

# Environmental quality index for neighbourhoods of Curitiba

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*Environmental quality means to express the conditions for an environment that interacts with culture and society, its social and economic situation and the space on which they interact. The objective of this paper is to develop an index of environmental quality for the neighbourhoods of Curitiba, to facilitate the evaluation of the quality of the environment through the use of indicators, for periodic analyses, especially for the districts of the municipality of Curitiba to evaluate its performance. A quantitative approach has been used in the development of applied research, which seeks to discover the interrelationship between indicators. The development of indicators was made using the SPSS software, and the development of an index, through the Genebrino method. The main results demonstrated a poor quality in the social dimension, but good quality for the other dimensions of the neighbourhoods of Curitiba.*

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*La calidad del ambiente puede expresarse a través de las condiciones de interacción con la cultura de la sociedad, su situación social y económica y el espacio en el que conviven. El objetivo de este artículo es el de desarrollar un índice de calidad del medio ambiente para los barrios de Curitiba, con el fin de facilitar una evaluación de su calidad. Para ello se han utilizado distintos indicadores, de carácter periódico, que sirven de base comparativa y continua para su evolución. Procedemos a una investigación cuantitativa y aplicada, cuyo objeto es el de interrelacionar los distintos indicadores. Utilizamos el software SPSS, basándonos en el método Genebrino. Podemos adelantar que, según las técnicas descritas, los principales resultados revelan una baja calidad ambiental relacionada con la dimensión social de los espacios de la ciudad, que se transforma en buena para las demás dimensiones de los barrios de Curitiba.*

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## 1. INTRODUCTION

The recent and growing urbanisation as a worldwide phenomenon is a fact. In 1960, Brazil's urban population was of 31,303,034 inhabitants and increased to 137,953,959 inhabitants in 2000. According to the results of the Population Census of 2000 (IBGE 2006), the urban population is 4.3 times greater than the rural population, confirming for the whole country, a trend that began in the 1960s, when the cities exceeded the countryside.

This growth of urbanisation has brought problems with it. To understand them it is necessary to have a holistic view that will connect the natural and anthropic environment as a result of the social aspects and the issues arising thereon. This assessment converges into the search for urban environmental sustainability, although the Brazilian reality hampers this process through institutional carelessness and improvisations (GUERRA and CUNHA, 2001).

According to Nucci (2001) there are still few works and the methodological options are scarce, mainly in Brazil, to analyse the quality of urban environment, where the use of small scales on urban work is still a common procedure.

With an intention to overcome that shortcoming, this work is intended to build an index, involving many variables, which aims to establish the inter-relationship between them to evaluate the quality of the environment per neighbourhoods. The selected indicators to measure the quality of the environment must meet in practice the multidimensional issue. Moreover, it studies the quality of the environment as intertwined with sustainable development. This means that the indicators need to be part of more than one of the dimensions of sustainable development: cultural, economic, environmental, social and spatial and need to be available per neighbourhood.

The need to develop indicators of sustainable development are expressed in *Agenda 21* in chapters 8 and 40. The Commission on Sustainable Development (CSD), created to put sustainability into practice and adopt the principles of *Agenda 21*, has prepared a five-year programme to create