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“CLEANER PRODUCTION INITIATIVES AND CHALLENGES FOR A SUSTAINABLE WORLD”

## Health Impact Assessment in Southern Brazilian EIAs: Too Far Away from Recommended Practices

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### Abstract

Health impact assessment practice, although listed as mandatory under Brazilian legislation on Environmental Impact Assessment (EIA), is still in its infancy mainly because it lacks the support of detailed tools that can enable it as a systematic process. In this paper, we investigate how far away health assessment stands from best practice, taking two departures points. The first one is a theoretical basis for advised practices in HIA that we propose from a literature review and compilation. This comprises 25 requirements for analysis, divided in three categories: theoretical lines of argumentation (biomedical/risk, promotion, and social/political features), broad measurability (which includes impacts magnitude and mitigation), and detailed measurability (going deep into biological, behavioral, circumstantial, environmental and institutional aspects). The second one is a set of six EIAs documents delivered by practitioners in Southern Brazil, that we take as a case study in order to assess their performance in relation to the international best practices outlined. EIAs selected are two from landfills, performed in 1992 and in 2006 by the same consulting firm; two from Small Hydropower Facilities (SHF), finalized in 1997 and in 2005, both by the same consulting firms; and two from a road (2004) and from an industrial plant (2007) projects, each one carried out by different consulting firms. Descriptive results are divided into three: a requirements' conformity analysis; a gap analysis, in which we assess the level of full, partial and non-completion of requirements; and a peer analysis, in which we compare, respectively two landfills and two SHF EIAs between each other, in order to highlight differences in health assessment in EIAs performed by the same consulting firms. With respect to theoretical lines of argumentation, we find that: biomedical risks are common but not considered in detail in all EIAs; epidemiological and toxicological models are rarely used; cause-effect relationships for environmental-health issues are only partially described; quantification is poor, but not so much in more recent documents; health promotion is not targeted by practitioners, and collective health is of more concern in EIA's landfill projects; regarding social aspects, they are partially considered in just two documents. Concerning broad measurability aspects, EIAs performed before 2000 have neither magnitude description nor investigation parameters, and wellbeing indicators are absent in all documents. With respect to detailed measurability, we highlight that health data are not accurate and/or reliable in all cases; biological issues are disregarded, as well as equity issues, which implies that there is no understanding of how the same impacts can affect different profiles of people.

**Keywords:** *Health Impact Assessment; Environmental Impact Assessment; Social Impact Assessment; best practice; evaluation.*

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