the price structure and marketing of wood produced on marginal and waste lands.

## **FOREST EXTENSION**

Pakistan has a meagre forestry resource, whereas demand for wood and forest products is mounting because of population

growth. Due to its arid climate, water constraints and financial limitations, afforestation of additional areas in the public sector is difficult. It is, therefore, imperative to grow the maximum number of trees on farm lands to overcome the wood supply and demand gap. For this, an effective out-reach/extension programme is the key to success. Forest extension shall endeavour to:

- a) Launch outreach/extension programmes featuring social forestry concepts, ideas and opportunities for the relevant audience.
- b) Train staff, motivators, NGOs and PVOs in outreach and extension techniques and methods.
- c) Develop a system for monitoring and evaluation of the outreach programmes.
- d) Provide a feedback mechanism in which researchers interact with both professionals and practitioners of farm forestry so that future research efforts can be tailored to solve real constraints.
- e) Establish demonstration areas serving as visit points for farmers' tours/workshops and on-farm research trials in collaboration with research institutions to attract active participation of the farmer community.

It may be noted that in general the 'Action Programme' for an agricultural extension worker, with some modifications, will be relevant to forestry extension.

## **RESEARCH AND EDUCATION**

Trained manpower is an essential pre-requisite for the sound and effective management of forests. Up-grading forestry

education to produce a corps of specialists in forestry related disciplines will encourage research for sustainable utilization and development. Forestry research and education shall aim to:

- a) Up-grade training facilities to expand and improve forestry education and to cater to the future requirements of trained personnel in the relevant fields of specialisation.
- b) Integrate forestry education in the Pakistan Forest Institute with the university system.
- c) Encourage induction of women into the forestry profession through training programmes.
- d) Encourage and up-grade inservice training for the forest service cadres in line with modern trends which emphasize social aspects of forestry.
- e) Develop and strengthen research programmes which provide technologies on the social and scientific management of forest and rangeland resources.
- f) Establish regional research stations to conduct research on specific local problems.
- g) Involve and encourage Provincial Forest Departments and industries to finance research on problems relating to forestry and forest products.
- h) Evolve effective mechanism for coordination of research on forestry and forest products by Federal and Provincial Institutions and Universities.

## ENVIRONMENTAL FORESTRY

Global environmental problems such as acid rains in Europe and North America, the danger of sea level rise in coastal regions, disappearance of tropical forests in equatorial zone, ever increasing devastating floods, and expanding desertification in Asia and Africa, have captured the attention of the world community and have brought into lime light the importance and role of forest as a vehicle to improve global environment and check global warming. This fact has adequately been recognised in the Pakistan Forest Policy and efforts will be made to:

- a) Implement programmes to minimise environmental pollution and environmental hazards through tree conservation and planting.
- b) Develop a framework and programmes for establishing green wind breaks on arid lands to check erosion and desertification.
- c) Establish green areas in all cities having populations of 50,000 or more.
- d) Reserve at least 25% area in new townships and industrial estates for use as parks, recreation spaces and green belts.
- e) Formulate, enact and enforce pollution standards for emissions and discharges impacting the wildlife protected areas and wetlands.
- f) Strengthen capacity to implement anti pollution measures.

## **RESOURCE SURVEYS**

To provide a sound planning base for the forestry, wildlife, watershed and rangeland sub-sectors, the following will be undertaken :

- a) Periodic physical/mapping surveys.
- b) Implementation of a programme for the improvement of statistics relating to forests and wildlife which includes a remote sensing laboratory and Geographical Information System (GIS).

## **INCENTIVES**

The following incentives have been provided in the Forest Policy of 1991:

- a) Exemption of custom duties on aerial rope ways and sky line cranes used exclusively for forest exploitation and management.
- b) Introduction of tree insurance scheme on a pilot project basis.
- c) Provision of enhanced concessions to certain agro-industries (i.e., Sericulture, apiculture, wood carving/sawing etc.) covering debt equity ratio of 80:20 and cheaper credit.
- d) Farmers raising block plantation of trees will be advanced long term credit on concessional terms.
- e) Study tours abroad for progressive farmers to update their knowledge.

## POLICY FORMULATION PROCESS

There are no written rules and procedures for the policy formulation and consultation process. The procedure is formalized by a person or a group of persons who are given the task of policy formulation.

The starting point for the 1991 Policy was a three Day International Seminar on Pakistan's Forest Policy held in March 1989 at Karachi which was attended by more than 60 delegates including the participants from FAO, USA, Canada, Germany and Switzerland. Local participants included the Forest Ministers, provincial Secretaries, Chief Conservators of Forests, serving and retired senior Forest Officers and representatives of wood based industries, related NGO's and other concerned ministries of the Federal Government.

After presentation of papers on experiences and important aspects of forest policy, five working groups were constituted to provide recommendations in the following areas:

- i) Socio-economic conditions
- ii) International linkages
- iii) Forestry legislation
- iv) Future objectives & directives
- v) Financial & political support.

Based on the recommendations of the seminar, a draft Forest Policy was developed and distributed to the participants of the seminar. The draft was revised in light of their comments.

Later on a committee was established in the Ministry of Food and Agriculture to consolidate the draft sub-sectoral policies for crops, forests, livestock, fisheries etc., into one sectoral policy on Agriculture. This entailed modifications and revision for integration and proportional treatment. The

consolidated draft was once again distributed to the provinces and was modified in light of their comments. There-after, the draft was presented in a Farmers Conference convened under the Chairmanship of the Prime Minister for the contribution of progressive farmers and leading experts in all sub-sectors of agriculture and the draft was revised. This draft was considered in a sub-committee of the cabinet which included the Ministers for Finance, Industry, Commerce and Education, Deputy Chairman of the Planning Commission, Federal Secretary of Finance and Planning Divisions, Chairman of the Agriculture Development Bank and senior officers of the Ministry of Food and Agriculture. In this meeting a package of incentives was developed. The policy was finally approved by the Prime Minister and was announced by the Minister for Food, Agriculture and Cooperatives in a press conference on 15 May, 1991. The salient features of the policy were discussed in the National Assembly during the Budget Session in June 1991 and the policy was approved by majority vote.

## CONCLUSION

Forest Policy 1991 is elaborate, innovative, progressive and demand oriented. It is a great improvement over previous policy statements. It enshrines a viable strategy and an attractive package of incentives. Hopefully, its implementation will have far reaching positive results.

**TABLE NO. 3.1**  
**FOREST COVERAGE IN PAKISTAN**

(000 ha)

Province/Territory	Total area	Forest Area	Percentage
N.W.F.P.	10170	1410	13.9
Punjab	20630	630	3.1
Sindh	14090	680	4.8
Balochistan	34720	720	2.1
Northern Areas	7040	770	11.0
Azad Kashmir	1330	360	27.0
<b>Total:</b>	<b>87980</b>	<b>4570</b>	<b>5.2</b>

Source: Pakistan Forest Institute.

**TABLE NO. 3.2**

**CLASSIFICATION OF FORESTS BY FUNCTIONS AND FOREST TYPES**

(000 ha)

Forest Type	Productive forests	Protective (Conservation) forests	Total	(%)
Coniferous	867	1092	1959	42.8
Scrub	158	1568	1726	37.6
Riverain	158	138	296	6.5
Mangrove	-	347	347	7.6
Irrigated plantations	083	151	234	5.1
Linear plantations	-	17	17	0.4
<b>Total:</b>	<b>1266</b>	<b>3313</b>	<b>4579</b>	<b>100</b>

Area(%)      27.6                  72.4

Source: Pakistan Forest Institute

**TABLE NO. 3.3****FOREST AREA BY LEGAL CLASSES**

(000 ha)

Category	Punjab	Sindh	NWFP	Balochistan	Pakistan
<b>State Owned Forests</b>					
1. Reserved	329	172	94	1087	1682
2. Protected	646	344	4	-	994
3. Unclassed	23	-	20	-	43
4. Municipal/ Cantonment	116	-	92	-	208
5. Resumed Lands	8	57	35	-	100
<b>Private Owned Forests</b>					
6. Guzara Forests	37	-	585	-	622
7. Chos Act Areas	3	-	-	-	3
8. Section 38 Areas	6	-	42	-	48
9. Communal Forests	69	-	809	-	878
10. Farm Forests*	-	-	-	-	-
<b>Total:</b>	<b>1237</b>	<b>573</b>	<b>1681</b>	<b>1087</b>	<b>4578</b>

- Source: 1. Punjab Forest Department Annual Report 1986-87  
 2. Pakistan Forest Institute, Forests and Forestry in Pakistan, 1987.  
 \*Not a legally recognized category.

**TABLE NO. 3.4**  
**ADMINISTRATIVE UNITS WITH AREA & POPULATION**

Province	Area (Sq.Km)	1951	<u>POPULATION (000)</u>			1990
			1961	1972	1981	
Punjab	205,344	20557	25500 (2.2)	37612 (3.4)	47293 (2.7)	60,108 (2.7)
Sindh	140,914	6054	8374 (3.3)	14158 (4.6)	19029 (3.6)	26,161 (3.6)
NWFP	74,521	4587	5752 (2.3)	8392 (3.3)	11061 (3.3)	14,815 (3.3)
Balochistan	347,190	1187	1385 (1.6)	2433 (5.0)	4332 (7.1)	6,720 (5.0)*
FATA	27,220	1337	1847 (3.3)	2491 (2.6)	2199 (-1.5)	2,514 (1.5)**
Islamabad	906	94	120 (2.4)	235 (6.0)	340 (4.5)	0,505 (4.5)
Total (Pakistan)	796,095	33,816	42978	65321	84254	110,823
Azad Kashmir	133	-	-	1,400	1,980	2,515
Northern Areas	704	-	-	0,400	0,562	0,714

Source: Monograph on fertility and mortality population census organisation, GOP, January, 1990

1990: NCS Projections

\*1961-72 Growth rate

\*\*Average of 1951-61, 1961-72 and 1972-81 Growth Rates

**TABLE NO. 3.5**

**LIVESTOCK POPULATION IN (ANIMAL UNITS)**  
**IN PAKISTAN.**

			1986
<u>Animals</u> <u>(A.U)</u>	<u>No.</u>	<u>Animal Unit</u>	<u>Total</u> <u>(A.U)</u>
Cattle	17,540,592	1.0	17,540,592
Buffaloes	15,705,433	1.5	23,558,150
Sheep	23,286,655	0.2	4,677,331
Goats	29,945,122	0.3	8,983,537
Camels	958,047	1.7	1,628,680
Horses	388,379	1.3	504,893
Asses	2,998,129	1.0	2,998,129
Mules	67,842	1.0	67,742
<b>Total:</b>	<b>90,890,199</b>		<b>59,960,054</b>

# Increase in Livestock Population (Million Head)

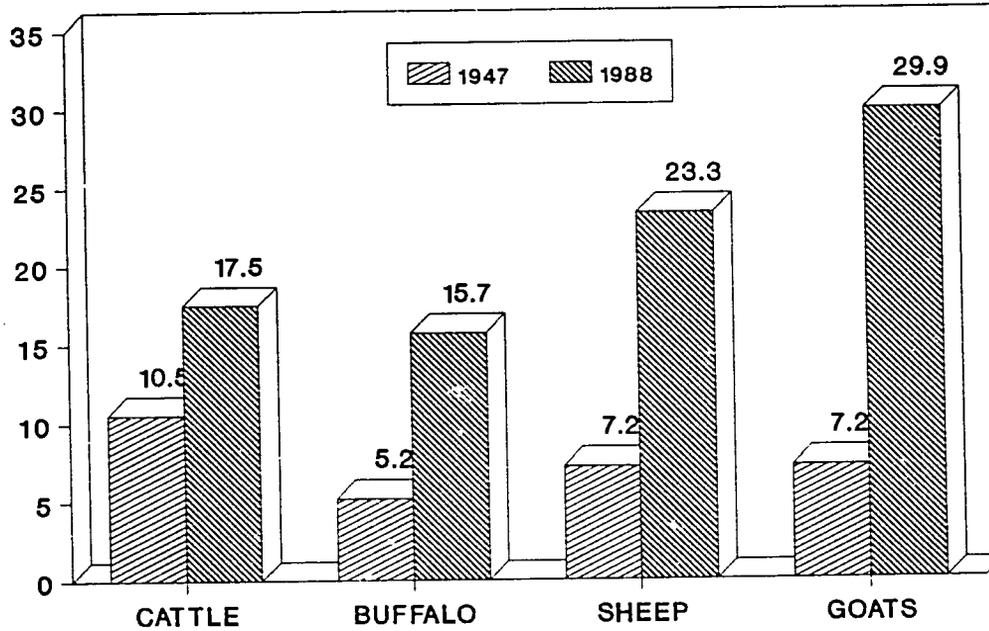


Fig-3.1: Increase in Grazing Livestock Population

**TABLE NO. 3.6****FOREST AREA BY TYPES OF VEGETATION**

(000 hec)

<b>G.Total</b>	<b>Punjab</b>	<b>NWFP</b>	<b>Sindh</b>	<b>Baoch- istan</b>	<b>Sub- Total</b>	<b>A.K.</b>	<b>N.A.</b>	
1. Coniferous	93	1052	-	116	1261	379	285	1925
2. Irrigated	149	0.3	72	-	221	-	2	223
3. Riverain	52	0.3	232	2	286	-	-	286
4. Scrubs	311	115	8	597	1031	2	658	1691
5. Coastal	-	-	280	-	280	-	-	280
6. Mazri Lands	-	24	-	-	24	-	-	24
7. Linear Plan- tation.	15	2	-	1	18	-	-	18
8. Range Lands	2833	150	489	372	3844	202	2104	6150
<b>Total:</b>	<b>3433</b>	<b>1343</b>	<b>1081</b>	<b>1088</b>	<b>6965</b>	<b>583</b>	<b>3049</b>	<b>10597</b>

**TABLE NO.3.7**  
**LAND USE 1988-89**

(Million hecs)

Province	Punjab	Sindh	NWFP	Baoch- istan	Provin- cial Total	A.K.	N.A.	Total
<b>Land Use</b>								
1. Total Area	20.6	14.1	10.2	34.7	79.6	1.3	7.0	87.9
2. Area Reported	17.1	12.6	8.5	18.7	56.9	1.2	4.8	62.9
i. Forests	0.63	0.68	1.41	0.72	3.44	0.36	0.77	4.57
ii. Cultivated	11.6	5.5	1.8	1.4	20.3	0.2	0.1	20.6
iii. Cultivable waste	2.0	2.1	1.5	5.4	11.0	-	0.8	11.8
iv. Area not available for cultivation	2.9	4.3	4.0	11.2	22.4	0.6	3.0	26.0
v. Area not Reported	3.5	1.5	1.7	16.0	22.7	-	2.2	24.9

Source: Planning Division, Ministry of Food and Agriculture  
Provincial Forest Departments.

**TABLE NO. 3.8****DISTRIBUTION OF LIVESTOCK IN THE AGRO-CLIMATIC ZONES**

Eco-system	Area (000 hac)	Livestock (000 No.)					Total
		Cattle	Buffalo	Sheep	Goat	Other	
Indus Delta	1,918	307	145	170	369	991	
Southern Irrigated Plains	2,257	2,070	1,970	1,360	2,993	8,393	
Sandy Desert (a & b)	13,708	3,127	2,349	2,914	5,716	14,106	
Northern Irrigated Plains	17,883	5,795	8,286	3,781	6,140	24,002	
Barani Lands (a & b)	4,005	2,048	1,517	897	2,304	6,766	
Wet-Lands	1,918	567	441	248	1,107	2,363	
Northern Dry Mountains	3,723	1,418	283	1,240	2,145	5,086	
Western Dry Mountains	17,488	975	65	8,327	4,712	14,079	
Dry Western Plateau	19,575	469	296	3,300	3,372	7,437	
Sulaiman Piedmont	4,175	404	56	731	707	1,898	
<b>Total:</b>	<b>86,650</b>	<b>17,180</b>	<b>15,408</b>	<b>22,968</b>	<b>29,565</b>	<b>5,770</b>	<b>90,891</b>

## CHAPTER NO. 4

### **POLICY RESPONSES TO KEY DEVELOPMENT ISSUES**

Policy in its simple meaning and general application is a specified course of action. A rational policy is one which is based on public aspirations, evolved through the process of wider consultation and gives due consideration to the social, economic and environmental factors. The successful implementation of such a policy depends upon enlisting the support of all interest groups and on the availability of essential inputs, identification of priority areas, and fixing clear cut targets. The chances of success are greater if expected social and economic benefits are likely to accrue to larger sections of the population.

The Forest Policy of 1991 as a part of the overall National Agriculture Policy for Pakistan has been evaluated on the basis of these pre-requisites and developed in light of the manifesto of the political party in power, recommendations of the farmers' convention held in December, 1990 and findings of the National Commission on Agriculture (NCA).

The goals of the National Agriculture Policy are; social equity; self-reliance; export orientation; sustainable agriculture; and enhanced productivity. Flowing from these overall goals, the objectives of the Forest Policy in order of priority are:

- i) Conserve existing forest, watershed, wildlife and range resources.

- ii) Promote social forestry programmes to increase forest area from existing 5.4 percent to 10 percent during next 15 years.
- iii) Contain environmental degradation and conserve biological diversity.

The overall goals of the National Agriculture Policy and the objectives of the Forest Policy are intended to be achieved by adopting the following strategy:

- a) Obtain higher growth than the population growth to ensure food security, self-sufficiency and export surpluses.
- b) Increase productivity in crop, livestock, fisheries and forestry sectors.
- c) Evolve an export oriented or import substitution strategy.
- d) Conserve and develop natural resources.
- e) Institutional reforms - improve agrarian structure and achieve institutional development.
- f) Focus on small farmers and barani area development.
- g) Achieve full employment in rural areas through industrialization.

The plan of action for achieving the stated objectives of the forest policy is given in Chapter 2. Obviously, the policy will be successful if it receives positive responses in case of key development issues, some of which are high-lighted below:

## **RURAL DEVELOPMENT**

In the process of rural development, human resources are organized in rural areas, their efficiency and skills are improved and natural resources are managed to improve the quality of life. This is accomplished by providing access roads to rural areas to improve delivery of goods and services such as food, energy, transportation, education, health care, and for marketing of agricultural produce. Rural development is a vast area. Here the role of forestry in rural development is discussed.

Forests are located in rural areas and the potential for new forests also exists in rural areas. As such, focus on forestry leads to rural development. The specific provisions of the Forest Policy 1991 for rural development are:

- i) Increasing forest area from 5.4 percent to 10 percent during the next 15 years.
- ii) Promote social forestry programmes.
- iii) Take anti-desertification measures and rehabilitate waterlogged, saline and degraded lands through vegetative treatment.
- iv) Generate opportunities of income and self-employment for rural populace.
- v) The existing road density of 2 meters per ha. will be increased to atleast 10 meters per ha. to facilitate harvest of wood and to reduce wastage in timber.
- vi) Provision of incentives such as exemption from custom duty on machinery, introduction of tree insurance scheme, encouragement of agro-based

forest industry and credit on concessional rates to farmers for raising block plantations.

