



Environmental Changes in the North-eastern Part of Bosnia as Factors of Desertification

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In the north-eastern part of Bosnia were represented quartz sands formations of the upper Miocene and lower Pliocene (Luković, M., 1929., Soklić, I, 1964., Schmidt, S., and Veselinović, N. 1996.). In these sediments were formed shallow and “light” soils (Jakšić, V., 1970. Malović, P., and Jakšić, V., 1973., Veselinović, N., et al., 1984., Čengić I., 2004., 2011.) with dominantly represented two types of vegetation communities: (i) the thermophile forest communities, (ii) extensive agricultural systems.

The climate changes contribute to the processes of desertification in the analyzed area which have the following trends (50 year period): (i) increasing temperature, (ii) increasing water deficits, (iii) reduction water surplus, (iv) increasing PET, (v) reduction SET.

Activities on surface mining for the coal extraction also act on the environment changes. This process has strong influence on geographical changes of landscape, characteristics of vegetation and dynamics of water. To the processes of desertification contribute deforestation and agricultural activities. Soils on quartz sands as bearers of vegetation system have a small capacities for water conservation. The small water capacity of the soil are presented through the following elements: (i) the shallow soils - depth interval of the solum, 6 cm - 24 cm, (ii) low humus content; forest soils - Ah horizon, 3.52% - 10.77%; agricultural soil - Ap horizon, 1.79% - 10.68%, (iii) high % content of sand. Above factors which have influence on small conservation capacity of water in the soil, as well as climate and the environmental changes, contribute to the further desertification processes.

Key words: desertification, surface mining, humus, sandy soils