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ASSISTANCE TO THE FORESTRY SECTOR

OF

BANGLADESH

Results of the
Village Forest Inventory
Remeasurement

by

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PREFACE

A village forest inventory was carried out in 1980 - 81 by FAO/UNDP Project BGD/78/020. At the same time 27 village units were selected to be remeasured after a certain period to obtain an estimate on the extension/depletion of the tree and bamboo grown areas, the amount of annual felling, the ingrowth volumes.

The remeasurement was carried out by Project BGD/79/017 during the period April-August 1984. It was decided to publish the preliminary results, related to changes in the number of trees and bamboo culms, as soon as possible in order to provide the evidence needed to confirm or to deny the alarming reports circulating in forestry circles about the rapid depletion of these forests and the disappearance of bamboo due to overexploitation and blight disease.

Because of the disastrous flood situation in the country since May of this year, one of the villages could not be reached. The results therefore are for 26 villages only but they are considered statistically accurate to represent the situation of the whole country.

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1. INTRODUCTION

In 1981 FAO/UNDP Project BGD/78/020 "Village Forest Inventory" presented the results of the National Village Forest Inventory. The field enumeration of this inventory, which was carried out from May 1980 to March 1981, covered the village forests of 267 village-units distributed over all the districts except Chittagong Hill Tracts.* The project prepared village tree stand and stock tables and also bamboo and palm tables.

(With the resources of the village forests in 1980 known, the next information required for planning purposes were data about fellings and growth of the village forest. The Village Forest Inventory Project revisited seven villages in North West Bengal, twelve months after the first enumeration, to record the trees felled in the twelve months period. Due to lack of time not more than this insufficient number of villages could be revisited. The percentage of volume harvested in one year (only trees with dbh of 8 inch and more) was then found to be an alarming 8.9%. In order to fill up the data gap concerning village forest growth and felling, it was decided that UNDP/FAO Project "Assistance to the Forestry Sector" would carry out a comprehensive remeasurement of some of the villages.))

*Districts as in 1980

2. OBJECTIVES OF THE REMEASUREMENT

The objectives of the remeasurement were to produce the following information :

1. Change in total number of regeneration trees (dbh 0 - 20 cm).
2. Change in number of trees with dbh of 20 cm and above, including the number of trees felled and the number of trees which passed from the regeneration class to the 20 cm + class.
3. Change in total volume of trees with dbh of 20 cm and above, and volume of trees felled.
4. Volume increase and diameter increase.
5. Change in total number of bamboo culms.

The present paper deals with points 1., 2. and 5. above.

3. METHODOLOGY

3.1 GENERAL

Due to various reasons the remeasurement of the pilot village-units did not start until April 1984, about 3½ years after the first enumeration.

During a preliminary check it had been found, as expected, that most of the old tree numbers were not visible anymore. In spite of that it was decided to try to implement the remeasurement as originally planned : i.e. with location and remeasurement of all the trees previously with a dbh of 8 inch and above. An alternative solution, being the remeasurement of the family-units (enumeration units) disregarding the situation during the first enumeration, was discarded. On the one hand, the field work would have been easier and data about the change in number of trees and volume (the sum of growth and removal) would have been obtained, but, on the other hand, no data about number and volume of trees felled or about growth figures could have been calculated.

3.2 NUMBER OF SAMPLES

The original sample consisted of 267 village-units. A total of 27 subsamples (pilot plots) were drawn from the main sample, randomly distributed throughout the survey area, but with an ensured 'spread' factor. These plots were used for more detailed measurements during the initial survey and were scheduled to be remeasured. Calculation of the standard error of the total tree volume of trees with dbh of 8 inch and more was done. The calculated standard error at 95% confidence level was 27.5%, which is considered to be acceptable. Although, as mentioned before, one of the villages could not be reached and remeasured, it is expected that this will have no significant effect on the above mentioned accuracy estimate.

