

## **A SYNTHETIC INDICATOR FOR THE EVALUATION OF THE CONTRIBUTION OF PROJECT CLEAN DEVELOPMENT MECHANISM TO THE SUSTAINABLE DEVELOPMENT IN LATIN AMERICA**

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Abstract:

If one were to assign responsibilities of current climate change, one of the most important challenges of the XXI century, probably not correspond to the Latin American countries, by contrast, Latin America is a region with lower emissions of greenhouse gases (GHG), and their countries are most vulnerable to the effects of these gases.

One of the opportunities to meet the challenge of climate change is already being put into practice, because rich countries are developing so-called environmentally sustainable projects in Latin America to account as their own GHG reductions in developing countries that have ratified the Protocol Kyoto generated in the region.

Although in recent years has been observed that the clean development mechanism (CDM) flexibility mechanisms provided for in Article 12 of the Kyoto Protocol, constitute a real opportunity for developing countries to achieve the benefits of the carbon market emerging, not all benefits for host countries of these CDM projects, as there is a risk that they are better adapted to the economic interests of industrialized country to host country. The dual objective requires that CDM projects should contribute to sustainable development of countries in which they perform, in addition to reducing GHG emissions. However, studies show that this instrument contributes little to the development of the host country, with the specific impact on local communities even more uncertain and sometimes even negative. This is due to the absence of a policy framework or procedure to include in the analysis of CDM projects its impact on socioeconomic development of communities living in the area of influence.

This paper presents the proposal to create a synthetic indicator to measure quantitatively and summarized the contribution of CDM projects to a complex phenomenon such as sustainable development in a particular region. This sustainable development project index (IDSP) is expected to serve as a mechanism to monitor the economic, environmental and social support for decision making for the validation of a CDM project. The aim, thus, prevent appears interesting projects for the countries of Latin America may contain more strengths weaknesses from the perspective of the same.

Similar to that used in the current human development index (HDI) for the IDSP has also used the geometric mean, unlike the arithmetic mean penalizes the fact that the indices of the environmental, economic and social development are very different from each. That is, to improve the IDSP would be appropriate to do so by improving the rates of the three components that is done, and not just one. It also assumes that these components are not replaceable, ie matters that the three components are highly valued and developed in the CDM project.

To get the resulting value of IDSP, you must first calculate the composite index for each dimension considered and each has an equal share in the final composition of IDSP.

Thus the project environmental synthetic index (ISAP) is composed of core indicators reduction of GHG emissions, reducing the level of other air pollution, reduction in the level of water pollution, reduced the level of soil contamination, and protection of biodiversity. Project economic synthetic index (ISEP) consists of the basic indicators of employment generation, generation and increased income earned by workers, and technology transfer. Finally, the project social synthetic index (ISSP) is composed of core indicators contribution to access to health, contribution to access to education, contribution to energy access, contribution to access to the collection and transportation of garbage, and contribution to access to sanitation.

The methodology applied in this process of creating synthetic or composite indices to the generation of IDSP may have its representation through a pyramidal structure where the base, much wider than the other levels, demonstrates how the thirteen indicators are positioned based and what their importance in all the way to the development of IDSP. The central part of the pyramid contains three synthetic indices that make up the IDSP whose value ranges from 0 to 1. The top of the pyramid represents the value of IDSP, which also varies from 0 to 1. The closer to 1 the value of index, the greater the level of contribution of the CDM project to sustainable development in the region.

The simplification is suggested for the IDSP is important because it can provide a numeric value that can represent easily identifiable or non-viability of the proposed CDM project. Moreover, the degree of standardization of the proposed index in relation to CDM projects evaluated, allowing a comparison is made between them, so that those with the highest rate are the projects selected for implementation in the host regions. Another application for the index lies in the possibility of evaluation of the projects already implemented.