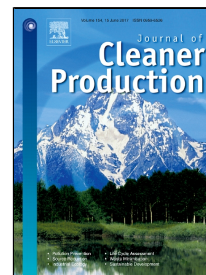


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Marise K. Santos, Angela M.F. Danilevicz, Rejane M.C. Tubino

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Environmental Service Providers Assessment: a multi-criteria model applied to industrial waste

Marise K. Santos ^{a*}, Angela M.F. Danilevicz ^b, Rejane M.C. Tubino ^a

^a Post-Graduation Program in Mining, Metallurgical and Materials Engineering (PPGE3M), Federal University of Rio Grande do Sul (UFRGS), Porto Alegre, RS, Brazil.

^b Graduate Program in Industrial Engineering (PPGEP). Federal University of Rio Grande do Sul (UFRGS), Porto Alegre, RS, Brazil.

*Corresponding author

E-mail addresses: marise.keller@gmail.com (M.K. Santos), angelamfd@producao.ufrgs.br (A.M.F. Danilevicz), rejane.tubino@ufrgs.br (R.M.C. Tubino)

ABSTRACT

The study presents a model to evaluate environmental service providers (ESPs) that recycle, recover, transport, and disposal of industrial waste. The model was developed based on the needs of a group of 20 waste generator companies (WGCs) of the metal-mechanic sector in the state of Rio Grande do Sul, Brazil, as a means to standardize the evaluation of their ESPs. The model uses the house of quality (HOQ) of the Quality Function Deployment (QFD) tool. This tool helps to systematize the identification and prioritization of the WGCs' requirements as well as the indicators to evaluate and control the performance of the selected ESPs. Four macro-phases compose the developed model, which are divided into 12 steps and 31 activities. Following the QFD precepts, the 61 WGCs' secondary requirements were organized into nine management areas of primary requirements. A set of 61 indicators complemented the top of the house of quality. In addition, two qualifying criteria were defined to identify ESPs with better performance. The criteria revealed that only five of the 13 ESPs evaluated had complied with both of them. The others complied with one criterion only, while two did not comply with either of the two criteria. Thus, the successive applications of the proposed model contribute to the development of ESPs as well as the improvement of the relationship between WGCs and ESPs. The results of the present study also indicate the potential for consolidation of shared accountability roles in environmental management relationships.

Keywords: Environmental Service Provider, Assessment model, Performance indicators, Industrial waste; Metal-mechanic sector, Quality Function Deployment.

Highlights

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