



The Small Reservoirs Project: Research on distributed multi-purpose water sources

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Supplying the rural population in semi-arid developing countries with water requires spatially distributed sources of different qualities and quantities of water. In many regions, small reservoirs act as multi-purpose water sources in support of irrigated agriculture, livestock watering, fishing, building, and domestic use. They are often the only adequate and economically feasible source of large volume water supply for non-drinking purposes and important for economic development and the reduction of poverty. One of the key advantages of small reservoirs is their existence in large numbers, greatly improving the water availability at village level. Their small size, existence in large numbers, and widespread distribution, makes it difficult to study their behavior. For the same reason, their regional impact has rarely been studied. The Small Reservoirs Project seeks to address the lack of knowledge on ensembles of these water structures by conducting research on local and regional levels. The functioning of small reservoirs is being studied in the Tanga watershed in the Upper East Region of Ghana, where water use, and the filling and draining of reservoirs is being observed. Special attention is being given to evaporative water losses which are being studied with an innovative floating weather station. On the regional scale, remote sensing techniques are being used to make up-to-date reservoir inventories and to monitor the reservoir storage over time. Using this information, the Small Reservoirs Project will improve our knowledge of these important water structures and develop the strategies and tools necessary for scientifically sound watershed development.