European Bank
for Reconstruction and Development

Sub-sectoral Environmental and Social Guidelines: Logging

PROCESS DESCRIPTION

Logging comprises the harvesting of timber through the felling of trees either selectively or by clear felling and may include cutting the timber into lengths. Timber logs are then moved to designated loading points. A distinction should be made between forestry operations involving natural forests and intensively managed forests. The value of natural forests is usually higher and, therefore, may require thorough inventory and planning before logging can take place.

Natural forests: Defined by [Organisation for Economic Co-operation and Development (OECD)] Forests with natural species and ecological processes and for which there has been continuity of ecological processes over a very long period of time

Intensively Managed Forests: Defined by [Organisation for Economic Co-operation and Development (OECD)] as Forests regenerated planted and managed for intensive industrial fuel wood production. Typically logging has already taken place in the past.

KEY ENVIRONMENTAL, HEALTH AND SAFETY RISK/LIABILITY FACTORS

Regulatory Requirements and Legality

Broadly, illegal logging is: the harvest, transportation, purchase or sale of timber in violation of national laws and international agreements.

National and Regional requirements for forestry management by logging companies and concessional agreements specify companies' responsibilities for reforestation and harvesting. These are undergoing constant evolution and may change drastically during the life of a leasehold, therefore requiring adaptation of the company or re-negotiation of operating standards and demarcation of logging areas.

It is worth noting that legal harvesting does not necessarily mean sustainable harvesting.

Forest Management and Sustainability

The aim of sustainable forest management is to achieve a balance between felling, and replacement by means of natural regeneration or replanting. Natural forests have evolved to form a complex habitat which supports diverse plant and animal life. The habitat and the life it supports is significantly affected by tree felling. It is important to retain some natural forest areas in an undisturbed state as a refuge for plants and animals which can re-colonise regenerated areas subsequently.

Sustainable Forest Management is a management regime that integrates and balances social, economic, ecological, cultural, and spiritual needs of present and future generations (United Nations, 1992).

Forest Certification

Certification to an internationally recognised certification scheme is seen as a key means to demonstrate Sustainable Forest Management. The two most commonly recognised certification schemes are the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC).

Hydrological regime

Felling and logging operations close to water courses may adversely affect downstream water quality (turbidity and siltation) and impact on downstream water users. Fish farms and

spawning areas may be damaged leading to litigation. Improper storage and use of chemicals (fuels, pesticides) could also contaminate water systems.

Fire Hazard

Anthropogenic activity increases the risk of fires during dry periods due to the introduction of flammable material and spark sources and the increased dry organic matter upon harvesting. Climate change is expected to contribute to increased risk of fire in many forested areas.

Soil Degradation

Significant damage to soil structure and chemistry can be caused by the use of heavy machinery on the forest floor and the construction of link roads, as a result of soil compaction as well as soil erosion. Areas which are vulnerable to erosion include unstable slopes, particularly those with inclinations greater than 30%, flood plain soils, areas adjacent to river channels and stream crossings. Soil degradation compromises reforestation activities because it limits plant growth due to poor drainage or loss of nutrient rich topsoil.

Reputational Risk

o companies engaged in illegal or unsustainable forestry are vulnerable to negative publicity and disruption of their activities. Downstream companies will not wish to buy wood from such suppliers because of end consumer preferences. Once allegations of environmentally unsound logging are made in the international community, whether true or not, it may take years for a logging company to rebuild its reputation and regain lost market share.

Climate Change

Land use change to agriculture and forestry activity produces approximately 17% of global carbon dioxide emissions, making it the third largest source of greenhouse gas emissions (Eliasch Review, 2008). Forthcoming climate change regulation may impose a cost of carbon for forestry operations with significant upside and downside potential for forestry operations depending on the shape that legislation takes. Sustainable Forest Management can contribute to reduced greenhouse gas emissions as the forest stock will be increasing as opposed to reducing.

Hazardous Materials

In planted forests the use of pesticides may be widespread. Pesticides should be managed to avoid their migration into off-site land or water environments by establishing their use as part of an Integrated Pest Management strategy and a documented Pest Management Plan. In addition, overuse of fertilizers could cause disruption to local water ecosystems (for instance through eutrophication caused by overuse of nitrate fertilizers).