3.3 SHORT DESCRIPTION OF METHODOLOGY OF ORIGINAL ENUMERATION

The sampling procedure, based on population rather than area, is described in a field document (Obaidullah, 1980). The sample-unit, or

village-unit, consists of a part of a village, a full village or more than one village, dependent on the number of people living in the village as recorded in the Village Population Statistics (1974). The sample-unit is divided in a number of family-units, which serve as enumeration units. The village family has usually a clearly defined village forest, mostly being one block where also the dwellings are located, but sometimes more blocks. The village household, often used by village surveys, does have its clearly defined agricultural land, but does not necessarily have private village forest. Usually several households, forming together a family, own a unit of village forest. The actual number of enumeration units to be measured was calculated in the field. It depended on the proportion of the village to be measured and the number of households per family, based on household lists supplied by the Union Chairman.

In each enumeration unit trees were enumerated in three dbh classes : 0 - 3.9 inch, 4.0 - 7.9 inch and 8.0 inch and more. Of each 8" + tree the dbh was measured and the length and middiameter of each 'timberlog'. Smaller trees were counted per species. Also bamboo culms and palms were counted per species.

3.4 REMEASUREMENT METHODOLOGY

A new field sheet for the remeasurement was designed while the old sheet was used to assist with the location of the family-units and the trees with dbh of 20 cm and more. The diameter of all trees with a dbh of 20 cm and more is measured. Trees which had a dbh of more than 8 inch during the first enumeration are recorded with the same tree number. No species code is recorded since this information is already available on the old field sheet. For **trees** which are removed code 0000 is filled in under dbh.

Trees of which the dbh was less than 8 inch during the first enumeration but which have now a dbh of more than 20 cm are separately recorded. For these trees the species code is filled in.

The total number of regeneration trees in two dbh classes and bamboo culms in two maturity classes are counted and recorded per family unit.

Of each tenth tree (provided it has a fairly regular stem) dbh is also measured at 1.37 m (4 feet 6 inches), the imperial height of dbh measurement, in order to establish the relation between metric (used during remeasurement) and imperial dbh measurement (used during original survey).

4. RESULTS OF THE REMEASUREMENT AND COMPARISON WITH THE RESULTS
OF THE ORIGINAL INVENTORY

Note :

in 3 of the 26 villages there were anomalies in some family units. Trees were found which were not enumerated in 1980/81 or vice-versa. The reason could be either an untraceable change in family ownership or a measurement (sampling) error. These few cases were discarded completely from tables and results.

Table 1 : CHANGES IN NUMBER OF REGENERATION TREES,
BIG TREES AND BAMBOO BY VILLAGE

Village Number : 1

Village(s) : Baje Akannapur, Malgaon, Badnohali

Code : 10080206

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	1,700	1,389	- 18.3
10-20 cm	1,047	831	- 20.6
Total	2,747	2,220	- 19.2
Big trees			
≥ 20 cm	1,001	1,017	+ 1.6
Bamboo			
Mature	1,569	7,099	+352.4
Immature	10,938	7,272	- 33.5
Total	12,507	14,371	+ 14.9

Village Number : 2

Village(s) : Salki (Part)

Code : 10160306

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	2,102	1,314	- 37.5
10-20 cm	999	801	- 19.8
Total	3,101	2,115	- 31.8
Big trees			
≥ 20 cm	957	871	- 9.0
Bamboo			
Mature	6,705	16,657	+148.4
Immature	16,265	8,141	- 49.9
Total	22,970	24,798	+ 8.0

Village Number : 3
 Village(s) : Khorda Narayanpur
 Code : 10370402

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	4,518	2,097	- 53.6
10-20 cm	1,468	1,361	- 7.3
Total	5,986	3,458	- 42.2
Big trees			
≥ 20 cm	807	762	- 5.6
Bamboo			
Mature	7,651	11,529	+ 50.2
Immature	14,048	14,805	+ 5.4
Total	21,699	26,334	+ 21.4

Village Number : 4
 Village(s) : Khamar Narail
 Code : 10490604

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	5,772	1,750	- 69.7
10-20 cm	1,148	839	- 26.9
Total	6,920	2,589	- 62.6
Big trees			
≥ 20 cm	633	460	- 27.3
Bamboo			
Mature	7,131	8,554	+ 20.0
Immature	11,650	9,308	- 20.1
Total	18,781	17,862	- 4.9

