Bridging universities and industry through cleaner production activities. Experiences from the Cleaner Production Center at the University of Cienfuegos, Cuba

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Abstract

The involvement of universities is crucial to identify how Cleaner Production strategies are formed in practice so that companies integrate sustainability into their strategies. This paper discusses the experience of establishing and operating the Cleaner Production Center at the University of Cienfuegos. From 2008 to 2011, the University of Cienfuegos, the Free University of Brussels (Belgium) and the University of Leuven (Belgium) implemented a project, financially supported by the Flemish Interuniversity Council (Belgium) allowing establishing a Cleaner Production Center at the University of Cienfuegos. This first project was followed by a second University of Cienfuegos - University of Leuven one. So far, the collaboration allowed to establish a master program on Cleaner Production that constitutes a bridge between the university and the production and service sector, allowing to promote and implement cleaner production strategies. 34 master students graduated during two graduations and a third one is ongoing. Among the most important results of the master thesis were the yearly reduction of the emission of 60 000 t/a of carbon dioxide equivalent and of the electricity consumption by 400 MWh/a at a cement plant. Research activities on Cleaner Production were upgraded through the collaboration resulting in several publications in peer-reviewed journals with impact factor. This type of North-South cooperation aided establishing and developing the center, by transferring expertise and experience and by providing part of the necessary funding which is difficult to raise by developing economies. This case study offers an interesting practice example about developing academic (training, research) values on Cleaner Production.