

SHIP BUILDING IN BOMBAY : DEFORESTATION OF WESTERN INDIA, EARLY NINETEENTH CENTURY

Louiza Rodrigues

Department of History, Ramnarain Ruia College, Mumbai (INDIA)

Email : louiza23@rediffmail.com

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ABSTRACT

The paper endeavours to make a critical analysis of forest policy of the British Government in the early nineteenth century Western India. The paper is divided into two sections. The first section focuses on ship building, especially warships at the Bombay Dockyard by the British Government for their Royal Navy in the early nineteenth century. It marked the beginning of the first phase of deforestation of Western India. In the second section, the paper describes the second phase of devastation of the forests of western India as a result of the end of the monopoly of timber trade in 1823. The study argues that ship building in Bombay and the end of monopoly of timber trade had catastrophic effect on the forests of Western India.

Key Words: Forest, Ship building, Deforestation, Timber, Conserve, Monopoly

INTRODUCTION

With growing consciousness about environment issues, the problem of deforestation has become a subject of discussion not only among policy makers but also among the people at large. It is necessary to analyse the forest policy of India in a historical perspective in order to improve strategies and guide future reform efforts. The colonial policy on forests of Western India during the early nineteenth century has not been explored extensively, and has not been placed under scrutiny especially deforestation of western India as a result of shipbuilding at Bombay. Neither there is substantial work to prove that the forest policy of the British Government such as the abolition of East India Company's monopoly on forests in 1823 further decimated the forests of western India. The aim of the paper is to critically analyse the forest policy of the British government in the early nineteenth century. This study analyses the timber trade and timber contracts (statistical data) between the British government and the contractors to show the quantum of timber, different species of timber utilised by the ship building industry and the extent of deforestation of western India. It argues

that commercial interests predominantly underlined the forest policy of the British.

METHODOLOGY

The paper is based mainly on primary sources, (original manuscripts) culled from the Maharashtra State Archives such as Public Department diaries, Secret and Political Department, Volumes of Marine and Revenue Departments. The Gazetteer of Bombay City and Island and the Imperial Gazetteer of India, Bombay Presidency is also referred for this study. The paper is also supplemented by contemporary literature.

Ship Building in Bombay

One of the first industries established in Bombay by the British was the ship building industry which commenced in the middle of the eighteenth century. The rise of Napoleon Bonaparte in France in 1799 and his threat to India induced the British government to construct warships in the early nineteenth century to maintain their supremacy on sea against the French. In 1800 a frigate named 'Cornwallis' of 1363 tons with 50 guns was built and launched

1363 tons with 50 guns was built and launched by the British for the first time at Bombay Dockyard¹. It set a precedent for building large ships in future. These ships were primarily built of timber and Malabar contained abundant stores of excellent teak timber, especially straight timber that attracted the attention of the Bombay Government².

Mapping the Forests of Malabar, Exploring the Jungles

In 1800, the exclusive right of forest administration of Malabar was given to the Bombay Government, which enabled the East India Company to establish their monopoly over the Malabar forests³. In 1804, Captain John Johnson, military engineer in the Bombay government traversed the forests of Malabar and found valuable species of timber required for ship building such as bintek, beety or blackwood, poon, irumba or ironwood (to be used to knees or ribs and durable under water), maur tree, species of wild palm, anjily or wild jackwood (all very durable and sufficient dimension for building frigates)⁴. To ensure control over these forests, the British government passed legislation on 25 April 1806 according to which all private extraction of wood became an offence punishable by law. On 10 November 1806, Captain Joseph Watson was appointed as the Conservator of forests of Malabar. He was given the charge to conserve teak and other timber resources of the forests of Malabar and Canara. The future trade was henceforth to be conducted under his inspection⁵. In 1807, a proclamation was issued which authorised him to punish any person who was found violating the rules put forth by the government with regard to forests⁶. In the course of time, he brought the entire forests of Malabar under his control. As demand for timber increased, a need arose to exploit such private forests and to regulate and restrict these forests. The government persuaded the proprietors to relinquish their claim over the land and these proprietors were compensated for each tree felled by them⁷.

As shipbuilding activity increased at the Bombay dockyard, surveys were carried out in Canara for the procurement of timber. In 1806,

Captain John Johnson traversed length and breadth of Canara from Sudashewghur to Nulaseer and found exotic forest land covered with splendid timber trees such as kunda, maurtee, ebony, wild jack, coomba and waund, worthy of naval architecture⁸.

