

## **Lulseged Tamene Desta**

ZEF – Ecology and Development Series No. 30, 2005

### **Reservoir siltation in Ethiopia: Causes, source areas, and management options**

Siltation is the main threat of water harvesting schemes and hydro-electric power dams in Ethiopia and needs to be prevented rather than corrected. This study is a first attempt in the drylands of northern Ethiopia to elucidate the source areas of sediments within a catchment and the factors controlling the instability of these soils. Sediment yields in reservoirs were related to the environmental attributes of the landscape and the information integrated into distributed models to assess the erosion risks of various landscape units. The models were applied to evaluate the impact of various alternative land-use scenarios and management on the projected lifespan of reservoirs.