## **POVERTY ALLEVIATION**

All forestry programmes aiming at conservation of natural resources and creation of new plantations in private and public sectors are meant to improve the economic conditions of rural masses. It is now widely understood that poverty and natural resource conservation are two sides of the same coin. Conservation is not possible if people living in and around the forests are poor. Poverty is not only a state of mind, it is a state of perpetuate isolation, vulnerability, powerlessness, and physical weakness.

Any programme aimed at improving means of communication and construction of roads helps to break the isolation of the people living in remote areas. Similarly job opportunities are created by development projects. The payment of salaries, wages, food for work and training imparted to improve skills are alleviating poverty and benefitting the workers. Forestry examples range from nursery manager to wood logger to industrial worker. The role of forestry is quite significant in this respect.

## **SUSTAINABLE DEVELOPMENT**

Sustainable development requires a good base of natural resources, their uniformly distributed for equity purposes and growing at or above the increase in population. The 1991 Forest Policy considers these essential pre-requisites and aims at doubling the forest area during the next fifteen years by laying greater emphasis on social (farm) forestry. It also aims at tree development in all regions for meeting local needs of fuelwood, small timber and supply of industrial raw materials near the centres of consumption and for environmental benefits.

**Sustainable development is the major goal of the Forest Policy. It will be achieved by:**

- i) Meeting the country's need for timber, fuelwood, fodder and other products.**
- ii) Conserving the existing forests, watershed, rangeland and wildlife resources by sustainable utilization and developing them to meet the ever increasing demands.**
- iii) Conserving biological diversity and maintaining ecological balance.**
- iv) Containing environmental degradation and taking anti-desertification measures.**
- v) Promoting NGO's and PVO's to educate the masses and creating public awareness.**
- vi) Introducing better management, efficient logging practices and reducing waste in timber harvest and utilization.**
- vii) Providing incentives to land owners to establish trees and horticulture crops on lands exceeding 30 percent gradient for reducing the incidence of soil erosion.**
- viii) Developing habitat management plans, species recovery plans and habitat improvement programmes for conservation and improvement of species of wild animals and plants.**
- ix) Reserving at least 25% of the area in new townships and industrial estates for use as parks, recreation grounds and green belts for residents.**

## **POVERTY AND ENVIRONMENTAL ABUSE**

Poverty and abuse of environment are inter-related. Some believe that poverty is the result of low productivity, others feel that low productivity is due to excessive pressure of staggering human and cattle population on natural resources. Perhaps both groups are right as the actions of the poor lead to environmental degradation and depleted environment leads to poverty. It is also obvious that indiscriminate use of natural resources interrupts supplies and as a result lowers the standard of living. The only option remains to promote the wise use of natural resources. For achieving this objective of the National Forest Policy 1991 the task to formulate the Forestry Sector Master Plan is being undertaken currently with the technical and financial support of ADB/UNDP.

## **FOOD SECURITY**

Forests are among the important natural resources which play a significant role in the economic development of a country, whether rich or poor, small or big developed or under-developed. In the context of Pakistan, forests have even a greater significance due to their contribution beyond the traditional role as a source of raw material. The main stay of agriculture in the dry flood plains of Pakistan is irrigation water which is received in the form of rains and snow in the northern mountains. The precipitation is absorbed and released slowly into streams and rivers due to the presence of adequate tree cover in the catchment areas. The quality and quantity of water as well as its regular flow from the catchment area is, therefore, vital for agriculture, hydro-power and industries dependent on them. About 20 million ha. of irrigated agriculture in the Indus plain, known as grain bowl of Pakistan, is dependent on good water husbandry practices in Himalayan - Karakoram region of Pakistan.

Thus, forests are important not only for food security but for the whole range of human activities including social well-being, industrial development and resource conservation.

## **NUTRITION**

Nutrition is an area of food security. Forests provide a large number of fruits, nuts, flowers and seeds which are consumed by human beings, animals and birds. Nuts are rich in oils, protein, and vitamins and add to the health and happiness of the people living close to forests. In remote and inaccessible localities, forests are valued by local people more for fruits and nuts than for other known economic benefits. Mushrooms, medicinal plants, aromatic plants, wildlife and fish are a few other products taken as food for nutrition.

## **MANAGEMENT OF FOREST RESOURCES**

Proper management and effective organizational structure are key to the success of forest policy. The Policy addresses these crucial elements by laying down well thought out management action plans for different categories of forests such as management of forests, watersheds, rangelands, wildlife areas and irrigated plantations. The Policy also aims at:-

- i) Expanding social forestry;
- ii) Improving wildlife habitats;
- iii) Expanding environmental programmes;
- iv) Increasing forest extension activities;
- v) Promoting forestry research & education;
- vi) Strengthening Forest Departments; and
- vii) Reviewing and Improving legislation.

These activities will be supported by periodical resource surveys and monitoring and evaluation programmes. Identification and mapping of areas requiring special attention

and developing and implementing programmes for them will be useful. Improvement in statistics relating to forests, watersheds, rangelands and wildlife areas and developing and using the facilities of remote sensing and Geographical Information System (GIS) will be necessary.

### **INCREASING OFF-FARM EMPLOYMENT**

In addition to increasing the forest area by more than 100% in the next 15 year, the 1991 Forest Policy stipulates intensification of forest management practices. This would entail increasing road networks from 2 meter/ha. to 10 meter/ha, mechanization of felling operations, raising improved stock in nurseries from known genetic resources complete reliance on re-forestation through artificial planting, better protection afforded to newly raised trees from grazing, fire, insects, fungi and other causes through fencing, increased protective staff and intensified cultural operations. All these works are likely to increase jobs for different categories of the social strata. It is anticipated that Provincial Forest Departments would require 14000 to 16500 additional trained professional staff and about 1.5 million technicians during next 15 years.

### **COMPETING LAND USES**

Water and suitable land are scarce physical resources in Pakistan and consequently competing demands for different uses i.e agriculture, communication, infrastructure, mining, energy, settlements, etc, make them the biggest constraint for forestry. This constraint is minimized when farm forestry activities are targeted towards saline, waterlogged and wasteland areas.

## **Agriculture**

Farmers are encouraged to grow the maximum number of trees possible on farm lands and the forest policy provides for a farm forestry package which contains the following incentives:

- i) Introduction of crop, livestock and tree insurance schemes on a pilot project basis.
- ii) Provision of enhanced concessions to certain agro-industries (e.g. sericulture, apiculture, wood carving/sawing etc) to cover debt equity in the ratio of 80 : 20 and of cheaper credit.
- iii) Farmers raising block plantations of trees will be advanced long-term credit on attractive terms.
- iv) Study tours abroad for progressive farmers to update their knowledge.

## **Mining**

Mining may be a conflicting land use with forestry in mineral rich forests. Cement and phosphate fertilizer industries are booming and expanding in Pakistan. Scrub and chir pine forests in NWFP and Punjab provinces grow on lime stone and phosphatic rocks. The two are used as the basic raw material for the two industries. As a result of mining, forests have been damaged & destroyed. To date mining use has been preferred over the land use for forestry.

The problem has been partly addressed in the 1991 Forest Policy revision by restricting denotification of forest areas and change in land use without legal authority. The Prime Minister of Pakistan issued a directive in April 1991 to stop stone quarrying in the Margalla Forest which is also a national park. However, alternative quarrying sites will be provided.

## **Other land uses**

The other major conflict between forestry and other land uses are discussed under land tenure system.

## **LAND TENURE SYSTEM**

Land tenure system in Pakistan is extremely complex. All productive natural forests are located in the region where ownership rights are neither well defined nor adequately documented in the Government revenue record. Where-ever settlement of rights has been attempted in recent times, local people have boycotted the proceedings as they dispute the validity of the whole process. A region-wise discussion of land tenure issues follows.

### **Malakand**

The whole of Malakand Civil Division in NWFP, which supports more than a million acres of coniferous forests, previously belonged to three Princely States and a part included in the Provincially Administered Tribal Area.

The forests in these states were traditionally owned partly by the states and partly by the rulers and the revenue from the forests went to the state treasury and the rulers respectively. Since the latter were despotic and tyrant and the forests contributed most of the state revenue used in administration and development, ownership was not questioned.

When the erstwhile states of Dir, Swat and Chitral were merged with the province of NWFP during 1970, the situation changed over night and the people started demanding a share of the sale proceeds from forests. This demand was resisted by the Provincial Government and agitation started. The Prime Minister of Pakistan ultimately, conceded in 1976 to the

demand of the people by agreeing to share the sale proceeds with the local people to the following extent:

- Dir ▶ 80% in Painsa Khel and Sultan Khel areas and 60% elsewhere.
- Swat ▶ 80% in Buner area and 60% elsewhere.
- Chitral ▶ 60%.

The people accepted the decision but when the revenue officials started showing forests as Government property in the revenue record, the Government claim was disputed and ownership rights were demanded. The Government did not agree to this demand and went ahead with the land settlement but the process was disrupted through agitation and interference. The Government functionaries completed the process hurriedly. As a result, the Forest Department considers forest lands as public property whereas local people contend that forests belong to them. Thus, there is confusion and uncertainty.

There is another linked issue. Royalty is distributed only among the male members of the local communities. Those who have few or no male members, have little interest in the protection and conservation of forests. On the other hand agriculture land vests in the individuals and consequently, there is a growing tendency to convert forest areas to cultivation for claiming ownership. This encourages encroachment on forest lands. Government functionaries are not effective in controlling this trend. The result is that forest areas are shrinking.

### **Hazara**

There are settled districts and tribal areas in Hazara. In the latter the situation is even worse than in Malakand.

Neither the Hazara Forest Act, 1936 has been made applicable to the forests in the tribal areas nor staff has been posted for their protection and management from the settled districts. The forests are, therefore, being damaged and destroyed.

Land settlement has been completed in the settled districts of Abbottabad, Mansehra and Haripur and two types of forests have been notified, namely the Reserved Forests and the Guzara Forests. The latter are large, wooded areas set aside to meet the bonafide domestic needs of local people. Less than 50% of Guzara Forests are owned by individuals who protect them against cutting of trees or encroachments, in particular along boundaries. Others Guzara forests are jointly owned by communities in the form of village shamilat (joint property) and those are subjected to all sorts of abuses.

However, the Guzara forests have been properly surveyed and demarcated on maps as well as on the ground. The stock maps of forests have been prepared and trees properly enumerated. The first and the last working plans of these forests were prepared in 1953-54 and 1970-71 respectively. They currently are managed and treated under working plans.

### **Murree Hills**

The Guzara forests in Rawalpindi and Murree Hills are still undemarcated, because of opposition from the people. The boundaries and forest areas are unknown and working plans have not been prepared. As a result, the forests are managed on an adhoc basis through a Guzara Committee headed by the Deputy Commissioner, Rawalpindi with membership from the nation building departments and notables of the area. A Divisional Forest Officer acts as a technical member and secretary of the Committee. This type of management is not conducive to efficient protection and resource conservation. The resource is being widely used without responsibility for its

protection, conservation or improvement, resulting in its depletion and deterioration.

### **Azad Kashmir**

Azad Kashmir was also a princely state before 1947. The forest situation in Azad Kashmir is more or less similar to Malakand except that the sale proceeds are not shared by the people. The forests in Neelum Valley are fully owned by the State and are a significant source of revenue. This revenue comes mainly from the sale of timber and minor forest produce. Elsewhere in the State, the forest growth is sparse and unsuitable for commercial harvest. Traditionally, the people are using these forested areas to meet their domestic needs and claim their ownership.

### **CONCLUSION**

The forest departments are no longer effective in protecting forests against abuses by local people due to breaking of village institutions, declining respect for law, excessive rights granted to local people and their rapid multiplication due to increases in human and cattle populations. The Forest Policy has not addressed the question of land tenure because of its complex nature and the tribal life style governing the use of forests. Past experience has shown that policy resolution of land tenure problems is not an option within the foreseeable future.

**TABLE NO. 4.1**

**GOVERNMENT OF N.W.F.P. PROVINCE  
AGRICULTURE DEPARTMENT**

Dated Peshawar the 14th March, 1977.

**NOTIFICATION**

No.SOFT(FAD)V-405/77. In pursuance of the provisions contained in clause (a) of paragraph 3 of the Dir and Swat (Devaluation and Distribution of Property) Regulation, 1972, and in accordance with the directions of the Federal Government, the Government of the North-West Frontier Province is pleased to direct that:

- (a) in Home Department Notification No.10/16-SOTA-II/72-1520, dated 15th September, 1972, in clause(b), for the brackets and words "(subject to payment of fifteen percent of their income as royalty to the local right holders)", the brackets and words "(subject to payment of royalty to the local right holders at the rate of eighty percent of the income of Painsa Khel and Sultan Khel forests, and sixty percent of the income of other forests)" shall be substituted; and
- (b) in Home Department Notification No.10/16-SOTA-II/72-1521, dated 15th September, 1972, in clause(b), for the brackets and words "(subject to payment of fifteen percent of their income as royalty to the local right holders)", the brackets and words "(subject to payment of royalty to the local right holders at the rate of eighty percent of the income of Buner forests and sixty percent of the income of other forests)" shall be substituted.

Sd/-Abdul Mannan Khan  
SECRETARY TO GOVT OF NWFP PROVINCE  
AGRICULTURE DEPARTMENT.

14.3.1977.

**TABLE NO. 4.2**

**TRANSFER OF MANAGEMENT OF PRIVATE  
(GUZARA) FORESTS  
TO FOREST COOPERATIVE SOCIETIES IN HAZARA**

"In exercise of the powers conferred by Section 53 of the Hazara Forest Act, 1936 (NWFP Act VI of 1937) the Government of NWFP is pleased to direct that in the Hazara Management of wastelands (Guzara) Rules, 1950, the following further amendments shall be made namely:-

After rule 6, the following new rule shall be inserted, namely:-

"6A. (1) The conservator may, with the prior approval of the provincial Government transfer on leases on such terms and conditions as may be specified, the management of any wasteland, for a specified period or periods, to a Forest Production and Multipurpose Cooperative Society, registered as such under the Cooperative Societies Act, 1925.

(2) Where any wasteland is transferred under sub-rule (1), the provisions of rules 7 to 24 of these rules, or any other rule that may be specified by the Conservator shall not apply to the area or areas so transferred during the currency of lease period".

SD/-

SECRETARY TO GOVT OF NWFP PROVINCE  
AGRICULTURE DEPARTMENT.

## TABLE NO. 4.3

### FOREST DEPARTMENT

The 24th December 1929.

No.41654.- The following rules for the constitution and proceedings of the Forest Advisory Committees are published for information and guidance:-

1. Forestry Advisory Committees will be constituted as follows:-

Name of Forest Advisory Committees.	Constitution.	Electorate.
Kulu Forest Advisory Committee		
Kungra Forest Advisory Committee		
Hoshiarpur Forest Advisory Committee.		
Attock Forest Advisory Committee.	Officials- Divisional Forest Officer Rawalpindi West(Chairman) Revenue Assistant,Attock. Non-officials- Two elected members from Attock district and one from Rawalpindi district.	Non-official members of District Boards.
Rawalpindi Forest Advisory Committee.	Officials- Divisional Forest Officer, Rawalpindi east(Chairman) Divisional Forest Officer, Rawalpindi west Revenue Assistant Rawalpindi. Non-official- Three elected members from Rawalpindi district.	Non-official members of District Boards.
Jhelum Forest Advisory Committee.	Officials- Divisional Forest Officer, Jhelum (Chairman). Three Revenue Assistants, i.e.,from Jhelum,Shahpur and Mianwali districts. Non-officials- Four elected members, one each from Jhelum,Shahpur, Attock and Mianwali districts.	Non-official members of the District Boards.

## TABLE NO. 4.4

### FOREST DEPARTMENT

The 11th November 1933.

No.3793-C.- It is notified for general information that the Governor in Council has had under careful consideration the desirability of bringing the right holders in the forests in the Rawalpindi district into closer touch with the forest administration and with this end in view has decided to amplify the work of the District Forest Advisory Committee by revising its constitution. Punjab Government notification No.41654, dated the 24th December 1929, as far as it affects the Rawalpindi Forest Advisory Committee, is hereby cancelled:-

1. The committee will be constituted as follows:-

Names of Forest Advisory Committee.	Constitution.	Remarks.
Rawalpindi.	Officials- 1. Divisional Forest Officer, Rawalpindi. (Chairman). 2. Divisional Forest Officer, Rawalpindi West (member). 3. Revenue Assistant, Rawalpindi (Secretary). Non-officials- Five*	*i) Two to be nominated by the District Board.  ii) Three to be nominated by a committee consisting of the Deputy Commissioner and the two Divisional Forest Officers. Of these nominated members one would be a resident of the Rawalpindi West Division and two residents of the Rawalpindi East Division.

2. The term of office of non-official members shall be three years.

Sd/- D. J. BOYD,  
Financial Commissioner and  
Secretary to Government,  
Punjab, Development Department.

## TABLE NO.4.5

### FOREST DEPARTMENT

The 11th November, 1941

No.3485-Ft.- In partial supersession of Punjab Government notification No.41654, dated the 24th December, 1929, the following sections and alterations made in the constitution of the Forest Advisory Committee the Rawalpindi district are published for information and guidance:-

Name of Forest Advisory Committee.	Constitution.	
	Officials.	
Rawalpindi Forest Advisory Committee	1. Divisional Forest Officer, Murree Hills Division	The senior to act as Chairman.
	2. Divisional Forest Officer, Rawalpindi Division.	
	3. Guzara Forest Officer, Rawalpindi.	Secretary.
	4. Sub-Divisional Officer, Murree.	Members
	5. Revenue Assistant, Rawalpindi	
	6. District Panchayat Officer, Rawalpindi.	
	7. Assistant Registrar, Co-operative Societies, Rawalpindi.	
	Non-officials	
	Ten.	
	Officials	
Guzara Forest Advisory Committee	1. Deputy Commissioner, Rawalpindi.	Chairman
	2. Guzara Forest Officer, Rawalpindi	Members
	3. Sub-Divisional Officer, Murree	
	4. District Panchayat Officer, Rawalpindi,	
	5. Assistant Registrar, Co-operative Societies, Rawalpindi.	
	Non-officials.	
	Seven. Members	

Sd/- F.L. BRAYNE  
Secretary to Government,  
Punjab, Development Department.