Survey of the Gujarat forests:

In 1806, a local inhabitant, Motiram was dispatched by the Forest Committee to ascertain timber resources in the Gujarat forests. He travelled into the jungles from Baroda to Udaipur and the Kathiawar forests and found variety of trees of great utility for ship building such as teak, blackwood (seesume), rulwood-khair, jadur, moura and margoe. The two jungle districts of Kattiawar and Ruttonmahl were abounded with large timber to the extent of 50 feet in length and proportionate diameter⁹. The Forest Committee also acquired information about the Dharampore forests which comprised of five forests which were rich with timber resources namely, Kellah Punch Malee, Kellah Rajpore, Vigaye, Pepree, and Ram Naggar. Thereafter the British government appointed Captain Thomas Thatcher as the Inspector of the forest of Dharampura (near Surat) in January 1807 to explore the jungles of the Northern forests. He was assisted by Lieutenant Campbell in this venture¹⁰. Thomas Thatcher submitted the report on 26 February 1808 to Money after examining the forests of the Bhill Chiefs of Ramboss Pepra and Kollybhut, where they encountered many difficulties due to non cooperation of the inhabitants. The timber was of a superior quality, straight and sufficiently curved for ship building¹¹.

More surveys were undertaken in areas, which were in areas close to Bombay.

Timber Resources of Salsette

The Collector of Salsette, Peter Lellessurrier carried a regular survey of standing teak throughout Salsette as per the Board's instructions and reported the following quantities in different districts in 1810¹².

As great quantity of teak trees was found in the Salsette region, competent shipwright were sent to the Collector of Thana to inspect and examine the teak throughout the island and it was found

that the trees fell under the denomination of Kail or diameter.

| 12 Inches | 8 Inches | 6 Inches |
|-----------|----------|----------|
| 420 | 290 | 320 |

These trees approximately, 21000 were in thriving condition because restrictions were imposed against the cutting of teak and other trees and plants towards the end of the eighteenth century.

Forest Operations in Western India

To procure a regular supply of timber from western India to the Bombay dockyard, the East India Company advertised in the newspapers

and invited tenders for the same. The Company entered into a contract with those merchants whose tenders were on most favourable terms. Some of the prominent contractors in the early nineteenth century, who were based in Bombay as well as Malabar were as follows: Bayon Chacooty, Chacora Moussa, (both in Malabar) the rest in Bombay were Nusserwanji Jamshetji, Ardashir Dady, Shapurji Callabhoy and Dadabhoy Rustomji, Juggunnath Wittonjee, Cazi Mohammad Hussain Satary, Shankar Pandayji, Shyamji Herji, Ballaji Laxaman, Mohanji Russordji, Nakhoda Bawa, Hormusji Bomanji¹³,

Table 1 : Timber resources of Salsette in different districts.

| Districts | No. 1 sort | No. 2 sort | No. 3 sort | Total |
|--------------|------------|------------|------------|---------|
| Thane | 60 | 107 | 398 | 565 |
| Godbunder | 116 | - | 227 | 343 |
| Mallad | 6 | 1,056 | 2,140 | 3,202 |
| Marol | 2,214 | 6,821 | 9,424 | 18,459 |
| Trombay | 6 | 1,088 | 118 | 1,212 |
| Total | 2,402 | 9,072 | 10,322 | 23, 781 |

Some of private commercial firms and the European Agency Houses were involved in the timber trade. These were Alexander Adamson, Bruce, Fawcett and Company, Forbes and Company, Ship Sharks Harding Rivett and Wilkinson, Souza (Miguel de Lewis), James Tate, Taylor and Agnew¹⁴. The East India Company, however, monopolised the exclusive rights of timber trade. Private contractors and agency houses were permitted to carry out business, provided they possessed the Company's License. After seeking permission from the Government to fell trees from the forests, the Contractor obtained a permit order for the same from the owner and hired people to cut trees by paying one rupee per tree. The contractor was expected to supply seasoned timber¹⁵. The timber was purchased by the brokers for the Bombay merchants. In western India, generally, carts and buffaloes were used to transport timber from the jungles to the rivers. In Malabar and Canara, elephants were preferred to drag timber to the river edge than labourers, who were reluctant to go in high jungles and labour was very expensive¹⁶.

