Abstract of Present Research Work

I have been involved in Implementation and Validation of various watershed Models (DHSVM, UBC) since 2004. My prime objectives were to understand the various aspects of Watershed modeling and solution of technical problems that scientific community comes across while dealing with these models. The main goal of my research was to analyze the effect of Climate and Land Cover changes on Water Resources. Also to develop Interpolation/Extrapolation Techniques suitable for Pakistan where the density of meteorological stations is very low. I am now finalizing my initial findings in this regard.

I am contributing in the climate change impact studies in water resources. It involves the use of Global/Regional climate model scenarios downscaled to high resolution (both statistically and dynamically) for use in hydrological models such as DHSVM and UBC.

The preliminary results of a case study which was related to the downscaling of climate data of a GCM (HadCM3) using statistical downscaling and its use in the watershed model were quite encouraging. It is expected that the results of statistical downscaling of Regional Climate Model (RegCM) data and its use in the watershed model would be more promising.

I am also interested in working with the one way coupling of RegCM with watershed model DHSVM.

Fahad Saeed