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(54) Title of the invention : IDENTIFICATION OF AN IDEAL STRUCTURE FOR WATER CONSERVATION IN RURAL AREAS USING SWAT MODEL

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(57) Abstract :

The present invention provides a process and system for creating a drainage network useful for delineation is provided. The process includes the steps of: providing land use land cover map, soil map, slope map and weather data as an input on which the processing is done through SWAT model; receiving output in the form of surface runoff, PET (Potential Evapotranspiration), Evapotranspiration, Percolation, Groundwater flow, Soil Moisture, Water Yield and Sediment Yield; comparing estimated runoff and sediment yield from each sub-watershed with measured values; evaluating effect of LU/LC, soil, and topographic characteristics; defining multiple HRUs within a sub-basin by ignoring land uses less than 2% of the sub-basin and ignoring soil types in a sub basin covering less than 5% of the sub basin; and creating a predefined HRUs for sub basins.

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