



PROJECT

REHABILITATION AND DEVELOPMENT OF MANGROVE FOREST
ECOSYSTEM IN THAI BINH PROVINCE

MONITORING AND EVALUATION PLAN OF SILVICULTURAL ACTIVITIES



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INTRODUCTION

Monitoring and evaluation are important managerial methods to help project owner to find out information about the activities now and in the past. This information will be served for adjustment, orientation and planning of the project activities.

The general purpose of the monitoring and evaluation plan is to review and evaluate the results of the project, identify the shortcomings, offer solutions, repair,... from that can manage the outputs of the project in a more efficient way.

In the scope of contract which is signed between the Research Institute for Forest Ecology and Environment and national Project Management Board of the project Rehabilitation and Development of mangrove forest ecosystems in Thai Binh Province, the consultant develop monitoring and evaluation plan which focuses mainly on the monitoring and evaluation of the project's progress and quality of professional activities, include:

- New planting of mangrove forest.
- Supplementary planting of mangrove forest.
- Mangrove forest protection.

In monitoring and evaluation process, if detect any shortcoming or insufficient; the monitoring and evaluation unit reports to the Project Owner to consider and decide related problems.

PART I: MONITORING METHOD, FRAMEWORK AND INDICATOR

1.1. Monitoring and evaluation bases

- Project document entitled "Rehabilitation and Development of mangrove forest ecosystems in Thai Binh Province" of the Ministry of Agriculture and Rural Development developed in September 2015;
- Contract No. 02/BQLDA-HĐ signed on 31/5/2016 between PMB of Rehabilitation and Development of mangrove forest ecosystems in Thai Binh Province belonging to the Vietnam Administration of Forestry and the Research Institute for Forest Ecology and Environment;
- Circular No. 23/2006/TT-BNNPTNT dated 30/06/2016 of Ministry of Agriculture and Rural Development on guiding some management-content of silvicultural work;
- Decision No. 452/QĐ-TCLN-KH&HTQT dated October 21st, 2016 of Vietnam Administration of Forestry on the approval of status map and design map of the project entitled "Rehabilitation and Development of mangrove forest ecosystems in Thai Binh Province";
- Decision No. 512/QĐ-TCLN-KH&HTQT dated November 30th, 2016 of Vietnam Administration of Forestry on the issuance of technical documentation for the project entitled "Rehabilitation and Development of mangrove forest ecosystems in Thai Binh Province".

1.2. Monitoring and evaluation method

Monitoring method: monitor frequently and update periodically the information relate to the implementation of silvicultural activities.

Evaluation method: evaluate systematically periodically the silvicultural activities of the project. Focus mainly on the progress and quality of the activities (evaluates the preparation, the implementation in the field and annually results of planting area, species, density and quality of plantation forest/protection forest).

Details of methods for monitoring and evaluating the categories of the project are described in Section 1.4.

1.3. Monitoring and evaluation organization/individual

According to the project document, the Research Institute for Forest Ecology and Environment is the support organization for central Project Management Board to monitor the progress and quality of project activities (section 1.6, part VII and Annex 1 of the project document). Therefore, the Research Institute for Forest Ecology and Environment will support /coordinate with the central Project Management Board for periodic monitoring and evaluation; Provincial Project Management Board is responsible for regular monitoring of silvicultural activities. Specific tasks of the organizations in the monitoring and evaluation of silvicultural categories of project specified in Section 1.4.

1.4. Indicator and framework of monitoring and evaluation

No.	Monitoring/ evaluation content	Monitoring, evaluation indicator	Monitoring and evaluation method	Organizations/ individuals	Report frequency	Report method
New planting forest						
1	Planting preparation	- Expected location, area for planting compared to the design area of the plan year.	<ul style="list-style-type: none"> - Localize the field area by GPS, compare to the design map. - Observation 	<p>The Consultant coordinates with the PMB staff.</p> <p>The Consultant with the evaluation for activity 1.</p>	01 time at the end of the evaluation for activity 1.	The Consultant reports directly by document or email to the Central PMB.

