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Bachelor Thesis
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**Irrigation Water Conveyance Systems in Mae Sa Mai as an
example for a rural area in Northern Thailand**

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EXECUTIVE SUMMARY

The focus of this thesis is on the inventory and evaluation of different kinds of water conveyance systems used by farmers of Ban Mae Sa Mai as an example for the rural area of Northern Thailand for achieving a preservation of the resource water and an efficient irrigation under the dominating conditions of water shortage during the dry season.

By on-field work spatial data was collected and analyzed with the help of a GPS implement. The determining size of the systems was established by volumetric-flow and floater measurements in the mountain creeks and pipelines as well as by the storage capacity according to the basis of over-lay of geometrical bodies at collected data of the basin extensions. For a better impression interviews were realized.

The main problems are result of the elevation differences between the tap-off and the fields, where the water is used, the sediment load and the implemented materials of the water conveyance constructions. The suffering of the system from these aspects causes water losses, high maintenance efforts and water pollution.

The improvement of the existing water conveyance system is possible and necessary. The farmers are interested in it with restrictions concerning the amount of investments for a short-time used system and their traditional habits. Small improvements as the marking of the pipe lines should not be a problem. Extensive ones as the introduction of sedimentation tanks and disc filters would be harder to realize but are possible.