

6 Proposed Environmental Prevention and Mitigation Measures

6.1 Waste treatment and disposal measures

6.1.1 Waste water management specifications

SPECIFICATION MCA-02: WASTE WATER MANAGEMENT			
ABIOTIC COMPONENT MANAGEMENT PROGRAM		RESOURCE: Water	
OBJECTIVE			
<ul style="list-style-type: none"> To establish the necessary measures for ensuring that waste water generated by the project is managed correctly. To implement a waste water treatment system for each camp that forms part of the project. 			
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT	
<ul style="list-style-type: none"> Operational Stage 	<ul style="list-style-type: none"> San Cristóbal Base Mono Paraíso PC Malvinas Tierradentro Toro I 	<ul style="list-style-type: none"> Change in water quality. Change in soil quality. 	
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT	
<ul style="list-style-type: none"> Accommodating personnel in camps. Washing machinery and vehicles. 		<ul style="list-style-type: none"> Water and soil resources affected in terms of changes in the quality thereof. 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	X		
ACTIONS TO BE TAKEN			
<ol style="list-style-type: none"> Install waste water flow meters in every camp. Conduct annual analyses of the physical-chemical and microbiological parameters of waste water. Implement a waste water treatment system at every project camp. Carry out preventive maintenance on the waste water treatment system. Keep a monthly record of waste water flows at each camp, and try to record waste water produced and waste water treated. 			
TECHNOLOGIES USED			
See Attachment 11 <ul style="list-style-type: none"> Physical-chemical analysis guide 			
DESIGN			
See Attachment 11			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be carried out		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	

SPECIFICATION MCA-02: WASTE WATER MANAGEMENT		
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.	<ul style="list-style-type: none"> Water technologist Non-qualified manpower FFC personnel responsible for environmental management. 	
FOLLOW-UP AND MONITORING		
INDICATOR	ACTIONS	RECORD
Parameters that adhere to reference values / parameters evaluated against reference values	Carry out corrective maintenance on the waste water treatment system.	Physical-chemical analysis report and maintenance chart.
Parameters that adhere to reference values / parameters evaluated against reference values	Measure the physical-chemical and microbiological parameters of waste water produced.	Waste water analysis reports
Waste water treated / waste water generated	Install a waste water treatment system.	Photographic record
Waste water treated / waste water generated	Measure the monthly flow of waste water produced in the inhabited core and the flow treated.	Flow record chart.
QUANTIFICATION AND COSTS		
The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.		

6.1.2 Specifications for the management of non-dangerous solid waste

SPECIFICATION MCA-03: MANAGEMENT OF NON-DANGEROUS SOLID WASTE		
ABIOTIC COMPONENT MANAGEMENT PROGRAM		RESOURCE: Water, soils
OBJECTIVE		
<ul style="list-style-type: none"> To establish environmental management measures that will enable the impacts generated when non-dangerous solid waste produced by the project is handled, stored and transported to be prevented and mitigated. 		
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT
<ul style="list-style-type: none"> Operational Stage 	<ul style="list-style-type: none"> San Cristóbal Base Mono Paraíso PC Malvinas Tierradentro Toro I 	<ul style="list-style-type: none"> Change in soil quality. Alterations in the physical-chemical properties of the soil. Change in ecosystem quality. (Fauna and flora affected). Change in landscape quality (Landscape modified)
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT
<ul style="list-style-type: none"> Accommodating personnel in camps. Activities carried out by personnel throughout the project zone. Operation and maintenance of the nursery and plantations. 		Soil resource affected in terms of changes and alterations thereto.

SPECIFICATION MCA-03: MANAGEMENT OF NON-DANGEROUS SOLID WASTE			
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	X		
ACTIONS TO BE TAKEN			
<ul style="list-style-type: none"> Sell recyclable inorganic waste to companies in the area. Carry out annual physical-chemical analyses of the compost produced. Hold a training workshop for various levels of project personnel on the integrated management of solid waste. Construct a suitable site for the temporary storage of non-dangerous waste. Establish a site for treating non-dangerous waste. Provide the various facilities with containers (ecological points) where solid waste can be deposited. Measure the amount of solid waste collected by type. 			
TECHNOLOGIES USED			
See Attachment 12			
<ul style="list-style-type: none"> Guide for the physical-chemical analysis of compost produced. 			
DESIGN			
See Attachment 12			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be carried out		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.		<ul style="list-style-type: none"> Non-qualified manpower FFC personnel responsible for environmental management. 	
FOLLOW-UP AND MONITORING			
INDICATOR	ACTIONS	RECORD	
Inorganic waste sold / Inorganic waste generated	Sell recyclable inorganic waste to companies in the area.	Solid Waste Record Chart	
Numbers of analyses / Number of analyses proposed	Carry out annual physical-chemical analyses of compost produced each half-year.	Physical-chemical analyses of compost produced report	
Number of persons trained in the integrated management of solid waste / Total project personnel	Hold a training workshop for various levels of project personnel on the integrated management of solid waste.	List of persons attending training workshops	
The temporary storage site has the necessary characteristics for storing non-dangerous solid waste.	Construct a suitable site for the temporary storage of non-dangerous waste.	Photographic record	
The temporary storage site has the necessary characteristics for storing non-dangerous solid waste.	Adapt a suitable site for the temporary storage of non-dangerous waste.	Photographic record	

SPECIFICATION MCA-03: MANAGEMENT OF NON-DANGEROUS SOLID WASTE		
The temporary storage site has the necessary characteristics for storing non-dangerous solid waste.	Check storage conditions each month and, if necessary, carry out cleaning and disinfection of the temporary, solid waste storage site every six months.	Photographic record
Containers installed / Number of containers proposed de	Provide the various facilities with containers (ecological points) where solid waste can be deposited.	Photographic record
Number of records made / Number of records proposed	Measure the amount of solid waste collected by type.	Solid Waste Record Chart
QUANTIFICATION AND COSTS		
The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.		

