



**CHAPTER – III  
BAMBOO**





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**3.1** According to the WP prescriptions, bamboo is felled/exploited in four years rotation cycle. Each felling series becomes due for harvesting after every four years. If bamboo is not harvested from a felling series in a particular year, such felling series can be harvested only after four years, resulting in loss of revenue. Non-exploitation of bamboo crop prevents fresh growth of coppice shoots/clumps which eventually form the future crop. Besides, if not harvested in time, bamboo becomes clumsy and congestive, shows sign of deterioration and causes unwieldy growth of shoots.

Majority of bamboo harvested in the State for generating revenue is transported to the two paper mills of Hindustan Paper Corporation (HPC) located at Panchgram and Nagaon in the State. Apart from this, a small percentage of bamboo is used in handicrafts and other day to day use. Bamboo is harvested as per the WPs of respective Divisions. As per the present schedule of rates, royalty rate of bamboo is ₹ 2/bamboo.

### 3.2 Management of bamboo resources

Audit scrutiny revealed that in order to assess the total growing stock of bamboo in Assam, the E&F Department has carried out a detailed survey<sup>12</sup> between May-June 2010 and brought out the findings in a Report named “Assessment of total Growing Stock of Bamboo in Assam”. The Report *inter-alia* revealed that by putting all safe guards, a minimum 7.17 lakh MT bamboo can be harvested every year following a four year rotation cycle.

It was further noticed that the two units of HPC located in Assam need a total stock of 8 lakh MT bamboo as raw material per year for running at optimum capacity. Scrutiny of records revealed the following deficiencies in the management of bamboo resources.

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<sup>12</sup> Survey carried out under the leadership of Dr R M Dubey, IFS, CCF, Research, Education and Working Plan, E&F Department, GOA.

### 3.3 Non-finalisation of Working Plans

As mentioned above, non-preparation and finalisation of WPs hamper exploitation of bamboo coupes thereby causing loss of revenue in addition to hampering the regeneration of new shoots. Preparation and approval of WP for subsequent period is therefore necessary prior to the expiry of the existing WP.

Audit scrutiny revealed that though the WPs in respect of three out of seven Divisions<sup>13</sup> had expired in 2009, the E&F Department is yet to finalise the WP and obtain approval of the MoEF, GOI. Consequently, the concerned Divisions were not in a position to allow extraction of bamboo during the working seasons 2009-10 to 2011-12. As per the existing

WP, the consolidated bamboo exploitable was calculated as 49,855 MT<sup>14</sup> (each MT consisting of 350 bamboo). Thus, non-initiation of timely action to prepare and finalise the WPs of these three Divisions has led to non-exploitation of available bamboo resources resulting in loss of potential revenue of ₹ 1.86 crore (calculated at the existing rate of ₹ 325/MT for three working seasons).

It was further noticed that there was no report/return prescribed for monitoring the currency of the WPs and status of preparation of WPs for subsequent periods to be furnished by the Divisions or the WP Divisions to higher authorities. Consequently, the higher management in the E&F Department remained unaware about non-renewal of WPs leading to loss to State exchequer. This was despite the fact that MoEF, GOI reminded the E&F Department in July 2007 to take expeditious steps to put in place the WPs so that extraction of bamboo can continue un-hindered.

The Department stated (November 2012) that due to delay in the release of funds for various works related to preparation of WPs, timely revision of WPs is badly affected in the State.

#### Recommendation 6:

*GOA may kindly ensure timely release of funds so as to enable the E&F Department to expedite the finalisation of the WP for immediate commencement of bamboo extraction.*

*E&F Department may put in place a mechanism for reports/returns to be furnished by the Divisions/ WP Divisions for monitoring the progress of renewal of WPs in time.*

<sup>13</sup> Cachar, Hailakandi and Karimganj.

