The Impact of the Cleaner Production Technologies in the Mining Productive Chain: The Case of Padua-RJ

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Abstract

The industry of ornamental stones of Santo Antônio de Pádua, located in the northeast region of the state of Rio de Janeiro/Brazil, is currently the most important productive activity in the region. Despite this, companies make use of simple and rudimentary techniques, which causes serious environmental and competitiveness problems. In order to seek a reasonable sustainability standard for firms operating in the sector, many research, government and civil society organizations have tried to develop and diffuse technologies in order to enhance the industry’s competitiveness. However, some difficulties to diffuse technologies, especially to small companies, have arisen. The objective of this research paper is to describe and assess the use and implementation of these technologies as an important contribution for cleaner production and more sustainable approaches and attest that these technologies can represent partial solution for the practice of cleaner production systems in its broader and modern conceptualization. The research study used a qualitative approach and sought to work with multiple sources of evidence such as an extensive bibliographical review, multiple case studies with semi-structured interviews with entrepreneurs and industry professionals, in addition to technical visits to local companies. This paper considers that even with all the effort, the model used to address the lack of sustainability of the firms located in Padua was incomplete and the results were modest. The model was too focused on the technology development itself, but missing other aspects such as training of entrepreneurs and workers as well as the implementation of environmental management systems and adequate set of policies to back up these initiatives.

Keywords: cleaner production technologies, innovation, technological diffusion, mining, productive chain.