

# TRANSPORTATION, AIR POLLUTION AND PHYSICAL ACTIVITIES (TAPAS), A 6-CITY INTEGRATED HEALTH RISK ASSESSMENT PROGRAM OF ACTIVE TRAVEL POLICIES: THE BASEL CASE STUDY

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**On behalf of the TAPAS consortium**

**Background and Aims:** Within the TAPAS research program, quantitative assessments are developed for six case study cities in Europe, linking determinants of active travel to potential co-benefits and co-risks of modal shifts from motorized to non-motorized modes of travel. We describe here the Basel, Switzerland case study.

**Methods:** We identified local sources of information from government agencies describing active travel and environmental conditions. We aimed at selecting policies of local and international interest, with quantifiable or demonstrated effectiveness. We reviewed local and regional governmental policy documents. We are also conducting experimental work generating new data to help fill research gaps in current framework.

**Results:** The city of Basel has about 170'000 inhabitants. Since the 1980s, Basel has actively promoted sustainable forms of transportation. Especially the improvement of public transport (low-priced regional pass, expansion of network, customer convenience), reduction of car use (restriction of parking space, promotion of car-sharing), and the promotion of active transport (safe and coherent bicycle and pedestrian networks) are major themes of traffic policy. Almost 50% of the households are non-car owning and public transportation is the main travel to work mode of trips within the city (30.5%). The proportion of active transport on the total distance of trips to work is higher in Basel (12.4%) than the Swiss average (4.8%). Annual average concentrations of PM<sub>10</sub> and NO<sub>2</sub> have been stable in the last decade (PM<sub>10</sub>: 22µg/m<sup>3</sup>, NO<sub>2</sub>: 30µg/m<sup>3</sup>). However, street levels for NO<sub>2</sub> still exceed Swiss federal standards. As a special contribution to the overall project, we develop a multi-modal commute model which is able to simulate both travel patterns and commute exposure to traffic-related air pollution in the region of Basel.

**Conclusions:** With its long tradition of active transport promotion, Basel is an interesting case while addressing challenging environmental conditions to mitigate risks.