Village Number : 5
 Village(s) : Nandura, Mandail, Dobid
 Code : 10590704

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	1,444	1,283	- 11.1
10-20 cm	810	974	+ 20.2
Total	2,254	2,257	+ 0.1
Big trees			
≥ 20 cm	714	668	- 6.4
Bamboo			
Mature	5,595	8,477	+ 51.5
Immature	9,058	11,485	+ 26.8
Total	14,653	19,962	+ 36.2

Village Number : 6
 Village(s) : Jagatpur, Ramkrishnapur, Najarpur (Part)
 Code : 10971001

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	1,583	2,132	+ 34.7
10-20 cm	783	497	- 36.5
Total	2,366	2,629	+ 11.1
Big trees			
≥ 20 cm	529	586	+ 10.8
Bamboo			
Mature	623	1,401	+124.9
Immature	1,249	1,442	+ 15.4
Total	1,872	2,843	+ 51.9

Village Number : 7
 Village(s) : Langalmaria, Digharia (Part)
 Code : 11001103

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	1,389	1,090	- 21.5
10-20 cm	715	748	+ 4.6
Total	2,104	1,838	- 12.6
Big trees			
≥ 20 cm	423	398	- 5.9
Bamboo			
Mature	55	141	+156.4
Immature	292	368	+ 26.0
Total	347	509	+ 46.7

Village Number : 8
 Village(s) : Sahala (Part)
 Code : 31150102

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	1,635	1,206	- 26.2
10-20 cm	1,032	520	- 49.6
Total	2,667	1,726	- 35.3
Big trees			
≥ 20 cm	688	660	- 4.1
Bamboo			
Mature	3,068	5,268	+ 71.7
Immature	7,835	4,810	- 38.6
Total	10,903	10,078	- 7.6

Village Number : 9
 Village(s) : Rogunathpur (Part), Porahatia
 Code : 31270405

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	4,030	3,809	- 5.5
10-20 cm	1,839	1,642	- 10.7
Total	5,869	5,451	- 7.1
Big trees			
≥ 20 cm	1,031	1,118	+ 8.4
Bamboo			
Mature	3,657	8,478	+131.8
Immature	14,063	8,516	- 39.4
Total	17,720	16,994	- 4.1

Village Number : 10
 Village(s) : Chilar Kandi, Narayanpur
 Code : 32180801

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	2,933	2,332	- 20.5
10-20 cm	1,278	842	- 34.1
Total	4,211	3,174	- 24.6
Big trees			
≥ 20 cm	810	866	+ 6.9
Bamboo			
Mature	3,132	4,336	+ 38.4
Immature	8,323	3,344	- 59.8
Total	11,455	7,680	- 33.0

Village Number : 11
 Village(s) : Manikdighi, Mothuranagar (Part)
 Code : 31320301

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	919	1,612	+ 75.4
10-20 cm	674	466	- 30.9
Total	1,593	2,078	+ 30.4
Big trees			
≥ 20 cm	384	336	- 12.5
Bamboo			
Mature	1,491	4,384	+194.0
Immature	4,691	6,099	+ 30.0
Total	6,182	10,483	+ 69.6

Village Number : 12
 Village(s) : Chakman (Part)
 Code : 31900603

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	4,473	4,152	- 7.2
10-20 cm	1,839	1,626	- 11.6
Total	6,312	5,778	- 8.5
Big trees			
≥ 20 cm	1,182	1,058	- 10.5
Bamboo			
Mature	1,063	1,634	+ 53.7
Immature	3,872	1,706	- 55.9
Total	4,935	3,340	- 32.3

Village Number : 13
 Village(s) : Chalta Chata
 Code : 41510103

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	3,818	1,349	- 64.7
10-20 cm	1,486	582	- 60.8
Total	5,304	1,931	- 63.6
Big trees			
≥ 20 cm	520	411	- 21.0
Bamboo			
Mature	2,382	1,619	- 32.0
Immature	8,187	4,520	- 44.8
Total	10,569	6,139	- 41.9

Village Number : 14
 Village(s) : Karkhana (Part)
 Code : 41760204

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	6,749	4,701	- 30.3
10-20 cm	2,592	1,372	- 47.1
Total	9,341	6,073	- 35.0
Big trees			
≥ 20 cm	1,015	964	- 5.0
Bamboo			
Mature	1,479	2,697	+ 82.4
Immature	9,981	2,658	- 73.4
Total	11,460	5,355	- 53.3

