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Spotlight on Agriculture

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WEIRS

EXPERIENCE IN SOUTHERN NAMIBIA

MAIN CAUSES OF TOPSOIL LOSS IN THE HARDAP AND KARAS REGIONS

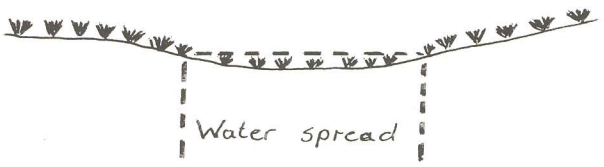
The rain pattern in southern Namibia mainly consists of thunderstorms. Large areas have a low natural vegetation coverage or are completely barren. On these more sensitive areas, the rainwater flows fast with nothing to slow down water runoff. Precious topsoil is lost through runoff if not prevented in one way or the another. This leads to soil erosion.

Through unsustainable rangeland management practices, like overgrazing, overstocking and others, a drastic reduction of vegetation can occur, which leaves the soil bare and vulnerable to various forms of erosion.

THE POSSIBLE EFFECTS OF THE USE OF WEIRS

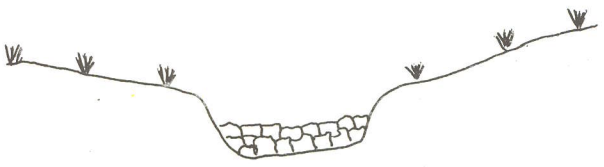
Weirs are physical structures, made from tyres, stones, old fencing materials and old car wrecks, that are built into eroded gullies (see sketches below) in order to slow down water run-off. This leads to reduced loss of soil. The slower flow of rainwater improves the chance of water penetration into the subsoil and thus contributes to the replenishment of the underground water. It is however important that proper rangeland management practices should be implemented simultaneously.

The effect of a weir can be monitored by taking photographs (on the same spot and in the same direction) of the area on regular intervals.



Before erosion took place, the water spread was wide.

Due to reduced vegetation coverage, water run-off increases and leads to serious soil erosion (gully formation).



A weir will reverse the effect of erosion. Over time, the weir has to be maintained and raised when necessary. Proper rangeland management practices should be implemented simultaneously.