6.1.3 Specifications for the management of dangerous waste

SPECIFICATION MCA-04: MANAGEMENT OF DANGEROUS WASTE			
ABIOTIC COMPONENT MANAGEMENT PROGRAM		RESOURCE: Water, soil and ecosystems	
OBJECTIVE			
<ul style="list-style-type: none"> To establish environmental management measures that will enable the impacts generated when dangerous solid waste produced by the project is handled, stored and transported to be prevented and mitigated. 			
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT	
Operational Stage	<ul style="list-style-type: none"> San Cristóbal Base Mono Paraíso PC Malvinas Tierradentro Toro I 	<ul style="list-style-type: none"> Change in water quality Change in soil quality Change in air quality Change in landscape quality 	
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT	
<ul style="list-style-type: none"> Operation and maintenance of machinery and equipment. Accommodating personnel ins camps Operation and maintenance of the nursery and plantations. 		<ul style="list-style-type: none"> Soil resource affected in terms of the quality thereof. 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	▪ X	▪	▪
ACTIONS TO BE TAKEN			
<ol style="list-style-type: none"> Deliver empty agrochemicals packaging to the supplier responsible therefor. Triple wash agrochemical packaging. 			

SPECIFICATION MCA-04: MANAGEMENT OF DANGEROUS WASTE			
3. Hold a training workshop for project personnel on the management of dangerous waste.			
4. Build a suitable site for the temporary storage of dangerous waste.			
5. Clean the site for the temporary storage of dangerous waste on a monthly basis.			
TECHNOLOGIES USED			
See Attachment 13			
DESIGN			
See Attachment 13			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be carried out		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.		<ul style="list-style-type: none"> • Non-qualified manpower • FFC personnel responsible for environmental management. 	
FOLLOW-UP AND MONITORING			
Indicator	Activity	Record	
Temporary storage site with suitable conditions for storing dangerous waste	Build a suitable site for the temporary storage of dangerous waste.	Photographic record	
Number of cleaning sessions carried out / Number of cleaning sessions proposed	Check storage conditions each month and, if necessary, carry out cleaning and disinfection of the temporary, solid waste storage site every six months.	Record	
Quantity of dangerous waste delivered / Quantity of dangerous waste generated.	Keep a record of the quantity and type of dangerous waste generated in the project area.	Waste generation record chart	
Number of people trained in the integrated management of dangerous waste / Total project personnel.	Hold an annual training workshop for different levels of project personnel on the management of dangerous waste.	List of those attending training sessions.	
<ul style="list-style-type: none"> ▪ QUANTIFICATION AND COSTS 			
<ul style="list-style-type: none"> ▪ The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter. 			

6.1.4 Specifications for preventing and controlling pollution by chemicals and fuels

SPECIFICATION MCA-05: PREVENTING AND CONTROLLING POLLUTION BY CHEMICALS AND FUELS.	
ABIOTIC COMPONENT MANAGEMENT PROGRAM	RESOURCE: Water, soils and ecosystems

SPECIFICATION MCA-05: PREVENTING AND CONTROLLING POLLUTION BY CHEMICALS AND FUELS.			
OBJECTIVE			
<ul style="list-style-type: none"> To minimize pollution risks resulting from the use of chemicals and fuels. 			
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT	
Operational Stage	<ul style="list-style-type: none"> Project property 	<ul style="list-style-type: none"> Changes in water quality. Changes in soil quality. Changes in ecosystem quality. 	
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT	
<ul style="list-style-type: none"> Soil preparation Fertilization, planting, harvesting, weed control, pest control, and diseases in plantations. Operation and maintenance of machinery. 		<ul style="list-style-type: none"> Soil resource affected in terms of the quality thereof. 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	X		
ACTIONS TO BE TAKEN			
<ol style="list-style-type: none"> Hold an annual training workshop for project personnel on the management of agrochemicals and fuels. Avoid storing large quantities of fuel. Fill the tank and carry out maintenance work and the washing of machinery and equipment in the area specially set aside for these activities. Adhere to the protocol for handling agrochemicals and fuels. Carry out monthly maintenance on machinery, vehicles and equipment. Prepare the necessary amount to be used on plantations, to avoid some being left over. Keep an inventory of agrochemicals stored, and update this every month. Carry out monthly maintenance on machinery used for applying agrochemicals. Measure the quantity of fuels and oils used on the project. 			
TECHNOLOGIES USED			
See Attachment 14			
DESIGN			
See Attachment 14			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be carried out		X	
PARTY RESPONSIBLE FOR EXECUTION	PERSONNEL REQUIRED		
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.	<ul style="list-style-type: none"> Vehicle maintenance personnel FFC personnel responsible for environmental management. 		

SPECIFICATION MCA-05: PREVENTING AND CONTROLLING POLLUTION BY CHEMICALS AND FUELS.		
FOLLOW-UP AND MONITORING		
Indicator	Activity	Record
Number of inventories drawn up / Number of inventories proposed.	Keep a monthly inventory of agrochemicals stored at the project.	Agrochemicals inventory chart.
Number of maintenance activities carried out / Number of maintenance activities proposed	Carry out monthly maintenance on machinery used for applying agrochemicals.	Machinery, vehicles and equipment maintenance chart.
Number of inventories drawn up / Number of inventories proposed	Keep a monthly inventory of fuels and oils stored at the project.	Chart showing inventories drawn up
Number of inventories drawn up / Number of inventories proposed	Keep a monthly inventory of agrochemicals stored at the project.	Agrochemicals inventory chart
Quantity of agrochemicals used / Quantity of agrochemicals acquired	Monthly maintenance of machinery, vehicles and equipment.	Machinery, vehicles and equipment maintenance chart.
Number of accidents per month related to agrochemicals and fuels / Total number of accidents	Follow the guidelines established for handling / managing agrochemicals	Protocol for handling / managing agrochemicals
Number of persons trained in managing agrochemicals and fuels / Total project personnel.	Hold an annual training workshop on the handling / managing of agrochemicals and fuels.	List of persons attending training in the handling / management of agrochemicals and fuels.
QUANTIFICATION AND COSTS		
The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.		