Ships Built at the Bombay Dockyard

Although Shipbuilding began at Bombay dockyard since 1735 under the government patronage, the ships that were built were small with 6 to 10 guns and ranged between 500 and 800 tons. In 1800, "Cornwallis" a frigate of 1363 tons with 50 guns was built. A number of ships were built in 1801 alone¹⁷. In the period, 1810 - 1821, thirteen vessels were built for the British Admiralty of which five were with 74 guns, the largest being the "Ganges" of 2289 tons. Following is the table which gives us the fair idea of the ships built at Bombay dockyard from 1795 to 1825¹⁸.

| Ten years ending | Number of ships built |
|------------------|-----------------------|
| 1795 - 1804 | 22 |
| 1805- 1814 | 24 |
| 1815- 1824 | 38 |

End of Timber Monopoly in 1823

The British government's approach to forest lands since 1820's was based on the laissez-faire principle advocated by the French Physiocrats, Adam Smith and David Ricardo, that free trade

will ensure progress and prosperity. Hence the government policy was to maximize private harvesting, especially of teak and encouraged private ownership of economic resources, especially land¹⁹. Moreover, the system of government's monopoly over timber in Malabar and Canara had created discontentment among the people, proprietors of the forests as well as traders against colonial foresters as the former resisted encroachment on their age old customary rights to the use of forest resources for sustenance and trade. According to E.P. Stebbing, the people's pressure exerted by both the peasantry, angered by the loss of their rights and above all the timber merchants, who were hostile towards State monopoly, which convinced Thomas Munro, Administrator in charge of the Malabar District, to end this teak monopoly in 1823²⁰.

In Konkan, too on the recommendation of John Andrew Dunlop, the Collector of Southern Konkan, the Government of Bombay authorised Dunlop to issue a proclamation in 1829 surrendering all claims to teak or other valuable timber beyond the limits of the forests of Band, Tandil and Vinhere in the Suvarnadurg taluka to the ryots. Dunlop believed that such a measure would enable the land holders to regard the forests as their best resources and they would nurture them with care²¹. The land use policy of the British had serious repercussions on the forests of Bombay Presidency.

RESULTS AND DISCUSSION

Ship building and First Phase of Deforestation of Western India

The statistical information on timber trade provide the data base of the quantum of timber consumed by the gunship and frigates at the Bombay dockyard. It also indicates the extent and the areas that were deforested in western India. For instance, a warship of 74 guns ship required approximately 646 pieces of Calicut timber and 1,58,560 Guz Calicut planks. The trees were classified into three types, first sort, second sort and third sort. On an average, a tree provided 4 candies of timber, (the first sort timber provided 5 candies per tree, and the second sort 4 candies per tree, third sort 2 to 3 candies

per tree) approximately 161 trees were cut to provide 646 pieces of timber. Approximately, 825 trees were cut to obtain 1,58,560 Guz planks from Calicut. (one candy is equal to 48 guz, total number of candies were 3,300). Therefore, 986 trees were cut from Calicut alone to construct a war ship of 74 guns.

The frigate of 36 guns comparatively consumed less timber than the 74 gun ship that is, 151 pieces of Calicut timber, and 53,000 Guz Calicut Planks. The southern forests of Malabar such as Walyar, Kollinghood, Kammala and Tenmalapuram forests in Paulgautecherry district and Ernaad as well as the northern forests of Nedunganad and Nellatree were denuded to construct frigates and warships. Likewise the in Canara, the forests of Sedashewghur, Gunga Valley, Todrie, Onore, Chunderagharie and Neelaseer and Uurgaum were decimated to meet the needs of timber for ship building at Bombay dockyard. The northern Teak forests of Gujarat, Surat, Gundavie Versaul, Koluch, Damaun, Omergaum, Danoo, Werrow, Tollia were also denuded. Bassein forests were depleted of their green cover as it provided crooked timber as well as straight timber for the construction of ships. After the extension of the British rule in the Bombay Presidency in 1818, the Konkan forests were depleted to meet the timber needs of the British government²².

End of Monopoly and Second Phase of Deforestation of Western India. (1823 - 1838)

The end of Company's monopoly on timber had cascading effects of the forests of western India. By the 1830's, the forests of Malabar were denuded to such an extent, that William, the timber agent of Calicut had to visit the interior forests of Malabar for its procurement. Timber that was available was of inferior quality and of lesser dimensions, which indicated that young trees were cut²³. For instance, the Principal Collector of Madras, Alexander Fell, found in the period, 1837-1839, 40,000 young trees floated down from the jungles whose diameter did not yield 12 inches and a great proportion were under 6 inches diameter. Even in the government forests, due to its over exploitation by the contractors, there were fewer teak trees. In the vicinity of the government forests of

Palghaut forests, William found that out of the 71 logs of the timber felled in 1826, only 18 logs were serviceable and the rest 53 were useless resulting in waste. In Oodamullah forest, the standing teak trees did not exceed between 500 to 600 trees. He remarked that within 8 to 10 years the teak trees would be exhausted²⁴.

The scarcity of timber coupled with the failure of rains during the monsoons of 1837 -1838 rendered it difficult to transport timber by water and increased the prices of timber in the 1830's as shown in the following (Table 2)²⁵.

