

**THE WEST PAKISTAN FOREST
MANUAL
VOLUME III**

**(Relating to office business, Working Plans, Annual
Reports and Returns)**

PREFACE

This volume deals with office business, the offices of the Chief Conservator of Forests, Conservators of Forests and Division of Forest Officers, Territorial and Research Divisions and preparation of Working Plans. Annual Reports and Returns, Miscellaneous executive orders by Government and the Chief Conservator of Forests.

The necessity for compilation of this volume has arisen due to the integration of former N.W.F.P., Punjab and Sind and Baluchistan into a single province of West Pakistan. The revision of the various chapters has been done keeping in view the forest areas under the administration of West Pakistan.

The work of the compilation was started by Mr. A.H. Khan, P. Ft. S., Conservator of Forests, Officer on Special Duty. The chapter on the preparation of the Working Plans was revised by Mr. Zulfiqar Ali, Conservator of Forests, Development.

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Chief Conservator of Forests,
West Pakistan

TABLE OF CONTENTS

Subject	Paragraph	Page #
CHAPTER I -- OFFICE BUSINESS		
PART I – GENERAL		
Introduction	1.1	1
Numbering of Paragraphs and marginal references	1.2	1
Definition of case and files	1.3	1
Title page of cases	1.4	1
Files	1.5	1
Case register	1.6	1
No Two subjects to be included in one letter or docket	1.7	1
Government and Account Department General Orders and Circulars	1.8	1
Register of books and maps	1.9	2
All office records are government property	1.10	2
Civil Suits	1.11	2
Criminal cases	1.12	2
Services of the Public Prosecutor	1.13	2
List of Reports and returns	1.15	3
System of marking of numbers	1.16	11
PART II - OFFICES OF THE DIVISIONAL OFFICERS AND THEIR SUBORDINATES		
Telegraphic addresses	1.17	11
Register of correspondence	1.18	11
Vernacular correspondence	1.19	12
Procedure of receipt of correspondence	1.20	12
Sub-Divisional and Range offices and officers not provided with clerks.	1.21	13
Destruction of useless documents	1.22	13
Submission of correspondence without explanatory notes prohibited.	1.23	18
Numbering of telegrams and teleprinters	1.24	18
Legal status of a forest to be given in correspondence	1.25	18
Previous correspondence and subject to be quoted	1.26	18
Submission of officials service books to conservators	1.27	18
Fire reports	1.28	18
Translation of vernacular documents	1.29	18
Agreement deeds and maps, etc., to be placed in envelopes when sent as enclosures to letters	1.30	18
Copies of endorsements of letters	1.31	19
Head Clerks responsible for extinguishing fire in all fire anguishes.	1.32	19
Correspondence in memo Form	1.33	19
Diaries of Gazetted Officers	1.34	19
Leave addresses of officers	1.35	19
Foreign Timber Trade return	1.36	20
Indent of Forms	1.37	20
Change in the charges	1.38	21
PART – CHIEF CONSERVATOR AND CONSERVATOR OFFICES		
General	1.39	21
Registers of correspondences	1.40	21
Procedure on receipt of correspondences	1.41	21
List of correspondence to be sent to the Conservators when on tour.	1.42	21
Correspondence carried on by Conservators while on tour	1.43	21
Destruction of useless documents	1.44	22

PART IV – TRANSFER OF CHARGE

General	1.45	22
Transfer reports	1.46	22
Divisional officers Accounts and vouchers	1.47	22
Timber and forest produce	1.48	22
Examination of property by relieving officer	1.49	23

CHAPTER III -- ANNUAL REPORTS AND RETURNS

A -- ANNUAL ADMINISTRATION REPORTS

Divisional Annual reports and returns	2.1	23
Circle and Divisional Annual reports	2.2	24
Date of submission of the report	2.3	24
The arrangement of Chapters	2.4	25
General instructions regarding the compilation of annual reports.	2.5	29
Detailed instructions regarding the writing various chapters.	2.6	32
Returns to accompany the Provincial and Divisional Annual Reports.	2.7	52
Detailed instructions regarding preparation of forms and appendices.	2.8	54
Annual reports and reviews -- Miscellaneous orders	2.9	62
Instructions regarding indents for printing.	2.10	63
Supply of copies of annual reports to various parties.	2.11	63
Divisional Reports	2.12	70
Provincial Reports	2.13	70
Arrangement of chapters	2.14	70
Instructions for writing the Divisional and Provincial Annual Research Report	2.15	71
Classified list of Forest Officers	2.16	73

CHAPTER III – MISCELLANEOUS EXECUTIVE ORDERS BY GOVERNMENT AND CHIEF CONSERVATOR

Forest Policy enunciated by Government of Pakistan	3.1	73
Forest Policy enunciated by Chief Conservator	3.2	77
Adoption of glossary of technical forms in the West Pakistan	3.3	78
Scale of tent equipage	3.4	79
Instructions regarding purchase and disposal of tents	3.5	79
Procedure in compounding offences	3.6 to 3.8	81 to 83
Rules regarding the grant of study leave	3.9 to 3.10	87 to 89
Rules regarding realization of forest income	3.10	88
Rules regarding forest publications	3.12	92
Special duty	3.13	92
Costing statements	3.14	92
Relations between Silvicultural Research Division and Territorial Divisions	3.15	97
Rules of the Forest Library at Lahore	3.16	100
Rules regarding service stamps	3.17	101
Orders regarding girdling	3.18	104
Orders regarding improvement fellings	3.19	104
Depots and Sale Rules	3.20	105
Grazing and browsing rules by transport animals	3.21	115
Extraction of minerals	3.22	116
Collection and supply of specimens, seeds and samples	3.23 to 3.26	116 to 117
Working Plans	3.27	119
Engineering works -- Buildings – Power of sanctions	3.28	158
Plans and estimates	3.29	159
Constructions	3.30	159
Repair and maintenance	3.31	159
Furniture for building sanctioned scales	3.33	159
Application for furnishing buildings	3.34	164

No furniture to be supplied at Government expense for private residence of forest officials.	3.35	164
Rules for occupation of forest bungalows	3.36	164
Payment of rent of buildings rented or leased by Government	3.37 to 3.38	166
Roads and bridges – Power of sanction	3.39	166
Roads and bridges – Application for sanction to incur expenditure.	3.40 to 3.41	166
Roads and bridges – Programme for construction	3.42	166
Roads and bridges – New Construction and repairs – Miscellaneous orders	3.43	167

CHAPTER I -- OFFICE BUSINESS
PART I – GNERAL

- 1.1 Introduction Office work should be conducted in such a manner that, while a sufficient record of every transaction is preserved, the bulk of documents may be kept as small as possible and arranged as best calculated to facilitate reference.
- 1.2 Numbering of paragraphs and marginal references. Long letters and reports are to be divided into numbered paragraphs; and if they are of great length, a brief marginal abstract of each paragraph may usefully be added.
- 1.3 Definition of “cases” and “files” A group of documents relating to one subject is called a “case”. A group of cases referring to one head or division of work may be collected in a “file”.
- 1.4 Title-page of cases. (Form No. 53) On the top of each case will be kept a title page (universal Form No. 53), on which the register number and subject of the case and the name of the file will be entered. A list of the documents in the case and the general purport of each may be added whenever necessary.
- 1.5 Files The files may be as various as the requirements of each office necessitate. Document which do not belong to any particular case may be placed in a file designated “Miscellaneous”.
- 1.6 Case register (Form No. 44) A register of cases will be kept (Form No. 44) with a series of number commencing on the opening of each financial year. These numbers and the name of the file, if any, will be entered the title-page (universal form no. 53) referred to in paragraph.
- 1.7 No two subjects to be included in one letter or docket. To facilitate the keeping of each case complete in itself, no two subjects should, as a rule, be included in one letter or docket.
- 1.8 Government and Account Department General Orders and Circulars. Government and Account Department Gneral Orders and Circulars will be filed separately according to number and date in a “Circular File”. If they are received in duplicate, one copy will be placed with the case to which it relates. If only one copy be available, and it has special reference to any case, a memorandum of its contents will be filed therewith.
- 1.9 Register of books and map (Form No. 45) (I) In each office a register of books (Form No. 45) must be kept up. The current number of the register and the date of receipt should be entered on each copy. The column of “Remarks” is intended to explain what has become of any copies which may have been lost or otherwise disposed off. The entries in this column should be dated and initialed by the officer to whose office the books belong.
(II) A separate register for maps will be kept in the same form.
- 1.10 All office records are Government property. All accounts, books, maps, records and paper of a Forest Office are Government property, and the officer in whose charge they are will make them over to his successor on being relieved of charge, or to his departmental superior whenever they may be demanded.
- 1.11 Civil Suits No civil suit can be instituted or defended on behalf of Government by any officer without the sanction of the competent authority and full compliance with the rules contained in the Law Departmental Manual.
*NOTE : Under Paragraph II © of the Appendix A of Government of West Pakistan, Finance Department’s letter No. F.D. S.O.I (FR) -423/58, dated 5th November 1958, the Chief Conservator and Conservator of Forests, incharge of circles are authorized to sanction respectively an expenditure in respect of law charge on Criminal cases in accordance with the rules in force up to Rs. 2,000 and Rs.. 1,000 in each case.
Any case exceeding Rs. 2000 or not covered by the Rules should invariable be referred to the Government.*
- 1.12 Criminal Case Divisional Forest Officers are empowered under the provisions of Chapter IX of the Forest Act, 1972, to start criminal proceedings of forest offences. They should, however, if possible, report to the Conservator before commencing proceedings in any grave or unusual such criminal cases and the sanction of

the conservator must be obtained before a Pleader can be retained, according to the rules in force, for the prosecution of any case.

No criminal prosecution must be taken up by any Range Office or other subordinate without the written sanction of the Divisional Forest Officer.

NOTE : The Chief Conservator and Conservator of Forests incharge of circles can respectively sanction law charges, covered by the rules in force, relating to legal affairs up to Rs. 2,000 and Rs. 1,000

Any case exceeding Rs. 2,000 or not covered by the rules should invariably be referred to the Government.

- 1.13
- (i) The Solicitor to the Government of West Pakistan should be addressed through proper channel in all matters wherein arrangement are to be made for filing and defending suits and other proceedings by or against the government and public servant, -- vide Government of West Pakistan, Law Department letter No. Gen. 12-154/56, dated 24th April 1956
 - (ii) Where rules permit Divisional Forest Officer must arrange with the District Magistrate for the services of a Public Prosecutor affecting the Forest Department, unless the cases are so petty or so clear that the assistance of Public Prosecutor is manifestly not required.

- 1.14
- Divisional Forest Officers are forbidden to file an application for a revision or for an appeal in any forest offence case without having previously obtained orders of their conservators on the subject.

Important forest criminal case are often lost on appeal simply because the Forest Department is not properly represented in the appellate court. Divisional Forest Officers should therefore, arrange in consultation with the District Magistrate, that due notice is given to them when an appeal is lodged, so as to enable them to make proper arrangements to present the Department at the hearing of the appeal.

- 1.15 List of Reports and returns
- The following is a list of the Reports and Returns to be submitted by Divisional Forest Officers, Conservators and Chief Conservators of Forests, West Pakistan, Lahore.

**STATEMENT SHOWING REPORTS AND RETURNS TO BE SUBMITTED BY THE DIVISIONAL FOREST OFFICERS,
CONSERVATORS AND THE CHIEF CONSERVATOR OF FORESTS**

Serial No	Name of report or returns	Date of submission by the Divisional Forest Officer	Date of submission by the Conservator of Forests	Date of submission by the Chief Conservator of Forests	To whom submitted
1	2	3	4	5	6
FORTNIGHTLY					
1	Progress Report	15 th and last day of each month.	..	..	Conservator
2	Progress Reports on Food Production	..	5 th and 20 th of each month	10 th and 25 th of each month	Government
MONTHLY					
1	Audit Office objection statement	Within a week after receipt. To be returned through conservator	Within a week after receipt.	Within a week after receipt.	Audit Office
2	Monthly Abstract of the Contractors and Disbursers Ledger (Form 13)	5 th of each month through conservator.	(a) 5 th of each month of Direction Office and (b) 15 th of each month of Divisional Ledger.	5 th of each month	Ditto.
3	Monthly statement of small saving scheme	Ist of each month	5 th of each month	10 th of each month	Conservator, and Chief Conservator of Forests and Government.
4	Monthly statement of Telephone Trunk calls	Ditto	Ditto	..	Conservator and Chief Conservator
5	Schedule of Income-tax deducted	Ist of each month	Ist of each month	Ist of each month	Income-tax officer concerned
6	Register of cheques	Last day of each month	Last day of each month	Last day of each month	Audit Office

7	Absentee statement of Non-Gazetted staff in the Province	Ditto	5 th day of each month	15 th day of the month succeeding	Ditto
8	Return of leave granted	Last day of each month	..	..	Conservator
9	Divisional and Administrative Officers accounts	5 th to 15 th of month succeeding	5 th to 15 th of month succeeding	5 th to 15 th of month succeeding	Auditor Officer
10	List of persons dismissed and debarred for future Government Service	Ist of each month	5 th of each month	10 th of each month	Services and General Administration Department

BI – MONTHLY

1	Comparison of Ledger Accounts in Form B.M. 14	Ist Week of every second month	Finance Department
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QUARTERLY

1	Statement showing changes in the charged held by subordinates	Ist January, April, July and October each year	Conservators
2	Foreign Timer Trade Return	5 th April, July, October and January each year	30 th April, 31 st July, 31 st October and 31 st January each year.	..	Conservators and Direct Imports and Exports
3	Speedy disposal of disciplinary cases	Last day of each quarter January, April, July and October	Last day of each quarter January, April, July and October	Last day of each quarter January, April, July and October	Secretary Agriculture Department West Pakistan
4	Progress report about the Surveys carried out by the Costal Zone A forestation Division.	..	25 th March, 25 th June, 25 th September, 25 th December	Ist April, Ist July, Ist October, Ist January	Chief Conservator of Forest
5	Progress Report on the activities of the Grow more food campaign	..	25 th March, 25 th June, 25 th September, 25 th December	5 th April, 5 th July, 5 th October, 5 th January	Government
6	Report on Autonomous and semi-autonomous organization win which government own	..	Ditto	Ist April, Ist July, Ist October, Ist	Government

7	majority shares Quarterly statement of Expenditure of Central Aided Schemes.	5 th October, 5 th January, 5 th April, 5 th July	10 th October, 10 th January, 10 th April, 10 th July	January 15 th October, 15 th January, 15 th April, 15 th July	Government
8	Quarterly statement of Forecast of expenditure and receipt for ways and means	5 th July, 5 th October, 5 th January, 5 th April	10 th July, 10 th October, 10 th January, 10 th April	10 th July, 10 th October, 10 th January, 10 th April	Government

HALF YEARLY

1	Statement showing the name of Gazetted Officers appearing in the Departmental Examination	Ist January, 20 th July	15 th January, 5 th August	31 st January, 31 st August	Secretary, Central Examinations Committee, West Pakistan, Lahore
2	Action taken against corrupt officials independently by the Anti-corruption Department.	Last day of half year ending January and July	Last day of half year January and July	Last day of half year January and July	Government
3	List of Gazetted Officer serving in West Pakistan	..	Ist December and Ist June each year	Ist January and Ist July	Officer Incharge, Civil List, Service and General Administration Department

YEARLY

1	List Of publications issued by the Forest Department	..	..	15 th January	Controller, Printing and Stationery, West Pakistan.
2	Resin Form D.	15 th January	..	..	Conservators
3	Classified list of subordinate service and office establishment corrected up to 30 th June.	Ist July	10 th July	..	Chief Conservator
4	Forest Schools Tour Programme	Ist March	5 th March	..	Conservators and Chief Conservators
5	Annual Confidential reports on Gazetted Officers	..	Ist January	7 th January	Administrative Department
6	Indents for Universal Forms and official envelopes	15 th February	Ist March	Ist March	Conservator, Chief Conservator and Controller, Printing and Stationery.
7	Statement regarding renewal of policies	..	Ist July	..	Chief Conservator
8	Annual Establishment Form A and B	Ist August	15 th August	Ist September	Chief Conservator and Audit Office
9	Statement of additions and alterations required to the History of Services of	..	..	5 th July	Audit Office

	Gazetted Officers				
10	Indents for Vernacular Forms	15 th April	Ist May	Ist June	Conservator, Chief Conservator and Controller, Printing and Stationery, West Pakistan
11	Actual amount of the claims	..	..	Ist May	Finance Department
12	Annual Report	15 th July to 10 th August	31 st July to 30 th August	15 th October	Conservator, Chief Conservator and Government
13	Statement showing names of Chief Conservator and Conservators of Forests of and above 15 year service desirous proceeding on leave between Ist January and 30 th June of the following year and Provincial Forest Service Officers	Ist June	Ist July	15th July	Conservator, Chief Conservator and Government
14	Control Forms	15 th September	..	..	Chief Conservator and Conservator
15	Classified list of Gazetted Officer	..	Ist December	Ist June	Inspector-General of Forests
16	Estimate of commuted valued of pensions payable.	Ist January	20 th January	10 th February	Conservator, Chief Conservators and Government
17	Indents for 7 th edition code forms	15 th August	Ist September	Ist October	Chief Conservator of Forests
18	Recommendations for the grant of sanads	Ist August	20 th August	..	Conservator and Chief Conservator
19	Proof of Annual Report	..	..	15 th October Final proof, 5th December.	Controller, Printing and Stationery, West Pakistan
20	Indent of treasury and Account forms	15 th August	Ist September	Ist October	Conservators, Chief conservator and controller, printing and stationery, West Pakistan
21	Indents of Uniforms	15 th October	15 th October	..	Chief Conservator
22	Recommendation for the nomination of candidates to West Pakistan Forest School.	Ditto	Ist November	..	Conservator
23	Budget estimate of advances (House building etc)	20 th October	Ist November	15 th November	West Pakistan G Government
24	Indents of Forest English Forms	15 th December	2 nd January	Ist February	Chief Conservator and Controller, Printing and stationery West Pakistan
25	Indent of Character Rolls	15 th August	Ist September	Ist October	Chief Conservator of Forests
26	Budget Estimate of recoveries from other Government	20 th December	Ist January	10 th January	Finance Department
27	Forecasts of requirement of stores	15 th December	Ist January	15 th January	..
28	Variation Statement	10 th August	10 th September	10 th October	Audit Office

29	Budget Estimate of 10 forests	15 th November	15 th December	15 th January	..
30	Budget Estimate of 50 Civil Works	Ist December	20 th December	15 th January	..
31	Budget Estimate of 56-Stationery	Ditto	Ditto	Ditto	..
32	Budget Estimate of 57 – Miscellaneous	Ditto	Ditto	Ditto	..
33	Budget Estimate of 81 – Capital Accounts on Civil Works outside the Revenue Account	Ist January	10 th January	20 th January	..
34	Supplementary Schedule of New Expenditure	Ist January	10 th January	Ist February	..
35	Budget Estimates along with revised estimates of the current year of X-Forests	10 th December	10 th January	Ist February	..
36	Budget Estimates of 55 – Superannuation Allowances and Pension	Ist January	20 th January	Ditto	..
37	Memoranda on Budget	15 th January	Ist February	20 th February	..
38	Ist list of excesses and surrenders, under various major heads of expenditure.	10 th January	Ditto	Ditto	..
39	List of late sanctions	Ditto	Ditto	Ditto	..
40	Supplementary information in regard to leave and deputation, allowances payable in England	Ist February	15 th February	Ist March	..
41	Statement showing the amount budgeted for the West Pakistan Government for services rendered to or by the Central Government both under the receipts and expenditure heads.	15 th February	Ist March	15 th March	..
42	Revised forecasts of recoveries from other Governments	15 th March	25 th March	15 th April	..
43	2 nd List of Excesses and Surrenders, under various Major heads of Expenditure.	10 th March	Ditto	Ditto	..
44	Schemes for schedule of New expenditure of various heads	Ist August	15 th August	Ist September	..
45	Schedule of New Expenditure of various heads.	..	..	31 st December	..
46	List of major and minor works	Ist December	15 th December	Ist January	Public Works Department (buildings and Roads)
47	Cost of passage required for the year as a whole	10 th February	Ist March	20 th March	
48	Instruction for writing of confidential reports of Government servants (Annual certificate)	10 th March	15 th March	..	Chief Conservator of Forests

49	Annual return of simal planting	..	November of each year	..	Ditto
50	First List of 50 – Civil Works	20 th December	10 th January	20 th January	Public Works Department (Building and Roads)
51	2 nd list of 50 – Civil Works	10 th March	25 th March	5 th April	Ditto
52	Appropriation Accounts of 50 – Civil Works	1st August	5 th August	5 th April	Ditto
53	List of additions and alterations to existing residential buildings	1st November	5 th November	15 th November	Ditto
54	List of special repairs	10 th November	20 th November	1st December	Ditto.

- 1.16 System of marking numbers of As an invariable rule, in all official documents numbers shall be marked off according to the Pakistani system of numeration in the case of rupees and according to the English system of numeration in all other cases. Examples of both systems are given below:

PAKISTANI SYSTEM

1	One
10	Ten
100	One hundred
1,000	One thousand
10,000	Ten thousand
1,00,000	One lakh
10,00,000	Ten lakhs
1,00,00,000	One crore
10,00,00,000	Ten crores

ENGLISH SYSTEM

1	One
10	Ten
100	One hundred
1,000	One thousand
10,000	Ten thousand
100,000	One hundred thousand
1,000,000	One million
10,000,000	Ten million
100,000,000	One hundred millions

PART II – OFFICES OF DIVISIONAL OFFICERS AND THEIR SUBORDINATES

- 1.17 Telegraphic addresses have been discontinued on account of expense
- 1.18 Registers of correspondence, Form No. 46 of (i) Registers of receipts and issues of correspondence will be kept in the same books (Form No. 46). One book will be kept for correspondence with the conservator's office.
(ii) A new series of numbers will be commenced in each register book at the opening of each financial year. Circulars are to be entered in red ink.
- 1.19 Vernacular correspondence Vernacular papers may be kept in case as laid down in paragraph 1.3 and a register book may be kept in Form No. 44
- 1.20 Procedure on receipt of correspondence All letters will be opened by the Divisional Officer himself or by some one duly authorized by him. He will write on them the date of receipt, and will then cause them to be registered. The general register number and the name of the file, if any, to which they belong will be entered on them at the foot of the docket, as well as the number of the case thus:

Register N. 329

XVI-10 of 196061
Supply of Firewood

- i. All ephemeral or routine correspondence should be enclosed in cases for each year separately and on each such routine case the year in which it can be destroyed should be written. The length of time for which each kind of routine correspondence is to be kept in a matter for the discretion of the Divisional Forest officer, but once it has been fixed, it should be adhered to. Ordinarily, 3 years are enough for most routine correspondence. Each year, therefore, during September,

Divisional Forest Officer will call for all routine cases which are marked for destruction that year and he will glance through each such case to assure himself that there is no correspondence or record of a more permanent nature filed thereon, either by mistake or because of some change of circumstances. Having satisfied himself of this, he will order the papers to be destroyed; the boards being removed for further use if still serviceable.

- ii. The original accounts rendered to the Divisional Officer by Sub-Divisional officers and subordinates, and which have been filed in his office for three full years, should be similarly set aside for destruction.
 - iii. Such documents as annual or special reports correspondence relating to boundary questions to rights and privileges of other persons in the forests, to working plans and annual plans of operations, and to all subjects affecting the general management and history of the forests included in the Division, as well as all orders of Government and circulars on important subjects, should be carefully preserved.
 - iv. The Register of Reserved and Protected Forests (Form No. 1) is an important document and should be continuously retained. Forms No. 2 and should be preserved until a working plan or other report, embodying a complete account of the history and statistics during any period considered, has been prepared or revised for the forests in question. As a general rule, when monthly or annual returns have been reproduced or adequately summarized in printed working plans or administration reports, the original manuscript forms if they have been retained for at least three full years in all, may be destroyed.
- 1.21 Sub-Divisional and Range offices and officers not provided with clerks.
- (i) The above rules apply, as far as practicable, to sub-divisional and range offices also.
 - (ii) Officers who are not provided with clerks will conform, as nearly as possible, to the above rules. They may, under ordinary circumstance, dispense with copying letter, but will in that case make fuller entries of their contents in the register books.
- Correspondence between Divisional Forest Officers and their subordinates will be restricted and carried out by memo. Form. Correspondence between Range Officers and their subordinates is generally unnecessary and should be eliminated.
- 1.22 Destruction of useless documents
- The following list shows the dates after which useless documents can be destroyed :-

LIST SHOWING PERIODS FOR WHICH PRESCRIBED FORMS AND RETURNS ARE TO BE PRESERVED

Serial No.	Nature of Documents	NUMBER OF PRESCRIBED FORMS IN FOREST DEPARTMENT		Forest Account Code	Number of years for which to be preserved	Remarks
		Forest Department Code				
		6 th Edition	7 th Edition			
1	Register of reserved forests	1	1	..	For ever	
2	Control Books for working plan	2 and 3	2 and 3	..	Ditto.	
3	Record of works of reproduction and improvements	4	4	..	Ditto.	
4	Register of Receipts of timber in Depots	5	5	..	3 years	
5	Register of disposals of timber in Depots	6	..	..	Ditto.	
6	Receipts and Issues of timber in Depots	7	..	..	Ditto.	
7	Sale of timber cut and collected by Government Agency	8	..	..	Ditto.	
8	Drift timber operations	9	..	..	Ditto.	
9	Revenue from timber, etc., removed by purchasers	10	..	..	Ditto.	
10	Outstanding on account of revenue	11	..	..	3 years or until the revenue shown in the returns has been fully recovered	
11	Register of grants of forest produce. Free grants	12	..	..	3 years	
12	Register of grants of forest produce. Right holders	12	..	..	Until next settlement	
13	Bill book for timber sold from Depots	13	..	..	3 years	
14	Receipt book for payments on account of timber depots	14	..	..	Ditto.	
15	Permit book for sale of timber, etc., to purchasers from place other than from Depots.	15	..	..	6 years	
16	Receipts and Issues of stores, tools	16	..	..	To be destroyed after a new	

	and plant.				one has been made
17	Disposal of forest produce and other property seized in forest cases.	17	..	..	3 years
18	Budget estimate (manuscript)	18	..	New	1 Year
19	Applications of credits (Divisions)	19	..	..	To be kept as routine case and destroyed after one year
20	Account current with treasuries	21	..	3	6 years
21	Registers of cheques	22	..	4	Ditto.
22	Telephonic Trunk Call Register	..	..	..	3 years after last entry
23	Daily Cash Books (Officers)	24	..	5	25 years
24	Monthly Cash Account	25	..	6	3 years after last entry
25	Salary bill of Gazetted Officers	26	..	1 (C.A. code)	Not to be kept in bound registers but in loose cases being destroyed annually.
26	Salary bill of Non-Fazeted Officers	27	..	..	For ever
27	Traveling Allowance bills	29	..	..	1 year in divisions where copies are kept.
28	Revenue from sales to Public Depots	30	..	9	3 years
29	Muster Roll Forms	..	..	10	Ditto.
30	General vouchers (cancelled vouchers)	32	..	11	Petty vouchers if kept at all should be destroyed years. 25 years after all accounts close
31	Contractors and disbursers' Ledger	33	..	12	
32	Abstract of Disbursers' Ledger	34	13	13	3 years
33	Classified abstract of Revenue Expenditure	35	..	14	For ever
34	Schedule of Revenue Remittance to treasuries	36	..	15	3 years
35	Record of sanctioned works	37	..	16	For ever
36	Register of Financial results	39	..	..	Ditto.
37	Accountant-General and Controller's objection statements to Divisional Accounts.	40	..	18	3 years
38	Conservator's objection statement to Divisional accounts	40	..	17	Ditto.

39	Summary of Revenue and Expenditure	41	5	60-T	Ditto.
40	Register of cases	44	..	..	For ever, subject to quinquennial revision
41	Register of books and maps	45	..	..	Ditto.
42	Receipts and issues of documents (Divisional offices, English and Vernacular).	46	..	..	10 years
43	Receipts and issues of documents (Range office, English and vernacular).	..	..	..	Ditto.
44	Distribution of books and circulars.	47	..	..	For ever
45	Tour list of correspondence	48	..	..	For ever
46	Transfer of charge reports and papers	50	..	..	5 years
47	Annual Administration reports and subsidiary statement of Divisional Forest officers in their offices as well as other similar reports that are not printed.	..	..	..	For ever. To be bound and kept in Library routine correspondence such as objection memos., etc., being destroyed after every 3 years.
48	Manuscript Divisional Offices Estimates	..	..	..	3 years
49	Classified list of Forest Officers and sub-ordinates (Manuscripts)	72	28	..	As soon as new list is prepared and checked
50	Classified list of Forest Officers and Sub-ordinates (Printed)	..	..	..	For ever
51	Statement of changes in the subordinate establishments	73	..	7	3 years
52	Return of leave granted to subordinates	74	..	8	Ditto.

- 1.23 Submission of correspondence without explanatory notes prohibited
The submission of a mass of correspondence by any official to his superior for orders without any explanation of the matter is prohibited. A short explanatory statement explaining the issues should always be submitted with such correspondence and a definite recommendation as to the action to be taken should be made in the concluding paragraph.
- 1.24 Numbering of telegrams and teleprinters.
Telegrams and teleprinters messages must bear a correspondence number. This number should form the opening word of the telegram and teleprinters.
- 1.25 Legal status of a forest to be given in correspondence
In correspondence with the Conservator, Divisional Forest Officers must describe the legal status of a forest in referring to it by adding the words Reserved Forest, Protected Forests, etc. after the name. It is incorrect to refer as rakh.
- 1.26 Previous correspondence and subject to be quoted
Reference to previous correspondence, if any, and the subject of the correspondence should always be briefly quoted in the opening paragraph of a letter, or above its body as explained in paragraph 1.33 below.
- 1.27 Submission of official's service books to conservator
The Service books of an official should be submitted by the Divisional Forest Officer to the Conservator when he has occasion to refer to him on such subject as the promotion, reduction, leave, transfer, etc., of the official when past services are taken in account.
- 1.28 Fire report
The range fire reports should be sent in original (with such additions as the Divisional Forest Officers find advisable) to the Conservators of Forests. These reports will be returned to the Divisional Forest Officers after making the necessary entries in the Circle Fire Register.
- 1.29 Translation of vernacular documents
When submitting vernacular papers to Conservators of Forests, or Chief Conservator of Forests, any which are of importance should always be accompanied by an exact translation certified as correct by the Divisional Forest Officer himself or by some responsible person employed on the permanent establishment.
- 1.30 Agreements and maps to be placed in envelopes
Agreement deeds, maps or other documents submitted as enclosures to a letter should always be placed in envelopes and not attached to the forwarding letter by tags, pins or by stitching.
- 1.31 Copies of endorsements
Divisional Forest Officers must make copies of endorsements on letter addressed to the Conservators of Forests, copies of which they have sent to other officers. Not only should they inform him in this way as to whom they have sent copies but it may save unnecessary copying in his office.
- 1.32 Head Clerk responsible for extinguishing fire in all fire anguishes.
The Head Clerk in each office is to be made responsible:
(i) For seeing that all fires in the office fire place are extinguished before he leaves the office.
(ii) For seeing that the earth or sand kept in tins for extinguishing fire, is loose.
- 1.33 Correspondence in Memo. Form
All correspondence between officers of the Department will be in Memo. Form. For as per sample below:
**OFFICE OF THE CONSERVATOR OF FORESTS
LAHORE CIRCLE**
To,
**THE DIVISIONAL FOREST OFFICER, JHELUM
FOREST DIVISION, JHELUM**
No. , Dated Lahore, the March, 19
Subject --- Office furniture – purchase of.
Reference – Your Letter No. , dated the February, 19.
SANCTION is conveyed to the purchase of table at Rs. 15 (Rs. Fifteen only) under sub-head.
2. It is understood that fund to meet the expenditure exists in

your budget estimate for the current year.

(Sd.) _____

Conservator of Forests, Lahore

- The ordinary formal mode of address will be used to Gazetted Officers of other Department.
- 1.34 Diaries of Gazetted Officers Diaries of Gazetted officers attached to Divisions for general duty must be forwarded to Conservator of Forests for perusal. Diaries of Range Officers will be submitted to the Divisional Officers – Diaries of other subordinates will be disposed of as directed by the Divisional Officers.
- 1.35 Leave address of Officers In order to avoid delay in communicating with Government servants on leave, every Government servant must record in his application for leave the address as which the letter will find him during leave. Subsequent changes during leave should likewise be intimated to the Head of the office and should he be a Gazetted officers, to the Head of the Department as well.
- 1.36 Foreign Timber Trade Return A quarterly return showing the imports of timber from foreign territory will be prepared in each Division bordering on foreign territory and submitted to the Conservator on the 5th of the month of following the quarter to which the return relates. Each species of timber will be classified under (1) Logs, (2) B.G. Sleepers, (3) M.G. Sleepers (4) Scantlings, (5) Miscellaneous, and (6) Firewood. In calculating weight 50 cubic feet of all coniferous wood will be taken to 1 ton (27.22 Maunds). The value of all imported timber will be calculated according current market rates.
- 1.37 (i) Detailed instructions regarding printing and supply of printed forms and stationery are contained in the Government of West Pakistan, Printing and Stationery Manual, 1st edition they should be read carefully for strict compliance.
(ii) Officers below the rank of Conservator of Forests are not authorized to indent direct for standard and non-standard forms. Divisional Forest Officers will submit their indents on the prescribed from to the conservator on the following dates:-
(1) Indents for all standard and non-standard English forms in use in the Department 2nd January
(2) Indents for universal forms and official envelopes 1st March
(3) Indents for vernacular forms 1st May
(4) Indents for forms prescribed in the 7th edition, Forest Department code. 15th August
(5) Indents for Treasury and Accounts forms. 1st September
(6) Indents for stationery 1st October
Indents will be scrutinized and consolidated in the office of the respective conservator of Forest and consolidated indent for the circle forwarded to the controller, printing and stationery department, West Pakistan
All further correspondence in regard to the supply of the forms will be done by the Divisional Forest Officer directly with the superintendent/works manager to whom the indent has been passed by the controller for compliance. In case of undue delay in the supply of forms a report may be made by the divisional forest officer to the conservator.
(iii) The instruction given above apply mutandis to the indenting and supply of stationery.
- 1.38 All changes in the charges held or duties performed by members of the subordinate establishment should be reported quarterly.

PART III – CHIEF CONSERVATOR AND CONSERVATOR’S OFFICES

- 1.39 The Chief Conservator and Conservator of Forest have separate offices. The chief Conservator of Forests office is under the charge of the Divisional Forest Officer, Direction and Conservator of Forests, offices under the charge of Circle superintendents concerned. The Divisional Forest Officer, Direction, is the head of office and disbursing officer and exercises the powers of a Divisional Forest Officer in all matter concerning Chief conservator’s office. An Assistant is working as a Disburser under him.
- 1.40 Registers of correspondence (Form No. 46) Registers of receipts and issues of documents (Form No. 46) must be kept as ordered for Divisional Officers (Paragraph 1.18). There may be as many registers as will suit the requirements of the office.
- 1.41 Procedure on receipt of correspondence. The rules regarding registry and docketing of correspondence, laid down in paragraph 1.20 apply generally to chief conservator and conservator’s offices. No nothing is to be done on the original fresh receipt except stamping with date of receipt and marking to the branch concerned. All nothing should be done on a separate note portion started for each file. The note portion should bear the case No. (Office File no.) Serial No. of the note portion and page No. e.g.