6.2 Natural resource management (e.g. sustainable management of biological resources and protection of endangered species and their habitats)

6.2.1 Efficient use of water specification

SPECIFICATION MCA-01: EFFICIENT USE OF WATER		
ABIOTIC COMPONENT MANAGEMENT PROGRAM		RESOURCE: Water
OBJECTIVE		
<ul style="list-style-type: none"> To establish the necessary measures for ensuring water is used efficiently and saved on the project. To implement a drinking water treatment system for water consumption. 		
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT
<ul style="list-style-type: none"> Operational Stage 	<ul style="list-style-type: none"> San Cristóbal Base Mono Paraíso PC Malvinas Tierradentro 	<ul style="list-style-type: none"> Changes in water quantity (availability of water resources). Changes in water quality.

SPECIFICATION MCA-01: EFFICIENT USE OF WATER			
		• Toro I	
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT	
<ul style="list-style-type: none"> Accommodating personnel in camps. Resource used in irrigation and fertigation activities at the nursery. 		<ul style="list-style-type: none"> Water resource affected in terms of changes in the availability and quality thereof. 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	X		
ACTIONS TO BE TAKEN			
<ol style="list-style-type: none"> Install water flow meters to measure water consumption in each camp and in irrigation and fertigation activities in the nursery. Carry out annual analyses of the physical-chemical and microbiological parameters of water for human consumption. Hold a six-monthly training workshop for project personnel on the conservation, efficient use and saving of water. Install sanitary equipment and other accessories that have systems which guarantee the efficient use and saving of water. Carry out preventive maintenance on an annual basis on all pumping, storage and distribution structures, equipment and accessories relating to water for human consumption. Keep a monthly flow record of water from all catchment sources for human consumption and for use in the nursery (irrigation). Implement a drinking water treatment system for water consumption. During the dry and rainy seasons, conduct appraisals of surface sources that are used for catchment and determine the ecological flow thereof. Carry out an annual pumping test on underground wells that are used for catchment, to analyze conditions in the underground aquifer. 			
TECHNOLOGIES USED			
See Attachment 10. <ul style="list-style-type: none"> Methodology for appraising the flow of surface sources. Subjects to be discussed at half-yearly training sessions. Guide for the physical-chemical analysis. 			
DESIGN			
See Attachment 10			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be carried out		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.		<ul style="list-style-type: none"> Water technologist Non-qualified manpower Pumping test study, geological services company. FFC personnel responsible for environmental management. 	
FOLLOW-UP AND MONITORING			

SPECIFICATION MCA-01: EFFICIENT USE OF WATER		
INDICATOR	ACTIONS	RECORD
Meters installed / Number of meters proposed	Install flow meters for water that is for human consumption	Monthly flow record of water for human consumption and irrigation in the nursery.
Water quality parameters within permitted limits established in Resolution 2115 of 2007	Take annual measurements of the physical-chemical and microbiological parameters of water for human consumption.	Analysis reports of water for human consumption.
Number of people trained in conserving water resources and the efficient use of water / Total project personnel.	Hold an annual training workshop for project personnel on conserving, saving, and the efficient use of water.	List of persons attending training sessions in the conserving, saving, and efficient use of water.
Efficient water use and saving accessories installed / Efficient water use and saving accessories proposed.	Install sanitary equipment and other accessories that have systems for saving water and ensuring it is used efficiently.	Monthly flow record of water for human consumption and for irrigation in the nursery.
Annual maintenance carried out / Annual maintenance proposed	Carry out preventive maintenance on an annual basis on all pumping, storage and distribution structures, equipment and accessories relating to water for human consumption.	Equipment and space maintenance chart.
Number of records kept / Number of records proposed	Monthly flow record of water for human consumption and for use in the nursery.	Flow record chart.
Number of appraisals conducted / Number of appraisals proposed	Carry out an annual pumping test on underground wells that are used for catchment, to analyze conditions in the underground aquifer.	Appraisal record chart
Number of pumping tests performed / Number of pumping tests proposed.	Carry out an annual pumping test on underground wells that are used for catchment, to analyze conditions in the underground aquifer.	Pumping test reports
QUANTIFICATION AND COSTS		
The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.		

6.2.2 Soil management specification

SPECIFICATION MCA-07: SOIL MANAGEMENT	
ABIOTIC COMPONENT MANAGEMENT PROGRAM	RESOURCE: Soil
OBJECTIVE	
<ul style="list-style-type: none"> To implement measures for protecting, conserving and recovering soil and the production capacity thereof. 	

SPECIFICATION MCA-07: SOIL MANAGEMENT			
STAGE			
PLACE TO BE APPLIED		ENVIRONMENTAL IMPACT	
Operational Stage		<ul style="list-style-type: none"> Project property Change in ecosystem quality. 	
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT	
<ul style="list-style-type: none"> Operation of machinery and equipment. Movements of personnel in the project zone. Preparation of ground. Establishment and development of plantations. 		<ul style="list-style-type: none"> Soil resource affected in terms of the quality thereof. 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	X		
ACTIONS TO BE TAKEN			
<ol style="list-style-type: none"> Carry out a soil quality analysis every seven years. Take specific plantation requirements into account when carrying out fertilization. 			
TECHNOLOGIES USED			
See Attachment 16			
DESIGN			
See Attachment 16			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be carried out		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.		<ul style="list-style-type: none"> Accredited laboratory FFC personnel responsible for environmental management. 	
FOLLOW-UP AND MONITORING			
Indicator	Actions	Record	
Percentage of soil quality parameters within optimum ranges for crop development	Carry out soil quality analysis every three years.	Soil analysis reports	
Production per hectare	Carry out fertilization activities on the basis of soils analyses and in accordance with specific plantations requirements.	Chart recording preparation and application of agrochemicals.	
QUANTIFICATION AND COSTS			
The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.			

