



**GOVERNMENT OF PUNJAB
ENVIRONMENTAL PROTECTION AGENCY**



Environmental Assessment Checklists and Guidelines

Forest Harvesting Operations

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1. Introduction

1.1 Background

Growing environmental awareness over the past several decades has highlighted the need for careful management of forest harvesting operations to ensure the conservation of forest resources, biodiversity, soil stability, watershed protection, and the long-term productivity of forest ecosystems. In Pakistan, and particularly in Punjab, forest resources are limited and the existing forest cover remains significantly below the level recommended for maintaining ecological stability. Unsustainable harvesting practices, including excessive tree felling, poor extraction methods, damage to regeneration, and disturbance to forest soils and habitats, can further reduce forest productivity and degrade natural ecosystems.

Forest harvesting should therefore be planned and implemented on the principles of sustainability to ensure that timber and other forest products are extracted in a manner that maintains forest health, supports natural regeneration, and preserves the ecological functions of forest areas while meeting present and future socio-economic needs.

Forest harvesting operations in Punjab must also be viewed within the broader context of global environmental challenges, including biodiversity loss, land degradation, climate change, increasing demand for land and natural resources, and the growing concentration of greenhouse gases in the atmosphere. These challenges underscore the need to adopt environmentally responsible harvesting practices that minimize damage to residual stands, soil, water resources, wildlife habitat, and surrounding communities.

Proper planning and environmental management of forest harvesting operations are essential to maximize economic and social benefits while minimizing potential adverse impacts. Environmental considerations should therefore be integrated into all stages of harvesting operations, from planning and marking to felling, extraction, transportation, and post-harvest site rehabilitation.

i. Forestry Sector in Punjab

The Province of Punjab covers a diverse ecological landscape, from the coniferous forests of the Murree Hills to the irrigated plantations of the plains and the riverine forests along the Indus. Legally, forests in Punjab are categorized as:

- **Reserved Forests:** Exclusive property of the State with minimal concessions for local communities, such as right of way or limited fuelwood collection.
- **Protected Forests:** Areas where the Government exercises specific protections, often including rights for local communities.
- **Guzara Forests:** Community-owned forests managed under specific provincial rules.
- **Irrigated Plantations:** Managed Forest crops raised artificially through irrigation systems.

ii. Current procedure of Forests Harvesting Operations

In Punjab, the Forest Department develops working plans for specified periods to address harvesting potential and forest management. Officers of Forest Department mark trees on

silvicultural basis and according to these plans, Operations are typically carried out through registered contractors and monitored by field staff.

1.2 Purpose of Guidelines

These Environmental Assessment Checklist and Guidelines have been prepared to assist project proponents, forestry agencies, environmental consultants, and regulatory authorities in identifying, assessing, and managing the potential environmental and social impacts associated with forest harvesting operations in Punjab. They provide a systematic framework for incorporating environmental considerations into the planning, implementation, monitoring, and post-harvest management of forestry projects.

The Guidelines present practical measures for environmentally sound harvesting practices, protection of biodiversity, conservation of soil and water resources, pollution prevention, occupational health and safety, community health and safety, environmental monitoring, and rehabilitation of harvested areas. The Environmental Assessment Checklist provides a standardized tool for identifying key environmental issues, evaluating potential impacts, and determining appropriate mitigation measures during project planning and implementation.

The purpose of these Guidelines and Checklist is to facilitate the preparation and review of Initial Environmental Examination (IEE) reports, promote compliance with the Punjab Environmental Protection Act, 1997 (as amended), the Punjab Environmental Quality Standards (PEQS), the Forest Act and applicable forestry regulations, and encourage sustainable forest harvesting practices that conserve forest ecosystems, maintain ecological integrity, and support the sustainable utilization of forest resources for present and future generations.

1.3 Scope of the Guidelines

Within the framework of sustainable forest management, these guidelines cover the management of forests for wood production within the Province of Punjab using environmentally friendly harvesting operations. The timber and wood products from Punjab's forests are in high and continuing demand. Careful management ensures profitable production on a sustainable basis while maintaining the integrity of forest ecosystem values. Environmental and social considerations are paramount in planning a balanced approach to wood production. These concerns include soil, water, and biological diversity conservation, as well as the interests of forest-dependent communities.

