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Estimation of soil carbon in the moist temperate forests: A case study of Galiyat Pakistan

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The soil plays an important role in capturing carbon from the atmosphere also known as Carbon Sequestration. The current study was conducted to estimate soil carbon in the moist temperate forests of Galiyat, Pakistan. Samples plots (n=15) were randomly laid out in moist temperate forests of the study area which covered most of the area of the Galies Forest Division. Soil samples were collected from 0 to 15 cm and 15 to 30 cm depth with the help of a soil agar. In each sample plot data was collected on slopes, aspect, crown cover, elevation, soil bulk density, and soil organic matter and soil carbon. In each sample, moisture content (%) and ashes (g) were determined. Sample plots taken were located on different slopes with mostly on moderate slopes. The majority of the sample plots was located on North Eastern aspects and was at an elevation greater than 2000 m. On the basis of crown cover, the sample plots were located in open, medium dense and dense forests. The value of organic matter in the soil samples having depth from 0 to 15cm (3.642 g) and 15 to 30 cm depth (3.178 g) were found. The value of soil carbon for soil having depth of 0 to 15cm (2.112 g) and soil having depth of 15 to 30 cm (1.843 g) was calculated. The bulk density in the soil sample was calculated having depth 0 to 15 cm (1.462 g/cm3) and 15 to 30 cm (1.337 g/cm3). Moisture content for the soil having depth of 0 to 15cm (6.195 %) and soil having depth of 15 to 30 cm (6.205 %) was observed and the ashes value for soil having depth of 0 to 15cm (94.279 g) and soil having depth of 15 to 30 cm (95.087 g) was determined.

Biography

Soon after graduation, she joined World Wide Fund for Nature-Pakistan (WWF) where she worked for almost 4 years since 1999-2003 on several projects related to education and natural resource management, etc. She worked with mountainous area's women in Gilgit, Ishkoman valley, Hisper Valley, Chitral, Kashmir, Sudhan Gali, Swat, Mahudand, and Kalam etc. After that, she joined the University of Peshawar in September 2003 as a lecturer and in 2009 promoted to Assistant Professor. During this time she had worked on a variety of projects related to global environmental and climate change, Natural Resource Management, water pollution, and soil pollution etc., funded by HEC. To date, she has 22 publications in peer-reviewed journals. She has been teaching several courses of Environmental Sciences since 2003 and has supervised 83 research groups of graduates and undergraduates level students' and 10 MS/M.Phil students mostly female students in the field of Environmental Sciences.

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