



Forestry

Medium Risk Sector



Planting of forests and logging activities.
For further wood processing refer to the related 'Wood Products' sector.

Related Sectors:

- Wood Products
- Crops and Gardening
- Pulp and Paper



Production Processes

Forestry relates primarily to the logging of trees in forest areas and plantations. Tree trunks and branches are cut in order to use the timber directly or to market it as a raw material for further processing. There are two main methods of logging: Clear cutting and selective cutting. The most common in commercial operations is clear cutting, a practice that removes essentially all trees in a selected area.

• **Clear cutting:** The most common method in commercial operations. All trees are removed in a selected area.

• **Selective cutting:** Only the largest, most commercially viable trees are cut, leaving younger trees and non-commercial trees to continue to grow. The harvesting of trees is mostly accomplished mechanically by large felling machines and chain saws. The logs usually are stored for a short time at a collection point, from where they are transported onward for further manufacturing.

Most conventional logging results in either pulpwood for the manufacture of paper products or saw logs for further wood production. A significant percentage of wood is used as firewood or for charcoal production and, today, a very large and growing volume of logging output is used in chipwood production.

Sustainability Issues

	Energy
	Water Use
	Emissions to Water
	Waste
	Emissions to Air
	Ecosystems
	Workplace Health & Safety
	Disaster Risk
	Site Contamination

Sector Rating

- High risk issue
- Medium risk issue
- Low risk issue

Risks & Opportunities

- **Logging activities may have irreversible impacts on ecosystems.**
Clearcutting forests exposes soil to erosion and increases the risk of floods and landslides. Fertile topsoil may be carried away, making reforestation or agricultural use impossible. Deforestation of large areas entail a risk for regional biodiversity.
- **Logging equipment (saws, axes etc.) and moving timber entails significant health and safety risks.**
The main health and safety risks lie in the use of logging equipment such as chainsaws, in falling timber and in handling timber for transport. Dust and noise may negatively affect the health of workers if no preventive measures are implemented.
- **Tree plantation in monocultures involves the use of large amounts of agrochemicals.**
While tree plantations avoid some of the negative effects of clearcuts (soil erosion, floods, landslides) monocultures still have a negative effect on soil fertility and biodiversity. Monocultures may require the application of large amounts of pesticides and fertilizer, which presents risks to man (workers) and the environment, particularly to water.
- **Reforestation may be a business opportunity.**
The Kyoto protocol - ratified by many countries - allows trading in CO2 absorption certificates. Reforestation is the practice of re-establishing a forest on a site that has recently been harvested or the reestablishment of a forest on a site that has been cleared for some period of time. Reforestation acts as a carbon reserve since it results in the build-up of carbon stocks in the newly established biomass.