6.2.3 Fauna wildlife management specifications

SPECIFICATION MCB-01: FAUNA WILDLIFE MANAGEMENT			
BIOTIC COMPONENT MANAGEMENT PROGRAM		RESOURCE: Fauna	
OBJECTIVE			
To implement measures aimed at protecting, conserving and restoring soil and its production capacity.			
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT	
<ul style="list-style-type: none"> Operational Stage 	<ul style="list-style-type: none"> Project property 	<ul style="list-style-type: none"> Change in ecosystem quality. 	
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT	
<ul style="list-style-type: none"> Preparation of land for planting plantations. Operation of equipment. 		<ul style="list-style-type: none"> Fauna resource affected in terms of quality thereof. 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	X		
ACTIONS TO BE TAKEN			
<ol style="list-style-type: none"> Hold an annual training workshop for project personnel on fauna wildlife management. Remove healthy, slow-moving animals (e.g. tortoises and armadillos) from any potentially harmful area and relocate them in an area that is safe for them and as near as possible to the place they are removed from. Inspect the area before preparing the ground (harrowing and applying lime), in order to be sure that it is clear of animals. Transport any animals that have been found injured to the Corporation's fauna rehabilitation center. 			
TECHNOLOGIES USED			
See Attachment 19			
DESIGN			
See Attachment 19			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be carried out		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.		<ul style="list-style-type: none"> FFC personnel responsible for environmental management. 	
FOLLOW-UP AND MONITORING			
Indicator	Actions		Record

SPECIFICATION MCB-01: FAUNA WILDLIFE MANAGEMENT		
Number of people trained in fauna wildlife management / Total project personnel	Hold an annual training workshop for project personnel on fauna wildlife management.	List of persons attending fauna wildlife management training.
Number of individuals relocated per month.	Remove healthy, slow-moving animals (e.g. tortoises and armadillos) from any potentially harmful area and relocate them in an area that is safe for them and as near as possible to the place they are removed from.	Fauna inspection chart.
Number of individuals relocated per month.	Inspect the area before preparing the ground (harrowing and applying lime), in order to be sure that it is clear of animals.	Fauna inspection chart.
Number of injured animals that are taken to the rehabilitation center each month.	Transport any animals that have been found injured to the Corporation's fauna rehabilitation center.	Chart showing animals taken to the rehabilitation center.
QUANTIFICATION COSTS		
The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.		

6.2.4 Flora wildlife management specifications

SPECIFICATION MCB-02: FLORA WILDLIFE MANAGEMENT			
BIOTIC COMPONENT MANAGEMENT PROGRAM		RESOURCE: Flora	
OBJECTIVE			
<ul style="list-style-type: none"> To conserve the functional and structural attributes of ecosystems in the area of influence of the project. 			
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT	
Operational Stage	<ul style="list-style-type: none"> Project property 	Change in ecosystem quality.	
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT	
<ul style="list-style-type: none"> Preparation of the ground. Establishment and development of the plantations. Construction of associated basic infrastructure. 		<ul style="list-style-type: none"> Flora resource affected in terms of the quality thereof 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	<ul style="list-style-type: none"> X 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">

SPECIFICATION MCB-02: FLORA WILDLIFE MANAGEMENT			
ACTIONS TO BE TAKEN			
1. Protect forest, palm swamp and wetland ecosystems. 2. Protect the ecotone between grassland, gallery forests and palm swamps. 3. Provide grassland corridors associated with planted areas, so as to enable native fauna to migrate and access the necessary resources for maintaining their populations. 4. Hold an annual training workshop for project personnel on environmental zoning and other ecosystem conservation strategies.			
TECHNOLOGIES USED			
See Attachment 20			
DESIGN			
See Attachment 20			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be performed		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.		<ul style="list-style-type: none"> Non-qualified manpower. FFC personnel responsible for environmental management. 	
FOLLOW-UP AND MONITORING			
Indicator	Actions	Record	
The average annual variation in species diversity in the canopy, in exclusion and intervention areas with restrictions, is less than 5 per cent.	Protect forest, palm swamp and wetland ecosystems.	Zoning map of project properties that identifies strategic ecosystems (inlets, palm swamps and gallery forests) and protection strips.	
The average annual variation in species diversity in the canopy, in exclusion and intervention areas with restrictions, is less than 5 per cent.	Monitor the flora make-up of ecosystems in exclusion areas on an annual basis.	Biota monitoring chart.	
The average annual variation in species diversity in the canopy, in exclusion and intervention areas with restrictions, is less than 5 per cent.	Protect ecotones between grassland, gallery forests and palm swamps.	Georeferenced photographic record of ecotones between grassland, gallery forests and palm swamps.	
Number of persons trained in protecting areas classified as exclusion zones and intervention zones with restrictions / Total project personnel.	Hold an annual training workshop for project personnel on environmental zoning and other ecosystem conservation strategies.	List of persons attending training workshops on environmental zoning and other ecosystem conservation strategies.	
Number of people with training, information, facilities, and the necessary logistics for promptly detecting and controlling fires that might break out.	Hold an annual training workshop for project personnel on preventing and fighting uncontrolled burning and fires.	List of persons attending training workshops on preventing and fighting uncontrolled burning and fires.	

