

## **A CRITICAL REVIEW OF THE PRESENT FOREST MANAGEMENT OF THE CONIFEROUS FORESTS OF NORTHERN WEST PAKISTAN.**

by

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**Summary.** The conservative management system applied to the coniferous forests results in stagnation of growth and loss of capital. Suggestions for the application of intensive management system are given.

**Introduction.** The coniferous forests of Northern West Pakistan are highly valuable. These forests occupy the important watersheds and play vital role in the economy of the region. The total area of these forests in Hazara district and Malakand civil division is 2.1 m acres (8) constituting about 18 percent of the total area of these territories. At present, these forests possess a total growing stock of about 2,000 m cft valued at approximately Rs. 10,000 million, and produce an estimated yield of 5 m cft per annum (7).

Pakistan is very deficient in forests. These coniferous forests are the major source of timber and allied goods. Unfortunately, the system of management in vogue suffers badly with the ills of over-conservatism (10). The management of these forests on scientific lines started early in the twentieth century and it should have been sufficiently advanced by now but the reluctance of the resource managers, i. e., foresters to adopt new methods of maximum production and rapid returns seems to have withheld the progress. After independence in 1947, the demand for timber and wood-products suddenly increased and timber markets registered steep price hike. This called for immediate application of intensive management techniques but no step was taken in this direction. In fact, the improvement works already initiated in the 1920s (2,3) were reversed and the forests were again put under the conservative selection system after about 30 years (13,20). A common argument advocated in favour of this conservatism is the fear of erosion and denudation. This seems due to the lack of proper appreciation of watershed management principles with the result that the forests had to suffer considerably.

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**Effects of the Conservative Management.** The conservative management of forests brings multiple losses and results in the following :

1. **Blockade of Capital.** Huge capital is withheld in the forests in the form of over-mature stock resulting in poor utilization percent. A statement showing the percent stock of mature and over mature trees (24" dbh and over) and utilization percent taken from the current working plans will amply illustrate this point (1,4,5,6,9,11,12,14,15, 18,19,20).

Working Plan				Vol. of trees (24" dbh & above) as per centage of the total growing stock)	Utilization Percent
Galis reserved forests	..	..	..	47.29	0.6
Kaghan reserved forests	..	..	..	52.30	0.60
Upper Siran reserved forests		..	..	72.10	0.87
Lower Siran reserved forests	..	..	..	29.92	1.10
Swat and Swat Kohistan forests	..	..	..	64.99	0.38
Lower Indus Kohistan and Buner forests		..	..	73.58	0.87
Chitral forests	..	..	..	61.85	0.61
Upper Kaghan guzara forests		..	..	70.55	0.50
Lower Kaghan guzara forests	--	..	..	61.27	0.31
Siran guzara forests	..	--	--	62.71	0.51
Galis guzara forests	--	--	--	32.04	0.94
Haripur guzara forests	--	--	--	42.99	0.77

2. **Loss of Site Productivity.** For maximum production, full utilization of the site is necessary. This calls for removal of congestion both above and below the ground surface. The conservative management without proper regard to subsidiary silvicultural operations is not conducive to the maximum site productivity and the retention of the old stock is, in fact, counter productive. In these days of technical advancement, not only the site is fully utilized but also the site productivity is increased manifold by artificial methods. By under-utilization of the site, both



the site potential and the growing stock capital is lost due to rot, deterioration and stagnation resulting in the diminishing returns.

**3. Lack of Rapid Development.** Because of the low financial returns due to under-utilization of the resource, the forests are not developed to the extent they deserve. Large areas are yet inaccessible and remain untapped and others are still not properly opened up for maximum output (7).

**4. Low Rate of Increment.** At present, the forests are said to be managed on sustained yield basis and it is presumed that only the annual increment is being removed in the form of prescribed annual yield. Thus the utilization percent can be presumed as increment percent.

The increment percent for the selection forests varies from 0.31 to 0.94 as indicated above which is sub-normal and gives a poor rate of capital growth.

