

# ENVIRONMENTAL MANAGEMENT SYSTEMS AND THE PRACTICE OF POLISH LOCAL AUTHORITIES IN WARMIA AND MAZURY DISTRICT

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## Abstract

Last ten years were very important for the environmental management in Polish local authorities. New technologies, know-how and ecological awareness are today closely connected with requirements of environmental management systems (EMS). Subject of research was: if the environmental procedures and level of practice in Polish communes fulfill the standards of EMS (ISO 14001 and EMAS). Research has done in 92 of 113 communes of Warmia and Mazury District in northeastern Poland, which answered the research initiative. Correct management system includes stage of planning, realization as well as monitoring of effects. Activity in every part of managing system is necessary condition to also set correct Environmental Management System. Auditing team compared real applied methods in local authorities to all recommendations of ISO 14001 standard. This way they got the image of practical level of managing of every significant environmental aspect. This research let to concretize which part of commune management could be the base to implementing EMS in local label of authority. The most direct effect is an answer if temporary procedures in communes in Warmia and Mazury District of Poland are correct and compatible with ISO 14001 standard.

## Introduction

Many are looking for new, more effective instruments for preservation of natural resources in the world. So far the most popular way was "end of pipe" method. During the last years bigger and bigger significance has pollution prevention.

For the sustainable development many domains of science of ought to cooperate. Combination of environmental and management sciences there are requirements of Environmental Management System (EMS). EMS affects not only on environmental benefits but also on economic results and social communication. EMS implementation in industry shows few categories of benefits. There are: environmental aspects, finance, human resources and organization management (Table 1).

Benefits of implementation of Environmental Management System for the industry should to apply local authorities also. Interviews in local authorities of northeastern Poland permit to line up ranking of potential benefits of implementation of EMS. First seven of the benefits there are: decreasing environmental impact, improvement of involvement of inhabitants, fulfillment of law requirements, promotion of commune, meeting of inhabitants' expectations, preparation for the future requirements and improvement of relations with environmental inspection.

Main aim of research is to check if the environmental procedures and level of practice in Polish communes fulfill the standards of EMS.

Table 1. Potential benefits of implementation of Environmental Management System

Group of benefits	Possible benefit
Environmental aspects	<ul style="list-style-type: none"> <li>• Implementation pollution prevention</li> <li>• Support of identification of environmental aspects</li> <li>• Implementation or development of pollution control</li> <li>• Consideration of environmental impact of new products or technologies</li> <li>• Conformation to law requirements</li> </ul>
Financial aspects	<ul style="list-style-type: none"> <li>• Evaluation of economic feasibility of environmental and other innovations</li> <li>• Reduction of environmental costs of entertainment</li> <li>• Adaptation of budget to environmental program</li> </ul>
Human resources	<ul style="list-style-type: none"> <li>• Definition of competency and requirements for employees</li> <li>• Integration environmental requirements with quality and discipline</li> <li>• Involvement of employees</li> <li>• Better documentation of processes</li> <li>• Improvement of employees training</li> </ul>

There are no legal barriers of implementation of Environmental Management System in local authority. Because of that implementation depends on local decision. Range of commune competencies results from national and European law. It is possible to find few groups of this competence: General tasks (plans and programs connected with environment, environmental decisions and others), Tasks connected with managing of the water, Tasks of protection of air (in this group there are noise and radiation), Task of nature protection (plants, animals, landscapes), Protection of soils, Special threats (wastes, toxic materials and others), Spatial planning and managing.

This range of activity is compatible with range of requirements of EMS. Important for the process is adaptation practices to the procedures and requirements of ISO 14001 or EMAS. Main Elements of implementation Environmental Management System according to ISO 14001 are: Engagement and policy (Environmental policy), Planning (Environmental aspects, Legal and other requirements, Objectives and Targets, Environmental Managements Programs), Implementation and operation (Structure and responsibility, Training, awareness and competence, Communication, EMS documentation, Documentation and operation control, Emergency preparedness), Checking and corrections (Monitoring, Nonconformance and corrections, Records, Audits), Management review.

### Methods

Implementing Environmental Management System should to use as many existing procedures as it is possible. The research is diagnosis which part of commune activity is consistent with EMS requirements. It could be the base for the system implementation.