Serial No. Case No. B. VIII 9
Page 1

- | | | Diary No. | | Dated |
|------|---|-----------|---|-------|
| 1.42 | List of correspondence to be sent to the conservator when on tour (Form No. 48) | | When the Chief conservator or conservator is absent on tour, a list (Form No. 48) of all documents received in and issued from the office will be sent to him daily, or as frequently as he may direct with all letter that can not be answered without reference to him and all reports and papers that it is desirable he should see. The chief conservators or conservator will return the list with his orders. | |
| 1.43 | Correspondence carried on by the conservator while on tour | | Should the chief conservator or conservator, while on tour, carry on any official correspondence which has not passed through his office, he will send there the original letters received and copies of those written by him. He will keep a camp registers books for the letter the entries being numbered consecutively as in the case of other register books. | |
| 1.44 | Destruction of useless documents | | Paragraph 1.20 and 1.22 apply to Chief Conservator and Conservator’s offices. The chief conservator and conservator’s sanction will be obtained before documents are destroyed. | |

PART IV – TRANSFER OF CHARGE

- 1.45 General On the occasion of a transfer of charge, a arrangements must be made by the two officers concerned that the reliving officer is placed in such a position as will enable him to carry on the duties of which he has taken charge in an efficient manner, and with as complete a knowledge of the property entrusted to his charge, the works in progress, and all arrangements made in connection with them, as the circumstances of the case admit.
- 1.46 Transfer Report A transfer report signed by the relieved and relieving officers, will, on the day of transfer, be submitted between two Divisional Officers and to the Government in the case of a transfer of a Conservator’s office. The relieved officer will report the transfer of divisional charge to the officers incharge of the treasuries with which he as been placed in account and will, at foot of the report, send a specimen of the relieving

		officer's usual signature, in order that the treasury officers may satisfy themselves as to the validity of the cheques presented by the relieving officers.
1.47	Account and Vouchers	The following rules elate to Conservator and Divisional Officers. The relieving officer must see that all office books are posted up to date and, in the case of cash and stock accounts, that the needful vouchers of receipts and issues belonging to the accounts of the current month are made over to him.
	Outstandings and liabilities	The relieving officer will make himself acquainted with all outstandings and liabilities on account of the Department, and state that he has done so.
	Cash	(i) The cash book will be closed, and the cash balance will be counted in the presence of both officers who will, then sign the book.
	Certificate of Transfer of charge (Form No. 50)	(ii) A certificate (Form No. 50) will be made out in duplicate and signed by both officers. These certificates will be forwarded to the Conservator or to the Government and the original will be submitted to the Accountant-General or controller concerned.
1.48	Timber and Forest produce	In the case of a transfer between two Divisional Officers, the relieving officer will take over charge of all timer, bamboos, and other forest produce, for which a certificate, in a form similar to that prescribed in paragraph 1.47 for cash, will be submitted.
	Other Property	Besides cash, timber and forest produce, the following are the main classes of property which ordinarily form the subject of transfer between Divisional Officers:-
		(1) Demarcated reserves
		(2) Plantations
		(3) Timber Depots and Research Stations
		(4) Building, Roads and Bridges.
		(5) Live-stock
		(6) Machinery, stores, instruments and tools
		(7) Books and maps
		(8) Office records
		(9) Office furniture
1.49	Examination of property by relieving officer	(i) In the transfer report, the relieving officer should state by what means he has satisfied himself o the nature and conditions of the different classes of property of which he has taken charge,
		(ii) Live and dead stock and other articles which may be at Headquarters, as well as books and maps, office records and office furniture, should as rule, be personally inspected by the relieving officer at the time of transfer, and the fact of this having been done should be stated.
		(iii) In the case of property at t distance from headquarters, the registers and other documents in which they are described should be examined.
		(iv) Officers taking over charge of Division or Ranges will see that they have received all necessary working plans and control records, forest journals, stock maps, etc., for which they be held responsible.
1.50		Gazetted Officers on general duty or placed in charge of Special works or Ranges will also be required to submit transfer of charge certificates in Form No. 50 which can be modified according to requirements in

each case.

**CHAPTER III – ANNUAL REPORTS AND RETURNS
A – ANNAUAL ADMINISTRATIONS REPORT**

- 2.1 Divisional Annual reports and returns A brief annual report, or statement of progress in each Divisions for the financial year extending from Ist July to 30th June, will be submitted to their conservator by Divisional Forest Officers on the dates and in a form hereafter prescribed. The report will be accompanied by the annual returns in forms detailed in paragraphs 2.7 and by such other returns as the Conservators may direct. Divisional reports will be written on one side of the page only. Each section of the report and each for to be headed with the name of the Division concerned. Any corrections made by the Accountant-General, Comptrollers, after the closing of June final accounts will be made in the next year's report. Paisas will be omitted from all annual report except in the case of average which should be calculated to the nearest anna.
- 2.2 Circle and Divisional annual reports On receipt of the Divisional reports the Chief Conservators will prepare complete annual reports for their respective Religion circle and forward in same chapter by chapter to the Government for consolidation in a Provincial report. The Provincial reports as finally approved will be issued to the press or printing under the signature of the Secretary, Agriculture.
- 2.3 Date of Submission of the reports The Divisional Officers and the Regional Chief Conservators will submit the various Chapters of the Reports on the following dates:

Chapter	DATE OF SUBMISSION OF THE ANNUAL REPORT		
	Section	By Divisional Forest Officers	By Conservators
I. Constitution of Sate Forests	Whole chapter	15 th July	31 st July
II. Management of state forests	Whole chapter	15 th July	31 st July
III. Silviculture	All sections	Ist August	20 th August
IV. Exploitation	All sections	Ist August	20 th August
V. Financial results	Complete Chapter	Ist August	30 th August
VI. Research and experiments	Complete Chapter	15 th July	31 st July
VII. Administration	Complete Chapter	15 th July	31 st July
VIII. Soil Conservation	Complete Chapter	15 th July	31 st July
IX. General	Complete Chapter	15 th July	15 th August

The following dates of submission of the report for printing to the Controller, Printing and Stationery Department, West Pakistan, for review:-

- (1) Date on which complete manuscript should reach press 15th October
- (2) Date of submission of Ist proof by the Press 6th November
- (3) Date of return of Ist proof to press 11th November
- (4) Date on which final proof should be supplied by Press for submission to Government 30th November
- (5) Date on which final proof should be submitted by Chief conservator to Government for approval and review. 15th November

- 2.4 The arrangement of chapter The subjects treated will be arranged as follows in all the reports, whether reports, whether Divisional, Circle or Provincial.

NOTE --- The maximum limit of the printed Provincial report is fixed at 40 pages fullscape size equal to about 60 pages in Octavo.

TABLE OF CONTENTS
CHAPTER I

CONSTITUTION OF STATE FORESTS	PAGE
Section 1. Alteration in area.	
Section 2. Forest Settlements.	
Section 3. Demarcation.	
Section 4. Forest Surveys.	

CHAPTER II

MANAGEMENT OF (A) STATE FORESTS AND (B) PRIVATE LANDS UNDER THE CONTROL OF FOREST DEPARTMENT.

Section 1. Regulation of Management	
Sub-section (a) Preparation of Regular Working Plans.	
Sub-section (b) Control of Regular Working Plans.	
Sub-section (c) Preliminary Working plan reports.	
Section 2. Communications and Buildings.	
Sub-section (a) Roads and Bridges.	
Sub-section (b) Buildings.	
Sub-section (c) Miscellaneous Works.	
Section 3. Protection of Forests.	

INTRODUCTORY

Sub-section (a) General Protection.	
Sub-section (b) Protection from fire.	
Sub-section (c) Protection from cattle.	
Sub-section (d) Protection against injuries from natural causes.	

CHAPTER III
SILVICULTURE

Section 1. System of Management	
Section 2. General Progress of Regeneration and Afforestation.	
Sub-section (a) Mainly natural.	
Sub-section (b) Mainly artificial.	
Sub-section (c) Afforestation.	
Section 3. Tending of the Growing Stock in areas not under concentrated regeneration.	
Section 4. General.	
(a) Permanent Nursery	
(b) Collection of seed	

CHAPTER IV
EXPLOITATIONS

Section I. System of Management	
Sub-section (a) Major of Forest Produce	
Sub-section (b) Minor Forest Produce	
Section II. Agency of Exploitation, outturn and value.	
Sub-section (a) Departmental Agency.	
Sub-section (b) Purchasers Agency.	

- Sub-section (c) Rights, privileges and Free grants.
- Section III. Outturn and sources of Forest Produce.
- Section IV. Stock of produce.
- Section V. Foreign imports.

CHAPTER V FINANCIAL RESULTS

- Section 1. Revenue, Expenditure and Surplus/deficit.
- Section 2. Profit and loss account.

CHAPTER VI RESEARCH AND EXPERIMENTS

CHAPTER VII ADMINISTRATION

CHAPTER VIII SOIL CONSERVATION

- 1. General description.
- 2. Survey and demarcation.
- 3. Afforestation.
- 4. Range Management
- 5. Kas training
- 6. check-daming and gully plugging.
- 7. Bunds and escapes.
- 8. Terracing and wat-bundi
- 9. Shelter-belts and wind breaks.
- 10. Nurseries.
- 11. Demonstration areas
- 12. Village cattle-watering ponds.

CHAPTER IX GENERAL

- 1. Cantonment Forests.
- 2. Location Forests.
- 3. Game preservation.
- 4. Forest Industries.
 - (a) Resin Extraction
 - (b) Jallo Rosin Factory
 - (c) Mulberry.
 - (d) Ephedra (Crude drugs)
 - (e) Mazri
 - (f) Mulberry leaves.
- 5. Development schemes.
- 6. Tree Planting week.
- 7. Publicity
- 8. Relations with public.
- 9. Publications.

The prescribed returns in Forms No. 7 to 30 and appendices :-

- A Statement showing alterations in area administered by the Forest Department.
 - (i) Additions.

- (ii) Subtractions.
- (iii) Transfer within the Forest Department.
- B Statement showing various classes of Forests Administered by the Forest Department, Revenue and Defense Department.
- C Report on Management of Forests in Frontier agencies.
- D Area statement showing types of Forests in West Pakistan.

- I Statement showing progress of concentrated regeneration (mainly natural) upto 30th June, 19
- II Statements showing imports of timber, firewood and bamboos during the year 19 . – 19.

- 2.5 General instructions regarding the compilation of Annual Report
- In compiling the Provincial report the following principles should be strictly followed:-
- (1) The maximum limit of 60 pages of print should be printed at the heading of the table of contents and it should not be exceeded unless the writer has previously obtained the permission of the Government to exceed it in a particular year.
 - (2) All reports should contain only the explanation of really important or suggestive variations in the statistics and the statement of really note worthy facts in the history of the year's administration.
 - (3) No more paraphrasing and reproduction of the statistics should be allowed in the report.
 - (4) All attempts to offer explanation of variations in this figures which are not important or unusual, should be excluded unless the fact alleged in explanation is in itself important enough to demand mention.
 - (5) The idea that it is necessary to say something should be discarded and it should be recognized that the briefer a report is the better, provided that it says all that is needed for an intelligent comprehension of the meaning of the facts and figures and of the salient features of the year's works.
 - (6) The introduction into the text of large number of tables of statistics in the appendices destructs from the value and interest of a report while it greatly increases the cost of printing. The body of the report should be almost entirely in narrative form. It will occasionally be necessary to introduce tables of comparative statistics into the narrative, but such tables should be brief and simple and their number rigidly restricted.
 - (7) The number of maps or diagrams should be restricted, they should be placed at the beginning or end of the volume.
 - (8) Tables of statistics should side-ways on a page unless distinct economy of space thereby results.
 - (9) Pages of tabular matter should be printed with the columns left entirely or almost entirely blank.
 - (10) It is seldom necessary to give in full detail and in separate column in tables of statistics the corresponding figures for the preceding year. In most cases it will be found sufficient to give corresponding figures for the total only, by means of one additional line at the foot of the table.
 - (11) Cross references between the statistical tables and the paragraphs discussing them should be given by means of marginal entries on the paragraphs and, if possible, also on the tables themselves.
 - (12) The directions of the Government that reports should be printed in solid pica and extracted matter and appendices in small pica should be strictly followed.

The following additional instructions are issued for the guidance of Divisional Officers:-

- (1) It is not infrequently found that Divisional Officers are content to leave the compilation not only of statistics but also of the comments upon and explanations of the features of the year's work to their office. Reports as compiled are very badly worded and frequently contain comments and explanations which are entirely inadequate or even incorrect; emphasis is often laid on point of little important while important features of the year's work are omitted or quite inadequately dealt with.
- (2) When it is started that inadequate explanation such as the following are by no means rare in annual reports received, the necessity for improvement will be evident:-
 - (i) The increase in the area burnt is due to a greater number of fires.
 - (ii) The lager outturn removed is due to more timber being extracted.
 - (iii) The increased revenue is due to increased sale.
- (3) As far higher standard in divisional annual report can be obtained with very little additional work and it is desired that the divisional officers will write their own reports bearing in mind that their clerks should only be required in the first instance, to put up the forms and statistics upon which the Divisional Forest Officers will comment. It is for the Divisional Officer to call for any cases or papers he wants when he finds himself unable to furnish an adequate explanation of the statistics from his own knowledge of the work in his division. They are themselves responsible for the accuracy of forms and statistics and must satisfy themselves of the accuracy to the best of their ability before submitting their reports to Conservators.
- (4) While the annual report is not to be used for the purpose of discussing theories or of propounding views not relevant to the actual results of the year's work. It can undoubtedly be made an interesting and informative document. Divisional Officers must treat it as a valuable record or progress (or otherwise) in forest conservancy and managements during the year.
- (5) The Provincial Reports should be compiled from accurate information supplied by the Divisional Forest Officers to produce an interesting and information reports for the perusal of the Government and the Public and a record of value of the Forest Department of year's operation.

2.6 Detailed instructions regarding the writing of various chapters. The following instructions are laid down for the writing of various chapters, their sections and sub-sections.

**CHAPTER I
CONSTITUTION OF STATE FORESTS
FORM 7 AND APPENDIX D**

1. Alteration in area Form 7. This section should give concisely the areas added or excluded during the year together with the reasons for addition and exclusions. The following classes of lands under the control of the Forest Department will be dealt with separately:-
 - (i) Government forests :-
 - (a) Reserved
 - (b) Protected
 - (c) Unclassed or public forest lands; and
 - (d) Leased forests; if any.
 - (ii) Canal and Road avenues and plantation
 - (a) Canal Avenues

- (b) Canal Plantations
 - (c) Public works department roads; and
 - (d) District Board or Municipal roads, if any:
- (iii) Private Lands:-
- (a) Section 39 closures; and
 - (b) Chos Act closures.
- (iv) Guzara Forests
- (v) Tribal areas and other areas of which a special mention will be made in the heading.

The Divisional Forest Officers should classify those areas working circle by working circle in the form given below:-

APPENDIX D
STATEMENT OF AREAS UNDER CONTROL OF THE FOREST DEPARTMENT, WEST PAKISTAN
FOR THE END _____
(AREA IN ACRES)

Circle	Division	Range	Grand total area as per last report	FORESTS					Range Lands		Grand Total	Area under sanctioned working plans	Area under sanctioned working scheme	Area not under sanctioned plans or schemes	REMARKS
				Coniferous	Hill Plateau scrub forest	Riverain or bela forests	Irrigated Plantation	Coastal Forests	Plains inland scrub (range Land)	Plateau Range Lands					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				State Private	State Private	State Private	State Private	State Private	State Private	State Private	State Private				
	A	A													
	B	B													
	C	C													
		A													
		B													
		C													
		A													
		B													
		C													
	Total														

Note: Necessary remarks for additions and alterations made during the quarter should be quotes.
(2) Column 12 will be total of Column 12 will also be total of column 13 to 15

- The Chief Conservator will address each year the Heads of the Revenue and Defence Departments for information as to what areas of forest lands under their control were brought under the various enactments during the year and classed in the four classes of Government forests given above. This information also will be shown in Form 7, 7A, 7b and Appendix D.
- 2 Forest Settlement The progress made in forest settlement will be recorded; the area finally settled during the year, that under settlement and the cost and agency employed will be given. An estimate of the area still to be settled should be added together with suggestions for the future.
- 3 Demarcation Demarcation of (a) government forests and (b) other lands under the control of the Forest Department should be treated separately. Cost of demarcation of section 38 and other private lands will be charged under B-I-(iv) as a separate project. In annual report, Chapter VIII, this cost will be also shown as Soil Conservation charge.
The length of boundary (a) demarcated and (b) repaired during the year should be noted, differentiating between external and internal boundaries. The method employed and its cost per mile should be stated, and an estimate made of the work still to be done.
- 4 Forest Surveys Form 10. A short report by the circle Superintendent, Survey of Pakistan Department should, where necessary, be entered have followed by a brief notice of local surveys if undertaken. The section should close with an estimate of the amount of surveys work still outstanding.
The chapter should end with a statement of the total expenditure under the head "Constitution of State Forests"

CHAPTER II – MANAGEMENT OF (A) STATE FOREST AND (B) PRIVATE LANDS UNDER THE CONTROL OF THE FOREST DEPARTMENT (FORM 11)

(A) STATE FORESTS

1. Regulation of Management:-

Form 11

- (a) Preparation of regular working plans -- under 'preparation' should be mentioned the area for which working plans were sanctioned during the year and the area for which working plans were under compilation. In each case the system of working prescribed or proposed should be recorded; and in the case of completed plans the cost per square should be given.
- (b) Control of Regular Working --- Under 'Control' a summary of the over all position of fellings in the Division will be given for each working Circle showing the deficit and advance fellings in terms of year-fellings (for headings consult A.R. Form
- (c) Preliminary Working Plans Reports --- A brief note on the reports submitted or under compilation should be given here.

2. Communication and Buildings:-

Form 12

- (a) Roads, bridges, tramways, rope ways, etc., -- This subsection includes tramways, rope ways, slides and all other forms of extraction lines, special repairs to roads, etc., should be shown separately from usual repairs. The information should be sub-divided under the heads "New Works", 'Special repairs', 'ordinary repairs'. If the works were of some magnitude details of interest may

be given regarding their nature. Cost of 'temporary' works if any, should be given in total separately. The following form should be used to summaries the cost:-

NATURE OF WORK	TOTAL COST OF		AVERAGE COST OF PAST 3 YEARS
	YEAR UNDER REPORT	PREVIOUS YEAR	
New Works Special Repairs Ordinary repairs	Rs.	Rs.	

- (b) Building – Here again the information given should differentiate between ‘New works’, ‘special repairs’, ‘ordinary repairs’, but no details are required save for new buildings and special repairs. The cost should be given in totals only in the form given below:-

NATURE OF WORK	TOTAL COST OF		AVERAGE COST OF PAST 3 YEARS
	YEAR UNDER REPORT	PREVIOUS YEAR	
New Works Special Repairs Ordinary repairs	Rs.	Rs.	

- (c) Miscellaneous Works – Compounds walls, etc., -- A short paragraphs may be devoted to a brief description of any miscellaneous works of interest. Otherwise a brief statement of the cost will suffice.

**2. Protection of forests – Forms 13, 14, 15, 16, and 17:-
INTRODUCTORY**

Summary of offences as may be given and commented upon. Short paragraphs regarding any other executive measures taken for the protection of the forest land or produce should be added.

- (a) General Protection – Form 13 – This sub-section is of importance. The total number of forest offences which came under observation during the year should be compared with the average number of offences of the past three years. In the same way the number of offences of the year under the head (i) injury by fire; (ii) Unauthorized feeling of removal of produce; (iii) Unauthorized grazing, and (iv) other offences including unauthorized lopping should be compared, the reasons for any marked increase or decrease being given.
In another paragraph the number of cases compounded and brought to court should be considered together with the percentage of convictions obtained. The cases remaining unenquired or pending at the close of the year be commented upon, particularly when the balances are large. The sub-section should close with comments as to undetected cases and the nature of the punishment inflicted by the magistracy in important forest cases.
- (b) Protection from fire – Forms 14 and 15 – The sub-section should open with a statement of the different methods employed, i.e., fire lines, patrols, departmental burning etc., and the work done under different methods, following by information as to the area under

regular protection and the percentage of success attained, and its cost per square mile. The origin of fire should be considered under the following heads:-

- (i) Those originating in departmental fire conservancy operations.
 - (ii) Those crossing over fire traces.
 - (iii) Those due to carelessness or accident by outsiders.
 - (iv) Or to unknown causes.
 - (v) Those originating from intention or malice.
- (c) Protection from Cattle – Form 16 – The percentage of forests open to – (i) grazing and (ii) browsing to the whole area may be mentioned. The number of cattle impounded as compared with the average number of the last three years should be noted and reasons given for any marked changes in these number. The injury done by cattle, the means taken to prevent such injury and their results should be recorded.
- (d) Protection against injuries from natural causes – Form 17 – This sub-section should be of interest. Any special danger threatening the forests, such as insects, parasites, climbers, floods storms, snow, etc., should be mentioned together with the measures taken to avert these dangers.

B. PRIVATE LANDS UNDER THE CONTROL OF THE FOREST DEPARTMENT

The report should follow the lines laid down for Government forests.

CHAPTER III – SILVICULTURE

1. System of Management – Form No. 18 Appendix I. Give general remarks regarding the various systems adopted in the Division or Circle.
2. General progress of regeneration and afforestation --
 - (a) Mainly natural
 - (i) Concentrated – Refer to Appendix I and comment on the progress of regeneration and give general remarks. Add short paragraphs regarding the progress of regeneration under different systems of management commenting on the natural regeneration and explaining glaring failures of regeneration. It is for Divisional Officers to say when an area has been completely regenerated. This stage may be reached when one or more secondary felling have been made and is always so when a final felling has been completed. A detailed list of all area allotted for natural regeneration by seed under concentrated systems of regeneration should be kept in divisional offices and examined annually before writing the report with a view to striking off areas in which
 - (ii) Not Concentrated – Here give short paragraphs commenting on the progress of natural regeneration of forests under the selection systems and of protections of forests.
 - (b) Mainly Artificial – This should be treated under the heads of (i) Regular plantations, (ii) Taungya plantations, and (iii) any other forms of artificial reproduction. Nursery work and the costs per acre of sowing and planting is to be dealt with as well as the total expenditure and the total extent of the work carried out.
 - (c) Afforestation – Under this head are included the (i) Irrigated plantations (ii) Pabbi Afforestation work (or of future work of a similar nature). Give a statement showing the progress made with the formation of new irrigated plantations during the year and comment on the success or otherwise of the operations and any modifications in technique introduced. Costs per acre on the formation of irrigated plantations are to be dealt with in detail. Give in a separate paragraph statement showing the re-stocking of areas planted in the previous years, which for some reason or other had failed, together with costs. The availability (or otherwise) of water in sufficient quantity from the Irrigation Department should be

commented on in separate paragraphs. In the end two paragraphs on dealing with the temporary cultivation leases, and the other with the revenue realized from these leases, as also expenditure incurred on formation of irrigated plantations and on reboisement work should be added.

3. Tending of the growing stock in areas not under concentrated regeneration:-

Give a short note on the various operations, viz., improvement fellings, stubbing out of kana grass, weeding, burnings of debris, etc., in such areas in short separate sub-paragraphs. Area over which such operations are carried out and their costs per acre should also be given

4. General :-

Here give the total expenditure incurred on regeneration afforestation and tending, etc., works during the year and compare it with the previous year.

- (a) Permanent Nursery – Permanent nurseries formed to raise plants for a afforestation purpose will be dealt with in this section and information about them will be supplied in the following temporary nurseries in regeneration areas of plantations are excluded;
 - (i) Name
 - (ii) Location
 - (iii) Year
 - (iv) Area in acres.
- (b) Seed Collection – Information regarding collection, etc., of seed should be given in this section.

Species	Quantity	Total Cost	Cost per Maund of		Remarks
			Year under report	Last year	
	Mds.	Rs.	Rs.	Rs.	

CHAPTER IV – EXPLOITATION (FORMS 19 AND 20)

1. System of Management

(a) Major Forest Produce -- Form 19.

The area worked during the year under various ‘systems of management’ will be classified working circle by working circle – under the different systems stated in the table given below:-

System of Management	AREA (ACRES)	
	Total	Worked during the year
(a) High Forests		
(i) Clear felling		
(ii) Shelter-wood		
(iii) Selection		
Total....		
(b) Coppice		
(i) Simple coppice		
(ii) Coppice with standards		
(iii) Coppice selection		
Total.....		
Grand Total.....		

(b) Minor forest produce – Form 20

The minor forest produce include the following:-

- (i) Resin
- (j) Bamboos
- (k) Grass
- (l) Grazing
- (m) Medicinal plants
- (n) Stones
- (o) Honey
- (p) Miscellaneous

Summaries of Annual Report Forms 19 and 20 showing the quantities extracted and values received should be given and compared with those received last year and averages of the preceding three years. The disposal of minor forest produce should be explained. Efforts made with a view to increase the utilization of minor forest products may be touched upon.

2. Agency of exploitation, outturn and value --

Give for major as well as for minor forest produce:-

- (i) Outturn percentage by various agencies in the following table;

Year	Particulars	MAJOR FOREST PRODUCE EXTRACTED						MINOR FOREST PRODUCE		
		TIMBER			FIREWOOD			Kind	Quantity Maund	Value
		Cft.	%	Value	Cft.	%	Value			
1950-51	Example Departmental Purchasers Free grantees Right-holders, etc....	150,000 200,000 500 49,500	38 50 .. 12					Resin Bamboos Grass Grazing Medicinal Plans.	Mds.	Rs.

								Stones		
								Honeys		
								Miscellaneous		
		400,00								

- (ii) Cost of felling, sawing, carriage, floating, overall per cft. Of timber and per 100 cft. Stacked of firewood.
 - (iii) Royalty per cft. Of timber and per 100 cft. Stacked of firewood and other produce extracted by purchasers.
 - (iv) Statement showing market prices illustrated by graphs to show their tendency.
3. **Rights, Privileges and Free grants** -- Any appreciable increase or decline in the exercise of rights, etc., should be explained.
Any large grants made during the year may be mentioned and explained.
Grant of firewood to subordinates should be shown under free grants in Form 19 and recovery of cost of conversion, carriage, etc., should be given in a footnote.
4. **Outturn and sources of Forest Produces** – This section should give the summary of the preceding three sections. The total number of animals grazed during the year should be given and then converted into animal mouth grazing units and shown separately under camels, buffaloes, kine, goats and sheep, etc.
5. The stocks of produce in hand at the beginning and the close of the year will be compared in Form NO. 21
6. A summary of foreign imports detailed in Appendix II will be given.

CHAPTER V – FINANCIAL RESULTS
Financial Results – (Forms 23 and 22)

- (a) Revenue, Expenditure and surplus/deficit – A comparison should be made of the of the income and expenditure of the year and the preceding year and the average of the past three/five years in the table given below. The Divisional Forest Officers should show the revenue and expenditure by major heads:-
Revenue .. A.B.C.D. and E.
Expenditure .. B. and C.

Head	Year 19 .			Preceding Year			Average of past 3/5 years
	Government Forest	Other areas	Total	Government Forest	Other Area	Total	

REVENUE							
1. Major forest produce including revenue from drift timber.							
2. Minor forest produce including revenue from forests not managed by Government.							
3. Other revenue...							
4. Deduct --- (i) Refund (ii) 50:50 basis share							
Of the irrigation department from canal revenue and plantations managed by the Forest Department, if any.							
Total Revenue...							
EXPENDITURE							
1. Extension, Constitution, improvement and exploitation of forest property.							
2. Administrative, Executive and protective charges							
3. Interest on capital expenditure and loss or gain by exchange.							
Total Expenditure.....							

SURPLUS/DEFIT

- (b) Profit and Loss Account – The Profit and Loss account will be prepared in the following form (figure fictitious).
Profit and Loss Account for the year 1950-51

Dr.	Rs. (Lakhs)	Cr.	Rs. (Lakhs)
1. Stocks of timber and other produce in forests and at launching depots on 31 st March 1950 as per form No. 22 for 1949-50	3.25	1. Stocks and timber and other produce in forests and at launching depots on 31 st March, 1951, as per form No. 22 for 1950-51	3.92
2. Timber in transit in river on 31 st March, 1950, as per foot note to form No. 22 for 1949-50. Less depreciation at 10 percent.	0.46	2. Timber in transit in rivers on 31 st March, 1951, as per foot-note to form no. 22 for 1950-5	0.48
3. Stocks of timber, et., in sale depots on 31 st March 1950 per form 22 for 1949-50.	0.62	3. Stocks of timber etc. in sale depots on 31 st March 1951 as per form no. 22 for 1950-51	0.82
4. Revenue expenditure for 1950-51	25.67	4. Net sale for the year 1950-51	29.98
5. Interest on capital Expenditure	3.78	5. Met deficit	0.12
6. Depreciation on stores, tools and plant as per form No. 23 for 1950-51	0.57		
7. Pensionary charges	0.98		

Total	35.28	Total	35.28
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For further instructions please see Forms No. 22 and 23 in paragraph 28.

CHAPTER VI – RESEARCH AND EXPERIMENTS

This chapter should be devoted to a record of research and of experiments made in the introduction of new species or in the utilization of indigenous growth. A brief but interesting record should here be maintained which may be of use in extending the scope of economic forestry.

The Secretary Agriculture will prepare a report for the whole province which will be sent the Inspector-General of Forests, Pakistan Government, Rawalpindi. A summary of the Provincial report on research will appear in this place in the annual report.

CHAPTER VII ADMINISTRATIONS

This chapter should deal with administration under the following heads:-

- (i) General
- (ii) Re-organization of Circles, Divisions, Ranges, etc.
- (iii) Establishment :-
 - (a) Gazetted
 - (b) Subordinate:- Permanent, Temporary.
 - (c) Clerical:- Permanent, Temporary.
- (iv) Services and conduct of officers.
- (v) Casualties.
- (vi) Office inspections.
- (vii) Action taken against corrupt officials.
- (viii) Miscellaneous.

In the Divisional Reports the Divisional Forest Officers should give the number of days spent by them on tour and compare it with the figures for the previous year and the average of the past three years.

CHAPTER VIII -- SOIL CONSERVATION

This chapter should deal with Soil Conservation Works carried out in private lands under the control of the Forest Department and measures adopted or considered necessary to check erosion in them. All expenditure incurred on such works except demarcation should be shown in the tables given below. Expenditure on “demarcation” on section 38, areas should be given in this Chapter.

- 2. Survey and Demarcation -- This will include all survey conducted in private lands for afforestation, check-damming, Kas training and guide channels. Kind of survey should also be stated. The information should include;
 - (a) Total area surveyed
 - (b) Cost incurred.
 - (c) Cost per acre.
 - (d) Total cost of demarcation.
- 3. Afforestation

- (a) General – This will be classified as bela lands, ravined area, hill tracts, and plains. Forms used to show progress of works for each type separately will be similar to those prescribed for afforestation in Government forests under Chapter III.
- (b) Afforestation of torrent beds –

Nature of Work	Area (acres)	Cost of			Total Cost	Cost per Acre		REMARKS
		Plants or seed	Planting or sowing	Irrigation		Year under report	Last Year	
1. Planting of Kana 2. Planting of tree species 3. Sowing.								
Total								

4. Range Management – In the range lands like Quetta – Kalat Divisions and some parts of former Sind and Punjab, the rain falls is too low and erratic to guarantee the growing of barani crops and the irrigation water is available for very small area. In order to improve the economy of this tract, it is necessary to improve the range land so that they become capable of producing enough for age for the livestock. With this objective in view the work done on the Range Development Projects should be described.
5. Kas training – The purpose of training should be explained and the work done should be given in the form given below:-

Nature of spurs	Total length (foot)	Total Cost	Cost per food length	Average cost per foot length of last year.
1. Wooden 2. Stones 3. Live hedges (by species)	(Rs.)	(Rs.)	(Rs.)	(Rs.)
Total.....				

II – Guide Channel

Serial No.	Length	Earth Work (Cft.)	Total Cost (Rs.)	Cost per 100 (Cft.)	Average cost per 100 Cft. For last year
			(Rs.)	(Rs.)	(Rs.)
	Total.....				

6. Check-damming and gully plugging – All work done to check erosion and establish vegetation should be given in the follow-

Nature of Check-dams etc.	Quantity etc.	Cost including carriage and	Area (acres)	Cost per	Average cost for the past year per

		extraction		100 Cft.	Acre	100 Cft.	Acre
1. Stone				(Rs.)	(Rs.)	(Rs.)	(Rs.)
2. Earth							
3. Brushwood							
Total....							

* Head loads should be converted into cubic feet.

7. Bunds and escapes – All bunds and escapes constructed to reclaim land for cultivation, afforestation and counter-erosion and escapes to regulate the flow of surplus water should appear in the form given below:-

Nature of bund or escape	Area to be reclaimed	Cost			Cost per acre reclaimed	
		Owner's share	Govt.'s share	Total	For the year	For the preceding year
1. Pakka stone masonry bund	(i) Reclamation bunds					
2. Pakka brick masonry bund						
3. Dry stone masonry bund						
4. Earth bund						
5. Mixed dry stone or brick and earth bund	(ii) Escapes					
1. Pakka bricks, masonry						
2. Pakka stone masonry						
3. Pipe						
4. Pitched stone						
Total.....						

8. Terracing an wat-bundi – Salinity given to individuals for terracing and for wat-bundi of cultivated fields should be shown in the following forms:-

Nature of Work	Area (acres)	Subsidy given	Subsidy per acre	REMARKS
1. Terraced only				
2. Wetted only				
3. terraced and wetted				
Total.....				

9. Shelter-belts and wind breaks – All works designed to check wind erosion in private cultivation as well as waste lands should be given in the following form. Shelter-belts (which include more than one row of trees) should be shown in area units and wind breaks (which are single rows) should be shown in liner units.

Nature of Work	Total	Total Cost	Cost per	Average cost of the
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	Acres Miles		acre/miles	preceding year per acre/mile
1. Shelter-belts				
2. Wind-breaks				
Total....				

10. Nurseries – All charges on nurseries made for soil conservation works on private lands and for distribution to the public on planting days sponsored by the Forest Department will appear in this section.

1. Total area under nurseries ... Acres
2. Total cost incurred ... Rupees.

11. Demonstration areas – Demonstration areas established to educate the public in soil conservation operations should be dealt within appropriate sections, but summary of works and cost should be shown in the form given below:-

PREVIOUS DEMONSTRATION AREAS			STARTED DURING THE YEAR			TOTAL UP-TO-DATE		
No.	Area (acres)	Cost (Rs.)	No.	Area (acres)	Cost (Rs.)	No.	Area (acres)	Cost (Rs.)
	Total.....							

CHAPTER IX – GENERAL

This chapter should deal with any special matter of interest which does not fall under any of the previous heads such as:-

(1) APPENDIX C

- (1) Game Preservation
- (2) Forest Department
 - (a) Resin
 - (b) Paper
 - (c) Sports Goods
 - (d) Others
- (3) Development Scheme
 - (a) Sanctioned by the Central Government
 - (b) Sanctioned by the Provincial level.
 - (c) Sanctioned by the District Level.

