



3<sup>rd</sup>  
INTERNATIONAL WORKSHOP  
ADVANCES IN CLEANER PRODUCTION

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“CLEANER PRODUCTION INITIATIVES AND CHALLENGES FOR A SUSTAINABLE WORLD”

## The Cleaner Production Tool and the Management of Phosphorus in the Environment

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### Abstract

The development of strategies for management of phosphorus in the environment has been considered, increasingly, of great importance for the maintenance of the quality of life. This is because besides the correlation of phosphorus with the deterioration of water resources due to eutrophication, it is projected a decrease in availability of natural reserves of this nutrient, which are finite and non-renewable. Thus, besides the discussions on ways to strengthen the protection of waters, tools for source control and recycling of phosphorus in the environment are assessed, in order to ensure the sustainability of known and exploitable stocks of this nutrient in an integrated way. Given the above, our objective is to discuss the dynamics of phosphorus in the environment, presenting the experiences already adopted, to rationalize the use and the management of the nutrient, discussing the importance of introducing the concepts of Cleaner Production. As an illustration, we present a scaling potential load of phosphorus released daily into the waters of the Tiete river, located in São Paulo state, Brazil, from urban and agricultural activities developed in the watershed. It is verified that the Cleaner Production emerges as an important tool for pollution prevention and management support, as it can contribute to reduce emissions and for implementing changes in production processes, helping them to improve the perception of this subject by producers and consumers, and the fulfillment of public policies for environmental preservation.

**Keywords:** *Phosphorus, Environment, Cleaner Production.*

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