

Linking land use change to coastal conditions: a case study from Southern Bahia, Brazil

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ABSTRACT: The present paper embraces the interface of key issues of *Global Change* concern, such as the management of coastal resources, watershed management, and land use change. It provides a case study, representative of the developing nations context, to address the need for a more integrated approach that links the management of watersheds and coastal zones. Land use pattern in the watersheds that comprise the East Basins, southern Bahia, Brazil, has considerably changed in the last decade. Cocoa cultivation, the most important economic activity in the region, has been replaced by other crops and livestock. The impacts of land use change have mainly been analyzed in terms of deforestation of the Atlantic Forest and biodiversity loss, since much of cocoa in southern Bahia is grown in an agro-forest system. Little attention, if any, has been paid to the adverse effects on the coastal zone. This paper adds a coastal dimension to the issue, providing a comprehensive analysis that relates changes at the watershed level to impacts on the coast. Examples of major impacts on the coastal zone are presented to demonstrate how both natural and socio-economic coastal systems have been affected by changes in upstream land use. It is argued that given the critical linkages between watersheds and coastal zones, there is a strong need for an integrated watershed approach that incorporates the coastal dimension, if the integrity of the coastal zone is to be maintained. In addition, management implications that may be replicable at larger scales are also discussed.