

Air pollution and well-being: socio-environmental cost of urban development

The general objective of the project is to increase our understanding of human-environment relations, in the broadened conceptual framework of development (see: figure 1). Traditional approach to development is centered on economic growth (*an intermediate mean*), leaving aside the natural environment (*ultimate means*) and human well-being (*an ultimate end*). With the dramatic increase in impact exerted by human economy on natural environment, the significance of the latter for well-being is being increasingly acknowledged, but remains underexplored.

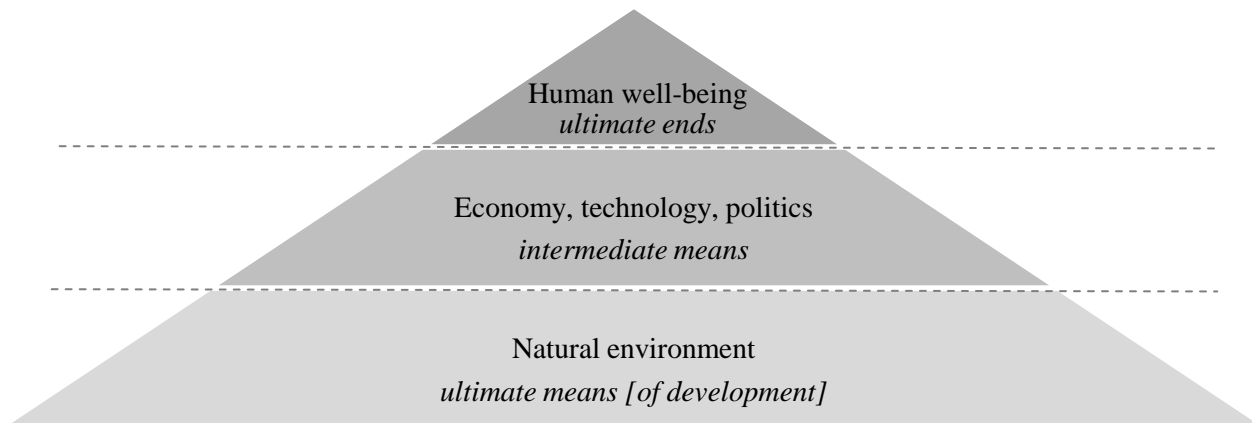
This project adds to our understanding of the ways in which particular features of environment - in this case urban air pollution - relate to human well-being. We focus on urban air pollution, because it is particularly acute issue in Polish cities. Placing the analysis on a local level allows to examine this relationship 'on the ground', in real circumstances of different cities. In this respect, using data on urban air pollution seems better suited than e.g. greenhouse-gas emissions, as the former has more direct and immediate effect on a local community.

We then investigate the relation between urban air pollution and well-being both empirically and theoretically. The empirical part is carried out for Polish cities – we test the relationship between their indicators of urban air pollution and GDP per capita, Human Development Index, and index of life satisfaction of their inhabitants. The analysis will allow us to check if the environmental impact is higher in more developed places, and is this affected by the measure of development that we apply. Or maybe this is the pollution that drives the well-being downward?

The project is the first to comprehensively test the relation between subjective well-being and air quality in a post-transition country. Previous studies, conducted mostly in Western European countries, found the life satisfaction to be negatively affected by higher levels of air pollution. Results of this project will thus add to an on-going discussion on the impact of level of development on the significance of environmental problems.

Finally, the project will focus on a local policy response to urban air pollution. Together with international specialists in transition studies we will develop a comprehensive matrix of public policies aimed at improving air quality and then use it to benchmark activities undertaken in Polish cities. It will allow to assess their progress in implementing policies to counteract air pollution, and to show what more can be done to address this pressing challenge.

Figure 1. The conceptual framework of development



Source: adopted from: Daly, H. (1973). *Toward a Steady-state Economy*. San Francisco: W.H. Freeman.