6.2.5 Specifications for comprehensive pest and disease management

SPECIFICATION MCB-03: COMPREHENSIVE PEST AND DISEASE MANAGEMENT			
BIOTIC COMPONENT MANAGEMENT PROGRAM		RESOURCE: Fauna and flora	
OBJECTIVE			
<ul style="list-style-type: none"> To implement integrated management of pests and diseases as a strategy for minimizing impacts on fauna and flora in the region. 			
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL	
Operational Stage	<ul style="list-style-type: none"> Project property 	<ul style="list-style-type: none"> Change in ecosystem quality. Changes in income and socioeconomic and cultural dynamics. 	
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT	
<ul style="list-style-type: none"> Pest and disease management for the plantations. 		<ul style="list-style-type: none"> Fauna y flora resources affected in terms of the quality thereof. 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	X		
ACTIONS TO BE TAKEN			
<ol style="list-style-type: none"> Hold an annual training workshop for project personnel on the integrated management of pests and diseases. Monitor the state of beneficial microbiota in the soil on an annual basis. Back up chemical control technically with evaluations in the field. Rotate agrochemical products that are to be used for controlling pests and diseases, in order to prevent resistance to them developing in pests. Calibrate equipment, in order to prevent an overdose or underdose of agrochemicals being applied. Use low toxicity and high specificity insecticides as a last resort for controlling pests. 			
TECHNOLOGIES USED			
See Attachment 21			
DESIGN			
See Attachment 21			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be carried out		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.		<ul style="list-style-type: none"> Non-qualified manpower Accredited laboratory FFC personnel responsible for environmental management. 	

SPECIFICATION MCB-03: COMPREHENSIVE PEST AND DISEASE MANAGEMENT		
FOLLOW-UP AND MONITORING		
Indicator	Actions	Record
Number of persons trained in the integrated management of pests and diseases / Total project personnel.	Hold an annual training workshop for project personnel on the integrated management of pests and diseases.	List of persons attending training workshops on the integrated management of pests and diseases.
Number of species associated with biological control present in the area of influence of the project.	Monitor the state of beneficial microbiota in the soil on an annual basis.	Biota monitoring chart
Quantity of agrochemicals used per month.	Back up chemical control technically with evaluations in the field.	Field evaluation reports
Quantity of agrochemicals used per month.	Rotate agrochemical products that are to be used for controlling pests and diseases, in order to prevent resistance to them developing in pests.	Chart showing agrochemicals applied
Annual number of pest outbreaks	Calibrate equipment, in order to prevent an overdose or underdose of agrochemicals being applied.	Equipment and spaces maintenance chart
Annual number of pest outbreaks	Use the releasing of biological controllers as a low-cost strategy for managing pests and diseases.	Biota monitoring chart
Annual number of pest outbreaks	Use low toxicity and high specificity insecticides and fungicides as a last resort for controlling pests.	Chart showing agrochemicals applied
QUANTIFICATION AND COSTS		
The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.		

6.2.6 Forest fire management specifications

SPECIFICATION MCB-04: FOREST FIRE MANAGEMENT		
BIOTIC COMPONENT MANAGEMENT PROGRAM		RESOURCE: Landscape, ecosystems and air
OBJECTIVE		
<ul style="list-style-type: none"> To conserve fauna and flora by preventing and dealing with fires 		
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT
Operational Stage	<ul style="list-style-type: none"> Project property 	<ul style="list-style-type: none"> Destruction of ecosystems that are part of the natural areas protected by the project. Air pollution.
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT

SPECIFICATION MCB-04: FOREST FIRE MANAGEMENT			
<ul style="list-style-type: none"> Burning of grassland on neighboring properties and with communities. Lack of care by project personnel, contractors, or people in the area of influence of the project. 		<ul style="list-style-type: none"> Landscape, ecosystem and air resources affected in terms of the quality thereof. 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	▪ X	▪	▪
ACTIONS TO BE TAKEN			
<ol style="list-style-type: none"> Hold an annual training workshop for project personnel on preventing and dealing with uncontrolled burning and fires. Equip project personnel with the necessary items for dealing with uncontrolled burning (backpacks, tankers, hoses, axes, mattocks, shovels, radio telephones, etc.). Carry out periodic maintenance of firewalls, as required. Carry out zoning of project properties, identifying areas where forest fires are most likely to occur. In dry seasons, carry out follow-up on areas where forest fires are most likely to occur. 			
TECHNOLOGIES USED			
See Attachment 22			
DESIGN			
See Attachment 22			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
Operational Stage		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.		<ul style="list-style-type: none"> Non-qualified manpower FFC personnel responsible for environmental management. 	
FOLLOW-UP AND MONITORING			
Indicator	Actions	Record	
Number of people with training, information, facilities, and the necessary logistics for promptly detecting and controlling fires that might break out.	Hold an annual training workshop for project personnel on preventing and dealing with uncontrolled burning and fires.	List of persons attending training workshops on preventing and dealing with uncontrolled burning and fires.	
Number of people with training, information, facilities, and the necessary logistics for promptly detecting and controlling fires that might break out.	Equip project personnel with the necessary items for dealing with uncontrolled burning (backpacks, tankers, hoses, axes, mattocks, shovels, radio telephones, etc.).	Inventory chart	
Area affected by forest fires / Forested area within the project	Carry out periodic maintenance of firewalls, as required.	Equipment and spaces maintenance chart	

SPECIFICATION MCB-04: FOREST FIRE MANAGEMENT

Area affected by forest fires / Forested area within the project	Carry out zoning of project properties, identifying areas where fires are most likely to occur.	Zoning map, identifying areas where forest fires are most likely to occur.
Area affected by forest fires / Forested area within the project	In dry seasons, carry out follow-up on areas where forest fires are most likely to occur.	Verification chart showing areas where forest fires are likely to occur.
<ul style="list-style-type: none">▪ QUANTIFICATION AND COSTS		
<ul style="list-style-type: none">▪ The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.		

