ABSTRACT

Pollution of freshwater resources in Poland is a result of negligence in wastewater management in the past. Major sources of pollution are effluents from municipal wastewater treatment plants and surface runoffs. While in the cities, large wastewater treatment plants are gradually modernized and new ones are constructed, in small communities the situation is changing very slowly. The development of wastewater infrastructure in rural areas is a difficult and costly process that does not produce immediate reduction of large pollution loads discharged to the environment. Hence, people living in rural areas have worse access to sanitation services than the residents of large agglomerations do. Local communities undertake efforts to improve this situation but they often encounter financial and organizational barriers. The national program of improvement in wastewater management focuses its efforts on massive reduction of pollution loads from large agglomerations. The other program that refers to small communities has significantly smaller budget and a number of limitations. In effect, despite the fact that the progress in development of wastewater infrastructure in rural areas is apparent only about 26% of rural population in Poland is served by wastewater treatment plants. Nevertheless, many of them apply very modern treatment technologies with nutrient removal. The article reports the situation in this area, analyzes the causes of it, and presents perspectives for the future.

Keywords: Water management; Wastewater management; Sanitation; Small wastewater treatment plants; Nutrient removal