## TABLE NO. 4.6

### **GUZARA FOREST ADVISORY COMMITTEE**

In pursuance of Punjab Government Notification No. dated 11th November 1941, I constitute the Guzara Forest Advisory Committee as follows:-

#### OFFICIALS

1. Deputy Commissioner, Rawalpindi.
2. Guzara Forest Officer, Rawalpindi.
3. Sub Divisional Officer, Murree.
4. District Panchayat Officer, Rawalpindi.
5. Assistant Registrar, Co-operative Societies, Rawalpindi.

#### NON-OFFICIALS.

1. K.S.Subedar Mohd Azim Khan.
2. Lt. Qalandar Ali Khan of Kala Basand.
3. R. Mohd Zaman of Charhan
4. R. Khan Mohd of Charhan.
5. K. S. Lt: Mohd Sarwar Khan of Sattian.
6. Subedar Alam Sher Khan of Sattian of Gobi Viilage.
7. R. Allah Ditta Khan of Salitha.

The Guzara Forest Officer will act as the Secretary of the above advisory committee. The rules of business given in Punjab Government Notification No.41654, dated 24th December 1929 should be observed.

The term of office of non-official members shall be three years.

Sd/- V. B. Stainton,  
Deputy Commissioner,  
Rawalpindi.

7/4/1942.

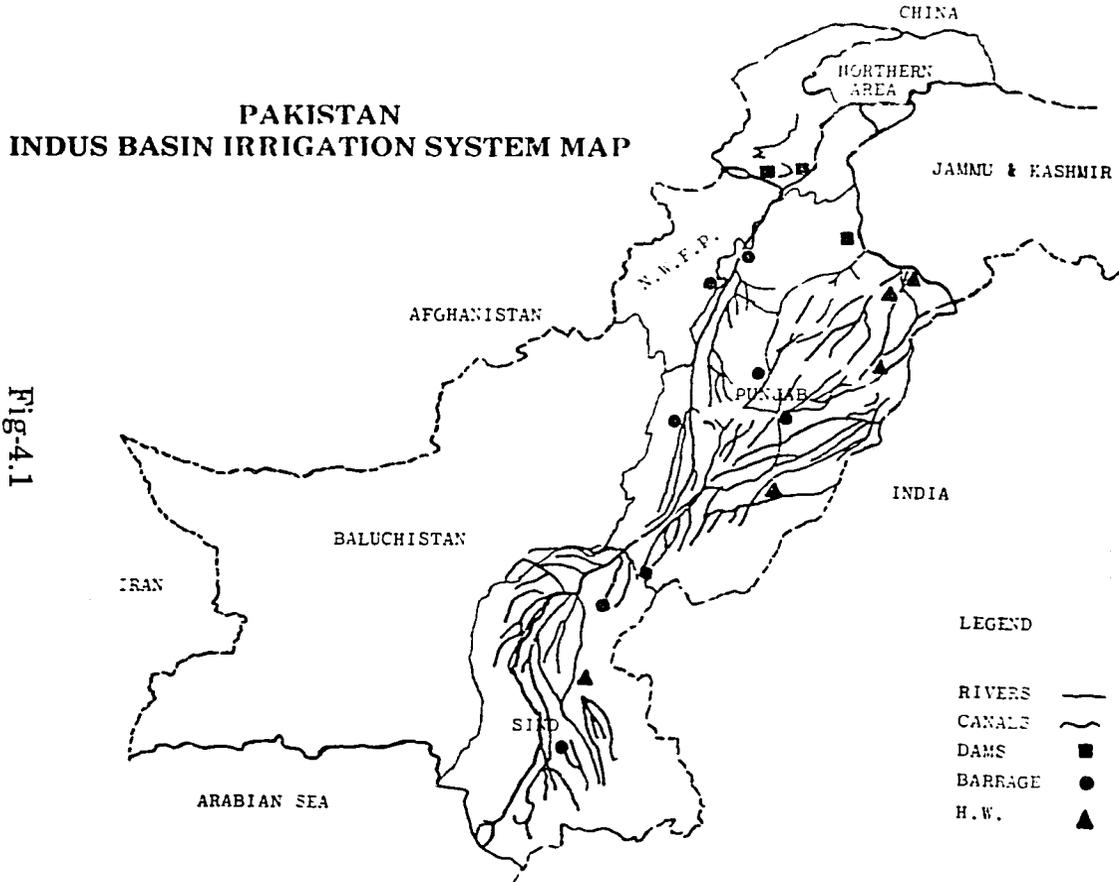


Fig.4.1

# Forest wealth depleting

**C**HITRALIS fondly recall a certain European tourist to have spoken of Chitral as Switzerland of Asia because of its refreshing summer breeze, lush green valley and good prospects for more forestation. But, in sharp contrast to this, recent tourists to the valley bewail that if the present trend of deforestation is not reverse, Chitral would soon turn into a waste-land.

Many factors have contributed towards the depletion of the valley's forest wealth. The galloping population growth, further exacerbated by the influx of Afghan refugees, has placed un-guarable demand on the forests for construction and firewoods. Today trails have to be travelled to reach a wood for cutting, which is then dragged down, crushing under it any grass or freshly grown plant. The ground left loose underneath is either blown down by wind or rain water in the form of floods destroying houses and crops downstream, which have assumed endemic proportion in recent years. The resulting climatic and topographic changes have made nature hostile to every living organism.

The government policy on forest has been responsible for this state of affairs. The reversal of earlier policy and allowing forests to be cut for firewood has encouraged the indiscriminate cutting of forest by royalty holders, private property of any individual even during the time of the former state.

The corruption ridden Forest Department officials make a big bug by marking trees of some individuals for cutting and payment of royalty. This amount, which should normally have been spent on forestation, is paid to royalty holders for taking out of Chitral to be spent on Pajeros, Klashnikovs and bungalows in big cities.

**T**HIS state of affair has led to resentment against the government. Strikes and processions have become order of the day. On July 23 government offices were locked by the protesting people of Mastuj. The people of Ayon staged a march to the forest under the leadership of an old Muslim League, Qazi Nizam, to take possession of the forest in the name of the people. Reports say that royalty holders had hired klashnikov bearing Afghan refugees to stop the marchers. Fortunately the symbolic march came off peacefully. However, violence could not be stopped on July 25 when the protesters had planned to lock offices of the Forest Department.

The over-zealous police with a view to enforcing section 144, imposed a night before, provoked the protesters of the All Parties Action Committee, to burn the hotel of IJI MNA Shahzada Mohyeddin, who was considered to be advocating the continuation of royalty of a few influential families, including his own.

The protesters consider forests to be national wealth the benefits of which should be shared by all in the form of reforestation and enhanced development outlay. They maintain that being widely grown and rain fed, the forests were never considered as private property of any individual even during the time of the former state.

**I**T was Gen Zia who started the practice of obliging certain influential families. The royalty holders say that they hold bona fide rights to earn income from these forests, which they have either inherited or occupied after court verdicts in their favour. They equate forest royalty with mining royalty and compensation for poppy growing areas. Their opponents content that royalty is not equally distributed among all right holders. The big chunk of the amount is pocketed by a few in-

dividuals, who are in league with Forest officials and government contractors. They believe that the claim of forest ownership of the royalty holders is bogus which cannot stand the test of legality and historical scrutiny. However they are unable to expose the claim of royalty holders in a court of law because of the time and money involved in litigation. Therefore political campaign led by PPP and Jamaat-e-Islami is underway to undo the forest royalty.

It is time the government woke-up to its responsibility towards the sensitive district and took measures to re-assure Chitralis that their valley would not be allowed to become a future wasteland. As a first step it can stop export of construction wood out of Chitral to reduce the speed of deforestation. Substitute sources of fuel like coal and LPG can be introduced to reduce burden on forests for fire-wood.

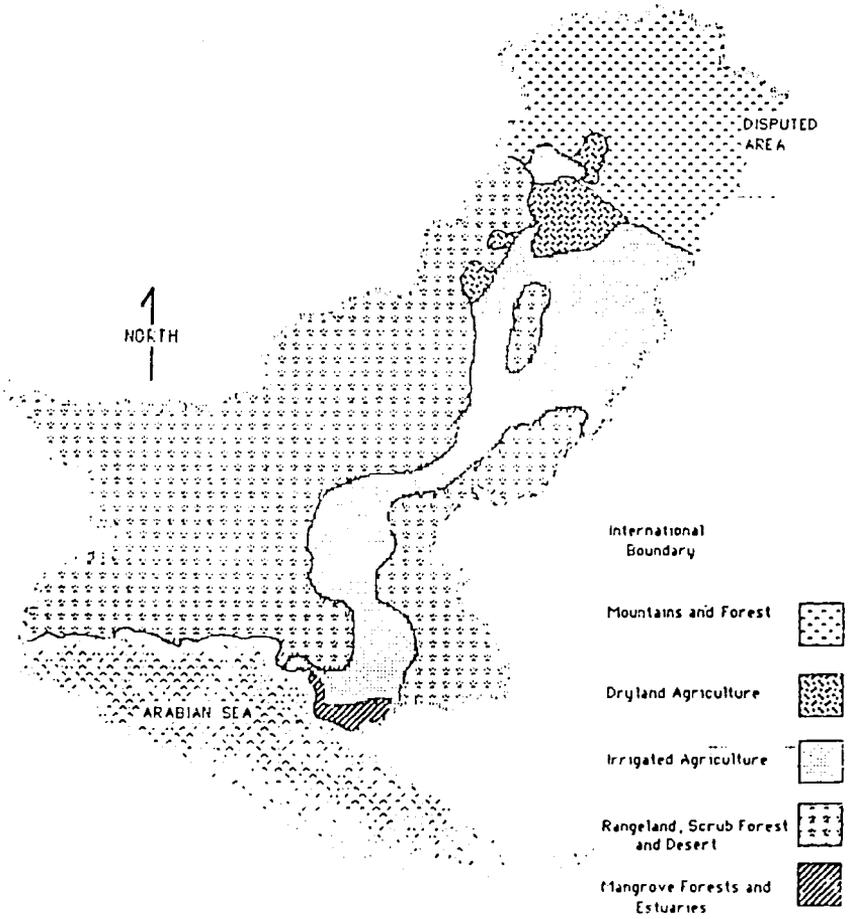
**C**HITRAL Area Development Project being funded by IFAD should be overhauled and brought into cooperation with the provincial government to increase forestation in Chitral.

Last but not the least, forests in Chitral should be declared as collective property of the people, as has been case throughout history.

The nearest village should have prior claim to the forest by way of any routine benefit like firewood or construction material for self use. Royalty, if any, should be spent on the afforestation in the district. All forms of grazing should be banned for grazing, which causes deforestation and government notification declaring barren lands as state property should be strictly enforced. Arms licence fee be increased and wild life watch administration should be made vigilant to protect wild life.

— Chitrali

Fig-4.2



**FIG-4.3 : MAP SHOWING MAJOR LAND USE SYSTEM IN PAKISTAN.**

## CHAPTER NO. 5

# FORESTRY LINKAGES

Forestry has linkages with crop and livestock sub-sectors of agriculture and cross sectorial linkages with energy, trade, housing, and communications, as well as with human environment.

Keeping in view the socio-economic and climatic conditions in Pakistan, the concept of the farm is incomplete without the components of trees and livestock. Such a mixed farm is more profitable than one with just agricultural crops. A common farmer in Pakistan is traditional, conservative, illiterate and poor. His exposure to the market economy is limited due to the exploitative marketing system, poor access to markets and credit, and poor savings and non-utilization of banking facilities. In such a situation, the livestock and trees are the only capital a farmer can use for education of his son in the town, medical treatment of an ailing member of his family, marriage or death of family members.

However, farmers like only milch animals and fruit trees. The former are kept and fed even if it involves raising of fodder or buying it and the fruit trees are nourished even if they need hand watering and adversely affect the agricultural crops with their shade. But the dry animals become a burden, in particular when fodder and grasses are not available. Because woody trees are believed to adversely affect agricultural crops due to their shade, root competition, and as environs for pest, birds, insects and diseases which damage the agricultural crops, currently, research efforts under social forestry projects are concentrating on tree-crop interaction. These studies covers economics, sociology and anthropology factors; design and yield of farm forestry systems; species trials and tree seed propagation; tree-

crop interface, and hydrological aspects of tree-crop establishment. These studies are producing useful results.

## **ENERGY**

Energy, both commercial and conventional is a resource for domestic consumption and is a pre-requisite for economic development. Biomass includes fuelwood, cowdung, wheat straw, bagasse, grasses, etc. and is extensively used for cooking and heating in rural areas because other sources of domestic energy are neither available nor the majority of farmers have the purchasing power for their use.

According to the World Bank estimates, consumption of fuelwood in Pakistan is 24.3 million cubic meter per annum. These estimates are based on per capita consumption of 0.213 m<sup>3</sup> and population of 114 million in 1991. 70 percent of Pakistan's population lives in rural areas and 90% of this population use biomass as the only source of energy. 50% of urban population is also reported to be using biomass as the main source of energy.

Several major industries in Pakistan use biomass either as raw material or as an energy source. Out of 34 paper and pulp mills a survey of 16 showed that they were using 229,900 tonnes of wheat straw, 63800 tonnes of bagasse, 42300 tonnes of grasses, 7600 tonnes of waste cotton and 142700 tonnes of waste paper.

Wood being used by other industries include 131500 tonnes for chipboard, 35061 tonnes for hardboard, 22776 m<sup>3</sup> for veneer and plywood, 163770 tonnes for match industry, 41035 m<sup>3</sup> sports goods industry and 195063 m<sup>3</sup> for mining industry per annum.

The rural industries which consume fuelwood for energy are the tobacco industry (77000 tonnes); and the brick kilns

(99486 m<sup>3</sup>) per annum. Therefore, any change in the energy policy of GOP is bound to affect forestry sector.

During the energy crisis in the 1970's and 1980's, allocation of financial resources to the energy sector was increased. A share of 835 million rupees was provided to the forestry sector during the 7th Five Year Plan period (1988-89 to 1992-93) to organize promote and expand energy plantations on private lands. This was accomplished through the Forestry Planning and Development Project. The National Conservation Strategy (NCS) and Forestry Sector Master Plan for Pakistan have been launched for achieving sustainable development and uplifting rural economics. Forestry has been identified as a key sector and social forestry a key actor.

### **TIMBER TRADE**

The sale of standing trees from State forests to contractors was stopped under the 1980 Forest Policy. The institution of contractors was replaced with the Forest Development Corporation (FDC) in NWFP, Logging and Saw Milling Corporation (AKLASC) in Azad Kashmir and separate exploitation wings in Punjab and Sindh. The objectives are to safeguard against theft and other malpractices in the felling coupes; generate resources and invest them in forest development and expansion; and induce efficiency, speed and economy in forestry operations.

Wood and wood products have been retained on the free list for import due to their shortage within the country. However, excessive import of wood items is controlled through tariff due to paucity of foreign exchange. The customs duties on log, timber and wood products range from 50 - 125 percent ad valorem. Such a high tariff restricts the import to high value timber and products such as teak, chemical pulp and news print.

The export of timber and many forestry related items has been prohibited by including them on the list of essential items in schedule-I of the Export Policy or by making specific provisions relating to them. Value added products such as furniture, veneer, sport goods are however, allowed to be exported since their export encourages the creation of opportunities and earns additional foreign exchange.

## Housing

Housing is an important sector of the economy. It responds readily to increase in per capita income and levels of remittances from abroad, affecting both domestic and commercial housing. This activity has, therefore, direct bearing on the availability and prices of constructional timber.

According to the latest official estimates of the National Housing Authority (NHA), there is a shortage of 3.5 million houses. The yearly incremental demand for housing is projected to be 500,000, whereas only 90,000 houses are constructed annually. In accordance with the 1980 estimates of the existing houses, 63 percent are Kutcha (mud dwellings), only about 10 percent are Pucca (concrete and brick structures) and the remaining are an amalgam of mud and concrete.

The 7th Five Year Plan (1988-93) envisages distribution of 7 marla (1800ft<sup>2</sup>) plots to ease the pressure. Under this programme, it is expected that 3.2 million plots will be provided to the shelterless in rural areas, meeting the entire demand of the rural homeless. The consumption of constructional timber is bound to increase manifold due to: the 7 Marla Project; meeting the existing shortage; and the tendency to convert Kutcha (mud) houses to Pucca (concrete) structures. This pressure on the meagre forest resources will increase and the prices of timber will escalate.

## Communication

Pakistan has limited forests area i.e 5.2%. Further, the forests are not evenly distributed. Four-fifths of the total forest area is located in the Himalayan, Karakoram and Hindu Kush regions i.e. 12 percent of the landmass of the country (16 percent if Azad Kashmir is included). The remaining one-fifth is spread in the three provinces of the Punjab, Sindh and Balochistan, i.e. on 84% of the land surface. The small percentage of forest area and its uneven distribution are two of Pakistan's critical issues in forestry.

This situation has, obviously, given rise to many problems. All our forests, yielding constructional timber, are located in the north and are remote, difficult and remain snow bound in winter. Consequently, extraction of timber is slow, inefficient, wasteful and expensive.

On the other hand, major consumption centers of wood and wood products, population, industry and economic activities are concentrated in big cities like Karachi, Hyderabad, Sukkur, Multan, Lahore, Faisalabad, Sargodha and Sialkot. In the recent past, Rawalpindi and Islamabad have been picking up industrial and construction activities also.

In case of industrial raw-material, the situation is even more perplexing. Poplar trees are grown in Peshawar and Mardan valleys whereas poplar wood is used mostly in Sialkot and other industrial towns of Punjab and Sindh. Fire wood produced in the irrigated plantations of Punjab and Sindh, is used for tobacco curing in NWFP. Babul plantations are raised in D. I. Khan in NWFP and Hyderabad in Sindh, but the wood is utilized for props in the coal mines of Balochistan.

On an average, more than 200 trucks carry wood daily from one part of the country to the other. With increase in residential and commercial activities, and intensification of

forest management, the pressure on the existing communication facilities is likely to increase, creating more congestion on roads and adding to the cost of raw-materials. This situation has given rise to other problems and may accentuate them even further in future. These are:-

- i) direct contact between growers and users is difficult, if not all together impossible;
- ii) contact between growers and users is maintained through a strong group of middlemen who exploit both to the maximum extent; and consequently;
- iii) growers do not get fair prices and the users do not get adequate and sustained supplies.

It is for this reason that the 1991 Forest Policy has placed great emphasis on social/farm forestry to produce industrial, commercial and constructional timber close to the centres of consumption.

## **FACTORS AFFECTING POLICY IMPLEMENTATION**

Effective implementation of forest policy depends on three factors, namely proper organization, adequate finances and strong legislation. The review of earlier policies discussed in Chapter No. 3 has shown that none of these pre-requisites have been adequately provided. A brief description of the facilities, or lack of them, will elucidate this weakness.