No.	Monitoring/ evaluation content	Monitoring and evaluation indicator	Organizations/ individuals	Report frequency	Report method
2	Seedling preparation	<ul style="list-style-type: none"> - Gather seedlings to land before planting for 5-7 days. - Types of seedling - Soil pot's size, height, diameter, quality of seedlings. 	<ul style="list-style-type: none"> - Observation, interview. - Observe to identify species. - Measure randomly at least 30 seedlings, repeat at least 3 times; root collar diameter measured with Palme caliper, accurate to millimeters; height measured by tape, accurate to centimeter. <p>Calculate some characteristic of root collar diameter and height such as the mean value, max value, min value, coefficient of variation.</p> <p>The number of seedlings qualified according to forest planting plan of the year.</p>	<p>01 time at the end of the evaluation for activity 2.</p>	<p>The Consultant coordinates with the PMB staff.</p> <p>The Consultant reports directly by document or email to the Central PMB.</p>

No.	Monitoring/ evaluation content	Monitoring, evaluation indicator	Monitoring and evaluation method	Organizations/ individuals	Report frequency	Report method
3	Tendance and forest protection in the first year	<ul style="list-style-type: none"> * Planting phase: <ul style="list-style-type: none"> - Digging holes, planting trees, covering holes, piling as designed; Density, interval space. - Actual planting area, location compare to design * After-planting phase: <ul style="list-style-type: none"> - The time of replanting, re-planting rate compared with the main planting, seedlings standards for replanting. - Removing garbage, re-piling, re-tying ropes, removing shipworms... * First year ending phase: <ul style="list-style-type: none"> - Survival rate, seedlings evenly distributed in the area. - Identify planting area and actual area to ensure survival rate compare to the design. 	<ul style="list-style-type: none"> - Regular monitoring based on the contractor's plan. - Setting up 100m² standard plots randomly (total area of the standard plots occupies about 5-10% planting area). - The Consultant coordinates with the PMB staff. 	<ul style="list-style-type: none"> - Provincial PMB staffs. - Provincial PMB staffs. - The Consultant coordinates with the PMB and staff. 	<ul style="list-style-type: none"> - 1 time after planting. - 1 time after the evaluation for planting phase after 2 months. - 1 time in December annually. 	<ul style="list-style-type: none"> - Provincial PMB reports directly by document or email to the PMB and cc to the Consultant. - Provincial PMB reports directly by document or email to the PMB and cc to the Consultant. - The Consultant reports directly by document or email to the Central PMB.

No.	Moni-toring/ evaluation content	Monitoring, evaluation indicator	Monitoring and evaluation method	Organizations/ individuals	Report frequency	Report method
4	Tendance in the second and the third year	<ul style="list-style-type: none"> * Replanting, tendance: <ul style="list-style-type: none"> - The time of replanting, replanting rate compared with the main planting, seedlings standards for replanting. - Removing garbage, re-piling, re-tying ropes, removing shipworms... * Ending phase: <ul style="list-style-type: none"> - Survival rate, seedlings evenly distributed in the area, clean... - Identify planting area and actual area to ensure survival rate and well protection compare to the design. 	<ul style="list-style-type: none"> - Regular monitoring based on the contractor's plan. - Taking sample for field inspection (5-10%). Counting the number of living tree; observing the distribution of tree, checking for trash, water-fern, shipworms stick on trees in 100 m² standard plots. 	<ul style="list-style-type: none"> - Provincial PMB staffs. - The consultant coordinates with the PMB staff. 	<ul style="list-style-type: none"> - 1 time after the evaluation for planting phase after 2 months. - 1 time in December annually. 	<ul style="list-style-type: none"> - Provincial PMB reports directly by document or email to the PMB and consultant. - The Consultant reports directly by document or email to the Central PMB.

No.	Monitoring/ evaluation content	Monitoring, evaluation indicator	Monitoring and evalua- tion method	Organizations/ individuals	Report frequency	Report method
II		Supplementary planting				
1	Field preparation	<ul style="list-style-type: none"> - Expected location, field area for planting compared to the design area of the plan year; Expected area, location for supplementary planting (in clusters, rows, bands...) - Density, species, current forest growth. - Vegetation clearing (if any) and piling to identify location, planting boundary 	<ul style="list-style-type: none"> - Localize field area by GPS, compare to the design map. - Observation, representative measurement - Observation 	<p>The Consultant coordinates with the PMB staff.</p> <p>01 time before planting about 5-10 days.</p>		Report directly to the PMB.

