# USING OF FINE KINNEY RISK ASSESSMENT METHOD IN THE WOOD PRODUCTION PROCESS

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# INTRODUCTION

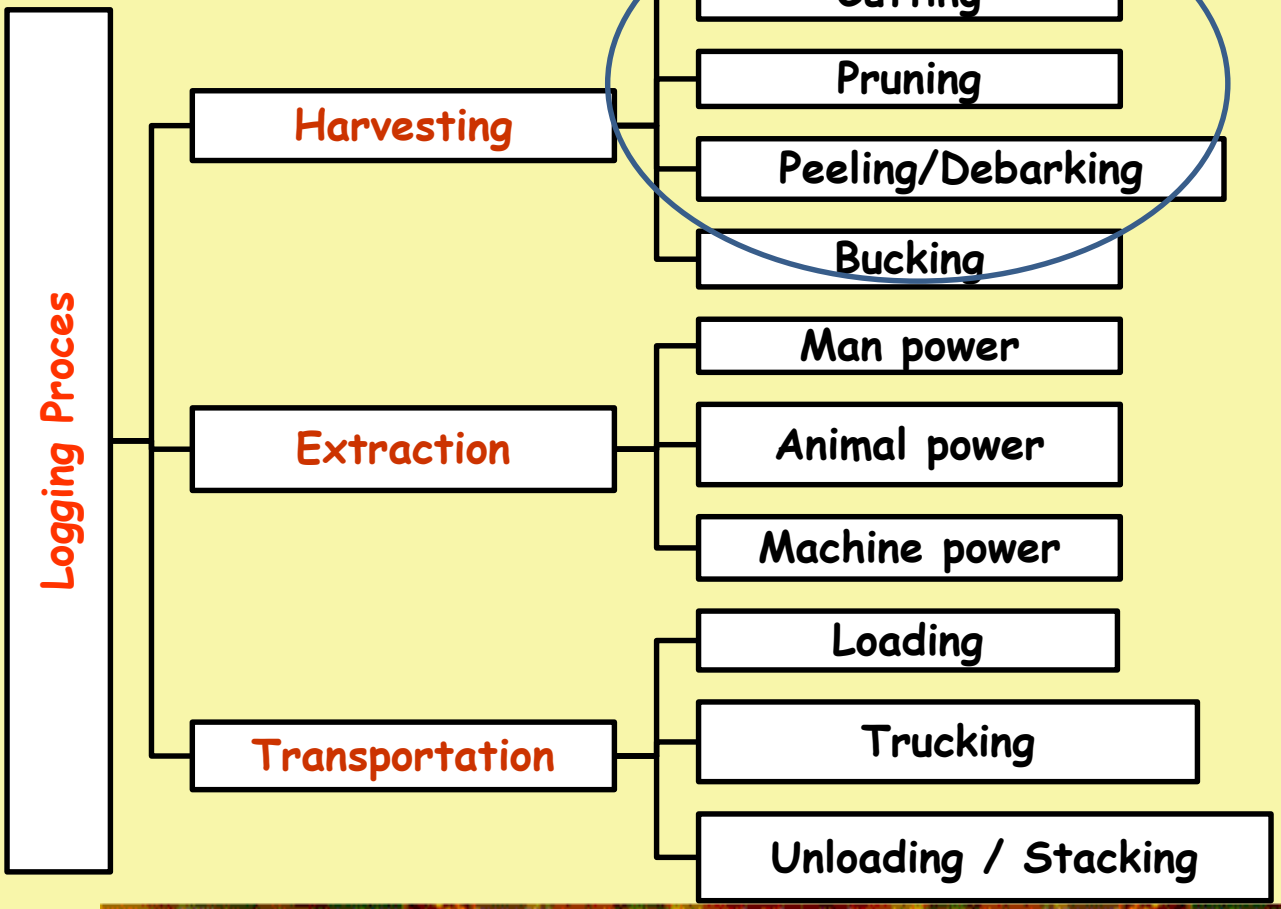
- Occupational health and safety in work places has gained more importance as importance attached to human increased and awareness on benefits of having healthy and safe working conditions climbed up in recent years.

A large part of the regulations on working life has put an emphasis on having safe working conditions for workers and minimization of exposure of workers to occupational diseases or work accidents.

# INTRODUCTION

- One of the most risky and most difficult forestry activities is the wood raw material production activity which is conducted regularly every year.

# Wood Raw Material Production Process



# INTRODUCTION

- Approximately 60% of the injuries or deaths that take place during wood production process occur during tree harvesting.

  Similarly, a study in Canada revealed that 40% of the deadly accidents that occurred in forestry works took place directly in chainsaw-related tree harvesting activities, which made it a priority to conduct risk assessment particularly for the tree harvesting stage.

# Risk Assessment Cycle

# INTRODUCTION

- This study conducted a risk assessment by evaluating separately the cutting-rolling, branch-taking, peeling, and bucking that constitute the first stage of wood raw material production.
  It was used the Fine-Kinney risk assessment method that takes into consideration the frequency parameter as well as the accident probability frequency.

# MATERIAL AND METHOD

- The probable hazard situations were determined for the wood raw material production activities in the forests of the Eastern Black Sea Region in the north of Turkey.

  This study examined the processes of cutting, rolling, branch-taking, topping, peeling and bucking works that are harvest activities of the wood raw material production activities.

# MATERIAL AND METHOD


Chainsaw

Axe

Peeler/Debarker

# Decision and action by risk levels

| | Total rating | The classification of the level of risk | Action |
|---|---|---|---|
| R1 | R < 20 | Negligible risk | No action is required |
| R2 | 20< R < 70 | Low risk | Action plan must be taken |
| R3 | 70 < R <200 | Medium risk | Carefully monitored and corrected |
| R4 | 200 < R < 400 | High risk | Eliminated by taking into the short-term action plan |
| R5 | R > 400 | Extreme risk | Take immediate precautions by suspending work |

# RESULTS AND DISCUSSION

- The harvesting stage of the wood raw material production activities was examined in sub-stages as general preparation, preparation-at-tree, cutting-rolling, branch-topping, bucking and peeling.
  Each sub-stage was thoroughly observed in the field at four stages and the probable hazard situations that are inherent in each of every sub-stage were listed based on the observations and literature information.

# RESULTS AND DISCUSSION

The hazard situations were evaluated;

the characteristics of the work,

the equipment and machinery,

the work environment,

the nature of workers,

Handled in four classes as;

the work environment,

physical hazards,

chemical hazards,

hazardous methods and processes.

# RESULTS AND DISCUSSION

- A trip to the cutting area to determine the topographic, climatic and stand characteristics as well as checking whether the workers use protective equipment, and examining the maintenance of the equipment to be used (saw, chain, sharpening tool, pruning tool, peeling tool, and bucking meter and etc.), spare parts and reserve fuel/oil.

# RESULTS AND DISCUSSION


Preliminary Preparation

Preparation-at-Tree

Cutting

Pruning

Peeling

Bucking

# CONCLUSIONS AND RECOMMENDATIONS

- The wood harvesting is composed of different stages such as preparation, cutting-rolling, pruning and peeling.

  Each stage requires in itself different works, working postures and different tools.

  It may expose workers to various hazards.

# CONCLUSIONS AND RECOMMENDATIONS

Therefore, each stage was evaluated in itself according to its own parameters and probable hazards were defined accordingly.