The information should be given in the following form:-

- (1) Name of Circle
- (2) Name of Division.
- (3) Name of scheme
- (4) Area
- (5) Amount spent of brief note.

Village cattle watering ponds – This section should show all subsidy given for digging cattle-watering ponds as a soil conservation measure as under:-

- (a) Number of ponds dug.

- (b) Government subsidy
- (c) Average Government subsidy per pond.

Planting Days – All expenditure incurred on the distribution of plants for the observance of planting days should be shown as under : pay and traveling allowance of the staff employed on this work is not to be included.

- (a) Number of plants distributed, by species, i.e., Shisham Mulberry, bakain, etc.
- (b) Cost of raising plants.
- (c) Cost of carriage of plants
- (d) Total Cost.

Relations with the public – A general review of the relations of the Department with the public should be given. Reaction of the public to the Planting Day programmes should be detailed.

Publicity – Activities of the publicity staff and the equipment for publicity should be commented upon and the following information given:-

- (i) Number of villages.
 - (a) Where movies and slides were shown
 - (b) Where simple talks were given.
- (ii) Total cost on publicity including-
 - (a) Pay and traveling allowances of special staff employed.
 - (b) Cost of new equipment and running charges.

2.7 Returns to accompany the The following returns should accompany the Provincial and Provincial and Divisional Annual Divisional Annual Reports:-
Reports.

FORM NO. 7

- (i) Area of Reserved Forests
- (ii) Area of protected forests
- (iii) Area of unclassed forests
- (iv) Area of leased forests.
- (v) Area under section 38 Forest Act.
- (vi) Chos Act.
- (vii) Guzara
- (viii) Commoval Forest

- Form No. 7-A (Forest Area (In square mile) showing the type of forest indicating timber etc.
- Form No. 7-B Area classified according to type of wood.
- Form No. 8 Progress made in and expenditure incurred on Forest settlement.
- Form No. 9. Demarcation and maintenance of boundaries.
- Form No. 10. Forest Area surveyed and under survey.
- Form No. 11. Progress made in working plans.
- Form No. 12. Communications and buildings
- Form No. 13. Prosecution for breaches of forest rules
- Form No. 14. Area of forest tracts protected from fire
- Form No. 15. Causes of forest fires
- Form No. 16. Areas open and closed to grazing
- Form No. 17. return of grazing in State Forests
- Form No. 18. General progress of regeneration and afforestation

- Form No. 19. Outturn of timber and fuel and agency of exploitation.
- Form No. 20. Outturn of minor forest produce.
- Form No. 21. Account of timber and other produce cut or collected by Government agency and brought to depots, sold locally or otherwise disposed off.
- Form No. 22. Abstract showing the value of timber and other produce at sale depots.
(Abstract showing the value of Live and Dead Stock)
- Form No. 23. Summary of Revenue and Expenditure for the Province.
- Form No. 24. Revenue received and outstanding on account of Revenue.
- Form No. 25. Outstandings and Liabilities on account of contractors and disbursers
- Form No. 26. Foreign trade – (Imports) Wood and Timber
- Form No. 27. Foreign trade – (Exports) Wood, Wood Products and minor forest produce).
- Form No. 28. Inland (Raid and River Borne) Trade Wood.
- Form No. 29. Coastal Trade – Forest Products
- Form No. 30. Soil Conservation Works in Soil Conservation Project.

No additional return giving in a different form the information contained in the above statements shall be submitted Any other appendices that may be inserted should be strictly limited to the Illustration of important material points mentioned in the annual report.

The following appendices are prescribed: -

- A- Statement showing alteration in area administered by the Forest Department.
 - (i) Addition.
 - (ii) Subtractions.
 - (iii) Transfer within the Forest Department.
- B- Statement showing various classes of forests administered by the Forest Department, Revenue and Defence Department.
- C- Report on Management of Forests in Frontier Agencies.
- D- Area statement showing types of forests in West Pakistan.
 - (i) Statement showing progress of concentrated regeneration (mainly natural) up to 19 19 . 19 .
 - (ii) Statement showing imports of timber, firewood and bomboos during the year 19 19 .

Statistical Appendices.

- Note. (I) The Accountant General and Comptroller will prepare Form No. 25 for Circle sunder his audit a forward it to the Conservators. Those forms as consolidated for the Province, will be inserted in the annual report over the Accountant General/Comptroller's signature.
- Note. (ii) All the forms will be prepare for the financial year.
- Note. (iii) Except in Form No. 25 fractions of rupees, squares mile, acres or cubic feet. If exceeding one half will be taken as a full rupee, square mile, acre, or cubic foot, as the case may be. If one half or less, they will be omitted.
- Note. (iv) In the West Pakistan, which contains more than one Conservator's charge the figures with details for each Circle should be brought together into a single table with a grant total for all the Circles instead of a separate series of statements for each Circle.

2.8 Detailed instructions regarding Form No. 7 (Area of Reserved, Protected, Unclassed and Leased Forests) come under section 38, Chos Act, Guzara, Divisional Forest Officers will prepare this form by Ranges and the figures must agree with the total Form No. 7-A, 7-B and Appendix D.

- Form No. 7-A. In Column 2 there should be given merchantable, unprofitable or inaccessible type of forests. The totals should tally with Form No 7.
- Form No. 7-B. Area classified according to type of wood. In this form there should be given softwood (coniferous) and hard wood and total should tally with Form No. 7.
- Form No. 8. (Progress made in, and expenditure incurred on, Forest Settlements). Totals for Divisions should be given.
- Form No. 9. (Record of demarcation and maintenance of boundaries). As indicated by the heading of column (1) the information given in this form should be confined to totals for each division, with a grand total for the Circle. G The entries in column (5) should equal the total of those in column (2), (3) and (4), while the ninth column should be the total of columns (5) (6) and (7), (8), column (6) is not intended to include any boundaries which do not require demarcation, as they will be shown in column (7). Where surveys have not been completed, the entries in column (6) and (7) must be estimated.
- Form No. 10. (Forest area surveyed and under survey). This form should be restricted to a record of surveys made by Survey of Pakistan. The totals of 2,3,4,5,6 and 8,9 and 10 should show the area remaining to be surveyed and this total should be equal to Form No. 7 When a tract which a tract which has already been shown as surveyed is resurveyed in a more elaborate manner the area entered for the year under the head of the superior survey should be deducted from the area for previous years shown under the head of the inferior surveys, the alteration being explained in the column of remarks.
- Form No. 11. (Progress made in Working Plans). This form is required in divisional abstracts only for each class of forests separately.
- Form No. 12. (Communications and Buildings). Only totals by division should be given. No further details of expenditure are necessary except that an abstract should be made out at the end giving the totals of the various items. These totals should tally with the figures given in Form No. 23.
- Form No. 13. (Register of breaches of Forest Rules). Only totals by divisions should be given.
- Form No. 14. (Area of forests protected from fire). Information should be given for each range only, with totals for e.g., chil, deodar and kail, irrigated plantations and poplar forests should be entered in Column 6.
- Form No. 15. (Causes of forest fires). A Divisional abstract is all that is required.
- Form No. 16. (Area closed and opens to grazing). This form should be filled in by divisions only for each class of forests separately.
- Form No. 17. (Return of grazing in State Forests). Information should be shown separately for each class of forests.
- Form No. 18. (General progress of regeneration and afforestation). This form has now been simplified considerably. The information is required in division and circle totals with a grand total for the province. The column "Cost of regeneration, including tending, and" (will comprise the following expenditure: -
Total B. I. (iv) b as per Form No. 23.

- Total B. I. (iv) b as per Form No. 23.
Total 65. Capital Outlay on Forests as per Form No.23.
- Form No. 19. (Outturn of timber and fuel and agency of exploitation). Only divisional totals are to be given for each class of forests separately. It is not necessary to show separate figures for the several methods of exploitation, but if desired, the outturn of the different classes of timber may be given.
- Form No.20. (Outturn of minor forest produce). An abstract for the whole circle, showing the outturn from each class of forest separately but without details for divisions will suffice. The different kinds of produce to be shown separately may be left to Conservator, who will, apart from receipts on account of grazing and fodder grass and of bamboos, which should invariably be shown separately, confine themselves to items of revenue which are important in their circle and show the rest in one entry under the head "Miscellaneous".
- Form No. 21. (Account of timber and other produce cut or collected by Government agency and brought to depots, sold locally, or otherwise disposed of). For all purposes of superior control and statistics it will suffice if the opening balances, the receipts and disposals during the year (taking into account all the various sources) and the closing balances are given in lump sums for each division under the main heads of timber, firewood and minor forest produce only. If any one kind of wood possesses a special value its transactions may be shown separately from those in woods of other descriptions.
- Form No. 22. (Abstract showing the value of live and dead stock). In preparing this form the depreciation on stock store, tools and plants should be taken into account. A footnote should always be given showing the rate and amount of depreciation calculated and deducted.

Receipts	Disposals
Received from the forests in depots and sold locally.	Removed by purchaser from depots.
Received by conversion in depots.	Sold locally, Converted in Depots.
Received by transfer from sale depots.	Lost or written off as useless.
	Used by the Department. Transferred to other sale depots.

The following schedule shows the percentage of depreciation fixed for various types of dead stocks: -

	<u>Per cent</u>
1. Building Kacha-Pacca.	2 1/2
2. Buildings Kacha.	10
3. Furniture	10
4. Iron safes	1
5. Tent, &c., (Plain)	10
6. Tents &c. (Hills)	20
7. Tools and survey chains	20
8. Tapes	25
9. Mathematical instruments and steel tapes	5
10. Tramways and machinery	5
11. Plain leather goods	15
12. Ropes, Steel	15
13. Ropes, Manila	25

14.	Fencing wire	7 1/2
15.	Miscellaneous.	20

The rate of depreciation of the live stock will be fixed in each case at the discretion of the divisional office.

Owing to the importance of the above forms in the preparation of the Provincial Profit and Loss Account, the greatest care should be taken by the Divisional Officers in seeing that the figures entered are corrected.

- Form No. 23. (Summary of receipts and expenditure for the Province). This should contain a summary of receipts and expenditure both Revenue and Capital under the fixed budget sub heads.
- Form No. 24. (Revenue received and outstanding on account of revenue). This should be given in abstract for each circle, the Chief Conservator's office being considered as a Circle for the purpose of this form.
- Form No. 25. (Outstanding and liabilities on account of contractors and disbursements). This form will be prepared by Accountant General for each Circle.
- Form No. 26. Foreign Trade (Imports). This form should be prepared in the Direction office after calling for the information from the Director of Imports and Exports West Pakistan.
- Form No. 27. Foreign Trade (Export). (Wood, Wood products and Minor Forest Produce). This form should be prepared in the Direction Office after calling for the information from the Director of Imports and Exports, West Pakistan.
- Form No. 28. Inland (Rail and River Borne). Trade Wood. This form should be prepared in the Direction Office.
- Form No. 29. Coastal Trade- Forest Products- This form should be prepared in the Direction Office.
- Form No. 30. Soil Conservation work in the Soil Conservation Project. A divisional abstract is all that is required.

APPENDICES
APPENDIX A

STATEMENT SHOWING ALTERATION IN THE AREA ADMINISTERED BY THE FOREST DEPARTMENT
DURING _____.

Circle	Division	Class of Forests	Addition in acres	REMARKS

- (i) Addition.
- (ii) Subtraction.
- (iii) Transfer within the Forest Department.

TRANSFERRED FROM

Class of Forests	Circle	Division	Area	Class of Forests	Circle	Division	Area	REMARKS

APPENDIX B

STATEMENT SHOWING VARIOUS CLASSES OF FORESTS ADMINISTERED BY THE FOREST,
REVENUE AND DEFENCE DEPARTMENT, DURING _____.

Forest Department	Reserved Forests Protected Forests. Unclassed Forests. Section 38 Chos Act. Guzara Forest administered by the Forest Department (Abbottabad) and Rawalpindi (Distt:) Commoval. Grand Total of Forest under the control of Forest Department. Reserved Forest under Revenue Department. Reserved Forest under Defense Department.	Area on 1-7-19	Addition during the year.	Excluded or transferred to appropriate heads	Area on 1-6-19
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APPENDIX C

REPORT OF THE MANAGEMENT OF FORESTS IN FRONTIER AGENCIES.

APPENDIX D

See in para 2.6.

APPENDIX I

STATEMENT SHOWING THE PROGRESS OF CONCENTRATED REGENERATION
(MAINLY NATURAL)

This statement will be prepared in the following form: -

Name of Working Circle	Principal species	Regeneration	Total area to regenerated	“Normal” progress of regeneration by 31 st March,	AREA OF FULLY ESTABLISHED REGENERATION BY 31 ST MARCH, 19	Percentage of “Normal” established	REMARKS
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		period	during the period	19	Previous	During the year	Total	ended by 31 st March, 19	

APPENDIX II

STATEMENT SHOWING IMPORT OF TIMBER (FIREWOOD AND BAMBOOS). THIS WILL BE PREPARED IN THE FOLLOWING FORM

Rivers	DEODAR LOGS		PINE LOGS		OTHER LOGS		DEODAR SLEEPER		OTHER SLEEPER		DEODAR SCANTLINGS	
	No	Cft.	No	Cft.	No	Cft.	No	Cft.	No	Cft.	No	Cft.

OTHER SCANTLINGS		MISCELLANEOUS		TOTAL TIMBER		BAMBOOS		FIREWOOD	
No	Cft.	No	Cft.	No	Cft.	No	Cft.	No	Cft.

The statement is to be prepared for each river and totaled up for the whole province. The figures for the three previous years are given and the average struck. The comparison and comments, &c., are to be made in the body of the report.

2.9. Miscellaneous orders regarding Annual Reports and Reviews. The following orders have been issued by the Government with regard to the writing of annual reports.

The Government has observed that there has been a tendency in recent years to include in annual departmental reports general discussions of policy and recommendations for future action in connection with matters which are frequently controversial. The attention of all Heads of Department is, therefore, drawn to the orders contained in paragraph 5 of former Punjab Government consolidated Circular No. 3 in which it is laid down that a report should contain only the explanation of really important or suggestive variations in the statistics and a statement really noteworthy facts in the history of the year's administration matters requiring consideration and orders should not be brought forward in an annual report that should invariably be submitted in a separate official letter ; if comment or suggestion is considered necessary, it should be as brief as possible especially when the matter is a complicated one or one regarding which there is room for controversy. This direction in the main should guide Heads of Departments in writing their reports. Though Government has no desire to prevent them from taking the opportunity of inviting attention to facts of interest or importance, or considerations which form the subject of discussion in the Press or in the Legislature, brevity is a matter of great importance and it is essential that matters requiring discussion or orders should be reserved for separate correspondence. In future if any report when received in proof for the approval of Government is found seriously to contravene these instructions, the Secretary to Government concerned should return it for revision to the Head of the Department by whom it was submitted.

2.10. Instructions regarding submission of indents for printing to the Controller, Printing and Stationery, West Pakistan. Requisition for printing. All fresh matter sent to the Government Press for printing must be submitted in accordance with the following instruction :-

- (a) It must be accompanied by the prescribed requisition form obtainable from the office of the Controller, Printing and Stationery, West Pakistan, on which the number of copies required and any special instructions should be given. Unless the requisition forms are filled in completely, the manuscript is to be returned.
- (b) Unless, special sanction to the contrary has been granted, requisition on Press must be signed in full by a Gazetted Officer, who will be responsible that the work is submitted in accordance with these rules, and that it has been properly edited and examined. He will also see that a reasonable period is allowed for the execution of the work. In the case of urgent and immediate work, which usually involves overtime, the requisition, should, whenever possible, be signed by an officer not below rank of Assistant Secretary or Registrar. Telephonic requisitions will not be attended to unless immediately confirmed by a requisition in the prescribed form signed by an officer who is competent to sign requisitions as laid down in these rules. When work of exceptional urgency is required to be undertaken after 4-30 p.m. on any week day except Saturday (or 2 p.m. on Saturdays) notice must be sent to the Controller, Printing and Stationery, before 4 p.m. (or 1-30 p.m. on Saturdays) in order that arrangements may be made for the necessary staff to remain on duty. Without this notice and in the absence of very special reasons the work cannot be taken in hand until the following working day.

2.11. Supply of copies of Annual Reports to various parties. The Copies of the Annual Report will be supplied by the Controller, Printing and Stationery Department, as per distribution lists attached.

LIST SHOWING NAMES AND DESIGNATION OF OFFICERS TO WHOM COPIES OF THE PROGRESS REPORT ON FOREST ADMINISTRATION IN WEST PAKISTAN ARE TO BE SENT (FREE OF COST)

S. No	Whom to be sent	Number of copies to be Supplied
PART I – IN PAKISTAN		
1	Chief Secretary to Government, West Pakistan, Lahore (For Civil Secretariat Library).	2
2	Secretary to Governor, West Pakistan, Lahore	1
3	Secretary to Government of West Pakistan, Finance Department, Lahore	1
4	Secretary Agriculture Department, Lahore	5
5	Director of Agriculture, West Pakistan.	1
6	Director of Industries, West Pakistan	1
7	The Adjutant, General, Army Headquarter, Rawalpindi	1
8	The Inspector General of Forests, Government of Pakistan, Karachi.	2
9	Director , Pakistan Forest College, Peshawar	2
10	Director, Agriculture, Economics and Statistics, Government of Pakistan, Karachi.	2
11	The Forest Utilization Officer, Pakistan Forest Research Institute Abbotabad.	1
12	The Punjab Public Library, Lahore.	1
13	The Economic Department, Punjab University, Lahore.	1

14	The Secretary Revenue, Board of Revenue, West Pakistan, Lahore.	1
15	The Director of Public Relations, Lahore.	1
16	The Conservator of Forests, West Circle, East Pakistan, Dacca.	1
17	The Conservator of Forests, East Circle, East Pakistan, Dacca	1
18	The Chief Conservator of Forests, East Pakistan.	1
19	The Director of Land Records, Lahore.	1
20	The Director of T.D.A., Jauharabad.	1
20-A	Director ,Rangers College, Ghoragali.	1
21	The Senior Instructor, Forest School, Ghoragali	1
22	The Principal, Forest School, Bahawalpur	1
23	The Director, Erosion Control and Soil Conservation Project, Rawalpindi.	1
24	West Pakistan, Forest Library, 6-A Model Town, Lahore.	20
25	<p style="text-align: center;">COMMISSIONERS.</p> <p>(i) Peshawar Division, Peshawar (ii) D.I. Khan, Division, D. I. Khan (iii) Rawalpindi Division, Rawalpindi (iv) Lahore Division, Lahore (v) Multan Division, Multan (vi) Khairpur Division, Khairpur (vii) Bahawalpur Division, Bahawalpur (viii) Hyderabad Division, Hyderabad (ix) Quetta Division, Quetta (x) Kalat Division, Kalat (xi) Karachi Division, Karachi (xii) Sargodha Division, Sargodha</p>	11 (one each)
26	<p style="text-align: center;">DEPUTY COMMISSIONERS</p> <p>(i) Peshawar District, Peshawar (ii) Mardan District, Mardan (iii) Hazara District, Abbotabad (iv) Campbellpur District, Campbellpur (v) D. I. Khan District, D. I. Khan (vi) Bannu District, Bannu (vii) Kohat District, Kohat (viii) Mianwali District, Mianwali (ix) Rawalpindi District, Rawalpindi (x) Jhelum District, Jhelum (xi) Gujrat District, Gujrat (xii) Shahpur District, Shahpur (xiii) Lahore District, Lahore (xiv) Sheikhpura District, Sheikhpura (xv) Gujranwala District, Gujranwala (xvi) Sialkot District, Sialkot (xvii) Multan District, Multan (xviii) Jhang District, Jhang (xix) Lyallpur District, Lyallpur (xx) Monegomery District, Monegomery (xxi) Bahawalpur District, Bahawalpur (xxii) Bahawalnagar District, Bahawalnagar (xxiii) Rahim Yar Khan District, Rahim Yar Khan</p>	43 (One each)

	(xxiv) Muzaffar Garh District, Muzaffar Garh (xxv) D. G. Khan District, D. G. Khan (xxvi) Khairpur District, Khairpur (xxvii) Jacobabad District , Jacobabad (xxviii) Sukkur District, Sukkur (xxix) Larkana District, Larkana (xxx) Nawabshah District, Nawabshah (xxxi) Hyderabad District, Hyderabad (xxxii) Nawabshah District, Nawabshah (xxxiii) Thatta District Thatta (xxxiv) Mirpur District Mirpur (xxxv) Sanghar District, Sanghar (xxxvi) Quetta District, Qutta (xxxvii)Zhob District, Fort Sandeman (xxxviii) Loralai District, Loralai (xxxix) Sibi District, Sibi (xl) Kalat District, Kalat (xli) Chagi District, Chagi (xlii) Kharan District, Kharan (xlili) Mekran District, Mekran (xliv) Lasbela District, Lasbela	
27	AGENCIES Malakand Headquarter, Malakand Mohmand Headquarter, Mohmand Khyber Headquarter, Peshawar North Waziristan, Not known South Waziristan, Not Known	1 1 1 2 1
28	Chief Conservator of Forests, Peshawar Region, Peshawar Conservator of Forests, Abbottabad Circle, Abbotabad Divisional Forest Officer, Galis Forest Division Divisional Forest Officer, Kargan Forest Division Divisional Forest Officer,Siran Forest Division, Abbottabad Divisional Forest Officer, Haripur Forest Division, Abbottabad Divisional Forest Officer, Kohat Forest Division, Kohat Divisional Forest Officer, Mardan Forest Division, Mardan Divisional Forest Officer, Hazara Tribal Divisionm, Mansehra Divisional Forest Officer, Southern Forest Division, D. I. Khan Divisional Forest Officer, Malakand Forest Division, Mardan Divisional Forest Officer, Northern Forest Division, Nowagera	3 1 1 1 1 1 1 1 1 1 1
29	Chief Conservator of Forests, Rawalpindi Region Rawalpindi Divisional Forest Officer, Rawalpindi South Forest Division, Rawalpindi Divisional Forest Officer, Northern Forest Division, Rawalpindi Divisional Forest Officer, Murree Forest Division, Murree Divisional Forest Officer,Campbellpur Forest Division, Campbellpur Divisional Forest Officer, Jhelum Forest Division, Jhelum	3 1 1 1 1 1

30	Chief Conservator of Forests , Lahore	3
	Divisional Forest Officer, Lahore Forest Division, Changa Manga	1
	Divisional Forest Officer, Gujrat Forest Division, Gujrat	1
	Divisional Forest Officer, Gujrat Wet Forest Division, Gujrat	1
	Divisional Forest Officer, Lyallpur/Jhang Forest Division, Lyallpur	1
	Divisional Forest Officer, Mianwali Forest Division, Mianwali	1
	Divisional Forest Officer,Shahpur Forest Division, Jauhrabad	1
	Divisional Forest Officer, Bhakkar Division, Bhakkar	1
	Divisional Forest Officer, Leiah Forest Division, Leiah	1
32	Chief Conservator of Forests, Multan Division, Multan	3
	Divisional Forest Officer, Multan Forest Division, Multan	1
	Divisional Forest Officer,D. G. Khan Forest Division, D. G. Khan	1
	Divisional Forest Officer, Muzaffargarh Forest Division, Fuzaffargarh	1
	Divisional Forest Officer, Bahawalpur Forest Division, Bahawalpur	1
	Divisional Forest Officer, Montgomery Forest Division, Montgomery	1
33	Chief Conservator of Forests, Hyderabad Division, Hyderabad	3
	Divisional Forest Officer, Hyderabad Forest Division, Hyderabad	1
	Divisional Forest Officer,Thatta Forest Division, Thatta	1
	Divisional Forest Officer, Ghulam Muhammad Barrage Afforestation, Hyderabad	1
	Divisional Forest Officer, Coastal Zone, Afforestation Division, Karachi	1
	Divisional Forest Officer,Lac Zone, Afforestation Division, Hyderabad	1
	Divisional Forest Officer, Kohistan Zone, Afforestation Division, Thatta	1
	Divisional Forest Officer, Registran Forest Division, Hyderabad	1
	Divisional Forest Officer, Larkana Forest Division, Larkana	1
	Divisional Forest Officer, Shikarpur Forest Division, Shikarpur	1
	Divisional Forest Officer,Khairpur Forest Division, Khairpur	1
	Divisional Forest Officer, Nawabshah Forest Division, Nawabshah	1
	Chief Conservator of Forests, Quetta Region, Quetta	3
	Divisional Forest Officer, Quetta/Chagi Forest Division, Quetta	1
	Divisional Forest Officer, Sibi Forest Division, Sibi	1
	Divisional Forest Officer,Zhob Forest Division, Fortsandeman	1
	Divisional Forest Officer, Loralai Forest Division, Loralai	1
	Divisional Forest Officer, Kalat Forest Division, Kalat	1
Project Supervisor, Range Pasture Imporvement Scheme, Quetta.	1	
36	The Director, Bureau of Statistics, Planning and Development Department, West Pakistan, Lahore.	1
37	Conservator of Forests, A.D.C., Hyderabad	3
	Divisional Forest Officer, Silvicultural Research Forest Division, Lahore	1
	Divisional Forest Officer, Silva, Hyderabad	1
	Divisional Forest Officer, Working Plan Forest Division, Shikarpur	1
	Divisional Forest Officer,Working Plan Forest Division, Abbotabad	1
	Divisional Forest Officer, Working plan Forest Division, Hyderabad	1
38	Director, Forest Products Research Laboratory, Chittagang	1

39	Director, Pakistan Council of Scientific Research Karachi	1
40	Pakistan Association for Advancement of Science, Lahore	1
41	Director, Pakistan National Scientific and Technical Documentation Center, Nazimabad, Karachi	1
PART – II OUTSIDE PAKISTAN		
1	Secretary to Ambassador for Pakistan in the United Kingdom	2
2	Secretary, Empire Forestry, Association, Grand Buildings Trafalger Square London, W. C.	1
3	The Governor of New Zealand, Wilington (New zealand)	1
4	The Chief Conservator of Forests, Patoria, South Africa	1
5	The Imperial Institute, Department of Forestry in University of Edinburg	1
6	The Imperial Institute, Department of Forestry, University of Oxford	1
7	Director of Forestry, Department of Interior, Ottawa (Canada)	1
8	Chief Conservator of Forests, Rangoon (Burma)	1
9	Chief Conservator of Forests, Azad Kashmir	1
10	Director, The New York Public Library Fifth Avenue and Forty Second Street, New York, Sn. N.Y.	2
11	The Librarian the ORIO Street, University Columbus 10, ORIO U.S.A.	1
12	Chief Conservator of Forests, Eastern Region, Ennui, Nigeria, Africa	1
13	The Indian Institute Library, Board Street, Oxford, England	1
14	The Makerene Collage, East Africa, Kampala	1
15	Secretary to the Ambassador for Pakistan in U.S.A.	1
16	Secretary to the Ambassador for Pakistan in Germany	1
17	Secretary to the Ambassador for Pakistan in Iran	1
18	Secretary to the Ambassador for Pakistan in Turkey	1
19	Secretary to the Ambassador for Pakistan in France	1
20	Common Wealth Scientific and Industrial Research Organization 314-Albert Street, East Melbourne, CZ. Victoria	1
21	United States, Department of Agricultural, Washington 25 D. C.	1
22	F. A. O. Rome	1
23	Director of Forestry, P. O. Box 334, Pretoria, South Africa	1
24	Department of Northern Affairs and National Resources Forestry Branch Ottawa, Canada	1
25	UNESCO, Paris	1
26	F. R. I. Helsinaki, Finland	1
27	Librarian F. R. I. Dehra Dun	*
28	Chief Conservator of Forests * East Punjab, Intimation will follow*	*
29	Reserve with the Manager Book Depot, West Pakistan, Lahore	31

B- ANNUAL RESEARCH REPORT

2.12. Divisional Reports

A report on the research work during each financial year in the various branches of forestry will be submitted by all the Divisional Silvicultural Research Division, before the 1st of October each year.

2.13. Provincial Report

The Divisional Forest Officer, Silvicultural Research Division, will prepare the provincial report by the 20th October and submit it together with a summary to the Chief Conservator, who will, in his turn submit it to the Director, Pakistan Forest College, Peshawar. The full report will be circulated to all Divisional Officers for perusal.

2.14. Arrangement of chapters

The following is the arrangement of chapters prescribed by the Forest Research Institute.

CHAPTER I- GENERAL

- A. The Central Forest Research Institute.
- B. The Provinces.

CHAPTER II- SILVICULTURE AND WORKING PLANS

- I. Experimental Silviculture
 - a. General
 - b. Natural regeneration.
 - c. Seeds
 - d. Nursery work.
 - e. Artificial regeneration.
 - f. Reclamation and afforestation
 - g. Mixtures
 - h. Under planting
 - i. Silvicultural systems
- II Working plans and statistics
 - a. Working plans
 - b. Yield tables
 - c. Volume tables
 - d. Bark measurements, heart wood, etc.
 - e. Miscellaneous.
- III MISCELLANEOUS
 - a. Photographic section
 - b. Records
 - c. Museum
 - d. Staff

Any other matter of interest like conferences, etc.

CHAPTER III- FOREST BOTANY

Mycology

CHAPTER IV-FOREST ECONOMY

- I. General work of Administration.
- II. Experimental and Commercial activities:-
 - (i) Timber testing.
 - (ii) Wood preservation.
 - (iii) Timber seasoning.
 - (iv) Minor forest produce.
 - (v) Miscellaneous.

CHAPTER V-FOREST ENTOMOLOGY

CHAPTER VI-FOREST CHEMISTRY

CHAPTER VII-FOREST PUBLICATIONS

2 15. Divisional Forest Officers, while writing the, report should follow the arrangement of chapters given in paragraph 2.15, as far as possible, leaving out those on which they have nothing to say. The report should give a detailed record of the observations carried out and any definite conclusions arrived at but all mention of work not yet started should be avoided. The Provincial report should be compiled under the headings given in paragraph 2.15 and if there is nothing to report under any heading the word "Blank" should be written below it.

The headings of the various chapters or sections and subsections are self-explanatory. No detailed instructions are, therefore, laid down, especially when it is realized that the subject matter of the various subsections may not be the same each year.

Taking the section of silviculture for detailed comments, which apply *mutates mutandis* to the other section, the President, Forest Research Institute writes as follows.

Under I, Experimental Silviculture there are ten sub-heads, the first being (i) General. Under this general head should be given a short account, not in details of the general experimental work that is going on. On the other sub-heads I will take two by way of example, *viz.* (ii) Natural regeneration, and (v) Artificial regeneration.

(2) Pages of matter have been sent in regarding sample plots, giving number of seedlings counted stating that a weeding was made

at such and such a cost, and similar details; the same species is repeated over and over again and no attempt is made to correlate the various observations, or it is stated that the Divisional Forest Officer put down so many acres of taungya containing certain species, and it was fairly successful; or that the sal seeded Well in certain divisions. Such matter is in place in the Divisional Forest Officer's annual administration report, but not in the Pakistan Research Report. It is true that the recurrence of seed year is a proper subject of research, and the Central and Local Silviculturists collect and file such information. But such remarks are not wanted in the Research Report until the enquiry has reached such a stage that a definite statement can be made as to the periodicity of seed years.

(3) The general trend of the report so far has been to give a set of observations, with no conclusions. Observations are of course the basis of research; but a mere recital of them is not wanted for the Research Report. On the other hand, in some case, when a definite conclusion has been stated, it had been stated boldly with neither observations nor figures to support it. The object of the Research Report is

- (a) to inform the Department and the public what lines of research work are being carried on in the various Provinces, and
- (b) to let the Department and the Public know any interim results of the work. Final results are generally published in some other form, e.g., the Records of the Institute; though they may also be referred to or published in the report.

Take the case of a Province, which lays out 100 samples plots to test methods of natural reproduction of sal. The Silviculture or the Divisional Forest Officer concerned observes the plots, counts seedlings, etc., and records his observations. At the end of the first year, there is perhaps no definite result. It is then unnecessary to put into the Research Report, all the details of all the plots. All that need be said is: "A number of plots were laid out to test methods of natural reproduction of sal. Various intensities of light and shade, weeding and non-weeding, soil working and nonworking, etc., are being tried. Results to date are inconclusive That is all any one outside the province wants to know. If any other Silviculturist is carrying on similar experiments and wants to know the details he knows when to write for them. But once a result is achieved, even though it is an interim result and entirely conclusive, the matter is different. The result was probably obtained from a large number -

of observations, many of which overtop. When the conclusion is stated all the details on which it is based should be given, and given with such clearness of arrangements as will enable the reader to check the conclusion for himself. It is not enough to print a string of observation and leave the reader to sort them out for himself.

(4) A single consolidated report for province should be submitted. In provinces, where special officers, e.g., Silviculturist, Utilization Officer, etc., exist it goes without saying that the reports should be compiled by these officers. Otherwise the compilation should be done in the Chief Conservator's or Conservator's office.

CLASSIFIED LISTS OF FOREST OFFICERS

Classified list of Forest
Officers

2.16. Yearly classified list of Forest Officers will be forwarded by the Chief Conservator of Forests, West Pakistan, to the Inspector General of Forests, Government of Pakistan on the 1st of December in each year. In the list care should be taken that all abbreviations and symbols denoting the professional training of officers and their qualifications, etc., as well as all other necessary particulars are correctly entered.

CHAPTER III-MISCELLANEOUS EXECUTIVE ORDERS BY GOVERNMENT AND THE CHIEF CONSERVATOR

NATIONAL FOREST POLICY

3.1. The following resolution by the Government of Pakistan, Ministry of Agriculture, shows the policy of Government in Forest matter. This policy has been approved by the Government of West Pakistan, vide their letter No.41(22) (Ft)-F&A-58/3698, dated 7th March 1958.

RESOLUTION

*Introduction-*The Government of Pakistan has so far been Resolution following the old Forest Policy of the undivided Government of India enunciated in their Department of Revenue and Agriculture Resolution No. 22-F, dated 19th October, 1894, for the management of State forests in the country. Pakistan has only about 4 per cent of its land under State forests against 22 per cent in undivided India. This small area of forests is altogether insufficient to meet the requirements of fuel and timber in the country. A dynamic Forest Policy is, therefore, required for Pakistan to be vigorously pursued to increase the area of forest by large scale afforestation and by introduction of scientific forestry in private forests. Over the greater part of West Pakistan grazing is of paramount importance in the economic life of its population and this subject, therefore, requires a prominent place in the general forest policy of the country. Forests are necessary for development of Industries and

communications and they play a very important part in preservation of flood and soil erosion, and in conserving water. Forests are also essentially necessary for the preservation of wild life.

2. The Government of Pakistan have, therefore, decided to re-orientate the Forest Policy on the lines indicated below.

3. *General*-Whereas it is essential to preserve in perpetuity, for the benefit of the people of Pakistan sufficient land under forests to maintain and develop the supply of fuel and fodder to produce an adequate yield of timber and other forest products, to conserve soil, to maintain essential services and industrial enterprise and to improve conditions for preservation of wild life, a high priority should be given in the national development plans to the claims of forestry and adequate forestry programmes.