Effects on Forest Flora and Fauna

Logging can have a significant effect on the forest habitat and plant and animal species it supoorts. Direct damage can occur through tree felling, disturbance of soil and through structural damage to the remaining stand. Indirect effects on botanical diversity will occur as a result of changes in light intensity, structural diversity of the forest and the introduction of competitive weed species. Populations of insect, bird and mammal species will be particularly affected by the changes in structural diversity and planting regimes. These changes may greatly reduce its ecological value.

Effects on Landscape

Large scale clear cutting impacts the landscape significantly and alters the scenery. This effect may be a temporary, visual one or it could lead to permanent change should the area incur significant soil erosion from logging activities.

Reclassification of Forest Areas

In the course of regulatory evolution, certain areas may be re-classified as protected areas at the national or international level. These are usually pre-determined and a logging operation must identify their location early on, prior to start up. Public consultation on the operations, independent of regulatory planning and requirements, should be undertaken at the local and national levels as it may influence subsequent litigation claims arising, for example, from erosion.

KEY SOCIAL, LABOUR AND COMMUNITY RISK/LIABILITY FACTORS

Workers' Health and Safety

Forest operations involve a number of heavy physical activities that may result in injury and accidents to workers. They may result from use of chainsaws and axes or machetes during felling, crosscutting and de-branching activities. Use of cables to extract logs may expose workers to injury from cable breakage under tension or the sudden release of loads. Falling trees and loose branches are also a significant cause of injury. Electricity supply lines can also represent significant risks to workers who may receive severe burns, for example, when trying to remove trees felled onto overhead power lines.

Chemical hazards in forestry operations include exhaust gases, oil aerosols, gasoline aerosols, explosives, herbicides and pesticides. Loggers often complain about irritation of the upper respiratory tract and eyes, skin disorders, headache, nausea and fatigue, which can be at least partly explained by these exposure levels.

Loss of worktime and personal injury claims present a significant potential cost to firms.

Labour standards

Labour standards may be formal, such as national level regulation and international agreements, or informal, expressed through norms and values. In addition fair wages and working hours, and acceptable decent working conditions should be expected.

Labour standards should apply to the company's own employees as well as to all contractors and sub-contractors engaged. In addition, labour standards should be expected to be enforced by key suppliers.

Ethics and bribery

Strong governance structures and transparency in reporting are also important, particularly since charges of corruption and bribery can negatively impact a company's reputation and its ability to enter into business relations with partners. Logging companies may use unethical means (such as bribing government officials) to obtain logging concessions and permits. Companies may also violate the rights of local peoples by bribing certain members of the community to obtain false acceptance for logging.

The risks are higher in developing countries where institutional checks and enforcement are weaker. A formal business code of ethics is now standard practice for many companies..

Property and Land Use Rights

Logging concessions may have been granted in areas where local and indigenous people claim customary property rights. Land use rights held by indigenous communities may be undocumented and have evolved over millennia. In contrast to legal rights they can be much harder to demonstrate but are arguably equally legitimate.

Forestry operations should consider, and be compatible with, the local land tenure rights regime, which may include community-based forest management systems.

Perceived violation of local land use rights may lead to protests and conflict which can be costly both in terms of lost time and reputation.

FINANCIAL IMPLICATIONS

Maintaining the Resource

Sustainable harvesting of forests can have significant financial implications. This may mean restricting harvesting activities on the basis of sustainable yield plans and ensuring reforestation by ground enhancement measures and the planting of new stock. Areas of forest recently felled need to be reforested almost immediately to ensure that the younger trees grow rapidly and fill the gaps in the canopy. This will also prevent significant soil degradation from occurring. The provision of nursery facilities is generally required, which entails significant costs.

Soil degradation will result in significantly reduced yields. To reduce the risk of soil erosion, some forest areas (buffer strips) may need to be left un-harvested, especially on slopes. Poor weather conditions and potential damage to soil can delay harvesting operations.

In order to minimise erosion, bare un-vegetated areas should be replanted as soon as practical so that new roots can bind the soil together. These issues all have financial implications, whether it be in terms of lost profit, slow growth or cost of replanting. There is also danger of 'exhausting' the soil through over farming of the land. This is especially true of mono-culture plantation farming which can degrade soil fertility.

Liability may arise if water quality or fish hatcheries are affected by silt generated during logging operations.

