

**PEOPLE'S COMMITTEE OF BINH THUAN PROVINCE
BINH THUAN FORESTRY LIMITED COMPANY**

**SUMMARY OF REPORT
ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (EIA/ SIA)
IN BINH THUAN FORESTRY ONE MEMBER CO., LTD**

Binh Thuan, July 2016

**TECHNICAL ADVISORY
RESEACH INSTITUTE FOR SUSTAINABLE FOREST MANAGEMENT
AND FOREST CERTIFICATION (SFMI)**

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LIST OF ABBREVIATIONS

Abbreviation	Meaning
CO., LTD	Limited Company
CPC	Comune People' Committee
CIT	Corporate Income Tax
DPC	District People's Committee
DARD	Department of Agriculture and Rural Development
EIA	Environmental Impact Assessment
FSC	Forest Stewardship Council
FSC	Forest Certification
FPD	Forestry Protection Department
HCVF	High conservation value forest
ILO	International Labour Organization
LURC	Certificate of land use rights
MDF	Medium Density Fiberboard
PROFOREST	Programe for Forest
RIL	Reduced Impact Logging
UN-REDD	United Nations for Reducing Emission from Deforestation and Forest Degradation
REDD +	Reducing Emission from Deforestation and Forest Degradation
SIA	Social Impact Assessment
SLIMF	Small and Low Intensity Managed Forests
SFM	Sustainable forest management
SFMI	Reseach Institute For Sustainable Forest Management & Forest Certification
SFE	State-owned Forestry Enterprise

INTRODUCTION

Binh Thuan Forestry Limited Company (Abbreviating in this report to as Binh Thuan Company) was established by Decision No. 3616/ QD-UBND dated December 16, 2015 of the People's Committee of Binh Thuan Province on a consolidated basis 2 Companies, Binh Thuan Forestry Limited Company (Be established since 2010) and Ham Tan Forestry Limited Company (established since 2010).

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Total area assigned to be managed by Binh Thuan Forestry One Member Limited Company is **17,745.22** ha, in which 7,634.09 ha is in Ham Thuan Nam District, 1,659.48 ha is in Ham Thuan Bac District, 1,508.38 ha is in Bac Binh District, 6,940.77 ha is in Ham Tan District and La Gi Town, 2.5 ha is in Phan Thiet City (Non-agricultural land).

In recent years, the company has successfully completed the task of producing business and the forestry service, bussiness profitable, successful implementation of obligations to the state, have accountability to the local community, life of officers and employees are enhanced, contributing to local economic development in the local province.

So far the production activities, trading in the Binh Thuan Forest Company has yet to cause environmental incidents or environmental hazards, especially on soil and water, yield and forest productivity still ensuring in 6 - 7 cycles before.

The Company needs to implement is the Environmental and Social Impact Assessment (EIA & SIA) by the company's activities have caused in recent years. EIA/ SIA is forecasting of impacts that have scientific basis (especially disadvantage impacts) when implement the works or proposed plans. The tasks of the environmental impact assessment and social impact (EIA & SIA) in the Binh Thuan Forest Company in currently is that we have to pointed out the impacts of qualitative and quantitative due the production and business activities caused to the natural environment and social environment and propose viable solutions effectively according to FSC – PROFOREST standards. Therefore, with the technical consultancy of SFMI, Binh Thuan Company has implemented EIA & SIA and results are shown in this report.

Chapter I. BRIEF DESCRIPTION OF UNIT ARE ASSESSED

1.1. Pursuant to legislation and technical evaluation of the implementation of environmental and social impacts

The laws, regulations and standards as a basis for the implementation of environmental and social impact assessment.

1.2. Organizations to evaluate EIA & SIA

Consulting unit implemented assesment of environmental and social impact is the Reseach Institute For Sustainable Forest Management & Forest Certification (SFMI) and staffs of Binh Thuan company. Composition of expert groups to evaluate consists of 10 people including 7 staffs of the Binh Thuan Forest Company and three staffs of the consultant unit SFMI.

1.3. The methods applied in the process of implement EIA & SIA

1.3.1. Method of information collection

Expert group of assessment conducted collecting primary and secondary informations and serviced for environmental and social impact assessment.

a. Methods of collecting secondary informations

Reach and collecting secondary informations including datas, documents at the company's office, such as sustainable forest management plan of the Company (the draft is not approved yet); The report is committed to protecting the environment the company was established, the economy contracts, annual reports, design documents plantation, harvesting, labor contracts, the records relating to facilities building and infrastructure of the Company.

b. Methods of collecting primary informations

i) Consultation method

Consulting with the company's staff and other stakeholders at provincial, district, commune and village levels in the operation field of the Company.

ii) Methods of collecting information through observations at the scene

Observing the scene of manufacturing operations in 02 wood processing factories, nurseries, some areas of natural forest, plantation area Acacia, Eucalyptus, Rubber, some locations have agroforestry model combined, the scene after harvesting, reforestation area along streams and area of silvicultural road construction ...

1.3.2. Assessment methods

Report of Environmental and Social Impact assessment is built on the basis of combined application of the following methods: i) Statistical methods; ii) Rapid assessment method; iii) Expert method; and iv) FSC - Proforest method.

On the basis of the principles (standards), FSC criteria related to environmental issues and social, determine the overall impact of forest management activities impact to the natural and social environment. Conducting selection of activities to be assessed as harvesting, afforestation, road building, construction, transport and use of chemicals,

waste, litter, forest firesand apply clever solution: Mitigation, references in around, documentations supervision before, the inhabitants, administration, compared with the permitted level, regional adaptation ...

