

LAND USE IMPACT ON BUTTERFLY DIVERSITY: A CASE STUDY FROM BULGARIA IN THE FRAMEWORK OF STACCATO PROJECT

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STACCATO project is a BiodivERsA funded EU project which focus on the evaluation of ecosystem services and their sensitivity to land use patterns in agriculturally dominated landscapes. It aims to investigate the interactions between crop production areas and the landscapes in which they are imbedded across an European site network. The impact of land use on the biodiversity of different bioindicators (including butterflies) in rapeseed croplands and the adjacent grasslands was studied and preliminary result will be presented. Ten rapeseed-planted sites surrounded by different percent coverage of grassland areas (from 0 to 100 %, with 10 % increment) have been selected in the South-Central Bulgaria. Two 500 m transects in each site, one in the rapeseed and one in the grassland, were walked and all butterflies were registered. The MDS analysis using Bray-Curtis similarity index revealed two distinct butterfly assemblages. Butterfly species richness and diversity in the grassland areas was higher and the similarity between sites lower as compared to those of rapeseed fields. The communities of rapeseed fields had lower diversity dominated by one species *Pieris rapae*, This is a species which larvae feeds on Brassicaceae species, and its relative abundance was between 49.1 and 84.5%. No relation between grassland coverage of the sites and butterfly diversity was revealed.

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