The yield per acre per annum for these forests works out as 3.4 cft as against that obtained in some foreign countries given below (8);

Name of country				Yield per acre per annum (cft)
1.	Italy	--	--	98.6
2.	Kenya	--	--	78.5
3.	Hungry	--	--	64.5
4.	Ethiopia	--	--	63.2
5.	Burma	--	--	59.3
6.	USA	--	--	14.6
7.	Iran	--	--	9.0
8.	India	--	--	5.3

**5. Improper use of Forestland.** In our forest management, large areas are labelled as protection forests. Whereas it may be necessary to afford protection to some areas for some time, it is not at all convincing to keep this resource idle during the present time of economic appraisal. The productivity level of total forested area will fall further low and the utilization percent will decrease if these areas are also included for economic analysis.

**6. Socio-economic Problems.** The economic development of the community and raising of the socio-economic status of the people is one of the important requirements of any development programme. By creating job opportunities, provision of basic amenities of life, communication and marketing facilities for local raw materials, the economic condition of the people can be improved. With rising unemployment, labour-intensive projects are required to be launched and forests can provide job opportunities if worked on intensive management system. This will remove the present socio-economic problem which to a great extent are a cause of the deterioration of forests.

**Recommendations.** It is imminent that the present state of affairs is urgently rectified and a bold policy of forest management is immediately initiated. The future forest manager must take cognizance of this fact and bring the management of forests on sound scientific footing compatible with the needs and requirements of the people. The following suggestions may justify consideration in this context.

**1. Utilization of the Productive Capacity of Forests.** In a recent study (16), it has been found that some of the fully stocked blue pine forests in the Galis Division have a maximum growing stock level of about 10,000 cft per acre and that, fir forests have a maximum growing stock level of 13,500 cft per acre as against the present growing stock of about 2,500 cft and 3,300 cft respectively. Some abnormalities conceded, this study has provided sufficient indication to fix optimum limits of growing stock and, if worked efficiently, the forest resource capital can greatly be increased and utilized for greater production.

**2. Application of Proper Management Techniques.** It is already being widely felt that the application of intensive management system is urgently required. In this connection the following steps may be of value in the initial stages.

**(i) Change of Silvicultural System.** For the conifers like chir, kail and deodar, uniform system should be applied instead of single tree selection system now in vogue. Even for fir/spruce forests, group selection or the modified uniform system should be applied for quick removal of over-mature stock and rapid regeneration (17). The natural regeneration should largely be supplemented with artificial reproduction.

**(ii) Increased Investments.** It seems that at present the department is only interested in revenue returns. A small percentage of revenue is re-invested in the form of developmental expenditure. This gives a low input/output ratio. Increased investments are necessary for the desired rate of development.

**(iii) Subsidiary Silvicultural Operations.** It is a sad aspect of management that silvicultural operations prescribed for the development and improvement of stock like thinnings, cleanings, artificial regeneration and improvement fellings, are not being carried out. These operations are very important and need strict application. It is a



common scene that even seeding fellings in chir forests are not properly done. This aspect has got to be improved.

### 3. Better Utilization. In this connection:

(i) *Removal of overmature stock* is need of the hour and this should be done on emergency basis using all means at the disposal of the department.

(ii) *Present long rotations* of conifers should be reduced and emphasis be placed at the production of medium size industrial wood in minimum possible time.

(iii) *Protection forests* should mostly be managed like other productive forests commensurate with the watershed requirements. These forests can be improved over short periods and then transferred to commercial working. Even under protection, yield may be realized according to silvicultural availability. This will bring all forests under production and scope of their development will definitely widen.

(iv) *Present administrative set-up* is not successful so far as the requirements of integrated development are concerned. The administration has to be streamlined and more involvement of the public obtained for smooth and healthy working. This requirement is specially of importance for the private guzara forests where public interest is largely involved.

It is evident that there is ample scope of increasing production from forests and it is expected that foresters will rise to the occasion and meet the challenge of maximum development and production from this important natural resource and will save it from depletion and destruction. In this way the foresters will be doing a national service in furthering the development and self reliance of the country.

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