1.4. The content of environmental and social impact assessment at the Binh Thuan Forestry Company

1.4.1. Environmental impact

Environmental impact assessment is the process of reviewing all production activities at the company including operations have done, are doing and will do, assessing the positive impacts, the negative of all forest management activities on soil, water, air, land cover, vegetation resource and values of biodiversity. Currently, there are a lot of production and business activities taking place at the company which includes activities to influence positively and negatively on the environment; however, this review focuses only raised the negative impacts

Needed activities need to assess the environmental impact

- Nursery activities
- Planting and tending activities
- Harvesting activities
- Processing activities at 02 wood processing factories
- Infrastructure and transport activities as planned by 2017 - 2022

1.4.2. Social impacts

Social impacts are understood that is impacts to be related to human factors and social, in which social impact assessment is the process of evaluating the impacts positively or negatively on the objects as the officers and workers are working directly in the company as well as the object of people, communities, related agencies indirectly influenced by the manufacturing activities have been being carried out at the company.

Content to focus on

- Positive effects
- Negative impacts

Chapter 2. ENVIRONMENTAL AND SOCIAL IMPACTS ASSESSMENT

2.1. ENVIRONMENTAL IMPACTS

2.1.1. Impacts in nurseries stage

At present, the company is using 02 nurseries in two the enterprises are Ham Thuan Nam and Ham Tan, which mainly supply Eucalyptus and Acacia hybrid seed cuttings. The average capacity of nursery 2,7 million trees/ year, in Ham Thuan Nam nursery which is 1,5 million plants / year and Tan An nursery - Ham Tan district of 1,2 million seedlings / year.

a/ Assessment of technical process of sowing seedlings

- Origin of mother trees

The mother trees are being used in two nurseries are still in the stage qualified providing cuttings and two nurseries are both storing the records to prove and monitoring the origin of seedlings.

- Soil prepare for pots

Generally the process of potting preparation , potting components at 2 nurseries relatively ensured. However, percentage (%) of potting components is not have a common rules in amount and workers themselves only estimates.

- Source of water for irrigation

Ham Thuan Nam nursery: Using water spray system automatically, water filtration systems and water source mainly from rivers and reservoirs adjacent to the nursery, the test results showed that the water source is abundant and quality assurance. Tan An nursery: Using water spray system automatically, and water filtration systems and water resources primarily from the Dinh River. But in the dry season, there is still a shortage of water and irrigation water quality has not been tested.

b/ Fertilizers, chemicals are used

Both nurseries have been using chemicals and pesticides, the use of probiotics have not been interested at two nurseries. The pesticides used include: Drugs COC85 disease control, VIBENC and BOOCDO1%.

Fertilizers and pesticides are used according the plan in next time

No	Name	Purpose using	Ingredient
1	Anvil	Fungicides	Hexaconazole
2	Tilsuper	Fungicides	Bropiconazole
3	Vino79	Fertilizers leaf	Ca, bo, mg.
4	Hpc 79R	Fertilizers leaf	N,P205; K20, NAA

These above pesticides are in the list of pesticides permitted for use, However, the use of the drug should follow the instructions; Avoiding arbitrary or prolonged use will be a risk to the environment.

c/ Transportation

All the transport used in nurseries are motorized vehicles, including tractors, conversion vehicle, cartage, trucks but the circulation of the vehicles out on at nursery still ensuring the level of safety for road systems and the allowable load, fuel leaks (petrol, oil) have happened however insignificant.

d/ The warehouse system

Currently 2 nurseries have had warehouse system however arranging materials seedlings, fertilizers, plant protection drugs, tools ... lacking the tidy, lack of planning.

e/ System of waste collecting and treatment

At present the company has signed contracts with Phuong Nam environmental Company to collection and treatment of wastes for the entire 4 enterprises (Ham Thuan Nam, Ham Thuan Bac, Bac Binh, Ham Tan), 2 wood processing enterprises (Duc Long, Phan Thiet) and 2 nurseries (Ham Thuan Nam, Tan An). The waste will be gather prior the unit functions conduct carry away and processed but the survey results show that a lot of solid wastes includes household waste and the polymer bag still on two nurseries

f/ Training

Workers were only be transmit about the technical process through the guidance of technical staffs that workers have not been attended any training courses as well as have not been provided specific documents. Workers have not been trained on how to use pesticides, as well as the regulations on safety and labor protection.

2.1.2. Stage of caring, management and plantations protection

a/ Training

Workers who are locals and experienced in planting the forest. However, workers are only guided technical through the guidance of the staffs and they were without training as well as provide specific documents. Workers have not been trained on how to use pesticides, as well as the regulations on safety and labor protection.

b/ Cleaning, treatment of vegetation

At enterprise Ham Tan: Plow land upside down between two rows of trees by agrimotor 07 pans. At the enterprises of Ham Thuan Bac, Ham Thuan Nam and Bac Binh: Cleaning and handling vegetation by manner of plowing comprehensive and burning (band burning and burning in batches). Do not use herbicides, use the mower to cut the grass.

Thus, some time the enterprises still used a large quantities of chemicals and pesticides and applied burning methods in processing vegetation stage. Needing to be improve in the future.

c/ Planting

(i) Technique process application

The forest plantation techniques guidlines that company is applied is relatively reasonable, as evidenced by the yield and productivity still have been maintained stability throughout cycles before, but through observations at the scene there are still some problems to overcome as follows:

- Some areas planted with wrong distance between trees and rows, has led to the deviation of the specified density;
- Some planted forest areas showed high rate of 2-trunk, 3-trunk due to the influence of mother clone quality;
- Design afforestation does not ensure a safe corridor for the stream line;
- Plantations produced mainly with short cycle business, did not yet focused business to long cycle, lead to the rate of timber was not high and reduce the value of planted forests;
- Currently, the natural forest area of the management company mainly zoning for regeneration;
- It is important to note that some areas of high risk of erosion must be plant on a contour line.

