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OFFICE OF THE INSPECTOR GENERAL OF FORESTS

A REVIEW OF PAST FORESTRY POLICY IN PAKISTAN.

By

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## PART I. INTRODUCTION

The object of this paper is to present a background analysis of the three Forestry policies of Pakistan, 1955, 1962, and 1980, for the purpose of stimulating and informing their discussion and revision. The paper will begin (Part II) with a brief summary or overview of each of the three policies. Part III of the paper will consist in a more detailed analysis of each policy, focussing on their objectives, methods employed, results achieved, and constraints encountered. Part IV will present a series of possible questions designed to focus thinking on concrete directions for policy revision. Finally, Part V will present - in abbreviated form - the texts of the policies themselves, listing for each discrete policy item its objective and method, and adding a brief assessment of the results achieved and the constraints encountered.

## PART II. OVERVIEW OF POLICIES: RECOMMENDATIONS &amp; PROGRESS

The 1955, 1962, and 1980 Forestry Policies are wide-ranging, touching on a number of different aspects of forestry. For the purpose of reviewing and assessing them, the following broad summary is presented.

## RECOMMENDATIONS

1. Priority of Forestry

A high priority should be given to the claim of forestry in the National Development Plans (1955).

2. Improved Forest Management

A. Classify forests on the basis of their utility (1955).

B. Give beneficial aspects of forests precedence over their economic aspects (1955).

C. Manage forests as economic-concerns (1962).

## PROGRESS

1. Priority of Forestry

Funding for forestry has declined both as a % of the total National Plans, and as a % of the provisions that were released:

Plan	Provision (Millions)	% Total Plan	Released (Mill.)	% of Provis.
1st	Rs. 39.1	0.8 %	Rs. 35	90 %
2nd	87.0	0.8	72	83
3rd	140.4	1.1	92	66
4th	216.0	0.3	212	98
5th	1 238.0	0.8	629	51
6th	1 571.0	0.5	749	48

2. Improve Forest Management

A. Forest have been classified as production and protection forests.

B. This has been implemented, as regards protection forests (see A above).

C. This has been implemented, as regards production forests (see A above).

D. All forests should be managed under approved plans (1955).

D. The areas covered by working plans as of 1983 were:

	<u>Hectares (000)</u>	<u>% Forests</u>
Punjab	448	88%
Sind	297	44%
NWFP	718	66%
Baluchistan	100	14%
A. Kashmir	285	74%
N. Areas	576	6%

E. Promote quicker & better utilization of forests, reduce rotations, plan regeneration (1962).

E. Reduced rotations in some coniferous forests & planned in others. Started planting of fast-growing species like poplar & eucalyptus.

F. Conduct pilot projects to raise fuelwood reserves in dry belts (1962).

F. Not much progress has been made.

G. Progressively acquire forest rights (1962).

G. Punjab studied this issue but reached no conclusion. NWFP studied it and decided that implementation is difficult for socio-economic reasons.

### 3. Extension of Forest Area

### 3. Extension of Forest Area

A. Reserve 10% of land & water in colony areas for irrigated plantations (1955,1962).

A. Average of 4% has been reserved:

<u>Colony</u>	<u>Area(ha)</u>	<u>Area Reserved</u>	<u>%</u>
Thal	631,578	37,426	6
Taunsa	695,546	15,342	2
Guddu	187,854	20,540	11
Kotri	1,093,117	24,353	2

B. Raise trees along linear belts (1955).

B. Undertaken intermittently.

C. Transfer lands along canals, roads & railsides to F.D. for tree planting (1962).

C. Transferred in all provinces except Sind, but reverted to Irrigation Dept. in Punjab.

D. In consultation with Flood Commission, survey & manage riverain areas on behalf of the owners (1962).

D. Surveys carried out along Jhelum & Chenab rivers, but afforestation not carried out because of competing pressure for agricultural use of the land.

E. Limit goats in hills (1962)

E. Ordinance issued but not implemented.

#### 4. Private Forests

- A. Ensure sound management through legislation & government assistance (1955).
- B. Draw up provincial legislation for plantation on private lands (1962).
- C. Union Councils should prevent grazing in forests (1962).
- D. Agriculture Dept. should take responsibility for farm forestry (1962).
- E. Put more emphasis on tree plantations outside of forests (1980).

#### 4. Private Forests

- A. Punjab assisting Guzara Forest Committees in management, but socio-economic factors prevented preparation of working plans; NWFP prepared working plans & is managing sizeable forest areas.
- B. Punjab passed act in 1974 & Choas act of 1900 also applicable, but neither used.
- C. Nothing apparently has been done.
- D. The Agriculture Dept. is not qualified for this task.
- E. Planting of trees through annual campaigns has increased as follows:

<u>Year</u>	<u>Target (millions)</u>	<u>Achievement</u>
1980	69.577	67.943
1981	76.395	79.336
1982	81.640	80.750
1983	90.140	89.926
1984	95.500	92.641
1985	102.800	104.998
1986	107.300	97.618
1987	112.800	102.338
1988	116.610	128.827

- F. Involve public in mass-scale tree plantation (1980).

- F. 'Forestry Planning & Development Project' begun in 1986. More than 60,000 farmers are benefitting from this project in 3 districts of NWFP, 2 districts of Baluchistan, and 7 districts of Punjab.

#### 5. Inter-Sectoral Issues

- A. Manage wildlands in accordance with their potential (1980).
- B. Meet demands for raw materials and stimulate development of wood-based industries (1980).
- C. Integrate/coordinate forestry development at National & Provincial levels (1980).

#### 5. Inter-Sectoral Issues

- A. Watershed & Arid Land Development Agency (WALDA) being set up for this purpose.
- B. Planting of poplar & eucalyptus on public & private lands has increased supplies & stimulated development of small & medium-sized industries.
- C. Finalized agreement with ADB & UNDP to prepare Forestry Master Plan.

6. Range Management

A. Develop rangelands by giving land & credit to public (1962).

B. Survey rights (1962).

7. Soil Conservation

A. Obtain necessary powers to control land use (1962).

B. F.D. take responsibility for soil conservation in state forests, Agriculture Dept. take for private areas (1962).

8. Wildlife

A. Provide protection & living space to wild animal populations (1955).

6. Range Management

A. Land allocation not done as yet, but public involved in range management projects on state lands and in pasture improvement projects on private lands.

