



## NATURAL RESOURCE MANAGEMENT

### Design and development of site-specific artificial groundwater recharge filters

Laboratory testing for hydraulic and filtering efficiency of different types of filters was conducted with different sediment loads at Vasad. Inverse filter for the direct well recharge was found hydraulically more efficient for agricultural runoff with acceptable-level chemical parameters. It is



Laboratory set-up for testing efficiency of filter system comprising gravel, sand and agro-net in case of upward flow of runoff through filter system

found suitable for area with slope < 4%.

In this filtration system, runoff enters the filter system from the bottom under pressure head, taking advantage of gravity in sediment removal.

Attempts have been made to prefabricate components of down to up flow filter to save time and cost. There is also a provision of pressure head manipulation for cleaning filter system in the proposed design.

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