4. *Private Forests*- The area of State forests is so small in Pakistan that it is thought necessary to preserve the forests wherever they occur whether on Government or on private land. Forestry is, however, a long-term process and the private owners have neither the means nor the knowledge necessary to manage the forests scientifically. It is only on the basis of sustained yield management that forests can be perpetuated. The practice of sound management in privately owned forests should be ensured by legislation or otherwise and such technical and financial assistance provided by Government as may be deemed necessary.

5. *Soil Conservation*-Soil erosion has gone on for centuries in the uplands of West Pakistan. Over large areas, the country presents a barren look and particularly in the vicinity of Salt Range salivation has already rendered large areas at the foot of these hills unfit for cultivation. In all cases where as a result of defective methods of cultivation deterioration of soil has taken place or is likely to take place necessary powers should be obtained to control land use under a co-ordinate programme of soil conservation and land utilization.

6. *Public support*-The devastation of forests both by faulty agricultural methods and unregulated grazing has gone on to such a large extent that the conservation of forests is only possible by mobilization of public opinion in its support. Public support should be enlisted for the execution of forest policy through education, propaganda and demonstration.

7. *Classification*-Even the small area of State forests in Pakistan does not yield timber and fuel through out. Large tracts are mere forest lands than forests. Some forests are more necessary for preservation of soil and water than for production of timber and fuel. Forests should be classified on the basis of their utility and objects.

8. *Commercial aspect*-Great importance has been attached in the past to the commercial aspect of forestry as forests cater principally to the requirements of the individuals. The beneficial aspect of forestry should

now get precedence over the commercial aspect. It is only then that love of forestry can be created in the minds of the people without which maintenance of forests becomes extremely difficult. The commercial aspect of

forestry should be as far as possible subordinate the over-riding requirement of an integrated economic policy divided for the country as a whole.

9. *Forestry on reclaimed land*-The extent of forests in West Pakistan is extremely poor and will not extend to more than 3 per cent of the land area. The growing of trees in this part of Pakistan is limited by the availability of water. While agriculture is being extended by harnessing the water resources, forests have also been raised with canal irrigation. Afforestation is possible on the canal banks, road and railway tracts if water can be made available to the plants. To make the people tree minded, small plantations of trees have to be insisted on in all new colonies. It is only by such concerted efforts that the total area of forests particularly in West Pakistan can be increased. Realizing the deficiency of forest area in the country, a bold and a properly planned programme should be undertaken for increasing forest area by methods best suited to local conditions. For example in West Pakistan the objective can be achieved by (a) reserving at least 10 per cent of canal irrigated land and, 10 per cent water-supply for raising irrigated plantation in the new tracts, (b) growing trees along canal banks, road and railway tracts and on arable waste land, and (c) encouraging farm forestry, on co-operative basis by village communities in compact blocks of crop land set apart for the purpose.

10. *Utilization*- By far the larger area of forests of Pakistan lies in the province of East Bengal, which is of the most thickly populated parts of the world. The forests there are situated in inaccessible Regions, where cultivation is difficult. Big trees occur in these forests and they cannot be extracted and brought to the market for lack of equipment and transport facilities. In order to make full use of the available timber in the country intensive utilization of timber in those forests is necessary. Existing forests should be developed by encouraging the most economic utilization of timber and other forest products.

11. *Working Plans*-The sure method of perpetuating forests is to work them on a sustained yield basis under a regular working plan. Such Working Plans ensure that the forest area carries a normal crop which will yield a definite amount of produce for consumption every year. Whenever a forest area is felled it will be regenerated with species of trees of equal value if not of greater value. All forests should be managed under an approved Working Plan.

12. *Forest Service*-Forestry is a complicating process and a long term project. Highly trained officers are, therefore, necessary to manage forests scientifically over a long period of years.

very often the rotation extends to 100-150 years. Even for production of firewood the rotation is 20-30 years A properly constituted forest service of fully trained persons should be made responsible for the execution of the forest policy.

13. *Research and Education*-In dealing with a crop whose life often extends beyond a century extensive research is necessary not only to find the most intensive method of utilization but also for protection and improved yield of the crop over long periods. Forest research and education which are the pre-requisites of an effective forest policy should be organized on suitable lines.

14. Fauna-Forests are the only areas, where the land fauna of the country can be maintained. Pakistan is rich in wild life. Whether it is the elephants and tigers of East Bengal or wild goats and chinkaras of West Pakistan, the cover of a forest is essential for their existence. It is in fact the result of ruthless destruction of forests in the past that the number of wild animals is steadily going down. Adequate protection and living space must be provided to the animals to prevent their total extinction and other measures taken for the ~reservation of wild life which serves human beings in more ways than one.

3.2. The Chief Conservator desires to bring to the notice of all members of the staff, the general lines of the policy it is intended to pursue.

Silviculture being the foundation of all good forestry it follows that the most important duty of all concerned is to see that the silviculture of this province rises as near perfection as possible. A perusal of certain working plans and an inspection of certain divisions shows very clearly that this is not always the case. The Divisional Officer is responsible for the silviculture of his division; he is not to entrust markings to those incapable of doing them and he must satisfy himself that the work has been properly carried out. All Divisional Officers are expected to take a leading and active part in the silviculture of their divisions and Conservators are particularly requested when inspecting divisions to see that they are satisfied with the standard of silviculture. Silvicultural incompetence will be seriously considered in all cases of promotion.

The silviculture favoured is a natural as opposed to an artificial silviculture. The ecological conditions of every site more than the personal wishes of the forester or the dictates of finance are to be

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Silviculture being the foundation of all good forestry it follows that the most important duty of all concerned is to see that the silviculture of this province rises as near perfection as possible. A perusal of certain working plans and an inspection of certain divisions shows very clearly that this is not always the case. The Divisional Officer is responsible for the silviculture of his division; he is not to entrust markings to those incapable of doing them and he must satisfy himself that the work has been properly carried out. All Divisional Officers are expected to take a leading and active part in the silviculture of their divisions and Conservators are particularly requested when inspecting divisions to see that they are satisfied with the standard of silviculture. Silvicultural incompetence will be seriously considered in all cases of promotion.

The silviculture favoured is a natural as opposed to an artificial silviculture. The ecological conditions of every site more than the personal wishes of the Forester or the dictates of finance are to be

considered in the selection of species; mixed woods are preferred to pure woods and no importance is attached to extreme regularity.

Working Plans entrust the regeneration of the forests to the Divisional Officer and it is his business to get on with the work. Divisional Officers are strictly bound by their working plans whatever their personal fancies may be. Tampering with working plans has usually done far more harm than good and is to be discouraged. Conservators are requested to see that due responsibility is delegated through all

ranks of the service so that each individual knows exactly what he has to do and is given the necessary facilities for doing it. All useless writing and correspondence should be cut out. The efficiency of each individual will be judged not by the numbers of his correspondence register but by the state of his forests.

The financial transactions of the department call for great attention. The state of the timber trade is at present deplorable and the financial position of Government very difficult. Every possible economy on every sort of expenditure including staff is to be affected everywhere.

In carrying on departmental exploitation not only must strict supervision be exercised overall operations, but costs must be reduced or profits will vanish.

The standard of scientific research is not satisfactory. Intensive research into the problems of the irrigated plantation is required; little seems to have been learnt about the natural regeneration of spruce and silver fir and these and other enquiries must now be taken up in earnest in consultation with the Forest Research Institute. A series of former Punjab Forest Leaflets has been prepared dealing with every aspect of technical forestry, exploitation and engineering work. Every member of the staff of the rank of Forest Ranger and upwards will keep a set of these leaflets in his personal possession and is expected to be fully acquainted with the contents. All work will be carried out in accordance with the general instructions given therein. The Chief Conservator of Forests expects the cordial co-operation of all members of the department in improving technical efficiency and in raising the standard of scientific research.

3.3. The attention of all concerned is directed to Indian Forest records, Volume XV, Part II. "A glossary of technical terms for use in Pakistan; Indian Forestry". These terms have been accepted by the delegates of all provinces at the Silvicultural Conference and none other will be used in the former Punjab and North-West Frontier Province.

TENTS

3.4. The following is the list of tents authorized for Forest Officers in the West Pakistan. This scale will be worked up to as required:-

**STATEMENT SHOWING REVISED SCALE OF TENTS OF THE FOREST
DEPARTMENT, WEST PAKISTAN**

Designation of Officers	Blascheck pattern Swiss cottage tent of size 10' x 10'	Mcdonald tent of size 9' x 8'	Mcdonld tent of size 8' x 8'	Kabul tent of size 8' x 8	Pals	Necessary tents
CHIEF CONSERVATOR'S OFFICE						
Chief Conservator	1	1	1	-	3	-
DEVELOPMENT CIRCLE						
Conservator	1	1	1	-	2	-
Divisional Forest Officer	1	1	-	-	2	-
Silviculturist	1	1	-	-	2	-
Working Plan Officers each	-	1	-	-	2	-
REGIONAL HEADS						
Conservator	1	1	1	-	2	-
Divisional Forest Officers	1	1	-	-	2	-
Attached Officers	-	1	1	-	1	-
Forest Rangers	-	-	1	-	1	-

Should aries to the Forest Subordinate Field Staff and Vehicle Driver, etc., working in the fields may be supplied according to actual demand.

NOTE-The side walls of all McDonald should be 4' high. The bathrooms should be rectangular and not rounded. Gauze should be provided for Officers' McDonald pattern tents.

3.5. (1) All new tents must be ordered subject to the

condition that if not approved by a committee of inspection, they shall be returned to the makers and not purchased.

80

(2) On receipt of a new tent, the Divisional Forest Officer should convene a committee of three officers including himself, or as many Gazetted and report in the attached form.

(3) When a tent neither is, nor can by repair be made, serviceable it should be inspected by a committee- constituted as examined in paragraph 2, who will report upon it in the prescribed form.

(4) Tents with proper care and proper repair, are expected to last eight years, except in Hill Divisions, where the -climate wears them out -sooner. If a tent less than 8 years old is condemned, the reason should be explained when the report of the committee is submitted to the Conservator.

FORM OF REPORT OF COMMITTEE

REPORT OF A COMMITTEE ASSEMBLED BY INVITATION OR
 ORDER OF _____ TO REPORT ON TENTS
 BELONGING TO THE _____ AT _____

President

Members

S.No.	Description of tents	Cost	No. & date of authority for purchase in the case of new tent, or date of purchase in the case of one to be condemned	Name of maker	Remarks
		Rs. Ps.			

Attending the committee

President

Member

Member

COMPOUNDING OFFENCES

3.6. Proceedings taken by Forest Officers under section 68 of the Forest Act, 1927, must be regulated in accordance with the following instructions which have the sanction of the Government.

By the notification quoted in the margin, the Conservator of Forests, all Deputy, Assistant and Extra Assistant Conservators of Forests, when in charge of Forest Divisions, are empowered to make certain compositions, in accordance with the terms of section 68 of the Forest Act, with persons who are reasonably suspected of having committed a forest offence.

It is obvious that, as a general rule, powers such as those conferred by section 68 should be exercised in "Personal communication" with the person affected by them, and it should only rarely be necessary to proceed on written reports of subordinates and in the absence of the person offering the composition. At the same time when the amount of damage done is insignificant, if it is necessary to take compensation at all, it would be manifestly inequitable to drag a herdsman a long distance in order to make a petty payment of a rupee or two to the Forest Officer. In all such cases in which Forest Officers accept compositions under section 68, otherwise than in personal communication with the person offering the composition, this circumstance and the reason for it shall be noted in the register prescribed by paragraph below.

The action of Forest Officer under section 68 of the Forest Act is subject to the control of the Deputy Commissioner, who, if necessary, after calling for a report may instruct the Forest Officer how to deal with any particular case or class of cases. It is not, however, to be understood that Forest Officers must send a report and make proposals as to whether compensation should be accepted or not in every case before passing orders. The matter is one for the discretion of Deputy Commissioners, who are expected to exercise the same supervision over the action of Forest Officers in regard to the composition of forest offences as in other matters referred to in paragraph 766 (3) (b) of the Land Administration Manual.

Deputy Commissioners and Forest Officers should bear in mind that the mere fact that cattle have trespassed in reserved forests does not by itself constitute a reasonable suspicion of the commission of a forest offence. In addition to the fact of the trespass there must be reasonable grounds to suspect that it

3.7. Former Punjab Government circular No. 27, No. 384, dated 19th August 1884. Where the Magistrate's court is at a distance from the scene of an alleged forest offence, and a police station is within convenient access, any person accused of such an offence and arrested under section 63 of Act VII of 1878, who is ready and willing to give bail, shall be taken for the purpose to the Police Station, the Officer-in-Charge of which shall thereupon take action in the matter in accordance with the provisions of the Criminal Procedure Code, Chapter XXXIX.

3.8. When a forest offence is committed, it is the duty of the nearest Forest Officer to arrest the offender, if permissible, and if the offender is not known, to do his utmost to trace and arrest him. When an offender is found in the act of committing an offence, he must, if arrested, be taken before the Lambardar of the nearest village or the Range Officer, if he is near as soon -as possible, and a report should be made in the Damage- Report Book giving details of the offence committed and of implements or forest produce seized.

2. The implements and forest ~produce seized should be made over to the Lambardar and a written receipt obtained from him. The Lambardar should be required to sign the report made by the arresting officer, as also any statement the accused may make.

3. Where an offence has been committed and the offender is not known, or has escaped arrest on the spot, an immediate report shall be made to the nearest Lambardar and his signature taken on the report -and the implements or produce captured dealt- with as above.

4. If the offender has been recognized while making his escape, the Lambardar shall be called upon to produce him, and on his arrest, his statement must be taken, and got signed by the Lambardar and the arresting officer.

5. Should the Lambardar happen to be absent or non-cooperative, the report, etc., should be made in the presence of two reliable and respectable residents of the village, and their signatures or thumb impressions obtained in place of the Lambardar.

6. When an arrest is made, t-he accused must in the presence of the Lambardar, or the aforesaid two reliable witnesses as the case may be, offered the choice of compounding the offence, subject to the approval of the Divisional Forest Officer and according to the compensation rate⁸ current at the time.

7. Where the offender desires to pay compensation, shall make a written statement to this effect on the back of the damage report and sign it in the presence of the arresting officer, and the Lambardar or two reliable witnesses referred to in paragraph 5 above, who shall also sign it-.

8. When the arresting officer is a Forest Guard he must after having strictly observed the procedure laid down in the

- Paragraphs above forward his report together with the statement of the accused and witnesses, and the application to pay compensation, if made, to his Range Officer through the Sub-Range Officer, where
- one exists, and direct otherwise. A copy of the damage report shall also be submitted direct to the Divisional Forest Officer on the same date and one copy made over to be accused. If the accused refuses to take the copy it should be made over to the Lambardar
- who shall deliver it to the accused -or 'paste it on his house door.

9. The Sub-Range or Block Officer shall, with as little delay as possible, proceed to the spot and inspect the scene of the damage done in the forest and assess the value of the damage. If the accused agrees to take back his property and to give a receipt, therefore, such property should be brought on to forest forms, before returning the same.

10. If the offence is admitted and the accused desires to pay compensation, the Sub-Range Officer may, where the value of damage assessed amounts to less than Rs. 25, realize the amount from the accused and issue a receipt, therefore, as provided below and immediately report the ease to the Range Officer.

11. Where the value of the damage done is estimated at a sum of Rs. 25 or more, the Sub-Range Officer or Block Officer shall report at once to the Range Officer, who shall with as little delay as possible proceed to the spot to make a thorough investigation, and having estimated the amount of damage, realize from the accused, if willing, the amount of the damage assessed.

12. When the case is compounded the property, if any, seized from the accused should be made over to the offender and his receipt obtained.

13. If the offender remains untraced, a report should be submitted to the Divisional Forest Officer giving briefly the circumstances under which it has not been possible to trace the accused, along with the Range Officer's recommendations for filling the damage report.

14. If the offender is traced, but refuses to pay the compensation, a complaint for prosecution should be prepared and submitted to the Divisional Forest Officer.

15. It may happen that an accused who has originally on the day of arrest applied for compounding the case later retracts. In such a case, he should be given (one more chance) to pay the compensation when the Sub-Range Officer or the Range Officer as the ease may be, visits the village. If he agrees to compound, the procedure outlined above should be followed, otherwise he should be prosecuted.

16. For any compensation, or value of property seized when realized, a printed receipt for the amount so realized must be made out in the proper form, and witnessed by the Lambardar, or the

two reliable villagers referred to in paragraph 5 above, one copy of the receipt should be made over to the accused,

17. A Forester may realize compensation up to Rs. 25, Deputy Ranger up to Rs. 40 and a Range Officer up to Rs. 50. A Forest Guard on permanent establishment with not less than fifteen years' service may be specially authorised in writing by the Conservator to perform the duties of a Forester in realization of compensation up to Rs. 20 in each case. No other Forest Guard shall be allowed to realize compensation. The penalty for disobedience of these orders if proved after necessary inquiry shall be dismissed. The compensation recovered by any officer on any one day should be shown in the daily diary maintained by him.

18. When the Divisional Forest Officer happens to be in the range where the offence has been committed, all important cases must be brought before him for orders.

19. The Forester or the Deputy Ranger shall soon after he has made a round of his block, remit the amount of compensation recovered by him, and make over all damage reports along with the treasury challans to the Range Officer. He should hand over the amount of compensation collected by him to the Range Officer within 10-15 days from the date of realization. The Range Officer shall enter ~ll cases compounded by the Forester or Deputy Ranger and by himself, in anticipation of the formal approval of the Divisional Forest Officer in his cash book. The damage reports and one counterfoil each of the compensation receipts will be submitted to the Divisional Forest Officer along with the monthly accounts. These will be checked in the Divisional Office and formally approved and filed. by the Divisional Fore8t Officer in his office.

20. All cases shall be compounded according to the sanctioned compensation rates, previously approved by the Divisional Forest Officer, but if at any time, the Forest Officer recovering the compensation, considers that less compensation should be charged for any deserving case or more compensation should be re-covered from some accused on account of their behaviour towards the Forest staff, or where the offence has been aggravated by other factors, in such cases the amount proposed by the officer concerned should be recovered and deposited with the Lambardar of the nearest village or with any respectable well known person, a receipt being taken for the amount so deposited.

21. A report should then be made to the higher authority and the Divisional Forest Officer's sanction asked for. The Divisional Forest Officer may either accept the recommendation or reduce, or enhance the compensation. The case shall then go back for recovery of the compensation from the Lambardar, etc., or for recovering any extra amount and when the compensation has been paid as finally ordered by the Divisional Forest Offi6er, the case:

shall be dealt with in same manner as when the cases are compounded according to the scheduled rates.

22. *Damage Report Book*—These books shall be printed in quadruplicate. The duplicate, triplicate and the quadruplicate foils shall be written with carbon paper. The original foil shall remain in the Damage Report Book, the duplicate shall be made over to the accused, etc., the triplicate submitted to the Range Officer, and the quadruplicate sent to the Divisional Forest Officer in an unstamped envelope marked "On Pakistan State Service". They shall be sorted out by forests and missing reports enquired for.

23. *Sapurdnama*—The sapurdnama shall be printed in duplicate and when any property seized has to be made over to a Sapurdar, a receipt shall be obtained from him on the original copy. One copy shall be made over to him and when the articles are taken back, a receipt shall be issued to the Sapurdar on his counterfoil, and entries also completed in the original foil.

24. *Money receipts*—The money receipts for compensation recovered and value of property released shall be issued from the receipt book which shall be printed in triplicate. One copy shall be made over to the accused and one submitted to the Divisional Forest Officer through proper channel with the accounts. The duplicate and triplicate copies must always be written with double faced carbon paper.

(ii) The recovery of compensation money must be witnessed by two reliable witnesses for the signatures of whom space has been provided for in the form.

(iii) The compensation receipt shall show clearly the value of forest produce, e.g., grass, firewood, leaves, timber, stones, etc., removed by the accused as distinct from the value of property seized e.g., rope, tragar, axe, datari, donkey, camel, truck, boat, etc. The rate at which compensation is recovered and property seized is released along with the total for each item and the grand total should be given.

25. *Damage Report Register*—All reports of damage made out by any Forest Officer shall be entered in a Damage Report Register maintained in the range, sub-division or divisional offices. In the Damage Report Register, the book number and the foil number of the Damage Report Book shall be entered along with the serial number of the report in the year.

(ii) The disposal of each damage report must be shown in the Damage Report Register. The report shall be filed only under orders of the Divisional Forest Officer and a reference to the date and number of the order shall be recorded. When compounded

or prosecuted the number of the compensation or prosecution case shall be given using the following abbreviations -

(3) C. C., P.C.

(iii) Copies of Damage Report Register shall be made out monthly and submitted to the Divisional Forest Officer along with an abstract of the damage reports received and disposed of. The damage reports, entries regarding which have been submitted previously, and which are disposed of during the month, shall be shown by their yearly serial number.

26'. *Compensation Case Register*-All cases compounded shall be entered in the Compensation Case Register, as soon as they are compounded. The entries shall be made carefully and monthly and progressive totals made, the figures should tally with the budget control form. The cash book entries regarding the cases compounded shall also be made in the same form.

(ii) The revenue received from the forest property made over to the accused must be clearly shown in the 'books under

E-(2) (2).

(iii) It must be clearly noted that all forest produce removed and charged for in the cash book must appear in the Monthly Form 10 by forests.

(iv) The compensation recovered from the accused must be entered in the cash book as soon as the compensation amount reaches the hands of the Range Officer, and must not be delayed even by one day.

(v) Those prosecutors appearing in 'the courts on behalf of the department who withdraw any cases, with the court's permission. When the accused agree to compound, the offence, should issue compensation receipts from their receipt books and deal with them in the manner as the block officers do in a range.

27. *Prosecution Register*-Prosecution of the cases where the accused refuses to compound the offence should not be delayed and the prosecution challan should be made out and submitted in the range office within a week of receipt of the damage report or further report of the denial to compound the offence. All cases prosecuted shall be entered in the Range Prosecution . Register and a serial number maintained for the year.

28. "Parcha Hamrahis" must be filled up carefully and submitted along with the challans. They must be obtained back from the courts when cases have been decided and the entries in the Prosecution Register made and signed and then the parchas filed by the Divisional Forest Officer under his signatures.

RULES REGARDING STUDY LEAVE.

(1) Rules regarding grant of study leave to Forest Officers.

In order to encourage selected officers of the the Forest Department to undertake short tours on the continent of Europe with the object of keeping their general professional knowledge up-to-date, the following

rules are published with the concurrence of Government of Pakistan in super session of those issued under circulars No. 4-F., dated the 13th February 1892, and No. 4-F-60-3, dated the 20th April 1903, printed as Appendix VI and sub-appendix 'A' thereto of the Forest Department Code, 7th edition. For the purposes of more detailed study of any particular branch of forestry, or of undertaking a special investigation on the continent of Europe or elsewhere, officers of the Forest Department may be placed on deputation, while the cases of those who wish to undergo regular courses of study at institutions will be dealt with under the general study rules detailed in Appendix 32, Civil Service Regulations.

2. The Government of Pakistan are fully convinced of the enormous possibilities of forest development in Pakistan. They are also aware that this development depends greatly on the extent to which officers of the Forest Department keep themselves up-to-date not only in silvicultural methods of treatment, but in other branches of forest management also. Consequently, they regard it as of great importance that Forest Officers should avail themselves of the privileges granted by the rules attached to this resolution.
3. Permission to carry out tours under these rules will not be granted to any officer who, being in a position to retire, does not undertake not to do so voluntarily until three years after his return to duty.

3.10. Rules under which selected officers of the Forest Department in Pakistan may be authorized to devote portions of their leave to the study of Forestry on the continent of Europe at public expense.

A Forest Officer desirous of obtaining permission to study Forestry under these orders must submit an application to the competent authority through the Chief Conservator/Conservator under whom he is serving.

2. The Government will require to be satisfied that the Government servant applying is likely to profit by the additional experience which he will gain by continental study, and that he possess sufficient knowledge of the language of the country which it is proposed that he should visit.
3. The application should reach the Government not less than two months before the Government servant concerned pro-poses to depart from Pakistan on leave. It should state the purpose of the proposed tour and, as far as may be possible, the localities which it is proposed to visit.
4. Government servants on leave out of Pakistan who wish to avail themselves of the privileges conferred by those orders should address the Head of the Pakistan Diplomatic Mission concerned giving the information mentioned in the proceeding para graph.

5. If the application is sanctioned the Government servant concerned will, on arrival in the foreign country, report himself to the Head of the Pakistan Diplomatic Mission concerned. The details of the tour will then be arranged under his orders.

6. The maximum period which a Government servant will be allowed to spend on study under these orders, will be limited to three months at one time. Ordinarily, no Government servant will be permitted to avail himself of the privilege granted by these orders on more than two occasions in the course of his service. At the end of any period of study, the Government servant concerned will submit to the Head of the Pakistan Diplomatic Mission concerned a diary showing how this time has been spent, and a report which should indicate fully the nature of the operations studied. The Head of the Diplomatic Mission will decide whether the diary and the report show that the time of the Government servant has been properly employed, and will determine accordingly for what period the daily allowance admissible under paragraph 7 may reasonably be granted.

7. A Government servant permitted to avail himself of the privilege granted by these rules will be paid by the Head of the Pakistan Diplomatic Mission the cost of first class return tickets by rail and steamer from the port of embarkation to the places which he may be required to visit. He will also, subject to the preceding paragraph, be granted a daily allowance, on such scale as the competent authority may ~x from time to time during the period of study. Forms for the submission of claims for traveling and subsistence allowances may be had on application to the Secretary, to the Head of the Pakistan Diplomatic Mission and claims should be submitted to the Head of the Diplomatic Mission concerned, for payment.

8. The reports, notes and drawings submitted by a Government servant may not, without the previous permission of the Government, be communicated to any professional journal or institution ; and the Government will be at liberty to print, publish or circulate them, should they think fit to do so.

9. The cases of Government servants who wish to undergo regular courses of study at institutions will be dealt with under the general orders in Part A of Appendix 20 of Civil Services Rules (Punjab), Volume I, Part II.

RULES REGARDIN~ REALIZATIO~ OF FOREST INOOME

3.11. Arrears how recovered.

Under section 82 of the Forest Act (XVI of 1927) all forest income is, if not paid when due, recoverable as if it were an arrear of land revenue.

The manner in which arrears of land revenue are recoverable is described in Chapter VI of the Land Revenue Act.

Petty permits. - Petty permits issued by the Forest Officers are ordinarily paid for in cash before hand, so that arrears cannot ordinarily accrue in respect of them.

Chief items of revenue realized through collectors:

The chief items of forest revenue realizable through collectors are:-

- (1) Grazing leases.
- (2) Leases to collect sajji, main, gulkesu, kankar and any similar articles of miscellaneous forest produce.
- (3) Price of fu~ sold.
- (4) Price of timber sold.

The last two items are usually collected by forest officers direct but occasions may arise when the assistance of the Collector is necessary for their recovery, and in such cases the present instructions are applicable.

Leases for grazing in ranks under the Forest Department must always be sold in communication with the Collector at such places and under such arrangements as may be agreed upon between him and the Forest Officer.

Security must always be taken from purchasers of leases and such security must be verified by Security of lessees. The Collector before the lessee is put in possession. When the lessee's security has been verified, and his deposit (if required, has been paid he' shall be furnished with a "Patta" Stating the terms of the lease signed by the Collector or the Forest Officers. A list of all pattas issued shall be kept up in the District Office.

The Forest Officer will send in to the Deputy Commissioner a Demand Statement in the annexed form, showing the details of forest revenue due for the year and realizable through the Collector, should any further items arise during the year, they may be reported to the Deputy Commissioner in Supplementary Demand Statements in the same form.

All objections to the amount, demanded will be referred by the Collector to the Forest Officer.

A -DEMAND STATEMENT OF FOREST REVENUE FOR THE 19

Serial No.	Name of contractor permit holders etc. with caste, Father's name and residence etc.	Name and situation of rakh or forest.	Area over which the permit extends.	Detail of demand	Total demand of the year.	Date of installments, amount and date when due.	Remarks.

In certain cases, as in Multan and Montgomery, the grazing income of the Forest Department

Where Forest Deptt-

Gets a share of tirmi. consists of a share of the tirmi of the district proportioned to the area of grazing land under the Forest Department. In such cases the management is vested in the Deputy Commissioner, and no Demand Statement need be sent in by the Forest Officer.

Collectors will furnish Forest Officers with a monthly statement of demand, collection and balances of **Collection Statements.** forest revenue in the annexed form

B. STATIUMENT SHOWING THE DEMANDS, OOLLEOTIONS AND BALANCES OF FOREST REVENUE REQUIRED TO BE REALIZED BY THE COLLECTOR IN THE DISTRICT OF _____-FOR THE MONTH OF _____

DEMAND			COLLECTIONS			BALANCES			Remarks (explanatory of balance)
For current year	Balance of previous year	Total	In previous month of current year.	In present month.	Total	Of previous year	Of current year	Total	

COLLECTOR'S OFFICE

The 19 }

Collector

It has been ruled by Government that in the disposal of **Permission of balances.** unrealized balances of such revenue the rules contained in Circular No.35 for the treatment of balances of Miscellaneous Revenue shall apply and this Course must for the future be followed. It may be noted that under those Commissioners are competent to remit unrecoverable balances.

Before, however, recommending remissions of such forest revenue, the Collector should communicate with the Divisional

Forest officer, in-order that he may have an opportunity of expressing his opinion upon the proposals made.

RULES REGARDING FOREST PUBLICATIONS

3.12.: All working plans and other professional publications of the West Pakistan Forest Department will, in future, be printed Pakistan Journal of Forestry size.

2. A certain number of copies of Part I and Part II should be bound up separately and interleaved copies are required for divisional use.

SPECIAL DUTY

3.1:3 - The Chief Conservator regrets to observe that Forest Officer placed on special duty in connection with working plans or research sometimes consider that they have been badly treated. The selection for such duty should be considered a compliment. The list is full of Divisional Officers and Range Officers, but if officers competent to prepare an up-to-date working plan or to conduct a scientific investigation the supply is not excessive. All of the service should consider it a privilege to be given the opportunity of making themselves more proficient in their profession and they may rest assured that such proficiency will be of considerable advantage to them in after years. Members of the staff who fail under such circumstances have only themselves to thank if they find themselves relegated to a position of mediocrity on the list. The Chief Conservator would be glad to see a much greater interest in the technical and scientific aspects of forestry manifested in all ranks of the service.

COSTING STATEMENTS

3-14. To ensure uniformity in the preparation of costing statements for timber works, such statements will, commencing with the costing statement for 1956, be prepared by all Divisional Officers in the manner detailed below

Two separate statements are to be submitted, statement I will show the detailed cost per cubic foot of all sawn timber, including axed, balas and round balls and round ballies from the forest to the sale depot. Statement II will similarly show the details of costs of delivery per cubic foot of logs from forest to sale depot.

A pillar diagram will be appended to Statement I. The vertical scale of this diagram will be one inch = 1 foot, and the width of the pillar will be 3/4 inch. The colors of the different sections of the diagram representing the different operations will be as shown on the specimen. Specimen statements and a specimen pillar diagram are attached herewith.

No Pillar diagrams need be prepared for Statement II for the present.

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Statement and diagrams will be prepared in duplicate annually by the Divisional Forest Officers in charge of the Hill Division and both copies will be Sent to the Divisional Forest Officer incharge of the Depot Division concerned. The statements and

diagrams will show all costs incurred on items I to II of statement I- (*vide* "Method of preparation" below), and statement II will similarly show all costs incurred on items I to 9 of that statement. At the same time the Divisional Forest Officer, Hill Divisions will intimate to the Depot Division the costs incurred under items 14 (a) and 12(b) respectively of Statements I and II.

The Divisional Forest Officer, Depot Division, will then complete the statement and diagrams and will prepare three additional copies of the statements and diagrams thus completed. One completed copy of each will be sent to the Chief Conservator of Forests, one to the Territorial Conservator, one to the Conservator of Forests, Development Circle and the fourth copy will be returned to the Divisional Forest Officer of the Hill Division concerned for record in his office.

METHODS OF PREPARATION

The headings used in Form 14 should be so arranged that total expenditure incurred throughout the year on each operation can be readily ascertained whenever the time come to prepare the statements.

STATEMENT I. CALCULATION OF COST PER CUBIC FOOT OF EACH OPERATION (*Vide* SPECIMEN STATEMENT I ATTACHED)

Item		
1.	Making and felling including commission and Godawn commission	Form 14, expenditure on making and felling is divided by the total number of cubic feet sawn.
2.	Sawing, including shipping and commission	Form 14, expenditure on sawing and shipping including commission is divided by the number of cubic feet sawn
3.	Godawn on sawing	Divide cost of Godawn or Godawn commission on sawing shown in Form 14, by volume cubic feet sawn
4.	Godawn on carriage	Divide cost of Godawn or Godawn commission on carriage shown in Form 14 by volume cubic feet carried
5.	Coolies carriage including commission	Divide cost shown in Form 14 by volume cubic feet carried by coolies.
6.	Roping including erection, commission and Godawn	Divide cost incurred under these heads as shown in Form 14 by volume cubic feet roped down.
7.	Ropeway depreciation	To save labour in calculation depreciation will be taken to be as follow: Pies per cubic feet roped Ditto
	Span 1-2,000' -0.5	
	2,001 - 3,000' 1.0	

94

	3,001 -4,000---1.5	Pies per cubic feet roped
	4,001 -5,000---2-0	Ditto
	Divide total depreciation thus calculated by number of cubic feet roped down.	

8.	Floating	Total cost of floating – vide Form 14 is divided by total volume of logs delivered at the bottom.
9.	Loss in Transit	Multiply total volume lost between launching depot and boom by the total cost incurred from stump to launching depot, viz., item I-7 above, and 10 and 11 below. Divide the amount of this product by the total volume delivered at the boom and you get the cost of loss per cubic feet floated
10.	Miscellaneous	Divide cost taken from 14X ½ (Volume sawn volume carried).
11.	Temporary establishment including traveling expenses (Actuals)	Divide cost taken from Form 14 by ½ (Volume sawn ¼ volume carried)
12.	Miscellaneous depot division	To be supplied by the Divisional Forest Officer Depot Division. Divide amount charged by volume carried at the boom.
13.	Rafting	To be supplied by the Divisional Forest Officer Depot Division. Divide amount charged by volume received at the boom.
14.	Distributive (3) Forest Division (4) Depot Division.	(3) Pay and traveling allowance of Divisional Forest Officer, pay and traveling allowance of Range Officers, Exploitation Officers, etc. fraction of pay and traveling allowance each to be charged to be decided annually by the Divisional Forest Officer, himself. The total amount charged to be divided by the average of the volume sawn, carried and floated. (4) To be supplied by the Divisional Forest Officer, Depot Division.
	Pillar Diagram The different operation will be represented by the following colours in ascending orders (vide specimen diagram attached)	
1.	Marking and felling	Yellow
2.	Sawing including commission	Brown
3.	Godawn on sawing	Brown, cross hatched
4.	Godawn on carriage	Red, cross hatched
5.	Collie carriage including commission	Red
6.	Roping, including ropeway erection commission and Godawn	Green
7.	Ropeway depreciation	Green, cross hatched
8.	Floating	Blue
9.	Loss in transit	Crimson
10.	Miscellaneous	Yellow with dots in black

11.	Temporary establishment	Yellow cross hatched
12.	Miscellaneous Depot Division	Leave uncoloured
13.	Rafting	Blue cross hatched
14.	Distributive (3) Forest Division (4) Depot Division	Light Green

STATEMENT II

METHOD OF CALCULATING COST OF DELIVERY OF LOGS PER CUBIC FOOT AT BOOM

(Vide Specimen Statement II attached)

1	Marking and felling, including commission and go dawn commission.	To be taken from Statement I. This may be taken to be the same as for sawn timber.
2	logging including commission..	Divide cost,- <i>vide</i> Form 14 by the total volume logged.
3	Godawn on logging	Divide cost,- <i>vide</i> Form 14 by total volume logged
4	Godawn on rolling	Divide cost, - <i>vide</i> Form 14~by total volume of logs rolled.
5	Rolling, including cost of Construction of rolling roads and commission.	Cost- <i>vide</i> form 14 is divided by total volume of logs rolled.
6	Floating	Total cost of floating,- <i>vide</i> form 14 is d'vided by total volume of logs delivered at the boom.
7	Loss in transit	Multiply total volume lost between launching depot and boom by the total cost incurred from stump to launching depot (<i>viz.</i> , items 1 to 5 above and 8 and 9 below). Divide the amount of this product by the total volume delivered at the boom and you get the cost of loss per cubic feet floated.
8	Miscellaneous	Divide cost taken from Form 14 by j (volume sawn plus volume carried).