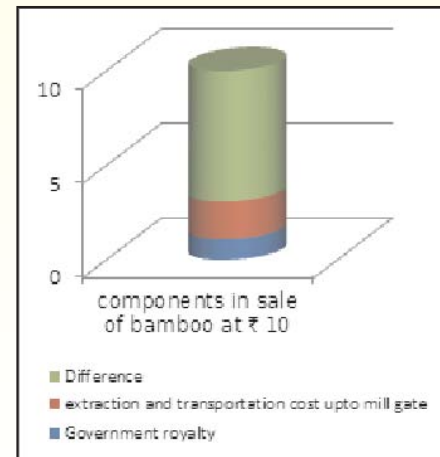
<sup>14</sup> Cachar (21,880 MT); Hailakandi (9,325 MT) and Karimganj (18,650 MT).

### 3.4 System of extraction of bamboo in the State

As discussed in the introductory paragraph under the segment named 'Bamboo', almost entire stock of bamboo extracted in the State are consumed by the two paper plants of HPC in the State. As per the system in place, contractors deputed by HPC operate the coupes earmarked in the WPs of respective Divisions and supply to HPC. Against each MT of bamboo (consisting of 350 bamboo) so supplied, the E&F Department gets a royalty of ₹ 118 upto March 2009 and ₹ 325 thereafter. Further, the Supreme Court has held<sup>15</sup> in 1998 that forest produce used by industries should be sold at 'market rates.'

An analysis of the market value, royalty and cost of extraction of bamboo revealed the following:

Item	Rate/bamboo
Market price/price at which procured by HPC	10
Extraction and transportation cost upto HPC mills	2
Royalty paid	0.39/1.08 <sup>16</sup>
Difference	7.61/6.92
Percentage of profit	76/69
Percentage of royalty GOA gets on each bamboo	4/10



Thus, while the market price/price at which HPC procures bamboo from Assam is about ₹ 10/bamboo, GOA gets only ₹ 1/bamboo and ₹ 2/bamboo is incurred on transportation cost upto HPC mill gate. Evidently, the Government which is the owner of the forest produce *i.e.* bamboo, gets the least of all the components whereas the contractors supplying bamboo to HPC are benefitted of substantial percentage of the sale value.

#### Methodology in neighbouring States

In Mizoram, bamboo coupes are sold through *mahals* wherein the royalty rate is benchmarked as the 'reserved price'. This methodology ensures that there is no loss to Government exchequer as the *mahals* are settled above the royalty rates.

Forest produce sold through tender system (*mahal* operation) had the tendency to generate much better revenue over and above the royalty rates as the forest

<sup>15</sup> Order dated 15 January 1998 in WP (C) No. 202/95.

<sup>16</sup> ₹ 0.39 upto March 2009 and ₹ 1.08 thereafter.

produce are being sold on competitive bidding, keeping the royalty rates as the base price. Taking the royalty value of bamboo *i.e.* ₹ 2/bamboo (effective from September 2009), the minimum price of bamboo per/MT works out to ₹ 700/MT (350 X ₹ 2/bamboo). Verification of records revealed that even the E&F Department has been following up a proposal (mooted in 2009-10) for enhancing the rate of royalty per MT of bamboo supplied to HPC to a similar amount. But the HPC authorities had been pleading the E&F Department not to increase the rates and maintain status-quo on the matter. However, the reasons as to why the HPC authorities wanted to stall the process of upward revision of Government royalty on supply of bamboo to HPC mooted by E&F Department, GOA could not be understood by Audit in view of the following:

- (i) the HPC authorities extract bamboo from forest areas in the State through contractors appointed by them and purchase the same at existing market rates while a meagre percentage of the total price is paid to GOA as royalty; and
- (ii) the HPC authorities regularly purchase bamboo originating from Mizoram, Manipur, Tripura, North Cachar Hills Autonomous District Council etc., at rates ranging between ₹ 1,565 and ₹ 2,323 per MT Green (each MT consisting about 150-200 bamboo); average price of bamboo working out to ₹ 1,892/MTG.

Thus, there was no reason why the GOA did not resist the contention of the HPC and went ahead with the proposal mooted in 2009-10 for revision of the rates of royalty for supply of bamboo to HPC. This would have enabled them to generate additional revenue.