1.4 How to Use These Guidelines

These guidelines supplement all existing technical manuals and departmental instructions for forest harvesting in Punjab. The guidelines are produced for general information and compliance; however, as per current Punjab Environmental Protection Act provisions, specific approval from the Punjab EPA for routine forest harvesting may not be required unless falling under specific Schedule I or II categories.

1.5 Glossary

Act: Means the Punjab Environmental Protection Act, 1997.

Afforestation: Establishment of forests by planting or seeding on land that has not been under forest cover for a considerable period.

Biodiversity: The variety and variability of living organisms, including plants, animals, microorganisms, and the ecosystems in which they occur.

Buffer Zone: A designated area adjacent to environmentally sensitive features, such as streams, wetlands, or wildlife habitats, where harvesting activities are restricted or prohibited to minimize environmental impacts.

Compartment: A defined management unit within a forest established for planning, harvesting, protection, and silvicultural operations.

Dust: Fine particulate matter, such as dry soil or pollen, that can become airborne during natural processes or human activities.

Eco-friendly: Environmentally friendly; causing minimal harm to the environment.

Environment: Means (a) air, water and land; (b) all layers of the atmosphere; (c) all organic and inorganic matter and living organisms; (d) the ecosystem and ecological relationships; (e) buildings, structures, roads, facilities and works; (f) all social and economic conditions affecting community life; and (g) the inter-relationships between any of the factors mentioned in clauses (a) to (f).

Environmental Assessment: A process by which information on the potential environmental effects of a proposed project is identified, evaluated, and considered in decision-making before project implementation.

Environmental Management: The planning and implementation of measures to ensure that development activities are carried out in an environmentally sustainable manner.

Environmental Management Plan (EMP): A document describing the measures to prevent, minimize, mitigate, monitor, and manage the environmental impacts of a project during its implementation.

Forest: An area of land predominantly covered by trees and associated vegetation, managed for ecological, economic, protective, or social purposes.

Forest Harvesting: The planned felling, extraction, processing, and transportation of trees and other forest products from a forest area for commercial, management, or conservation purposes.

Forest Harvesting Plan: A document specifying the location, harvesting methods, extraction routes, environmental protection measures, operational schedule, and rehabilitation activities for a harvesting operation.

Forest Road: A road constructed or maintained primarily to provide access for forest management, harvesting, fire protection, or transportation of forest products.

Habitat: The natural place or physical environment in which a plant, animal, or other organism normally lives and grows.

Impact on Environment: Means any effect on land, water, air, or any other component of the environment, including impacts on wildlife, forests, biodiversity, as well as the social and cultural environment and heritage resources.

Log Landing (Log Yard): A designated area where harvested logs are temporarily collected, sorted, measured, and loaded for transportation.

Mitigation Measure: A measure adopted to avoid, reduce, control, eliminate, or compensate for an adverse environmental impact of a development project.

Mitigation Measures: Actions taken to avoid, minimize, control, or compensate for adverse environmental and social impacts resulting from project activities.

Noise: Unwanted sound that is loud, unpleasant, or disruptive to human activities or the environment.

Reforestation: Re-establishment of forest cover through natural regeneration or planting on land that was previously forested.

Regulations: Means the Punjab Environmental Protection Agency (Review of Initial Environmental Examination and Environmental Impact Assessment) Regulations, 2022.

Residual Stand: Trees that remain standing after harvesting to support natural regeneration, maintain biodiversity, and preserve ecological functions.

Riparian Zone: The area adjacent to rivers, streams, lakes, or other water bodies that supports unique vegetation and ecological functions and requires protection during harvesting operations.

Selective Harvesting: A harvesting method in which only selected trees meeting specified criteria are removed while retaining the remaining forest stand.

Silviculture: The science and practice of establishing, tending, protecting, and managing forests to achieve desired ecological, economic, and social objectives.

Skidding: The movement of felled trees or logs from the felling site to a landing or roadside using machinery, animals, or other methods.

Skid Trail: A designated route used for transporting logs from the harvesting site to a landing area.