(ii) Solid waste

Domestic waste by workers, pesticide bottles, especially after planting a lot of polymer bags to remain in the forest. Needing to overcome when implementing the sustainable forest management plan.

d/ Stage of plantations care

Care process is performed from the second year until the harvesting, including in the period closed canopy forest. Care techniques used mainly plowing and some time used herbicides (eg the case of enterprises Ham Tan). Needing to fix in the coming time.

e/ Stage of management and protection of forests

Techniques for fire prevention in major plantation mainly plowed road with 4 m wide from silviculture to limiting the incendiary agent from the people, between two rows of trees rake raking leaves under the ice and the whole area depends on the age of the forest planting, to control and prevent the fire from spreading to a large scale. Fire prevention dissemination was interested but has yet to come to all the objects people living near the forests

In recent years, dissemination organisation about prevent and fight fire was interested but has not been reached all to the objects people living in surrounding areas; Systems of watchtowers in fire prevention, vehicles, tools, sign boards for forest fire protection is not adequate

2.1.3. Stage of logging

The Company did not logging directly that winning bidder will stands out logging, the technique logging the fact is not yet in accordance with principles of the RIL. Technical staffs and the station only coordinate monitoring progress.

In contracts between Center for Service in property auction Binh Thuan and units harvesting bidders not have a specific technical procedures required to be performed as well as the regime of labor safety protection for workers in harvesting process, including employment regulations (Age, Objects...)

The findings at the scene after harvesting and harvesting shows that harvesting process has not complied with the provisions of low-impact logging RIL, in particular: Workers unrealized the regulations on logging and labor safety, most of the workers do not wear gloves, masks during work; height of original cutting is not yet inappopriate;

- No have sign board to notice in the area near the logging site, where people crossing; cleaning vegetations forest land after logging still used burning method; numbered of the timber yards is inappopriate;
- Area of cleared cutting is still large and area of logging also fragmented due to complex topographic, rivers and mountains divide, remaining tree branches in the marshy ravine cause environmental pollution; area of logging annual are not corresponds to area of afforestation, affecting forest management plans for sustainable; to pursue revenue should remain small forest exploitation cases reduces plantation yields; time for extraction depends on the decision of the superior as well as the documents approval of the agencies and departments involved;
- Sort of wood in the timber yard unclassified in groups;
- Vehicles and logging tools are not enough technical standards, some machines are not guaranteed, leading to oil leakage in the forest.

2.1.4. The production activities at two wood processing enterprises

Every year, the wood processing enterprises have been Department of Natural Resources and Environment conduct environmental impact assessment, evaluation and management of toxic waste. Currently, the Company has signed a contract with Phuong Nam Environment Co., Ltd for evaluation (contract signed in February 2016). Through field observations show that:

- The enterprises have had the warehouse systems for solid waste collection, had the areas for containing hazardous waste, arrangement of warehouses, shops were relatively reasonable;
- The signboards on environmental protection, the signboard about principles in labour safety, equipments and tools for the prevent and fight fire are equipped;
- Enterprises were interested in capacity building for workers through training on fire prevention, the layers of food safety and workplace safety;
- Information dissemination sessions on the work of fire protection and environmental protection in accordance with the undertakings 5S at enterprises (Screening, sort, clean, caring, willing) with the aim to professionalism and efficiency in production.

Thus, Implementation of environmental protection in two wood processing enterprises are generally fairly ensured. However, the interviews showed that some workers used fire extinguishers are not proficient yet, some concentrated areas of wood shavings and sawdust cell, leading to a high risk of fire. Some machines have been used for a long time, some are being maintenance, lack of vacum systems affect the environment

*** The findings in 02 wood processing enterprises shows**

- The solid waste including fluorescent lamps, filter materials, rags, residues of paints, coatings and varnishes, waste toner box, abrasive objects used, the waste from production and business activities include the carton, packaging, shavings, sawdust, very explosive.
- Including waste fuel oils, wood preservatives without organic halogen compounds, coatings, paints and varnishes residues, adhesives and sealants.
- Wood dust generated from sawing operation, the exhaust gases from the kiln operation wood materials, emissions arising from volatile organic solvents

from varnishes injection system for finished wood products, the emissions from the vehicles has moved out and into the enterprise.

- Source arising from the operation of the machines during the sawing of wood raw materials and finished products, the operation of the equipment wood refined.

2.1.5. The conservation of biodiversity

Currently the company has carried out assessments of biodiversity for natural forests area that company manages, on the basis of the results of the investigation of biodiversity and HCVF will have a management plan is built.

2.1.6. Activities of construction facilities, infrastructure, investment in equipment and machinery

a/ The activities at nurseries

Co. has upgraded the nursery, investment more water pump equipment, building home repair work, building fence system, pouring soil on some areas. Overall the upgrade operation, building new infrastructure on a small scale just should not greatly affect the environment, particularly the irrigation system has been interested and more complete, ensuring irrigation water for crop sowing.

b / Conversion of a number of planted forests into a long-cycle business model

The company is testing, converting some short-term plantation forests, small timber to long cycle, large timber; Selection criteria are forest areas with thinning age, good soil, but the density of trees retained after thinning is still large.

C / Construction of infrastructure

- The results show that the Company has completed all the design documents for the construction of the Company's office, the dossiers and procedures related to the construction of the head office has its own report on the Environmental impact according to the State regulations before construction.

- In addition to the construction work of the company's working offices, other infrastructure construction works are not subject to EIA. All construction activities are under EIA according to Decree No. 18/2015 / ND-CP

2.2. SOCIAL IMPACT

2.2.1. The positive impact

a. Contributions to the state budget, create jobs, raise incomes for workers and local people

The results in the table above shows that the Company consistently achieved high growth rates in revenue, primarily revenue from plantation timber harvest (over 60%). The contribution to the budget (through implementing CIT) increases from year 2011 to 2015. The income of employees and workers from 2011 to 2015 is stable. The company has resolved hundreds of jobs for local workers through the planting, tending, forest protection, exploitation and contributing to poverty reduction, preservation of social order and security at the local.

b. Contributing to capacity building for staff, workers and local people

(i) In recent years, the company has created an opportunity for staffs to participate in training courses to enhance skills and knowledge.