6.2.7 Forestry exploitation management specification

SPECIFICATION MCB-05: FORESTRY EXPLOITATION MANAGEMENT			
BIOTIC COMPONENT MANAGEMENT PROGRAM		RESOURCE: Flora	
OBJECTIVE			
<ul style="list-style-type: none"> To establish technical guidelines for the forestry exploitation activity, including the management of products and/or sub-products resulting from the same. 			
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT	
Operational Stage	<ul style="list-style-type: none"> Project property 	<ul style="list-style-type: none"> Land flora affected. Loss of vegetation cover. Landscape affected. 	
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT	
<ul style="list-style-type: none"> Adaptation and operation in plantation areas. Preparation and adaptation of land. 		<ul style="list-style-type: none"> Landscape and ecosystem resources affected. 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
ACTIONS TO BE TAKEN			
<p>All actions described in the forestry exploitation plan will be carried out (see Attachment 23A), plus those described below.</p> <ol style="list-style-type: none"> Water resources Protection areas for bodies of water will extend for a distance of at least 200 meters from the limit of the protection area (maximum elevation of flooding in bodies of water). Soil resources Material resulting from exploitation activities will be disposed of in soils as a recycling method for organic waste on suitable sites (where it does not constitute any danger of forest fires occurring and, at the same time, does not inhibit natural succession processes at certain sites), with a view to it benefiting the physical properties of the soil. Waste resources Material resulting from exploitation activities will be stacked, in order to allow it to decompose naturally, thus benefiting the physical properties of the soil. It will be disposed of on suitable sites, where it does not constitute any danger of forest fires occurring and, at the same time, does not inhibit natural succession processes at certain sites. Fauna management The following procedure will be carried out with fauna prior to the commencement of activities: driving away, which will basically consist of using different methodologies and techniques as auditive stimuli, such as reproducing sounds that warn them of danger and mechanical stimuli like moving tree and bush vegetation. 			

SPECIFICATION MCB-05: FORESTRY EXPLOITATION MANAGEMENT			
5. Dissemination among personnel The above will be duly disseminated among support personnel who will be involved in exploitation activities (machinery operators).			
TECHNOLOGIES USED			
See Attachment 23			
DESIGN			
See Attachment 23			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
Operational Stage		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.		<ul style="list-style-type: none"> FFC personnel responsible for environmental management. 	
FOLLOW-UP AND MONITORING			
Indicator	Actions	Record	
Correct disposal of vegetable matter	Vegetable matter disposal report.	Photographic record	
Dissemination among personnel	(Number of persons trained / Total number of persons responsible for the activity) x 100	List of persons attending training sessions	
QUANTIFICATION AND COSTS			
The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.			

6.3 Mitigation of human impacts: compensation, training, etc.

6.3.1 Specifications for managing socioeconomic and socio-environmental impacts caused by the project.

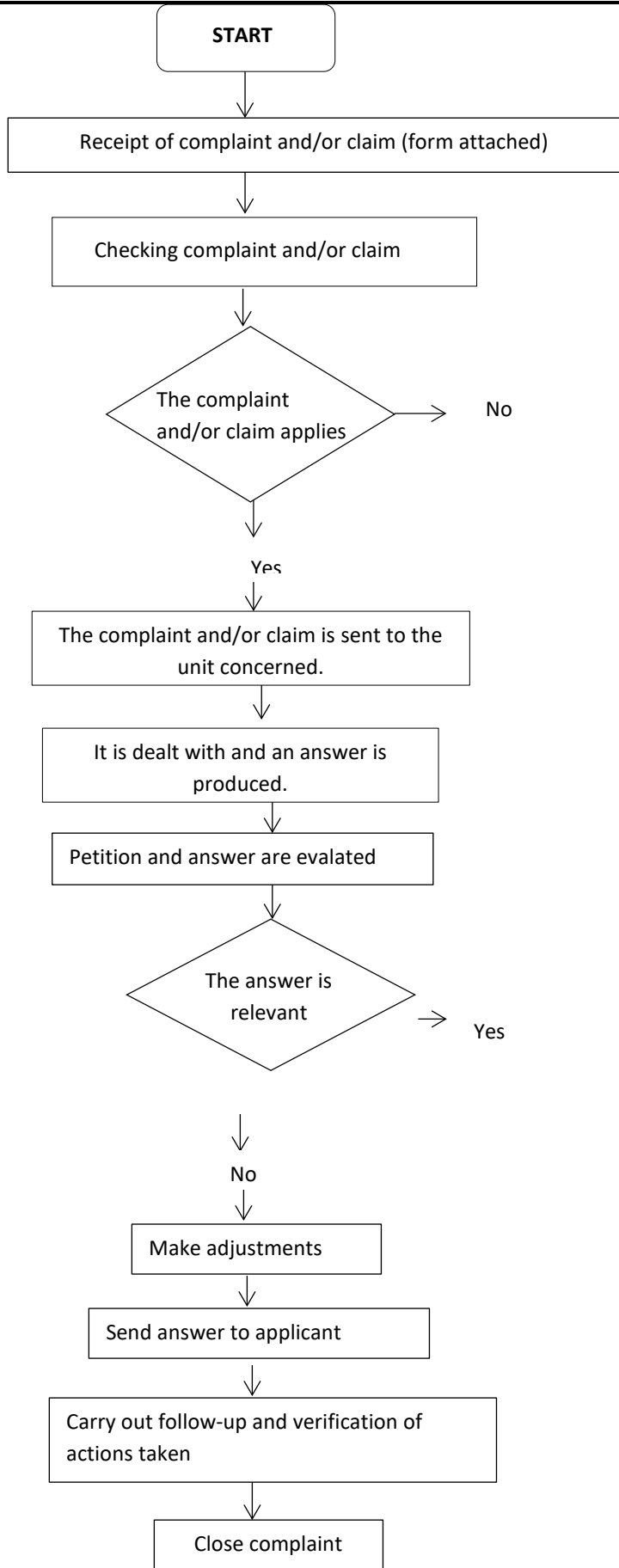
SPECIFICATION MCSE-02 MANAGEMENT OF SOCIOECONOMIC AND SOCIO-ENVIRONMENTAL IMPACTS CAUSED BY THE PROJECT		
COMPONENT MANAGEMENT PROGRAM	RESOURCE: Human	
OBJECTIVE		
<ul style="list-style-type: none"> To prevent, minimize and control the impacts that most frequently affect the quality of life of communities living near the project. 		
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT
Operational Stage	<ul style="list-style-type: none"> La Venturosa inspection Puerto Murillo inspection Aceitico Inspection 	<ul style="list-style-type: none"> Change in society's quality of life.