Waterlogged Land: Land that is saturated with water, resulting in excessive soil moisture that may adversely affect vegetation growth and land productivity.

2. Project Profile

2.1 Project Description

The proponent, after consulting Annexures should provide a concise description of the proposed project, including but not limited to followings:

- Name of the project
- Project location (district, tehsil, mouza, and coordinates)
- Nature of the project (new or expansion or rehabilitation)
- Government's designate nature of proposed area
- Total project area.
- Estimated water demand during construction and operation phases
- Covered and open areas

- Land ownership status
- Estimated project cost
- Detail of different categories of houses and others structures
- Number of employees during construction phase.

The proponent after deep consultation must describe the project and all related allied activities which may include but not limited to followings:

- i. General Information
- ii. Site Description
- iii. Forest Resource Characteristics
- iv. Harvesting Methodology
- v. Machinery and Equipment
- vi. Transportation and Access Roads
- vii. Workforce and Support Facilities
- viii. Construction and Operational Activities
- ix. Environmental Protection Measures
- x. Post-harvest Rehabilitation

3. Environmental Impacts

3.1 Land Disturbance and Soil Erosion

- Disturbance of soil during tree felling, skidding, road construction, and log transportation.
- Increased soil erosion, particularly on steep slopes.
- Soil compaction due to movement of heavy machinery.
- Loss of fertile topsoil and reduced soil productivity.

3.2 Loss of Vegetation and Forest Cover

- Removal of trees and understory vegetation.
- Reduction in forest canopy cover.
- Damage to residual trees during harvesting operations.
- Impaired natural regeneration if harvesting is not properly managed.

3.3 Biodiversity and Wildlife Habitat

- Disturbance or loss of wildlife habitats.
- Displacement of wildlife due to noise and human activities.
- Damage to nesting, breeding, and feeding sites.

- Fragmentation of forest habitats.
- Potential impacts on rare, endangered, or protected species.

3.4 Surface Water Quality

- Increased sedimentation of streams and rivers due to soil erosion.
- Obstruction or alteration of natural drainage.
- Pollution from fuel, lubricants, and accidental spills.
- Increased turbidity of nearby water bodies.

3.5 Groundwater and Watershed Protection

- Disturbance of watershed functions due to vegetation removal.
- Reduced groundwater recharge in severely disturbed areas.
- Increased runoff resulting from reduced vegetation cover.

3.6 Air Quality

- Dust generation from road construction and transportation of logs.
- Exhaust emissions from chainsaws, tractors, skidders, loaders, and trucks.
- Smoke emissions where slash burning is practiced.

3.7 Noise and Vibration

- Noise generated by chainsaws, harvesting machinery, trucks, and heavy equipment.
- Temporary disturbance to wildlife and nearby communities.
- Vibration associated with heavy machinery operation.

3.8 Waste Generation

- Generation of logging residues such as branches, tops, bark, and damaged timber.
- Domestic waste from workers' camps.
- Waste oil, used filters, and other hazardous wastes from machinery maintenance.
- Improper disposal of waste causing environmental pollution.

3.9 Forest Roads and Access Development

- Land clearing for temporary or permanent forest roads.
- Increased soil erosion along roads and skid trails.
- Slope instability and drainage problems.
- Improved access potentially leading to illegal logging or encroachment.

3.10 Occupational Health and Safety

- Injuries from chainsaws and felling operations.

- Accidents involving heavy machinery and vehicles.
- Exposure to noise, dust, and vibration.
- Risks associated with manual handling of logs.
- Fire hazards during harvesting activities.

3.11 Community Health and Safety

- Increased traffic due to timber transportation.
- Dust and noise affecting nearby communities.
- Safety risks to local residents using forest roads.
- Conflicts over forest resource use and access.
- Temporary restrictions on community access to forest areas.

3.12 Fire Risk

- Increased risk of forest fires from machinery, fuel handling, smoking, or careless disposal of combustible materials.
- Accumulation of logging residues increasing fire hazards.
- Damage to forest ecosystems and nearby communities in the event of a fire.

3.13 Climate Change and Carbon Storage

- Reduction in forest carbon stocks due to tree removal.
- Greenhouse gas emissions from harvesting machinery and timber transportation.
- Reduced carbon sequestration if harvested areas are not adequately regenerated.

