

Summary of doctoral thesis.

Environmental protection in Poland, especially air protection, is one of the most serious challenges facing contemporary environmental policy, requiring effective action at the local and national level to reduce pollutant emissions. Research findings have indicated that substantial regions of Poland frequently exceed the permissible standards for the concentration of harmful substances in the air. Local government plays a key role in air protection, as it is closest to the problem and has the opportunity to take specific and effective measures to improve air quality in its area. However, the process of implementing air protection policy by municipalities is complex. It requires the coordination of strategic, legislative, informational and control activities. Municipalities are required to develop and implement air protection programmes, which are planning documents specifying measures to reduce pollutant emissions. Therefore, analysing the implementation process of air protection policies is important from both theoretical and practical perspectives. From a theoretical perspective, it allows better understanding of the mechanisms of environmental management systems at local levels. From a practical perspective, it enables to identify barriers and good practices, as well as opportunities to optimize existing municipal measures.

The implementation of an effective air protection policy requires the involvement of all stakeholders, i.e. municipal authorities, residents, non-governmental organisations and supervisory bodies. The implementation of national air protection programmes and programmes developed by local governments is one of the basic tasks of municipalities, aimed at improving air quality and reducing pollutant emissions.

This thesis analyses the implementation of environmental protection policy by selected municipalities and institutional and legal solutions related to air protection in Poland. The doctoral dissertation's research problem is the effectiveness of the implementation of environmental protection policy, as demonstrated by environmental protection programmes in selected cities. The study also identifies prospects, directions and needs for improving the state of the environment and the activities of local authorities. The time frame of the research covers the years 2018 to 2024.

The main objective of the doctoral dissertation is to assess the effectiveness of local government actions in the area of environmental protection, with particular emphasis on air quality. The author selected three cities for the study: Krakow, Katowice and Łódź. The criteria for selecting the cities for the study were the highest air pollution with PM_{2.5} dust according to a 2021 report published by Airly, and the size of the cities measured by the number of inhabitants. PM_{2.5} particulates are atmospheric aerosols with a diameter of no more than 2.5 micrometres. They are considered to be the most dangerous to human health. They are both solid and liquid substances of various origins. The doctoral dissertation analyses the effectiveness of air protection policies implemented by local authorities in selected cities. It focuses particularly on changes in air quality in order to compare the effectiveness of these policies and identify areas in need of improvement.

The secondary objectives leading to the achievement of the main objective of the research are:

1. Analysis of environmental protection policy regulations in the Republic of Poland.
2. Identification of the competences of local authorities in the implementation of environmental protection policy programmes and an answer to the question of whether these competences are sufficient.
3. Identification of the actions of local authorities in selected cities that have contributed to effective environmental protection by using their competences and performing the tasks specified in the Environmental Protection Law of 27 April 2001.

4. Identifying differences and their causes in the effectiveness of air protection programme implementation in selected cities.

The main research question posed in this thesis is therefore: Is the environmental protection policy in selected local government units effective?

The auxiliary research questions are as follows:

1. Are the competences of local government in the implementation of environmental protection policy sufficient?

2. Do the environmental protection programmes adopted by local authorities take into account all the factors that contribute to the deterioration of the environment?

3. What impact do the meteorological conditions and topography of selected cities have on air quality?

4. How does the historical economic development of selected cities affect contemporary air quality problems?

The author formulated the following research hypotheses:

Main hypothesis:

H0: Local government bodies in selected cities pursue ineffective policies for improving air quality.

Auxiliary hypotheses:

H1: The main problem of selected municipalities in the field of environmental protection is poor air quality.

H2: The reason for the ineffectiveness of local authorities in the field of air protection is the unfavourable meteorological conditions and topographical location of selected cities.

H3: The historical industrialisation of selected cities has a negative impact on current air quality.

The research was conducted within the framework of public policy theory. Environmental protection policy is one of the public policies. It encompasses measures taken at national and local level to protect ecosystems, natural resources and human health. It involves the state apparatus in the process of decision-making regarding the allocation of resources, the creation of legal regulations and the control of their implementation. The scope of environmental policy is broad: from the regulation of atmospheric emissions, through water and waste management, to the promotion of renewable energy and climate action.