Secondly, adoption of a methodology for sale of bamboo through tender system by the GOA similar to that in vogue for sale of minor forest produce like sand, stone etc., (till the temporary ban of Gauhati High Court in 2010-11) and also practiced in neighbouring State like Mizoram would have ensured that the GOA gets the best price or atleast the royalty value through sale of bamboo resources. That would have ensured that the verdict of apex court for supply of forest produce at market rates is being followed in letter and spirit and also reduced the involvement of HPC authorities in the matter relating to fixation of royalty rates of forest produce, which is otherwise a State subject.

The Department stated (November 2012) that revision of the system of supply of bamboo to HPC through sale of departmental coupes as suggested by Audit requires negotiation with HPC and mutual agreement to new terms and conditions. As stated above, why the E&F Department needs to take the HPC on board for revising the mode of sale of bamboo resources is not understood.

#### **Recommendation 7:**

***GOA may revisit its decision to allow supply of bamboo to HPC through contractors appointed by the latter. They may instead consider selling the bamboo coupes through tender for optimising revenue yield from bamboo resources.***

### 3.5 Non-revision of WP of quota allotted to Ashoka Paper Mills

The WP in respect of bamboo bearing areas earmarked by E&F Department for supply of bamboo to M/s Ashoka Paper Mills (non-functional since 1998) expired in 2004. As per the agreement between the GOA and M/s Ashoka Paper Mills (executed in October 1974), the annual quota of bamboo was 60,000 MT.

Audit scrutiny revealed that the aforesaid Mill was non-functional since 1998 and the bamboo lease as well as the WP was valid till 2004. But, the WP was not renewed by the E&F Department till the period of this performance audit. This was despite the fact that the two Mills of HPC operating in the State have been running on shortage of raw material and has been repeatedly requesting the

E&F Department to take necessary steps to renew the above WP and allot the quota to the Mills of HPC.

Had the E&F Department initiated timely action to renew the WP after expiry of erstwhile bamboo lease of M/s Ashoka Paper Mill in September 2004, the aforesaid quota of at least 60,000 MT per annum could have been allotted for the Mills of HPC which would have enabled generation of additional revenue of ₹ 7.38 crore<sup>17</sup>.

The Department stated (November 2012) that revision of WPs would be undertaken after proper inventory survey in the divisions due for revision. The reply however, remained silent as to why the WP could not be revised for more than eight years which led to the loss of revenue.

### 3.6 Supply of bamboo at 'Air dried' instead of 'Green' method

Audit scrutiny revealed that as per the system of procurement of bamboo in place, the Mills of HPC purchase bamboo originating from the States like Mizoram, Manipur, Tripura and even North Cachar Hills Autonomous District Council (falling in Assam) on MT 'Green' (MTG) basis<sup>18</sup>. Each MTG consists of 150-200 bamboo. However, in case of bamboo procured through HPC appointed contractors from bamboo bearing areas located in Assam (other than district council area) the same is purchased at MT 'air dried' (MTAD) method<sup>19</sup>. Each MTAD consists of 300-400 bamboo. However, payment for bamboo procured by HPC authorities is made on per MT basis.

<sup>17</sup> 60,000 X 5 years (2004-05 to 2008-09) = 3,00,000 MT X ₹ 118 (royalty rate upto 2009) and 60,000 X 3 (2009-10 to 2011-12) = 1,80,000 MT X ₹ 325 (royalty rate from April 2009).

<sup>18</sup> Methodology in which 'green' bamboo are sold which has more pulp content.

<sup>19</sup> Methodology in which dry bamboo is sold with less weight.



Thus, it can be seen from the above that while the HPC authorities are purchasing bamboo from other sources at MTG basis and paying prices per MT consisting 150-200 bamboo, Assam bamboo is procured at MTAD basis where payment is made as per MT consisting 300-400 bamboo. Consequently, while making payment for each MT of bamboo, the HPC authorities are actually receiving double the number of bamboo due to adoption of MTAD method in procurement in case of bamboo originating from Assam.