In Canara, too, by 1839, D. Blair, Acting Principal Collector of Canara, found few number of trees which were classified into 4 classes, 1st class, 5935, 2nd class -2370, 3rd class -4846, 4th class- 4300. Similarly, in Gujarat, Colonel Geo Jervis, who visited the forests of Dharampur, Jowar Raja's jungles and the Daman jungles found these forests greatly reduced²⁶. In Konkan, the forests were denuded to such an extent that it led to timber crises in the 1830's. In Thana, in the districts of Panvel, Sanski, Rajpuri, Taighur, very little timber was found even for building purpose. According to the Revenue Commissioner and D. Davidson, in the Thana district, although there was tax levied on any tree young or old that was cut, yet no timber could be secured from that region²⁷. The private trade gave rise to speculation and ruined the forests²⁸.

Severe deforestation of the forests of western India resulted in the scarcity of timber and escalated the prices of timber. It created anxiety (leave space between created and anxiety) to the Marine and Revenue department to ensure a

continuous supply of teak in the late 1830's. Therefore, in 1837, the government's attention was drawn to the indiscriminate exploitation of forests. The first step adopted by the Bombay Government to stop the reckless cutting of the wood, was to issue orders in 1839, prohibiting the felling of teak without permission. In January 1840, Dr. Alexander Gibson, the Superintendent of the Botanical garden at Dapuri and Hewra, was instructed to make a tour of the Northern forests on behalf of the Marine Department from whence large supplies had formerly been drawn, namely, the Kolwun taluka, the Dharampore forests, and the state of Johar²⁹. It is interesting to note that wood crisis induced the ship builder, Nowroji' Lowji's son, Jehangir to go to England in 1838, who spent three years there to acquaint himself with the new British methods of building iron Steamships. Subsequently, in 1840 the first iron ship was constructed in Bombay, the "Planet" of 397 tons. Moreover, the extinction of East India Company in 1857 and assumption of Government of India by the British Crown led to the abolition of the Indian Navy³⁰⁻³¹.

The colonial rulers neglected the forests and paid scant attention to conservation of the forests of western India. Conservation was accorded to only certain species of trees such as teak in particular or trees of commercial importance. Even if the trees were conserved, it was to ensure guaranteed regular supply of timber to the government. It is not surprising that the government was bound to experience the shortage of teak especially of the first and second sort in the following decade of 1830.

Table 2 : Prizes of Timber with respect to Scarcity.

| Timber | 1835-1836 | 1836 -1837 | 1837 - 1838 |
|---------------|--------------------|-------------------|--------------------|
| Superior | Rs. 18 per covit | Rs. 20 per covit | Rs. 27 per covit |
| 1st sort | Rs. 13 " | Rs. 15 " | Rs. 19 " |
| 2 sort | Rs. 11" | Rs. 13 " | Rs. 15 " |
| 3 sort | Rs. 8 " | Rs. 10 " | Rs. 12 |
| Plank | | | |
| 1st sort | Rs. 40 per 100 guz | Rs 45per 100 guz | Rs. 55 per 100 guz |
| 2nd sort | Rs. 32 " | Rs. 38 " | Rs. 50 " |
| 3rd sort | Rs. 26 " | Rs. 30 " | Rs.36 " |

CONCLUSION

The years between 1807 and 1822, marked the high point of the Company's monopoly in timber trade in Malabar and Canara. The volume of timber trade expanded considerably with the increasing demand of timber for the construction of ships which eventually devastated the forests of western India. This ship building industry marked the first phase of deforestation of western India. The end of timber monopoly in 1823 by the British government marked the second phase of deforestation followed by the years of regression in western India during the period 1823 - 1838. The immediate result of the colonial forest policy was the reoccupation of the forest by the landowners. Even the undisputed Government forests during this period were visited by almost unrestricted fellings, encouraged by timber agencies. The natural consequence was that, large forest areas were entirely lost to government never to be recovered, others were ruined, a few years later the availability of supply of first class timber reduced and the prices of timber rose. It led to timber crisis in the 1830's and compelled the British government to pay attention to the issue of deforestation and conserve the forests. This marked the beginning of forest conservancy in Bombay in the latter part of the 1830's.