Climate Change and Biodiversity

In addition to operational costs resulting from the negative impacts of climate change the regulatory response to climate change may impose a cost of carbon on forestry companies.

On the other hand, measures to protect forests in light of concerns over climate change and biodiversity loss could also lead to forest products companies being out-competed for key forest resources and ecosystem services by new entrants from other sectors. For example, the sale of forest carbon rights may become more attractive to forest owners than concession rights for conventional timber extraction.

Hence, the effect of legislation on forestry companies is currently uncertain and could be either positive or negative.

Access to markets

With changing legislation and customer requirements, access to markets could be at risk if sustainable forest management principles are not upheld or cannot be proven.

ENVIRONMENTAL, HEATH AND SAFETY IMPROVEMENTS

Environmental

Potential environmental improvements may include:

- The felling of trees in such a way as to minimise damage to the remaining stand;
- The establishment of reserved areas for natural regeneration;
- The maintenance and planting of native species to ensure ecosystem regeneration (provision of nurseries);
- Development of plans to prevent forest fires;
- Maintain a buffer strip of vegetation adjacent to water bodies;
- Avoid harvesting at critical times in the life cycle of key animals, e.g. during spawning seasons and bird nesting;
- Adopt sustainable forest management practices;
- Develop the operation to a sufficiently high standard and seek sustainable forest management certification such as FSC or PEFC;
- Monitor and report environmental impacts of operations (such as fuel use, pesticide use, land use changes); eg. Use external verification of operations against SFMs standards.
- Include a section in the annual report on sustainabiltiy of logging operations.
- Implement an environmental management system to support progress (certified to a recognised standard such as ISO14001);

IHealth and Safety

- Establish an appropriate Health and Safety policy;
- Provide regular training for workers and management on safety procedures;
- Develop KPIs for Health and Safety with monitoring, reporting and target setting;
- Provide appropriate personal protective equipment – such as safety boots, safety trousers, close-fitting clothing, gloves, safety helmet, goggles, visors and ear muffs;
- Ensure that all machinery is guarded according to manufacturer's instructions;
- Plan regular maintenance schedules for all equipment;
- Ensure proper maintenance, training of drivers, clear marking of pedestrian routes and control of access to loading areas in order to reduce vehicle related injuries;
- Implement a Health and Safety management system (certified to a recognised standard such as OHSAS 18001).

SOCIAL, LABOUR AND COMMUNITY IMPROVEMENTS

Social and Labour

- Implement a formal code of business conduct, which outlines the principles by which individual employees and the organisation must conduct themselves;

- Ensure fair wages in line with national law and sector standards average;
- Develop a policy covering labour practices for contractors and sub-contractors;
- Develop a whistle-blowing policy to allow anonymous reporting of any ethical violations without fear of repercussion.

Community

- Ensure Free, Prior and Informed Consent (FPIC) is obtained. This is a process of participative consultation to enable indigenous peoples, local communities and other stakeholders to express their views in negotiations and for these views and wishes to be included in the decision-making process, especially when land rights are being awarded or when resettlement will be required;
- Prior to logging consult with local communities to understand and mitigate on-going impacts (positive and negative);
- Develop policies to protect the right of indigenous people to access land and food sources, to preserve traditional ways of life and to enjoy ecosystem services;

ENVIRONMENTAL, HEALTH AND SAFETY ACTION PLAN

Recommended environmental action plans should focus on the sustainable management of the forest.. Key actions should include:

- Develop and implement a Forestry Management Plan regularly reviewed, covering:
  - Selection, felling and extraction of timber;
  - Construction, maintenance and rehabilitation of roads, bridges, extraction routes, landings and firebreaks;
  - Regeneration of harvested species (maintenance of nursery stock);
  - Environmental protection including designating protected areas and rehabilitation of selectively logged areas;
  - Fire management and control;
  - Pest, disease and weed control;
  - Contingency plans for all aspects of the operation;
- Implement a plan for conserving biodiversity;
- Retain corridors of uncut forest between reserved and harvested areas to allow movement of key plant and animal species;
- Consider achieving timber certification to an international timber certification scheme;
- Develop and implement an environmental management system;
- Conduct regular environmental audits of logging operations.