9	Temporary establishment including traveling expenses (actuals).	Divide cost taken from Form 14 by~ (volume sawn plus volume carried).
10	Miscellaneous Depot Division..	To be supplied by Divisional Forest Officer, Depot Division. Divide amount charged by volume received at boom.
11	Rafting	To be supplied by Divisional Forest Officer, Depot Division.
12	Distributive: (a) Forest Division. (b) Depot Division.	(a) Fraction of pay and traveling allowance of Divisional Forest Officers, pay and traveling allowance of Range Officers, Exploitation Officer, etc., etc., to be charged the amount to be decided annually by the Divisional Forest Officer himself. The total amount* charged to be divided by the average of the volumes. (b) To be supplied by Depot Division. Divide the amount charged by the total volume of loge received at the boom.

96
(SPECIMEN ONLY)

-----FOREST DIVISION
STATEMENT I

STATEMENT SHOWING COST OF DELIVERY OF SAWN TIMBER (INCLUDING AXED, BALAS
AND ROUND BALLAS)

Operation	Cost incurred Rs.	Volume used for calculation Cubic foot	Cost per cubic foot (annas)	Total
1- Marking and felling - including commission and godawn commission.	3032	213966	0.226	-
2. Sawing, including shipping and commission.	22379	213966	2.241	-
3 Godawn on sawing	4506	213966	0.337	-
4 Godawn on carriage	2152	233962	0.154	-
5 Coolies carriage including commission.	21327	223962	1.526	-
6 Roping, including erection commission and godawn.	3508	103396	0.543	-
7 Rope way depreciation	-	103396	0.078	-
8. Floating (including timber Slid)	26886	238167	1.806	-
9: - Loss in transit	-	17830	0.421	-
10 Miscellaneous	2210	218959	0.161	-
11 Temporary establishment including Traveling- expenses (actuals).	2419	211959	0.177	-
12 Miscellaneous Depot Division	-	-	-	-
13 Rafting	-	-	-	-
14 Distributive:	-	-	-	-
(a) Forest Division	28799	255046	1.806	-
(b) Depot Division -	-	-	-	-

97

(SPECIMEN ONLY)

-----FOREST DIVISION

STATEMENT No.11

STATEMENT SHOWING COST OF DELIVERY OF LOGS AT 19 -19

Item No.	Operation	Cost incurred Rs.	Volume used for calcula tion (Cubic foot) Cubic foot	Cost per cubic foot (annas) Annas	Total
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1	Marking and felling including commission and godown commission.	(Taken from Statement I)			0.226
2	Logging, including commission	403	22,139		0.292
3	Godown on logging	231	22,139		0.167
4	Godown on Rolling	411	19,730		0.334
5	Rolling, including cost of construction of rolling roads.	1,621	19,730		1.316
6	Floating	2,07~	23,165		1.431
7	Loss in Transit	-	1,961		0.211
8	Miscellaneous	--	107	20,934	0.82
9	Temporary establishment including traveling expenses (actuals).	98	20,934		0.75
10	Miscellaneous Depot Division-	-	-	-	-
11	Rafting	-	-	-	-
12	Distributive				
	(a) Forest Division-	-	1,900	21,678	1.402
	(~ Depot Division..	-	-	-	-
	Total	-	-	-	-

RELATIONS BETWEEN SILVICULTURAL RESEARCH DIVISION AND TERRITORIAL DIVISIONS

3. 15. It is impossible to place at the disposal of the Divisional Forest Officer, Silvicultural Research Division, sufficient staff to carry out, independently of the territorial divisional staff, all the field work which must be carried out in connection with "experimental"⁴¹ plots, especially when such plots are being laid out for the first time; nor is it desirable that the staff of the Silvicultural Research Division should fell and convert trees, propose closures, and erect fences and so forth in areas under the control of territorial

98

Divisional Forest Officers. On the other hand, in the case of forest research stations of statistical sample plots and of collection by the Silvicultural Research Division of growth statistics by single trees it will seldom, if ever, be necessary for the Divisional Forest Officer, Silvicultural Research Division, to call in the aid of the territorial divisional staff.

2. In order to clear up all misunderstandings to prevent friction and to ensure the necessary co-operation between the Silvicultural Research Division and Territorial Divisions, the following orders are issued :-

I. The Silvicultural Research Division is entirely responsible for the arrangement and execution of all work in connection with-

- (i) Forest Research Stations.
- (ii) Statistical sample plots; except that the Territorial Division will be required to dispose of any trees, etc., cut by the Silvicultural Research Division.
- (iii) Collection of single Tree statistics by the staff of the Silvicultural Research Division except that the Territorial Division will be required to dispose of any timber cut by the Silvicultural Research Division.

II. In the case of "experimental" plots, the Silvicultural Research Division will be entirely responsible for-

- (i) the selection of such plots
- (ii) the laying out and demarcating of the plots
- (iii) the marking and listing of any trees or other forest produce in such plots
- (iv) the submission of proposals, through the Territorial Divisional Forest Officer concerned for closures or restrictions in the plots
- (v) the preparation of estimates for fences, huts, boundary pillars and other structures, such estimates being sent to the Conservator of Forests, through the Territorial Divisional Forest Officer concerned when the value of the work exceeds a Divisional Forest Officer's powers, or sent direct to the Territorial Divisional Forest Officer in other cases ; and
- (vi) the carrying out of observations and writing up of research notes, etc. ,in connection with such plots.

On the other hand the Territorial Divisional Staff will be entirely responsible to see-

- (i) that such plots are properly protected and in no way interfered with
- (ii) that closures or restrictions are duly notified and properly enforced throughout the year

99

- (iii) that fences, huts, boundary pillars and other structures required in such plots are properly and promptly completed in accordance with sanctioned estimates; and
- (iv) that all trees, etc., marked in such plots are felled, converted and removed as quickly as possible in accordance with the marking, etc., lists prepared by the Silvicultural Research Division.

III. When the staff of the Silvicultural Research Division is working in any particular forest, the Beat Guard concerned will co-operate with them in the matter of arranging camping grounds and

supplies, obtaining labour and assisting the staff of the Silvicultural Research Division with all local information available.

On the other hand no other territorial staff is to be taken from its ordinary territorial duties, etc., for purposes of accompanying the staff of the Silvicultural Research Division or of carrying out work for the Silvicultural Research Division (except as provided in this order) without the previous permission in writing (either general or particular as circumstances may require) of the Territorial Divisional Forest Officer.

The Divisional Forest Officer, Silvicultural Research Division will invariably submit his tour programme to the Territorial Divisional Forest Officers concerned and in doing so will specify clearly what work he is engaged on and the extent to which he requires the assistance and co-operation of the Territorial Divisional Staff within the limits laid down in this circular and will modify his tour programme to suit the needs of administration.

IV) . In no case may the Divisional Forest Officer, Silvicultural Research Division, usurp the powers and discretion of the Territorial Divisional Forest Officer in respect of-

- i) regulating the movement of the Territorial Divisional Staff;
- (ii) any Territorial Divisional works in progress or proposed to be carried out
- (iii) the work of the Territorial Divisional Office ; and
- (iv) permission to occupy Forest Rest Houses by any person, whether a private person or a Government official.

In particular all requisitions for papers, information, etc., from the Territorial, Divisional or Range Offices will be made to the Territorial Divisional Forest Officer himself and to no one else, unless and until the Divisional Forest Officer concerned has specifically relaxed this rule in any particular case or class of case.

3. While it has been deemed desirable to issue these orders in the interests of discipline and good order, the Chief Conservator of Forests desires to make it perfectly clear that the Divisional Forest

Officer, Silvicultural Research Division and his staff are working in the interests of the Forest Department as a whole and incidentally in the interests of the particular forest division in which they may be working from time to time. Territorial Divisional Forest Officers and their staff of all grades are, therefore, required to interest themselves actively in all research work in progress in their divisions so far as this is possible without detriment to their own work. The Divisional Forest Officer, Silvicultural Research Division and his staff for their part must do all they can to avoid interference with the work of a Territorial Division and the Divisional Forest Officer, Silvicultural Research Division, must make it his business to carry out as much as possible of his work through his own staff and to see that his staff does not do any thing to create friction, etc., with the territorial staff.

RULES OF THE FOREST LIBRARY AT LAHORE

(a) General

3-16. 1. The change in the working hours during summer and winter will be notified as and when made.

The incharge of the library for the present will attend to requirements of local officers between 10-30 a.m. to 11-30 a.m. only.

2. The persons entitled to use the library are the Gazetted Officers of the West Pakistan Forest Department. Other persons may be permitted to use it with the sanction of the Chief Conservator of Forests, Lahore Region.

3. No one shall remove from the library any book or any other object belonging to it except in accordance with rules regulating the issue and return of books on loan.

4. No one shall, whether under pretence of correcting an error or otherwise, make any mark on any book or turn down its leaves or otherwise damage it.

5. If a book issued on loan is lost, the borrower shall replace it or pay its value as decided by the Divisional Forest Officer, Silvicultural Research Division.

6. Books marked by an asterisk on the catalogue are not removable from the library.

(b) Issue and return of books.

7. Gazetted Officers of the West Pakistan Forest Department are permitted to take books or periodicals on loan from the library giving a written receipt. In case of officers stationed outside Lahore~ books will be supplied by post on receipt of the indent and printed receipt will be sent along with, which must be signed and returned at once.

8. Books taken out on loan are liable to recall at any time by the Incharge Library, but if not so recalled, may be kept for a month. In special cases, Chief Conservator of Forests, Lahore

Region can extend this period. Officers are requested, however, to keep the books with them for the minimum time possible.

9. The number of volumes which may be taken out on loan at one time by an individual is ordinarily limited to six.

10. To reduce expenditure on postage to the minimum, each division, except in case of emergency which should be quoted clearly, should indent and shall be supplied with books only once a month and preferably in its first week. Attached officers should send in their requirements to the Divisional Forest Officer who will forward consolidated indents making it clear therein whether the whole lot asked for should be sent to headquarters of the Division or a specified part should go to headquarters of the attached officers.

11. Written receipt prescribed under rule 6 shall be returned to the borrower on receipt of the books back in the library and any officer not getting it back should let the Incharge Library know about it.

**RULES REGARDING SERVICE STAMPS
PART I-MAINTENANCE OF ACCOUNTS**

3.17. 1. Every controlling or disbursing officer shall maintain an account of service stamps purchased from the treasury and of all issues made there from to officials entrusted with the posting and despatch of official communications. The account shall be kept in the form attached and the responsibility for its proper maintenance and the custody of stamps shall be entrusted to an official specially detailed for the purpose by the controlling or disbursing officer.

Date of receipt of stamps from treasury	value of stamps received	value of stamps issued and to whom issued	Receipts for receiving official
	Total in hand on quar-	Total issues during	
	ter ending ending.		

*Note-*The headings of the form of account should be written by hand or type-written.

2. All issues of stamps made by the official in whose custody they remain shall be shown as received in the outstation dak book or despatch register by the despatcher or other official who is responsible for the despatch and posting of official communications.

3. No issues of stamps shall be made under rule 2 to any official except on a written requisition and after the official responsible

for the custody of stamps has satisfied himself by reference to the outstation dak book or despatch register that the supply requires to be supplemented. The official responsible for the issue of stamps shall take a receipt for all issues made by him in column 4 of the form of account prescribed in rule I, or by a separate receipt which should be pasted in his Stamp Account Register.

4. Ordinarily, officials entrusted with the despatch of official letters will be entitled to draw stamps from the official custodian but the head of an office may authorise any other official to draw stamps for official use and require him to render an account to the official issuing them.
5. The value of stamps with a despatcher shall be shown commencement of each day and the balance carried forward from day to day after deducting the total value of stamps used as shown against each cover or telegram despatched in the course of a single day.

6. No custodian of stamps or despatcher may loan stamps for the use of another office.

PART II-DOMESTIC AUDIT

7. The stamps account shall be audited at the end of every quarter in each financial year by a gazetted officer or other responsible official nominated by the controlling or disbursing officer.

8. Such audit shall be carried out in the following order:-

(a) Trace all purchases of stamps in the contingent register of the office for the period under audit.

(b) See that all such purchases have been brought to account in the register prescribed by rule 1 and that the balance with the custodian is correct by actual count.

(c) See that issue of stamps made by the custodian to the despatcher or other authorised official have been issued under proper receipt.

(4) See that such issues have been brought to account in the outstation dak book or despatch register.

(e) Then see that all issues entered in the outstation dak book or despatch register have been duly consumed from time to time and that the balance of stamps in hand with the despatcher is correct.

(f) Further make a 10 per cent check of daily despatches from the outstation dak book or despatch register to see that rules 10, 12, (2) and 13 are being complied with and that the rules in Part IV are not being disregarded by subordinates.

(g) If the accounts of the custodian and despatcher are correct and no irregularity has been committed by

103

the despatcher or other official, -vide clause(f) above, a certificate of correctness should be recorded at the end of the accounts maintained by the custodian and despatcher. Should any irregularity or discrepancy be discovered matter should be reported separately to the disbursing officer.

PART III-WEIGHMENT OF PARCELS AND LETTERS AND USE OF THE REGISTERED POST

9. The despatcher should weigh every parcel and letter and then affix stamps to the required value.

10. The registered post should be used for the transmission of-

- i. original documents of which copies cannot be obtained;
- ii. confidential and secret documents;
- (c) documents which are required under rule or law to be sent by registered post; and
- (d) such other documents which the head of an officer or other gazetted officer may require to be so sent.

11. When registration cannot be effected under the foregoing rule and some measure of precaution is needed, the practice of obtaining certificates of posting should be followed.

PART IV-DESPATCH

12. (1) Urgent letters and parcels should be despatched on every working day.

(2) Other letters and parcels, the posting of which is not a matter of urgency, should be despatched on alternate days, except when the last working day is followed by two close holidays in which case despatch should take place on the last working day.

NOTE 1-Nothing in the latter part of this rule is intended to delay the posting of communications to the Government of Pakistan and other Governments, or of reports, diaries, etc., which are required under rule or special orders to be sent daily.

NOTE 2-The selection of the letters and parcels for despatch on alternate days will not rest with a despatcher. Letters, etc., should be so distinguished before they reach the despatcher so as to leave him no discretion in the matter of the despatch of urgent communications.

13. No two or more covers should be addressed to the same officer on the same day.

14. Any disregard to rule 10, 12(2) and 13 should be viewed as a waste of public funds and the official responsible should be dealt with.

PART V- TELEGRAMS AND TELEPRINTERS MESSAGE

15. Except as provided for in the following rule, every telegram/ teleprinter message should be authenticated by the head of the office from whom it emanates.

104

16. The head of an office may authorise another officer or other responsible official to authenticate telegram/teleprinter message on his behalf when the issue of such telegrams has been approved.

17. In the absence of the head of an office~ the next senior officer or official in charge of the office may use the telegraph on behalf of his superior officer, when a telegraphic communication is necessary. "Express" telegrams should on no account be sent except in a real emergency. As a general principle teleprinter service should be utilized where there is a teleprinter service station.

PART VI-ADDITIONAL DUTY OF DESPATCHER

18. All registered letters, parcels and telegrams shall be entered by the despatcher in red ink in his outstation dak book or despatch register.

ORDERS REGARDING GIRDLING

3.18. 1. The attention of all concerned is directed to the practice of girdling which apart from being highly dangerous to man and beast is a barbarous habit only to be resorted to under exceptional circumstances.

2. A forest full of girdled trees is a positive danger to life, and it was due to the fall of a girdled tree that Mr. Amery lost his life many years ago. In addition girdled trees provide an ideal breeding ground for bark beetles which afterwards infect living trees in the vicinity.

3. A mixture of species is from every point of view desirable, soil conditions are ameliorated by a mixture of trees especially broad leaved trees so that natural regeneration is facilitated. The quality of trees grown in mixture is often superior to pure crops. Great harm has been done by the senseless extirpation of so-called inferior species.

4. Definite orders are to be issued to every subordinate engaged on cultural operations, thinning, cleanings and improvement felling; that the mixture of species is to be maintained and that girdling will not be done except in those cases where express orders are given by the Divisional Officer and when such an operation is the only possible way of doing what is necessary.

ORDERS REGARDING IMPROVEMENT FELLINGS

3.19. A case having arisen where selected trees were marked in so called "Improvement, Fellingings" it is notified for the information of all concerned that an improvement felling consists in the removal of more or less worthless material in favour of better species or better stamps of the same species. An improvement felling which does not result in the improvement of the crop already

105

on the ground contravenes the first principles of forestry and is absolutely prohibited.

DISPOSAL OF MAJOR FOREST PRODUCE

PART I- DEPOTS AND SALE RULES

3.20 Depots-Govt Depots are of two kinds-

Depots classified and defined.

(1) Transit depots.

(2) Sale-Depots.

"Transit depots" are used for catching, collecting, examining and rafting timber in the case of river borne timber or for the collection, checking and examination of land borne timber. They are more or less permanently located, but can be changed from time to time with the approval of the Conservator of Forests concerned.

"Sale depots" are appointed for storing, sale and issue of timber and are notified by the Chief Conservator of Forests. Temporary sale depots are notified by the Conservator.

2. All sale depot sites must be demarcated. The Government orders, title deeds, or other authority for, the occupation of the land must, in each case, be

Demarcation of depot sites

forthcoming in the divisional office. The demarcation, fencing, etc. will be permanent or temporary in character, according as the depot is established permanently or otherwise.

PART II- MANAGEMENT OF THE TRANSIT DEPOT

3. *River borne timber*-The Divisional Forest Officer-in-charge of the river may issue standing orders **Standing orders for contractors.** to contractors and subordinates regarding the clearance of standard logs, or scantlings and the management of timber in transit and at catching depots.

4. When timber is landed at a transit depot it is at once to be booked. Logs should Treatment of timber arriving in transit depots be marked with a running timber proceeded by the initial letter o of the name of the transit depot at which they are caught. Below the number should be noted the year of receipt.

Illustration- Logs caught at Dalli in 1960 will be marked D1/60, D2/60, D3/60, D4/60 and so forth.

Scantlings will be entered by number under each size and kind. Records of arrivals at transit depots will be kept up in form 5 as laid down in the code, despatches of timber are covered by rafting permits and the necessary entries are made in the remarks Columns of Form 5. At catching depots forms 5 and 6 are not maintained. Rafting permits show full details of timber despatched.

106

5. A weekly statement of timber brought into each depot **Weekly statement of arrivals and despatches.** relaunched and still stranded, shall be sent by the depot officer to the Divisional Forest Officer, the same to be countersigned by the contractor or his authorised agent.
6. Every raft of timber shall be accompanied by a challan (or **Rafting chalan.** invoice)' a duplicate of the same shall be despatched immediately by post to the sale depot officer, who should keep and file these invoices.

(b) Land borne timber.

- (3) The record of arrivals and despatches will be kept in form 5 and 6 as laid down in the Code, other **Land borne timber** procedure will be according to local standing orders.

III-OF THE MANAGEMENT OF SALE DEPOTS

- (4) **Arrangement of sale depot.**
Every sale depot is to be laid out into separate spaces for each kind of timber or firewood, the compartments being separated by clear passages to facilitate inspection. Logs must be nearly arranged in lines according

to section and class as far as circumstances admit. If owing to lack of space they have to be piled. Care should be taken that only logs of the same classification are put together. Full details of measurements should in such cases be given on the ends of each log. It is of the utmost importance not to expose scantlings to the sun for longer periods than can be helped, they must be staked in cribs of 100 or other convenient number, each different species and class being stacked separately, and not more than two scantlings in each stack being in direct contact with the ground. There should be an interval of two feet between stacks in order to afford protection to the ends of scantlings from the Sun. Sleepers intended for presentation to the railway will be stacked in accordance with the terms of the contract.

9. Timber to be measured and marked before stacking and its booking

All logs and scantlings on reaching a sale depot will be measured, marked and classified according to standing orders. Logs and scantlings will be entered daily in the register of receipts as they are taken charge of the former by measurements singly and they latter by number under each separate size and kind. Logs shall be measured to the nearest 3" in length (and marks made showing the points of measurement) and to the next lowest inch in girth

volumes shall be calculated by the $(\frac{g}{4})^2 \times \text{length}$ method,

107

(3) **Sale mark.**

All logs and scantlings, when sold will be marked with sale hammer mark. No officer under the rank of Forest Ranger may be entrusted with the custody of the sale hammer mark without the special permission of the Conservator.

11. Safety of money.

The depot officer may not receive cash in excess of one hundred rupees in each case, save as earnest money received at auctions, but must invite payees to deposit the same in a treasury. Cash chests in the depots should contain as little money as possible. All monies received must be remitted forthwith to a Government Treasury.

12. Bill and receipt books.

Bill and receipt books in the prescribed forms will be used for every sale of timber and every receipts of cash, one copy being handed to the purchaser. At auctions small printed receipts are issued to each purchaser directly, the bid is accepted and the deposit paid.

13. Taking stock in sale depots. The stock at each sale depot must be counted once every three months by the depot officer, the depot books being balanced at the time of counting. A special report of each taking of stock must be submitted to the Divisional Officer. Officers taking over charge of depot will be held personally responsible for the correctness of the stock taken over. The whole stock must be counted by the Divisional Forest Officer personally at least once in each financial year and a stock taking report sent to the Conservator.

14. Departmental code to be compiled with. The departmental code and other orders governing all accounts, returns, stock accounts, and other forms, etc., must be compiled with.

15. Depot registers open to public The depot registers containing information about purchasers timber will be open for inspection at the depot office during business hours.

PART IV-CLASSIFICATION OF TIMBER AT SALE DEPOTS.

ROUND TIMBER

(3) Logs-

Definitions. All round timber of minimum length 6' and minimum mid-girth 42".

Scraps- All round timber of less than 6' in length and of minimum mid-girth 02".

Poles- All round timber of minimum length 8' and of mid-girth 33"-to-41".

Ballas- All round timber of minimum length 8' and of mid-girth 21" to 32".

Ballies- All round timber of minimum length 8' and of mid girth under 21".

108

Pole pieces, Balla pieces and Balli pieces are of length less than 8' in their respectively girth cases.

Deodar and Kail-Logs will be arranged in three girth classes:-

Glassification-

- (1) Girth 42" to 59".
- (2) Girth 60" to 95".
- (3) Girth 96" and upwards (Ghallos).

In each Division the logs will be arranged in separate length classes for each foot of length, thus a 12' log will be of length 12' to 12-11", a 13' log of length 13' to 13'-11", etc.

Each length class will be classified as follows:-

- (i) Special--Cylindrical logs free from knots and all defects.
- (ii) *1st class sound* logs with only a very few knots such as not to depreciate the value of scantlings or planks cut from these logs.
- (iii) 2nd Class-Sound logs with knots but capable of yielding good scantlings or planks.
- (iv) 3rd class- Sound but very knotty logs or logs of very considerable taper.
- (v) *Refuse*-Unsound logs, i.e., rotten, hollow, and badly spilt or badly cracked logs.

Scraps

I-class-Sound timber, capable of yielding good but short planks or scantlings.

II- class-Inferior.

Poles-I—class- length 12' and upwards.

Ballas-II class-8' to 11'- 11".

Ballis Samudha within each length class.

Pieces-Samudha.

Chair and Fir

Logs-To be classified into Samudha and Refuse under girth class.
each length and

Poles

Ballas

Ballis As for deodar.
Pieces

17- SCANTLING5

Definitions

1. *Beams-Of* minimum length 12' and of minimum cross section 12"x3".

109

I

2. *Gattus-Of* length 4' to 11' and minimum cross section 12" x 6".

3. *Sleepers-14'* sleepers. 14' in length and cross section 10'x5"

12' sleepers. 12' in length and cross section 10" x 5".

B.G. sleepers 9' to 10' in length and cross section 10"X5".

8' sleepers. 8' in length and cross section 10" x5"

6' sleepers. 6' in length and cross section 10 x 5".

M.G. Sleepers 6' in length and cross section 8" x 4j" to 9" x5".

4 karries-Of length 9' and up and of rectangular or a square section.

5. Pieces-Broken scantlings.

6.Slabs-Outside planks.

CLASSIFICATION

Deodar B. G. Sleepers

Specials 10' in length of straight grain, full cross section and without knots or blemishes.

1st class railway sleepers-According to specification of current railway contracts.

R.R. Class-Sleepers returned by the Railway authorities as not up to 1st class specifications.

A Class-Undersized sleepers without cracks, and sound sleepers not up to railway specifications.

B Class-Sleepers with damaged ends and cracks extending slightly beyond rail seat.

C Class- With longitudinal or transverse cracks very appreciably lowering the value of the sleepers.

Kail, Chir and fir B. G Sleepers-As for deodar except that A and A classes are combined, and that "specials" are not ordinarily distinguished.

Other sleepers ~ Scantlings-To be classified as "Sammudha~~ and "Rejected" according to foot lengths and cross sections broken pieces to be classified separately.

Sleepers pieces-To be classified in-Under 4' lengths:

4' to 6' lengths.

Over 6' lengths.

Note- The classification is revised from time to time under the orders of the Conservator.

PART V-OF SALES

18. **Where to be held-** Timber will be sold and issued only at Sale Depots appointed under rule No. 1. No sale or delivery of timber on the river or at any catching depot or other places can be permitted except with the special sanction in writing of the Conservator.

19. **Sale of unregistered material prohibited.** No -timber or waste wood that has been received or collected at a sale depot may be sold or issued there from unless previously entered in the depot books -as already provided therein.

20. **Public departments deal with the Forest Department in open -market.** Sales of timber to Government Departments should be made by private negotiation at last auction rates or at average rates of last four auctions, whichever is greater.

21. **Sale of timber.** The sale of all classes -of timber, shall be made by auction by the Conservator - of Forests, -or by the Divisional Forest Officer -or other Gazetted Forest Officer acting under the orders of the Conservator.

22. **Special contract sale.** The Conservator of Forests may direct the sale of timber by special agreement whenever circumstances render such a course profitable or desirable. Such sales will be *Sammudha* and no selection will be allowed.

23. **Divisional Officer to exert themselves in depositing of stock.** Divisional Officers should remember that it is their first duty to sell quickly and advantageously, the stock as it comes in. While great care has to be taken to avoid unprofitable sales equal care is necessary to prevent material remaining too long unsold and deteriorating in depot. -

24. **Instructions about auctions.**

(1). Unless otherwise ordered by the Conservator of Forests-as soon as it has been definitely decided to dispose of any timber, by auction, the Divisional Officer should fix a day in consultation with the Conservator.

When the necessary sanction has been obtained a notice should be published in the English and the Vernacular papers stating the date, hour and place where such sale will be held and the nature and quantity of material, to be disposed of. This notice should also be circulated to the chief traders doing business at the depot concerned.

- (3) Previous to the day of sale, the material it .is intended to auction, should be arranged in lots, each lot being distinctly.

111

defined and numbered with a consecutive number. A sale should also be prepared in the form given

below:-

AUCTION

Lot No.	Description of Timber	Number	Cubic Foot	Depot Rate	Rate	Amount	E.Money	Balance	Name of Purchaser	Remarks
1	2	3	4	5	6	7	8	9	10	11

This statement shall, at the conclusion of the sale, be carefully kept as part of the Depot records.

(4) Unless otherwise ordered by the Conservator prior to every sale, the Conservator shall himself or after confidential consultation with the Divisional Forest Officer fix the minimum reserve rates for different classes of timber.

These reserve rates shall be kept strictly confidential.

(5) At the commencement of the sale, the conditions of sale as~ laid down below should be read to intending purchasers, who should be made to sign a copy of such conditions in token of acceptance:-

(i) Any bid for any lot or lots of timber at the auction may be accepted or rejected by the officer conducting the auction without assigning any reason.

(ii) The purchaser shall accept as correct, the number, kind, and measurements of the timber purchased at the auction as entered in the auction list and the depot. registers.

(iii) On the fall of the hammer a deposit of 10 per cent of the value of the timber bought shall be made by the

112

purchaser forthwith, and the lot marked with white wash to show what it has been sold..

(iv) If any purchaser fails to make such payments, the lot may be put up again and resold. Any deficiency in the price realised shall be chargeable to the purchaser in default and be recoverable from him under section 82 of the Forest Act.

(v) Unless special arrangements have been made to the contrary, the purchaser shall pay the balance of the purchase money within one month from the date of auction. If the purchaser fails to pay such balance within the said period, the 10 per cent deposit shall be wholly forfeited to Government who may thereupon resell the said timber in whatever manner it thinks best and any deficiency in price on resale and all expenses attending such resale shall be borne by the purchaser and may be recovered, together with interest calculated at 6.25 per cent per annum for the period from the date of the auction to the date of recovery in the manner prescribed in section 82 of the Forest Act.

This remedy is without prejudice to Government's remedies and rights otherwise.

(vi) On the deposit of 10 per cent, the purchaser may write his name on the timber and the sale shall be deemed to be completed. Any subsequent loss from any cause whatsoever (except fraud on the part of the depot officer and his staff) shall be at the risk of the purchaser.

(vii) All timber sold and fully paid for must be removed within a specified time to be fixed by the Divisional Officer according to the nature, size and quantity of timber purchased. Generally the period allowed for removal will be one month from date of auction. For every day after the expiry of the specified time a depot rent of six piasa a log and one and a half piasa per scantlings per day shall be charged and the timber shall not be removed till such rent has been paid and such rent shall be a first charge on such timber. If any timber remains un-removed for three calendar months after the date of expiry of the period originally fixed for removal, the timber shall be forfeited to Government, and the same shall be resold, the amount of depot rent and expenditure in connection with the resale shall be recovered first from

the proceeds, and the surplus, if any, if not claimed within two months, from the date of the resale, shall be forfeited to Government, under section 83 of the Forest Act.

(viii) The purchaser shall not remove the timber until it has been marked with the forest department sale hammer mark and the latter shall not be applied till the full price of the timber has been paid.

(ix) No purchaser may sell timber purchased by him to another party while such timber is lying in the Government timber depot, nor until the price has been paid in full, and the Forest Department will recognise no such transfers of property. Sawing or conversion of timber will not be permitted in the depot.

(x) In the event of failure to abide by these conditions, the defaulting purchaser shall be liable to prosecution under the Forest Act or any other law, as may be ordered by the authority sanctioning such prosecution.

25. Disposal of timber that has gone down the sale depots.

Timber that has passed down the river beyond the main sale depot and is there caught or found stranded will be taken to the next sale depot downstream and sold there.

26. Payments on sale in case of Government department. In the case of Public Departments, who pay by transfer receipts removal may be allowed any time after the conclusion of the sale and the issue of a bill.

27. **Sale on Credit.** No sale on credit will be permitted except under special sanction of the Conservator but no timber not paid for in full may be removed.

28. **Debtors to the department cannot purchase.** No person who is overdue in his payments to the Forest Department or who is or has been in any way in default be permitted to purchase timber at any depot whatever.

29. **Payment how to make.** Payments of deposit will be made in cash at the time of auction to the officer holding the auction. Subsequent payments may be made to the depot officer in cash if not

exceeding Rs. 100 or by remittance into any Government Treasury as forest revenue of the divisions concerned and the presentation of such receipts to the depot officer in lieu of cash. Purchasers must make their own arrangements so that the treasury receipt is presented to the depot officer within the stipulated period.

30. **Allowance in measurements for ends, hollows, etc-** The amount to be deducted on measurements, on account of tearing ends, hollows, cracks or other defects and all disputes regarding classification shall be determined by the Divisional Officer and his ruling shall be final and conclusive.

31. Abstract of auction rates. An abstract of rates realized for each important class of timber at the auction shall be sent immediately to all depot officers and other officers interested by the Divisional Office concerned. -Separate copies- shall be sent to the Conservator and Chief Conservator of Forests for information.

32. Classification of Timber and firewood at Changa Manga Sale Depot

A-TIMRER

	1. Mulberry logs – 5', 5-1/2', 6', and 6'.
Grade	Mid-diameter (over bark).
I	36" -and over.
I	30" -35'.
III	20'-29."

NOTE-(i) Butt logs which on account of the greater proportion of heartwood and-consequent greater elasticity, fetch prices in the sports trade market than other logs must always ~be sold separately in "Butt "log" lots.

(ii) Sale lots must contain only logs of the same length and diameter.

(iii) Logs containing bad knots and-other serious defects should be sold as rejects.

	2. -Shisham logs--8- feet and over in length.
Grade	Mid-diameter (over bark).
I	20" and over.
II	17"-19".
III	12"-16".

NOTES-(i) Logs must be straight free from knots and other defects.

(ii) Sale lots must, as far as possible, contain logs of the same length, diameter and quality.

(iii) Logs containing knots and other serious defects should be sold in 'Rejected' lots.

3. *Shisham billets and pieces--Logs 17" and over in diameter but shorter than 8' will be sold as billets, if 5',-7'-i-U" in length, and as pieces, if less than 5'.*

4. *Bakain Timber-There is no special classification. The volume of shisham logs will be according to the quarter~*

girth method, and will be the volume over bark. The mean girth of the log will be measured with a tap and recorded in inches. - The volumes will then be calculated by the quarter girth method with no allowance for bark as in the following example:-Length 19'
mean girth over bark=63"

$$\text{Volume} = \frac{19 \times (63)^2}{12 \times 4} = \frac{19 \times 63 \times 63}{12 \times 4} = 32.72 \text{ Cft. or say } 33 \text{ cft}$$

115

B-FIREWOOD

33. All firewood is sold in 5' billets and in 1,000 Cft. stacks.

	Grade	Species	Diameter
1	Select	Shisham	10" & over
		Mulberry	Ditto
		Mixed	Ditto
2	Thick	Shisham	7" - 9"
		Mulberry	Ditto
		Mixed	Ditto
3	Medium	Shisham	4" - 6"
		Mulberry	Ditto
		Mixed	Ditto
4	Thin	Mixed	1" & 2"
5	Under sized	Mixed	2" - 3"

NOTE -(i) Diameters are taken in the middle of billets, except in the case of thin and undersized when measurements are made at the thin end.

(ii) Produce from main felling, should be stacked and sold separately from thinning felling.; Distinctive letters F (for main fellings) and T (for thinnings felling.) should be used while numbering stacks in the depot as well as in Form No.5.