Village Number : 15
 Village(s) : Baradubi (Part), Dohalia (Part)
 Code : 22830603

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	2,984	2,970	- 0.5
10-20 cm	1,273	970	- 23.8
Total	4,257	3,940	- 7.4
Big trees			
≥ 20 cm	624	510	- 18.3
Bamboo			
Mature	3,567	7,603	+113.1
Immature	10,536	8,677	- 17.6
Total	14,103	16,280	+ 15.4

Village Number : 16
 Village(s) : Rangaloti
 Code : 63260304

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	2,549	1,751	- 31.3
10-20 cm	1,084	811	- 25.2
Total	3,633	2,562	- 29.5
Big trees			
≥ 20 cm	213	208	- 2.3
Bamboo			
Mature	13,642	42,054	+208.3
Immature	32,584	27,124	- 16.8
Total	46,226	69,178	+ 49.6

Village Number : 17
 Village(s) : Madhonagar, Kakra
 Code : 22860705

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	2,648	2,612	- 1.4
10-20 cm	1,754	985	- 43.8
Total	4,402	3,597	- 18.3
Big trees			
≥ 20 cm	1,164	954	- 18.0
Bamboo			
Mature	2,764	4,578	+ 65.6
Immature	9,010	5,797	- 35.7
Total	11,774	10,375	- 11.9

Village Number : 18
 Village(s) : Ikurdia (Part)
 Code : 63060102

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	129	127	+ 1.6
10-20 cm	72	59	- 18.1
Total	201	186	- 7.5
Big trees			
≥ 20 cm	19	17	- 10.5
Bamboo			
Mature	0	0	
Immature	0	0	
Total	0	0	

Village Number : 19
 Village(s) : Bhushandi
 Code : 22730403

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	2,063	989	- 52.1
10-20 cm	1,133	533	- 53.0
Total	3,196	1,522	- 52.4
Big trees			
≥ 20 cm	632	592	- 6.3
Bamboo			
Mature	3,291	7,994	+142.9
Immature	11,418	7,172	- 37.2
Total	14,709	15,166	+ 3.1

Village Number : 20
 Village(s) : Shuhata, Bhelanagar (North)
 Code : 63530503

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	3,045	2,321	- 23.8
10-20 cm	2,083	1,625	- 22.0
Total	5,128	3,946	- 23.0
Big trees			
≥ 20 cm	757	787	+ 4.0
Bamboo			
Mature	1,506	7,578	+403.2
Immature	7,427	5,831	- 21.5
Total	8,933	13,409	+ 50.1

Village Number : 21
 Village(s) : Kaotail
 Code : 22380108

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	1,400	741	- 47.1
10-20 cm	774	542	- 30.0
Total	2,174	1,283	- 41.0
Big trees			
≥ 20 cm	289	364	+ 26.0
Bamboo			
Mature	82	192	+134.1
Immature	286	151	- 47.2
Total	368	343	- 6.8

Village Number : 22
 Village(s) : Lambardardi, Jatrabari Joar, Mayapur, Bara Baraikhail
 Code : 22550301

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	2,355	1,399	- 40.6
10-20 cm	978	814	- 16.8
Total	3,333	2,213	- 33.6
Big trees			
≥ 20 cm	399	381	- 4.5
Bamboo			
Mature	211	372	+ 76.3
Immature	1,129	641	- 43.2
Total	1,340	1,013	- 24.4

Village Number : 23
 Village(s) : Kazkamata, Deorpal
 Code : 53630104

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	6,741	4,734	- 29.8
10-20 cm	3,039	2,324	- 23.5
Total	9,780	7,058	- 22.8
Big trees			
≥ 20 cm	1,439	1,350	- 6.2
Bamboo			
Mature	9,044	17,109	+ 89.2
Immature	10,805	8,731	- 19.2
Total	19,849	25,840	+ 30.2

Village Number : 24
 Village(s) : Pathalia, Kallandi (Part)
 Code : 53660205

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	6,341	3,584	- 43.5
10-20 cm	2,540	1,199	- 52.8
Total	8,881	4,783	- 46.1
Big trees			
≥ 20 cm	1,196	914	- 23.6
Bamboo			
Mature	1,711	2,796	+ 63.4
Immature	3,730	3,265	- 12.5
Total	5,441	6,061	+ 11.4