Health and Safety

- Implement a Health and Safety management system;
- Monitor and report progress against Key Performance Indicators (KPIs);
- Schedule regular training for all workers and maintenance of equipment;
- Encourage a culture of 'safety first' through communication from the top;
- Incentivise a culture of safety by linking H&S performance to reward structures.

SOCIAL, LABOUR AND COMMUNITY ACTION PLAN

- Design and communicate an appropriate code of business conduct that considers concerns of key stakeholders (shareholders, employees, government bodies, NGOs);
- Implement best-practice labour standards (in line with ILO principles); consider signing up to international frameworks such as the UN Global Compact;
- Implement a process to assess labour and human rights conditions for contractors and sub-contractors;
- Design a robust and on-going community engagement process to measure and report on impacts (positive and negative) on local communities;
- Consider measuring and communicating wider socio-economic impacts (job creation, infrastructure development) – for example using the WBCSD Measuring Impact Framework.

GUIDE TO INITIAL DUE DILIGENCE SITE VISITS

The issues and risks associated with a site will vary depending on size of operation, site location, country of operation and quality of management. During an initial site visit to a logging operation it will be important to assess the following:

Environmental, and Health and Safety

- Examine logging permits, quota records and correspondence with authorities;
- Obtain information regarding growth rates/yields.
- Check the status of environmental permits at the site (such as those related to disposal of waste and noise levels);
- Enquire as to the quality of relationships with regulators and whether any fines are outstanding;
- Estimate levels of environmental awareness amongst staff;
- Check whether staff are wearing appropriate personal protective equipment (PPE);
- Are pesticides, fuels and other chemicals stored appropriately?
- Check how waste is handled on site especially hazardous waste;
- Check the age and condition of equipment, look for signs of wear and tear, degradation, leaks and breaks;
- Have there been any recent (within the last three years) incidents such as serious injuries,

fires / explosions, spills (check the accident and near miss figures at the site, contact the local environmental authorities). Is there insurance cover in place for such incidents?

- Have the sites been inspected by the regulatory authorities for health, safety and environment?

Labour issues

- Check that labour standards, contracting and remuneration are in line with national law and are consistent with the average for the sector;
- Check that hours worked, including overtime, are recorded and that staff receive written details of hours worked and payment received;
- Has the Company received inspections from the local labour inspectorate in the previous three years? Have these resulted in any penalties, fines, major recommendations or corrective action plans?
- Does the organisation have a grievance mechanism which allows employees to raise workplace concerns?
- Are employees free to form, or join, a workers' organisation of their choosing?

Community engagement

- Is there a policy and process for regular consultation with local community representatives?
- Is there a policy to prioritise community concerns and integrate into management decisions?
- Is there a process to communicate progress to local communities and other relevant stakeholders (such as local government authorities, NGOs etc.)?

REFERENCES AND ADDITIONAL SOURCES

Centre for International Forestry Research (CIFOR)
http://www.cifor.cgiar.org/

Chatham House illegal logging site http://www.illegal-logging.info/

Food and Agriculture Organisation of the United Nations (FAO) Forestry
http://www.fao.org/forestry/home/en/

The Forests Dialogue http://research.yale.edu/gisf/tfd/

The Economics of Ecosystems and Biodiversity (TEEB) COPI (Cost of Policy Inaction) report
http://ec.europa.eu/environment/nature/biodiversity/economics/teeb_en.htm

UK Government Central Point of Expertise on Timber Procurement (CPET)
http://www.proforest.net/cpet

The Forest Stewardship Council http://www.fsc.org/

The PEFC Council (Programme for the Endorsement of Forest Certification schemes)
http://www.pefc.org

The World Bank Forests and Forestry
http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTARD/EXTFORESTS/0,,menuPK:985797~pagePK:149018~piPK:149093~theSitePK:985785,00.html

WRI/WBCSD Ecosystems Services Review Guidelines
http://www.wbcsd.org/DocRoot/xp3g1DqCKAhllPnjj5Qs/Corporate_Ecosystem_Services_Review.pdf

FAO Pesticide Disposal Series http://www.fao.org/ag/AGP/AGPP/Pesticid/Disposal/guides_en.htm

High Conservation Value Resource Network http://www.hcvnetwork.org/

Round Table on Sustainable Palm Oil (RSPO) http://www.rspo.org/

International Labour Organization – core conventions and Convention 169, to recognize, promote and protect indigenous and tribal peoples' rights (ILO, 2003)