

## EDITORIAL

Poland has seen considerable intensification of the investment process in road transport since 2004. It concerned routes of various ranks and positions in the country's transport system. The greatest investments were made in runs of motorways and expressways. The role of these projects is analysed frequently, yet mainly in macroeconomic terms and in the context of links between the largest metropolises.

Establishment of new routes may also significantly affect the economic situation on a local scale. The impact occurs on several spatial levels, primarily by changes in accessibility on a national, regional and local scale (e.g. access to the labour market and public benefit services) and by improving traffic safety. At the level of individual gminas and villages/towns/cities road projects may also have negative consequences, such as dividing settlement structures and farmland or deterioration of the market situation of some economic operators.

Transport investment projects are traditionally perceived as a key regional development tool and spatial planning subject. This opinion is postulated by the majority of Polish papers, both scientific and policy papers. Already in the 1970s road construction was perceived as a source of benefits for the national economy. In highly developed Western European countries (with dense and modern transport networks) the impact of transport infrastructure on further economic development is questioned nowadays (inter alia because external costs are not taken into account. Yet certain contemporary Polish studies also challenge direct influence of road projects on development, emphasising at the same time that whether investment benefits translate into regional development depends largely on the economic offer of a given region (Domańska 2006). Studies using econometric models prove that in new European Union Member States only comprehensive completion of all necessary road and railway investment projects (creation of a consistent network covering the entire region) can actually stimulate economic growth.

The particular sections of the target transport network that have been constructed over the last few years have been as yet of marginal significance to developmental effects. The role of transport investment projects in Poland, however, cannot be perceived only in terms of stimuli for development. It is more appropriate to perceive the previous state of affairs in this regard as a developmental barrier. Underdeveloped infrastructure still negatively affects the competitiveness of Polish regions, especially those ones located at a large distance from not numerous, existing fragments of modern road and rail network. While till the end of 1990s among the key locational factors attracting foreign investments were the size of the market and labour costs, today we can clearly observe the growing significance of elements of transport accessibility.

As regards the local and regional dimension, road investments have also direct and indirect impact on a lot of features of natural environment, in particular in the areas adjacent to these investments. Of particular importance is the fact that these new transport developments often bring direct destruction of valuable natural habitats with various plant communities and extraordinary flora. Also, the serious threat is posed by change in hydrological regime of flows and streams that is caused by construction works. Among other occurring impacts are: processes of eutrophication, contamination of surface and groundwaters, soil contamination by heavy metals, soil erosion associated with rainwater that runs off road surfaces, etc. In the course of road exploitation, other negative phenomena may occur: introduction of alien species, salination of adjacent habitats, and creation of ecological barriers. Depending

on local conditions, also there occur changes in topoclimatic and microclimatic features. Similarly, development of road infrastructure affects the acoustic and thermal climate of the adjacent areas.

The factors described above have been the rationale behind undertaking geographical research concerning multi-criteria evaluation of the impact of road corridors on natural and economic environment of the adjacent areas.

The current volume of EUROPE XXI presents the findings from the research project entitled Multicriteria assessment of the influence of selected road corridors on the natural environment and on the socio-economic development of the adjacent areas financed with the resources from the National Science Center under the grant agreement no. 5649/B/P01/2011/40. Analyses were carried out on six purposely selected road corridors (Fig. 1) under two separate thematic blocks: socio-economic and physical.

