

FORESTRY RESEARCH IN INDIA (1861-2005): HISTORIC EVOLUTION WITH A CASE STUDY

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1. Introduction

The history of Forestry Research in India started with the setting up of the Forest Research School in Dehradun in 1861. In 1961 there was the celebration of 100 years of Indian forestry and in the year 2011 the research institute completed 150 years. In view of its long standing research in the field there is perhaps a need for its evaluation from social and political perspective and specially from the perspective of history of science. The present project was aimed to make a proper documentation of the history of forestry research in India. This research has an evolution from the mid nineteenth century, as it developed with the mechanism of the setting up colonial control over Indian forest resources which started in 1860s and these researches continued in the colonial and post-colonial period and with a few other forestry research institutes in independent India. This historical and scientific evaluation has been attempted with a special reference to the Forestry Research Institute, Dehradun which is still the major center of forestry research in India. The study was carried out under the following chapters:

1. Introduction
2. Concept of forestry research, forestry and transformation of forest policy between 1861-1947
3. Forestry research in four phases (early phase-1861-1905, Pre first world war phase, Inter war phase and final colonial phase)
4. Forestry researches in independent India (A

comparative analysis of the research works of FRI, Dehradun and eight other Institutes in independent India)

5. Concluding Remarks
6. Bibliography

Discussion

Forestry is the art of sciences of managing forests, tree plantation and related natural resources. The main goal of forestry is to create and implement systems that allow forests to continue a sustainable continuation of environmental supplies and services. British Forestry management in India between 1861-1947 shows an evolution of a system of managing forests that started the process of protection as well as a gradual erosion of forest resources and natural cover of Indian subcontinent. In fact, during the period Indian forests appeared to be the handiwork of British capitalist motive and imperialist intention. In general, the development of forest according to British rule of law resulted in some development in the sense of planned grafting of forests and some other development of disciplines related to Forestry such as Silviculture, Botany, Forest Chemistry, Wood Technology, Forest Entomology etc. In one hand it led to the routing of Indian Forests resulting in immense oppression to forest dwellers and on the other, it led to the advancement and implementation of science and technology to Indian forests.

The forestry research can be divided broadly into four phases. The early phase was from

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1861-1905. There was a history of forestry in India in ancient and medieval time, but the western concepts of scientific forestry, forest management etc were never in use which developed in Indian after 1861. The Indian Forest Department was started in 1864 with the leadership of Dietrich Brandis who was the first Inspector General of Forests. The new department needed legislative backing to function effectively, and in the following year, in 1865, the first forest act was passed. By this act the control over forest resources through legislation started, but the control was not much secured to maximize resource optimization. The second forest act of 1878 was more specific in nature and there was classification of forests into three categories - 'Reserved forests', 'Protected forests' and 'Village forests'. This classification was not possible without a proper extension of research activities in the highly heterogeneous forest areas in India. In reality, D Brandis drafted the first Forest Acts, who initiated both research and control over the forest resources in India. Further in 1894 when the forest map was more clear to the Government the classification for protection became more effective where forests to be preserved on climatic ground, forests to be protected to ensure supply of useful timber, forests to be protected to ensure the supply of minor forest products and forests to be used as pasture lands were divided. The forestry Institute served the purpose to set up a forest policy of the Forest Department and the Forest Department was placed administratively under the Revenue Department. This indicates greater concerns of the Forestry Research in India with the revenue extractions than the concern of developing forestry as a new area of scientific research.

The forestry research was initiated from the mid nineteenth century, when large timber woods were required for the railway companies. With the prevailing forest conservation programmes and administration upto 1857 the supply was not secured. Lord Dalhousie called in 1862 of a department to ensure the sustained availability. The enormous requirement of the

different railway companies for sleepers was made the subject of forest conservancy an important administrative question. Dehradun Forestry Research School was set up in this time. At initial stage the forest school were the place to train the forest rangers and other foresters. Here the forest research became associated with forest education with the aims like research, maintenance and improvement of forest estates, methods of improved utilization of the expensive resources of timber, education of young men in order to equip them to work and administer to work etc. The Institute didn't concern itself for the commercial advancement of any particular material or product - but being devoted to applied research, economic considerations naturally governed all its investigation. Further to ensure the sustainability of the work, Sir Alexander Rogers divided the research work into five heads - (1) Silviculture, (2) Forest economy or Utilization, (3) Forest Entomology, (4) Forest Botany, (5) Forest Chemistry. So a detailed study of the research in the first phase clearly exposed that the idea of scientific forestry which in theory aimed to protect Indian forests was aimed to extend the research activity to have a proper extraction of usable trees and other forest products. Here lies the true dichotomy of forest research in theory and forest preservation system in practice.