(III) Thin firewood is known in the trade as Paise (Pice) Kandi because at its thin end it is not less than 3 in circumference-the size of a copper pice. Undersized is known as Dhela (hslf pice) Kandi.

PART VII-DISPOSAL OF MINOR FOREST PRODUCE

(a) Fodder, grazing and browsing.

3.21. Rules for regulating grazing by transport camels when on the line of march:-

When transport Camels are required to proceed by route march, Commandants of corps shall -give due notice to the Divisional Forest Officers of the dates and the places at which they will halt; The Divisional Forest Officers will depute responsible officials to attend at these places and point out the forest in which the camels may browse.

2. Government camels on the march may: not browse except in places pointed out by the Forest Officials in attendance.

3. Lopping is absolutely prohibited

116

4. Cases of illicit grazing or damage by lopping by transport camels and their establishments shall be at once reported to the Divisional Forest Officer, who will after personal inspection of the areas assess the damage done and make claim for it to the Commandant of the Crops concerned. The Forest Officer in attendance on the Crops shall at the same time send a copy of his report to the Officer Commanding the Crops. The assessment made by the Divisional Forest Officer will be accepted and in case of dispute, the matter shall be referred to the Chief Conservator of Forests, whose decision shall be final.

Rules for regulation of browsing of Camels by the Military Camel Corps. Browsing by camels of Camel Transport Companies is regulated in accordance with the sanctioned browsing schemes and the rules laid down therein shall be strictly observed.

(b) MINERALS

3.22. Extraction of Minerals for the use of Govt. Departments. The Forest Department may charge any other Department for mineral products extracted from a forest area.

Royalty on Kankar shall be charged at the rate of Paisas 75 per hundred Cft.

(c) COLLECTION AND SUPPLY OF SPECIMENS, SEED AND SAMPLES OF FOREST PRODUCE

3.23. Register of indent. Owing to the delay which is often inevitable before indents can be complied with, and to avoid their being overlooked, a register will be maintained in the Direction and Divisional Offices in which particulars of indents will be entered as soon as they are received, as under

Serial number.

From whom the indent is received.

Number and date of indent.

Particulars of what is required.

Number and date of letter advising compliance with the indent

3. 24. Identification and labeling of samples, etc.. Great care will be taken that all specimens and samples are properly identified and accurately labelled before being despatched. A strong imperishable label bearing the scientific name will invariably be enclosed with the specimens, and if there is any doubt with regard to this identification, this should be stated: in the forwarding letter and when necessary botanical specimens should accompany the samples.

3.25. When botanical specimens are sent to the Forest botanist for identification, a duplicate set will always be prepared.

both sides of the specimens should be serially numbered and a list showing the serial numbers should accompany the set of specimens sent to the Forest Botanist who should be asked to fill in the names of each specimen and return the list. The heading of the list should show clearly the purpose of the collection and should refer to the official letter forwarding the collection to the Forest Botanist. The set of specimens sent for identification will be retained by the Forest Research Institute.

3.26. Collection and supply of seeds. All indents for seeds will be dealt with by the Silvicultural Research Division, Lahore (Silva) who acts as a clearing house for seeds. All requisitions for seeds on behalf of Divisions which they cannot themselves supply should be sent to him. Similarly all indents for seeds received in the Direction Office will be transferred to Silva for disposal.

119
WORKING PLAN

CHAPTER I

GENERAL

3.27. Areas for which working plans are to be prepared. Working Plans will be prepared for all forests under the management of the West Pakistan Forest Department with the exception only of certain un-classed and un-demarcated forests, civil rakhs and section 38 areas for which working schemes will be prepared and sanctioned by the Territorial Conservators of Forests, vide Chief Conservator of Forests, West Pakistan's Standing Order No. 1683-WP. dated 4th January 1960.

2. General orders regarding working plans. The general orders regarding working plans are given in Chapter II of the Forest Department. Code, 7th Edition and Code of Working Plan Procedure in the Punjab.

3. Authority controlling Research & preparation of working plan. All forest research, statistics of growth and yield and the revision and control of working plans are dealt with in the Regional Offices.

CHAPTER 11.-THE PRELIMINARY WORKING PLAN REPORT

4. The preliminary working plan report. Some 12 months before the introduction of a new or revised working plan, the necessary preliminary steps will be taken. First step is for the Chief Conservator of Forests of Region to give his views and those of any of his staff, he may wish to consult on the result of past working the defects in the existing plan (if any) and any modification which should be considered. The Chief Conservator of Forests, will then arrange to tour in the division concerned and will examine the problems and will discuss them with local Forest Officers. The Territorial Chief Conservator will thereafter prepare a preliminary working plan report in considerable detail. The report will deal with the results of past working, the fundamental modifications (if any) which should be made, the general object of management, the allotment of working circles, the silvicultural system, the constitution of felling series, periodic blocks, the method of calculating the yield etc., In case of new working plan, the preliminary report will contain a short description of the forests for which it is contemplated to frame a working plan, facts relating to their manage.

ment, working and reproduction future treatment recommended along with the reasons for the same; propositions regarding the basis on which it is intended to build the plan of exploitation and management (whether on area, or volume with area check); and proposals with regard to valuation surveys. A small scale sketch map showing roughly the proposed working circles and any other information that can conveniently be included with the object of more clearly setting forth the proposals for future working than is possible by means of manuscript description above, should accompany the report-. This preliminary report will be sent to the Secretary Agriculture who will approve it.

- CHAPTER III-PERSONNEL, DUTIES AND EQUIPMENT

5. **Appointment of Working Plan Staff.** -While the preparation of the Preliminary Working Plan Report is under way, the - appointment of a Working Plan Officer and other subordinate staff will be settled by the Chief Conservator of Forests, of the Region. - An attached gazetted officer, will rarely, - if ever, be appointed. A camp clerk for office work and such number of Forest Rangers, Foresters and Forest Guards as are necessary, will be provided for assistance in field works such as enumerations, collection of statistical data, -collection of necessary material - for writing out description of compartments, etc., etc. Two peons for the Working Plan Officer and one peon for each Ranger will be given. For carriage of dak, the divisional line dak will be employed, but special dak runners will be appointed-on the necessity being approved by the C-chief Conservator of Forests, of Region.

6. **Duties of the Plan Officer.** The preliminary working plan report will be his instructions regarding the preparation of the working plan. His duty will be to obtain all the necessary information from the territorial divisional office for the preparation of Part I. He will carry out the necessary fieldwork, will describe and allot compartments to working circles, felling series and periods, as necessary. He will also -do the stock mapping into species, age -classes, etc. and during the course of his field work will investigate the question of the real and normal growing stock and increment. The Working Plan Officer may state his views regarding any modifications in the preliminary report, which he thinks should -be made for the consideration of the Chief Conservator of Forests, of Region.

76. **Cooperation between Executive Staff and the working plans branch.**
It is absolutely essential that a spirit and mutual assistance should prevail between the staff of Working Plan & Territorial Conservators and Divisional Forest Officers.

Correspondence between Working Plans Officers and Divisional Forest Officers may be largely unofficial or in memo, form and Silvicultural matters are best settled by discussions on the spot. The Divisional Forest Officer will furnish the Working Plan Officer with record to enable him to obtain facts and figures, he will place accurate maps at his disposal, seeing that all corrections of boundaries have been made and new roads entered. The Divisional Forest Officer will have statements of revenue and expenditure prepared, but the Working Plan Officer must satisfy him self that the statements are correct and contain all necessary information.

Statements of past yield will be obtained by the Working Plan Officer direct from the control forms and any subsidiary returns.

The Range Officer should meet the Working Plan Officer when first he enters his range and must -afford him all assistance in starting field operations; the beat Forest Guard must accompany the Working Plan Officer and a enumeration parties- when work is proceeding in his beat. Transfers of local -staff must be avoided when a working plans is in course of preparation or revision.

8. **Equipment.** The Working Plan Officer will provide himself the following equipment:

- 1. Abney's level or other height measurer with table.
- 1. Pressler borer.
- 1. 25 feet steel tape.
- 1. hundred feet linen tape.
- 1. small axe or bill hook.
- 1. Two feet folding rule.
- 76. Magnifying glass (pocket size).
- 1 set of coloured pencils.
- 1 Small colour box.
- 1 Tray with cover or despatch box.

In addition, the necessary number of tents, enumeration callipers and scribes, etc., for the enumeration staff. -

Note: Prismatic compass, planimeters, research calipers, Acre comb and drawing box will be available in the Chief Conservator of Forests for Issue to the working Plan Officers when required.

9. **Duties of Conservator of Forests, Development Circle.** The Chief Conservator of Forests, of the Region is responsible for the Working Plan Officer. He will see that the field work is properly carried on, that the allotment to working circles and periodic blocks is on sound lines and that the work is generally carried out accurately and expeditiously. The Conservator will supervise the writing of the plan and will correct and amend it at his discretion. He will see that the form of control is suitable and that the compartment histories are in order.

76. working Plan Officer expected to be acquainted with all technical literature.

Working Plan Officers are expected to make themselves fully acquainted with the technique of the preparation of working plans; with the literature on the subject and with the publications of the Forest Research Institute. It is not intended here to reproduce all that has been written on the subject. All important books and references should be studied in extenso, they can be had from the Central Forest Library, Lahore.

11. **Technical terms.** All technical terms will be as defined in the "Glossary, of technical terms for use in Indian Forestry' Indian Forest Records, Volume XV, Part II.

12. "Principles and Practice of irrigation in the irrigated Forest Plantations of West Pakistan". The book "Principles and Practice of Irrigation in the Irrigated Forest Plantations of West Pakistan" by Mr. Zulfiqar Ah Conservator of Forests deals with all matters concerning the irrigated plantations and is the prescribed text book on the subject to be followed by all Working Plan Officers.

13. **Forest Leaflets.** All Working Plan Officers are bound by the instructions Contained in all Forest Leaflets dealing with technical matters, and no prescriptions contravening such instructions can be permitted. It is generally sufficient for Working Plan Officers to refer to these leaflets, which have been widely distributed amongst the staff.

CFIAPTER IV

THE ORGANIZATION OF TITLE FOREST UNDER WORKING PLANS

14. **Start of fieldwork.** The first duty of a Working Plan Officer in the field is to examine his territorial units (blocks and compartments) and see that they are adequately demarcated and sufficiently sub-divided for purposes - of the new plan, as outlined in the preliminary report. - A clear grasp of the right position is absolutely essential. Existing compartment boundaries, names and numbers should not be changed unless absolutely necessary and in case of change the- Chief Conservator of Forests, of Region sanction must first be obtained. In renumbering some definite order, as W. E.

and -N. - S must be decided on and observed throughout. Where it is necessary to sub-divide a well known compartment, this should be done by breaking it up into sub-compartments. - In this case the sub-compartments must be permanent units, clearly demarcated on the ground and shown on the map.

15. **Boundaries.** The maintenance of the external boundaries of the estate and of the boundaries of such interior private lands as have been excluded from the area of the legally notified reserved or protected forest is one of the first duties of the Executive Officer in-charge. In order to ensure that this important work be -attended to it should be prescribed in working plans that a certain proportion of the length of boundary or portion of the estate should be examined annually by a responsible officer, and any defects which may be brought to light rectified. During the course of the revision of the working plan, the officer in-charge will have frequent opportunity of examining the demarcation, and it is part of his duty to see that this is generally in order. Boundaries are demarcated in several different standard ways, the outer line with ditch and stone monoliths is the general standard in the plains, while in the -hills natural features, such as ridges and nalas, are frequently adopted. The boundary should be clear on the ground, the position of the pillars on the ground and their number should correspond with the map and the boundary register and usually each pillar should be visible from the next one.

16. **Blocks.** A forest block is either a natural division of a forest (state) or is part of a large tract of forest -separated off, either for purposes of the record of forest rights, when it is frequently – designated a settlement block, or for other administrative reasons. Forest blocks bear a local proper name and may be of any size. Some forest divisions, more especially -in the hills, are divided into separate entities known as blocks or forests, other divisions are merely divided into compartments.

17. **compartments.** A compartment is a portion of a forest that is as far as possible homogeneous throughout its extent as regard soil, aspect and composition of the growing stock. The compartment is the permanent working plan unit, it must be distinct on the ground and on the map. This latter point is of greater importance than the exact homogeneity of the crop it -contains, but as far as possible each compartment should be capable of treatment under one and the~ same silvicultural system and of inclusion in the same working circle. A compartment should be bounded by fixed lines,- paths, nalas, ridges.

18. Division of a Forest into compartments.

The division of a forest into compartments is the very foundation, which is built up the structure of the detailed management. This division into situation. The compartments is the first duty of - the Working Plan Officer. The size of compartments will vary with the intensity of the management, all the latest plans have considerably reduced the size of the compartment, and it is probable that finality - has not even now been reached. A reasonable mean in the size of compartments must be maintained, compartment should be neither too small nor too big. If too small, their numbers become excessive, if too big they are impossible to describe.

19. **Numbering of compartments.** Compartments may be numbered separately for each. block or they may be numbered serially throughout the division. It is important that the subordinate staff should become acquainted with the numbers of the different compartments, and to change their numbers is most undesirable. Compartments, should, therefore, be numbered on the ground either by small engraved stones, numbered boards, or by painted stenciled numbers on trees. Compartments are numbered in Arabic numerals as 1, 6, -24 and should be shown in black ink on the map.

20. **Sub-compartments.** A sub-compartment is a division of a compartment either permanent or temporary. - Sub-compartments are made when it is desired to split up an old established compartment with a well known number, or where the composition of the crop renders such sub-division necessary. Again, where part of a compartment is high forest and the rest bamboo, sub-compartments may be formed. The boundaries of sub-compartments are not necessarily permanently fixed, they are generally shown by a colour wash on the map and designated with a small letter. Therefore, where forest blocks exist a particular sub-compartment would be designated as, Chichawatni, 31,a.

21. **Coupes.** A coupe is the area set aside for felling in a single year. It is used more especially in the case of simple coppice and coppice with standards. It is not a fixed geographical entity nor is it a permanent working plan unit like a compartment. Coupes are given a Roman numeral, where it is necessary to give them numbers.

CHAPTER V

THE ORGANISATION OF THE WORKING PLAN -

22. **silvicultural management of the different species of West Pakistan.** "Practical Forest Management" deals in considerable detail with the Silvicultural management of the different species' of West Pakistan and with all aspects of practical management under, the standard silvicultural systems. Certain sections have been reproduced here for the sake of completeness, but the

whole book should be studied by all officers interested in forest management.

23. - **The constitution of working circles.** A working circle is an area subjected to one and the same Silvicultural system and method of treatment and which is exploited by a distinct series of operations. It may consist of one or more felling series. The number of working circles should not~ be unduly increased. The greater the number the more complicated the control. Having decided on the silvicultural system or systems to be adopted, it now becomes necessary to allot compartments to working circles in accordance with the way in which it has been decided -to treat them. The broad outlines of the working plan having already been laid down, the Working .Plan Officer will consider the question of the allotment to working circles at the same time, as he describes the compartments. In order that a working circle may be properly constituted it should contain crops of well graduated ages. - As, however, under present circumstances the distribution of the age classes is never normal, the Working Plan Officer must do the best he can with crops at his disposal and -must make the best possible arrangements to obtain greater normality in the future. A working circle comprising as it does forests under one and the same method of treatment need not be in one piece, in fact it is seldom so. As area is the foundation on which the constitution of a working circle managed under the uniform system rests, it is essential that the whole area allotted to t-he working circle or at any rate the greater portion of it should be capable of being. managed and regenerated under the silvicultural system prescribed. When large areas of Fir forest which it is never proposed to regenerate are included and shown in the allotment to periodic blocks, an entirely wrong picture of the constitution of the working circle may be presented and grave errors in allotment to periods may arise. If any compartment contains appreciable areas of forest in capable of regeneration under the prescribed system either the net area only should be shown or the unproductive area of - Fir or broad-leaved trees should be formed into a sub-compartment and excluded from the working -circle altogether. - It is also incorrect to imagine that definite areas cannot be prescribed for regeneration or afforestation in a working circle managed under the selection system should silviculture require this treatment- - over limited defined areas, as opposed to the general management under the principles of selection. Such areas are shown pink on the map.

24. **The constitution of felling series.** A felling series is part of a working circle comprising a separate series of age classes. Felling series are constituted from the area of the working circles in order to provide a sustained yield of forest produce to one or more markets or to distribute forest works of all kinds over one or more

ranges, although the constitution of separate felling series for this latter purpose alone is not necessary. Each felling series is a self-contained unit of management with a separate calculation of the yield and a separate series of all silviculture operations. Where there is local demand for the produce, where rights have to be annually satisfied at a reasonable distance from the right holding villages and local grazing rights have to be met, in these cases comparatively small felling series will be indicated. Beyond what is necessary to comply with the above considerations, the number of felling series should not be unduly multiplied. If too numerous the number of separate operations becomes inconveniently great and the work of a given year is correspondingly scattered.

25. The allotment to Periodic Blocks. One of the greatest faults observed in working plans is the incorrect allotment of compartments to periods. The first essential to a correct allotment is a reasonable sub-division into compartments.

In many divisions, these are far too big. It is impossible to deal with compartments of 500 acres. Compartments of not more than 100 acres should be aimed at. In the irrigated plantations 50 acres is the standard. In making any allotment of compartments to periods, the orders of the Forest Settlement regarding closure to grazing must be given the fullest consideration. The Chief Conservator will not pass any allotment to periods under which the area to be regenerated cannot be closed in accordance with the provisions of the forest settlement. There is no necessity to concentrate large areas under regeneration and this policy has every disadvantage, the fire hazard is greater, it is impossible to close the grazing, no local supplies of timber will be available once the area has been regenerated and the work of regeneration is not distributed amongst the staff. The allotment to periods should be scattered over the area of the working circle so that all areas allotted to P. B. I. can be closed to grazing; thereafter the allotment will naturally follow as far as possible the distribution of the age classes on the ground. Where the regulation of the yield is based on area it follows that areas allotted to periods must be net areas and where the question of quality classes is a factor of importance net reduced areas.

26. Standard Diameter Classes. The following standard diameter classes are prescribed for adoption throughout West Pakistan. All future revision of Working Plan will be made in these standard diameter classes and elsewhere the early introduction of these diameter classes will be considered:-

Table of standard diameter classes

Under 8" diameter				..	V Class
8" diameter upto	but less than	12"	diameter	..	IV Class
12" "	"	16-	"	..	III Class
16" "	"	20"	"	..	II-A Class
20" "	"	24"	"	..	II-B Class
24" "	"	28"	"	..	I-A Class
28" "	"	32"	"	..	I-B Class
32" "	"	36"	"	..	I-C Class
Over 36' diameter				..	I-D Class

27. **The determination of the rotation.** By rotation is meant the predetermined time period during which it is intended to cut over a working circle. Potation really refers to even aged crops. As regards solitary trees or the individuals of a canopied crops considered singly the age at which they become exploitable varies from tree to tree according to the special environment of each, and in such cases the exploitable size. is of more importance than age. Nevertheless in a selection forest a rotation calculated to produce on average exploitable tree must be determined for the purpose of calculating the yield, but this average tree will vary according to the different quality classes. of different sites.

28. The first essential of a rotation is that it produces a crop of trees for which a demand exists and the second that this particular class of crop shows satisfactory financial results. From an exploitation point of view it may be very desirable to grow trees to 30" diameter but under certain circumstances it may be financially very unwise to do so. It is useless growing coppice for firewood, when there is no demand for this material, nor is it profitable to produce small low class material, when the local market demands high class sawn logs and is prepared to pay for them. A study of this section in existing working plans will provide sufficient examples of how the rotation may be determined. Rotations have lately been lengthened for the coniferous forests of the hills and vary from 120 to 150 years, the latter figure being generally accepted correct, where timber in the form of the B. G. sleepers is required. In the dry zone considerably longer rotations are required to produce trees of the size-required and. some of these rotations appear to be excessive. Irrigated plantations should be felled first at the earliest possible rotation to reduce interest~ charges. The exploitable size which refers only to individual trees is entirely a different matter to the rotation. The former is of first rate importance only in selection forest whereas rotation is the dominating consideration in even aged crops.

20. **The Increment and Growing Stock.** Much greater attention must, in future, be paid to the consideration of the actual growing stock and increment as compared with the normal obtained from yield tables. The Forest Research Institute yield tables for *Pinus longifolia* and *Cedrus deodara* are entirely satisfactory and will be made use of in all future working plans. The C. A. I and M. A. I. of crops are read from the yield table. The C. A. I. of the diameter classes is obtained from curves better than direct from the table of ages and volumes. The Kulu (East Punjab) deodar figures i.e., the mean of quality class I/II are as follows:~-

Diameter Class				Age	C .A.I.c. ft.	Growth per cent
12"-16"	..	..	..	65	1-4	8-2
18-20"	..	.	..	80	1-9	4-8
20'-24"	.	..	..	100	2-1	2-7
24"-25"	.	..	..	120	1-9	1-4
25"-32"	..	..	..	155	0-5	0-5

Schneider's formula for the calculation of the growth percent of individual trees has been found by experience to be sufficiently accurate for all practical purposes. The growth per cent of the mother trees in areas under regeneration under the Uniform System is of very great importance and working plans must give consideration to this matter.

30. **Quality Classes,** As the Forest Research Institute have now standardized the quality classes of deodar, kail and chir, Working Plan Officer will, in future, allot all compartments to their respective quality class by the method of height over age or by measuring the height of mature trees which have completed their height growth and comparing their height with the height curve attached to the yield table. For the purpose of obtaining the age of standing trees specially long increment borers are now available. Ages of pole crops may also be obtained from trees felled in thinning.

31. **Reduced Areas.** The enormous difference in yield capacity between different quality classes renders it essential under certain circumstance; when allotting areas of different quality to the various periodic blocks or when fixing the annual Yield by area, to make due allowance for the difference in

yield capacity if a sustained annual yield is required. In the hills where, owing to the record of rights, periodic blocks have usually to be widely distributed over the area of the division differences in quality will average themselves out and reduced areas may not be necessary. In the irrigated plantations reduced areas will always be used in arranging the annual coupes as has been done in the last Shahdara and Chichawatni Working Plans,

32. **Yield capacity of different classes.** A ready indication of the yield capacities of different qualities is given by the M. A. I. curves. Thus for chir with a rotation of 150 years, the yield capacities for stem timber are as follows:-

Quality

	I	II	111
M. A. I.	107	74	40

or
1.44 1 0.66

Thus taking quality class II as unit, the reduced area of a working circle is obtained by taking:-

- (i) Area of quality class I compartments x 1.44.
- (ii) Area of quality class II compartments X 1.
- (iii) Area of quality class II Compartments x 0.66

In the case of the irrigated plantation local quality classes will have their different yield capacities in cubic feet stacked at rotation age and these figures will be used as the basis of the ratios of the different quality classes for the calculation of reduced areas,

76. The Forest Research Institute have published volume tables for deodar, kail and chir both in standard stem timber and in commercial timber.

For all purposes of yield calculation. commercial volumes are to be preferred to standard volumes. The latter will of course be used for comparing the actual growing stock with the normal from yield tables.

The following volume tables founded on the Forest Research Institute figures but rounded off to the nearest five cubic feet will in future be used in all working plans:-

Diameter Class	CEDRUS DEODAR			PINUS LONGIFOLIA			Picea morinda abies pndrow
	Quality I/II	Quality II	Quality III	Quality I/II	Quality II	Quality III	
12"-16"..	15	15	10	10	10	10	30
16"-20"	45	40	30	35	30	25	60
20"-24"..	85	70	55	75	65	55	110
24"-28"	125	105	85	120	105	85	180
28"—32"	170	145	120	..	..	..	250
32"-36"..	215	190	..	..	..	..	300

NOTES -1. The Deodar figures can be used quite well for *Pinus excelsa*.

2. Quality class I is not required in the former Punjab.

3. The figures for fir are from Trevor's Kulu working plan

The yield of sawn scantling from the above figures may be taken at 47 per cent. When less than this a special explanation has to be supplied by the Divisional Officer.

34. **The Silvicultural I System.** The uniform system of management for pine forest was introduced into the former Punjab by Jerraml in his plan for the forests of Murree and Kahuta. Provided the allotment to periods is carried out in a reasonable way and the strictest attention paid to departmental burning, cleaning, thinning and other measures of fire protection, this system is by far the best for the chir pine. Very excellent results can be seen in Rawalpindi and Siran. This system was introduced in Kuin by Trevor for deodar, kail and fir and has been in operation for 15 years. Regeneration of all species has been obtained under this system and the new crops are far better than any thing obtained in the past. The present distribution of the age classes in West Pakistan throughout the compartments is, however, very irregular and the complete adoption of the uniform system would result in a great sacrifice of immature timber. It is usually impracticable so to sub-divide the compartments as to allot only one age class to each sub-compartment. Consequently, the uniform system is modified to allow of the retention of compact groups of well grown poles as part of the future crop. A certain amount of irregularity in the young crop is not only recognised as inevitable but is welcomed. The system is known as the "Punjab shelterwood

System and is described in Punjab leaflet No.2. Elsewhere, where the steepness of the hills inhibits any such system of working, the selection system is employed- it is laid down that any selection system must provide for normal regeneration and the proper distribution of the age classes, and that the executive staff must see that this is obtained otherwise the system degenerates into pure lumbering. Another most important point is that when marking, all silvicultural operations must be carried out at one and the same time.

In the case of the irrigated plantation the silvicultural system is best designated as coppice or coppice with standards although the new crop is largely derived from seed and stumps. The technique of the simple coppice and coppice with standards system is described in chapters X and XI of Practical Forest Management. In case where the coppice or coppice with standard system cannot be practised as in babul crops, the clear felling system with artificial regeneration is used.

35 FINAL YIELD(Definition of the final yield). The definition of the final yield is as follows:-

The material which counts against the prescribed yield derived from clear or regeneration felling or from trees which have reached exploitable size".

The exploitable trees in blocks other than P. B. I. are geographically out of place, but there is no reason for excluding them from the final yield as they have already attained the size required in order to fulfill the objects of management.

The final yield is prescribed by volume and ordinarily consists of the volume of trees of over 16" diameter in P. B. I., no allowance being made for increment, plus the volume of such exploitable trees as are prescribed for felling outside P. B. I.

36. **The calculation of the yield.** This most important part of the working plan was discussed under item 16 of the Third Silvicultural the cultural Conference of 1929, reproduced on pages 251-277 of the proceedings and two valuable papers were contributed by Simmons and Glover, the former dealing with the general aspect of the calculation of the yield in 3 types of forests, I Regular forests or conversion of irregular forests to a series of even aged woods, II Irregular forests and III Forests where an equality of yield is a feature dominating management. Simmons's recommendation of methods of yield calculation are sound and can be adopted with confidence. In case of uniform working circles, volume plus area is really the most satisfactory method. In his paper Glover discusses the yield calculation in various former Punjab Working Plans and shows the necessity of regulating the yield not only by volume in P.B.I. but over the 'whole working circle'. Simmons's methods his type III must therefore be

a

applied in future working plans and the whole yield, both final and intermediate, calculated and controlled by volume at any rate above a diameter of 16". This is further discussed in Glover's paper on "Recent changes in Forest Management in the coniferous forests of the Punjab Himalaya", Punjab Forests Conference, 1931.

37. In the case of selection working circles the distribution of the growing stock in every compartment must be considered and it is a great help to draw the curve of the actual growing stock as compared to the normal or rather to a curve representing a conception of what the normal may be. The Working Plan Officer with the enumerations and the curve before him will assess the yield of every compartment both final and intermediate. The sum of the yield for the compartments may then be compared with the total yield of the working circle calculated by Brandis and Von Mantel's formula. It must be remembered that a correct distribution of ~ classes over the whole working circle does not imply a correct distribution in every compartment and this is where Brandis's method comes to grief. Glover's paper gives detailed examples of actual calculations and should be studied.

38. The general function of the regulation of the yield is to control the rate of removal of the existing crop so that the fundamental requirements of the silvicultural system may be fulfilled and future yields safeguarded. The yield must be a reasonable yield, it may be calculated by various methods but it must be subjected to close examination both with reference to past yields and their effect on the growing stock and with the actual increment of the growing stock. In all calculations of the yield, past and present growing stock must be discussed and the prescribed yield must be expressed in terms of percentage of the growing stock. A forecast should be made of the growing stock expected at the end of the period.
39. Taking Von Mantel's formula where $Y = \frac{Gr}{150}$ and making $Gr=100$ and $r=150$, the yield 1.3 per cent. From this, it is obvious that the correct total yield must lie somewhere, between this figure and 2 per cent. In his paper Simmongs discussed the various modifications of Von Mantel, and ~ results of these methods on the yield as expressed as a percentage of the growing stock and the actual effect of such yield with a felling cycle of 24 years. If Von Mantel's formula is modified Blanford and Simmons' modifications,--vide page. 101 of Practical Forest Management, should be used. Formula methods should, however, be used only to check the yield calculated according to paragraphs 35 to 39, as. They are not in

133

themselves of accuracy sufficient to determine the yield: they form, however, very useful checks on calculations and should not be neglected.

40. Subsidiary Silvicultural regulations. A table of thinnings, improvement felling, etc., will be provided. Thinnings will be carried out on a felling cycle of 10-15 years in coniferous forests in the standard manner laid down in the Punjab Forest Leaflet No. 1

CHAPTER (VI)-FIELD WORK

41. Description of Compartments. The description of compartments is one of the most important duties of the Working Plan Officer as on this description is based the allotment to working circles and periodic blocks. The description should be concise and should convey in as few words as possible an adequate idea of the composition, quality, age, density and general characteristics of the growing stock. In the hills, a good idea of the contents of a compartment may be obtained from the opposite side of the valley, and this, supplemented with an examination of the interior of the compartment, will enable an adequate description to be written. In the plains it is not sufficient to walk round the boundary of the compartment ; an entirely wrong impression of the content is often obtained in this way ; it is absolutely necessary, in order to obtain a just appreciation of its contents, to traverse the compartment in at least two directions. As the division into compartments varies with the intensity of management, so will the description of

45. The Working Plan Officer will generally decide how many gangs are necessary. He also gives orders as to what is to be included and distinguished in the enumerations. It is being found safest, with any given species, to enumerate all but the obviously unmarketable, as these alone can be distinguished with any certainty by an officer coming to mark against the prescribed yield. Further distinction (e.g. sound dry, sound green, unsound) may of course be made at will for information in the compartment histories.

In enumerating Chir forests where twist is a source of non fitness the degree of twist qualifying for unfitness must first be decided. This is usually fixed 7^0 . But the yield should be

on fit and unlit trees combined and not fit trees along as the estimation of the degree or twist in a tree is liable to vary greatly, and the trees marked to make up the annual yield might be very different from the Working Plan Officer's intentions.

A forest subordinate is generally put in direct charge of the enumeration work. He must be instructed to see that gangs work near each other, so far as possible, in order to facilitate control, and reduce the number of separate encampments. He must know the boundaries of each compartment or block to be enumerated, and make them known to the munshis. In particular he has to see that sample and experimental plots are not wrongly included in the count. He is also responsible that every man carries an efficient tool, and above all that no gang lies idle; for this the progress of enumeration must be watched and fresh work planned ahead. Enumeration books and an abstract must be forwarded to the Working Plan Officer immediately all enumeration has been completed. Gangs on the move carry their own saman and are allowed a day or half-day, according to the length of march, in which to erect CHAPPARS. An empty kerosene tin per season is generally sanctioned to each gang for carrying water.

- The Chief Conservator of Forests of the region lays down the amount of check enumeration to be done. The subordinate directly in charge usually checks 10 to 15 per cent and the Working Plan Officer another 5 per cent of the total number of trees enumerated, and up to 2 per cent difference may be passed. Gang must never check their own work, nor should any one but the Working Plan Officer have access to the original figures. Re-enumeration should proceed in exactly the opposite direction to the enumerations, so that scribe marks face the advancing gang these marks are then

prescribed to form a cross. The number of trees found un-scribed should be noted separately on the enumeration sheet. Enumeration must be carried out by quite small units and not by whole compartments. Results, of course, will finally be shown by compartments or sub-compartments, but the Working Plan Officer may often wish to sub-divide a compartment at the last moment after all enumeration work has been completed, and he will find it invaluable to have results separately for portions of the compartment. Such sub-division is also useful for subsequent checking.

46. The conduct of Enumeration. The extent to which the growing stock is to be enumerated having been determined it now remains to carry out this work. At the outset it is laid down that in working circles organized on a periodic block system, in which the yield is calculated by volume for the regeneration area and by area elsewhere.

a complete enumeration of the regeneration area must be made. In forests where the yield is regulated by area, no enumerations are generally necessary, but in special cases where an accurate forecast of the probable output is wanted they may have to be carried out.

47. Actual method of counting tree. The actual counting of the trees is done as follows each recorder is given a book ruled in the standard diameter classes already mentioned, and two or at the most three calliper men work with him. In the plains a couple of linesmen are also necessary. Starting from the edge of the compartment a strip of forest is taken along which the 2 linesmen walk tying bands of dry grass along the line, but keeping pace with the rest of the gang. The recorder takes up this position in the middle of the strip and the calliper men measure at breast height and shout out the species and colour of the trees on the callipers, the recorder entering each tree with a dot under its proper species and colour. After each tree has been measured it is given a spot of whitewash, or the bark is marked with a scribe or light axe in the case of suitable species like chir or deodar, to indicate that it has been recorded.

48. Another method is as follows. In addition to his calliper, each enumerator is to be provided with (i) a rope belt, (ii) a cigarette tin (without lid) filled with good atta paste, and (iii) a bundle of some 250 pieces of old thin paper (newspaper is most suitable) roughly 2" square on a piece of thin wire. Nos. (ii) and (iii) are carried on No. (i). As the recorder acknowledges the recording of each tree measured by the enumerator the latter tears off a piece of paper, dips it in the tin of paste and sticks the paper on the tree of about breast height. This will ensure that trees are not counted more than once. For checking purpose the enumerators should be provided with a coloured paper bundle instead of white or newspaper.

49. When the far end of the compartment or enumeration section is reached the line turns and measures a step adjacent to the one already done. The marks on the trees counted should be placed on the side of the tree facing the direction in which the work will progress so that when working in any

strip the remarks on the trees of the last strip are clearly visible. In most cases a man carrying drinking water for the gang will have to be provided

50. Division of compartment enumerated into sections. Whenever possible the compartment to be enumerated should be divided by clear physical features such as ridges, nalas or paths into enumeration sections. The ideal section is one that can be counted in one day, so that it becomes possible for the officer responsible for the work to check the work of any one man in one day. Such check is absolutely necessary and the permissible percentage of error is maximum of

137

2 per cent in number of trees counted. If this exceeds the work of that recorder must be rejected and the man dispensed with. As a matter of fact, the percent age of error found on checking is normally less than 2 percent. On completing each section or compartment the recorder hands in his results to the Working Plan Officer or the *assistant in special charge* of this work after signing the form. recorders usually work in separate sections or compartments, they have, however, been concentrated in one section spread out in a long line, this was found of advantage on difficult ground, as complete supervision by a responsible man was then possible. A standard day's task should be fixed by the Working Plan Officer and the work kept up to this. The custom of recording trees as sound or unsound in the enumerations has been found by past experience to be most unsatisfactory and has served no useful purpose.. Trees obviously worthless should be omitted from the count, trees which for below breast height are counted as two trees. The recorder must see that the calliper is properly applied to the bole, the rule of the calliper should touch the stem and the measurements be taken as near 4-1/2 feet as possible, the calliper man stands on the upper side of the tree if on hilly ground, one diameter measurement suffices. Callipers must be checked from time to time. The Working Plan Officer is entirely responsible for the correctness of his enumerations and must carry out check enumerations to the extent ordered.