(ii) Every year, Company hold communication about the prevent and fight fire, raise awareness of people living around the area about forest protection and management.

c. Take care of life and mental health staffs and workers, the insurance regulations, labor safety

(i) For staff: The company has always guaranteed the policy about housing in production teams and protection stations; salaries for staffs and the regime on health insurance, social insurance, unemployment insurance and protection regimes, labor safety;

(ii) For workers: Workers at timber processing enterprises, the company apply the insurance regime similar to officials.

d. Organizing charitable activities, social welfare

Every year, the Company shall supported to the local communities such as funds for the poor, education promotion fund, construction of gratitude house. Create conditions for local people to develop production and use the infrastructure of the company.

e. The attention to these vulnerable groups are ethnic minorities

The company was particularly interested in the subjects that ethnic minorities are Cham, Gia Rai, Cham and K'ho peoples living in the zone. For objects that ethnic minorities company has to create jobs, raise incomes for people through activities as contracting to manage and protect natural forest, activities on planting, caring and forest harvesting.

f. Relations with local authorities, stakeholders and staffs of the Company

In the last time does not happen inadequacies about the internal solidarity of the workers in the company as well as the relationship between the company and local authorities and other relevant agencies.

To well implement the regulations on grassroots democracy, to build a solidarity and solidarity among the company's staffs.

g. The attention to the preservation of traditional cultural values, beliefs, customs and spiritual life of the people in the local area

For the area of the cemetery (forbidden forest) of local people interspersed with the forest area of the Company; currently, this area has been delineated on the map and has played in the field boundary

2.2.2. Negative impacts

a. Disputes, land encroachments

Status of disputes, land encroachment arising during the production and business activities as some areas of the Company, the safe corridors for agricultural land of the people, the safety corridors for stream lines were encroached; Besides, the land is recovered by the other works without prior notification plan, leading to the reduction in the land is being managed of the Company, break the plans to of land using in the

sustainable forest management plans (2017 – 2022). Although many measures have been coordinated with the local authorities, but have not been completed resolve yet.

b. Safety in labour and social security

- The employee has not fully complied with the regulations on occupational safety even though they had been provided with protective clothing;
- Besides, the circulation of trucks transporting timber and machinery will cause environmental pollution and increasing the number of traffic accidents on the roads.

c. The management and forest protection

Awareness of forest management and protection of the people are still poor, especially the ethnic minorities when life was difficult; affects to forest management activities of the company, the situation that people go to the forest in illegally harvested , NTFPs collection...maybe is leading to high forest fire risk;

Educational level, the production capacity of the object is ethnic minorities remains limited, difficulties in the management of natural forest resources after allocation.

d. Complaints from the local people

In recent years no complaints about the local people about forest management activities of the company has caused negative impact on their lives (for farming, pollution, collection of NTFPs ...).

2.3. Commenting on the level of detail, the reliability of the results of the evaluation, forecast

The project/ planned development of forests, forestry development is often based on the basic of forest restoration and sustainable forest management, is generally contribute to protecting the environment and improving social life.

The EIA & SIA is often performed in conjunction with the construction project or building forest development plan as a basis for environmental protection for the implementation of future projects and also the basis for authority there are grounds for approval of investment projects. The Government of Vietnam guiding the implementation of environmental protection laws in Decree No. 18/2015 / ND - CP dated January 14th, 2015 and the MONRE guidance in Circular No. 27/2015 /TT - BTNMT dated May, 29th, 2015. In addition to the FSC – Profor guidelines will ensure effective evaluation, including small scale projects (SLIMF).

Therefore, the evaluation report has made sure to accurately reflect the environmental and social impacts of management activities of Binh Thuan Company.

Chapter 3. SOLUTIONS FOR PREVENTION AND MINIMIZE NEGATIVE IMPACTS TO THE ENVIRONMENT – SOCIETY

3.1. Solutions for prevention and minimize negative impacts in plantation stage

3.1.1. Solutions for prevention and minimize negative impacts in nursery stage

- It is necessary to build a complete technical process for nursery stage;
- Focuses on training, capacity building for staff and adequate training for workers before engaging in activities produce seedlings;
- In agreement with the workers need to specify the rules and commitments about technical, insurance regime, protection, workplace safety, monitoring organizations comply with the contract;
- Minimize the using of chemicals, plant protection drugs. In the case of compulsory use must be closely supervised regulations. To increase the use of microbiological preparations;
- Reasonable and scientific arrangement for materials, seedlings and fertilizers; Particularly, the warehouse of pesticides and fertilizers;
- Have a system of collection and treatment of waste in the area of the nursery.

About techniques

- Composition potting should be a certain proportion between the soil, fertilizer and pesticides (if any), the soil for potting bags should be collected from the non-contaminated soil areas;
- Mother trees are used no more than 3 years, the source of mother trees must be bought at the units to supply quality seed and had certified seedlings, use the origin for high productivity and quality.
- Should have a track record of the seedlings origin under the provisions of the Ordinance on plant varieties.

3.1.2. Solutions for prevention and minimize negative impacts in plantation stage

- It is necessary to build a completed technical process for stage of cleaning vegetations, planting, care, management and protection plantations; and organizing training courses on capacity building for staffs and workers before engaging in plantation activities;
- In agreement with the workers need to specify the rules and commitments about technical, insurance regime, protection, workplace safety, monitoring organizations comply with the contract;

- ***Cleaning, handling vegetation***

Should apply the method of plowing comprehensive, vegetations were chopped and sprinkled over the face of land or gathering branches follow rows, not use comprehensive burning method. In the case of burning must use the method of "controlled burning".