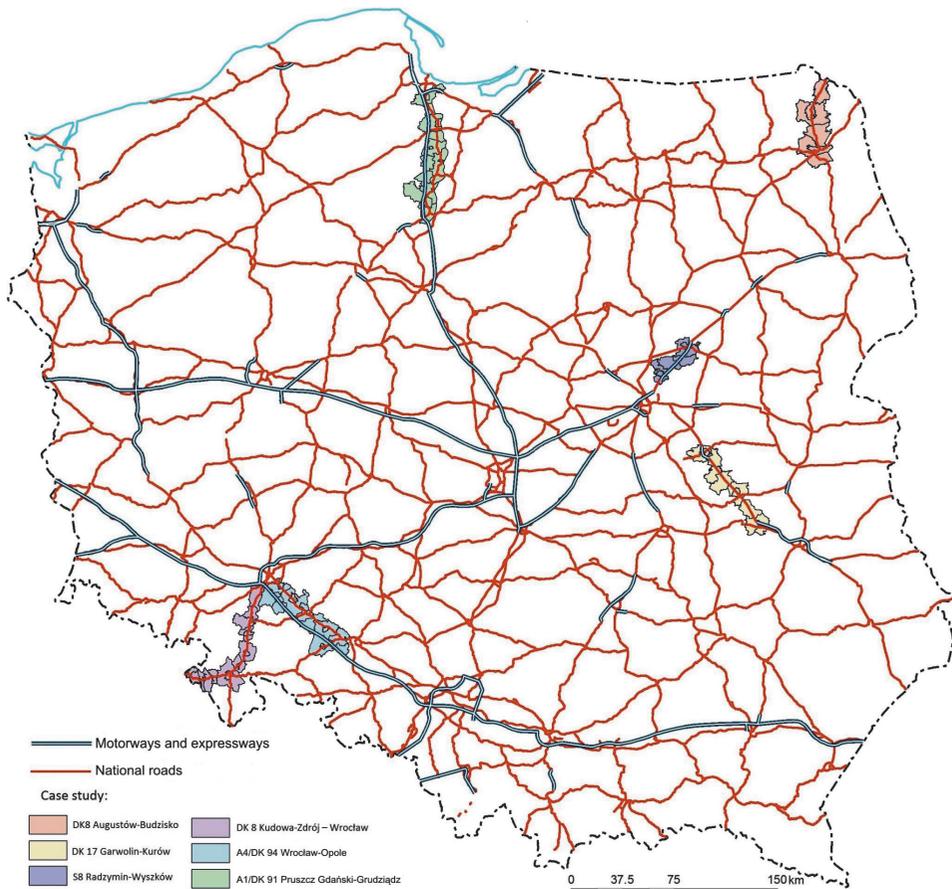


Figure 1. Distribution of road corridors and gminas (communes) under study

Source: own elaboration.

The articles contained in the current volume deal with the topic of multi-aspect impact of road corridors, including the newly-constructed express roads. The point of departure is a study of changes in the traffic volume for passenger and heavy goods vehicles in the 2000-2010 period (inter alia due

to the new road developments) (P. Rosik, S. Goliszek, K. Kowalczyk). Since the magnitude of road traffic affects other elements under study, both natural environment as well as different spheres of human activity and functioning. A positive phenomenon is the fact that the overall growth of traffic volume did not contribute to aggravating the road safety problems (R. Rosik, S. Goliszek). The overall trend is markedly positive, i.e. in the 2000-2014 period there was a significant decrease in the number of accidents on Polish roads, among other things, due to development of motorway and express road networks. This development was also conducive to improving the accessibility (T. Komornicki, M. Stepniak), including better accessibility to the public utility services (R. Wiśniewski, T. Komornicki), i.e. to the high-order services, located in regional urban centers. Express roads provide also the stimulus for economic development in the regions, because of the improved accessibility and investment attractiveness (R. Wiśniewski, P. Rosik, T. Komornicki). However, construction of these roads can also have a negative influence, particularly in the case of express roads that were built following the old routes, because of the possible disruption of the existing functional structures (for example, a hindered accessibility to different service outlets operating before the development of a given express road).

The studies are not restricted only to socio-economic aspect of the road corridors' impact, but they also take into consideration an environmental aspect, in part associated with human activity and functioning. The detailed measurements have been carried out to investigate the traffic noise (K. Błażejczyk, J. Baranowski) which, as turns out, increases consistently with the growing number of vehicles and with rapid development of road network. The road corridors have an impact on the population standard of living. Its influence is also manifest in accumulation of heavy metals in soil cover (M. Degórski, I. Zawiska). Extent of this accumulation is dependent on the traffic volume, its fluidity as well as quality of roads. The closing environmental problem under investigation concerns the study on the level of ecosystem fragmentation and the role of road corridors as an ecological barrier affecting many animal species (J. Solon).

The broad scope of issues related to the impact of road corridors on natural environment and socio-economic development of the adjacent areas, presented in the current volume of EUROPA XXI, points to the need of inter-disciplinary approach to studies on environmental effects of roads, in particular in the context of further development of road infrastructure due to, among other things, the inflow of the EU funds.

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