Mainly checked current state of environmental management in communes, which are connected, with documentation of activities, environmental aspects, structure and responsibility in environmental range.

Research objects were 113 communes in Warmia and Mazury Region in northeastern Poland. There are rural, and small-town communes. Results based on answers of 92 communes from whole 113 local authorities in region.

Instruments of research were postal questionnaires for the environmental department of local authority. Main questionnaire was preceded by test in few communes. Results were completed by direct interviews.

In the questionnaire were in 6 groups of questions: Adoption of environmental policy, Identification of environmental aspects (protection of air, soil, natural resources, water, sewage and spatial management), Documentation of environmental programs, Competence of environmental employees, Monitoring.

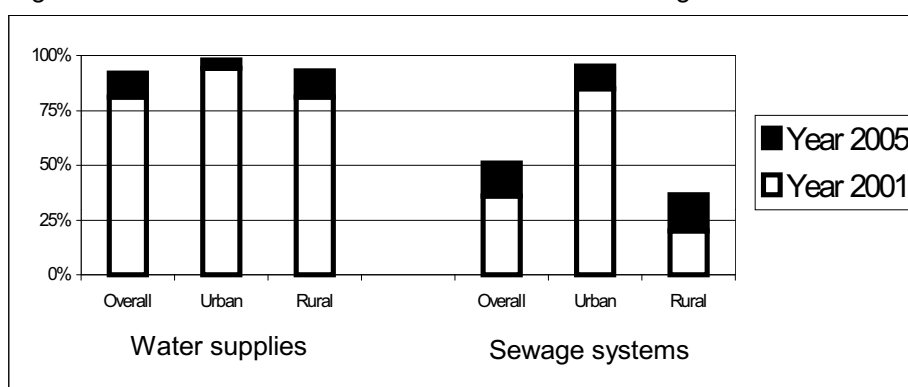
### Results.

Environmental Policy. Every local authority is favorable to environmental management system. Above 80% communes participated in research. It is good prognosis for the future possibility of Environmental Policy adoption. But so far only 7% of them have passed own environmental policy.

Environmental aspects. Activities in range of environmental aspects are realization of environmental policy. They sometimes need expensive investments.

Relatively significance for communes is water management. Main aspects of that are waterworks and their development from present 94,5% of area to 98,5% in 2005 in urban communes and from present 81% to 93% in rural areas (Figure 1.) In some local authorities are discrepancy between development plans and realization of investments. Discrepancy is also in range wastewater management. Only half of communes have investments now. Development in this range should to be 10% in urban communes and almost 16% in rural areas.

Figure 1. Current and future water and wastewater management



During last 5 years 49 new wastewater plants have been build in region and 19 have been modernized. But so far 20% of wastewater plants are only mechanical.

One of most important part of environmental activity of local authority is waste management. Wastes in Warmia and Mazury are traditionally developed in landfills. Almost every commune has own object of this kind. Only a half of them consist with requirements. Accidentally there are in communes places for collection of dangerous or large dimension wastes (Table 2). Additionally only 30% of communes have waste segregation.

Table 2. Places of dangerous wastes, large dimension wastes, areas for soil in communes

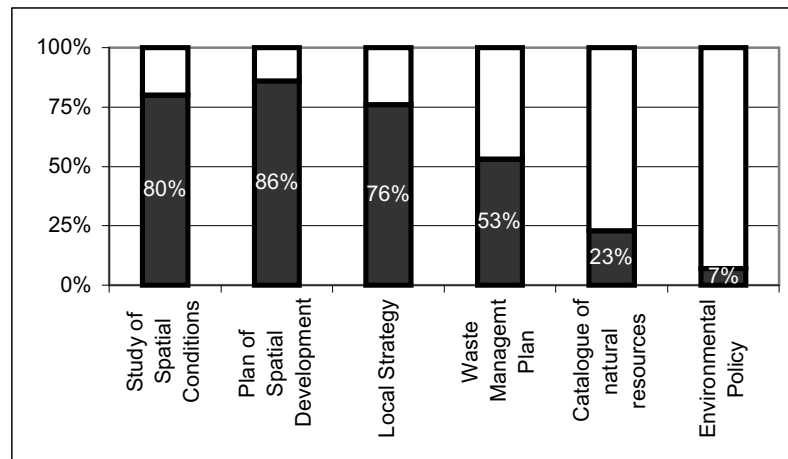
Commune		Overall	Urban	Rural
Place for collection	dangerous wastes	11%	0	12%
	large dimension wastes	14%	10%	12%
Place for rubble and soil		26%	50%	30%

Competent environmental staff has to coordinate of implementation of Environmental Management System. In Warmia and Mazury local authorities are from one to three

environmental employees. Every one of them participated in two or three networks or educational seminars to increase their knowledge.