3.14 Visual and Landscape Impacts

- Alteration of the natural appearance of the forest.
- Visible harvesting areas and skid trails.
- Temporary degradation of scenic and recreational values.

3.15 Positive Environmental and Socio-economic Impacts

- Sustainable harvesting can promote healthy forest growth and regeneration.
- Removal of diseased, damaged, or over-mature trees may improve forest condition.
- Employment opportunities for local communities.
- Supply of timber and other forest products to support economic development.
- Improved forest management when harvesting is undertaken in accordance with approved management plans and sustainable forestry practices.

4. Environmental Mitigation Measures

4.1 Land Disturbance and Soil Erosion

- Limit harvesting to approved areas identified in the harvesting plan.
- Minimize land clearing and soil disturbance during harvesting operations.
- Retain topsoil where earthworks are required and use it for site rehabilitation.
- Construct water bars, cross-drainage structures, and erosion control measures on forest roads and skid trails.
- Avoid harvesting on steep slopes and highly erodible soils where practicable.
- Rehabilitate disturbed areas immediately after completion of harvesting.

4.2 Loss of Vegetation and Forest Cover

- Adopt selective harvesting or other sustainable harvesting methods instead of indiscriminate clear felling.
- Clearly mark trees approved for harvesting before felling.
- Protect residual trees and natural regeneration from unnecessary damage.
- Minimize clearing of understory vegetation.
- Undertake reforestation or enrichment planting in harvested areas in accordance with approved forest management plans.

4.3 Biodiversity and Wildlife Habitat

- Avoid harvesting in protected areas and critical wildlife habitats.
- Maintain buffer zones around nesting sites, breeding areas, wetlands, and watercourses.
- Restrict harvesting during sensitive breeding or nesting seasons where feasible.
- Retain habitat trees, deadwood, and seed trees to support biodiversity.
- Prohibit hunting, trapping, or disturbance of wildlife by workers.

4.4 Surface Water Quality

- Maintain vegetated buffer strips along rivers, streams, lakes, and wetlands.
- Avoid depositing logs, soil, or waste materials into water bodies.
- Design stream crossings to minimize disturbance to natural flow.
- Refuel and maintain machinery away from watercourses.
- Immediately contain and clean up fuel or oil spills.

4.5 Groundwater and Watershed Protection

- Protect watershed areas from unnecessary vegetation removal.
- Minimize soil compaction to promote groundwater recharge.

- Avoid locating fuel storage areas near wells or springs.
- Prevent disposal of fuels, lubricants, or chemicals onto the ground.
- Restore disturbed drainage patterns after harvesting.

4.6 Air Quality

- Regularly maintain harvesting machinery and transport vehicles to minimize exhaust emissions.
- Sprinkle water on unpaved roads during dry conditions where dust becomes excessive.
- Limit vehicle speeds on forest roads.
- Avoid open burning of logging residues unless specifically authorized.
- Promote efficient harvesting techniques to reduce unnecessary machinery operation.

5.7 Noise and Vibration

- Restrict harvesting activities to daylight hours near settlements.
- Maintain machinery in good operating condition.
- Minimize unnecessary idling of equipment.
- Provide hearing protection to workers exposed to high noise levels.
- Inform nearby communities in advance of major harvesting activities where appropriate.

4.8 Waste Generation

- Collect and properly dispose of domestic waste generated by workers.
- Store waste oil, used filters, and hazardous materials in designated containers.
- Dispose of hazardous waste through authorized facilities.
- Remove non-biodegradable waste from the harvesting site.
- Manage logging residues in accordance with approved forest management practices.

4.9 Forest Roads and Access Development

- Utilize existing forest roads wherever possible.
- Minimize construction of new access roads and skid trails.
- Design roads with adequate drainage and erosion control measures.
- Stabilize cut and fill slopes using vegetation or other suitable techniques.
- Close, rehabilitate, and revegetate temporary roads and skid trails after harvesting.

4.10 Occupational Health and Safety

- Provide workers with appropriate Personal Protective Equipment (PPE), including helmets, safety boots, gloves, eye protection, and hearing protection.
- Train workers in safe tree felling, machinery operation, and emergency response.