No.	Monitoring/ evaluation content	Monitoring, evaluation indicator	Monitoring and evaluation method	Organizations/ individuals	Report frequency	Report method
2	Seedling preparation	<ul style="list-style-type: none"> -Gather seedlings to land before planting for 5-7 days. - Types of seedling - Soil pot's size, height, diameter, quality of seedlings. -The number of seedlings qualified according to forest planting plan of the year. 	<ul style="list-style-type: none"> - Observation, interview. - Observe to identify species. - Measure randomly at least 30 seedlings, repeat at least 3 times; root collar diameter measured with Palme caliper, accurate to millimeters; height measured by tape, accurate to centimeter. Calculate some characteristic of root collar diameter and height such as the mean value, max value, min value, coefficient of variation. 	<p>The Consultant coordinates with the PMB staff.</p>	01 time at the end of the evaluation for activity 2.	<p>The Consultant reports directly by document or email to the Central PMB.</p>

No.	Monitoring/ evaluation content	Monitoring, evaluation indicator	Monitoring and evaluation method	Organizations/ individuals	Report frequency	Report method
3	Tendance and forest protection trees, covering holes, piling space. in the first year	<ul style="list-style-type: none"> * Planting phase: <ul style="list-style-type: none"> - Digging holes, planting trees, covering holes, piling as designed; Density, interval space. - Actual planting area, location compare to design * After-planting phase: <ul style="list-style-type: none"> - The time of replanting, re-planting rate compared with the main planting, seedlings standards for replanting. - Removing garbage, re-piling, re-tying ropes, removing shipworms... * First year ending phase: <ul style="list-style-type: none"> - Survival rate, seedlings evenly distributed in the area. - Identify planting area and actual area to ensure survival rate compare to the design. 	<ul style="list-style-type: none"> - Observing the implementation of planting techniques. - Identify the landmarks in the field by GPS. - Regular monitoring based on the contractor's plan. - Setting up 500m² standard plots randomly (total area of the standard plots occupies about 5-10% planting area). Counting the number of living trees, observing the distribution of living trees in the standard plots. - Localize the field area by GPS, compare to the design map. 	<ul style="list-style-type: none"> - Provincial PMB staffs. - Provincial PMB staffs. - The consultant coordinates with the PMB staff. 	<ul style="list-style-type: none"> - 1 time after planting. - 1 time after the evaluation for planting phase after 2 months. - 1 time in December annually. 	<ul style="list-style-type: none"> - Provincial PMB reports directly by document or email to the PMB and cc to the Consultant. - Provincial PMB reports directly by document or email to the PMB and cc to the Consultant. - The Consultant reports directly by document or email to the Central PMB.

No.	Monitoring/ evaluation content	Monitoring, evaluation indicator	Monitoring and evaluation method	Organizations/ individuals	Report frequency	Report method
4	Tendance in the second and the third year	<ul style="list-style-type: none"> * Replanting, ten-dance: <ul style="list-style-type: none"> - The time of replant-ing, replanting rate compared with the main planting, seed-lings standards for re-planting. - Removing garbage, re-piling, re-tying ropes, removing ship-worms... 	<ul style="list-style-type: none"> - Regular monitor-ing based on the contractor's plan. - Taking sample for field inspec-tion (5-10%). - Counting the number of living tree; observing the distribution of tree, checking for trash, water-fern, shipworms stick on trees in 500 m² standard plots. 	<ul style="list-style-type: none"> - Provincial PMB staffs. - The Consul-tant coordi-nates with the PMB staff. 	<p>Every month after mon-itoring of replanting/ tending</p> <p>- 1 time in December annually.</p>	<p>- Provincial PMB reports directly by document or email to the PMB and cc to the Consultant.</p> <p>- Report di-rectly in by document or email to the Central PMB and cc to the Con-sultant.</p>

No.	Moni-toring/ evaluation content	Monitoring, evaluation indicator	Monitoring and evaluation method	Organizations/ individuals	Report frequency	Report method
Forest protection category						
1	800ha forest protection	<ul style="list-style-type: none"> - Identifying forest area stipulated in the contract, compare with actual area. - Number of case/forest area is cleared/encroached... 	<ul style="list-style-type: none"> - Comparing the position, the area between the design map and forest status map. - Interview commune staff and local people on forest protection result. - Survey randomly 5-10% assigned forest area for protection. 	November and December annually	Report directly to the PMB	

PART II: PRODUCTS

2.1. Monitoring and evaluation reports

- Monitoring and evaluation reports of field work on the monitoring, evaluation content are signed between the representative of the monitoring and evaluation organization, the Central Project Management Board with Provincial Project Management Board or between Provincial Project Management Board with the organization/ individual carries out silvicultural activities (template in Appendix 1-5).