### **Organization**

The existing Federal and Provincial administrative structures are the legacy of the colonial past. Since then nothing has changed, not even the nomenclature and titles of the posts from top to bottom. The out-dated pattern of administration, vast territorial jurisdiction, low input-output

type of forest management, emphasis on forest protection rather than on management, antagonism between forest staff and the people living around the forests have persisted all along. The only concern of the forest owners and the Provincial Governments is the planned exploitation of trees and progressively higher income from the forest resources.

It is surprising that forest policies were changed but forest administrative structure to implement them remained the same. Extensive jurisdictions, inadequate staff, inaccessible forests, complete reliance on natural regeneration which is irregular, uneven and inadequate, open grazing, death and decay due to old age, and last but not the least, illicit damage have taken heavy toll of forests which have been depleted in area and growing stock. Provincial forest staff are aware of this phenomena but they seem to be least concerned about it. The forests have shrunk in stocking. On papers they stay unchanged because it is the legal definition which determines the status of forests rather than their physical condition. An area once notified as Reserved Forest or assigned to any other legal category would stay as forest, irrespective of the fact whether it has tree growth on it and whether the trees are dense enough to qualify the area as forest in common sense of the word. The functionaries are happy that forests are increasing in area although the increase is notional rather than real. The custodians of forests are not aware or are least bothered about the disappearance of trees and shrinking of the forest estates. When trees are not there, the hill slope produce abundant harvest of grasses to support greater number of livestock. This phenomena suits the farmers who favour cutting of trees rather than planting them. The forest staff is happy with maintenance of status quo and Laissez-faire attitude. Therefore, all innovative ideas contained in the forest policy at any particular time have gone by neglect and default.

## **Finances**

The implementation of forest policies and execution of development programmes have suffered due to inadequate provision of funds in the Five Year Plans and Annual Development Programmes. The ratio between plan provisions and the funds actually released for development of forestry remained satisfactory during initial stages (1955-78) but thereafter dropped to 2:1 in the 5th (1978-83) and 6th (1983-88) Plan periods. The ratio is likely to drop further during the 7th Plan period (1988-93).

Similarly, the percentage of allocation for forestry projects in the total ADP and even in the ADP for agriculture sector has dropped. In comparison to total plan size, the allocation for forestry sector has declined from 0.8% during the 1st Plan period to 0.5% during the 6th Plan period.

No doubt, the allocations have increased in monetary terms from Rs 39.1 million during the 1st plan to Rs.1927 million during the 7th plan but considering the gradual increase in forest area 2 million ha. in the 1st plan to 4.5 million ha. in the 7th Plan, extension of scientific forest management to the former Princely States of Dir, Swat Chitral and Amb, escalation of costs, inflation, etc. there has been a gradual decline in resource allocation per unit area. With this pattern of funding support, the prescriptions and target envisaged in forest policies from time to time were difficult to achieve.

## **Legislation**

The forest policies enunciated in the past have made definite recommendations to amend the existing forestry legislation or to enact new laws which may be promotional, based on customs and traditions and backed by strong enforcement machinery. A reference to the provisions in forest policies may be relevant at this stage.

In the forest policy of 1962, clear and bold recommendations were made regarding:

- i) increasing tree wealth in the country by requiring each holder to grow a specified number of trees per unit area of his farmland.
- ii) rights permitting indiscriminate grazing, removal of trees and breaking of land for liquidation by progressively undertaking the acquisition of these rights.
- iii) imposition of higher taxation on highly eroded areas which are not reclaimed or afforested within a specified time.
- iv) elimination of goats from hills in a progressive plan covering not more than three years.

None of these mandatory provisions of the most comprehensive policy was implemented and the legislation enacted e.g the Goat Restriction Ordinance of 1962, was not implemented. The reason could either be impracticability of policy provisions due to its social unacceptability or lack of interest and resolve on the part of governments. In either case, it is safe to conclude that what can not be implemented, should not be mandated.

**TABLE NO. 5.2**  
**WOOD CONSUMPTION**

Type	Cubic Meter (Million)	Tonnes
Fuelwood	24.300	-
Construction	1.040	-
Furniture	0.860	-
Chip Board	-	132,000
Hard Board	-	35,000
Veneer and Plywood	0.023	-
Match	-	164,000
Tobacco	-	77,000
Sports	0.041	-
Brick Kilns	0.100	-
Vehicle Body	0.001	-
Mines	0.175	-
Railway	0.020	-
<b>TOTAL</b>	<b>26.560</b>	<b>408,000</b>

FIG-5.1

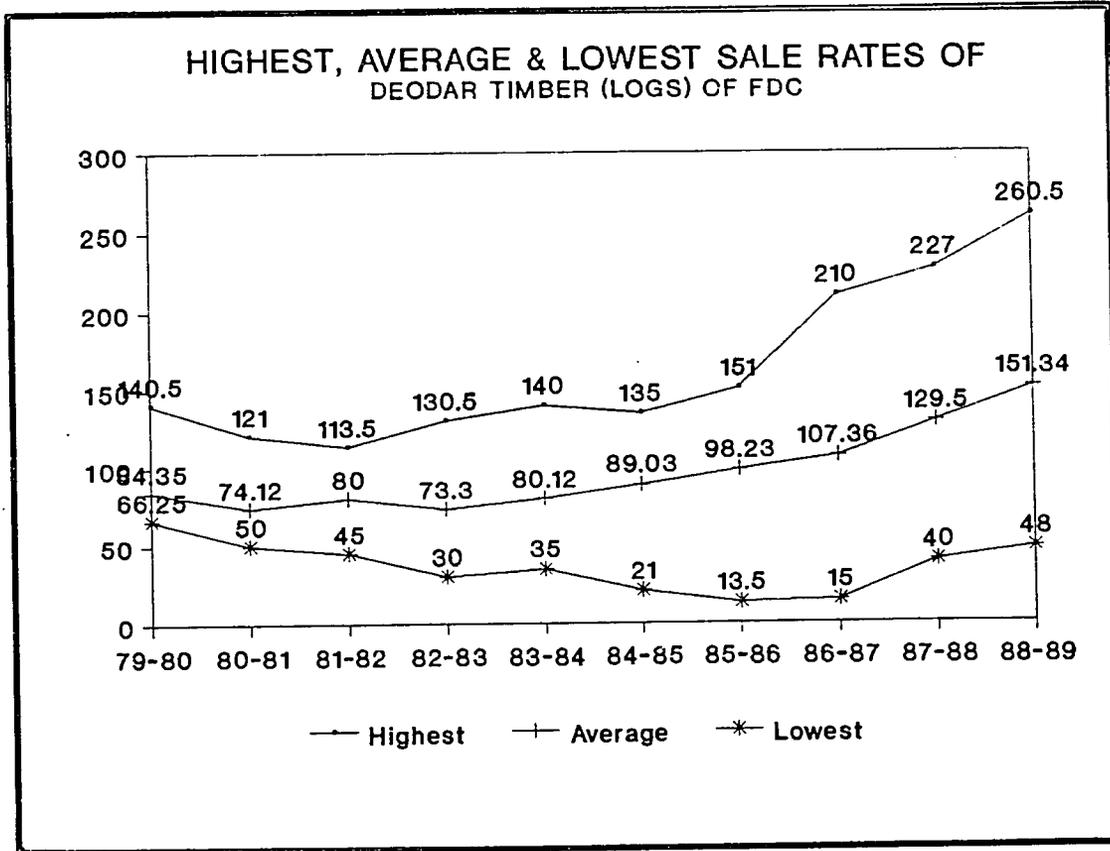


FIG-5.2

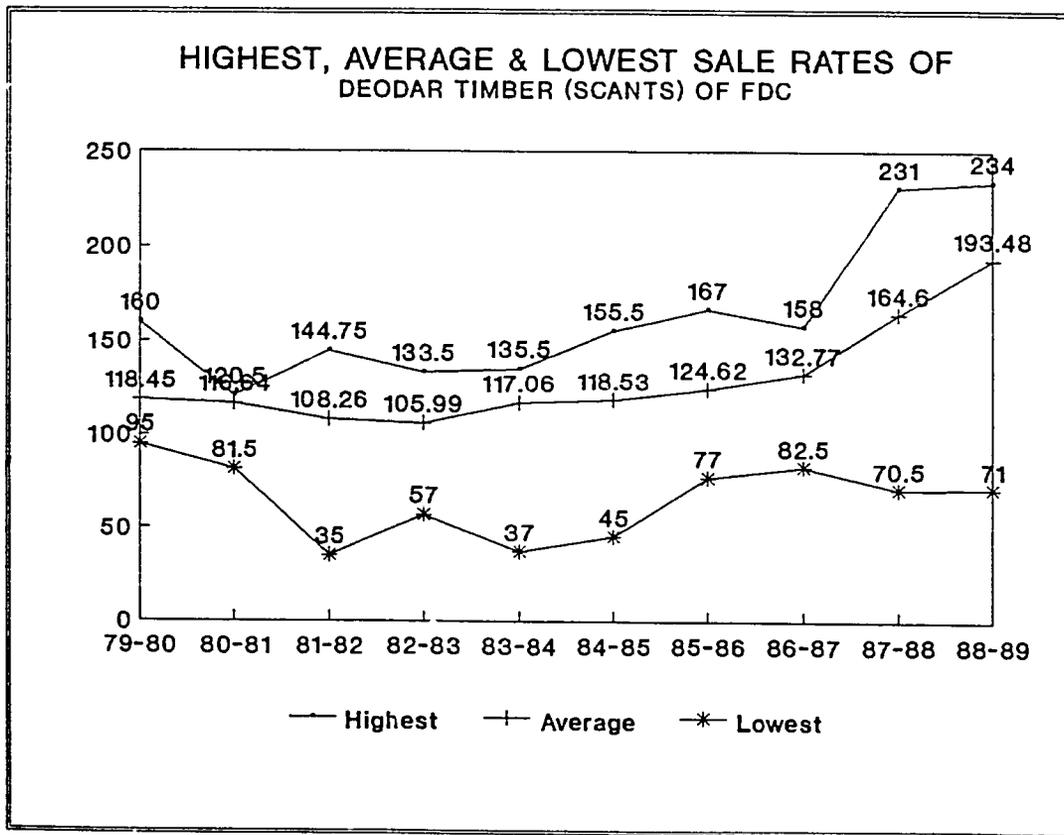
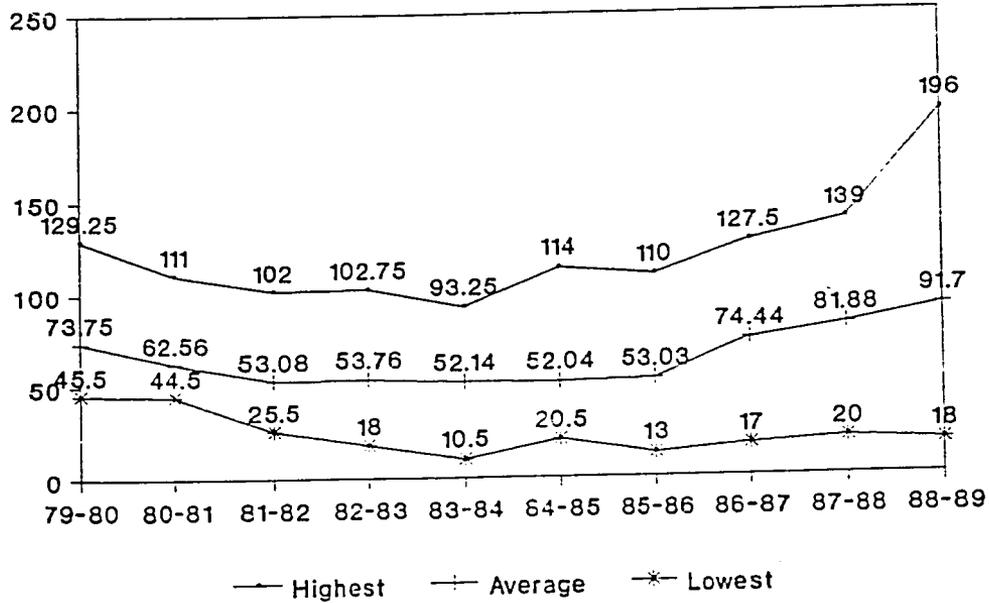


FIG-5.3

### HIGHEST, AVERAGE & LOWEST SALE RATES OF KAIL TIMBER (LOGS) OF FDC



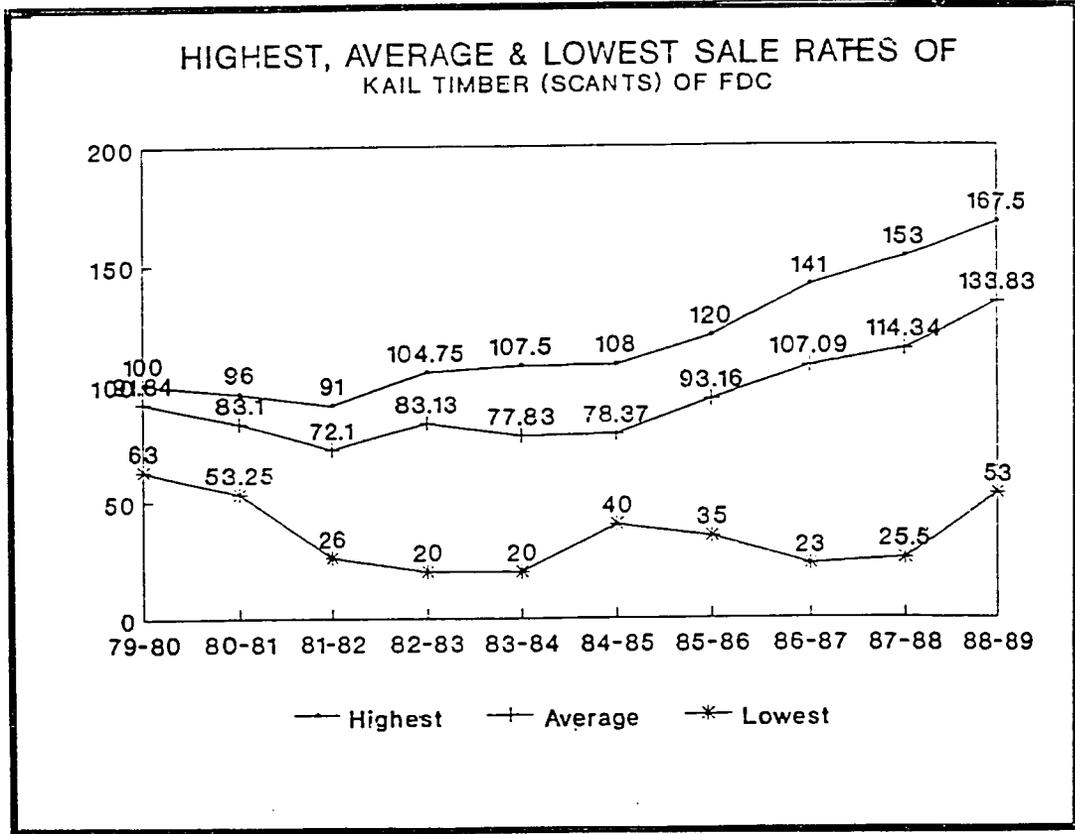
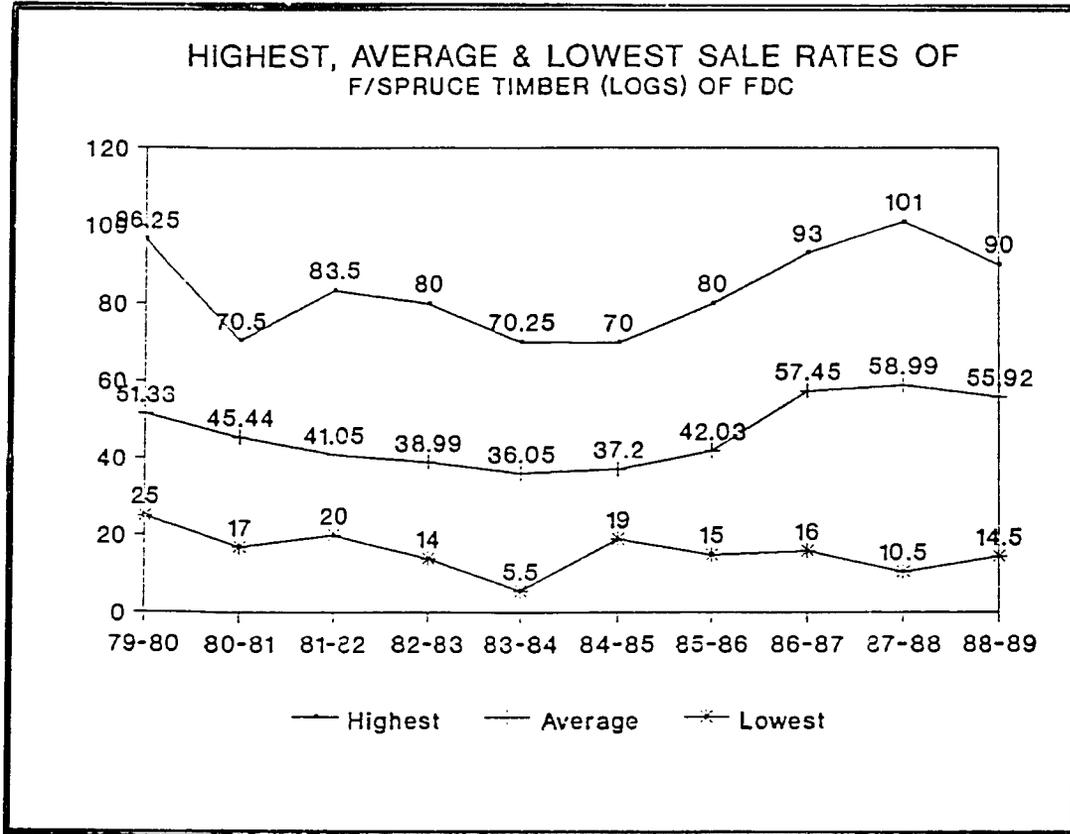