Audit scrutiny further revealed that though there was a series of discussion between the HPC authorities and the E&F Department about a number of issues, this matter was never discussed. An effort by Audit to independently collect the reasons for such difference in approach from HPC authorities failed as the latter did not respond to the request of Audit.

As per information collected from four Divisions<sup>20</sup>, 97,819 MTG bamboo was extracted<sup>21</sup> from these divisions by HPC appointed contractors during 2006-07 to 2010-11 but royalty was paid by the HPC authorities to GOA on MTAD basis (i.e. ₹ 118/MTAD during 2006-07 to 2008-09 and ₹ 325/MTAD during 2009-10 and 2010-11 totalling to ₹ 1.18 crore). Thus, the HPC authorities while purchasing 97,819 MT bamboo at AD method, got 3.42 crore<sup>22</sup> bamboo. Had the system been similar with other sources i.e. purchase on 'MTG' basis, 3.42 crore bamboo would have made 1,95,429 MTG<sup>23</sup> leading to recovery of revenue of ₹ 2.36 crore. This resulted in loss of revenue of ₹ 1.18 crore.

Further verification revealed that for supply of 97,819 MT bamboo to HPC Mills, ₹ 1.18 crore was realisable at the rate of ₹ 118 and ₹ 325 per MTAD. Against this, the concerned Divisions reported realisation of ₹ 69.54 lakh only resulting in further short realisation of ₹ 48.46 lakh.

#### **Recommendation 8:**

***GOA may initiate immediate steps to ensure that the system of procurement of bamboo on MTG basis applicable for bamboo of other States/autonomous bodies is applied in case of bamboo procured from Assam as well.***

The Department stated (November 2012) that the suggestion of Audit needs to be discussed with HPC management to arrive at an agreeable solution.

<sup>20</sup> Cachar, Hailakandi, Karimganj and Nagaon.

<sup>21</sup> 96,600 MTG during 2006-07 to 2008-09 (when royalty was ₹ 118/MTAD) and 1,219 MTG during 2009-10 and 2010-11 (when royalty was ₹ 325/MTAD).

<sup>22</sup> Taking the average of 350 bamboo per MT (each MTAD consists 300-400 bamboo).

<sup>23</sup> Taking the average of 175 bamboo per MT (each MTG consists 150-200 bamboo).

### 3.7 Non-supply of additional quota to HPC

Audit scrutiny of the information furnished by HPC authorities to the E&F Department revealed that the two paper manufacturing plants of HPC operating in Assam had an installed capacity of 2.5 lakh MT of bamboo each *i.e.* 5 lakh MT bamboo/annum which had been enhanced to 8 lakh MT/annum. It was also noticed that despite best efforts both the plants of HPC had not been able to obtain raw material for more than 60 *per cent* of the capacity of the mills.

This when compared to the assessment of total bamboo stock availability as discussed in paragraph 3.2 (*i.e.* 7.17 lakh MT bamboo/year) would reveal that the E&F Department could have managed its bamboo resources in a more efficient manner to augment the supply of bamboo to HPC Mills which are adversely affected due to non-availability of raw material. The huge revenue potential remaining to be tapped is about ₹ 50.19 crore<sup>24</sup>/annum considering the royalty value *i.e.* ₹ 2/bamboo only which would further increase if bamboo is sold through *mahal* operation.

The Department stated (November 2012) that the quantity that can be silviculturally harvested would be assessed after revision of the WPs. The reply remained silent as to why effective steps could not be taken by the E&F Department to process the relevant WPs timely in view of the extractable quantity of bamboo worked out in the Report on 'Assessment of total growing stock of bamboo in Assam'. That would have enabled them to allot more quota to the HPC mills located in the State and generated additional resources.

#### Recommendation 9:

*E&F Department may take immediate steps for optimising the supply of bamboo to the HPC Mills keeping in view the assessment of extractable bamboo already carried out in 2010.*

<sup>24</sup> 7,17,000 MT X 350 bamboo/MT X ₹ 2/bamboo.