



**1<sup>st</sup>**  
INTERNATIONAL WORKSHOP  
ADVANCES IN CLEANER PRODUCTION

**IV**  
SEMANA PAULISTA DE P+L  
CONFERÊNCIA PAULISTA DE P+L

## Cleaner Production Application in a Wood Industry in Amazon State

Bianca G. Pereira <sup>a</sup>, Ivan R. Neto <sup>b</sup>, Kaoru Yuyama <sup>a</sup>,  
Hugo G. Pereira <sup>c</sup>, Célio L. P. de Matos <sup>d</sup>

a. Instituto Nacional de Pesquisas da Amazônia, Manaus-Am, [bianca@inpa.gov.br](mailto:bianca@inpa.gov.br) e [kyuyama@inpa.gov.br](mailto:kyuyama@inpa.gov.br)

b. Universidade Católica de Brasília, Brasília-DF, [ivan@pos.ucb.br](mailto:ivan@pos.ucb.br)

c. Kali-Umwelttechnik GmbH Sondershausen – Alemanha, [Hugo.Galucio@k-utec.de](mailto:Hugo.Galucio@k-utec.de)

d. Serviço de Apoio às Micro e Pequenas Empresas do Amazonas, Manaus-AM, [celio@am.sebrae.com.br](mailto:celio@am.sebrae.com.br)

---

### Abstract

This study shows the proposal of implantation of a Clear Production program (PmaisL) in the company Portela Industry and Commerce of Wood, located in Manaus-Am. Currently, the Portela company, wood floor producer for the external market, operates at 25% of its full capacity, due to difficulties acquiring legalized raw material. In this current situation, the practice of low cost PmaisL has been suggested, as well as the Sebrae-AM subsidy for the Technological Consulting Program, with economic and environmental benefits. Starting from the application of PmaisL methods and based on the opportunities identified, the option taken was to work on the improvement of operational practices in the wood drying sector, as it is directly related with quality control, besides this being the initial basic process for wood improvement. As an intervention proposal, an accompaniment timetable of temperature and humidity of the drying controller/programmer was created to be followed by an employee put in charge of this function. This measure generated a reduction of four days in heater drying time, with a 1,4% reduction in defective raw material, 50% reduction in water consumption in the heater, 25% in energy consumption, 25% in reuse of residues in the ovens, thus decreasing pollutant gases emission by 25%. Other generated benefits were the creation of a new job position, reduction of risks with burning equipment and accidents caused by lack of control and the increased drier yielding. The good acceptance of the PmaisL by the manager was due to it implying no cost for the company, therefore the implementation occurred by means of behavioural changes and insertion of procedures in the task assignments.

**Keywords:** Environment management, residues reduction in the source, good practical, wood company, Amazon.

---