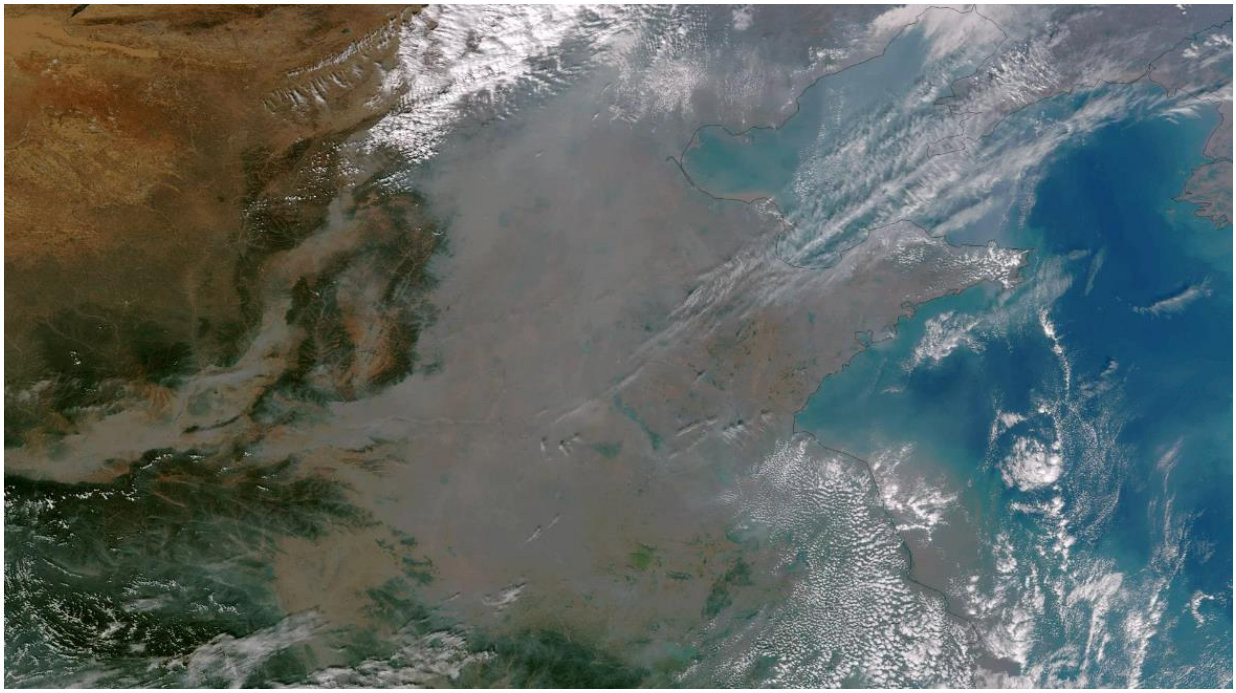

BOOK OF ABSTRACTS

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FUTURE AGRICULTURAL PRODUCTION STRUCTURE MODEL (FAPSMS) IMPACT ON SOIL EROSION

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Abstract

Various models of sustainable soil management are being applied in the world. They are aimed to prevent the erosion destruction of the soil through adequate processing methods, with appropriate yields and positive economic effects of such production. Conservation of soil on sloped terrains is of great importance, especially having in mind that mountain soils are home to 25% of all terrestrial biodiversity, including agrobiodiversity. Sustainable agricultural management needs to account for site specific characteristics, including topographic factors and coexisting biotopes. In Serbia the trend of people leaving rural households and moving to cities became increased during the second half of the twentieth century that led to a change in soil use so that the areas under meadows, orchards and vineyards were increased at the expense of areas under arable soils and pastures so the intensity of erosion processes have decreased. However, soil erosion is still very widespread in Serbia. More than 86% of Serbia's surface is affected by erosion of different intensity. According to Gavrilović's erosion potential method, soil erosion endangerment of research area of Barička river basin is in the category of medium erosion endangerment. The aim of this study is to determine existing soil erosion risk and risk after application of Future Agricultural Production Structure Model from the Aspect of Preserving Land Resources for Mountain Catchment Areas of Serbia (FAPSMS), in the suburban area of the morphological unit of the Barička river watershed, in Serbia. An analysis of soil erosion risk was carried out, using the Revised Universal Soil Loss Equation (RUSLE) method, with the existing and projected structure of agricultural production according to the FAPSMS. The results show that soil erosion losses are already below tolerance values with the existing production structure and that they could be reduced even more by applying the projected structure.