# Preface

Soil-forming process is affected by a range of physical, chemical, biochemical and biological factors. As a result, disintegration and synthesis of soil substrate, transformations of organic matter and its humification, reduction and oxidation processes, accumulation and translocation of chemical compounds, as well as numerous other transformations occur. These partial processes make up a soil-forming process – having developed features of the soil profile expressed in genetic and diagnostic horizons. In Polish natural conditions, the most important in the development and transformation of soils were brown soil, lessive soil, podzol soil, gley soil, bog soil and muck soil-forming processes which had a considerable influence on the Polish soil classification system.

Nowadays, domination of multidirectional human activity over natural factors which are influencing in-soil and soil-forming processes, is observed. It is a result of the decrease of groundwater level, soil use, fertilization and industrial contamination which inevitably lead to a transformation of soil landscape. These processes are more intense in south and west part of Poland where the level of industrialization as well as the use of fertilizers and pesticides in agriculture are high.

Recognition of partial processes occurring in the soil has a great practical importance. A diversity of geomorphological forms in Poland and variety of soil formations with simultaneous different industrialization of the country indicate that the soils are distinguished in relation to the degree of transformation as well as their resistance to degradation and anthropogenisation. Therefore field research should comprise application of new methods and modern genetic criteria.

There are numerous papers referring to soil environment – often fragmentary but very useful in monitoring changes. The presented monograph is aimed at determination of the changes occurring in soil environment with the reference to their role in the landscape. It is presented in the following chapters:

- definition of soil landscape (chapter I);
- specificity of soils in morainic landscapes (chapter II, III, IV);
- soil properties in urban landscapes (chapter V and VI);
- site conditions of soils transformed by open mining (chapter VII);
- determination of the factors influencing soil trophism of farmlands (chapter VIII) and forest lands (chapter IX).

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