Documentation. Every management system needs documentation. There are some kinds of environmental strategically documents in local authority. Kinds and quantity documents implemented in communes are in Figure 2.

Figure 2. Environmental documents in communes



Monitoring. Control of effects is one of the most important for EMS. Only 52 of 91 communes do monitoring.

### Discussion

Comparison between requirements of EMS and activities of communes shows the table 3.

Table 3. Areas of consistency or inconsistency in communes

Part of EMS	Area of consistency	Area of inconsistency
Environmental politics	Managements of local authorities are favorable to the idea of implementation EMS. 25% of communes have Environmental Policy already.	There are lack of connection between acceptance of Environmental Policy and continuing next stages of EMS
Planning		Dispersion of planning initiatives in every aspect of environmental protection
Environmental aspects	Range of competence of local authority is compatible with ISO 14001. This range includes all of communal influences on environment.	There are very seldom examples of tasks wider then legal requirements. To weak relation between planning and realization.
Spatial management	Most of communes have documents in spatial planning. The number of communes without base documents in spatial planning is decreasing	
Water management	Significant number of inhabitants with communal water supplies. Significant development of water supplies in rural area. Intensive development of sewage systems.	Differences between plans and realizations of investments. Far less number of sewage systems then water supplies. Many sewage plants require modernization.
Air protection		Great number of individual, difficult to control, heat sources. Not so many people have heat from „nature friendly” sources. There is no legal requirement to program

		protection of air in commune.
Noise protection		Lack of legal requirements of planning of noise protection in commune. Seldom control of noise volume.
Waste management	Most of local authorities have a waste management program. Many activities connected with waste management education.	To many landfills in region. Half of landfills are not compatible with legal requirements. Great number of illegal dumps. Not so popular waste segregation and recycling.
Nature protection	Law protects most part of area in the region.	Only few communes have catalogue of natural resources.
Legal and other requirements	Actual system of identification of legal acts in local authorities is good enough.	
Structure and responsibility		Responsibility in environmental range is only in environmental department of authority office. Sometimes in local authority there is no one professional in environmental sciences.
Training and competence	Authority workers participate in two or three workshops or courses in the year. It is good enough to actualize professional know-how. Communes organize ecological education for inhabitants.	Ecological education is mostly only for school children.
Communication	There are procedures of environmental communication.	Not enough participation of inhabitants.
Monitoring		Lack of monitoring and internal control of environmental effects.

## Conclusions

1. Managements of local authorities are favorable to the idea of studying and researching area of rules of initiation environmental management system in Polish authorities. Communes perceive advantages from initiating EMS. The main motivations for this process are: promotion of autonomy, engagement of inhabitants, realization their expectations and more effective limitation influence on environment.
2. Communes perceive and realize activity in all ranges of protection of environment because of their legal competences. It is very important to set right targets and objectives to fulfill the ISO 14001 range.
3. Most communes realize environmental protection as separate problems. They can give better results when each assignment becomes integrated in frames of Communal Environmental Management System.
4. Environmental documentation possessed by communes refers only some aspects of environment. To create Environmental Management System one should possess exact and transparent records. There should be descriptions of procedures and of assignments placed before commune. There were authorities without basic documents in the range of environment. The Greatest lacks perceives in range of procedures of communication with society.
5. Among activities of protection of environment the most important is the subject of investments in infrastructure. Especially distribution of water, sewage plants and waste management. Smaller attention is connected with other environmental aspects such protection of air, ecological consciousness.
6. In local authorities are lack of internal control of effectiveness of assignments realized in environment and lack of monitoring of state of local environment.
7. Local authorities do not opposed to certificate their environmental activities