SEA alternative prediction in specific context

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Abstract

Despite of the importance of Strategic Environmental Assessment (SEA) worldwide, obstacles and difficulties are encountered in its practice. One of them is the prediction of "reasonable" alternatives, which is frequently pointed as a weakness in different SEA systems. In Brazil, SEA is being done voluntarily over the past 15 years without any type of procedural guidelines. In this context, alternatives are defined merely after a comparison of the proposed action with the basic scenario (business as usual) and, consequently, without evaluating a range of "reasonable" alternatives. As a result, there is an important gap in the Brazilian SEA that must be clarified in order to increase its effectiveness. This ongoing research aims to define a methodological approach to support alternative prediction in SEA that fits the Brazilian context, considering aspects as the timing of SEA application, the institutional framework and the stakeholders involved.

Key words: Strategic Environmental Assessment; Alternative prediction; Context; Brazil.

Introduction

The Strategic Environmental Assessment (SEA) is an instrument that intends to support strategic decision-making and to include environmental issues in planning process, informing the possible environmental consequences of policies, plans and programs (PPP) (Fischer, 2007; Therivel, 2004; Sadler and Verheem, 1996).

SEA procedures and principles are being introduced worldwide, including many different contexts: developed and developing countries, contexts were SEA application is mandatory (e.g. European countries, Canada, United States, Chile) and contexts were SEA application is not mandatory (e.g. Brazil, South Africa, Colombia) (Chaker et al., 2006; Gachechiladze-Bozhesku and Fischer, 2012; Loayza, 2012;

Malvestio and Montaño, 2013; Oliveira et al, 2009). Its practice is being increased, motivated by a variety of factors such as SEA strengths, legislation enforcement, international financing institutions that require SEA to analyse financing requests (Malvestio and Montaño, 2013; Pellin et al., 2011).

Despite the instrument has spread and its practice enhanced, some weaknesses have been observed in SEA practices, for example, in relation to the development of alternatives, which is an important SEA stage (Desmond, 2007; Fischer, 2007; Sadler and Verheem, 1996). Thus, the understanding of alternatives prediction in SEA still needs to be improved, especially considering that one of the original reasons for the development of the SEA process was to enable the consideration of alternatives at the strategic level (Sadler, 1996).

In this paper the authors present a PhD. research proposal that aims to develop methodological approach to support alternative prediction in SEA that fits specific characteristics of the Brazilian context. In the sections that follow we first present the research justification and relevance, followed by the methodology proposed and by the expected results.

Research justification

In order to support the decision-making, according to Fischer (2007) SEA is a systematic process that might support the consideration of environmental and sustainability issues in planning process, it is an "evidence-based" instrument which applies assessment methods and techniques, aging scientific rigour in PPP making, and it might establish substantive focus, for example, pointing the main issues and alternatives to be considered.

Generally, the instrument practice relays on a structured procedure and pre-established steps, which usually includes: screening, scoping, baseline study, alternatives identification and assessment, mitigation proposal, monitoring proposals and public participation (Fischer, 2007; Lemos, 2012; Therivel, 2004). At the same time, the literature highlights that SEA should be understood as a "family of tools" (Partidário, 2000) instead of a unitary instrument, mainly because the SEA role, aims and methods as well as the expectations of its implementation vary according to context in which it is applied (Hilding-Rydevik and Bjarnadóttir, 2007; Tetlow and Hanusch, 2012).

Although SEA is being studied by academics since 1990s and it is being implemented and practiced by many countries, the instrument still have some weakness related to being integrated to planning context, which is straight related to SEA effectiveness (Tetlow and Hanusch, 2012). Moreover, the literature points other SEA weakness, namely related to effectively conduct the follow-up (Fischer, 2010; Gachechiladze et al., 2009; Gachechiladze-Bozhesku and Fischer, 2012; Malvestio and Montaño, 2013;

Montis, 2013), the public participation (Malvestio and Montaño, 2013; Montis, 2013; Partidário, 2010) and the consideration of alternatives (Environamental Protection Agency, 2012; Fischer, 2010; Malvestio and Montaño, 2013; Montis, 2013; West et al., 2011).

Regarding the alternative development in SEA process, Desmond (2007) clearly indicates that it is related to a range among of context characteristics. Just to illustrate, it is related to the decision-making level (Desmond, 2007; Fischer, 2007), to the planning sector (Du et al., 2012), to the policy and planning context (Desmond, 2007), to the stakeholders expectations (Du et al., 2012), and to the experience in applying SEA (learning process) (Desmond, 2007).

Being influenced by many circumstances, both the definition of what is "reasonable alternative" and the practice of developing alternatives in SEA are important challenges even in countries which practice SEA for long time and in the literature, as highlighted by West et al. (2011).

In countries with incipient SEA practice, the effective alternative development seems to be even more challenging. It is the Brazilian situation, whereas the instrument practice is limited to a small number of SEA applications, which were done without a common guideline to support it and, generally, they were not effective both in procedural and substantive aspects (Malvestio, 2013; Malvestio and Montaño, 2013). Regarding alternatives consideration, frequently it was not even mentioned or it consisted in comparing the proposed action to the "business as usual" scenario (Malvestio, 2013).

In this context, despite alternatives assessment is a central issue in SEA (Desmond, 2007; Fischer, 2007; Sadler, 1996), its prediction is still a challenge and the question regarding how to develop alternatives adequate for specific situations in SEA is unanswered. Thus, it is crucial to develop methodologies that guide this SEA stage (Desmond, 2007), fitting the context purpose (Tetlow and Hanusch, 2012), and, at the same time, being coherent with the SEA theory and purpose (Del Campo, 2008).

Given that perspectives, the proposed research aims to analyse how the alternative prediction in SEA is being adapted in different situations and to develop a methodological approach for alternatives development applied to the Brazilian context.

Methodology

To achieve the research purpose, the methodology proposed includes four main steps: criteria selection, review of a group of SEA cases, analyses of the Brazilian planning context and development of the methodology approach for the Brazilian context.

First, the authors will conduct a comprehensive review of legal documents and papers aiming to identify existing criteria to guide alternatives prediction in SEA. To identify the countries which have regulation or specific guidelines to support alternatives prediction, the authors will consult SEA experts through IAIA communication forums.

The review of SEA practice will be done for diverse kind of SEA (including different sectors, decision level, stakeholders involved), aiming to identify which criteria were used and how they were interpreted and adapted in each situation. These two steps will allow determining how alternatives are currently being dealt with in an international context.

To analyze how alternatives prediction in SEA might be improved in a specific context like Brazil, it is necessary to better comprehend the specific planning process and circumstances in which SEA is being used or it is intended to be used. It will include identifying stakeholders and decision arenas using an adaptation of the methodology proposed by Hansen et al. (2013).

Finally, the results of the previous steps will enable the development of a methodology approach for the Brazilian context, which will be validated by applying the proposed approach to a real case.

Expected results

As a result, the authors expect to contribute to a better comprehension of alternatives prediction in SEA and its effective adaptation to specific context, as well as to contribute to SEA practice and effectiveness in Brazil.

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