B. Nothing has been done.

7. Soil Conservation

A. Powers available under 1900 Choas Act, 1927 Forest Act & 1936 Hazara Forest Act, but not used.

B. Under implementation.

8. Wildlife

A. Under implementation, as follows:

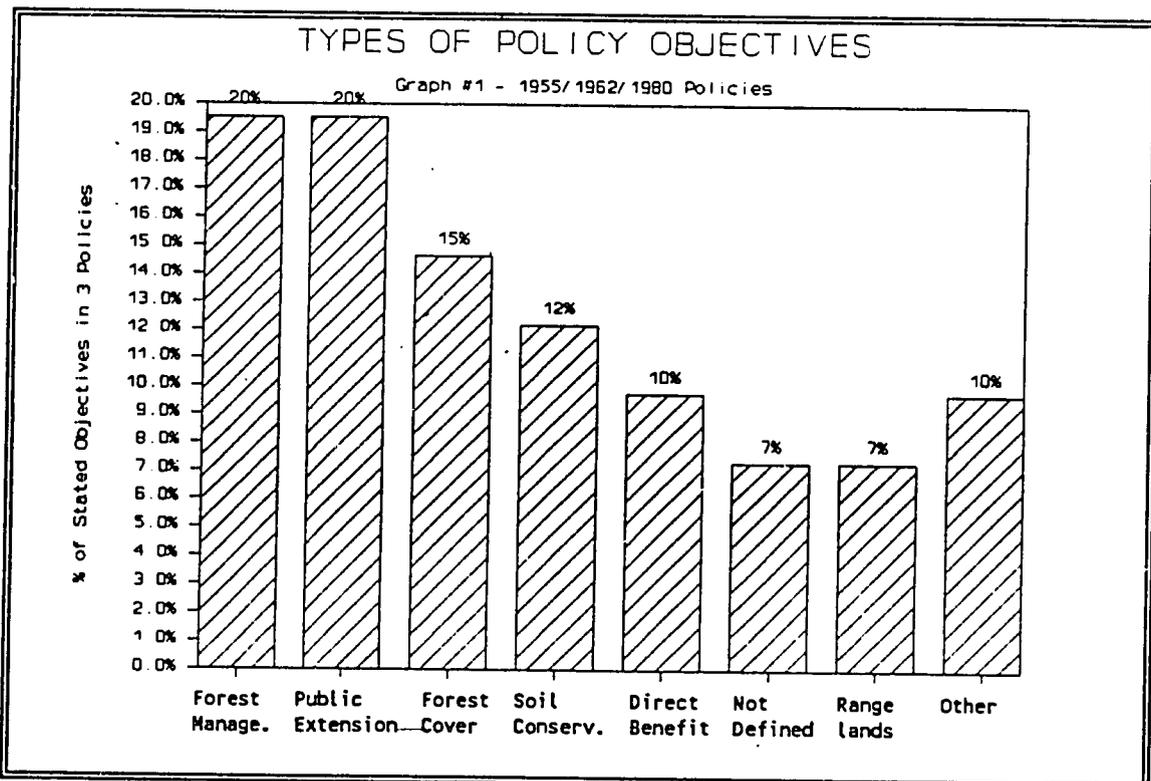
	<u>Natl. Park</u>	<u>Wildlife Sanctuary</u>	<u>Game Reser.</u>	<u>TOTALS</u>	
				<u>No.</u>	<u>Area(ha)</u>
Punjab	2	23	19	44	3274299
Sind	1	33	13	47	1215524
NWFP	2	7	19	28	233079
Baluch.	3	14	7	24	1536741
Capital	1	1	1	3	91586
N.Area	1	5	9	15	651074
A.Kashmir	-	1	8	9	51763
<u>TOTALS</u>	10	84	76	170	7044066

### PART III. ANALYSIS OF POLICIES: PATTERNS & TRENDS

This analysis is based on the detailed examination of the forestry policies that is presented in the Annexes of this paper. That summary, consisting in four parallel columns, separately presents the objectives (column 1), methods (column 2), results (column 3), and constraints (column 4) of each policy. For the purpose of the present analysis, the entries in column 1 were categorized according to type of objective; the entries in column 2 were categorized according to type, what parties were responsible for implementing them, and whether they in fact did implement them; and finally the entries in column 4 were categorized according to type of constraint. The analysis that follows is based on counting the frequency of each category, and graphing the results. Since this methodology is based on very cursory assessments of both objectives and results, it necessarily yields a very cursory assessment of policy. For example, the fact that a particular objective (e.g., 'increasing forest cover') or particular method (e.g., 'field activity') is mentioned most often in the policies and hence in the categories counted, does not necessarily mean that the most funding was devoted to it. Nonetheless, for the purpose of a brief review to stimulate policy discussion, this methodology is believed to be productive.

#### 1. OBJECTIVES

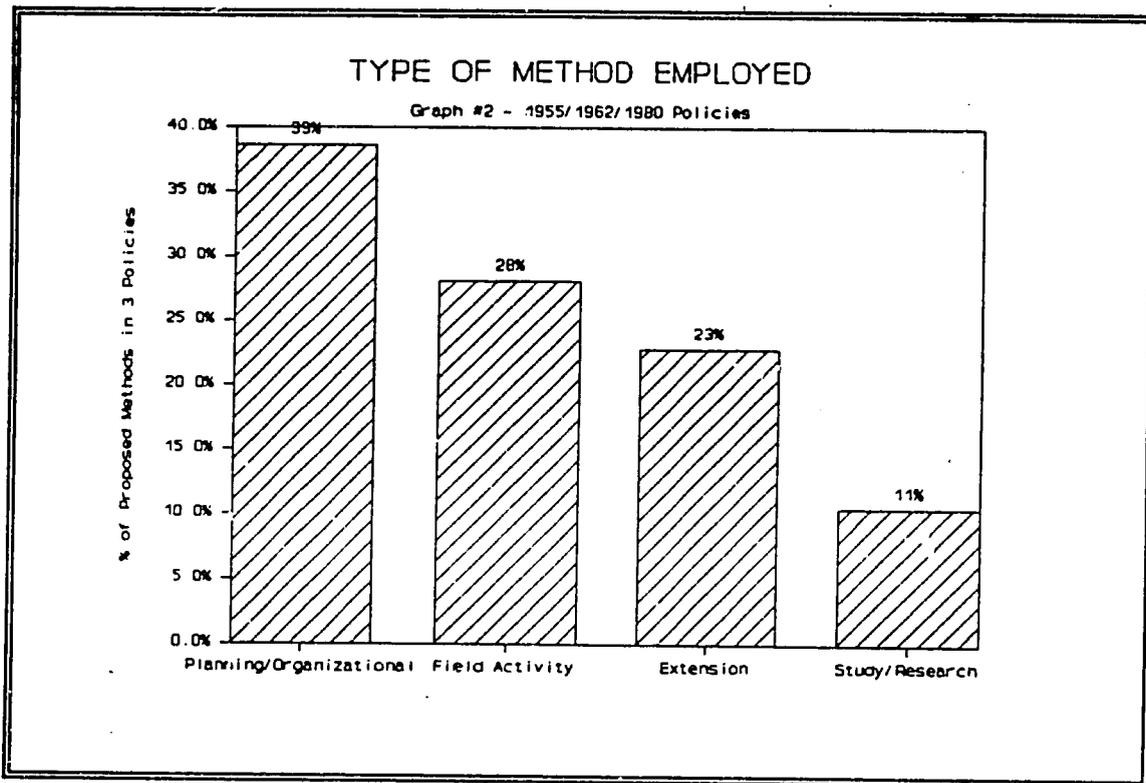
The stated objectives of the past three policies have covered a number of different topics, with public extension and improving forest management being foremost among them, as graph #1 shows:



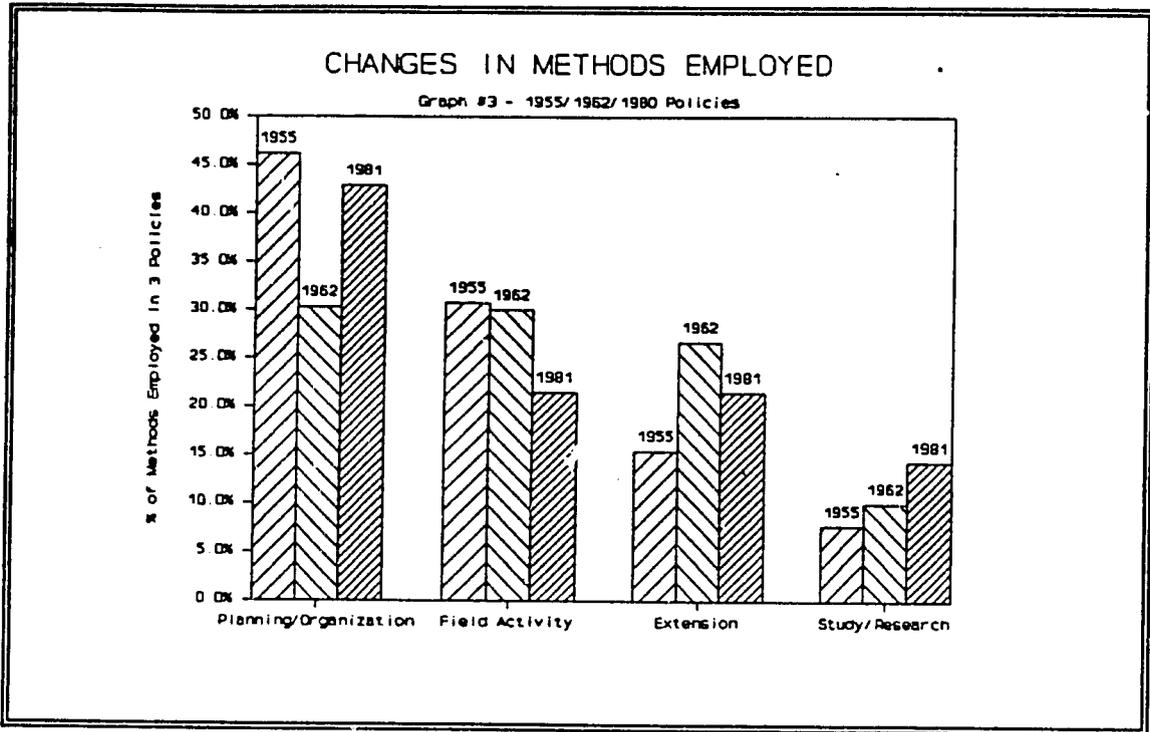
## 2. METHODS EMPLOYED

### A. Methods:

The methods proposed to attain these policy objectives can be categorized as involving: (1) planning, management, legislation, and rearrangement of jurisdictions; (2) field activities, including field management, assistance, and projects; (3) extension activities with the public; or (4) field study and research. Graph #2 shows that planning and management (etc.) type of methods have clearly predominated among the methods proposed:

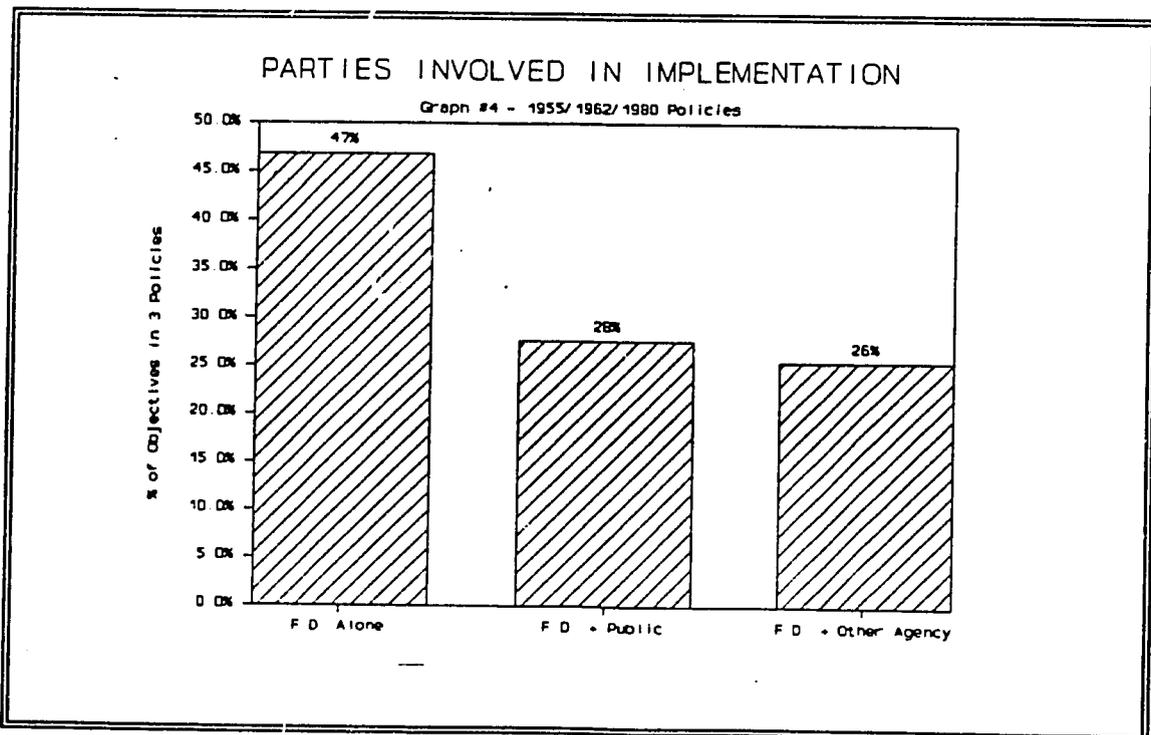


Over time, however, comparing the 1955, 1962 and 1980 policies, the methods proposed have shifted towards more extension and research, as graph #3 shows:

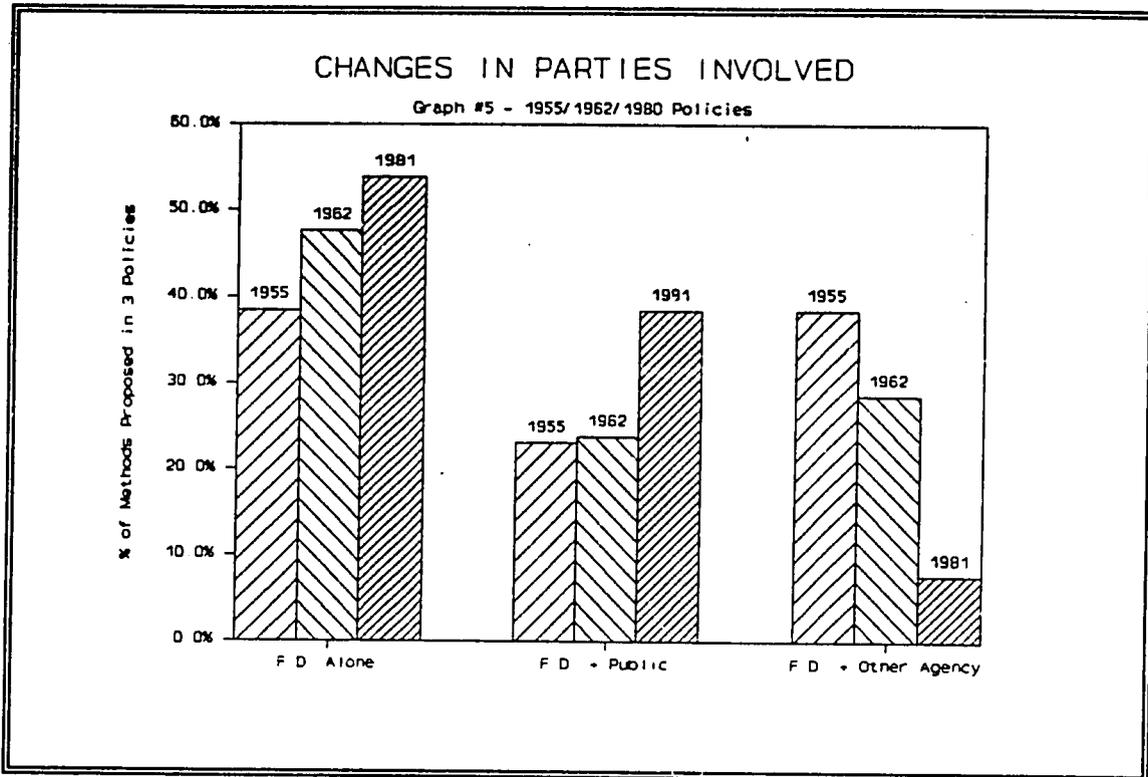


**B. Implementing Parties:**

The three forestry policies have either implicitly or explicitly required involvement by three different parties in implementation: (1) the Forest Department working with the public; (2) the Forest Department working with other government agencies; and (3) the Forest Department working alone. Graph #4 shows that the involved party has most often been the Forest Department alone:

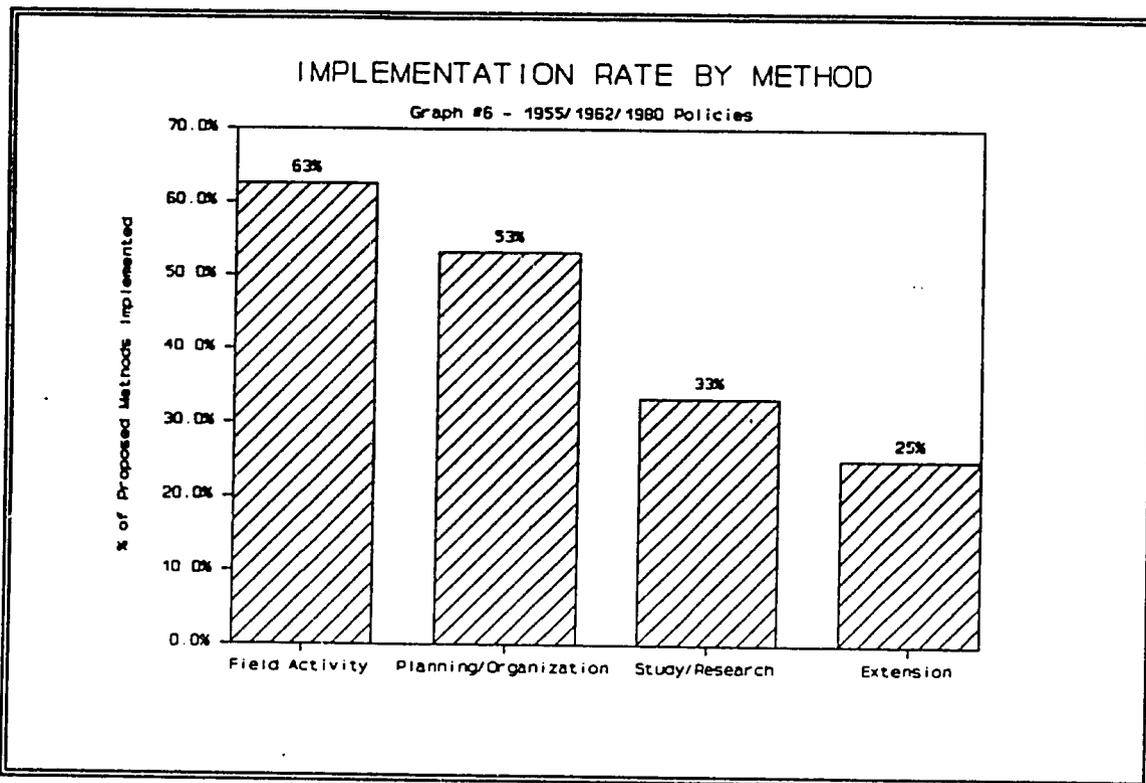


Over time, more and more policy provisions have required the Forest Department to work in collaboration with the Public (or else alone) for implementation, while fewer and fewer have required collaboration between the Forest Department and other government agencies, as graph #5 shows:

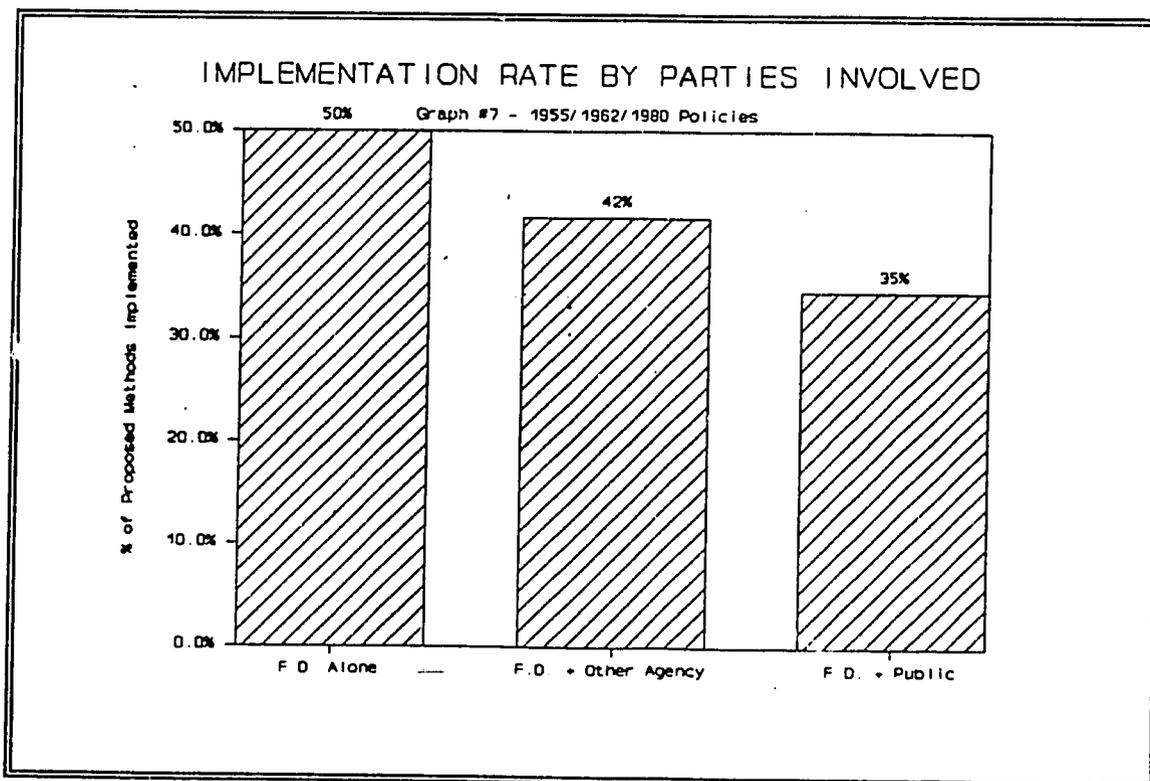


### 3. RESULTS ACHIEVED

Not all of the methods proposed for attaining policy objectives were actually carried out. An approximate assessment shows that only 44% of the methods proposed were applied. The implementation rate was higher for field activities and planning/management activities, and lower for studies/research and for extension activities, as graph #6 shows:



The implementation rate was also highest when the Forest Department alone was involved, lower when other government agencies were also involved, and lowest of all when the Public was also involved, as graph #7 shows:



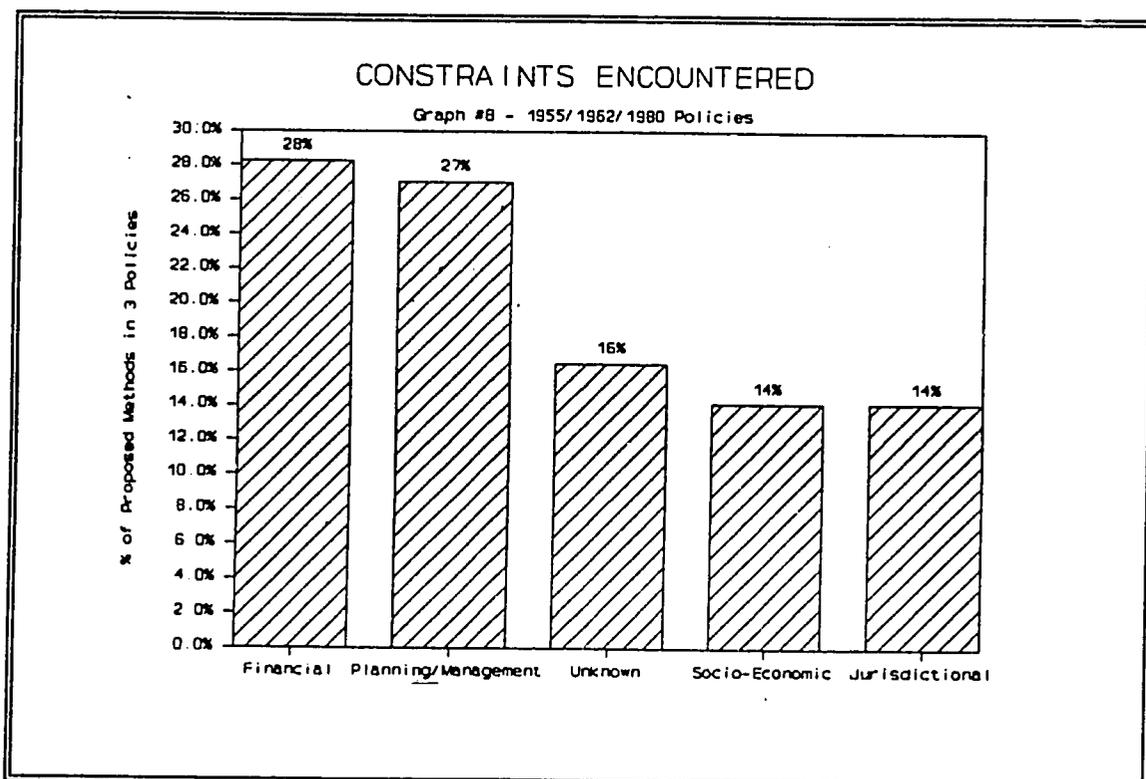
Even when the methods proposed were implemented, the stated objectives were not always attained. An approximate assessment shows that only 38% of the stated policy objectives were attained, which is significantly lower than the implementation rate (44%). This means that the application of a proposed method only resulted in attainment of a stated objective 86% (= 38/44) of the time, suggesting that the method proposed was not always suited to the objective desired.

The foregoing analysis of the results achieved with the various policies is tentative, in part because the initial policy objectives were for the most part neither specific nor quantifiable (see Qazi 1986:128,136). Even where the objectives were specific, the information required to adequately assess the degree to which they have or have not been achieved is - due to the lack of a comprehensive and on-going monitoring and evaluation system - not available. Hence, the assessments here are necessarily impressionistic and subjective.

#### 4. CONSTRAINTS ENCOUNTERED

##### A. General:

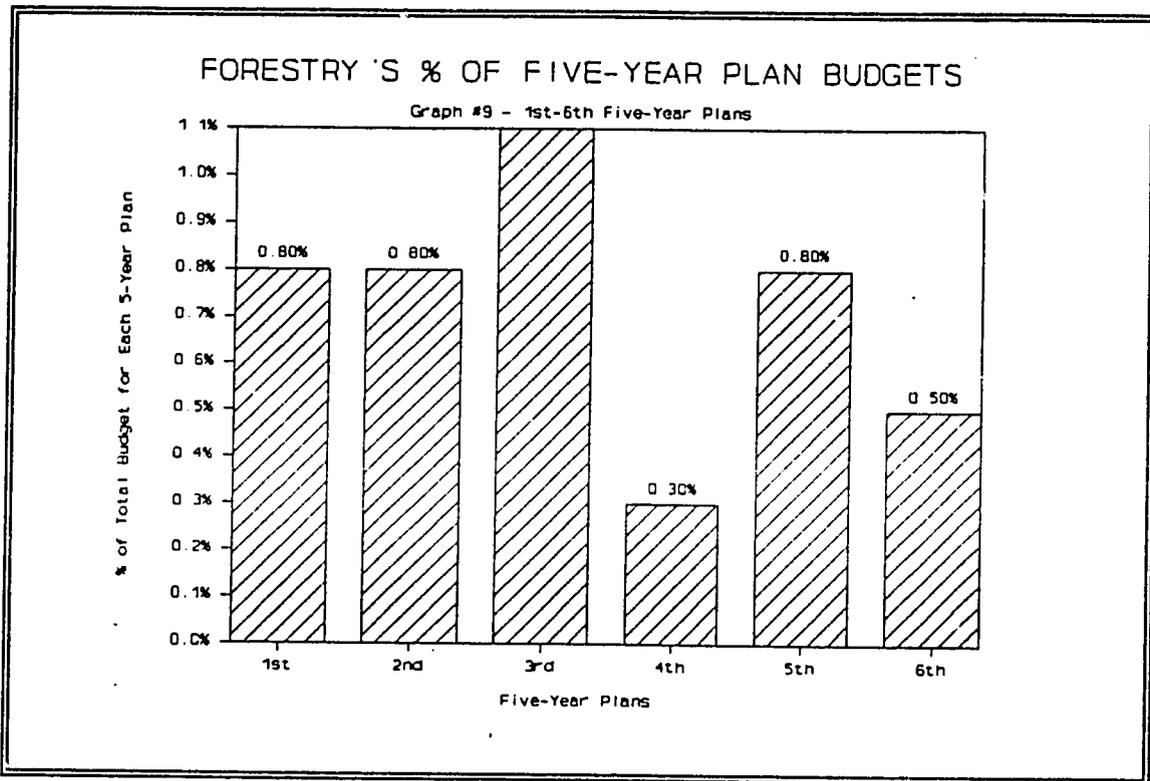
The constraints that have been encountered in implementing these policies and that have prevented the full attainment of their objectives, involve problems of finances, organization/planning/management, socio-economics, and jurisdictional disputes (see Khattak n.d.:9-10), as graph #8 shows:



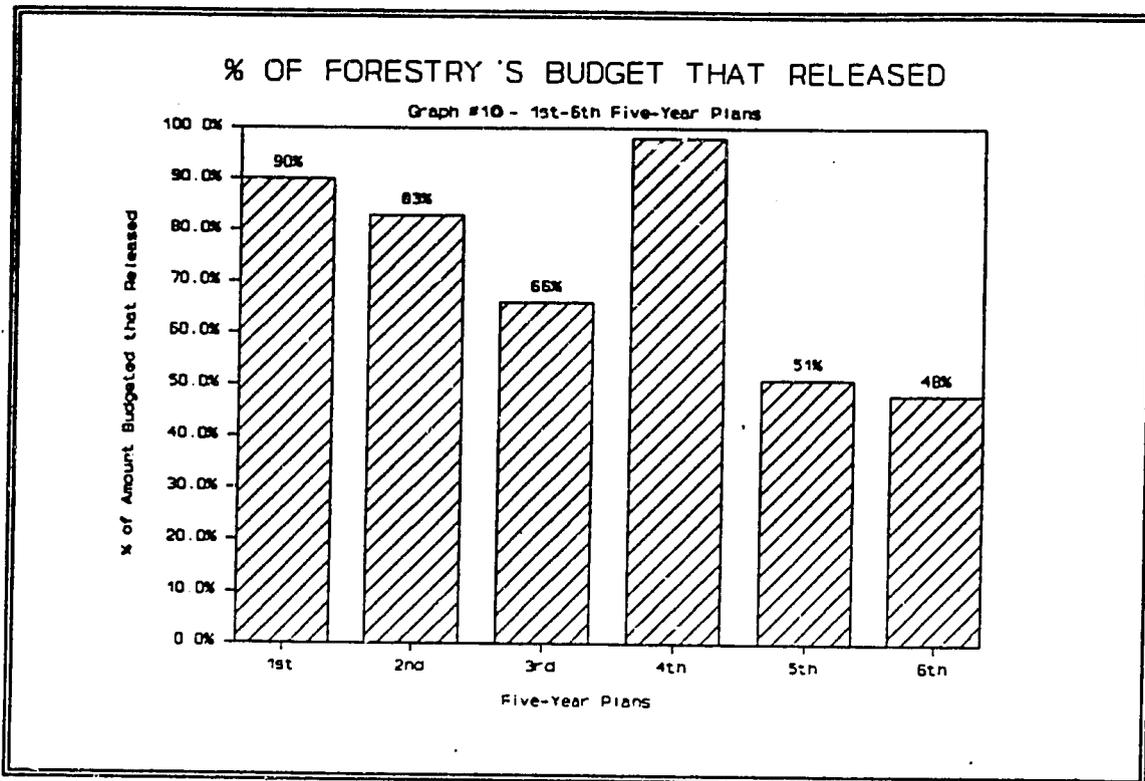
In a significant number of cases, as graph #8 also shows, the reason why a particular objective was not attained is unknown, which again illustrates the need for improved monitoring and evaluation.

#### B. Funding:

The reason why funding has been the major constraint in implementing forestry policies is explained in graph #9, which shows that over the past six five-year plans, the total percentage allocated to forestry has steadily declined (Abeed Ullah Jan 1989: 71):



Also relevant is the fact that the percentage of the funds that were budgeted for forestry that were eventually released has steadily declined as well (Abeedullah Jan N.d.: 91), as graph #10 shows:



As G.M. Khattak (n.d.:11) has noted, it cannot be assumed that just because policy statements have been approved, that all of the necessary funding will be allocated.

This declining funding for forestry must also be seen in the context of increasing responsibilities for the Forest Department, including an increase in the area falling within its jurisdiction, such that the total funding per unit of area managed has surely decreased in absolute terms (Abeed Ullah Jan n.d.:91).

## PART IV. QUESTIONS FOR POLICY REVISION

This review of past policies, along with various published reviews (Abeed Ullah Jan 1989, Khattak n.d., Qazi 1986), suggests the following lines of inquiry for producing the next national forestry policy.

1. Forest Department Objectives and Goals

A. Does the Department have clear-cut and quantifiable objectives and goals, for the development of forestry and allied fields in Pakistan, both on public as well as private land?

B. If 'No', how can this lack be remedied?

C. If 'Yes':

i. Is the Department's governmental responsibility and jurisdiction clearly assigned with respect to each objective?

ii. Has the Department clearly prioritized the various objectives, and assigned reasons for these priorities?

iii. Does the Department have a clear-cut time-frame for achieving each objective?

iv. Is the Department adequately funded to achieve these objectives?

v. Is the legislation necessary to the achievement of these objectives already on the books?

2. Monitoring & Evaluation

A. Does the Forest Department have adequate base-line data on the current state of Pakistan's wood resources and other natural resources, in order to adequately plan for their future management?

B. Does the Department have the necessary capacity to gather and process systematic and periodic data on changes in the supply and demand for the wood resources and other natural resources of Pakistan?

C. Does the Department have the necessary capacity to periodically assess all aspects of the markets for tree products in Pakistan, so as to be able to breakdown the magnitude of market demand by product (e.g., wood for construction timber vs fuel vs pit props, etc.), project demand 5-10-20 years hence, and discern the geographic locations of both shortages and surpluses of tree products?

D. Does the Department have a mechanism to evaluate and report on not just the extent to which trees are planted (e.g.), but also the extent to which the ultimate policy objectives (e.g., satisfaction of domestic demand, reduction in soil erosion, or reduction in amount of imports) are achieved?

E. Should the Department develop more in-house capacity to use such special skills as (e.g.) remote-sensing technologies (to gather data on physical environment) and rural survey technologies (to gather data on the socio-economic environment)?

### 3. Future Orientation

A. Should the Department shift its focus from solely responding to past problems to anticipating and meeting future problems (as well as future opportunities)?

B. For example, should the Department be examining the implications for its policies of the ongoing shift from animal to vehicular traction/transport in the countryside, and consequent reduction in livestock populations? Or a possible shift from biomass fuels to gas?

C. If the answer is 'Yes', then what additional resources does the Department require in order to adopt this 'proactive' as opposed to 'reactive' orientation?

### 4. Departmental Organization

A. Are current manpower levels adequate for the new and changing role of the Forest Department?

B. Is current training appropriate for this role?

C. In order to avoid service jealousies and 'job-hopping' between the conventional and non-conventional sectors of the Department, should these sectors be separated into non-transferable cadres, or is some other solution preferable?

D. Research:

- i. How can a career research path be made more attractive to young foresters?
- ii. Does the Department have adequate funding, transport and other resources to fully utilize the research personnel that it already has?
- iii. Does the Department have the capacity to do the increasingly high priority research on the relationship between rural populations and natural resources?

### 5. Funding

A. Does the Department have the necessary capacity to prepare and present analytic justifications of its budgetary needs?

