



Wood Products

High Risk Sector



Processing of cut wood into products such as furniture or construction materials.

For logging refer to the related 'Forestry' sector.

Related Sectors:

- Construction
- Forestry



Production Processes

Wood products are widely used in construction, e.g. for casements, roofs, walls and flooring, as well as for manufacturing furniture.

Raw logs harvested from forests are delivered to a **sawmill** where they are debarked manually, mechanically or with high-pressure water jets. The logs are then sawn into boards and large-dimension lumber, before they are cut to the proportions as required for their final purpose.

A large proportion of wood products is **treated with chemicals** in order to protect the wood from decay or biological attack from fungi and insects, such as termites. Wood preservation agents may be applied like paint, or the wood products impregnated in high-pressure reactors. The output of a wood manufacturer usually consists of boards, beams, roundwood, particleboard, plywood, furniture, etc. **Boards and beams** often make up the largest percentage of the output. **Roundwood** is debarked and peeled and used in a variety of ways including retaining walls, marina piles, building foundations, and telegraph poles. **Particleboard** is made out of wood particles that stem partially from wood processing waste. The wood particles are bonded together with a synthetic resin. The board is then blended with additives such as synthetic adhesives and wax. **Plywood** is normally produced in the form of panels. Most is used in the construction and boat-building industries and for railways, where the ability to withstand large forces is very important. Production processes for wood furniture includes the following steps: Sawing, planing, sanding, gluing, and finishing.

Sustainability Issues

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

Sector Rating

- H** High risk issue
- M** Medium risk issue
- L** Low risk issue

Risks & Opportunities

- **Equipment for cutting wood and hazardous chemicals for wood preservation are major risks to workers' health.**
In wood processing, the primary risks to the health and lives of workers are linked to equipment for sawing and drilling, to hazardous chemicals and to exposure to dust and noise. In particular, the chemicals that are used for wood preserving entail a risk to human health and the environment.
- **Using wood from non-sustainable sources presents a risk to reputation.**
Logging may have a material impact on ecosystems, particularly in sensitive areas. Negative side-effects may be deforestation and loss of biodiversity. Well-managed forests and plantations ensure a sustainable supply of wood. Particularly in export markets, there is demand for sustainably harvested wood products.
- **The high flammability of wood, particularly wood dust, as well as chemicals presents a disaster risk.**
Fires, explosions and accidental emissions of hazardous substances may have disastrous effects on a lumber or other wood processing plant and its surroundings. Approaches to managing disaster risks include emergency planning, safe equipment and process design as well as the substitution of hazardous substances.
- **Contamination of soil and buildings presents a risk to health and real estate value.**
Spills of liquids used for wood treatment, leaks in tanks or pipes, disposal of liquid waste and incidents involving hazardous substances may contaminate buildings and the ground. These contaminations may present a risk to groundwater resources or to human health. Contaminations can be avoided by training staff and technical measures such as proofed floorings and catchment tanks.