SPECIFICATION MCSE-02 MANAGEMENT OF SOCIOECONOMIC AND SOCIO-ENVIRONMENTAL IMPACTS CAUSED BY THE PROJECT			
		<ul style="list-style-type: none"> Project property 	
CAUSE OF IMPACT		ENVIROMENTAL EFFECT	
<ul style="list-style-type: none"> Project installation Project operation 		<ul style="list-style-type: none"> Human resource affected in terms of the quality thereof. 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	X		
ACTIONS TO BE TAKEN			
<ol style="list-style-type: none"> Provide interested populations, communities in the area of influence and social organizations with clear, prompt and reliable information about the project, and hold a project awareness workshop in the case of a community that does not know Forestal de la Orinoquia. Assign someone to be responsible for community relations and establish a permanent communication channel, thereby ensuring that possible impacts associated with project activities can be handled and resolved. Receive, deal with and resolve complaints made by the community resulting from project activities. 			
TECHNOLOGIES USED			
See Attachment 25			
DESIGN			
See Attachment 25			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be carried out		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.		<ul style="list-style-type: none"> FFC personnel responsible for environmental management. 	
FOLLOW-UP AND MONITORING			
Indicator	Activity	Record	
Number of communications from the community resolved / number of complaints, requests and other procedures received.	Based on the form relating to communications from the community dealt with, keep a record for internal company administration purposes.	File with record of communications from the community, and the respective procedure carried out for verification purposes.	
QUANTIFICATION AND COSTS			
The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.			

6.3.2 Specifications for handling, dealing with and resolving complaints.

SPECIFICATION MCSE-03: MEASURES FOR DEALING WITH AND RESOLVING COMPLAINTS			
COMPONENT MANAGEMENT PROGRAM		RESOURCE: Human	
OBJECTIVE			
<ul style="list-style-type: none"> To receive, process and administer complaints and claims in a prompt and objective manner, with a view to adopting measures for dealing with and improving activities carried out. 			
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT	
Operational Stage	<ul style="list-style-type: none"> La Venturosa inspection Puerto Murillo inspection Aceitico inspection Project property 	<ul style="list-style-type: none"> Change in society's quality of life 	
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT	
<ul style="list-style-type: none"> Installation of project Operation of project 		<ul style="list-style-type: none"> Human resource affected in terms of the quality thereof 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	X		
ACTIONS TO BE TAKEN			
<ol style="list-style-type: none"> Establish a telephone line and a form for "petitions, complaints, claims and suggestions" and keep a record for internal and external company administration purposes. Make workers aware of the procedure to follow in the event of a complaint or claim being received, and also of making communities aware of the project. <p>Community participation system and dealing with complaints and claims.</p> <p>Interested parties can join in project awareness workshops and thus participate in project administration.</p> <p>Requirements for receiving, processing and administering.</p> <p>If a complaint is to be processed in the corresponding manner, it should be justified, and also be respectful, serious, objective and warrant credibility.</p> <p>Means that can be used for receiving complaints.</p> <p>Telephone line, filling in the form for "petitions, complaints, claims and suggestions", and also physically using the respective form at project facilities.</p> <p>Path for dealing with and resolving complaints</p>			

SPECIFICATION MCSE-03: MEASURES FOR DEALING WITH AND RESOLVING COMPLAINTS



SPECIFICATION MCSE-03: MEASURES FOR DEALING WITH AND RESOLVING COMPLAINTS			
TECHNOLOGIES USED			
See Attachment 26			
DESIGN			
See Attachment 26			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be carried out		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.		<ul style="list-style-type: none"> FFC personnel responsible for environmental management. 	
FOLLOW-UP AND MONITORING			
Indicator	Activity	Record	
Number of complaints, requests and procedures resolved / number of complaints, requests and other procedures received.	<ul style="list-style-type: none"> Based on the form relating to dealing with complaints and claims, keep a record for internal company administration purposes. Make workers aware of the path to follow if a complaint or claim is made. 	File containing record of complaints and/or claims, with respective administration for verification purposes.	
QUANTIFICATION AND COSTS			
The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.			

6.4 Occupational safety and health measures

6.4.1 Project personnel labor wellbeing specification

SPECIFICATION MCSE-01: PROJECT PERSONNEL WELLBEING		
COMPONENT MANAGEMENT PROGRAM	RESOURCE: Human	
OBJECTIVE		
<ul style="list-style-type: none"> To promote labor wellbeing among personnel involved in the project. 		
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT

SPECIFICATION MCSE-01: PROJECT PERSONNEL WELLBEING			
Operational Stage	<ul style="list-style-type: none"> Project property 	<ul style="list-style-type: none"> Change in society's quality of life. Change in demand for manpower and services. 	
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT	
<ul style="list-style-type: none"> Labor activities and interpersonal relations during installation and operation of the project. 		<ul style="list-style-type: none"> Human resource affected in terms of the quality thereof. 	
TYPE OF MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	▪	▪	▪
ACTIONS TO BE TAKEN			
<ol style="list-style-type: none"> Draw up a training program based on the different job profiles on the project. Implement the occupational health, hygiene and industrial safety program. Produce a job induction program. 			
TECHNOLOGIES USED			
<ul style="list-style-type: none"> See Attachment 24 			
DESIGN			
See Attachment 24			
EXECUTION SCHEDULE			
Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be carried out		X	
PARTY RESPONSIBLE FOR EXECUTION		PERSONNEL REQUIRED	
The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.		FFC personnel responsible for environmental management.	
FOLLOW-UP AND MONITORING			
Indicator	Activity	Record	
Assimilation by personnel of the training received, by means of surveys.	Produce a job induction program.	List of persons attending induction	
Motivating aspects / demotivating aspects identified among personnel	Draw up a training program based on the different job profiles on the project	Training program for each job on the project	
Motivating aspects / demotivating aspects identified among personnel	Implement the constant motivation program for project personnel.	Personnel motivation program	
QUANTIFICATION AND COSTS			
The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.			

