

HYBRID CITY Urban Planning TECHNOVATION

Scenarios and USI for Managing Urban Sprawl

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The paper describes the method, innovative planning-evaluation strategy (IPES) and the results of a study that evaluates the impact of sprawl -urban occupation of the Protective Zone (PZ)-, in Maracaibo's -hybrid metropolitan archipelago- (HMA) sustainability. The IPES fills the gap of the local urban planning assuming the principles of sustainable development-management (SDM) by means of braiding the urban planning process (UPP) with the Pressure-State-Response Model (PSR) and Geographical Information Technologies (GIT) -satellite images and GIS- to develop urban models, specific attributes and urban sustainable indicators (USI). The IPES (UPP+PSR+GIT) is a multilayered-relational model that works, within the PSR model, developing GIS models and grapping them with the UPP. In this model, the causes of environmental changes, Pressure are correlated with the urban-spatial scenarios, their effects State, with the diagnose synthesis and, the Response with the multilevel government and stakeholders, urban projects, actions and policies, proposed and undertaken to deal with these changes. To reach an ethical decision, a concerted vision of the future scenarios and to build an integral territorial hypothesis for the PZ-HMA, sustainability and governance -stakeholders' participation- were the key principles of the study. The paper concludes presenting the IPES model (creative technovation), where the GIS models of vulnerability, consolidation, conformity of usage and the model synthesis, environmental and legal conformity-adequation of the urban occupation, serve as specific State Attributes; the envisioned urban-spatial scenarios constituted the Attributes of Pressure and urban governance, measured through three variables, legitimacy by performance, governability and participation, configured the Response Attributes.

Keywords: hybrid city, urban planning technovation, innovative planning-evaluation strategy (IPES), PSR model/ USI.