- ***Planting***

- Should focus on raising the quality standards for planting seedlings, planting density monitoring, dosage of fertilizer guaranteed increase the survival rate of seedlings after planting;
 - Planting design ensures a safe corridor for the streams follow as regulations;
 - Some inefficient rubber acreage need to transferring to the model of eucalyptus, acacia more suitable;
 - Continue to test on converting plantation forest to large timber products;
 - Should implement more test models about agroforestry, intercropping model of native trees, assay of Eucalyptus lines and new Acacia species to select the origins provide higher yields, suitable for soil conditions, regional climate;
 - For areas with high sloping, shall be plant on a contour lines;
 - For natural forests, when conditions permit, forest enrichment measures should be implement.
- ***About caring, management and protection plantations***
 - The process of care plowing and plowing for the fire prevention note the furrow depth as not to cause soil erosion and affect the quality of forest trees;
 - Need to equipped the fire warning boards, fire extinguishers, tools, vehicles, fire prevention forces to mobilize when needed;
 - Develop and improve the fire watch tower system, testing some prevent fire model by the green fire break using native species, fire-resistant plants instead of using the fire break by land boudary;
 - Should be kill termite by in silvicultural measures and probiotics instead of mechanical method;
 - Strengthening the organization of training courses to enhance skills, knowledges, communication sessions on the work of fire protection, the protection of labor safety and environmental protection for workers ... should equip adequate the protective clothing and monitoring compliance with rules on labor safety when participating in productive;
 - Close coordination with the forest rangers, the relevant agencies in the implementation of forest protection and monitoring and evaluation of the management and use of forests in the forest area has been assigned to manage.

3.2. Solutions for prevention and minimize negative impacts in logging stage

- **Contracts and logging techniques**
 - The Company should directly implement logging and supervise logging. If have a contract, the contracts should be recorded specify the technical requirements, the regime on safe and protection for the labor, should apply techniques reduced impact logging:
 - Supervise the height of original cutting follow regulations of RIL;
 - Reducing the area of white logging, logging the right age;
 - Define the area and reserves of the annual harvest is stable, avoid the case of mass white logging, leading to the unsustainable for the next cycle, avoid logging young plantations and under-aged forests to run the joint get benefit;
 - Minimize negative impacts on land, water, air, animal and plant resources during the exploitation process.
- **Organization of logging**

- Establishment of logging team for each region for management and allocate accountability in the process of monitoring, implementation of logging;
- Planning for the ogging and allocate appropriate human resources, sequentially, to avoid overlap between the stages;
- Apply rolling forms of logging for each stage specific exploit, quickly, before the next sequence right, shortened time to ensure exploitation, construction safety and limit the harmful effects caused by dust, the waste gases generated during the logging process.
- **Pollution control at the worker camps**
 - Prioritize the recruitment of local workers to reduce the number of workers to stay in the camps to reduce waste generation and pollution, limiting the negative social impact in the region;
 - Building for living rules fully, clear and organized labor management;
 - Limit the evils of the workers collective in the logging area;
 - Collecting of living waste and sorting;
 - Installing toilets, regulations about landfills, waste bins ... avoid defecating, littering indiscriminately causing environmental pollution;
 - Put the barrel of drinking hygiene water at the work place.
- **The regimes in labour safety**

In the stage of logging the accident labor risks is very high so therefore have had the preventive measures, specifically including:

- Training on occupational safety for those workers before the start of exploitation (The first aid for some accident that is usually occurs during logging);
- Regulation the working rules in the region;
- Installation of signboards for passers by in the logging area dangerous;
- Provide adequate and the right type of equipment and labor protection for workers. Check, reminding workers to use protective equipment when working labor. Worker health checks before hiring, work assignments consistent;
- Check and regular maintenance of vehicles, machinery and technical equipment to ensure the absolute safety of the logging units;
- Equipping with portable medicine cabinet, first aid kit, with conventional drugs such as snake bite medicine, colds, fever ...;
- Equipping the instruments and equipments as well as the contact address is necessary when the occur incidents (hospitals, fire and police ..).
- **Fire prevention and fight fire**
 - + Solvents and flammable fuel will be quarantined separately, away from sources of ignition capable and sparks;
 - + In the region could cause a fire, employees may not smoke, do not bring lighters, matches, fire appliances emanating due to friction, sparks;
 - + Building fire prevention team responsible for the project.
 - + Projects with explosion proof equipment to heal in time when the incident occurred;
 - + Organize, manage and protect under under unit area systems;
 - + Good cooperation with the CPC and local rangers to implement forest protection solutions in the province.

- **Ensure order and security**

Investors should be combined with local police to set out the measures of security and order in the logging region.

3.3. Solutions for prevention and minimize negative impacts in wood processing stage

- Focuses on retraining and capacity building for staffs and have the adequate training regime for workers before engaging in production activities;
- In agreement with the workers need to record specify the technical regulations, insurance policies, protection, labor safety, activities need to do, organize the monitoring carried out in accordance with the contract;
- Need to have the regular maintenance the machinery in order to reduce negative impacts on the environment such as dust problems, noise, oil leakage and waste;
- Regular cleaning of workshop, cleaning trash, collecting the hazardous waste in the right place under regulations, find and contract with the functional units to collecting and waste treatment follow periodicals regime;
- For solid waste is not hazardous as shavings, sawdust, wood samples can be collected and utilize as fuel for drying stage or as a raw material for plywood production line, the amount of chips and sawdust focus would be in danger of causing the fire explosion;
- Have maintenance mode of machinery periodically to extend the life of machinery and reduce noise and vibration. Avoid operating the machine in the hours of rest for workers and local people, build a system of soundproofed walls, partitions to reduce noise and vibration for people living in the neighborhood;
- Carrying out communication and training on the regulations on fire prevention and safety, frequently remind and supervise the carrying of workwear clothes, glasses, gloves, buttons noise reduction of workers;
- Need to have a health check mode for subjects periodically employees are directly involved in the production.

