Intensification of agriculture very often lead to spatial separation of natural or semi-natural habitat patches. The fragmentation of habitat patches, disconnected from each other by arable fields, has a usually negative impact on biodiversity. Because biodiversity plays a key role in sustaining ecosystem services, such as plant pollination, thus services provided by living organism depend also negatively on fragmentation of habitat patches.

Man-made linear structures (LS) such as road verges, levees or railway embankments create network structures along which species can disperse and provide ecosystem services. Moreover, the linear shape makes LS continuous habitats over many kilometres, contrary to fragmented semi-natural patches. Whereas it has been recently recognized that LS may constitute a good habitat for many organisms, LS values as landscape components improving dispersal of species and provide ecosystem services have been studied extremely rarely. Despite that, for example, in the European Union there is more than 200,000 km of railway lines, about 70,000 km of highways and more than 150,000 km levees.

Because of LS spatial connection, compared to fragmented semi-natural patches, the increase of species dispersal and availability of their ecosystem services along LS may be expected. However, very important for dispersal of species and provided ecosystem services are the character of LS management as well as the management of surrounded landscape. High intensity of the management (e.g. intensive mowing) may lower suitability of LS for species and thus remove positive effects of LS on species dispersal and ecosystem services provided by them. On the other hand, extensive management of farmland (e.g. low cover of arable land) may decrease the relative contribution of LS on species dispersal and ecosystem services.

To find how LS modify dispersal and spatial distribution of species as well as ecosystem services provided the experimental study will be performed in three types of LS: railway embankments, levees and highway verges. Native pollinator community (bees, butterflies, flies), with special attention paid to the red mason bee *Osmia bicornis* will be studied. Dispersal of red mason bees between artificial nests located along LS will be observed and compared to dispersal of bees between nests located far from LS (reference habitats). The potential availability of ecosystem services (pollination) will be studied by changing the distance of potted flowering plants to LS. Also, the LS and farmland management intensity, such as mowing intensity and cover of arable fields in the landscape will be measured.

Expected is that pollinators will cover longer distances and will more frequently disperse along LS than on reference habitats. Additionally, expected is that potted plants closer to LS receive higher quality ecosystem services (higher number of flower visitors, produce larger number of viable seeds) than plants potted further from LS. Less intensive LS management and more intensive farmland management surrounding the LS should increase dispersal of pollinators and ecosystem services along LS.

In summary, the project will born results that will enable comprehensive understanding of LS impact on the spatial processes affecting living organisms with background in metapopulation theory. Presence of LS, their management as well as farmland management have the power to explain significant part of species and ecosystem services distribution across farmland in most developed countries.