2.2. Monitoring and evaluation reports

- Brief report after each time of monitoring and evaluation for each activity in section 1.4 (template for reference can be found in Appendix 6).
- Annual report on monitoring and evaluation of the project: The report is developed by the consultant on December annually on the basis of reports and reports of monitoring and evaluation for each activity. Expected report proposal can be found in Appendix 6.

APPENDIX

Appendix 1. Report on monitoring of field preparation activity

SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom - Happiness

REPORT ON FIELD MONITORING AND EVALUATION
Activity: Field preparation for planting

Today at..... (Time); / / 20.... (Date); At..... (Place)

Parties consist of:

I. Consultant:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

II. Central PMB:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

III. Provincial PMB:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

Has monitored, evaluated the filed preparation activity in new planting/supplementary planting.

Location:

1. Monitoring, evaluation result

Indicator	Planned	Implemented	Difficulty/ problem (if any)
Time			
Location, forest planting area			
Clearing vegetation			

2. Comment of Consultant

3. Comment of Provincial PMB

4. Comment of Central PMB

The report is made into 03 copies with equally value, the consultant keeps 01 copy, the Central PMB keeps 01 copy and the Provincial PMB keeps 01 copy

FOR THE PROVINCIAL

PMB

(Signature, full name)

FOR THE CENTRAL

PMB

(Signature, full name)

FOR THE

CONSULTANT

(Signature, full name)

Appendix 2. Report on monitoring of seedling preparation activity

SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom - Happiness

REPORT ON FIELD MONITORING AND EVALUATION Activity: Seedling preparation for planting

Today at..... (Time); / / 20.... (Date); At..... (Place)

Parties consist of:

I. Consultant:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

II. Central PMB:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

II. Provincial PMB:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

Has monitored, evaluated the seedling preparation activity in new planting/
supplementary planting.

Location:

1. Monitoring and evaluation result

Indicator	Planned	Imple- mented	Difficulty/ problem (if any)
Gathering time:			
Types of seedling:			
Soil pot's size:			
Seedling height:			
Seedling diameter:			
Seedling quality:			
Number of qualified seedling:			

2. Comment of Consultant

3. Comment of Provincial PMB

4. Comment of Central PMB

The report is made into 03 copies with equally value, the consultant keeps 01 copy, the Central PMB keeps 01 copy and the Provincial PMB keeps 01 copy.

FOR THE PROVINCIAL

PMB

(Signature, full name)

FOR THE CENTRAL

PMB

(Signature, full name)

FOR THE

CONSULTANT

(Signature, full name)

Appendix 3. Report on monitoring of planting implementation activity

SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom - Happiness

REPORT ON FIELD MONITORING AND EVALUATION

Activity: Seedling preparation for planting

Today at..... (Time); ... /.... /20.... (Date); At..... (Place)

Parties consist of:

I. Provincial PMB:

1. Mr/Ms: Position:

2. Mr/Ms: Position:

II. Planting implementation organization/individual:

1. Mr/Ms: Position:

2. Mr/Ms: Position:

Has monitored, evaluated the planting implementation activity in new planting/supplementary planting.

Location:

1. Monitoring and evaluation result

Indicator	Planned	Imple- mented	Difficulty/ problem (if any)
Hole digging:			
Planting, hole covering:			
Pilling:			
Planting density:			
Interval space:			
Planting location:			
Planting area:			

2. Comment of Provincial PMB

3. Comment of implementation organization/individual

The report is made into 04 copies with equally value, the Provincial PMB keeps 01 copy, the implementation organization/individual keeps 01 copy, the consultant keeps 01 copy, the Central PMB keeps 01 copy.

FOR THE IMPLEMENTATION
ORGANIZATION/INDIVIDUAL

(Signature, full name)

FOR THE PROVINCIAL PMB

(Signature, full name)

Appendix 4. Report on monitoring of replanting, forest protection activity

SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom - Happiness

REPORT ON FIELD MONITORING AND EVALUATION Activity: Seedling preparation for planting

Today at..... (Time); / / 20.... (Date); At..... (Place)

Parties consist of:

I. Provincial PMB:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

II. Planting implementation organization/individual:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

Has monitored, evaluated the replanting, forest protection activity inyear in new planting/supplementary planting.