3.4. Solutions for prevention and minimize negative impacts by the activities of construction facilities, infrastructure, investment in equipment and machinery

- Except to the building a working office of the Company, other building infrastructures were not necessary to implement separate EIA, in this case, the Company shall be limited to the lowest possible level by the negative impacts on the environment during the construction;
- Construction activities silvicultural road system should minimize the possibilities that may occur, such as deforestation, landslides, erosion, affecting water resources in case of passing the flow, trash solid waste from construction camps, in particular, long construction time can affect the circulation of vehicles in service for the production activities of the company.

3.5. Solutions for prevention and minimize negative impacts about society

- The implementation of the forest management activities of the company to ensure that no negative impact on the lives of people around:

- Reduce the amount of smoke, dust, noise and water pollution in the watershed, groundwater sources, drinking water;
- Does not affect people's soil, for the case of households with adjacent acreage to the production area of the Company;
- Prevention and early resolution of issues related to the disputes, encroachment of land between the Company and the local community;
- To organize training courses, raising production capacity to the subjects are officials and employees before taking any forest management activities in the Company (Engineering nurseries, plantations, logging, Processing). Can train some experts are officers of the Company, noted the storage of records, list of training;
- Organize round of dissemination, raise awareness about the work of sustainable forest management, forest fire, regime about safety and protection for objects cadres, workers, local authorities, the relevant agencies, the community and people people living in the surrounding areas;
- There should be coordination with the police, local forest ranger in the process evils monitoring , maintaining security and social order;
- Introduction to the migrant workers about the customs and practices of local people in order to prevent any misunderstandings between migrant workers and local residents;
- Providing a full range of equipment and protective clothing labor safety for each object as officials and workers involved in manufacturing, medicine cabinet, the box of first aid on the office as well as on logging place, note the expiry date.

Chapter 4. PROGRAM MANAGEMENT AND ENVIRONMENTAL MONITORING

4.1. Environmental management program

Environmental management program is established on the basis of the results of the assessment, also known as the environmental protection plan.

4.2. Environmental monitoring program

The company will use environmental monitoring methods simple (according to FSC-ProForest). In the environmental protection plan, the Company will conduct monitoring of the contents include:

- Monitoring the environmental and social impacts at the company;
- Productivity, production forest (growth rate of the species, production, quality of seedlings in the nursery);
- The conservation measures (monitoring and planning special protection for endangered species or areas of high conservation value);

4.2.1. Monitoring productivity, output and dynamics of the forest

- Monitoring ensures the exploitation of fact, growing forests, regeneration and harvest levels are sustain. Including the exploitation of timber and non-timber products;
- For monitoring the development and production of forest is usually conducted by measuring annual crops in the sample plots. The results of measurement and calculation will show different growth rates of different plant species;
- To save manpower, time, funding, monitoring process should be made simple, just collect the necessary information, the information may be use;
- Find the organization has the ability to conduct research makes monitoring. This will help save costs and derive the accurate scientific data;
- It is possible to contact the universities, non-governmental organizations or local technical schools. If the establishment of monitoring plots too expensive and complicated, can refer to a number of methods;
- In some cases, can be applied evaluation methods observed by the naked eye without the need to measure, survey and sampling.

4.2.2. Monitoring of conservation measures and results

- The management plan will include methods to protect the biodiversity of forests and high conservation value and process monitoring to check whether the activities actually help protect, conserve biodiversity school and high conservation values identified or not, or check whether the plan has been established with conservation-oriented or not;
- To save manpower, time, funding, monitoring process should be done:
 - Instead of monitoring the emergence of a number of specific animals, conduct monitoring of habitat;
 - Use the sign that the appearance of animals than a sign of those animals;
 - Take a picture of the fixed point to see the change of habitat characteristics;
 - Using simple devices (no need for expensive equipment) for measure;

- Maybe interviews, discussions with community forest management groups, people living in the region to have the information about the rare plant and animal species in need of protection, can recognize and absorb the ideas and experiences of the people and added to the plan to monitor the species and special habitats.

4.2.3. Monitoring the Environmental and Social Impact

- The negative impact caused by forest management activities at the company caused such as afforestation, management and protection, logging, processing, road construction, chemical use ... The supervision ensures checks, whether the same effects even within the limits allowed or not;
- For contracting activities of allocate the natural for community management, the Company will have talks, consultations and discussions on the impact of forest management activities on the environment. A number of issues were interested include: quality watershed water, living water resources, levels of erosion, landslides and supervise the collection of NTFPs products, illegal hunting and the need of exploit timber cribs of people in the community, the monitoring plan will be presented at the meeting, to strengthen the participation of local people in resource management planning, monitoring of adverse effects the social environment;
- The monitoring plan includes: Content should monitor, supervise him, the subjects to be discussed and the frequency of discussion, Using the results of the discussions. Instead of using complicated methods of science and technology, can apply some simple methods such as counting, photographing or observing with the naked eye and experience, it is important to collect useful and means informations.

Sample simple about monitoring plan

No	The activities will be carried out	Monitoring what?	Monitoring methods. Who is responsible. Time of implement	The responsible person will report on what they saw in any way. Will do with the results obtained
1				
2				
3				
4				

To combine with the monitoring plan the organization of production and society, can establish 1 expression monitoring plan for both production and business cycle, including the following columns:

1. Contents of supervision;
2. Location, coordinates;
3. Frequency;
4. The funds, equipment;
5. Responsibility for implementation;
6. Responsibility for processing.

