

## Penerapan teknologi kayu pada kerangka atap dalam pembangunan perumahan secara massal akan meningkatkan nilai tambah industri konstruksi

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### Abstrak

For the last two decades, national development has been growing rapidly by 6-8% per annum. Nevertheless, gaps between regions and between sectors are still found which need to be taken care of for the future sustainable development, especially in construction industry. The average national growth of 8% has not been followed by the contribution increase to GDP, which is about 4-6% for the same period. Endeavor in support of raising contribution value to GDP through the development of wood technology application in strategically sector, in housing sub sector, in particular of construction industry would have important meaning for the development in general.

This research is directed to evaluate the potential of the application of wood technology using metal connector on housing roofs in large scale so that it can be used to provide value added by those sectors that can take benefit of the techno economic value of wood to the optimum. To this end the research will also be carried out to the upstream through downstream, especially those related to and influencing the supply and demand sides of the potential of the application of wood technology.

A survey in literature shows Indonesia as having about 4000 kinds of wood of which 268 kinds are recorded as spreader and only 62 kinds or 179 botanical species are traded with economic value is needed in the development. In addition, this research will take stock of and evaluate the outcome of applying wood construction technology that has been developed and well tested in other countries, such as Australia. Research is also carried out on the potential of mass production by fabrication system or manufacturing and on the value added of the technology and various controls needed to achieve the intended objective. Various quantitative methods, including mathematical and statistical ones, have been used with regression for house supply analysis and wood contribution for roof frame, comparison of wood use against the metal connector and hypothetical try out needed.

The result of the analysis is evaluated on statistical standard level regarding its validity, trustworthiness and forecasting. The data have been used in representing and describing the current conditioning of construction industry, especially in Indonesia.

The research result hopefully:

1. Can provide additional information to increase the value added of wood material for the development of construction industry at its downstream sector and specially in agricultural sector to provide indication of the kinds of wood in the upstream sector needed in the upstream sector needed in the future.
2. Provides the picture of natural resource of Indonesia in the frame of its maximum utilization and development.

3. Gives indication of how much of wood economizing scale is needed for the increase in construction value added that can be achieved by the application of wood technology know how, especially in housing sector.
4. Increases the awareness of those related parties to the objective of construction industry development in general and housing sector in particular so that it can :
  - i. Support the government program in developing wood resource potential from the development program of. Industrial Forest Plantation.
  - ii. Drive construction industry to achieve more profitable value added for development through the use of wood material efficiently.
  - iii. Provide required training and information for the application of wood technological know-how of highly beneficial usage to those related sectors, construction industry in particular.