The research was conducted using the following research methods and techniques:

- historical analysis, which provided the basis for understanding the origins of air pollution in the cities studied. It made possible to trace the historical sources of air quality degradation and identify key stages in the development of environmental protection policy;
- institutional and legal methods, which allowed for the identification of the legal and institutional basis of environmental protection policy and a detailed analysis of the competences and tasks assigned to institutions dealing with air protection, with particular emphasis on local authorities;
- statistical analysis, which provided the basis for generalisations about the actual state of the environment and trends in air quality changes. Statistical analysis was particularly valuable for assessing the effectiveness of environmental protection programmes by comparing long-term series of measurement data from selected air quality monitoring stations. It enabled not only an assessment of the current state, but also the identification of the dynamics of change, which allowed for the formulation of recommendations for future directions in air protection policy;

- case study was used to examine the actions taken by the local authorities of selected cities and enabled a qualitative assessment of the effectiveness of the actions taken, as well as the identification of both strengths and weaknesses in the air protection practices of individual municipalities;
- comparative method allowed for the identification of differences in the effectiveness and scope of the measures taken. The comparison of policies also aimed to identify the reasons for the varying effectiveness of individual local governments in the field of air protection;
- a questionnaire addressed to local officials involved in the implementation of environmental protection policy in the cities surveyed. Based on the officials' responses, the causes of air protection problems in selected cities were identified.

The dissertation is divided into six chapters. The first chapter is an introduction to the subject matter. It describes the main environmental threats facing the modern world, including an analysis of air, water and soil pollution, climate change, threats to ecosystems and biodiversity, and other processes of environmental degradation. It also presents ways of combating environmental degradation. The chapter concludes with an analysis of the principle of sustainable development, which forms the basis for the formulation of environmental protection policies today.

In the second chapter, the author presents environmental policy as one of the public policies responding to the problem of environmental degradation. The historical development of environmental policy and the process of its creation are discussed, taking into account the complex mechanisms of decision-making at various levels of administration. An important part of the chapter is an analysis of the effectiveness of national environmental policy, which allows for an assessment of the extent to which the implemented environmental policy achieves its intended ecological goals.

The third chapter is devoted to the legal and regulatory framework within which environmental policy is implemented in Poland. The analysis begins with international environmental law, followed by European Union law, and then focuses on national environmental law. A significant part of the chapter is devoted to a detailed discussion of environmental policy instruments, organised into three categories: economic and market instruments (fees, subsidies, environmental taxes), administrative and legal instruments (standards, permits, regulations) and social impact instruments (education, information, social campaigns).

Chapter four begins with a discussion of the tasks of national authorities in the environmental protection, then moves on to the role of local government in the environmental protection management system. The system and typology of local government tasks are analysed, distinguishing between: organisational tasks (creating structures, planning), directly executive tasks (implementation of programmes, management of investments), binding and regulatory tasks (issuing regulations, orders), and control and supervisory tasks (monitoring, supervision and control of compliance with environmental law).

Chapter five constitutes the empirical part of the dissertation, containing case studies of air protection policies in three selected cities: Krakow, Katowice and Łódź. At the beginning, national air protection programmes implemented in the studied cities are discussed and the research methodology is presented. For each city, an analysis was carried out covering: air quality assessment, characteristics of the air protection programme and evaluation of the programme's implementation. This made possible to examine how the legal framework and tasks of local governments translate into their actions and what the actual results of these activities are.

Chapter six provides a comparative analysis of the effectiveness of air protection measures taken by the local governments of the three cities, taking into account the topographical and climatic conditions affecting pollution levels. The chapter includes an analysis of actual changes in air pollution levels in the cities studied, an assessment of the implementation of air protection programmes, and the identification of prospects, directions and needs for environmental protection in the future.

The conclusion of the dissertation emphasises the complex and multifaceted nature of poor air quality in Polish cities. The contemporary problem of air pollution is caused by multidimensional degradation of the natural environment. Air quality protection is becoming not only a legal obligation, but also a concern for the health of present and future generations.

The ineffectiveness of local authorities in the field of air protection is attributable to two main factors. These are the unfavourable meteorological conditions and the topographical location of selected cities. Furthermore, the historical industrialisation of selected cities has a negative impact on current air quality. The industrialisation of each of the three cities has left behind a permanent energy infrastructure that is difficult to change quickly and continues to be a source of pollution emissions. The impact of these factors can be significantly mitigated through systematic emission reduction at source, such as the replacement of inefficient heat sources and the modernisation of transport infrastructure.

The research results do not confirm the claim that local government measures are completely ineffective in combating air pollution. On the contrary, observations show a clear trend towards a reduction in pollutant concentrations in the cities studied, which is a direct result of the air protection programmes implemented by local authorities. However, while these measures are producing measurable results, they are not effective enough to meet the standards set by either the World Health Organization (WHO) or the European Union. Pollutant concentrations in the studied cities remain many times higher than the WHO's safe levels.