Chapter 5: COMMUNITY CONSULTATION

5.1. Summary of the implementation of public consultation

Binh Thuan Forestry company has collaborated with the consulting unit deployed two community consultations include:

- **Consultation phase 1:** From June 4th, 2016 to June 6th, 2016, evaluation team worked with a number of communes, units and communities directly affected by forest management activities forestry at Binh Thuan company to collect information for the preparation of reporting for the environmental and social impact assessment . The units to be consulted include:
 - District, town: DPC Ham Thuan Nam, Ham Tan district and Ham Tan district Lagi town. Participants included representatives DPC Town, Natural Resources and Environment Department, Forest Protection Unit, Division of Agriculture and rural development, district social insurance, the district-level Tax Department
 - Commune: Commune People's Committee of Song Binh, Song Luy - Bac Binh district; Ham My - Ham Thuan Nam district; Tan Thang and Thang Hai - Ham Tan district. Participants include: representatives of the CPC, the Farmers' Association, Women's Union, youth, veterans, representatives from school blocks in the commune
- **Consultation phase 2:** From July 19th, 2016 to July 21st, 2016 the Binh Thuan Forestry Company in collaboration with UNREDD program and the consultancy unit organized a consultative workshop aimed through the contents of the report Environmental and Social impact assessment, collect comments from delegates and to unified, edit and complete the Environmental and Social impact assessment report of. The composition of the consultation participants, including representatives of local government commune, district, province and representatives of relevant agencies such as FPD, Department of Forestry, Division of Natural Resources and Environment, Division of Agriculture and Rural districts.

5.2. Results of the consultation on the environmental and social impact

5.2.1. Consultation phase 1

Results of the consultation Phase 1 showed that local authorities and other relevant agencies will agree and support the Forestry Company of Binh Thuan in the process of developing and implementing sustainable forest management to achieve forest certification plantation international.

Many consultants have said that the afforestation activities of the company over the years have contributed to the greening of bare land, bare hills and mountains, soil retention, water retention, protection and improvement of the environment in the area;

- Local authorities at district and town level have stated that the objectives and orientations of production and business of the Company are in full conformity with the State policies and policies of FLA as well as the regulations. Combination with the Local socio-economic development plans;

- The company has made many contributions to localities: creating jobs, raising incomes, supporting the construction of infrastructure facilities, upgrading rural roads.

- Many people said that the timber transport process, the machinery of exploitation phase has caused the phenomenon of smoke, dust, noise, impact on people living in the area of rural roads , a number of local people have had complaints and reminders;

- **Song Binh commune**

- + Burning process in vegetation treatment, cleaning after harvesting will be risk forest fire spread out wide, affecting the cultivate soil of the people living in the surrounding areas;
- + For the forest land after logging currently are no afforestation or bare land, the company should conduct checks to greening as soon as possible, to prevent the encroachment of the people into cultivate agricultural trees;
- + Company should organize more the communication session, the propagation of forest management and protection, environmental protection, forest fire ... for those people living in the surrounding areas;
- + Need to further tighten the relationship between the company and local authorities..

- **Ham My commune**

- + Company should create conditions for the local population to collected the branches after the logging, however requires have commitment of time to gather the branches, avoid the case people do not bring away lead to the branches still on of forest so long polluting the environment, prone to the risk of forest fires;
- + Should establish a forest protection committee to assign responsibility and ensure timely human resources to mobilize when forest fires occur;
- + Local authorities are keen in the near future the company will continue with the social welfare activities locally, and depending on the needs of each locality that has the support of more consistent, more realistic;

- **Ham Thuan Nam CPC**

- + Company and local governments need to cooperate more closely in the process of solving the problems related to natural disasters, conflict, land encroachment, the administrative records as well as issues arise in the process of deploying, monitoring forest protection and management activities;
- + The Company tries to use local labor, trying to maintain the coverage, effective business and continue to make contributions to local as many years.

- **Forest protection Unit - LaGi town**

Using the method of burning in the long time will affect the environment, collection of solid waste and to register with relevant authorities to process.

- **Division of resource management and environment**

- + In the process of harvesting to note the lanes back and forth can cause environmental pollution, avoid of the case the local people reflect;
- + In the environmental protection plan has been committed to protecting the environment, the need to take seriously;

- + Company should be resolved soon concerning issues of land disputes in order to minimize the loss of security and order in the locality.

- **Tan Thang commune**

Some lanes too tonnage, circulation process causes environmental pollution on route type, and some local people reflected, the Company should prompted the operators to overcome, avoid of reflecting from the local people

- **Thang Hai commune**

Local expect in the future, the Company and localities should cooperate more closely and more timely coordination to solve the disputes, encroachment, implement and supervise the management activities local forests.

5.2.2. Consultation phase 1

Results in the consultation Phase 2 showed that delegates unanimously the contents of Environmental and Social Impact Assessment report of the Company of Binh Thuan. However, the delegates required the company to strictly implement the provisions of environmental legislation as well as to comply with the commitments stated in the EIA - SIA report was made.

(The minutes of the consultations workshop have been make, stating the composition of delegates, the comments and signatures of delegates)

CONCLUSIONS, RECOMMENDATIONS AND COMMITMENT

1. Conclusions

Based on the analysis, synthesis would offer a number of conclusions:

1.1. Environmental impacts

- **For soil environment**
Were maintained stable, chemical residues during use and solid waste (packaging pesticide / illness) were be controlled, collected and processed. The cleaning of vegetation, vegetation treatment, care and plowed logging is done in compliance with the provisions thus limiting erosion and environmental impact on the land.
- **Water Environment**
Controlled, oil, grease and water from machinery during operation is handled in accordance with regulations. Riparian corridors, streams were protected noting erosion, leaching, afforestation and exploitation comply with regulations.
- **Air environment**
At the the extent permitted, machinery and equipment in the wood processing enterprises maintained periodically, workers from the basic training in the operation and use of machinery and equipment. Factory area is surrounded by green trees so noise restrictions, are air conditioning when operating machinery.
- **About biodiversity**
The investigation and statistics of rare plant and animal species, areas of high conservation value, define boundaries and put on regeneration and protection. Besides, the construction of the garden to variety testing, security garden existing genetic resources also contribute to the maintenance and preservation of the value of biodiversity. The application of new technical and scientific technology is concerned, therefore, the Company entered new varieties of high yield, good quality, sustainable business towards diversifying tree species in the forest crop categories, while protection of natural forests is to conserve species of high economic value.