FIG-5.5



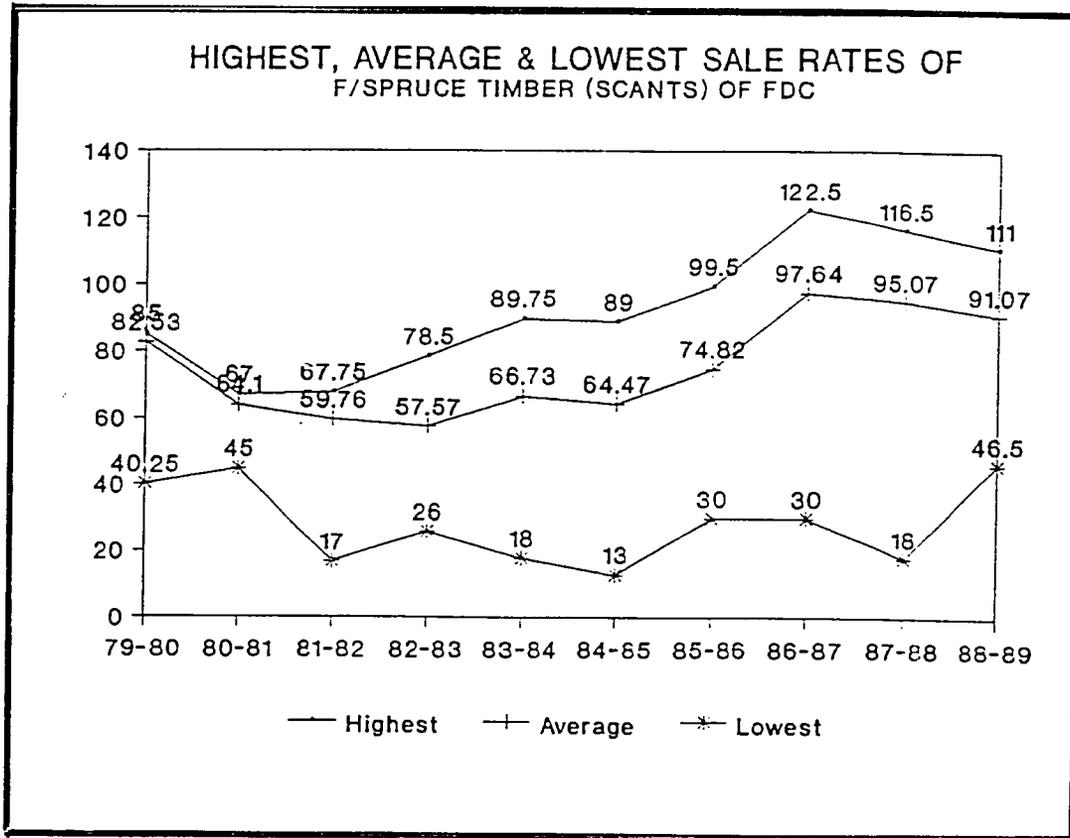
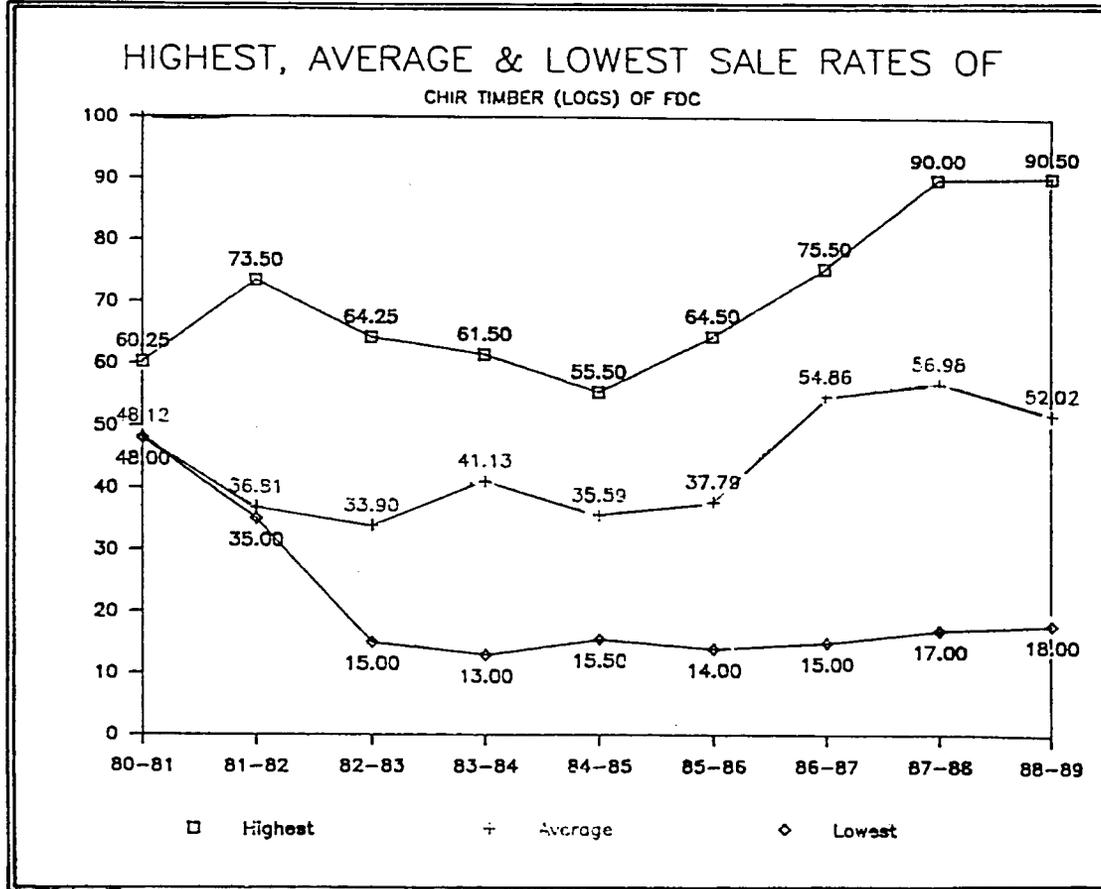


FIG-5.7



### HIGHEST, AVERAGE & LOWEST SALE RATES OF CHIR TIMBER (SCANTS) OF FDC

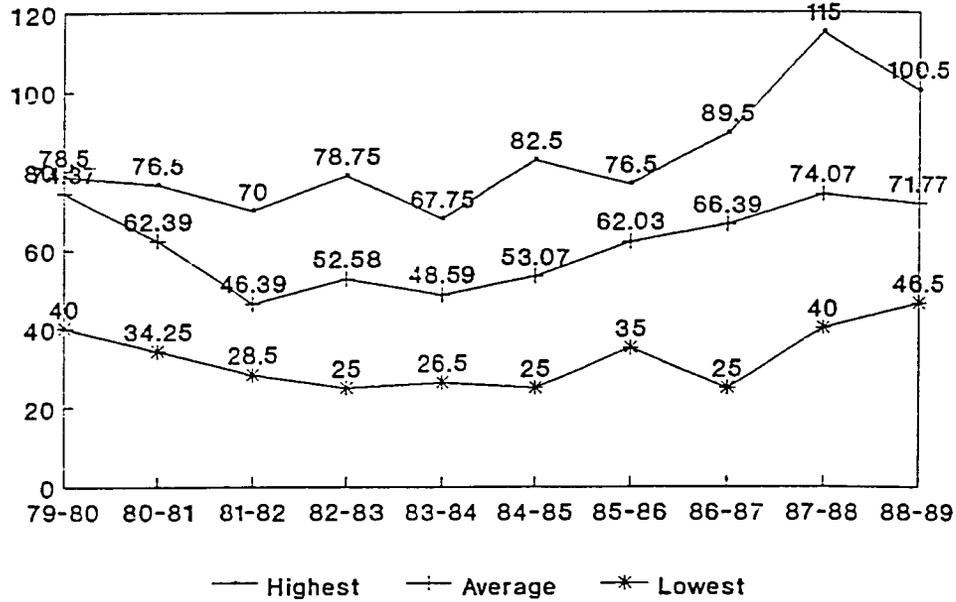
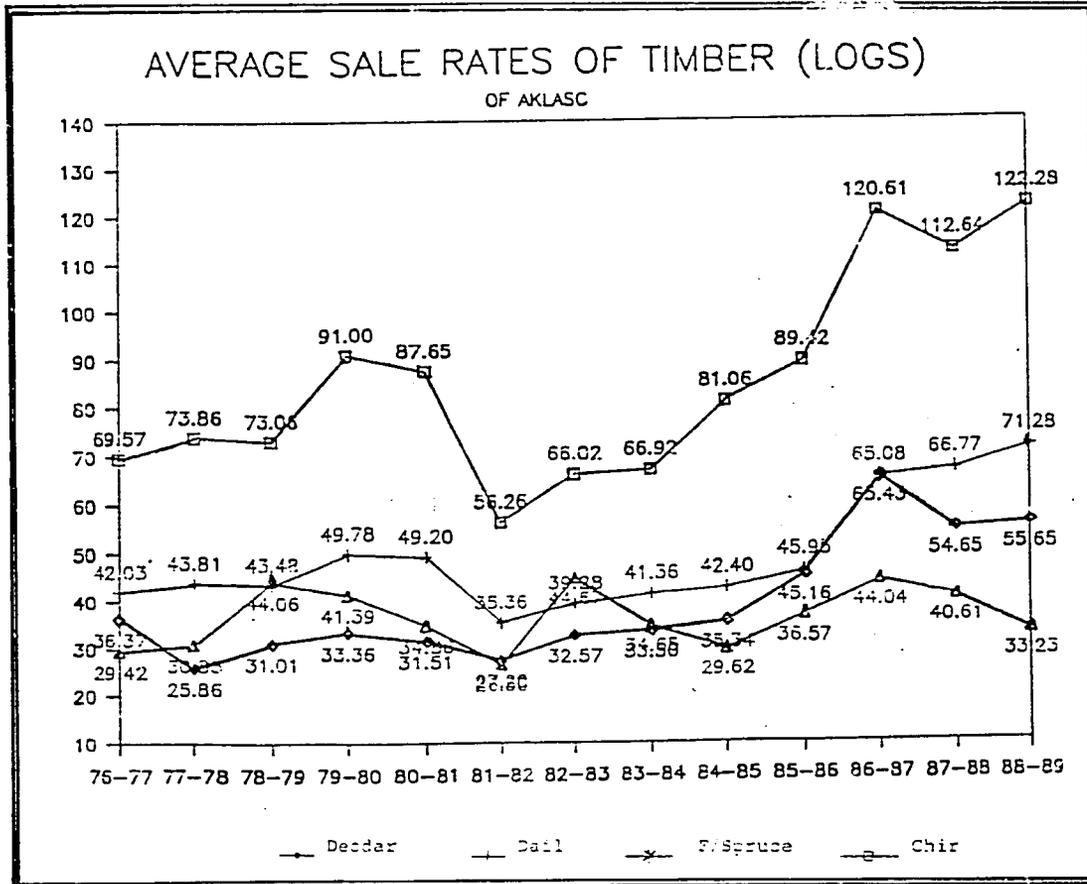
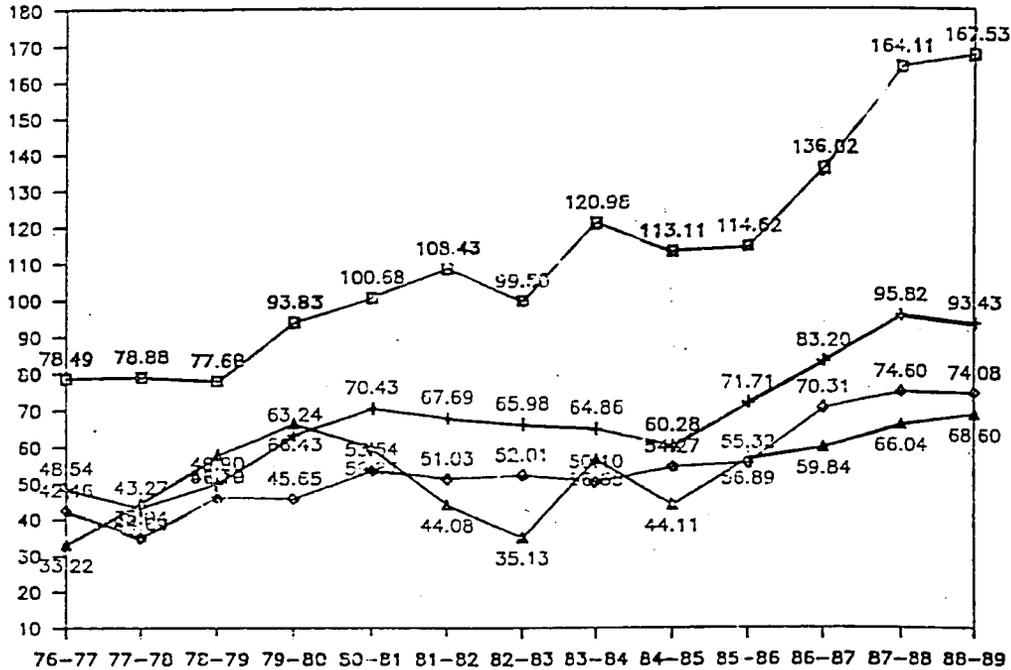


Fig-5.9



# AVERAGE RATES OF TIMBER (SCANTS)

OF AKLASC



Deodar      Kail      F/Spruce      Chir

**TABLE NO. 5.2**

**AVERAGE SALE RATES OF SHISHAM AND  
MULBERRY TIMBER AT CHANGA MANGA  
SALE DEPOT (1984-89)**

(Rupees per m<sup>3</sup>)

Year	<u>Shisham</u>			<u>Mulberry</u>				
	IR	IIR	IIIR	IR	IRR	IIR	IIIR	IIR
1984-85	8087	3885	2401	5897	4450	4979	2119	953
1985-86	10171	4096	2613	5615	3637	3461	1695	1377
1986-87	11754	5057	2596	5629	3661	3383	1872	1413
1987-88	12376	6066	3001	4961	36989	2983	1859	1412
1988-89	14504	8536	3687	5119	3654	3037	1889	1394

Source: Data supplied by Divisional Forest Officer, Changa Manga.

**TABLE NO. 5.3**

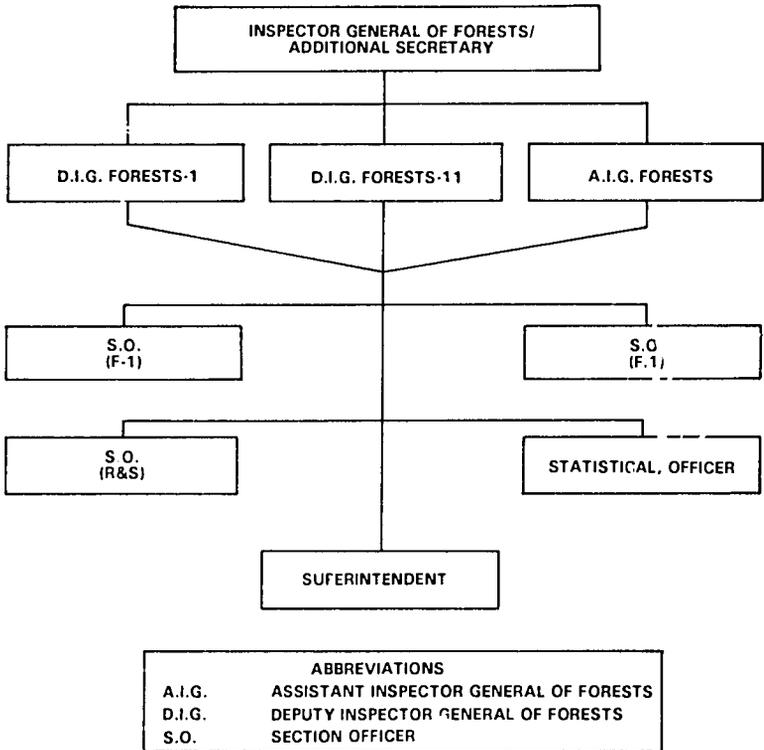
**AVERAGE SALE RATES OF SHISHAM AND  
MULBERRY FIREWOOD AT CHANGA MANGA SALE  
DEPOT (1984-89)**

(Rs. Per M<sup>3</sup> Stacked)

Year	<u>Shisham</u>			<u>Mulberry</u>		
	Selected	Thick	Medium	Selected	Thick	Medium
1984-85	362.67	247.20	141.26	217.18	176.57	125.36
1985-86	383.52	232.37	158.92	223.01	176.57	125.37
1986-87	385.64	285.86	143.02	239.08	187.52	134.55
1987-88	500.70	281.77	141.95	212.57	165.95	124.99
1988-89	593.21	445.21	184.67	243.64	195.62	156.42