6.4.2 Specifications for the management and transportation of materials and equipment

SPECIFICATION MCA-08: MANAGEMENT AND TRANSPORTATION OF MATERIALS AND EQUIPMENT			
ABIOTIC COMPONENT MANAGEMENT PROGRAM		RESOURCE: Soil	
OBJECTIVE			
<ul style="list-style-type: none"> To minimize the impact on the management and transportation of materials required during the project construction stage. 			
STAGE	PLACE TO BE APPLIED	ENVIRONMENTAL IMPACT	
<ul style="list-style-type: none"> Construction Stage 	<ul style="list-style-type: none"> Project property 	<ul style="list-style-type: none"> Generation of waste. Alteration to air quality due to particle material. 	
CAUSE OF IMPACT		ENVIRONMENTAL EFFECT	
<ul style="list-style-type: none"> Construction - Forestry activity habitation plan. Adaptation of internal roads. 		<ul style="list-style-type: none"> Air resource affected due to changes in the quality thereof. Soil resource affected due to changes in the quality thereof. 	
TYPE OR MEASURE			
Prevention	Mitigation	Correction	Offsetting
X	X		
ACTIONS TO BE TAKEN			
<p>1. Acquisition of material from authorized sites. Sites where construction materials will be acquired will be defined during the construction stage. Sites from which construction materials will be extracted should be purchased from third parties who hold permits valid at the time and a concession contract. Materials should be purchased from quarries and sources of materials that hold the respective permits, and such documents should be requested and verified.</p> <p>2. Transportation of materials Covering cargo that is transported is obligatory, in order to avoid emissions and to prevent it from dispersing, in accordance with the provisions stipulated in Ministry of the Environment Resolution 541 of 1994, <i>“Whereby the loading, unloading, transportation, storage and final disposal of rubble, materials, elements, concretes and loose aggregates relating to construction and demolition, and organic matter, soil and subsoil from excavations, is regulated”</i>. The cover will be made of a strong material, in order to prevent it breaking or tearing, and it will be fixed firmly to the outside edges of the container or vehicle.</p> <p>When equipment is being transported, it should be remembered that the vehicle should carry a notice bearing the following text, as the case might be: <i>“Danger, extra-long load”</i>, <i>“Danger, extra-wide load”</i>, or <i>“Danger, extra-long and extra-wide load”</i>.</p> <p>3. Storage of materials When materials are being stored, it should be remembered that the area set aside for the storage of materials should be stripped and well away from nearby bodies of water.</p> <p>When construction materials are being stored temporarily, canvas and/or plastic sheets should be used for protection, in order to prevent materials being blown away by wind or rain.</p>			

SPECIFICATION MCA-08: MANAGEMENT AND TRANSPORTATION OF MATERIALS AND EQUIPMENT

TECHNOLOGIES USED

- Copies of environmental and mining permits and/or licenses.
- Record accrediting the fact that the vehicle meets the necessary conditions.
- Photographic record accrediting correct storage of the material.
- Record of linear meters of material stored. metros.

See Attachment 17

DESIGN

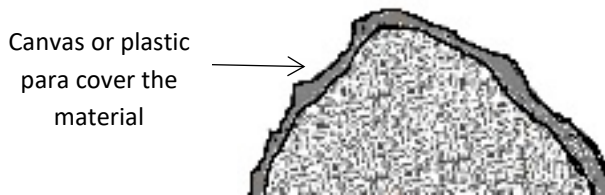


Illustration 1: Storage of material, showing canvas or plastic to cover the same

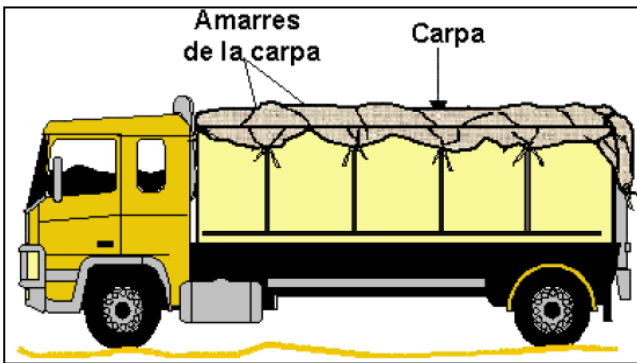


Illustration 2: Correct transportation of material

EXECUTION SCHEDULE

Activities	Stage		
	Construction	Operation and maintenance	Dismantlement and abandonment
All activities to be carried out		X	

PARTY RESPONSIBLE FOR EXECUTION

The party responsible for execution and control of, and follow-up on, the programs will be a FFC Environmental Engineer or environmental sciences specialist, and the HSEQ Leader.

PERSONNEL REQUIRED

- FFC personnel responsible for environmental management.

FOLLOW-UP AND MONITORING

Indicator	Actions	Record
Volume of duly licensed material acquired (m ³) / Total volume of material acquired (m ³) *100	Acquire construction materials from duly licensed sites.	Copies of environmental and mining permits and/or licenses.

QUANTIFICATION AND COSTS

The costs involved in implementing the environmental management programs and measures established in this environmental management plan specification, with the information on the total implementation figure at the end of the chapter.