1.2. Social impacts

- **Positive**
 - There is a unity between the Party Steering Committee and Board of Directors of the Company, the solidarity of all officials and employees of the company so there is no disunity, complaints, ...;
 - The income of workers and employees increasingly improved and sustainable;
 - Company leader have concerned to the workers about the social insurance system, health insurance, unemployment insurance and labor protection;
 - Creating jobs for local communities through corporate activities such as seedling production, plantation, logging, wood processing, ...;
 - Actively participate in and support local support in movement activities by the local government launched in the areas with units attached to the Company operates.
- **Limit**

However, due to pressure on labor material (productive land) should remain the land encroachment of the company, but the area and the case are not more. However, in certain respects, they may also have a positive side which is propagating through the company's training has changed the perception of the people, they see effect in business performance that in the previous time they did not get forest land.

2. Existence

- Although, the report reviews the basics of content / item of the environmental impact in the area of management of the company, however, some conditions have not allowed so remain some existence as follow:
- Plan for sustainable forest management of the company have not been approved by the competent authorities, therefore the content / items not build specific plans, need have time and make the subsequent periodic monitoring ;
- No quantifiable indicators to assess

3. Request

- To implement the environmental protection plan, monitoring plan and the level of compliance of environmental commitments, contracts need consensus effort of all staff in the company, as well as propaganda, raise awareness of environmental protection for the staff as well as local people living in the surrounding areas;
- Sustainable forest management will ensure on all three aspects of economy, society and environment, while to develop and implement sustainable forest management plans need to coordinate, support, collaboration, shared responsibility liability obligations and rights of local authorities from the village, commune, district and people living near the forest, the relevant agencies including the forestry, Natural Resources and environment, rangers, ... Due , the company respectfully request the organizational unit concerned, active support and assistance to contribute to the completion of the construction and implementation of sustainable forest management to effectively plan

4. Commitments

- Based on these findings, the report predicted environmental impact assessment (EIA & SIA), the Company will promptly remedy the errors of the environment in the shortest time;
- Building the environmental protection plan and supervise the implementation of environmental protection plans at the company:
- Assign tasks to the staff responsible for planning environmental protection, monitoring the implementation of the plan includes long-term planning, short-term plan, a master plan or plans to be established before deploy any forestation projects, logging and processing at the company;
- Select the unit of potential bidders, contractors units must comply with the following requirements:
 - + Comply with the provisions of labor law on the regime of contracts, salaries and social benefits (insurance regime, the regime of health care, food safety ...)

- + Providing a full range of equipment and labor protection for workers (accommodation, physical condition, clothing, shoes, hats, noise button, gloves ...)
- + Training of workers about labor safety and the use of equipment and labor protection
- + The contractor does not comply must excluded from forestry activities in the Company, for cases where the contractor has committed to, the Company should have oversight of contractor compliance and sanctions penalties depending on the seriousness of the breach of contractual commitments;
- In agreement with the Company's direct employees, should clearly state the commitments about technical and safety rules have been training, supervision of compliance with the regulations on labor safety of workers involved in the production;
- Can choose some experts are officers of the Company to technical training, the regulations on occupational safety, fire prevention ... to all workers before entering production (planting forest, logging, processing ...), note store training records;
- There should be plans of solid waste collection and absolutely no solid waste (inorganic waste) on plantations such as plastic bags, packaging, plastic bags, cigarette butts ...;
- There should be plans to handle the liquid waste and absolutely not for oil, liquid waste, chemicals on the ground;
- Absolutely do not use burning method in the vegetation treatment as well as cleaning the forest after harvesting;
- No child labor under 15 years of age to participate in any activity at the forest management company;
- Absolutely no use of chemicals and pesticides on the list of banned or restricted the use of chemicals and pesticides at the lowest level, increase the use of microbiological preparations;
- Equipped with costumes, equipment safety protection for staff and workers while engaged in manufacturing, equipped note costumes dedicated and specific to each task, armed with medicine cabinet, first aid box, at the corporate office as well as on logging place, note the expiry date
- Make a list of stakeholders, clearly define the roles and concerns of stakeholders for forest management activities in the company, to maintain the continuity, stability, and quality long term , limited to the minimum the contradictions in the relationship with stakeholders. Stakeholder groups may include:
 - + The group of state agencies: the General Directorate of Forestry, PPC, DARD, Department of Forestry, Forest Protection Department, the Department of Finance, Department of Taxation, Department of Planning and Investment (Ban innovative enterprises), Department resources & environment, social Insurance, labor Unions, the related departments at district level, DPC, the communes
 - + Group of local communities living around the company stands as the village, the group contracted forest protection and management, people ...
 - + Partners potential customers: The logging contractor unit, the purchasing unit of wood and products of wood processing

- + Other organizations: The Seed Company, institutes, schools, programs and projects, Other organizations currently working in the field of sustainable forest management, forest certification and legitimate trade
- + Implementing forest management plans in the next 5 years to ensure compliance with the provisions of national legislation on the environment, the International Convention on the environment and meet the principles, criteria and indicators the interim standard in forest management in Socialist Republic Vietnam - version 1.0 or GFA standards for sustainable forest management in Vietnam (in Circular No. 38/2014/TT-BNNPTNT).

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