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Systematization of Actions and its Respective Sustainability Indicators as Part of the Development of a Support Tool for Water Resources Management in Watersheds

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Abstract

The present article aims to present the methodology proposed to development of a Water Resources Management Support Tool (denominated FAGRH) to River Basins, supplying decision process with subsidies correlated to sustainability concept, integrating different dimensions (ecological, economical, social, cultural and politics). The sustainability main concept that oriented the research was, “the development that foresees satisfies the needs of the present generation without compromising the chance for future generations to satisfy their” (Brundtland Report, 1987).

The FAGRH will be composed by Sustainability Indicators (SI), related to conditions or situations correlated to water resources management. The SI are tools that can be used as support to systematize existing information and to evaluate water resources situation at specific moments, allowing to foresee tendencies to future, to analyze sceneries, compare them in time and space, and, finally, to collaborate in decision processes.

The FAGRH should be structured based in Decision Support Systems (DSSs) concepts, considering the consent that DSSs were adapted for water resources planning and management. The multi criteria analysis method was capable to aid choice process, alternatives ordination or classification and also to incorporate multiple aspects. This method will make possible join diversified problematic conditions, several sustainability dimensions, as well as integrate different stakeholders' opinions.

The FAGRH will correlate some conditions previously measured by SI and potentials actions to mitigate, to correct or to prevent them. The alternative selection should attend previously defined goal for Basin Committee, and will be proceed through stakeholders' analysis about aspects as social, economic and environmental benefits, legal and institutional constraints, among others. Finally, the FAGRH should guarantee wide participation of Basin Committee actors' at decision process.

In this way, the tool should still be accessible, comprehensible for technicians, as for users and all society members; and it will be structured in an electronic spreadsheet, simplifying its application and modification along the process. he FAGRH intend to collaborate in basin water resources situation diagnosis, and to elaborate prognostics and programs, projects and actions, composing or providing information for Basin's Plans composition.

Keywords: *water resources management, sustainability indicators, basin and support tool.*