- Maintain first-aid facilities and trained first-aid personnel on site.
- Regularly inspect chainsaws, machinery, and equipment.
- Develop and implement an Occupational Health and Safety Plan.

4.11 Community Health and Safety

- Install warning signs along timber transportation routes and active harvesting areas.
- Restrict public access to hazardous work zones.
- Coordinate timber transport to minimize traffic disruption.
- Maintain communication with nearby communities regarding harvesting schedules.
- Establish procedures for receiving and addressing public complaints.

4.12 Fire Risk

- Develop and implement a Forest Fire Prevention and Response Plan.
- Prohibit smoking and open fires in designated high-risk areas.
- Equip harvesting crews with appropriate firefighting equipment.
- Store fuels and lubricants in secure, designated locations away from ignition sources.
- Remove or manage excessive logging residues where they significantly increase fire risk.

4.13 Climate Change and Carbon Storage

- Limit harvesting to sustainable allowable cut levels.
- Implement prompt reforestation or assisted natural regeneration following harvesting.
- Protect healthy residual trees to maintain carbon stocks.
- Minimize fuel consumption through efficient harvesting operations.
- Encourage sustainable forest management practices that enhance long-term carbon sequestration.

4.14 Visual and Landscape Impacts

- Avoid unnecessary clearing in visually sensitive areas.
- Maintain buffer vegetation along roads, rivers, and recreational sites.
- Design harvesting blocks to blend with the surrounding landscape where practicable.
- Rehabilitate disturbed areas through revegetation.
- Remove temporary structures and restore sites following completion of harvesting.

4.15 Positive Environmental and Socio-economic Impacts

- Implement harvesting in accordance with approved Forest Management Plans.

- Promote sustainable forest management and continuous forest regeneration.
- Prioritize local employment and capacity building.
- Encourage community participation in reforestation and forest protection activities.
- Monitor harvested areas to ensure successful regeneration and long-term sustainability.

Environmental Assessment Checklist

Section I: Project Description

File No _____ (To be filled by EPA)

Date _____

General Information

1. Project Name or Title _____
2. Project Proponent (Department, organization, or owner) _____
3. Address _____
4. Telephone _____
5. Fax _____
6. E-mail _____
7. Representative of the Proponent _____
8. Designation _____
9. Name of the person who conducted this assessment _____
10. Designation _____
11. Qualification _____

Project Information

12. Project Location _____
13. Cost of the Project _____
14. Period of construction (start and end dates) _____
15. Total land area _____ m²
16. Brief Project Description _____

Please attach a sketch showing the layout of the proposed facilities

17. Will any new land be acquired? _____
If yes, please specify
The total area: _____

Present ownership of land _____

What is the present use of the land? _____

How the land will be acquired (Through Land Acquisition Act or Direct Purchase)? _____

When the compensation will be paid? _____

18. In case of state land, are there any squatter settlements on the land? _____

If yes, please specify

Number of settlements _____

Will any compensation be paid? _____

When the compensation will be paid? _____

19. How many trees will be removed for the construction of the road? _____

Section II: Screening

Is the proposed facility or part of the facility inside an ecologically sensitive area:

☐ Yes ☐ No

If yes, then the project would require an initial environmental examination or an environment impact assessment. Refer to the Punjab Environmental Protection Agency Review of Initial Environmental Examination and Environment Impact Assessment Regulations, 2022 for appropriate category.

Section III: Environmental Profile

1. Describe the terrain of the project area:

☐ Flat or Level (Slope < 3%)

☐ Level to moderately steep (Slope 3%-30%)

☐ Moderately steep to mountainous (Slope > 30%)

2. Are there signs of soil erosion or landslide anywhere within 500 m of the proposed site?

☐ Yes ☐ No

If yes, please describe (where, nature) _____

3. Is there any surface water body (river, canal, stream, lake, wetland) within 500 m of the proposed site?

☐ Yes ☐ No

If yes, describe each water body:

Name (including type, ie, river, canal or stream)	Dimensions	Status and Uses (Is it polluted? Is domestic or other wastewater discharged to it? What are its uses, eg, agriculture, domestic, industrial, washing, fishery)