Fig-5.11

**ORGANIZATIONAL CHART OF OFFICE OF THE  
INSPECTOR GENERAL OF FORESTS**



# ORGANIZATIONAL CHART OF THE PUNJAB FOREST DEPARTMENT

Fig 5.12

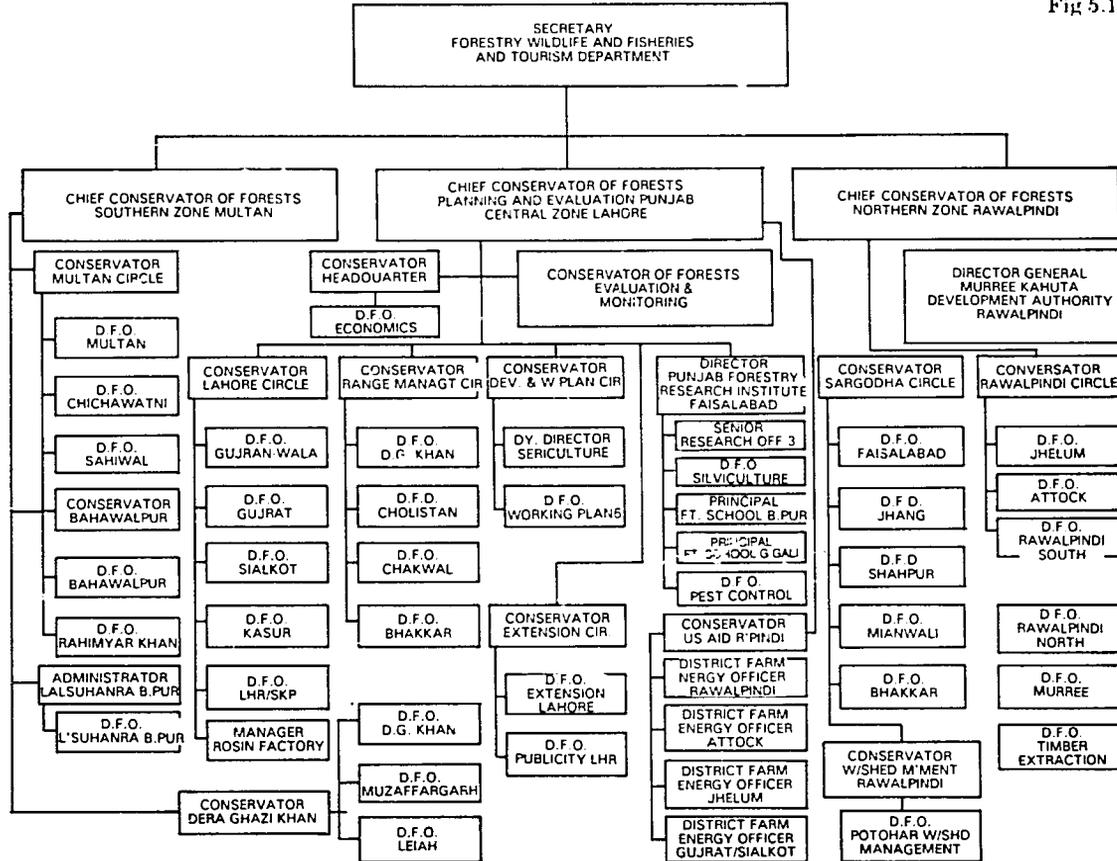


Fig-5.13

**ORGANIZATIONAL CHART OF FOREST MGT DEPARTMENT, SIND**

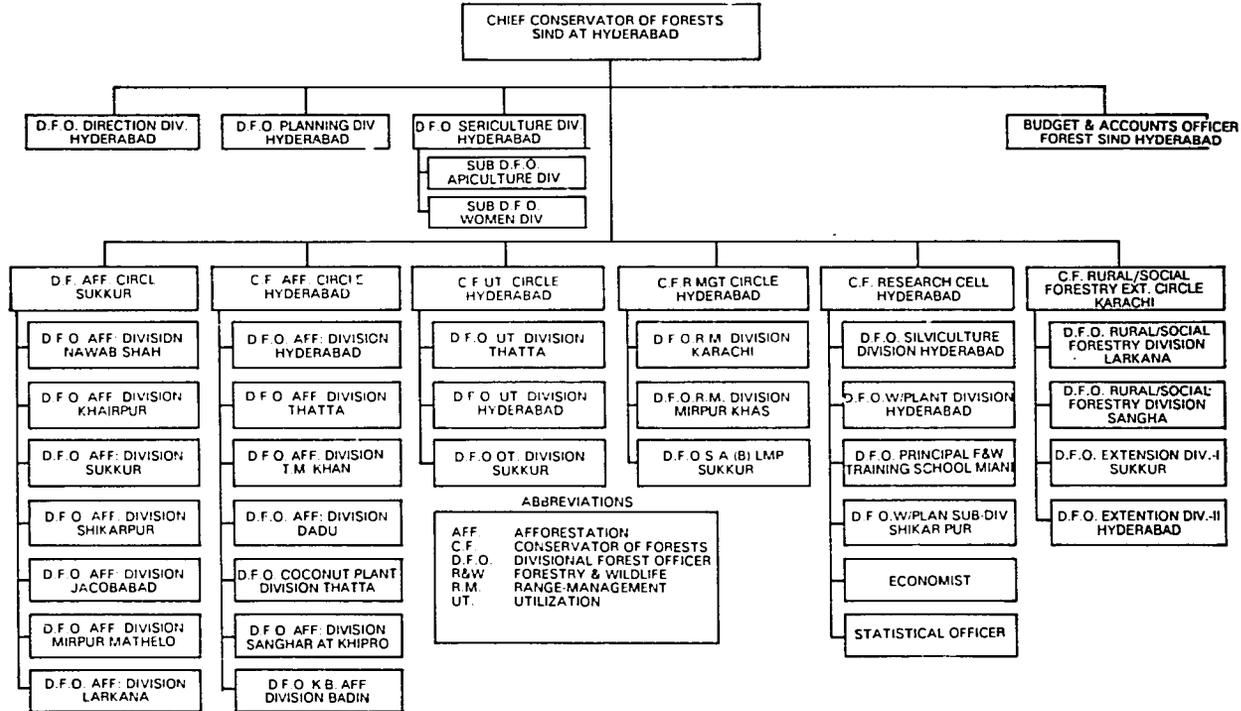
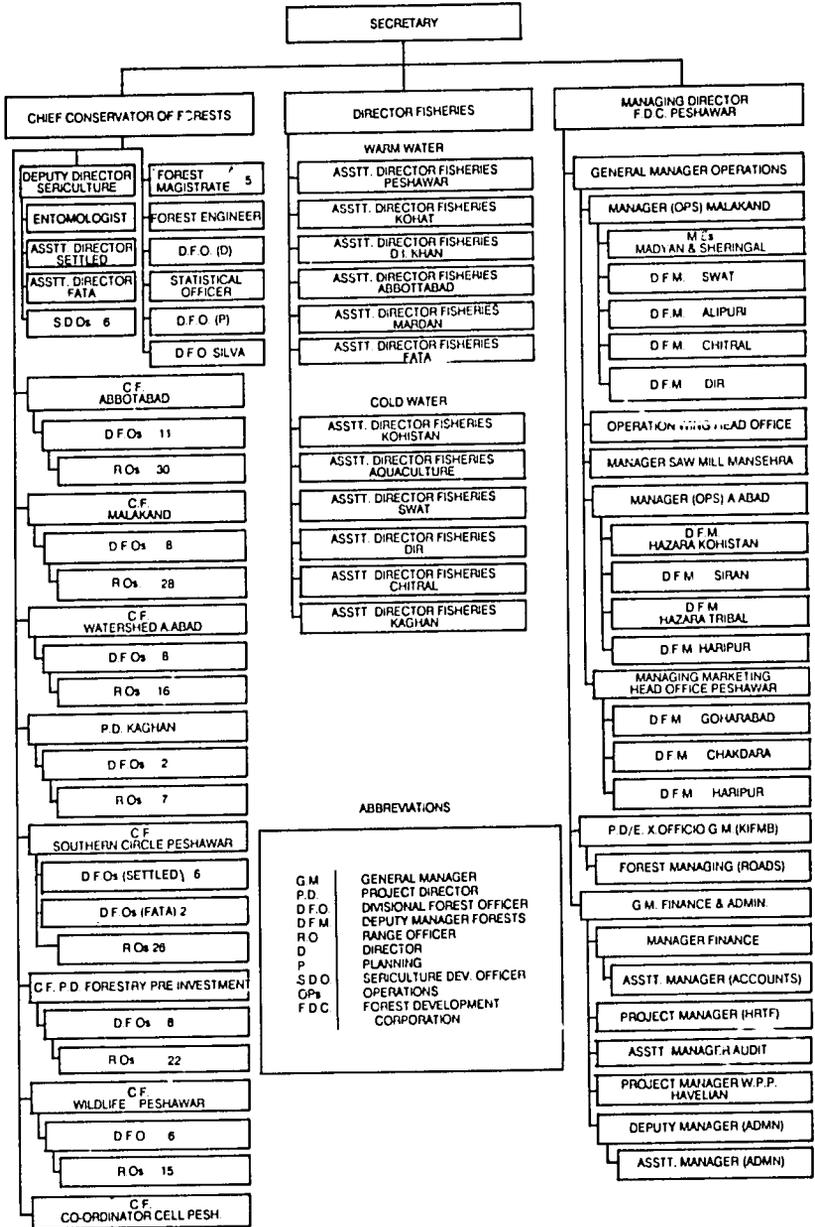


Fig-5.14

## ORGANIZATIONAL CHART OF FORESTS, FISHERIES AND WILDLIFE DEPARTMENT OF N.W.F.P.



**ABBREVIATIONS**

G M	GENERAL MANAGER
P.D.	PROJECT DIRECTOR
D.F.O.	DIVISIONAL FOREST OFFICER
D.F.M.	DEPUTY MANAGER FORESTS
R.O.	RANGE OFFICER
D	DIRECTOR
P	PLANNING
S.D.O.	SERICULTURE DEV. OFFICER
CP	OPERATIONS
F.D.C.	FOREST DEVELOPMENT CORPORATION