The forestry researches suffered in the mid war period when due to the world wars timber supplies suffered although demand increased. This was the phase of the development of homogeneous forest and it affected the forests of India which was heterogeneous with a large number of species yet to be explored at the time. Single variety plantation with a high return within a short period of time became important aim of these research activities which helped the administration in the long run. The uncertain political future also affected the foresters in this time. Many of them like Harry Champion who was involved in the Indian forest service as silviculturist for long, left the job and returned to their home country. Besides the traditional knowledge of the people for

protection was neglected and the concept of Joint forest management programme which was propagated by D Brandis much earlier were completely ignored.

After the liberation of India forestry research was also neglected in the initial years. In fact the forest department was controlled by the Ministry of Agriculture just after the independence. Some broader steps were taken from 1970s when some new Institutes were set up other than the first Institute of Dehradun depending on the varieties of the forest types in India. These are (1) Institute of Forest Genetics and Tree Breeding, IFGTB, Coimbatore, (2) Institute of Wood Science and Technology, IWST, Bangalore, (3) Tropical Forest Research Institute, TFRI, Jabalpur, (4) Rain Forest Research Institute, RFRI, Jorhat, (5) Arid Forest Research Institute, AFRI, Jodhpur, (6) Himalayan Forest Research Institute, HFRI, Shimla and (7) Institute of Forest Productivity, Ranchi. These Institutes are more specialized in the different types of forests to deal with.

The present project tried to explore how the forestry research has a strong and steady evolution in the last 150 years. There are many limitations in the colonial period and in the post-colonial period after the birth of a new nation. But there was a strong contribution of these researches towards the varied green cover of this subcontinent.

Concluding Remarks

There can't be a simple agenda of research which was exposed in the history of forests research developed from the last 150 years. Starting from the setting up of Forestry Research School at Dehradun, academic interests were dominant philosophy, at least externally, in this research Institution as there was a strong need to know the unknown tropical forests from the perspective of western scientific research methodologists. But this is also quite clear that administrative motives of resources exploitation

played a major and significant role. In the present project founded by Indian National Science Academy for the last three years it was an attempt to explore how academic research played a major role beyond the political agenda. Politics were important, but this is oversimplification to treat politics as a single dominant philosophy to destroy academic ethics of the country. Here Ram Chandra Guha, Madhav Gadgil and Richard's Grove's early researches sometimes suffer from its over focused limitation although their contributions are pioneering. In the total tenure of the process the colonial forest management programme continued in the post-colonial period also. The post-colonial process also could not overcome this essential limitation. Timber, particularly superior quality of timber, was also needed for administrative facilities even in the post-colonial situation. In that shadow of timber politics and ecological imperialism the Institutes tried to continue academic research in forestry. Forestry research in its' history of 150 years both suffered and achieved from this dialectics. Sometimes philosophy in academic interest of science played the main role and sometime imperial needs controlled the dialectical situation.

Selected Bibliography

- Brandis, D. *Memorandum of Forest Legislation proposed for British India*. Government Press, Shimla, 1875
- Gadgil, Madhav and Guha, Ramchandra. *This Fissured Land: An Ecological History of India*. OUP 1993
- Guha, Ramchandra. *Forestry in British and Post British India: A Historical Analysis*. EPW, Oct 29, XVII, 1983
- Grove, Richard Green. *Imperialism, Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism*. OUP, Delhi, 1999
- Rangarajan, Mahesh. *Fencing the Forest*, OUP, 1999
- Ribbentrop, B R. *Forestry in British India*. Calcutta, 1900
- Sarkar, Mahua (ed). *Environment and History: Recent Dialogues*. Kalpaz, 2007
- Sivaramakrishnan, K. *Modern Forests*. OUP 1999
- Stebbing, E P. *The Forests of India*. London, 1922
- Troup, R S. *The Work of the Forest Department in India*. Calcutta, 1917