51. Stock Maps. Stock mapping will only be done when specially ordered. This subject is dealt with in the PunjabLeaflet No, 7. In the hills stock-mapping may adequately be done by eye ; in the irrigated plantations it must be done by linear survey or plantable. The following colours are laid down as standard for the hills.

Deodar ..	Hooker's Gereen.
Kail ..	Crimson lake.
Chil	Chrome yellow
Spruce	Light blue
Silver fir	Indigo
Other species	
Including	
Broadleaf ..	Sepia

Past and current prices.

CHAPTER IV

Staff and labour supply

CHAPTER V

Past system of management General History of the Forests.
Past system of management and their results.
Special works of improvement under taken.
Past yield.
Past revenue and expenditure.

CHAPTER VI

Statistics of growth and yield

(To include allotment to quality classes, maps, annual increment, current annual increment, yield tables etc.).

139

CHAPTER VII

Estimate of Capital value of the forest

PART II

Future management discussed and prescribed.

CHAPTER I

Basis of proposals: General objects of management and brief statement of treatment required to secure them

76. As regards the attainment of the normal forest and the establishment of normal regeneration.

77. As regards the silvicultural requirements of the species dealt with.

78. As regards the yield of timber and other forest produce.

(d) As regards the improvement and regulation of the water supply.

Methods of treatment to be adopted. Working Circles, their area and distribution, reasons for their constitution. Period of working plan and necessity for intermediate revision.

CHAPTER II

Working plan for Working Circle. General constitution of the circle and character of the vegetation.

(Note-Separate Working Circle will be made for timber, fuel, bamboo and 'minor forest produce as considered necessary).

Blocks and compartment (permanent). Analysis and valuation of the crop.

Method of treatment (exploitable size, choice of species, silvicultural system, calculation of the rotation, division into periods allotment to periodic blocks, cycle, calculation of the yield).

Method of executing the fellings.

Tabular statement of fellings to be made.

Subsidiary silvicultural regulation

(sowing, planting, weeding, cleaning, thinning and supplementary felling.).

Other regulations grazing, protection, exercise of rights and privileges,
 Collection and record of statistics, forecast. of condition of crops at con~usion
 of fellings and control including forms record and maps as required here or
 generally.
 (Chapters for all other working circles).

CHAPTER III

Miscellaneous regulations (prescribed and suggested) -
 Roads and other export works. Improvement of water ways and water
 supply and methods of exploitation.
 Possible development of forest industries.
 Buildings.
 Maintenance of boundaries.
 Surveys and maintenance of maps.

CHAPTER IV

Establishment and labour.

CHAPTER V

Financial forecast and cost of plan.

CHAPTER VI

Appendices

Summary of prescriptions. Only the appendices required for the elucidation of the plan should be printed therewith.

General prescriptions under "other regulations" including the maintenance of control forms, record and maps may be provided either under Chapter II or in the chapters dealing with all working circles generally.

Although some overlapping is difficult to avoid this should be reduced to a minimum. Facts and prescriptions should only be dealt with in the correct place.

PART- I OF THE PLAN

54. General remarks. This part deals entirely with the forests as they exist at the time of writing the plan, and with their past history. Suggestions for future work are quite out of place and must be confined to Part-II. It is not always necessary to re-write part I completely.

141

55. Geology, Rock and Soil. Summarize the essential facts, the different geological Formations, their position and extent, the soil produced, and more especially the effect or influence of the geology and soil on the distribution of forest types, ecology and quality of tree growth.

56. climate Meteorological statistics can be obtained from the Deputy Commissioner's Office.

57. Distribution and areas. Detail separately any areas belonging to the division that are not reserved forest. Mention any important pending changes of area.

58. State of boundaries. This particularly refers to the "legal" boundaries, i.e., divisional including interior or chak boundaries.

59. Legal position. Detail the (re) notifications of reservations only if they are few. Briefly mention resumed grants and any distinct settlements having a bearing on the existing status of the forest.

60. Rights A clear conception of the extent and management of rights is essential both for the Working Plan Officer and subsequently for each new Divisional Forest Officer very soon after taking over their duties. Give a brief resume of the rights, position, their extent, nature, etc., and a reference to the (subsequent) paragraphs of the working plan whereby they are regulated or met, and to the appendix where they are detailed or summarized.

61. General description of crop. Briefly specify the forest by types, mentioning only the more characteristic species ; give a general note on constitution, condition, density and age (size) of the crop.

62. Injuries. Sub-heads are arranged according to the approximate agents causing injury. A list of areas most liable to illicit grazing is useful.

63. Markets and Market table products. These are inter-dependent subjects and cannot be treated separately. There is some inevitable overlapping with "Rights and concessions" and "wants of the population". Avoid mentioning routes here, as they form a separate heading.

76. Past and current prices. Include the existing grazing rates, also past rates if these have been altered during the currency of the last plan, giving brief reasons for the change.

77. Labour supply. This heading necessarily overlaps somewhat with "Agricultural customs of the populations" and in a less degree with "Methods of exploitation and their cost" to which suitable reference can be made~

66. Statistical Data. Include here (a) methods of calculating outturn, with any special local feature, (b) a note on check enumerations and percent of error found.

PART II OF THE PLAN

67. **General Remarks.** This part is written largely in the imperative mood and deals expressly with the future management of the forest estate comprehended by the plan. It is, however, necessary to avoid prescriptions about purely executive matters. For example, a prescription that an area must be completely felled over in one season is permissible if it is held that a second year's fellings will endanger regeneration, but is not permissible if the object is merely to suit contractors or for any reason unconnected with the welfare of the forests. Again, the working plan must not lay down that something which requires a special order may be done with the sanction of any particular authority. It will merely say that such an act will not constitute a deviation, leaving the question of authority to the administration.

68. These are conveniently divided into:-Objects of Management.

- (i) Ideal and ultimate.
- (ii)

Real and proximate:-

- (a) General for the division as a whole.
- (b) Particular as concerning different types or areas of forest.

69. Give a list of the different working circles, showing how they meet the objects ~f management detailed above.

Allotment to working circles.

70. **General constitution of the Circle.** Includes the area under rights, and a summary of the "Detailed Area Statement" (Appendix I) by ranges and blocks showing gross and stocked areas where these are known.

71. **Allotment to P. Bs.** Mention the principle followed in allotting to each, and whether any excess of age classes exists. Give table showing per P. B., the gross stocked and reduced areas, and areas actually allotted (where this has been done).

72. **calculation of the yield.** Trees which are to count against the yield now usually comprise all marked trees of a given diameter and over of the species enumerated.

Trees which are obviously unsound are excluded if they have also not been enumerated. It is important for the Working Plan Officer to make it quite clear exactly what is and what is not to count against the yield.

73. **Method of executing the Fellings.** Give a preamble stating the object and scope of the rules. These should not be too elaborate. Marking rules will be definitely laid down in the plan by some such phrase as "The rules for markings are _____ Exceptions may, however, occur as for instance when the operation for which marking rules are being formulated is a new one and the Working Plan Officer has had no opportunity of adequately testing his rules.

74. **Subsidiary Silvicultural Operation** The Working Plan Officer must be careful to prescribe _____ for carrying on cultural operations, cleanings or other subsidiary operations rendered necessary _____ by _____ fellings made under the old plan, as well as under the new plan.

75. The working plan must make it quite clear whether _____
Artificial Regeneration. any artificial regeneration prescribed is to be regarded as a plantation or as filling up gaps. The latter work is usually associated with filling up scattered failures in P. B. I. of a forest under concentrated regeneration. Plantations are not as a rule connected in any direct way with systems of natural regeneration. The general principle in doubtful cases is that a plantation is a continuous area of a certain number of acres which can be mapped.

76. Other Regulations insert here any regulations regarding such matters as grazing, fire protection and (1 the exercise of rights and privileges that specially affect the circle concerned. Compare this with the headings:-

General Regulations and Recommendations, which comprises prescriptions and suggestions that embrace the whole Division, e.g., petty fellings, disposal of minor produce. The regulation of rights and privileges is dealt with here.

77. All plans should state the existing grazing rates current in the Division and should also note any enhancement of alteration since the last plan, recording brief reasons for it.

78. **Establishment and labour.** It is not for a working plan to prescribe changes in establishment, but suggestions are legitimate.

79. *Control and Records-* A standard prescription has to be incorporated here, though modifications may be made under proper sanction. For control form, refer to Chapter X.

80. *Miscellaneous Chapter-* Mention here general matters like experiments and sample plots, which have no direct connection with ordinary divisional work, and discuss such problems as commercial grazing forest villages

81. The financial forecast should be forwarded to the Conservator of Forests, Development Circle, through the territorial Conservator for Chief Conservator of Forests approval before the

plan is faired out and while the Working Plan Officer is still on -the spot. In the past revenue and expenditure is carefully considered In consultation with the Divisional Forest Officer the effect of the Plan on finance should be capable of being fairly accurately estimated.

82. *Summary of Prescription*~This is not a combined felling table for the Division, but a brief resume of the prescriptions by working circles and paragraphs.

83. **Appendices-** These must be kept to a minimum.

1. The first and the most essential is the area statement, with headings approximately as follows

THE AREA STATEMENT

Range	Block	Cpt. No.	Acreage				Total Gross Acreage	Included Chak		Allotment to Working Circle	
			Stocked	Gross	Chief Spp.	Other Spp.		Blank	Name	Area	Shelter wood	Selection working circle

II. **Enumeration Results-** Figures are detailed by compartments. They should include only species counting against the yield. Full detail is reserved for the compartment histories.

III. Any rules, Government Notifications or Orders relating especially to the forests (or part of the forests) of the Division.

IV. **Statement of rights-** The amount of detail required will vary in different Divisions.

84. **Correct method of arranging and writing the plan-** Pages and paragraphs are numbered from the beginning of Chapter I and

both form a consecutive series through parts I and II of the plan. The pages of the appendix are numbered separately. Paragraphs and not page numbers should be mentioned in cross references remember, to, that the manuscript. Pages will not correspond to the printed pages.,

Note also the following miscellaneous points

- (i) Type in block capitals any passages to be printed in "bold-face" ; such as *e.g.*, the prescription fixing the yield in units. This device must be used sparingly or its effect will be lost. The Conservator of Forests, concerned, must always be consulted.
- (ii) Words to be printed in italics must be underlined by the typist.
- (iii) Writing must be clear and concise. Avoid redundancy and the word "etc.". As the preparation of the plan proceeds it will be duty of the Working Plan Officer to obtain the approval of the territorial Conservator and of the Deputy Commissioner or Collector to any recommendations or prescriptions in his plan with which the Deputy Commissioner might subsequently have to deal. For instance, any modification of facilities to connectionists or any restriction the right-holders or concessionists due to anticipated closures. Here all suggestions or prescriptions even remotely affecting the local villagers must receive the Deputy Commissioners' approval before the plan is submitted.
- (iv) The name of the working circle must be typed in full on the top right hand corner of each page of the draft chapters in part II which dealt with definite working circles.

85. If required, this will be written by the Chief Conservator

Introduction. of Forests.

86. Glossary and Technical Terms This is an alphabetical list of vernacular names used in the plan which may conveniently be classified under "botanical" and "miscellaneous" headings. The vernacular names have to be followed on the page, on which they first appear by the Latin equivalents in bracket; the spelling and the botanical names of Parker's flora should be adopted. All Vernacular names not beginning a sentence must be typed and printed with a small initial letter, and both they and scientific names are to be printed in italics; the latter are now printed in the Roman characters without a capital (e.g., silver fir oak - Vernacular names which have become widely known - In the English, language may also be printed in roman.

characters without a capital, such as chir and deodar. All technical terms will be as defined in the "Glossory of technical terms for use in Indian Forestry". Indian Forest records, Volume XV, Part-II.

87. These should be included wherever terms are used the

Definition. meaning of which has not been established, as e.g., "regeneration". "reproduction".

88. There is a general tendency to adopt capitals unnecessarily. The following are examples

Capital letters. indicating where they are and are not required

Lahore District

Hyderabad Division.

Regular Working Circle.

Miscellaneous Working Circle.

Divisional Officer.

Range Officer,

Selection System.

Periodic Block.

Working Circle.

Though if any of the above is used as each word would be a capital.

89. Checking, Passing & Despatch of working plan.

In writing the working plan although a certain amount of overlapping is unavoidable care must be taken to see that facts are not supplied at the wrong place. It is advisable for the Working Plan Officer to submit the first draft of his plan by chapters as soon as they are complete. These should be accompanied by a short explanatory note stressing any points of importance and drawing the attention of the Conservator of Forests, to any deviation, however slight, from the preliminary working plan report or subsequent instruction.

A single typed copy will first be made and after passing by the Conservator of Forests, Development Circle six final copies will be typed. The Working Plan Officer must check at least one of these himself and initial each page at the top right hand corner after necessary corrections. Every sheet of the final draft corrected from this master "copy" must be similarly attested by the Working Plan Officer. The Working Plan Officer will submit these six copies (including the original) to the Conservator, Development Circle, The original will eventually go to the Press and other ones will be used by the Department until printed copies are available.

The Working Plan Officer is responsible for the correctness of all calculations, details, area statements, descriptions, and figures.

etc. given in the working plan. The Conservator of Forests, Development Circle, will supervise the main structure and important prescriptions of the plan. He will correct and amend them at his discretion. When the master copy of the plan is complete it will be forwarded to the Chief Conservator of Forests for his approval. Afterwards the civil authorities will be addressed under paragraph 766(7) of the Land Administration Manual for counter signature and return of the plan to the Conservator of Forests, Development Circle, for taking steps for printing and obtaining Government sanction. Sufficient copies of the first proof will be obtained from the press for the Range Officers concerned to work on before final copies are received. This will be necessary only if the final print. mg of the plan is likely to be delayed beyond the date from which it is to be brought into force. One copy of the proof is to be sent to the author for check and return to the press through the Conservator of Forests, Development Circle.

90. **Alteration in the Plan.** Once a plan is sanctioned, its provision must be carried until it is revised or amended by the Chief Conservator of Forests. Intermediate amendments of the plan, very often made without thoughts or due consideration of the results of such amendment, have in the past resulted in much harm and such proposals are to be discouraged.

CHAPTER VIII

91. Compartment histories. (ii) The compartment history is a record of the past and present history of the forest. The unit for which a separate history will be maintained will be a compartment. The compartment histories will consists of separate files for each compartment. The actual form and the scope of the compartment history has been standardized for all forests in West *Pakistan*, vide Chief Conservator of Forests, West Pakistan's circular No. 634-WP., dated 24th September, 1959. A compartment history will contain the following essential information, which may, however, be modified to suit the special requirements of working plan under the sanction of the Chief Conservator of Forests

- (i) A tracing of the 4"-1 mile forest survey map of the compartment showing the same details as for the management *map*, vide Punjab Leaflet No. 7. Special Forest Maps.
 - (ii) A tracing of the stock map for the compartment concerned, vide Punjab Forest Leaflet No. 7-where the preparation of stock maps have been ordered.
 - (iii) A complete description of each compartment under the standard headings in compartment history form No. 1, *i.e.*, boundaries, area, soil, situation,

aspect, elevation, allotment to working circles, felling series, periodic blocks, coupe, description of the growing stock, locality and quality class.

(iv) Details of enumeration by standard 4" diameter classes, *vide* compartment history form No.2.

(v) A complete detail year wise of the record of soil preparation, fencing, planting and sowing, tending and irrigation, *-vide* compartment history form No. 3.

(Vi) A complete list of standards retained in the compartment by standard diameter classes at the time of felling, *vide* compartment history form No.4.

(Vii) A complete list of trees felled in standard diameter classes, *vide* compartment history form No. 5.

(Viii) A complete statement of yield obtained, *-vide* compartment history form No.6.

(ix) Useful notes on seed years, observation on the progress of regeneration both natural and artificial, suitability or otherwise of the prescribed system of the management, outbreaks of fires, a brief record of the past history of the crop and noteworthy occurrences in compartment history form No.7.

(x) The Range Officer should also maintain the rough detailed record of all operations as and when these are carried out in a compartment as per sample forms prescribed in the Chief Conservator's circular.

92. Compartment histories form an integral part of the system of control. They will be prepared or revised by the Working Plan Officer in duplicate, one set for the use of the Range Officer, and the other for the Divisional Forest Officer.

The Range Officer's copy is intended for use in the field and will be the working copy in which the Range Officer and Gazetted inspecting officers will record their observations and notes. At the close of every year the Range Officer will send his set of the compartment histories to his Divisional Forest Officer, who will edit and consolidate all the annual notes and observations, typed copies of which will replace the originals and will be filed both in the range and divisional compartment histories.

All notes shall be brief and concise and shall be signed and dated.

93. Marking officers will consult the respective compartment history files before commencing marking in any compartment, and at the close of marking, they will invariably make a note in the file detailing the lines on which marking has been done.

94. At the time of office inspection. Divisional Forest Officers and territorial Conservators/Chief Conservators will report, on the proper upkeep and posting to date of compartment history files. Officers taking over charge of a range or division will give a receipt for these records.

95. All compartment history files will be posted to date accurately before the divisional annual control forms are prepared. To ensure this, Divisional Officers will submit the following certificate to their Conservators/Chief Conservators with the control forms

"Certified that I have personally satisfied myself that all compartment history files are fully and accurately posted to date, and that the annual control forms for the year agree with the entries in the compartment histories."

CHAPTER -IX

MAPS

96. In addition to the 1"-1 miles management map, as prescribed in the Punjab Forest Leaflet No.7, two complete sets of 4" -1 miles scale forest survey maps folded to pocket size 8"x 5 showing division into compartment, sub-compartments, enumeration sections and annual coupes, etc., and where necessary, coloured to show allotment to working circles, periodic blocks, felling series, etc., will be prepared by the Working Plan Officer. One set will be for the use of the Divisional Forest Officer and the other set for the use of the Range Officer. The range copy of the map will be the working copy. It will be kept posted to date, all new roads and paths, changes in the forest boundaries areas burnt over, etc., etc., being shown therein as they occur. The divisional copy will be brought to date at the close of each year.

97. At the time of office inspection, Divisional Forest Officer and Conservators will report on the proper upkeep and posting to date the management maps.

CHAPTER X

CONTROL FORMS

98. Annual control Form . Annual control form consists of specially prepared form showing the prescriptions and suggestions of a sanctioned working plan or working scheme, and the fellings and other exploitation actually made or the working actually carried out against them. It must, however, be clearly understood that control form is concerned only with the control of prescriptions and suggestions, It is not an account form and so it will not be encumbered with unnecessary details of petty

feelings, net outturn, methods of exploitation, resin operations extensive information regarding repairs to communications, buildings, boundary pillars and fire lines, sowing, planting, and other cultural operations, etc.

99. A standard control form has been prescribed by the Chief Conservator of Forests, West Pakistan,- Vide his circular No 749-D, dated 25th June, 1958 and No. 2399-I), dated 29th December, 1958 which should be maintained. Control will be exercise(1 in bound control books which will be maintained by the Divisional Forest Officers.

100. The work actually carried out against each prescription of the working plan will be exhibited year after year on the page or pages assigned in the control book so that it would be possible to see at a glance how the prescriptions have worked. The first page of the control book should have an index showing items and authority under which control has been prescribed. A suitable number of pages should be allotted for watching control of each prescription.

101. One copy of the control form (on loose forms) will be sent to the Chief Conservator of Forests (Working Plans Branch) every year by the Divisional Forest Officer through the Territorial Conservators.

102. Special order of the Chief Conservator of Forests regarding felling. In areas covered by working plan or sanctioned working scheme no fellings not authorized under the working plan or working schemes will be carried out for any purpose whatever without previous sanction in writing of the Chief Conservator of Forests. Divisional Forest Officers contemplating any such fellings will send up a proper case for sanction through their Conservators before any marking are carried out. All trees so felled will be entered in the control form under the heading "Fellings neither prescribed nor suggested in the Working Plan and the sanction authorizing such felling will be quoted. The Territorial Conservators will submit such proposal to the Chief Conservator of Forests.

103. Felling in areas not covered by working plans or working schemes. No felling for other purpose whatever except

- (1) satisfaction of rights,
- (2) meeting of departmental requirements,
- (3) meeting of petty demands from other Government

Departments, will be made from areas not covered by working plans or sanctioned working schemes, without the previous sanction in writing of the Chief Conservators of Forests. Conservators may authorize such fellings to the extent covered by such free-grants as they themselves have power to sanction.

All trees so felled will be entered in the control form under the heading 'Fellings neither prescribed nor suggested in the Working Plan.

104. Deviation. Divisional Forest Officers are strictly forbidden to make excess or advance fellings not sanctioned or contemplated by working plans or sanctioned working schemes without obtaining previous sanction. These sanctions will be quoted in the remarks column of the Control Form.

105. All other deviations from the prescriptions of a working plan or sanctioned working scheme, e.g., deficit fellings, alteration of the year of felling, writing off or abandonment of arrears fellings, etc., will be sanctioned by the Chief Conservator of Forests. Sanctions for such deviations should be obtained and quoted in the remarks column of the Control Form.

The Territorial Conservators will quote Chief Conservator of Forests, sanction in support of the deviations in the remarks column of the Deviation Statement when it is submitted to the Chief Conservator of Forests along with the Control Form annually for approval. A copy of the deviation statement so submitted to the Chief Conservator will also be supplied to the Conservator of Forests, Development Circle, side by side for record in his office.

106. Sanction to deficit fellings against the working plan prescriptions should be renewed every year until the fellings are carried out or written off. No sanction to a minus entry is, however, required until the end of the period in cases where the yield control is periodic and not annual.

107. An entry brought forward from the previous year, if written off or abandoned from the years the control form must be supported by the sanction of the conservator together with a justification for not carrying out the working plan prescription.

108. Orders regarding the preparations and submissions of control forms. All control forms will be prepared for the financial year in accordance with Article 52 (ii) Forest Department Code, as amended by of correction slip No. 72, dated 14th December 1921.

2. The Divisional annual control form will be prepared by the Head Clerk, but the Divisional Forest Officer is absolutely responsible for the correctness of all details of volume felled, for the deviation statement and its explanations. Such futile explanations as "not done for want of plants" will not be accepted.

3. The divisional annual control forms will be submitted to the Chief Conservator so as to reach his office by the 15th August at the latest together with (i) deviation statement, (ii) a certificate to the effect that all compartment histories are fully and accurately posted to date and the annual control forms for the year agree with the entries in the compartment histories, (iii) a note on the

progress of operations prescribed in the working *plan*, -*vide* Chief Conservator of Forests, letter No. C .173, dated 8th December 1930, and (iv) report on closed areas, - *Vide* Chief Conservator's letter No. Z-84, dated 30th September 1931.

109. Audit orders The check of annual control forms is a most important work and must not be neglected, being as it is the basis of office control of all forest fellings and works. The following orders are issued for the audit of annual control forms-

- (1) The control of working plan prescriptions lies with the territorial Chief Conservators who are responsible for the scrutiny of their annual control forms especially in their technical and working plan aspect.
- (2) An Assistant will be in charge of the Working Plans Branch of the Chief Conservator of Forests Office and he will be responsible for control forms.
- (3) The control form clerk will maintain a register wherein he will show the date of receipt of the divisional annual control forms, date of the commencement of their check, date of the issue of objection memos., date of their receipt back from Divisional Forest Officer, date of the submission of control forms to the Chief Conservators of Forests, and the date of their final return to the Divisional Forest Office. He will issue reminders, if control forms are not received on due date, and if objection memos. are not received back with reply within one month of the (Tate of issue. The disposal of control form work in the Direction Office is on no account to be delayed.
- (4) Before commencing the check of control forms pertaining to any working plans, the control form clerk will read very carefully the working plan concerned, and understand it, especially its chapter on "Control" which deals with the special needs of the working plan as regards the control of its prescriptions, etc He will thoroughly acquaint himself with the general orders on the preparation of control forms issued in this code and follow them in so far as they are compatible with the orders given in the chapter on "Control" in the working plan. He will study and understand sample control forms prepared by the Working Plan Officer, a copy of which will always be filed in the Working Plan Branch of the office of the Chief Conservator of Forest and where it will be kept carefully until the revision of the plan.
- (5) The control forms will now be subjected to detailed,

examination and check by the control forms clerk. He will first see that the control forms are compiled in accordance with the general instructions issued and the sample control forms prepared for the working plan. He will then satisfy himself that the excesses and deficits are correctly brought forward from the previous year's forms, that the working plan prescriptions are duly filled in and correct paragraphs are quoted. He will also see that the same diameter classes and the same volume factors are used as for the yield calculations and otherwise check all volume details. He will see that sanctions of the competent authorities are quoted against all advance, excess or deficit fellings and that the reasons for deviations are sufficient and clear.

6. The control form clerk has direct access to the Chief Conservator, the Conservators of the Circles, the Divisional Forest Officer, Silvicultural Research Division and his Gazetted assistant when any of these officers are at headquarters on any matter connected with control forms.

7. After detailed examination and check, the control forms clerk will issue a consolidated objection memo. wherein he will bring to the notice of the Conservator glaring departures from the working plan prescription and irregularities in the methods of preparation, *-vide* sample control forms and the Chief Conservator of Forests' general orders on the preparation of control forms. He will particularly point out the excesses and deficits and other important deviations insufficiently explained or not supported by sanctions of the, competent authority.

8. On receipt of the control forms and the objection memo., the Conservator will scrutinize the control forms in all respects and pass orders on the objection memo, which will then be issued to the Divisional Forest Officer under the Conservator's signature.~

9. When all objections have been settled, the control form clerk will put up the control form and deviation statement with other enclosures, duly checked and corrected to the Conservator who will pass and countersign the control form and deviation statement and submit them to the Chief Conservator of Forests along with any remarks he may as wish to make. One copy of the deviation statement finally approved will be sent by the Chief Conservator of Forests to the Secretary, Agriculture who will send a copy to Inspector-General of Forests.

10. When they have been finally approved by the Chief Conservator of Forests, control form and the deviation statement will be sent to the Divisional Forest Officer who will keep copies of the control forms in bound registers.

11. Instructions regarding control forms for working Plan Officer. The control will be exercised in standard control forms as prescribed by the Chief Conservator of Forests, West Pakistan, in his circular No. 749-D, dated 25th June 1958 and 2399-D, dated 29th December 1958.

CHAPTER XI

MISCELLANEOUS

111. The Divisional Forest Officers, Working Plans Divisions, Accounts. are heads of offices in accounts matters and submit their accounts directly to the local audit offices. The Working Plan Officers and their staff will be incorporated in the Regional accounts in the ordinary way. The Working Plan Officers will be made disbursers as the circle accountant and will draw funds as necessary from the nearest territorial Division or Circle or Regional each month for disbursement to labour and staff employed under them. A proper cash book must be maintained by them, copy of which complete with all vouchers supported by sanctions of the competent authority, should be rendered each month punctually to the Chief Conservator of Forests, for passing and incorporation in the circle or Regional accounts. But for purpose of financial control over all items of expenditure, requiring Chief Conservator of Forests, sanction previous reference should invariably be made to him. The Working Plan Officers will maintain prescribed muster rolls for all labour employed by them and follow other usual account forms and procedure etc. Prescribed in the Forest Codes and Manuals. It is not advisable to have large sums of money in hand of the Working Plan Officers. Responsibility for the safe custody of the government money rests with the Working Plan Officers, unless their Camp Clerks have furnished the required security.

112. The Working Plan Officers shall prepare their own Budget. Budget estimates for all expenditure and submit them on 15th November each year for approval of the Chief Conservator of Forests, who after making such additions and alterations as he thinks fit will incorporate them in the Circle Budget due on 15th December. The Chief Conservator of Forests, will show the items concerning the Working Plan Officer in his budget under each sub-head. These instructions apply mutates mutandis in the case of 1st and 2nd lists of Excesses and Surrenders due on 10th January and 10th March each year. With a view to keep a regular control over the budget provision and to prevent the budget allotment being exceeded, Working Plan Officers shall maintain the usual budget control forms which should accompany their monthly account for check by the Regional Circle Accountant. The Regional Circle Accountant will return the budget control form with the remark "checked" and shall initial and date it after incorporation of the Working Plan Officers monthly accounts. Necessary date required for finding out total cost spent on preparing or revising the working plan in question can later on be collected from this form.

113. The Working Plan Officers should write their monthly. Progress Reports. Progress reports in the form below and send a copy of the same to the Chief Conservator of Forests, on the 5th of each month.
Forests, on the 5th of each month:-

- (i) Progress of inspection of Forests with a view to writing out description of compartments, formation of working circles and felling series, proposals for future treatment etc.
- (ii) Progress of Enumeration work.
- (iii) Checking of Enumeration by the Working Plan Officer himself. Results of checking must invariably be noted in each case.
- (iv) Progress of Ring Counting.
- (v) Progress of collection of other statistical data.
- (vi) Progress in the preparation stock and Management (Working Plan) maps.
- (vii) Progress in actual writing out of the working plan.
- (viii) Miscellaneous.

114. The working Plan Officers shall intimate annually Stationery and Forms. Their consolidated requirements of stationery and forms direct to the Chief Conservator of Forests, who will include such demands in his indent for stationery and forms. The Chief Conservator of Forests, will keep stock of such articles and shall issue them to Working Plan Officers as required.

115. Normally the scale of tents prescribed will be as follows:
Store, Tools and Plants.

FOR WORKING PLAN OFFICERS.

- (1) Swiss Cottage or McDonald pattern tent, 10" X 10' complete with bath room and durrie.
- (2) Shouldaris, 8' x 8' for kitchen and private servants.
- (3) Shouldaris, 8' X 8' for 2 peons and dak runners.
- (I) Kabul tent, 8' X 8' complete with bath room and durrie for camp clerk.

FOR OTHER WORKING PLAN STAFF.

- (I) Kabul tent, 8' X 8' complete with bath room durrie, for each Forest Ranger or Duputy Ranger attached.
- (I) Single fly tent or a shoularie, 8' X 8' for each Forester attached.

Note:- All tents and shouldaris shall be provided with salitahs and should always be in thir saliths for transport. The ten poles in all should be cut and fitted with iron sockets for joints.

116. It is essential that the camp clerk and the attached ranger are Furniture. provided with a table and a chair each.

The following scale is allowed:-

FOR WORKING PLAN OFFICER.

Two folding tables and 2 folding chairs.

FOR CAMP CLERK.

1 folding table and folding chair.

FOR ATTACHED RANGER OR DEPUTY RANGER.

1 folding table and 1 folding chair.

In addition to the above the following stock articles will also be needed for the Working Plan Officers and their staff:-

Portable type-writer, one.

Yakdons as required with locks.

Cash box for camp clerk.

Cash bag, cotton or leather.

117. These are generally procured from the divisional stock and forest Medicines. dispensaries, if any, available. The stock sufficient medicines for Working Plan Officers before the Working Plan is taken up, so that they are in a position to supply the medicines on demand by the Working Plan Officers.

118. The tendency amongst the Working Plan Officers to leave their work and Discipline. ask for permission to come to the headquarters to discuss various points should be discouraged. Most of these questions can be decided when the Chief Conservator of Forest is on tour or the point at issue can be discussed during the slack month when Working Plan Officers are writing up their plans.

As the preparation of the plan proceeds the Working Plan Officers will take the opportunity of discussing with Deputy Commissioner as the case may be, the proposals for future management embodied in the plans so that no subsequent objections be raised to the recommendations or prescriptions of the plans with which Deputy Commissioner may have to deal.

119. The Government of West Pakistan have sanctioned the following scale of allowances for various categories of officers, vide their letter No. SOAH-III-22 (I)-59 dated 15th August 1959, on production of a certificate of satisfactory work by the Chief Conservator of Forests, and the Working Plan Officers:-

- | | | |
|-----|---------------------------------|---------------------|
| (1) | Working Plan Officers. | Rs. 100 per mensem. |
| (2) | Assistant Working Plan Officer. | Rs. 50 per mensem. |
| (3) | Forest Rangers. | Rs. 25 per mensem. |

Afforestation Schemes areas will be covered by small working schemes to be written and sanctioned by the territorial Conservators themselves as ordered vide Chief Conservator of Forests, West Pakistan, Standing Order No. 1683-W.P. dated 4th January 1960.

121. Vide correspondence resting with Chief Conservator of Forests, former Punjab No. 8528, dated 18th March, 1947, it has been decided that in Working plans will be future all working plans will be printed and published in one standard printed. size, i.e. 9 X 6" X7.2".

LIST OF SANCTIONED WORKING PLAN AND SCHEMES OF WEST
PAKISTAN FOREST DEPARTMENT.

Serial No.	Name of the Plan	Name of the writer	Period of operation	Remarks.
1.	Working plan for the forests of Jhelum Mianwali and Shahpur, Forest Division.	Rana Muhammad Seed, F.F.S.(I)	1942-43 to 1981-82	
2.	Revised Working Plan for the Scrub Forests of the Rawalpindi and Mandra Range of rawalpindi Division and Lower Murree Range of Murree Forest Division.	Ch: Ghulam Hanif, P.F.S (II)	1949-50 to 1863-64	
3.	Revised Working Plan for the Murree Kahuta Forests of Rawalpindi District.	M.Bashir Ahmed, P.F.S. (I) (Retired).	1953-54 to 1982-83	
4.	Revised Working Plan for Giddarpur Guzara Chir forests of Hazara District.	Kh. Abdul Malik, Khattak, P.F.S. (I)	1951-52 to 1960-61	
5.	Working Plan for Khirpro Range.	M.I.U. Munshey, P.F.S (I) and T.A, Ansari, P.F.S. (I)	1954-55 to 1964-65	
6.	Working Scheme for Shorkot Plantation.	Ch: Khan Muhammad P.F.S. (I)	1949-50 to 1968-69	
7.	Revised Working Plan for the Khanewal Irrigated Plantation of Multan Forest Division.	M. Bashir Ahmed (Retired) PF.S. (I)	1951-52 to 1969-70	
8.	Revised Working Plan for Upper Siran Forests (Kagan Forest Division).	Kh. Muhammad Yusaf, P.F.S. (II)	1949-50 to 1963-64	
9.	Revised Working Plan for Kagan Forests of Hazara District.	G.R. Henniker Gotley, (I.F.S.) (Retired).	1931-32 to 1960-61	
10.	Revised Working Plan for the Lower Siran Forests of Kagan Forest Division.	KH. Muhammad Yusaf, P.F.S. (II)	1949-50 to 1963-64	
11.	Working Plan for the Upper Kuri Dalal Reclamation Area.	S. Gurbakhsh Singh Dhillon, P.F.S. (I)	1945-46 to 1964-65	
12.	Revised Working Plan for the Chirchawatni Irrigated Plantation.	S. Naranjan Singh Jaspal, P.F.S. (II)	1944-45 to 1963-64	

13.	Revised Working Plan for Bela Forests of Muzaffargarh District.	S. Sohan Singh, P.F.S.	1948-49 to 1967-68	
14.	Kaba Kas Regional Plan.	M. Khem Chand, Malhotra, P.F.S. (I)	1944-45 to 1960-61	
15.	Working Scheme of Wan Bachran Plantation.	Ch: Khan Muhammad, P.F.S. (I)	1950-51 to 1969-70	
16.	Working scheme for Kamalia Plantation.	Ch: Khan Muhammad, P.F.S. (I)	1946-47 to 1966-67	
17.	Revised Working Plan for the Shahdara Reserved Forests of Lahore Division.	D.D. Saigal, I.F.S.	1946-47 to 1965-66	
18.	Revised Working Plan for Dapohar Irrigated Plantation and Pakhowal Forests.	Kh. Muhammad Afzal P.F.S (I)	1959-60 to 1969-70	
19.	Revised Working Plan for the Changa Manga Irrigated Plantation.	R.S. Chopra, P.F.S. (I)	1947-48 to 1976-77	
20.	Revised Working Plan for the Bela Forests, of Khok, Sadhanwali, Koratans, Faizpur and Katarband.	Malik Abdul Qayum, P.F.S. (II)	1957-58 to 1966-67	
21.	Revised Working Plan for the Bela Forests of Gujrat West and Lyallpur Jhang Forest Division.	M. Manzur Ahmad, P.F.S. (I)	1957-58 to 1971-72	
22.	Working Plan for Irrigated Plantation in Hyderabad Forest Division.	M.I.U. Munshey, P.F.S. (I)	..	
23.	Working Plan for the Resul and Pabbi Reserved Forests.	...	1959-60 to 1958-59	
24.	Working Plan for the Plantation and Avenues of the Lower Chenab Canal, East and West Circle.	Khan Sultan Muhammad Khan, P.F.S.	1949-50 to 1969-70	

PART IX-ENGINEERING WORKS.