Fig-5.15

**ORGANIZATIONAL CHART OF BALUCHISTAN FOREST DEPARTMENT**

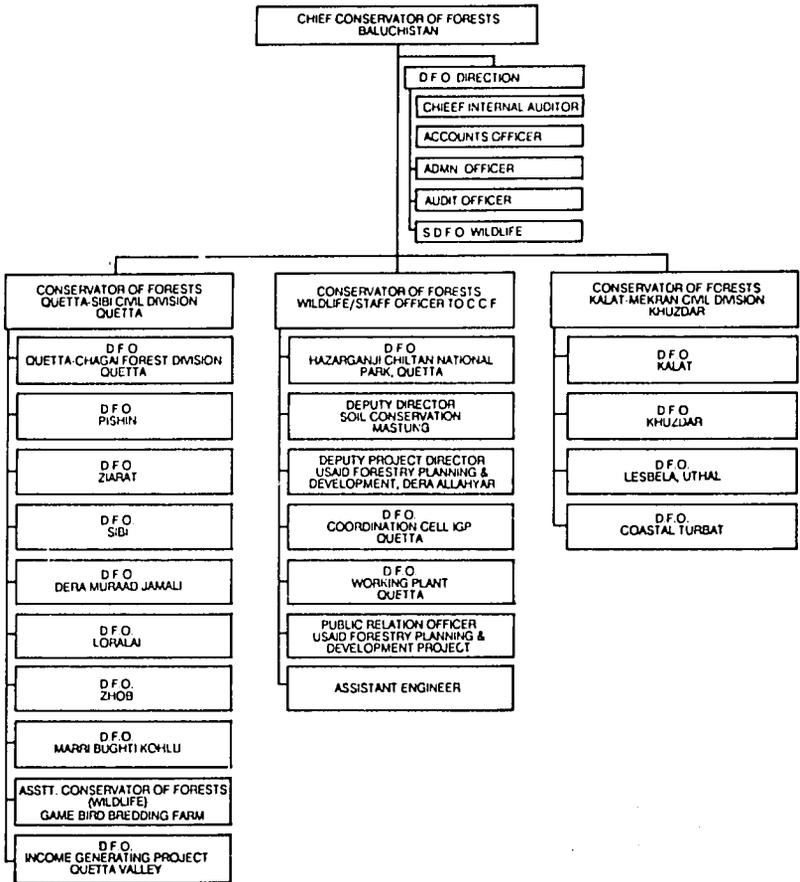


Fig-5.16

**ORGANIZATIONAL CHART OF FOREST DEPARTMENT, AZAD KASHMIR**

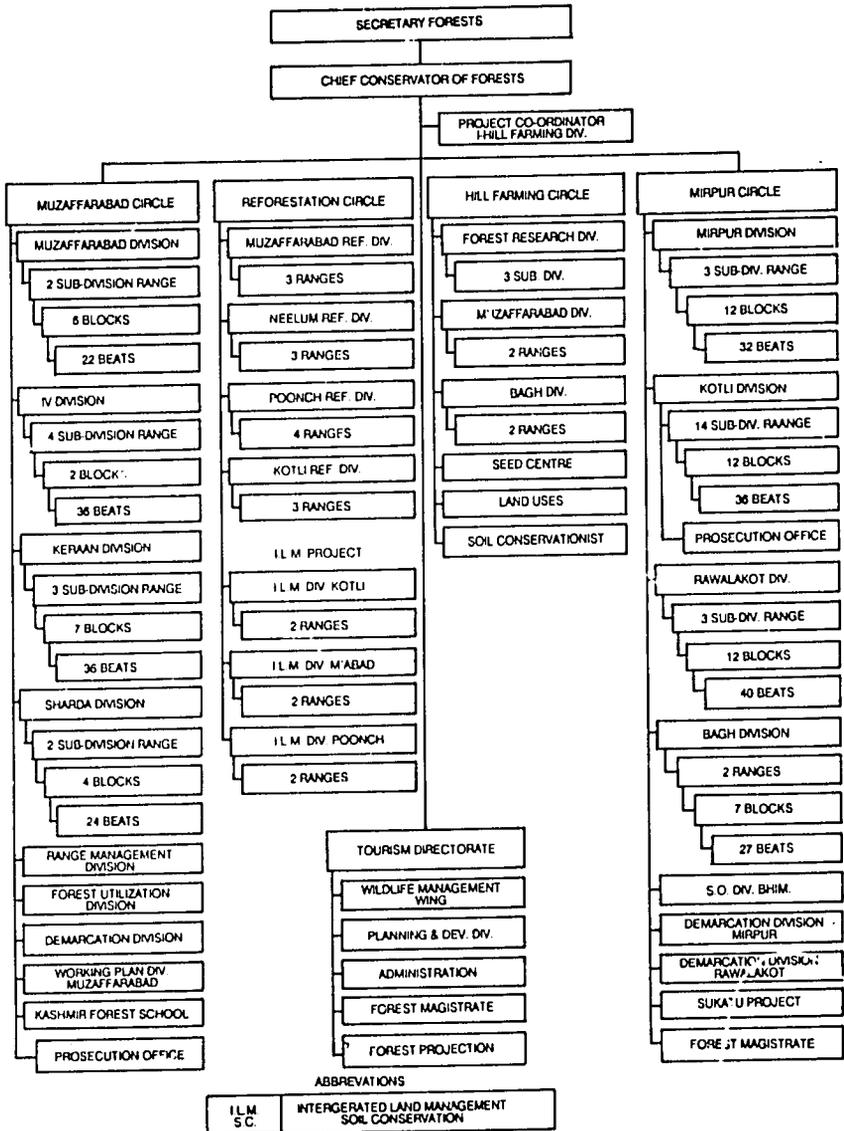


Fig-5.17

**ORGANIZATIONAL CHART OF FOREST DEPARTMENT, NORTHERN AREAS**

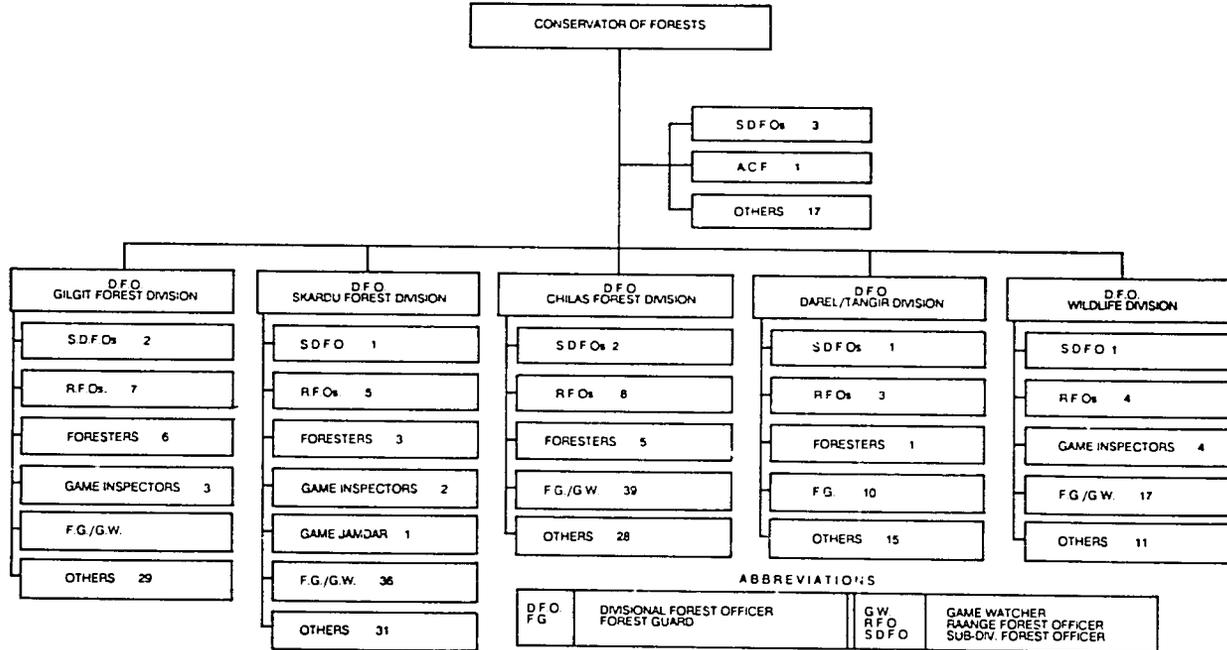


Fig-5 1-

ORGANIZATIONAL CHART OF PAKISTAN FOREST INSTITUTE PESHAWAR

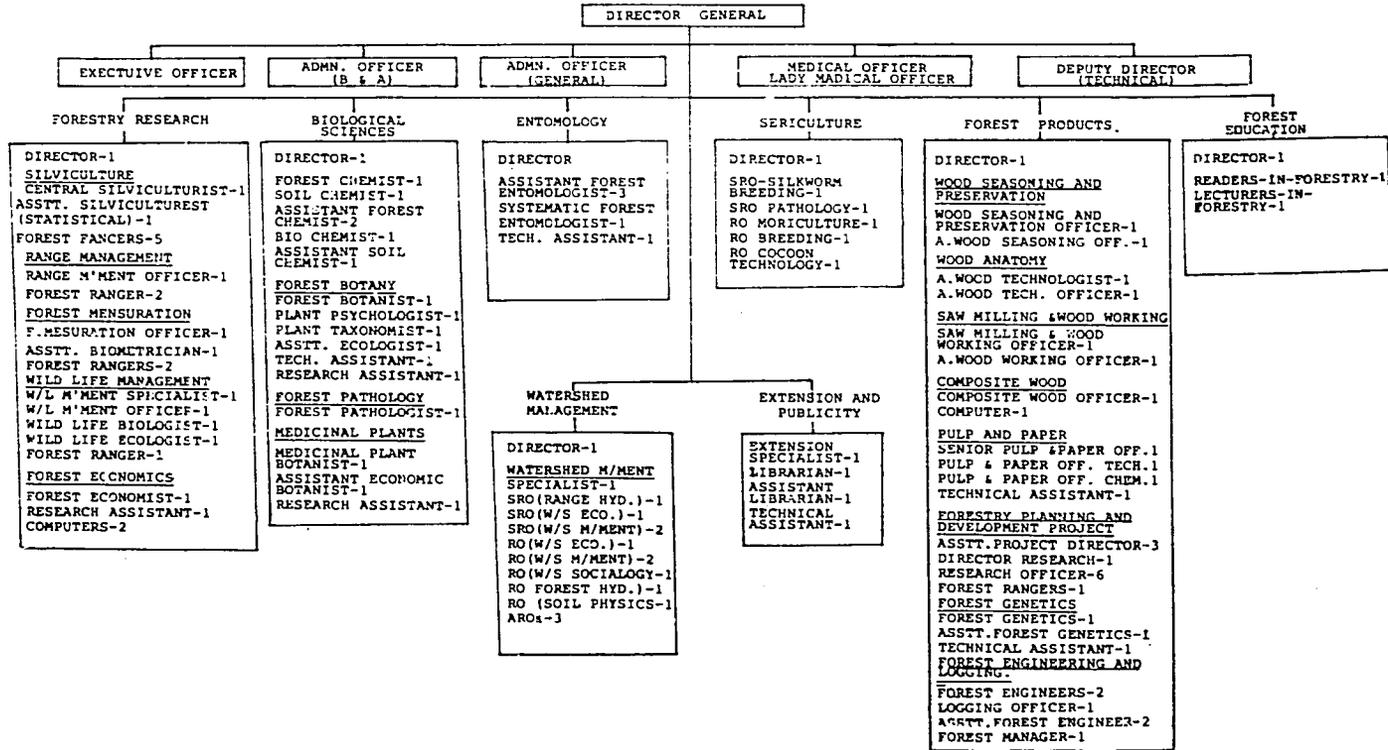
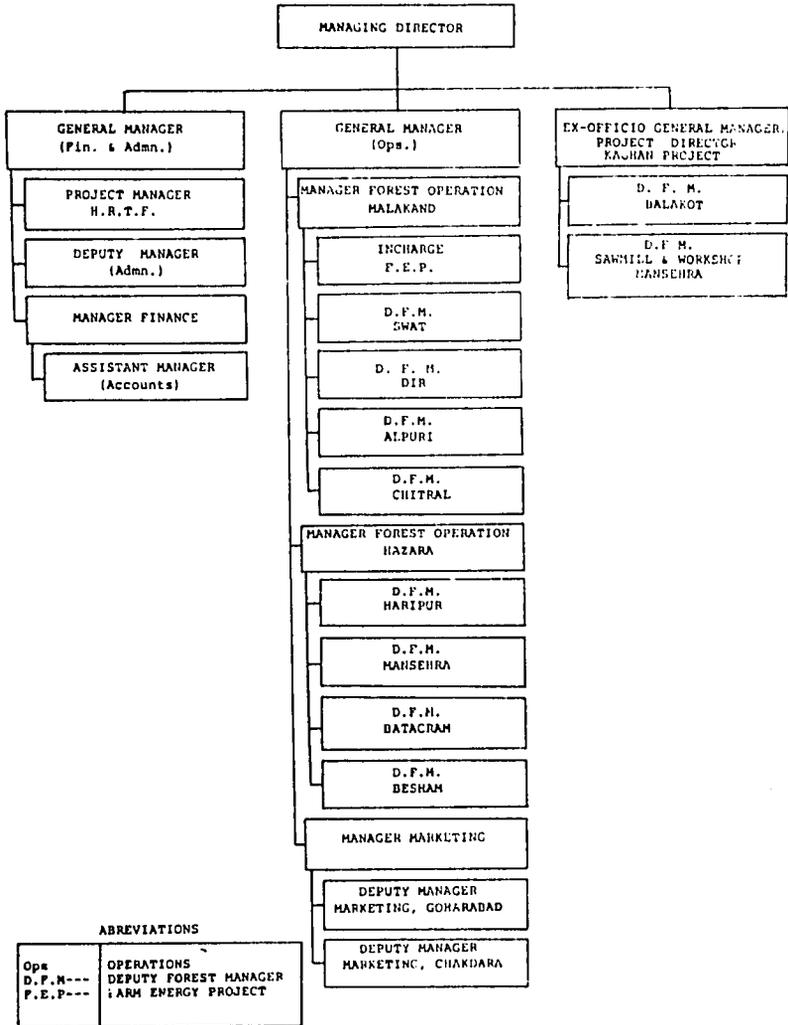


Fig-5.19

**ORGANISATIONAL CHART OF N.W.F.P.  
FOREST DEVELOPMENT CORPORATION (FDC)**



## CHAPTER NO. 6

# **POLICY REFORMS AND OPTIONS**

### SUMMARY

Policy is a tool, a device or a blue print which is enunciated in rhetoric but realised in action. More specifically, a policy is a pre-determined course for actions and direction. In this definition, the word 'ACTION' is central to the theme of the policy and every thing else is peripheral. It is the action which determines the success, not the rhetoric which may impress a few for a short time.

Policy is what is implemented on the ground. It is not what is preserved and decorated on the shelf. This is the hard lesson learnt and practical experience gained in policy implementation. 'The taste of pudding lies in eating it, and the test of policy lies in its implementation. There is no use in formulating a policy if it cannot be implemented. Furthermore, it would amount to a waste of time, energy and resources which a country like Pakistan can ill afford.

In the past, policies were not implemented because of:

- i) incomplete understanding of the social needs;
- ii) lack of political commitment;
- iii) provision of inadequate resources; and
- iv) absence of a monitoring and evaluation mechanism.

To avoid the same pitfalls and to prevent the same fate, it would be useful to understand the role of forests and their meaning to individuals, communities and the society as a whole.

Trees have different meanings for different levels of human organizations and these meanings change with time

and space. To quote a few examples, the main concern of an individual is to get adequate food, fuel and fodder to meet his immediate requirements even if it involves cutting of trees, clearing of forests or breaking of land on steep slope for agriculture.

On the other hand, a forest community values forests more as a source of income, jobs and raw materials for industry, thus providing the basis for social and economic development.

For a nation, forests have a significance which is much greater than their traditional role as a source of raw material. For her, the quality and quantity of water and its regular flow from the catchment areas is vital for agricultural production and hydro-power generation, together with a clean and healthy environment, for which forests are necessary.

Thus, one can see and appreciate the divergence in needs, the relative importance of the resource, and the focus of attention at different levels of human strata. Unless we recognize these differences and take steps to reconcile them, we will go on destroying forests, either due to lack of understanding and awareness or due to non availability of any other choice or option.

## **POLICY REFORMS - BACKGROUND CONSIDERATION**

Any policy reform in the domain of agriculture in general and forestry in particular will have to take into consideration perceptions, hopes and aspirations of different segments of a society as well as the physical and environmental characteristics of the regions in which the forests are growing. These special features, in the case of Pakistan, are:-

- i) The forest resource of Pakistan is confined to a region constituted by three big mountain ranges namely; Himalayas, Karakoram and Hindu-Kush.

K-2 (Karakoram - 2), the second highest peak after Mount Everest, is located in this region. Amongst others are Nanga-Parbat in the Himalayas and Tirich Mir in Hindu-Kush.

- ii) The highest rainfall and maximum snowfall in Pakistan occur in this region. The rainfall varies between 1000 -1400 mm per annum and more than 80% of it is received in two months during the monsoon season. Instances are not rare when 100 mm of rain is received in one hour or even in a single shower of less than one hour duration.
- iii) Because of favourable climate and suitable physiographic conditions, more than 80% of total forest resources of Pakistan are located in this region. These forests are dense, valuable and extremely productive.
- iv) Ten million people live in these mountains and are directly dependent on them whereas the remaining 100 million people are indirectly affected by what is happening in this region.

These special conditions are extremely meaningful; firstly, in drawing conclusions; and secondly, in linking the conclusions with the intensity of forest management.

Pakistan is a sub-tropical country with dry climate and, therefore, agriculture is difficult and uneconomical without canal irrigation. The northern mountainous region is the major source of water for irrigation and hydropower. The survival and prosperity of Pakistan depends on matching the water potential of the north with the soil fertility of the Indus basin in the south in order to produce foodgrains for the ever-increasing population and cash crops for their economic uplift.

Good quality and maximum quantity of water yield depend, to a large extent, on proper protection of unstable hill slopes against erosion with dense tree cover. The population on mountains is increasing at a rate much higher than the national average. In order to meet their food requirements, the local people cut trees and cultivate steep slopes. Forest protection is, therefore, a difficult task. Because of the remote location of forests in the northern region, strict enforcement of laws is not possible.

Every country has special features, history, socio-economic conditions, and traditions. Its population has qualitative and quantitative demands on, and rights and concessions to enjoy, its natural resources. Forest management and development is based on these considerations and their mention in the context of policy formulation. The hill forests provide an excellent resource base for economic development, hence their sustained utilization needs to be ensured for their long term use by the people and state, and for the survival of the resource itself. Therefore, reference to hill forests gets prominence in the following discussion.

### Social and Economic Considerations

Mountain forests in Pakistan are either privately owned or the local people have 60 to 80% share in sale proceeds. The owners are, therefore, keen to derive maximum financial benefit from their forests in their life time. They are not concerned with and least bothered by watershed benefits which go to other segments of the society. The owners satisfy their immediate needs first.

### Management Consideration

Forests are a living entity. Mature trees are utilised and replaced by new ones. Delay in harvesting results in the degeneration of mature and overmature trees due to death and

decay. This degeneration causes considerable financial and timber loss. Consequently, forest owners and royalty shareholders are frustrated by the reduced income.

### Demographic Pressure

Ineffective forest management and enormous increase in human and livestock populations are causing enormous damage. The forest resource is gradually being depleted due to illicit damage and inadequate natural regeneration. The growing stock of some hill forests showed 50% reduction in volume and 40% reduction in number of trees between 1958 and 1985. This estimate is based on the data taken from successive forest working plans. The Governments are reluctant to intensify forest management for fear it would likely cause denudation and depletion which, even otherwise, is taking place but is not being realised by the policy makers. It might be realised when it is too late.

### Conflicting Interests

Forests in the Himalayas - Hindu Kush region receive little attention because of vested private interests working against the national interest. The conflict is not visible and is even more difficult to resolve because the benefits of conservation measures tend to accrue in the long run, are difficult to quantify, and the benefits, to a large extent, go to other segments of society which do not make sacrifice.

### NEED FOR POLICY CHANGE

The present system of forest management has remained primitive in most countries in this region because the mountain forests are inaccessible and knowledge about the resource is limited. This situation can be changed by bringing fundamental changes in policy leading to intensive management. The change is necessary to achieve high input-output forest management as

it would result in greater contribution of forests to economic prosperity, sustainable development, healthy environments for man (major concern for the 21st century), and enormous job opportunities. This will help reduce rural - urban migration.

### FARM LAND POTENTIAL

Pakistan has the oldest and largest artificial irrigation system in the world based on a network of six rivers, namely Bias, Sutlaj, Ravi, Chenab, Jhelum and Indus, with more than a dozen medium to large size tributaries. The water flowing down from the Himalayas in the north to the Indian Ocean in the south has been abstracted at several places by constructing 3 multipurpose dams (Warsak on Kabul river, Tarbela on Indus river and Mangla on Jhelum river); 5 barrages, namely Jinnah and Taunsa in Punjab and Guddu, Sukkar and Kotri in Sindh; and 11 head works. In between is a vast network of canal systems which irrigates 16 million ha. of land constituting the grainry of Pakistan and producing cash crops which earn most of the foreign exchange through the export of cotton and Basmati rice which are in great demand the world over. The irrigated land and water can produce an un-imaginable number of trees on boundaries of holdings along water channels, and in court-yards, home gardens and other vacant places.

The greatest potential for tree cultivation in Pakistan does not lie on the 4.5 million ha. of state forests but on the 19.5 million ha. of 4 million individual farms averaging 4.7 ha. in size. This potential is illustrated by the calculation that 150 million additional trees can be planted just in one line of trees 6 meters apart, on one edge of these farms. If these trees are grown on a 5 years rotation, they can produce 60 million cft of industrial wood (one tree producing 2 cft). As a result, the present supplies from public and private forests in Pakistan can be doubled.

The aim of the new policy should be to develop this potential while minimizing negative impacts on agricultural crops. There are enormous prospects for harnessing this potential keeping in view the extent of cultivated areas and the size of farms mentioned above.

## **PROBLEM AREAS**

Canal systems have been laid out against the natural slopes and without lining, giving rise to problems of water logging and salinity. Wind and water erosion is yet another problem. Floods are causing considerable damage to agriculture and other infrastructure. According to estimates worked out for the National Conservation Strategy (NCS), 24.6 million ha. (30 - 40% of the areas surveyed) are suffering from menaces i.e. water erosion (11.2 million ha.), wind erosion (4.7 million ha.) salinity & sodacity (5.3 million ha.) water logging (1.11 million ha.) and flooding (2.3 million ha.)

The cheapest and the most effective treatment available for the problematic areas is tree planting. It can reclaim the land and restore it to agricultural use in addition to providing income to farmers from the sale of timber and other raw materials to wood based industry. Even in water logged areas with moderate infestation, each tree can act like a small tubewell pumping out excess water. This operation can boost wood production to a large extent and satisfy local needs in addition to serving other purposes.

## **SOCIAL BENEFITS**

In the plains of Punjab and Sindh the temperature goes beyond 45°C and stays in that range for more than 60 days during June and July i.e. before the on-set of monsoon rains. It is a very hot season and the shade provided by trees rescues farmers and their livestock, in particular in villages without electricity from this heat. Under such conditions raising of trees

is a social necessity. Trees with large and dense crowns are valued more for shade than other uses.

## NEEDS & POLICY

The need for policy reform has been identified in the preceding paragraphs. Thus, any change in emphasis in policy must take into consideration the following needs:

- i) Pakistan has 5% area under forests whereas it must be at least 20-25 percent to meet material needs, social benefits and environmental consideration.
- ii) Pakistan's population is increasing at a rate of 3.1% per annum. This together with a rising standard of living makes it necessary to increase wood & wood products by at least 6 percent annually to maintain the present level of consumption in the years to come.
- iii) Pakistan has a backlog of 3.5 million houses at present and this backlog is increasing because the need for construction of new houses is much in excess of the planned programme of construction.
- iv) 30% area in the mountains and 20% in irrigated plains are extremely suitable for tree culture. Restoring such areas to their appropriate use would increase their fertility, farm income and wood productivity.
- v) Forests in Pakistan have a skewed and irregular distribution. Bulk of forests are concentrated in the north whereas population and consumption centres are located in the south and central parts of the country.

- vi) Pakistan has a narrow industrial base in which the share of wood based industry is surprising low - hardly 2 percent. This can be raised if raw material is made available by increasing the area under forests.
- vii) Pakistan's prosperity lies in the integrated and well coordinated programme of rural development in which forestry can play a major and important role by providing job opportunities, conserving soil & water, correcting land use, and ensuring food security and a balanced diet.

### Rational Approach

Increasing area under forests from 5% to 20% would require setting aside suitable land for afforestation. The best lands for tree culture lie in hills where rainfall is substantial and slopes without trees are exposed to erosion hazard. This situation calls for classification of land into three zones, each with distinct uses.

- ▶ agriculture upto 30% slope
- ▶ horticulture between 30 - 50% slope
- ▶ forestry and range management more than 50% slope

The three land uses in the specified zones can be enforced through enactment of legislation. The earlier this system is introduced, the better it would be for the reasons specified below:-

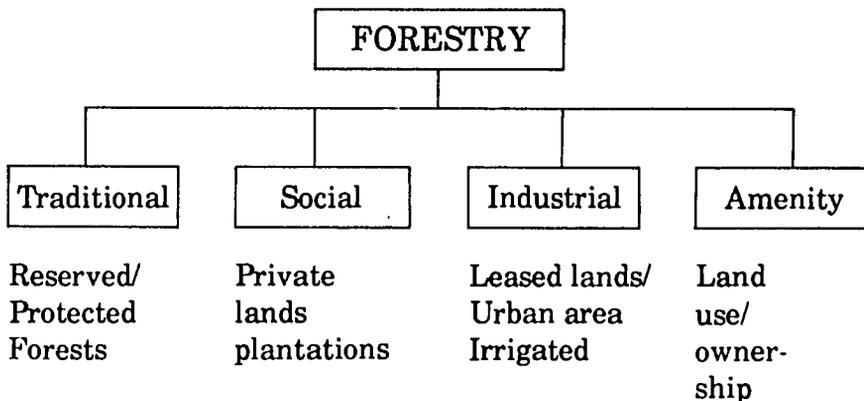
- i) People are living much below the poverty line and any change in the present land use pattern is not likely to affect them adversely if marginal agriculture is replaced by better land use through a "Food for Work approach";

- ii) Unstable slopes with more than 30% gradient are not fit for agriculture. This fact is amply demonstrated by wide spread erosion and land slides threatening habitations, communications and other important installations. The loss of soil from such areas far exceeds 80 tonnes/ha./ annum which is posing a serious threat to Mangla and Tarbela reservoirs.
- iii) The land retrieved from defective agriculture through enforcement of zoning can best be used for raising nurseries, planting trees, introducing sericulture, encouraging wood based industry and promoting tourism and wildlife. These activities would provide jobs to all those who are presently engaged in the marginal agriculture which is devastating the land and economy. The earlier this is realised and changed, the better it is for the country.

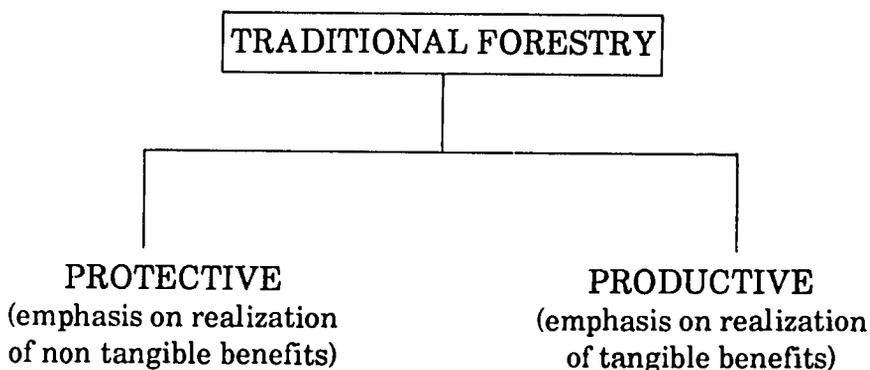
Similarly in the plains, with 20 million ha. of irrigated agriculture land and 24 million ha. of problem areas, there is a need to integrate tree planting with agriculture for better utilization of land and water resources and to address the question of under employment of farmers who, after sowing and before harvesting have surplus labour.

