



São Paulo - Brazil - May - 22nd to 24th - 2013

Acc4emic

INTERNATIONAL WORKSHOP
ADVANCES IN CLEANER PRODUCTION

“INTEGRATING CLEANER PRODUCTION INTO SUSTAINABILITY STRATEGIES”

An Introduction to the Nature of Wicked Problems - Ecological Challenges as Super Wicked

BITTENCOURT, E.

Universidade Estadual de Campinas, Campinas

e_bittencourt@uol.com.br

Abstract

In this paper the concept of “wickedness” is presented and discussed, considering the importance of this notion, to correctly deal with problems emerging in ecological systems. The term “wicked problem” was coined by Horst Rittel, who with colleagues perceived the failure of linear approaches to treat design and planning. Failing to recognize a problem as “wicked”, results in the utilization of inappropriate tools to solve challenges in climate change, leading to the use of inadequate methodology and management procedures, fit only to treat “tame problems”. Ecology is considered as a “super-wicked” problem, due to its innumerable uncertainties, interdependencies, and social fragmentation of the stakeholders involved. Ecological systems consist of an integrated and coherent association of dissipative structures, where the whole is not given by the sum of its parts, as known from complexity theory. Ecology consists of a network of open, nonlinear systems, hierarchically structured, highly integrated, adaptive whole of the living and non-living, entangled with social, cultural, and economic phenomena. How we perceive and manage this complex network will strongly influence the future of our planet, and hopefully, correctly orient the study of ecological issues as well as contribute to the effort to implement cleaner production practices. We strongly emphasize that this class of problems -wicked- should be made more familiar to students.

Keywords: wicked, super-wicked, ecology, cleaner production

“INTEGRATING CLEANER PRODUCTION INTO SUSTAINABILITY STRATEGIES”

São Paulo - Brazil - May 22nd to 24th - 2013