4. Is there any groundwater well on the proposed site or within 500 m of the proposed site?

☐ Yes ☐ No

If yes, describe each well:

Type (Dug well, tube well, hand pump)	Location (Village, road, mohalla, etc. and distance from the site)	Depth and Yield	Uses (Drinking, agriculture, domestic, industrial, washing, livestock)

5. Is any critical wildlife habitat found on, or within 1 km of the proposed site of the facility?

☐ Yes ☐ No

If yes, please describe _____

It is recommended that the opinion of the Punjab Wildlife Department should be obtained regarding the wildlife sensitivity of the proposed site.

Please attach the relevant opinion or no objection certificate of the Punjab Wildlife Depart if the opinion of the Department has been sought.

6. How many trees are there on the proposed site? _____
7. Please provide the traffic count for all main roads adjacent to the proposed site or roads that will provide access to the site. The count should be based on data collected, for both directions, on at least three typical working days. Use the following format:

Road _____ Count Location _____

	6:00 am- 9:00 am	9:00 am- 12:00 noon	12:00 noon- 3:00 pm	3:00 pm- 6:00 pm	6:00 pm- 9:00 pm
Large vehicles (trucks, buses, tractor trolleys, Minibuses)					
Medium sized vehicles (Suzuki pickups, cars, jeeps, taxis)					
Small vehicles (Rickshaws, motorcycles, scooters)					
Slow vehicles (animal- driven carts, tongas)					
Others					

(Please add additional sheets, if needed)

8. What is the present land use in the vicinity (roughly a radius of 500 m) of the proposed site?

	Residential (Thick, Moderate, Sparse)	Commercial (Office, Shops, Fuel Stations)	Open Land (Parks, Farmlands, unutilized plots, barren land)	Industrial	Other
Description					

(Please attach a map of the proposed project site and indicate roughly the area that you have considered for this evaluation)

9. How are the general hygienic conditions of the project area?

- ☐ Generally clean
☐ Fair
☐ Poor

10. Is there any bad odor in the project area?

- ☐ Yes ☐ No

What is the source of the odor? _____

11. Is there any site of cultural importance (graveyard, shrine, mosque, archaeological site) within 1,000 m of the proposed scheme?

☐ Yes ☐ No

If yes, please describe? _____

12. What main sources of pollution exist within a radius of 1000 m of the proposed site:

Name of the Source	Type of Pollution (Noise, air water)	Location (Village, road, mohalla, etc.)	Distance from Site

Section IV: Impact Assessment and Mitigation Measures

Potential Negative Environmental Impacts	Tick, if relevant	Mitigation Measures	Tick, if proposed	Monitoring Plan
Site Selection and Harvest Planning	☐	Harvesting area has been selected outside protected areas, national parks, wildlife sanctuaries and critical habitats.	☐	Verify approved harvesting maps before commencement.
		Harvesting has been restricted to approved compartments/coupes only.	☐	Field inspection of harvesting boundaries.
		Buffer zones have been maintained around rivers, streams, wetlands and springs.	☐	Periodic inspection of buffer strips.
		Steep slopes and highly erosion-prone areas have been excluded from harvesting.	☐	Verify slope maps and field observations.
		Rare, endangered and protected tree species have been identified and excluded from harvesting.	☐	Inspection before and during harvesting.
		Harvesting has been scheduled outside wildlife breeding and nesting seasons where applicable.	☐	Review harvesting schedule.
Loss of Vegetation and Biodiversity	☐	Only marked trees approved in the harvesting plan will be felled.	☐	Random inspection of harvested trees.
		Seed trees and mother trees have been retained for natural regeneration.	☐	Field verification after harvesting.
		Understory vegetation will be protected as far as practicable.	☐	Site inspections.
		Regeneration areas will be protected from unnecessary disturbance.	☐	Monitoring of regeneration success.
		Reforestation or assisted natural regeneration will be undertaken where required.	☐	Annual survival count of planted seedlings.