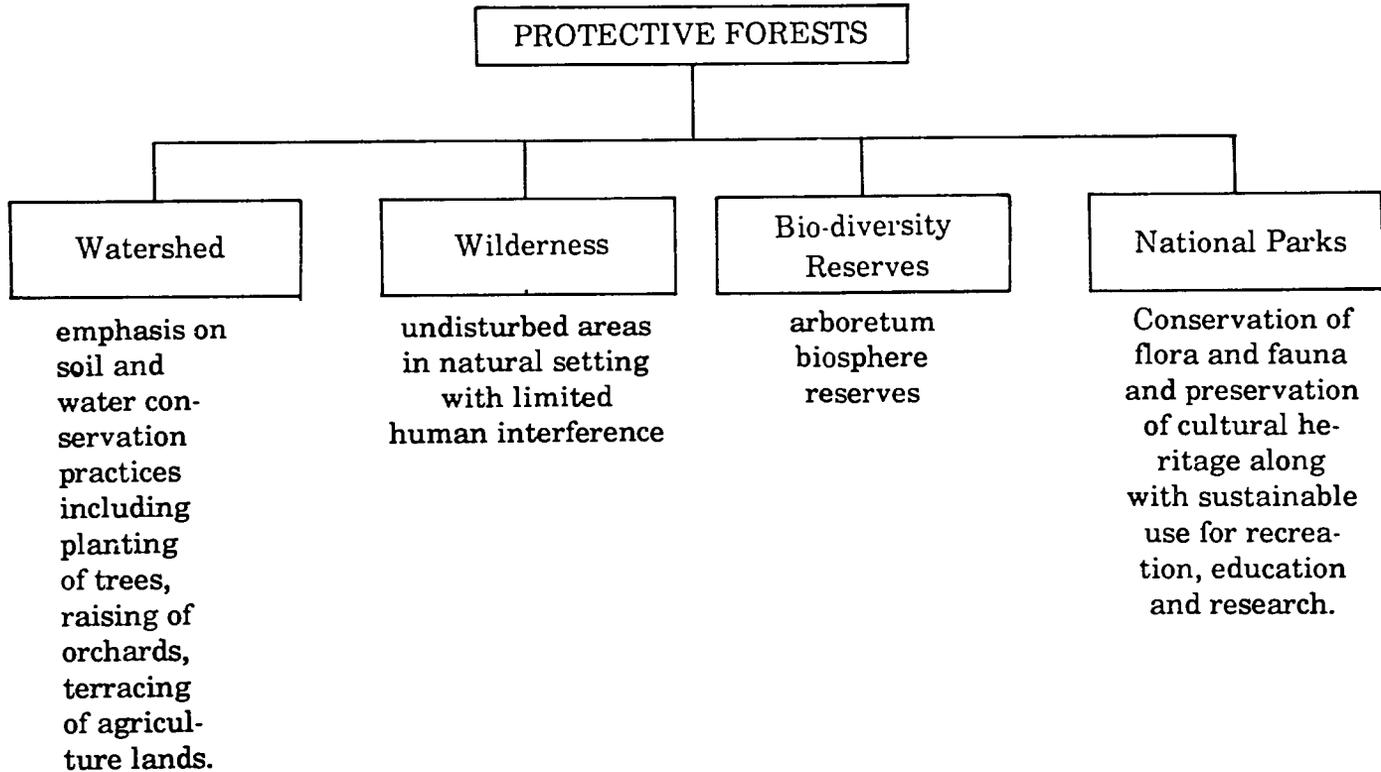
## REORGANISATION

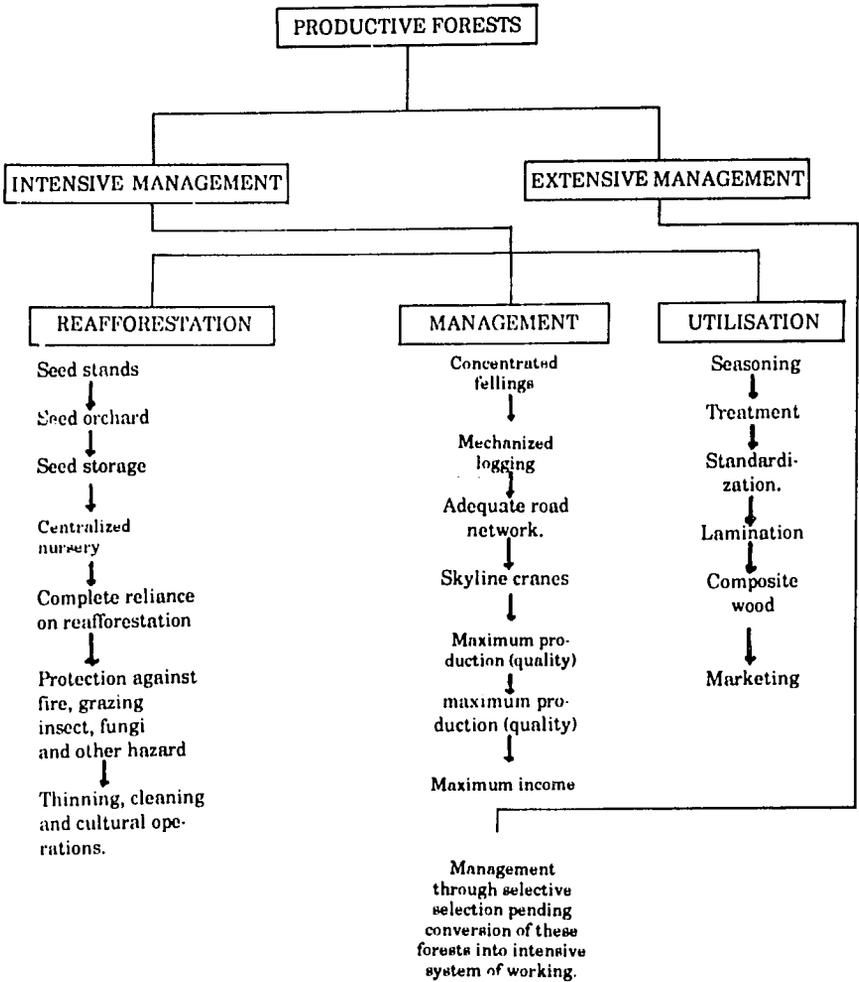
There is a need to enlarge the scope of forestry from statelands to private farmlands as well as the role of foresters from enforcers of punitive laws to facilitators as agents of social change. Under a new system, the following fields of forestry are envisaged:



These fields of forestry should have different cadres which are not inter changeable. Each should be headed by a chief conservator of forests or an officer of equal status and suitable nomenclature. This arrangement will ensure growth in all fields related to forestry. Further details are given below in the charts.

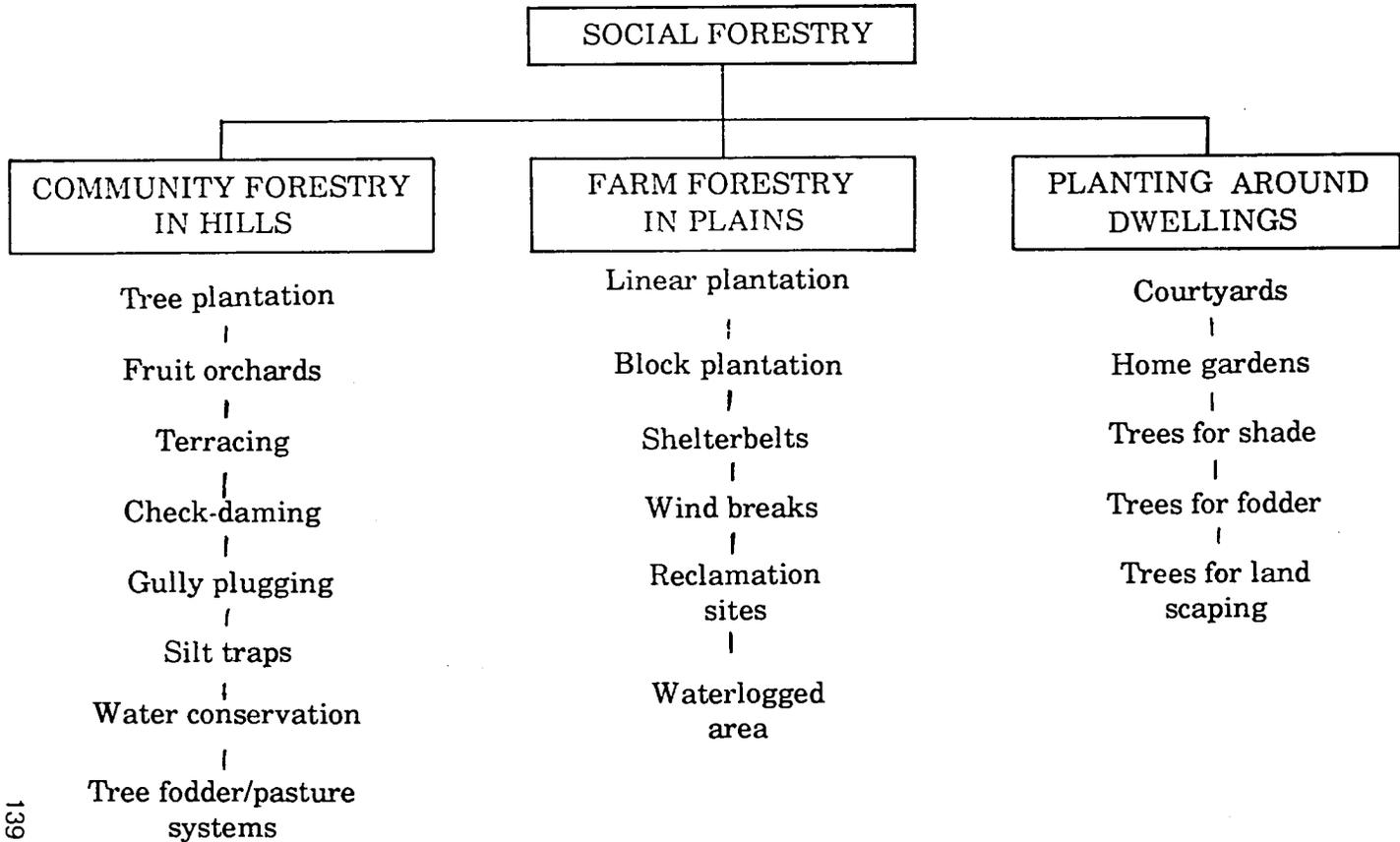






**Intensive forest management would require the following changes:**

- i) revision of working plans and changes in silviculture systems from a single tree selection type of management to concentrated group fellings to render productive forestry operations cost effective.**
- ii) structural reorganization to increase staff, reduce territorial charges, introduce specialization and delineate functions and responsibility clearly. To begin with staff should be increased by 100% in all categories and the size of administrative charges reduced to half their present size.**
- iii) provision of adequate funds for constructing roads, purchasing machinery (for mechanization), raising nurseries to completely rely on reforestation, and adequate measures of protection and care. The intensive forest management pilot projects in Kaghan (Hazara) and Kalam (Malakand) have shown that intensification produces self financing systems with sizeable surpluses (after meeting all costs) to finance other development projects.**
- iv) Establishment of wood based industries to produce standard items for building construction.**



## **COMMUNITY FORESTRY**

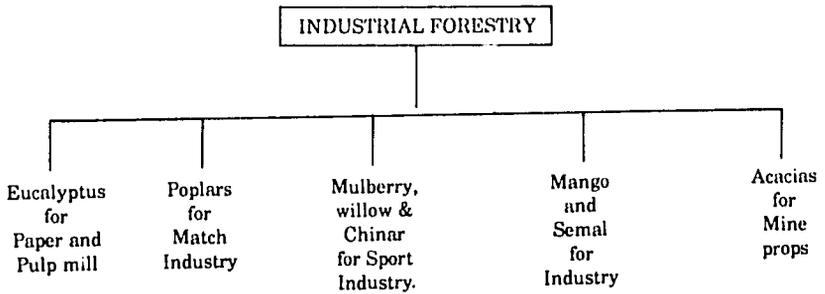
About 16% of the area in northern mountains (Hazara, Malakand, Murree hills, Azad Kashmir and Northern Areas) is ideally suitable for tree culture on the basis of climate, topography and fitness of land use. In this region, 20% of the area is under forests, 10% is under agriculture, 50% is used for grazing and grass cutting, and 20% is not suitable for human use because of high peaks, perpetual snow and large glaciers. Of the 50% area presently used for grazing more than half can be easily and profitably brought under tree culture. This is what is planned for Community Forestry in hills with the commodity assistance of the World Food Programme.

## **FARM FORESTRY**

Out of 62.9 million ha., Pakistan has 24.6 million ha. that suffer from problems of one type or the other. Waterlogging, salinity, wind and water erosion are the major problems responsible for depletion and loss of fertility. Such lands in the plains, which are currently used for irrigated and rainfed agriculture, have been included in the farm forestry programme. In these areas good prospects exist for growing eucalyptus, willows and acacias for consequential benefits to soil fertility, farmers' income and raw material supply for industry.

## **HOME GARDENS**

There are two dozen industrial cities (having more than one million population) and more than 45000 villages where people are living in small hutments to palacial buildings which provide vast and varied opportunities for planting trees for shade and aesthetic values. The new policy should utilise this environmental tree planting potential to the maximum possible extent by providing forestry staff and funds in all organisations with local Government responsibilities.



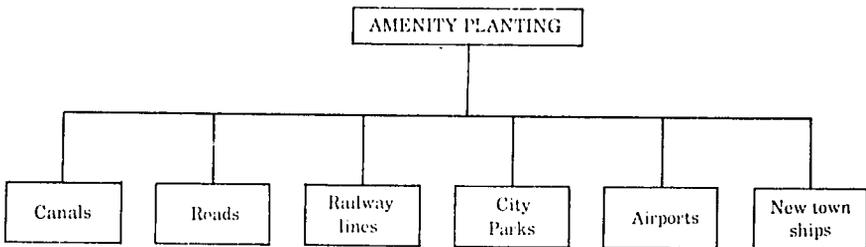
Pakistan's wood based industry is small yet well established and quite old. Sport industry of Sialkot and the mining industry are good examples. With cultivation of Eucalyptus on farmlands and in waterlogged areas, the prospects of this wood as raw material for the paper and pulp industry have increased. About 40 units have been set up in Pakistan but all of them are using agriculture waste as raw material because suitable wood in sufficient quality is not available. A shift from agriculture waste to wood is desirable to provide markets for wood now being raised by the farmers and to improve pulp quality as wood pulp is superior to that of bagasse and wheat straw.

Other wood based industries shown in the chart are meeting their raw material needs from wood grown on farmlands. This arrangement has worked well so far but with the expansion of the industry and an increase in the raw material requirements, a host of problems are likely to arise such as:

- i) timely availability of adequate supplies;
  - ii) desired sizes and dimensions;
  - iii) excessive or inadequate wood quality conditions;
- and

- iv) excessive procurement costs due to transportation over long distances.

Because of these and similar other problems, it is necessary that the wood using industry set up their own industrial plantations on lands to be purchased or acquired on long lease from Forest Departments or private individuals. This will also help to increase the area under forests which is the major objective of the Forest Policy 1991.



Pakistan is a hot and dry country. Dust, noise and scorching heat in summer are some of many environmental problems requiring attention. Planting of trees for public amenity, therefore, deserves greater attention and emphasis and it should become a part of mass tree planting programme under the new Forest Policy.

### LEGISLATIVE MEASURES

The blue print presented in the preceding paragraphs can succeed only if backed by viable structure, gradual institutional development and change in the existing legislation, preferably enactment of new legislation in line with the present day needs and future requirements. There is a strong need to replace the old hierarchical structure of the Provincial Forest Departments with a functional organization i.e. specific and specialized jobs and training for officers.

Forestry should no longer be the exclusive responsibility of the Provincial Forest Departments. In fact, all local

government organizations i.e. Town Committees (298), Municipal Committees (129), Union Councils (4271), Cantonment Boards (40), District Councils (95) and Municipal Corporations (13) should have forest and environment wings adequately staffed by professionals with sufficient funds to carry out afforestation, tree planting and land scaping activities within their respective jurisdictions.

The idea of village woodlots envisaged in the Policy Statement of 1962 should be translated into reality by the District and Tehsil councils which earn a great deal of revenue from levy of taxes on the export of wood and wood products within and outside the limits of the districts concerned. This will expand the base of forestry, and will ensure greater allocation and achievement of far greater targets of afforestation than is the case presently. There should be enabling change in legislation. A few short comings in the existing forestry legislation are pointed out below.

All existing Acts and Ordinances relating to forestry and wildlife are implemented by the functionaries of the Forest Departments. The implementation is poor due to deteriorating law and order situations or is misdirected due to political victimization, not to mention the involvement and connivance of the forest staff. As a result, the depletion of the resources and pollution of the environment are taking place but the concerned citizens are helpless because administration is not responsive to public cry and the courts are unable to provide remedy due to legal and procedural limitations.

Bulk of forests in Hazara, Murree hills and Northern Areas are privately owned. In case of illicit cutting of trees, the cases either go un-noticed and un-traced, or compensation which is recovered is remitted to the government treasury. Alternately, the offenders are prosecuted in courts who can accord a fine of Rs.500/- or imprisonment upto 6 month or both.

There is no provision for recovery of the value of the forest produce.

Under the circumstances the owner, whether a private individual or a family or the community (if it is a joint property), suffers losses but the existing Statute does not provide any remedy or compensation to the owner. Consequently, the owners have no interest in protecting their forests or in helping the Forest Department prosecute the forest offenders.

Deodar (Cedrus deodara) is a royal tree in Kaghan and Azad Kashmir which means that this tree is government property even if it is growing in Guzara forests, cultivated fields or a courtyard of a private house. This provision was made in the relevant "Acts" by the colonial masters because the proportion of deodar in natural forests was small, and its sustained supply was necessary for bridges, railroads and war efforts of the British in World War-II. The reason for this special status was its suitability and natural durability even when exposed to rains, sun, insects, fungi and other weathering agents. This provision in the law has rendered the people unsympathetic, rather hostile and enigmatic to deodar trees. Their protection and re-introduction on private property is difficult due to the non co-operation of owners. The law needs amendment to promote forestry in Hazara and Azad Kashmir.

In all new settlements and townships, ideally one-third of the area should be earmarked for trees, parks, wildlife enclosures, lakes and recreational areas. This should be a mandatory provision in Bylaws, PC-I projects, memoranda of understanding signed with donors and in the relevant Presidential Ordinance where promulgated.

These are only a few examples out of an inexhaustive list. The others include misplaced, ill timed and undesirable provisions in the existing forest and wildlife legislation. All

these require immediate attention in order to make the legislation supportive, need oriented and conducive to development, to ensure maximum financial return to the owners and the State, and to adequately safeguard the interest of forest dwellers, right holders and the public at large. The intended approach provides the last hope and minimum guarantee for the perpetual existence and sustainable development of an otherwise dwindling forest resources in the vulnerable region of northern Pakistan.

**TABLE NO. 6.1****RURAL AND URBAN LOCAL COUNCILS 1987**

PROVINCE	<u>Rural Local Councils</u>		<u>Urban Local Councils</u>			Cantonment Boards	Grand Total
	District/Agency Councils	Union Councils	Municipal Corporations	Municipal Committees	Town Committees		
	Number	Number	Number	Number	Number	Number	Councils
Punjab	29	2392	8	63	135	18	2645
Sindh	13	612	3	29	108	8	773
N.W.F.P.	15	655	1	17	23	11	722
Balochistan	19	315	1	10	20	3	368
Islamabad Capital Territory	-	12	-	-	-	-	12
Northern Areas	3	105	-	3	-	-	111
F.A.T.A.	11	-	-	-	2	-	13
Azad Kashmir	5	180	-	7	10	-	202
<b>TOTAL:</b>	<b>95</b>	<b>4271</b>	<b>13</b>	<b>129</b>	<b>298</b>	<b>40</b>	<b>4846</b>