Village Number : 25
 Village(s) : Charpagla (Part)
 Code : 53730301

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	6,914	3,351	- 51.5
10-20 cm	2,462	1,664	- 32.4
Total	9,376	5,015	- 46.5
Big trees			
≥ 20 cm	399	416	+ 4.3
Bamboo			
Mature	709	1,437	+102.7
Immature	1,447	2,051	+ 41.7
Total	2,156	3,488	+ 61.8

Village Number : 26
 Village(s) : Amtali (Part)
 Code : 53960501

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	2,070	1,182	- 42.9
10-20 cm	761	617	- 18.9
Total	2,831	1,799	- 36.4
Big trees			
≥ 20 cm	583	570	- 2.2
Bamboo			
Mature	637	215	- 66.2
Immature	1,485	66	- 95.6
Total	2,122	281	- 86.8

Table 2 : CHANGES IN NUMBER OF REGENERATION TREES,
BIG TREES AND BAMBOO ; REGIONAL.

Region : North-West *

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	18,508	11,055	- 40.3
10-20 cm	6,970	6,051	- 13.2
Total	25,478	17,106	- 32.9
Big trees			
≥ 20 cm	5,064	4,762	- 6.0
Bamboo			
Mature	29,329	53,858	+ 83.6
Immature	63,500	52,821	- 16.8
Total	92,829	106,679	+ 14.9

Region : South-West *

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	24,557	19,161	- 22.0
10-20 cm	10,740	7,050	- 34.4
Total	35,297	26,211	- 25.7
Big trees			
≥ 20 cm	5,630	5,413	- 3.9
Bamboo			
Mature	16,272	28,416	+ 74.6
Immature	56,952	31,653	- 44.4
Total	73,224	60,069	- 18.0

* See Appendix 1.

Region : North-East *

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	17,173	12,910	- 24.8
10-20 cm	9,151	6,339	- 30.7
Total	26,324	19,249	- 26.9
Big trees			
≥ 20 cm	4,097	3,813	- 6.9
Bamboo			
Mature	25,063	70,371	+180.8
Immature	72,390	55,393	- 23.5
Total	97,453	125,764	+ 29.1

Region : South-East

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	22,066	12,851	- 41.8
10-20 cm	8,802	5,804	- 34.1
Total	30,868	18,655	- 39.6
Big trees			
≥ 20 cm	3,617	3,250	- 10.1
Bamboo			
Mature	12,101	21,557	+ 78.1
Immature	17,467	14,113	- 19.2
Total	29,568	35,670	+ 20.6

* See Appendix 1.

Table 3 : CHANGES IN NUMBER OF REGENERATION TREES,
BIG TREES AND BAMBOO ; NATIONAL.

Type	1980 - 81	1984	Difference (%)
Regeneration trees			
0-10 cm	82,304	55,977	- 32.0
10-20 cm	35,663	25,244	- 29.2
Total	117,967	81,221	- 31.1
Big trees			
≥ 20 cm	18,408	17,238	- 6.4
Bamboo			
Mature	82,765	174,202	+110.5
Immature	210,309	153,980	- 26.8
Total	293,074	328,182	+ 12.0

5. CONCLUSIONS

The situation in general, in the country as a whole, and considering trees as well as bamboo is better than expected after the alarming reports about the depletion of the village forests. One should bear in mind however that the population in the villages has probably increased at about 2.5% per year over the 4 years period so that stock per capita has declined more than appears first.

5.1 REGENERATION TREES

Although the number of small diameter trees has diminished significantly (between 25 and 40 % according to the region) this decrease is not necessarily a serious case. There are still sufficient regeneration trees left to replace, in due time, the larger trees.

The decrease could be a result of the increasing lack of space on the homesteads : when more space is needed the villagers most likely will try to spare as much as possible their valuable big trees at the expense of the small trees. As a conclusion one might say that there is definitely scope here for some form of private-sector participation in (agro) forestry, based on the raising of fast growing exotic species to supply the increasing demand of small sized wood products.

5.2 BIG TREES

The decrease is much less than expected. As a matter of fact the difference (6%) is statistically not significant at the level of probability of 95%.