REFERENCES

- 1 Wadia R.A., The Bombay Dockyard and the Wadia Master Builders, *The Bombay Parsi Panchayat Funds and Properties, Mumbai*, 191, (2004)
- 2 Troup R.S., Economic Products Series, The Indian Forest Memoirs. *Indian Woods and their Uses*, Government Printing India, Calcutta, 7, (1909)
- 3 Maharashtra State Archives (hereafter MSA) Court of Directors, *London to Duncan J.*, President, Governor in Council, Bombay, 2 December 1800 Public Department Diaries (hereafter PDD), 155, (99), 963-65 (1801)
- 4 Johnson J., Military Engineer to Warden F., Secretary to Government of Bombay, 5 September, PDD, 203, 6426-6442, (1805)
- 5 Superintendent of the Marine, Money William Taylor to the Bombay Government, 8 November, MSA, PDD, 222, 6553-6557, (1806)
- 6 Duncan J., Governor in Council, Bombay to Lord Bentinck W., Governor in Council, Fort, St. George, 10 November 1806, PDD, 222, 6557, (1806)
- 7 Superintendent of Marine, Money W., to Bombay Government, 11 February, *Captain Watson's Report on Malabar forests*, PDD, 226, 806, 807, (1807)
- 8 Superintendent of Marine, Money W., to Bombay Government, *Report on Survey of Malabar Forests*, 19 February 1808, MSA, PDD, 248, 949-55, (1808)
- 9 Walker A., Resident of Baroda, to Money W., 12 April 1806, PDD, 212, 2069- 2083, (1806)
- 10 MSA, PDD, 226, 1046, 1058, 1063-64, (1807)
- 11 Money William to Bombay Council, Bombay 19 February, 1808, PDD, 248, 949- 973, (1808)
- 12 Money W., to Bombay Marine Board, PDD, 283, 711-12, (1810)
- 13 The above list of contractors is taken from Public Department Diaries in the period 1800 to 1820.
- 14 Douglas J., *Bombay and Western India - A series of Stray Papers*, 1, Sampson Low, Marston and Co., London, 168, (1893)
- 15 Sageiya K.P., *Forests and Forestry*, National Book Trust, New Delhi, 181, (1967)
- 16 Johnson J., to. Money W., Survey of the Canara forests, 15 May, 1807, PDD 233, 3843, (1807)
- 17 Philippe L., Secretary to Marine Board to Bombay Council, 17 April 1802, MSA, PDD, 163, 1015- 1017, (1802)
- 18 Kunte B.G., The Gazetteer of Bombay City and Island, *Times Press, Bombay*, 391, (1909)
- 19 Richard T. P., 'Forest Management and Imperial Politics: Thana District, Mumbai, 1823-1887', *The Ind. Econ. Soc. Hist. Rev.*, 16 (3), 279, (1983)
- 20 Buchy Marlene ,Teak and Arecanut, Colonial State, Forest and People in the

- Western Ghats (South India) 1800-1947.,
Institute Francais De Pondichery, **19, (1996)**
- 21 Imperial Gazetteer of India, Bombay
Presidency, Ratnagiri and Satara Districts,
Government Press, Bombay, **32, (1887)**
- 22 MSA, *Bombay Forest Commission Report*, .
1. Government Press, Bombay, 18, **(1887)**
- 23 MSA, M.D. **37**, 93-96,**(1839)**
- 24 Williams A.S., Timber agent at Calicut to
Captain Oliver R., Superintendent of the
Indian Navy, 11 May 1839, Calicut,
MSA, M.D, **37**, 189-198, **(1839)**
- 25 Report by Lieutenant Threshie, Sub
Assistant Commissary General on Malabar
and Canara Forests, 9 November, Calicut,
1939, MSA, M.D, **37**, 318, **(1839)**
- 26 Chief Engineer, Bombay, Jervis Geo Minute
to Lieutenant Colonel, J.W. Lester, Secretary,
Military Board, Bombay, 11 December,
1843, Revenue Department (hereafter RD),
63/1620, 419 - 433, **(1844)**
- 27 Revenue Commissioner, *Davis and
Davidson reports on the state of the teak
forests in Thana to Reid L.R.*, Acting Chief
Secretary, Bombay, 16 January, 1829, MSA,
PDD, **37**, 667-8, **(1839)**
- 28 Blane D., Revenue Commissioner, Southern
Division, Konkan, to Townsend E.H., Bombay,
M.S.A., R.D. **139/1696**, 69-71, **(1844)**
- 29 Minute by Governor, Bombay, Farish J.,
M.D., **37**, 726, **(1839)**
- 30 Yaacob Rafi M., studies on environmental
Management in Malasiyn palm oil industry.
A qualitative analysis of environmental non-
Governmental organisations. *J. Environ.
Res. Develop.*, **2**. (4C) 957-967 **(2008)**
- 31 Vibart J., Revenue Commissioner, Poona, to
Secretary to Government, Colonel E.M.
Wood, 27 August, 1840, MSA, M.D.. **45**
271, **(1841-42)**