B. Does the Department have the necessary capacity to prepare sophisticated budgetary justifications based on the indirect and long-term but still economic returns on conservation of natural resources, including returns that are produced by the forestry sector but enjoyed by other sectors?

### 6. Public Extension

A. Is the Department using the print/tv/radio media as effectively as possible in its afforestation & conservation campaigns?

B. Does the Department need to more clearly identify which segments of the population will receive priority in its programs: such as smallholders, landless tenants, rural women, the urban poor?

C. Has the Forest Department developed both a philosophy and a strategy to deal with the fact that the burden of conserving Pakistan's forest resources falls hardest upon the poorest of its peoples, those living in the northern, forested hill regions?

D. Should the Department commit its resources to social forestry and allied fields on a scale parallel to its commitment to traditional forestry?

#### 7. Rangelands

A. Is rangeland management the proper jurisdiction of the forest department?

B. If 'No', whose jurisdiction should this be?

C. If 'Yes', does the Department have a detailed and viable model for their management? Does the Department have adequate resources - in terms of organization, manpower, and funds - for implementing this model?

#### 8. Integration of Forestry in Overall Development of Nation

A. Does the Forest Department need to more clearly define its role with regards to other government agencies and private industry?

B. Does the Department need to more clearly define what relations between the Federal & Provincial Departments should be in implementing forestry policy?

C. Should the Department clarify the extent to which it should become a 'rural development agency' as opposed to a 'natural resource management agency'.

D. Is the Department adequately documenting - both for the government and the public - the intangible benefits of forestry development (e.g., control of erosion & flooding, conservation of wildlife)? And if 'Yes', is it receiving proper credit and support for producing these benefits?

E. Is the relationship between the Department's policies and the nation's five-year plans sufficiently clear and constructive?

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**ANNEXES: DETAILED EXAMINATION OF POLICIES - OBJECTIVES, METHODS, RESULTS, CONSTRAINTS**

**1955 NATIONAL FOREST POLICY**

<u>OBJECTIVE</u>	<u>METHODS PROPOSED</u>	<u>RESULTS ACHIEVED</u>	<u>PROBLEMS</u>
(1) Preserve & utilize forests for benefit of nation.	(1) High priority for forestry in national development plans.	(1) Not done: high priority not given.	(1) Funding requested not allocated.
(2) Sound management in privately owned forests.	(2) Government legislation, technical & financial assistance.	(2) Partially done: FD managing forests in NWFP, but assisting only in Punjab.	(2) Owners resist; and FD management not include regeneration.
(3) Soil conservation.	(3) Obtain powers to control land use.	(3) Done: in 1900 Chos & 1927 Forest Acts; but not used.	(3) Responsibility of Soil Conservation Dept.; small farmers lack funds for conservation.
(4) Public support for forest conservation.	(4) Education, propaganda, demonstration.	(4) Being done: with available resources.	(4) Possible financial & organizational constraints.
(5) Classification of State forests.	(5) Classify on basis of utility & objective.	(5) Done: classified as production & protection forests.	(5) No problems
(6) De-emphasize commercial role forests.	(6) National integrated economic policy.	(6) Not done (except through classification).	(6) Role of Forestry in economic policy unclear.
(7) Increase forests on irrigated lands.	(7a) Reserve 10% of colony land/water for trees. (7b) Raise trees on canals, roads, railways, & waste land. (7c) Support cooperative village plantings.	(7a) Partially done: average 3% reserved. (7b) Partially done. (7c) Not done.	(7a) Priority always given to agriculture. (7b) Different Depts. compete for jurisdiction. (7c) Cooperatives in agriculture poor.

(8) Work forests on sustained yield basis.	(8) Manage all forests under approved working plans.	(8) Partially done: 64% of forests covered by plans by '83).	(8) % low only in Baluchistan, where plans less needed.
(9) Long-term and scientific management of forests.	(9) Properly constituted & trained forest service.	(9) Done.	(9) Possible financial constraints.
(10) Organize forest research & education along suitable lines.	(10) Long-term research on improved utilization, protection & yield.	(10) Being done.	(10) Possible financial constraints only.
(11) Maintain wildlife in forests.	(11) Provide protection, living space, etc.	(11) Being done.	(11) Possible financial constraints only.

**1962 NATIONAL POLICY ON FORESTS/WATERSHEDS  
& RANGE MANAGEMENT/SOIL CONSERVATION**

<u>OBJECTIVE</u>	<u>METHODS PROPOSED</u>	<u>RESULTS ACHIEVED</u>	<u>PROBLEMS</u>
<b>I. STATE FORESTS</b>	<b>I. STATE FORESTS</b>	<b>I. STATE FORESTS</b>	<b>I. STATE FORESTS</b>
(1) Reorient state forests as commercial concerns.	(1) Maximize production in provincial working plans.	(1) Being done.	(1) Possible financial constraints re. inputs.
(2) Shorten maturation periods & quicken exploitation.	(2) Studies for faster & better utilization of forest products; plans for faster regeneration.	(2) Partially done: rotations shortened in some forests, and quick-growing species planted.	(2) Possible financial constraints (better access roads, etc.).
(3) Increase forest cover.	(3) Transfer state <u>rakhs</u> & canalside land to F.D.; afforest & manage via working plans.	(3) Partially done: transferred in 3 provinces, but reverted to Irrigation Dept. in Punjab.	(3) Jurisdictional problems.
(4) Provide provincial roads with tree plantings.	(4) F.D. assist Public Works Dept. & local union councils until it can assume this task itself.	(4) Partially done.	(4) Re. Public Works, no problems; re. Union Councils, they lack funds & sufficient land.
(5) Meet national needs.	(5) Province-wise plans for all types of state forests.	(5) Not done.	(5) Provinces not integrate Forestry into broader provincial development planning.
(6) Halt decrease in fuel reserves on state lands in dry belts.	(6) Pilot projects to support proper afforestation program.	(6) Not done.	(6) Unclear (although begun under FP&D Project).
(7) Develop forests hand-in-hand with agriculture.	(7) Provinces include irrigated plantations in new colony plans.	(7) Partially done (see 1955 Policy, # 7).	(7) Priority given to agriculture (see 1955 Policy, # 7).
(8) National effort for regeneration of	(8) Legislation for growing specific number	(8) Partially done: legislation passed in Punjab,	(8) Number legislated per acre (4) less

tree wealth.	of trees on private land.	but not effective.	than existing numbers.
(9) Reduce indiscriminate grazing, felling, & distribution of land due to local rights.	(9) Provinces study how to acquire rights or manage forests through F.D. on behalf of villagers.	(9) Partially done: NWFP studied & decided acquisition unnecessary; Punjab studied & made no decision.	(9) Resistance of public feared.
(10) Increase afforestation on river banks.	(10) Provinces prepare management programs for river banks.	(10) Done: but not implemented. due to pressure on arable land.	(10) Pressure on arable land for non-tree uses.
(11) Prevent indiscriminate grazing.	(11a) Pilot projects determine grazing limits and management techniques.	(11a) Done.	(11a) No problems.
	(11b) Ask Union Councils to prevent grazing.	(11b) Not done.	(11b) Union Councils powerless.
II. WATERSHED MANAGEMENT	II. WATERSHED MANAGEMENT	II. WATERSHED MANAGEMENT	II. WATERSHED MANAGEMENT
(1) Improve watershed management.	(1) FD take responsibility for soil conservation in state forests.	(1) Being done.	(1) No problems.
(2) "	(2) Provinces give responsibility for soil conservation on private lands to ADC or special organization.	(2) Not done (F.D. assumed responsibility in uplands, Agriculture Dept. in lowlands).	(2) Unclear why ADC's not given.
(3) "	(3) This organization make detailed watershed management program.	(3) Not done (though FD making partial watershed management programs).	(3) Unclear why ADC's not given.
(4) "	(4) Agriculture Depts. and ADC's take up farm forestry.	(4) Not done (but F.D. has taken up).	(4) Unclear why others not take up.
(5) Encourage farm forestry.	(5) Research & pilot projects on quick-growing	(5) Being done: by F.D.	(5) No problems.

commercial trees  
& shelterbelts;  
pilot projects on  
tree growing on  
saline & water-  
logged lands.