It is possible that there was a serious depletion during the seventies when Bangladesh was struck by several natural disasters, and that the effects of that depletion are now slowly being overcome. It is not unrealistic to imagine that the stock of big trees is actually improving.

It shows clearly one reassuring fact : the Bangladeshi villager is a forestry conservative and tree-minded person. As this is a rare good quality these days it deserves to be mentioned.

5.3 BAMBOO

As can be seen from the five summary tables showing the regional and national result, the increment in bamboo culms during the last 3½ years has reached nearly unbelievable levels, even more so if one takes into account the fact that most of the recounting was done before the appearance of the new culms, i.e. during the period of the year when the number of bamboo culms is at its lowest. The counting during the 1980-81 inventory was done after the new culms had reached "countable" height. This explains the negative figures for the 1984 immature bamboo counts, figures which, according to all estimates and guesses, should be largely positive if the counting had been done at a later stage during the year. The overall, total, figure of + 12% is therefore quite meaningless when compared to the + 110% for the mature bamboo alone.

The serious threat of bamboo blight (E.R. Boa and M.A. Rahman, 1984) seems, for the moment at least, to be restricted to the South-East region and more specifically to the Chittagong District. (See figures for village number 26, page 18). There is still time for the proper authorities to try to restrict the spread of the blight and find the cure for the affected areas.

Appendix I

LOCATION OF PILOT VILLAGES



Region	Village Number	Village Code	Village Name
North-West	1	10080206	Baje Akannapur, Malgaon, Badnohali
	2	10160306	Salki (Part)
	3	10370402	Khorda Narayanpur
	4	10490604	Khamar Narail
	5	10590704	Nandura, Mandail, Dobid
	6	10571001	Jagatpur, Ramkrishnapur, Najarpur (Part)
	7	11001103	Langalmaria, Digharia (Part)
South-West	8	31150102	Sahala (Part)
	9	31270405	Rogunathpur (Part)
	10	32180801	Chilar Kandi, Narayanpur
	11	31320301	Manikdighi, Mothuranagar (Part)
	12	31900603	Chakman (Part)
	13	41510103	Chalta Chata
	14	41760204	Karkhana (Part)
North-East	15	22830601	Baradubi (Part), Dohalia (Part)
	16	63260304	Rangaloti
	17	22860705	Madhonagar, Kakra
	18	63060102	Ikurdia (Part)
	19	22730403	Bhushandi
	20	63530503	Shuhata, Bhelanagar (North)
	21	22380108	Koatail
	22	22559301	Lambadardi, Jatrabari Joar, Mayapur, Bara Baraikhail
South-East	23	53630104	Kazkamata, Deorpal
	24	53660205	Pathalia, Kallandi (Part)
	25	52730301	Charpagla (Part)
	26	53960501	Amtali (Part)

Appendix 2LIST OF PROJECT DOCUMENTATION ON ORIGINAL
ENUMERATIONField Document No. 1 - Data Processing Procedures

Contains information on field sheet preparation, routines to transfer data from field sheet to suitable computer media and development of an edit programme to ensure correctness of data on the computer input media.

Field Document No. 2 - Inventory Manuals

Details and defines the inventory work to be undertaken including area measurements and volume estimation.

Field Document No. 3 - Tariff on Village Trees and Bamboos

A detailed study from field data collected on development of tree volume tables, bark volume considerations and bamboo weight tables.

Field Document No. 4 - Final Data Processing

Development of computer programmes and data processing of inventory results.

Field Document No. 5 - Inventory Results

Includes all pertinent results of the inventory in consolidated form.

Consultant's Report - Sample Design and Statistical Analysis Considerations

Outline of the sampling design and list of samples selected. Details formulae to be used for error estimation.

Contractor's Report - Special Studies of Selected Industries

Covers production details and raw materials used by a number of industries drawing their raw material from village forest areas.

Terminal Report - Project Findings and RecommendationsCoding Manual

Details of identification used in the inventory.

Maps showing location of samples measured.



A village homestead



Many of the trees in the villages are not what one would qualify as grade 1, 2 or even 3 trees but, whatever their form, they represent a considerable income for the Bangladeshi villager and a more than important percentage of the forest resources of the country.