

The Monitoring Wing

I. General Procedure and methodology

- It monitors the performance of plantations that are 1st year, 3rd yr. and 5th yr. old respectively and a **State level Report is published**
- **Area, survival % and height** are recorded from random samples from each plantation at a sampling intensity :7.5% for 1st year and 5% for the 3rd& 5th year.
- A weighted average/ weighted performance is later calculated after adding other associated parameters.
- Now this wing has taken up monitoring of 9/10th year plantation in the current year.
- Calendar of works in monitoring: April – Sept: Analysis and cross checking of data

Oct- Feb : Field recording of data



Monitoring in Sunderbans



Monitoring in Hills



Monitoring Grasslands



Monitoring young plantations

- On an average, 15000 ha plantations in SW Bengal and about 5000 ha in North Bengal are monitored under State Plan scheme
- Two meetings are organized after tabulation of data– at Kolkata for South Bengal and at Siliguri (for NB) respectively to discuss the results with DFOs and senior Officers for suggesting corrective actions.
- Monitoring is also done for JICA plantations (~4000ha in S Bengal and 1000 ha in NB) , CAMPA, NamameGange Plantations (~600 ha) etc.

- Generally, for first year, plantations, 90% survival is considered excellent; for 3rd yr, it be above 70% and above 50% in the 5th year.

II. Monitoring Scoring Parameters

Given below the parameters based on which a Plantation is evaluated: Ten parameters have been considered. that are classified into three broad categories

1. Conformity Parameters (with four subdivisions)
2. Execution Parameters (with four subdivisions)
3. Performance Parameters (with two subdivisions)

Scoring Index assigned to first year plantation

Broad category	Detail of parameters	Score
Conformity to the existing rules, provisions and guidelines.	Legal status of the land.	3
	Source of seed and status of nursery.	3
	Maintenance of plantation journal along with regeneration map.	3
	Planting pattern.	3
Execution of Plantation works in the field.	Site quality & choice of species.	5
	Mechanism to protect plantation.	5
	Timely completion of prescribed plantation activities.	5
	Inspection intensity by supervising officers.	5
Performance of the plantation.	Average survival percentage	51
	General health of plantation (Height)	17
Total		100




Scoring Index assigned to 3rd year Plantation

Sl. No.	Detail of parameters.	Score
1	Maintenance of plantation journal along with regeneration map	5
2	Mechanism to protect plantation	5
3	Infilling with big size seedling	10
4	Timely completion of prescribed plantation activity	5
5	Inspection intensity by supervising officers	5
6	Average Survival Percentage	51
7	General health of the seedling (Height)	19
Total		100

Scoring Index Assigned to 5th year plantation

Sl. No.	Detail of parameters.	Score
1	Maintenance of plantation journal along with regeneration map	3
2	Mechanism to protect plantation	5
3	Inspection intensity by supervising officers	5
4	Average Survival Percentage	56
5	General health of the seedling (Height)	21
6	Average GBH of seedling	10
Total		100

Colour Codes are given for visual assessment

Grade	Score (1 st)	Score (3 rd)	Score (5 th)	Colour code
Excellent	>85	>75	>60	
Very Good	>70– 85	>60 – 75	>44 – 60	
Good	>45 – 70	>45 – 60	>29 – 44	
Average	>30 – 45	>30 – 45	>15 – 29	
Poor	<=30	<=30	<=15	

Since comparing height posed problems between areas of varying Site Quality (Low Site Quality areas would have less height despite best efforts) , the concept of Coefficient of Variation has been introduced which indicates the relative distance from the mean height. It replaced absolute values of height on a State level or between plantations. It has got the advantage of comparing the plantations on a State level or circle level irrespective of the site quality.

1st Year		3rd Year		5th Year (except CMM*)				5th Year CMM	
CV for height	Score	CV* for height	Score	CV for height	Score	CV for CG	Score	CV for height	Score
0-10	17	0 -15	19	0-15	21	0-10	10	3-15	31
10-20	14	15-30	16	15-30	17	10-20	9	15-25	25
20-30	11	30-45	13	30-50	12	20-30	7	25-35	17
30-40	8	45-60	10	50-70	9	30-40	5	35-50	10
40-50	5	60-80	6	70-90	5	40-50	3	50-70	5
Above50	2	>80	2	>90	2	>50	1	>70	2

***CV is Coefficient of Variationie. Standard deviation x 100/ Mean; CMM is Mangrove plantations**