### III. RANGE MANAGEMENT

(1) Involve  
public in range  
land development.

(2-6) Promote  
proper pasture &  
social dev-  
elopment.

### III. RANGE MANAGEMENT

(1) Government  
support via land,  
credit, water-  
location, tube-  
wells, technical  
advice, market-  
ing, etc.

(2) Pilot proj-  
ects in different  
zones, including  
tribal settlement

(3) Survey  
rights.

(4) Distribution/  
leasing of gov-  
ernment land to  
public through  
incentives.

(5) Establish  
tribal ranges.

(6) Provinces put  
single agency in  
charge.

### III. RANGE MANAGEMENT

(1) Not done.

(2) Done: but  
results  
uncertain.

(3) Not done.

(4) Not done.

(5) Not done.

(6) Partially  
done: created  
range management  
circles.

### III. RANGE MANAGEMENT

(1) Unclear.

(2) No problems  
in projects, but  
unclear what has  
happened since.

(3) Unclear.

(4) Unclear (but  
land management  
more important  
than land  
distribution).

(5) Unclear.

(6) No problems.

### IV. SOIL CONSERVATION

(1) Reduce soil  
erosion &  
increase crop  
returns in N. &  
NW. submontaine  
areas.

### IV. SOIL CONSERVATION

(1a) Improved use  
of water, contour  
bundling, high-  
intensity crops,  
multi-cropping,  
legumes, rota-  
tions.

(1b) Provide  
terracing machi-  
nery, small dams,  
extension servi-

### IV. SOIL CONSERVATION

(1a) Agriculture  
Dept. jurisdic-  
tion: data  
unavailable.

(1b) Agriculture  
Dept. jurisdic-  
tion: data  
unavailable.

### IV. SOIL CONSERVATION

(1a) Unclear.

(1b) Unclear.

ces, credit, land consolidation, research, cooperatives, land-use law, etc.

(1c) Use surplus commodities from US FL480 & other programs.

(1c) Agriculture Dept. jurisdiction: data unavailable.

(1c) Unclear.

(1d) Give program to ADC or set up new coordinating board.

(1d) Agriculture Dept. jurisdiction: data unavailable.

(1d) Unclear.

## 1980 FORESTRY AND WILDLIFE POLICY

<u>OBJECTIVES</u>	<u>METHODS PROPOSED</u>	<u>RESULTS ACHIEVED</u>	<u>PROBLEMS</u>
(1a) Low per capita timber consumption; inadequate supplies for industry; heavy import bills.	(1a) More emphasis on fast-growing tree plantations outside forests.	(1a) Being done.	(1a) Financial & organizational constraints.
(1b) Deforestation & faulty agriculture silting up major reservoirs.	(1b) Develop fuel plantations on wastelands via motivation & incentives.	(1b) Being done: under watershed programs.	(1b) No problems.
(1c) Over-grazing leading to wind & water erosion and malnutrition of livestock.	(1c) Involve public in tree plantation & nature conservation via motivation.	(1c) Being done.	(1c) Socio-economic constraints.
	(1d) Harvest on scientific lines or through public corporations.	(1d) Done: both.	(1d) Possible financial constraints only.
	(1e) Increase production of industrial wood.	(1e) Being done.	(1e) Management & financial constraints only.
	(1f) Coordinate development of forestry & wood-based industries.	(1f) Not done.	(1f) Organizational constraints.
	(1g) Well-planned & coordinated forest development at provincial & national levels.	(1g) Partially done: but no accurate assessment of national resources & needs.	(1g) Organizational & financial constraints.
(2) Extinction of natural fauna.	(2a) Promote conservation & valuation of wildlife.	(2a) Being done: but results uncertain.	(2a) Social/organizational/financial constraints.
	(2b) Use scientific surveys, research & management plans	(2b) Being done.	(2b) Financial constraints only.

for wildlife.

(2c) Develop parks for conservation, recreation, & education.

(2c) Being done: 5 national parks established.

(2c) No problems.

(3) Negligible development of wildland.

(3a) Periodic survey & evaluation.

(3a) Not done.

(3a) Unclear.

(3b) Manage wild-lands in accordance with potential.

(3b) Not done.

(3b) Not F.D.'s jurisdiction.

(3c) Production of medicinal herbs.

(3c) Partially done: research underway.

(3c) No problems.

## 1988 REPORT OF THE NATIONAL COMMISSION ON AGRICULTURE: FORESTRY

<u>OBJECTIVES</u>	<u>METHODS PROPOSED</u>	<u>RESULTS ACHIEVED</u>	<u>PROBLEMS</u>
Not clearly stated in report.	<p>I. AFFORESTATION</p> <p>(1) Survey to identify priority areas.</p> <p>(2) Priority planting of blank areas.</p> <p>(3) More irrigation in riverine forests.</p> <p>(4) Study use of more water in irrigated plantations.</p> <p>(5) Support cooperative management of private forests.</p> <p>(6) Plant along canals &amp; railways, in sand dunes &amp; in saline /waterlogged areas.</p> <p>(7) Plant in government compounds.</p> <p>II. SOCIAL FORESTRY</p> <p>(1) Involve community organizations in planting &amp; care.</p> <p>(2) Set up social forestry wings in provincial F.D.'s</p> <p>(3) Set up demonstration</p>	Not yet implemented.	Not yet implemented.

centres.

(4) Provide farmers incentives: credit, tools, advice, etc.

(5) Do land-use classification & regular data collection.

### III. TIMBER HARVESTING & UTILIZATION

(1) Eliminate private contractor system.

(2) Involve owners in exploitation.

(3) Improve cutting tools & techniques.

### IV. WILDLIFE CONSERVATION

(1) Identify areas for conservation.

(2) Make management plans.

(3) Provide specialized training.

(4) Pass conservation laws.

(5) Increase public awareness.

### V. SERICULTURE

(1) Control quality of imported seed.

(2) Do seed  
production &  
training at PFI.

(3) Make research  
plantings of  
mulberry.

#### VI. ORGANIZATION

(1) Set up  
separate Depts.  
for NWFP & Azad  
Kashmir.

(2) Improve staff  
training, reten-  
tion, mobility.

(3) Affiliate PFI  
with NWFP Agric.U

#### VII. INVESTMENT

(1) 20,000,00000  
in 1988-2000.

(2) 3,600,00000  
in 1993-2000.