A-BUILDING.

3.28. For powers to incur expenditure on buildings see Financial Rules issued
Power of sanction. by the Government from time to time.

The Forest Department has been assigned the duty of maintenance of all works, used or intended for any purpose in connection with the administration of the Forest Department, with the exception of repairs and maintenance of all residential buildings for gazetted officers as well as original works for such buildings, construction of buildings for Head quarters offices and the construction of such other works as the Finance Department may call upon the Public Works Department to execute.

3.29 All applications for sanction to incur expenditure must be accompanied by
Plans and estimates. detailed plans and estimates except when a building is to be constructed in accordance with a standard plan and specifications in which case only the estimates will be submitted. After obtaining the

administrative sanction of the Conservator. Chief Conservator or the Government as the case may be, Divisional Officers will include all such items in the "Schedule of New Expenditure" submitted by them on the 1st August each year.

3.30 **No construction of building will be undertaken until plans and estimates Construction. have been prepared and sanctioned by the proper authorities or until the land on which they are to be constructed has been acquired and made over to the Forest Department. Acquisition proceedings are in no case to be anticipated. For details of construction see former Punjab Forest Leaflet No. 10.**

3.31. **All buildings will be maintained in through repairs and in a clean condition. Repair and main- Annual repairs will ordinarily be carried out in the bills during March-April tenance. and in the plains, as soon as the rains are over in September-October. For details see former Punjab Forest Leaflet No. 10.**

3.32. **The tenants of Government buildings are personally responsible for trhe proper treatment of the fabric of the building and any interior fittings and furniture, reasonable fair wear and tear excepted. Expenditure necessary to repair damage due to misuse or neglect will be recovered from the person concerned.**

3.33 **The following is the scale of furniture which will ordinarily be sanctioned Furniture for building for furnishing rest houses.**

For each bed room.

Upright chairs.	2
Easy chair.	1
Mewar bedstead.	1
Large table (3 ½ ‘ x 2’ x 2’-6” high)	1
Teapoy.	1
Sets of hat pags	2
Wooden fender (tin lined)	1
Looking glass	1
Durrie (to be 2’ less in width and length than the room).	1
Fire Guard (wire net)	1
Fuel box.	1
Curtain and curtain rod for each door and window.	
Chicks for door and windows (to be 3” higher and 4’ wider than the doors and windows).	

For each bath room.

Zinc tub	1
Commode.	1
Enamel Chamber pot.	1

Wash hand table.	1
Enamel basin	1
Enamel Jug.	1
Enamel soap dish.	1
Enamel tooth brush dish.	1
Towel horse.	1
Foot board.	1
Set of six pegs.	1
Curtains as for bed rooms.	
Chicks as for bed rooms.	
<i>Office.</i>	
Table.	1
Chair.	1
Durrie.	1
Curtain rods.	2
<i>Pantry.</i>	
Table	1
Hot case	1
<i>Kitchen.</i>	
Table.	1
Meat safe	1
<i>Out-houses..</i>	
Table.	1
	for Camp Clerk.
Chair.	1
Cots.	8
<i>Crockery..</i>	
Iron kettle.	1
Aluminium degchies.	4
Aluminium frying pan.	1
Knives (stainless steel)	6
Fork (electroplated)	6
Spoons (Dessert)	4
Spoons (tea)	4
Cups and Saucors, enamel (not of Japenees)	4
Large plates (not of Japanes)	4
Small plates (not of Japanes)	1

Lantern. 1

The following scale of furniture is sanctioned for Divisional Forest offices
in all the Circles:-

Divisional Forest Officer's room.

Office chairs.	6
Office table/	1
Small table.	1
Teapoy	1
Durrie.	1
Door mats.	2
Table cloth	1
Paper Baskets.	2
Almirah.	1
Waste Paper Basket.	1
Set of hat pegs.	1
Book shelf.	1
Office clock.	1
Chicks.	As required.
Fire Guard.	1
Fire fender.	1
Mung matting.	1
Depatch box.	1

Bath room

Commode with pot.	1
Chamber pot.	1
Hand Wash basin.	1
Soap dish.	1
Towel horse.	1
Looking glass.	1
Basin stand.	1

Clerical staff.

Durrie.	One for each room
Table.	One for each clerk.
Chair.	One for each clerk.
Standard typewriter table for typist.	1

Paper Baskets.	3 for each Clerk.
Waste Paper Basket.	1 for each clerk.
Chicks.	As required.
Extra chairs for all branches.	2 or each branch.
Cash safe.	1 for Head Clerk.
Table cloth.	1 for Head Clerk.

Almirahs.

Account Branch.	2
Record Room.	6
Head Clerk.	2
Library and Maps.	2
Book shelf.	1 each for Head Clerk, Record Keeper and Accountant.
Fire fender.	1 each for a fire place.
Fire guard.	1 each for a fire place.

Office Boxes.

Head Clerk.	2
Record Branch.	1
Account Branch.	2
Hat Pegs sets.	1 for each room.
Yakdans.	1 for D.F.O. and C.C. 4.
Watering stools.	1 for each room.
Wooden benches.	2 (1 for D.F.O's peons, 1 for office peons).
Time piece.	1 for Head Clerk.
Door mats.	As required.

The following scale of furniture is sanctioned for _____

Range Rest Houses in all the Circles.

Furniture for Range Rest Houses.

Table Office.	1
Chairs.	2
Teapoy.	1
Set of hat pegs.	1
Wooden fender (Tin lines)	1
Tin guard.	2

Cots.	2
Bucket.	2
Degchies.	2
Milk Jug.	1
Tea pot.	1
Tea cups and Saucers.	2
Plates ½	2
Tumbler.	2
Lantern.	1
Durrie.	1

3.34. As soon as the construction of a house is begun estimates for furnishing Application for should be prepared and submitted; in these it should be clearly stated what Furnishing building. articles it is proposed to have made locally, and the names of the firms from whom it is proposed to buy the remaining articles.

When applying for the above sanction the following particulars must invariably be furnished:-

- (a) Name of building.
- (b) Number and nature of the rooms it contains.
- (c) Description of furniture already in stock.
- (d) Furniture required.

3.35. No furniture is supplied at Government expense for the private residence of Forest Officials.
No furniture to be of Forest Officials.
Supplied at Government
Expense for the private
Residence of Forest Officials.

3.36. The following rules for the occupation of the Forest bungalows are Rules for the prescribed:-
Occupation of Forest bungalows.

- (i) The Gazetted Officers of the Forest Department shall have prior claim to the use of the accommodation.
- (i) (b) Officers of the Forest Department when on leave may occupy a Forest Rest House free of rent for a period of not exceeding 15 days.
- (ii) Subject to Rule 1, a Gazetted Officer of any Government Department may, when travelling on duty, occupy a Forest Rest House, provided that, in all but emergent cases, he gives due notice to the Divisional Forest Officer, under whose control, the Rest House is of his wish to occupy it. A Gazetted Officer shall not be refused

permission to occupy a Forest Rest House except on the ground that it is or is about to be occupied by an officer with a superior claim.

- (iii) **Gazetted Officer travelling on duty are permitted to make use of the Forest Rest Houses free of charges. But should any such officer of a department other than the Forest Department occupy a Rest House for more than 10 days, he will be required to pay the rent laid down for the particular bungalow in clause VI below, and no officer shall occupy a Rest house for more than one month without the sanction of Government to be previously obtained, which will be given in very special cases only.**
- (iv) **Non-officials or Gazetted Officers travelling on duty who wish to occupy Forest Rest House must, in all cases, obtain the previous sanction of the Divisional Forest Officer, and will be required to pay the rent laid down for the particular bungalow in Clause VI below.**
- (v) **Payment on account of rent should be made to the Chowkidar and entered in the book which he will present for the purpose.**
- (vi) **The rent for Forest Rest Houses will be Re. 1 per person per diem excluding children under 14 years of age.**
- (vii) **The period of occupancy is limited to 4 days for tourists and 7 days for officials on duty save with the special permission of the Conservator or the Chief Conservator”.**
- 2. **“The whole bungalow should not ordinarily be allotted where the demand is heavy and the Divisional Forest Officer should be able to mark on the permit the space allotted”**
- (viii) **“For the duration of the war the convalescent officers of the Army, Navy and Air Forces and all other branches of the fighting services may occupy, free of charge, for periods not exceeding ten days at a time Forest Rest Houses when not required by officers on duty in preference to other officers eligible to occupy them”**

Travellers are required to make arrangements to see that the bungalow is left in a clean condition. *

3.37. The rents of all buildings rented or leased by Government for the residence of its officers shall be paid direct by Government to the landlords and the amounts for which the officers concerned are liable shall be recovered by deduction from their salary bills.

Payment of rent of Buildings, rented or Leased by Govt.

3.38. Whenever any item of sanctioned rent lapses or is no longer paid the fact should be invariably reported to the Conservator/Chief Conservator in order that his register of sanctioned rents may be correctly posted up-to-date.

B-ROADS AND BRIDGES.

3.39. Powers to incur expenditure on the construction of roads are the same as Powers of sanction. **for buildings or other works entailing capital expenditure.**

3.40. Application for sanction to incur expenditure on the construction of roads must be accompanied by estimates and a map showing the position of the road proposed to be constructed.
Application for
Sanction to incur
Expenditure.

For the construction of roads on easy ground where the expenditure will not exceed an average of Rs. 200 per mile or a total of Rs. 2,000/-, the estimates may be framed to show the average rate for each mile only, but for the construction of roads which will involve a higher expenditure than an average of Rs. 200 per mile or a total exceeding Rs. 2,000/-, detailed estimates will be submitted.

3.41. The attention of Divisional Officers is drawn to the necessity of submitting estimates for sanction sufficiently in advance to enable road projects to be entered in the budget, as projects which require Government's sanction cannot be entered in budget until sanction to them has been obtained. For instance for a project to construct a road on the hills in the year 1965-66, the alignment and estimates should be prepared in the season April to October, 1963, the estimates submitted to the Conservator before the 15th March, 1914, so that they may be sanctioned and included the budget for 1915-16 to be submitted in August, 1914, or in other words the alignments and estimates should be prepared two seasons in advance of the season in which the work is proposed to be undertaken. There estimates will accompany the programme of roads proposed for construction necessary projects showing alignments and estimates to be made should be included in the budget.

3.42. The construction of roads and paths especially in the hill forests is essential for the proper supervision and working of the forests. The work Programme of roads And bridges proposal For construction. the should proceed systematically form year to year so for as funds are available in accordance with a definite programme which will be revised as may be necessary.

3.43. In laying out a road two Principal things must be considered (a) the line or direction in the horizontal plan (Plan) and (b) its gradient or slope, i.e., its direction in the vertical plane of these the gradient is most important. The best line is the one which gives the shortest length of road & repair of old ones between. the two places the road has to join, and if this does not involve too steep a gradient, then of course a straight line between the two places would be the best line of the road. In the hills, however, this is seldom possible, as the gradient would be too steep. Within certain limits rise or ascent is more objectionable

than extra length, since ascent reduces the carrying or tractive power of every pack or draught animal using the road. So much as this the case that it is generally considered to be permissible to lengthen the road by 20 feet for every foot of rise or ascent thereby avoided. This, however, applies more to roads which are much used, generally it is best to make the track as short as possible, and consequently at the steepest grades permissible for that particular type of road. The Ruling Gradient of a road is the steepest grade that occurs in it, since it rules the maximum load that vehicles or pack animals can carry along it. For if a horse can draw a load of 1 ton on the level, it can only draw $\frac{3}{4}$ ton up a gradient of 1 in 40, and only $\frac{1}{2}$ ton up 1 in 25, and $\frac{1}{2}$ ton up 1 in 10, so that on a road which has 9 miles of 1 in 30 and 1 mile of 1 in 10, the maximum load that one horse vehicle will be able to take along that road will be $\frac{1}{4}$ ton, and no more, the maximum load being fixed by the maximum or Ruling grade of the road, 1 in 10 in this case. It therefore, follows that it is useless to layout a road for a greater part of its length at an easy gradient if a steep gradient has necessarily to be used for a portion of its length. It is better in such case, if possible, to pay it out at one uniform slope (between the two gradients) for its whole length. For instance in the case above, the road with nine miles of 1 in 30 and one mile in 1 in 10 might be laid over the whole 10 miles at a uniform grade of 1 in 25 (the total rise would be the same in either case); and 1 in 25 being the Ruling Gradient now instead of 1 in 10, every one horse vehicle using the road could take $\frac{1}{2}$ ton in place of $\frac{1}{4}$ ton previously; an obvious advantage, as the capacity of the road is at once doubled. Since it is so important to avoid any unnecessary rise it is obviously a very bad fault for a road that must ascend from A to B to descend even for a short distance between A and B thereby adding a rise to be negotiated.

Picture.

This fault of switch back grading is a very common one in native hill tracts, which descend into almost every nullah, they cross, only to ascend on the other side. It should be a general rule that a road ascending from one point to another should usually not descend even for a short distance between these two points. This, however, cannot always be done owing to the great increase in length which would take place. If the road, when laid out at an even grade between two such points as A and B is found to be obstructed by cliffs, etc., which it is desirable to avoid; rather than descend from C to D in order to do so, it would be better to lay out the road at a slightly easier grade from A to D so as to pass under or above the cliff at D and then to make it at a slightly steeper gradient from D to B, the road would thus ascend the whole of the way. Switchback grading shows bad work by the person who lays out the road.

The gradient on those portions of a road which have to pass through solid rock on the face of a vertical precipice will ordinarily be level or as near level as possible. On sharp bends and at turns at zigzags the gradient will be as level as practicable.

It some times can be foreseen at the time of alignment that an inspection path will subsequently be converted into a bridle path, or a bridle path converted into a cart road. In such cases an inspection path will be aligned throughout with a gradient suitable for a bridle path: while a bridle path that will probably be converted at some later date into a cart road will be aligned on the gradient for a cart road.

In order to localise outbreaks of fires in forests it is necessary to subdivide forests by means of contour paths about a third above or below the lower or upper boundaries with connecting links down prominent spurs.

These contour paths will serve to localise outbreaks of fires, and to enable labour gangs quickly to reach the sites of fires: they will also serve as inspection paths. The width of these contour paths should be 3 ft. except on very rocky surfaces where it may be reduced to 2 Ft.

The maximum or Ruling Grade is settled before a road is made to suit the traffic that will use it. The orders for making the road always specify the ruling gradient and the clear width, besides any other important points that may be required.

The maximum (steepest) gradient that should be used for tracks is as follows:-

Inspection Paths.	..	..	..	1 in. 4
For Laden coolies.	..	..	..	1 in 5.
For riding roads and pack mule tracks with little traffic.	..			1 in 6
For main roads for pack mules And ponies.	..	..		1 in 7
			(of [possible])	(1 in 8)
For camels.	..	..	..	1 in 10
For okkas or mule or bullock carts.		..	..	1 in 12

The above should not be exceeded.

The minimum width of the roads in the clear at the bottom for traffic should be :-

For coolies.	..	..	2 to 3 ft.
For riding or pack mules unimportant tracks.	..		4 ft.
For pack mules or ponies important tracks.	..		6 ft.
For pack mules or ponies, at passing planes.			12 ft.
For camels or okkas, single line.	..		8 ft
For camels and okkas at passing places.	..		16 ft
For mules and bullock carts.		..	16 ft

Where possible fields and cultivated land should be avoided.

Instruments- The De-Lisle Level or clinometer, is much the best on the whole, especially for rapid work in rough ground. The Abney level is perhaps the best instrument for both surveying and road work. Clinometers depend on the spirit level, i.e., the Abneys Level, and (b) those which may be divided into two classes (a) those which utilise the principle of the plumbob such as De-Lisle level and Wathin's Clinometer. Generally speaking class (a) are more accurate and class (b) less liable to breakage, and better for road work.

Method of laying out the line of the road-The particular instrument to be used having been chosen, and tested to see if it is correct, the following will be found the best, quickest and simplest way of marking out the line of hill roads on the ground. This system has the advantage that both the line of the road as regards direction and its gradient (and therefore its level at every point of its length are both given by a single operation and by the means of one line. In this method the line marked out is not the centre line of the road, but the outer edge, i.e., the line where the road cuts the surface of the hill side.

The observer and 6 men are required for this work.

It will be convenient to use a Sight Rod with a sight vane (this consists of a straight light rod or bamboo with a cross piece nailed on it at the height of the observer's eye), especially for bushy or jungle country where it is often difficult to see a man when taking a long shot. The best form of sight rod is about 6 ft. long by 1 ¼ inches square: the sight vane being a piece of board about 12" X 9" which slides up and down the rod and can be clamped at any convenient height, so as to suit the observer (12" side of the board being horizontal); the board is painted black with a 2" wide white line horizontally across its centre: for use the board is clamped so that the top edge of the white line is at the height of the observer's eye. It is well to have two sight vanes and rods for quick work. There should be two men with each sight rod.. In addition it is necessary to have a couple of men carrying white wash as the marks when whitened can very easily be picked up afterwards when working parties are strong out on the work. In bushy country 2 to 4 men, or more will be required to clear the line of sight.

It is best always to lay up hill, especially if the country has not been gone over before, as the nature of the ground can then be seen in front and any precipices or bad ground better avoided than when working down hill.

Method of using a De-Lisle's level- The observer stands, where the road begins to ascend the hill facing the direction the road has to take. He adjusts the instruments to the gradient which he means to use and clamps the index vane to it. Having adjusted the sight vane to the height of his eye, he sends two men with the vane along the hill to a convenient spot where they are visible to him; this will generally be at a spur, re-entrant or nullah. One man rests the sight vane on the ground facing the observer who looks through the instruments and directs the man to move up or down the hill until he sees the horizontal line on the sight vane is opposite the reflection of his own eye in the mirror. He then signals to the sight vane holder who marks the

spot where his rod rests on the ground, the second man with him drives in the peg firmly to mark it permanently or makes a heap of stones on the spot. The ground where the sight vane rests and the ground under the observer's feet now have the required gradient between them (see sketch). The ground between should be approximately a slope as between A and B where A is the observer and B the sight vane, if there is a hollow or re-entrant in the ground between A and B (such as C between B and D), the sight vane must be sent to that spot first and to B afterwards; as the road will almost certainly be made too low at the re-entrant unless the working parties have a mark placed there to guide them.

Picture.

A mark must always be fixed at every nullah or re-entrant or hollow however slight, and every spur. Nullahs are especially important, as if no mark is given in a nullah, the road will of a certainty be made descending into the nullah slightly and ascending to the next spur on the other side. If there is a pronounced nullah running into the hill as at E the further spur F must be fixed from E in the nullah and not from D, as the straight line DF would give a wrong gradient. It is most important that spots in the ground determined by the instrument are so marked that they cannot be shifted or lost, as these are the only marks to guide the working parties afterwards: a peg driven a foot into the ground with 6' sticking up is the best, it is as well to heap stones or earth round it on which to sprinkle the whitewash the point B being marked, and the ground on which the observer stands similarly marked, the two men with the sight vane are sent to the next convenient spot C, and the observer still standing at A directs the sight vane holder as before, until the sight vane is in the line of the sight of the instrument and appears level with the observer's eye reflected in the mirror; then the point C is similarly marked. This process is repeated till either the sight vane has got too far forward for the observer to see it distinctly or a spur, etc., prevents him seeing it or a nullah comes between. For example E is probably invisible from A, and F must be fixed from E and not from D owing to the nullah between D and F when this happens the observer walks along the line to the last place D, where he has fixed a point, and standing at D behind the peg, he sends on the sight vane to any convenient spot E, and fixes E from D just in the same way as he fixed B, etc., from A. He then puts on as many more pegs from D as he can (only one here on account of the nullah at E) and then moves forward again and stands at E, the last point he has fixed from D, and so he continues until the whole line is pegged out. The whitewash party follow up and whitewash the stones placed round the pegs. If on arriving at any point the observer sees that the road must go below a certain rock or cliff, he must look through the instrument at the bottom of the rock or cliff and if

his line of sight cuts above this point, he must evidently lay out the road at a flatter grade till he has passed the rock; so he must, therefore, alter the index arm to the flatter gradient required and go on laying out the points as before until he has passed the rock or cliff, when the former gradient is resumed. The second sight vane and man come in useful to send on ahead in such places to make trial shots; or some times owing to such obstacles, it is found that the previous 4 to 5 points may have to be altered a little lower down the hills so as to get below an obstacle, when the second sight vane can be sent back to re-align these marks thus saving time.

The line of the proposed road must now be marked out with pegs at convenient intervals, i.e., up straight slopes not further apart than 50 yards or so also in every important hollow or re-entrant and on every spur. The top of the ground at these points (and not the top of the pegs or heaps of stones) is the level of the road bed at these points, and the marks thus show both gradient and direction of the road. The pegs may be taken as the centre of the road or the outer edge. On every precipices hill sides the pegs must be taken as the outer edge, and on flat country as the centre. In order to facilitate estimating, pegs or stakes 1 ½ feet long will mark every chain and stakes 3 feet long will mark every 10 chains. On the completion of the whole of the alignment the surface of the ground will be spit locked or dagbeled from stake to stake.

When the men of the working party are put on to the work, they must be shown the marks thou fixed and told that the Top of the ground itself at the pegs (or under the stone heaps) is the level of the road bed, i.e. that the road must be cut inside the marks into the hill and that the outer edge must coincide in level with the top of the ground at the marks. The final level of the road must be made by Boning which must be undertaken by the Officer Incharge, who is also responsible for seeing that only the proper width is excavated. It must be particularly impressed on all concerned that the marks must be left until the road is completed; if this is not done, the road becomes an up and down affair which cannot be restored to its proper grade afterwards; and without the page, it is impossible to check who is at fault and the quantity of work done.

If possible before starting get on a hill opposite the one on which the road is to be constructed and study it with filed glasses if available. It is then possible to see which line will probably be the best where ravines, cliffs, etc., must be crossed and what places must be avoided, and how to do so whether by going above or below. Any such points and also passes or Cols where the road must necessarily go are called Ruling points. Then lay out the line as already described beginning at the bottom and working uphill if possible, as it is easier to see bad ground in time and avoid it than when working down from the top. Rocky ground must be avoided wherever possible, especially cliffs where the road must be blasted out.

Whenever possible zig zags should be avoided; but they are very useful sometimes and do not matter for narrow tracks, especially if each return is long.

As a rule a road must be laid out with the Clinometer fixed at the steepest gradient allowed for that class of road, unless it is certain that the hill top can be reached with an easier one. It is a safe plan to begin with a ruling gradient from the very beginning, only easing it where absolutely necessary to pass under obstacles. Where the hill is very steep and high, and the top will only be reached by keeping the

maximum possible gradient all the way, the shots taken with the instrument when laying out must be kept short so as to follow the curves of the ground closely, and long shots from spur to spur must be avoided.

General orders on road construction- In the preceding instructions on the alignment of roads the minimum widths of road bed are given if a drain is to be made along the inside the widths must be increased from 1 to 2 ft. to give room for the drain. It is very important for roads 4 feet wide (riding or loaded mules, etc.,) to see that the width is now here less than the width laid down, and that no stones or roots, etc., are left sticking out of the bank on the side which may catch in the loads in roads used by camels especially, all sharp stones must be removed from the road bed. On the whole on the narrow type of roads it is better to omit the drain and give the road bed a slight slope outwards making the outer edge $\frac{1}{2}$ an inch lower than the inner for each foot width of the road. The advantage of this method is to save the excavation of the extra width of the inside drain. Also when a side drain is provided on the inside, if the slightest fall of earth slips from the hill face on to the inside of the road. It frequently chokes the drain up, and the whole of the water in the drain floods across the road, often cutting is very deeply.

If the road is made, however with a side drain the water in the drain must be carried across the road at frequent intervals by cross drains, Irish bridges or culverts, etc., so as to empty the water down the hill; there must be a cross drain at least every 50 yards. The road surface must slope in towards the side drain at a slope of 1 in 20. If the road is 16 feet wide and over it must be berrel shaped. The best places for cross drains are at spure, and not in small re-entrants, because of spurs there is more natural hard ground below the edge of the road for the water to wash away before it can cut away the road, the slope of the natural ground will be more gen. the also, while at a hollow ore-entrant the ground will usually be at a much steeper slope than on a spur. Where a nullah crosses the road, there must necessarily be a culverts or Irish bridge, so that the side drain can run in to the nullah itself at such places above the culverts. Where there are zig-zags, the said drain must be run out on the natural ground slope at the ends of the straight; if the straights are long, more than 200 feet, cross drains must be added between the turns.

The side drain must be made straight, or in large radius curves and with no sharp turns in it. No roots or stones should be left in it, nor should it be taken round any stones or roots, such stones must be removed by blasting if necessary. The drain need not follow the exact foot of the inside or hill face of the road, very often in rocky places, the road may be wider than necessary for a few feet, the side drain can be cut straight across such a place, provided the full width exists between the drain and the road. The side drains must be made from 3" to 6" deep and from 9" to 2 feet wide. The cross drains, if open, must be paved with stones, about 4 to 6 inches below the level of the road, the sides must slope gently down to the centre. Where nullahs cross the road Irish bridges must be constructed. These are depressions lined with paving stones made in the road to a depth of about 12 inches depending on the size of the nullah. The paving must be from 4 to 12 feet wide. On all such bridges it is advisable to construct a drop wall on the down stream side, the wall first being made of dry stones, and the paving then added, the wall prevents the paving being washed away.

If covered cross drains are required, provided that plenty of large flat stones are available, very good ones can be made in dry stones without mortar up to spans of 4 feet or so, by giving a joint of 6 to 9 inches; these are fit for light carts. These drains must always have a paved floor carried out well beyond the edge of the road, also a drop wall on the downstream side of the road must be provided.

Retaining walls - Of dry stone are most useful (logs and sawn timber can be used when creosoted); they can be built very quickly by men accustomed to the work. In rocky places, or narrow awkward nullahs where the ground is steep, their use enables blasting to be avoided, and in steep portions the road, in place of having to be cut in the hill, can be carried outside the hill surface with a minimum of excavation. Blasting whenever possible must be avoided as it takes a long time, much labour and is expensive.

Before a retaining wall is built it is of the utmost importance that the foundations are correctly dug. The excavation must be level longitudinally, and in steep ground they must be stepped down horizontally. The foundations must slope inwards at 1 in 6 to 1 in 4, at right angles to the outer face of the wall. For dry stone walls the top must be 2'-6" for walls up to 10 feet and 4 feet thick for those over 10 feet high. The foundations must be taken down to solid material, safe from scour, frost and surface water. Solid rock may be cut level, but it is advisable to slope it towards the filling. Foundations must be at least 1 foot plus $\frac{1}{10}$ th of the height of the wall, below ground. In high dry walls a band of stone in lime should be given at intervals varying with the quality of the stone. A normal method is to give a 12 inch bank for every 6 feet in walls over 12 feet high.

The back may be vertical, and the front slope downwards at a batter of 4/1, so that the bottom width of the wall will equal width at top plus 3 inches for every foot in height, or if W be the thickness at the top and H the height in feet the thickness of the wall at the bottom should be $(W + \frac{1}{4} H)$ feet. The volume of the wall is calculated as follows. Width at top X length plus $\frac{1}{2}$ height X height X length.

4

(For details of construction of dry stone masonry walls see former Punjab Forest Leaflet No. 10).

For details for blasting see former Punjab Forest Leaflet No. 12.

Control of expenditure on daily labour.

It is essential that the work should be completed within the sanctioned estimates, which involves the preparation of accurate estimates and careful supervision of the labour employed.

In order to control the expenditure, the officer in charge of the construction of the road will maintain a record showing the sum sanctioned in the estimates for each section of the road (which should not exceed 1 chains), and the expenditure incurred each month on each section. As soon as the expenditure on a section has reached the amount sanctioned in the estimates, no further work will be carried

out on that section unless money is available from savings on other sections or unless additional sanction is obtained from the proper authority for increased expenditure on the road. Boards will be erected on the road at the commencement of each section on which will be shown, the number and length of the section to which it relates and the expenditure sanctioned in the estimates , and after the construction of the section is completed, the actual expenditure incurred.

Estimates

1. A sample of the form in which the notebook should be kept is attached (Appendix A), Column 3 alone should be written up when the aligning and chaining are being done; but as soon as a section is finished, the remaining information required for the estimate for that section should be collect.

2. This is done by taking the slope of the hill, at right angles to the line of the road, at the beginning of each chain, in the following manner:-

The 10' rod should be held horizontally, at right angles to the road line, with one of its ends resting against the hill side. From the other end, a plummet line should be dropped to the ground vertically; and its length should be measured; this length divided by 10, will give the slope of the hill side.

Have been ascertained the slope is recorded in column 4 of the note-book.

3. The nature of the ground is then examined throughout the length of each chain, and its average quality is estimated by its appearance on the line, or immediately above or below the line, or by means of small excavations. The quality is then entered in column 2 of the note book, and the corresponding rate per 1,000 cft of excavation is shown in column 1. In column 5 is then entered the prescribed width of road, modified so far as may be necessary on account of special conditions e.g., where the gradient is steep or there are snow slides, etc., the width must be increased.

4. Each day the information recorded in the note-book, should be carefully transferred to an estimate form (Appendix B).

In this form:-

(i) the figures of column C are:-

The slope of the hill multiplied by the width of the road

_____ and

2

5. In column C, the figures have to be written under each chain concerned and they must be put in a new line unless the width of the road and the rate for excavation are both the same as in some previous chain. The cross or sectional areas are written in column E in accordance with the rate for excavation. Totals are made for every 10 chains, and are transferred to abstract (Appendix C) for each mile.

6. It will be seen that this system of estimating does not allow for any part of the width of the road being obtained by filling, i.e. the full width of the road has to be excavated. When completed the road will, therefore, be wider than is required, but in small roads and hilly country, the excess will often be small, and where the slope of the hill is steep will soon disappear by being washed away. Cutting the full width of the road avoids the expense of building retaining walls and of frequently repairing them, but when excavation is more expensive than the building of retaining walls, also where there are curves in nullahs, retaining walls must be built, unless another suitable alignment can be selected which shall enable them to be avoided.

APPENDIX A.

SHOWING AN EXAMPLE OF A FIELD NOTE BOOK USED IN MAKING THE
ALLGNMENT OF A FULL SECTION FROM THE 20TH TO THE 29TH CHAIN.

1	2	3	4	5
Rate per thousand cubic feet	Quality of ground	Chain	Slope of hill, I in	Width of road.
Rs. A.P.				
25 0 0	Hard limestone Rock.	20.00	1 ¼	..
20 0 0	Hard sandstone.	21.00	1 ½	5
10 0 0	Sahle (Loose)	22.00	1 ¼	5
8 8 0	¾ earth, ¼ stone.	22.00	1 ¼	6
22 8 0	Disintegrating limestone.	24.00	1 ¾	5
17 8 0	½ hard stone, ½ (¾ stone, ¼ earth)	25.00	1 ¾	5
12 8 0	Nearly ¾ stone ¼ earth.	26.00	2	5
15 0 0	¾ stone, ¼ earth.	27.00	2	5
5 0 0	Earth.	28..00	2 ¼	8
5 0 0	Earth.	29.00	1 ¼	8

*Note :- Gardient in 12 except chains 6 and 7 or 1 in 8; snow slides common in chains 8 and 9.
Retaining walls 12' long, 5' high chains 7, 2' filling 10' in chain 5.*

APPENDIX B.

FORM OF ESTIMATE PREPARED FROM THE FIELD NOTE BOOK ON AD LIGNMENT.

A	B	C										D	E							
Chains	Width of road	Half heights according to chain number.											Gross areas (b X) according to rates for excava							
		0	1	2	3	4	5	6	7	8	9		5	7.8	10	12.8	15	17.8	20	
20 th to 20 th	5	2	..	..	..	..	..	..	..	..	..	100	..	..	..	..	..	..	..
	5	..	1.7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	5	..	..	1.7	..	..	..	..	..	..	..	..	..	..	8.5	..	..	-	..
	6	..	..	..	2	..	..	..	..	..	..	..	..	..	1.2	..	..	..	..
	5	..	..	..	..	1.4	..	..	..	..	..	..	..	..	..	..	..	-	..
	5	..	..	..	..	..	1.4	..	..	..	..	..	..	..	..	..	..	..	7
	5	..	..	..	..	..	..	1.3	..	..	..	..	..	..	..	..	..	6.5	..
	5	..	..	..	..	..	..	..	1.3	-	-	-	..	..	..	..	..	..	5.6
	8	..	..	..	..	..	..	..	..	1.8	3.2	..	40	..	..	..	..	..	..
		Total excavation (d x e) cft.										4000	1200	850	650	650	700	850	700	
		Add 25 per cent cutting back in Rs. 5-Rs. 10 excavation Cft.										1000	300	213
		Total excavation for 10 chains cft.										5000	1500	1063	650	650	700	700	850	

APPENDIX C.

Estimated for the _____ to _____-road.

SECTION V.

Abstract by tens of chains and cost by section.

Chains.	VOLUME OF EXCAVATION IN CUBIC FEET ACCORDING TO RATES.									RETAINING WALLS.			Descriptio	
	5	7.8	10	12.8	15	17.8	20	22.8	25	Volume in Cft	Rate Rs. P.Cft	Cost		
0 to 9.00														
..														
..														
..														
20.00 to 29.00	5,000	1,500	1,063	650	650	700	850	700	1,000	157 1/2	6	9 7 0	Rs. P.	Fill
Total 2 miles	..	..	..	..	..	..	..	..	..
764 feet cost of	..	..	..	..	..	..	..	..	..
ites.	..	..	..	..	..	..	..	..	..
					
					

118 Agr, Deptt. _____ 1000- 12.11.64 SGPW Lahore.