Location:

1. Monitoring and evaluation result

Indicator	Planned	Implemented	Difficulty/ problem (if any)
Replanting time: Replanting rate: Seedling standard for replanting:			
Time/technique for trash picking: Time/technique for re-piling, re-tying: Time/technique for shipworm removing:			

2. Comment of Provincial PMB

3. Comment of implementation organization/individual

The report is made into 04 copies with equally value, the Provincial PMB keeps 01 copy, the implementation organization/individual keeps 01 copy, the consultant keeps 01 copy, and the Central PMB keeps 01 copy.

FOR THE IMPLEMENTATION
ORGANIZATION/INDIVIDUAL

(Signature, full name)

FOR THE PROVINCIAL PMB

(Signature, full name)

Appendix 5. Report on evaluation for planting activities at the end of the year

SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom - Happiness

REPORT ON FIELD MONITORING AND EVALUATION Activity: Seedling preparation for planting

Today at..... (Time); / / 20.... (Date); At..... (Place)

Parties consist of:

I. Consultant:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

II. Central PMB:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

III. Provincial PMB:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

Has monitored, evaluated the planting activity in the year in new planting/supplementary planting.

Location:

1. Monitoring and evaluation result

Indicator	Planned	Imple- mented	Difficulty/ problem (if any)
Survival rate:			
Distribution of seedlings in planting area:			
Planting area:			
Ensuring rate area:			

2. Comment of Consultant

3. Comment of Provincial PMB

4. Comment of Central PMB

The report is made into 03 copies with equally value, the consultant keeps 01 copy, the Central PMB keeps 01 copy and the Provincial PMB keeps 01 copy.

FOR THE PROVINCIAL

PMB

(Signature, full name)

FOR THE CENTRAL

PMB

(Signature, full name)

FOR THE

CONSULTANT

(Signature, full name)

Appendix 6. Report on evaluation of forest protection activity

SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom - Happiness

REPORT ON FIELD MONITORING AND EVALUATION Activity: Seedling preparation for planting

Today at..... (Time); /.... / 20.... (Date); At..... (Place)

Parties consist of:

I. Consultant:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

II. Central PMB:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

III. Provincial PMB:

1. Mr/Ms: Position:
2. Mr/Ms: Position:

Has monitored, evaluated the forest protectionactivity in the year

Location:

1. Monitoring and evaluation result

Indicator	Planned	Imple- mented	Difficulty/ problem (if any)
Area of forest protection:			
Number forest clearing/ encroaching cases:			
Forest area is cleared/ encroached:			

2. Comment of Consultant

3. Comment of Provincial PMB

4. Comment of Central PMB

The report is made into 03 copies with equally value, the consultant keeps 01 copy, the Central PMB keeps 01 copy and the Provincial PMB keeps 01 copy.

FOR THE PROVINCIAL

PMB

(Signature, full name)

FOR THE CENTRAL

PMB

(Signature, full name)

FOR THE

CONSULTANT

(Signature, full name)

Appendix 7. Outline monitoring report evaluation

MONITORING AND EVALUATION REPORT ON IMPLEMENTATION
OF SILVICULTURAL ACTIVITIES

**Project: “Rehabilitation and Development of Mangrove Forest
Ecosystem in Thai Binh Province”**

I. IMPLEMENTATION BASIS OF MONITORING AND EVALUATION

1. Legal basis
2. Standard, regulation and applicable guideline

II. OBJECTIVE, METHOD OF MONITORING AND EVALUATION

1. Objective
2. Method

III. MONITORING AND EVALUATION RESULT

1. Progress
2. Amount
3. Quality

IV. CONCLUSION AND RECOMMENDATION

APPENDIX

FOR THE MONITORING AND
EVALUATION ORGANIZATION



**DỰ ÁN
PHỤC HỒI VÀ PHÁT TRIỂN BỀN VỮNG
HỆ SINH THÁI RỪNG NGẬP MẶN Ở TỈNH THÁI BÌNH**

BAN QUẢN LÝ DỰ ÁN TRUNG ƯƠNG

Phòng 211 nhà A2, số 21A Ngọc Hà,
Ba Đình, Hà Nội

BAN QUẢN LÝ DỰ ÁN THÁI BÌNH

Số 1 Lê Lợi, thành phố Thái Bình

