

Rivers in the Abaya-Chamo-Basin – Research Activities for a Sustainable Use and Management of the Water Resource

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Rivers in the Abaya-Chamo-Basin show a great variability in discharge and sediment transport. The permanently increasing population in Ethiopia calls for an economic and sustainable use of the natural resources. Human activities using river flow for irrigation or for hydropower generation can lead to planning failures or can severely disrupt the natural balance of a river system. Diverting or impounding of water course requires detailed knowledge of the morphological processes prevailing in a river system. The morphodynamics of a river system depend on various partly interdependent parameters like bank and bed stability, transport of solid matter, discharge, longitudinal and cross sectional profile.

One major prerequisite of riverine human activities is the understanding of the behaviour, the variability and the interdependency of each parameter. This paper deals with current research activities in this field and identifies further research needs. Furthermore, possibilities for hydraulic structures in order to cope with these conditions are discussed.