

stream sediment loads, stabilization of vegetation, and maintenance of soil moisture for long periods. These structures reduce the velocity and erosiveness of rainwater, and control the displacement of sediment. Loose boulder check dams were constructed in series on narrow points of the gully bed. Loose stones/boulders were arranged in trapezoidal shapes (where the base is wide, and the top of the check dam is narrow), with a minimum base width of 90 cm.

Gabion Structures

Where the velocity of the water in *nalas* and main drainage channels is extremely swift, with relatively large quantities of runoff water and debris, and a normal loose boulder check dam would be unable to withstand the water pressure, a gabion structure is constructed across the *nala*. The gabion is made with stones/loose boulders that are tightly packed in wire mesh cages of galvanized wire (G.I.) of 10 gauge thickness, to a height of 1 m and width of 1.25 m and then ties together with steel wire. Gabion structures were constructed where necessary.

Water Harvesting

Water harvesting is the collection and storage of runoff water. For this, a series of farm (dugout and embankment type) ponds, small earthen *nala* check dams and percolation tanks were constructed in depressed areas, and across natural *nalas* to collect and impound the surface water runoff and store it for longer periods. The tools available for water harvesting are:

1. Farm ponds are multipurpose water conservation structures for irrigation, drinking water for cattle, fishery, ground water recharge, etc., that help control erosion, runoff water and stabilising the water channel. While constructing dugout and embankment ponds for these purposes, care should be taken to ensure the pond is large enough for its primary purpose keeping in mind the rate of evaporation, seepage, and other water loss. A spillway is to be constructed at zero level to check water pressure on the structure and overflows.
2. Earthen *nala* check dams store water for percolation and irrigation, thereby raising the water table, increasing crop productivity and