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Soil Erosion and Land Degradation	☐	Skid trails and extraction routes have been planned to minimize soil disturbance.	☐	Inspection during harvesting.
		Machinery movement will be restricted to designated routes.	☐	Routine field inspections.
		Water bars, cross drains and erosion control measures will be installed where required.	☐	Inspection after rainfall events.
		Disturbed areas will be stabilized and rehabilitated after harvesting.	☐	Post-harvest inspections.
Water Pollution	☐	Fuel, lubricants and chemicals will be stored away from water bodies.	☐	Weekly inspection of storage areas.
		Refueling and maintenance will not be carried out near streams or rivers.	☐	Routine field inspection.
		Drainage patterns will not be obstructed during harvesting.	☐	Inspection during harvesting.
		Sediment control measures will be implemented where necessary.	☐	Water quality observations after rainfall.
Air Quality	☐	Vehicles and machinery will be maintained to minimize exhaust emissions.	☐	Maintenance records review.
		Water will be sprinkled on forest roads where dust becomes excessive.	☐	Visual inspection during dry weather.
		Open burning of logging residues will be avoided unless specifically approved.	☐	Site inspections.
Noise and Vibration	☐	Machinery will be properly maintained to reduce noise.	☐	Equipment maintenance records.
		Harvesting operations will be limited to daytime hours near settlements.	☐	Community feedback and inspections.
Waste Management	☐	Waste oils, filters and lubricants will be collected and disposed of through authorized facilities.	☐	Waste disposal records.

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		Domestic waste generated by workers will be collected in designated containers.	☐	Regular site inspection.
		No littering or dumping of waste in forest areas or watercourses will be allowed.	☐	Routine inspections.
Forest Fire Risk	☐	Firefighting equipment will be available at harvesting sites.	☐	Inspection of firefighting equipment.
		Workers will be trained in fire prevention and emergency response.	☐	Training records.
		Smoking and open fires will be prohibited except at designated safe locations.	☐	Field inspections.
Wildlife Disturbance	☐	Wildlife corridors will remain unobstructed.	☐	Site inspection.
		Hunting, trapping and collection of wildlife by workers will be prohibited.	☐	Worker awareness and inspection.
		Noise will be minimized in wildlife-sensitive areas.	☐	Field observations.
Occupational Health and Safety	☐	All workers will wear appropriate Personal Protective Equipment (PPE).	☐	Daily inspection.
		Chainsaw operators will be properly trained and certified where applicable.	☐	Review training records.
		First aid kits and emergency communication facilities will be available.	☐	Weekly inspection.
		Safe tree felling procedures will be followed.	☐	Supervision during harvesting.
Community Health and Safety	☐	Warning signs and barriers will be installed around active harvesting areas.	☐	Site inspection.
		Public access to harvesting areas will be controlled where necessary.	☐	Routine inspection.

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		Local communities will be informed of harvesting schedules.	☐	Consultation records.
Transportation of Timber	☐	Timber trucks will comply with approved load limits.	☐	Vehicle inspection records.
		Loads will be properly secured before transport.	☐	Visual inspection.
		Existing roads damaged during timber transport will be repaired.	☐	Road condition monitoring.
Post-Harvest Site Restoration	☐	Temporary camps, fuel storage and equipment will be removed after completion.	☐	Final site inspection.
		Skid trails not required for future management will be rehabilitated.	☐	Post-harvest inspection.
		Harvesting residues posing environmental or fire hazards will be properly managed.	☐	Inspection after completion.
		Monitoring of natural regeneration or reforestation will continue until satisfactory establishment is achieved.	☐	Annual monitoring reports.

Section V: Undertaking

I, _____ (*full name and address*) as proponent for
_____ (*name, description and location of project*) do hereby solemnly affirm and declare:

1. The information on the proposed project and the environment provided in Forms I, II and III are correct to the best of my knowledge
2. I fully understand and accept the conditions contained in the Guidelines for _____ (*name, number and version of the guidelines*)
3. I undertake to design, construct and operate the project strictly in accordance with the project described in Form I, submitted with this undertaking.
4. I undertake to implement all mitigation measures and undertake monitoring stated in Form IV, submitted with this undertaking.

Date _____

Signature _____

Name _____

Designation _____

(with official stamp/seal)

Witnesses:

Signature

Name

Address

1

2
