



## INTERNATIONAL WORKSHOP ADVANCES IN CLEANER PRODUCTION

"KEY ELEMENTS FOR A SUSTAINABLE WORLD: ENERGY, WATER AND CLIMATE CHANGE"

# Cleaner Production: The Case of the Automotive Metal-mechanic Local Productive Arrangement from Serra Gaúcha

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### Abstract

Industrial production allied to a vertiginous economic improvement, during the last decades, has provoked negative impacts to the planet's natural resources, what reflects in society's life quality and environmental health. Currently humanity has faced extremely complex environmental problems, whose solution seems to be in applying a preventive environmental strategy, instead of having corrective actions. Undertaker strategies, up to then summarized to the economic matter, such as competitiveness, efficiency, profitability, etc, start to concern about environmental variables, and it is, then, vital to incorporate them to productive processes. Organizations started to adopt new technological strategies, by means of implanting environmental management systems. Face the environmental matter, these systems are seen as a competitive difference, as well as a factor of organizational improvement, in order to rationalize the consumption of natural resources. The expectation is environmental management strategies, besides decreasing the environmental impacts, may generate more profit, increasing the company's competitiveness and efficiency. Within this scenery, there are different methodologies in environmental management, as well as practices of Cleaner Production, which consider the opportunity of reducing costs, once a polluting organization is usually an entity that wastes raw material and inputs. The objective of this study was to identify environmental innovations, Cleaner Production methodologies and the results of implementing all of this. Three companies were analyzed in the Automotive Metal-mechanic Local Productive Arrangement from Serra Gaúcha (South of Brazil). It is a multi-case qualitative research. From the results, it is possible to highlight companies implemented technological innovations, once the objective was to improve the productive process. Results from the implementation of Cleaner Production methodologies show the studied companies had improvements in factors related to the productive process, such as increasing the operational efficiency, reducing costs with raw material and energy, and improving the product's environmental quality. Consequently, all these improvements have generated competitive advantage for the company that is placed in a more and more global scenery.

*Keywords: Cleaner production, environmental management, operational efficiency.*

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