INDICATORS SYSTEMS x SYNTHETIC INDICATORS.  
The role of composite indicators to communicate environmental and related statistics: a practical example.

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ABSTRACT

Since the 1990s, several proposals to measure environmental or sustainable development performance of countries, municipalities or other spatial unities have been launched. Among these initiatives, at least two major groups can be identified. One of them proposes the structuring of indicators systems that organize the indicators based on a logical framework that corresponds to a certain conceptual mark, while another one proposes the construction of synthetic (composite) indicators. Into the Official Statistics Offices there is no tradition to use composite indicators to communicate this type of information, but there is a role that this kind of synthesis can play in the communication of complexes issues. The main motivation of the present paper is to deepen the knowledge involved in this antagonism: indicators systems x synthetic indicators, exploring strengths and weaknesses of the composite indicators. The way to do it is to build a sustainable development index for the municipalities of Rio de Janeiro State, in Brazil, including the environmental dimension, in order to reach a synthesis that organizes an overview of the original indicators of the index, facilitating the identification of its strengths and weaknesses, and therefore supporting the decision-making process on what should be considered a priority among the necessary interventions for the effective change of the current reality. In that sense, each stage of the elaboration of a synthetic indicator was described and discussed, such as the approach of the conceptual issues, the adoption of a framework, the selection of primary indicators, the transformations needed in the variables of the primary indicators and the methods used to summarize information. In this sense, Mean, Principal Components and Multicriteria Analysis have been tested, and the Mean was the one that appeared to be more appropriate. This work contains a proposal to represent these indicators which gather charts and numeric results.

Key words: indicators, environmental sustainability, composite index, indicators system, synthetic indicators.