

Preface

In recent years the implementation of the EU “Water Framework Directive” has led to increased focus on water quality and measures to improve the quality. More local and international attention has been put on environmental changes, where changes in hydrological regime seem to be of great importance for ecological systems and human activity. Taken into account that small streams in rural areas are very seldom gauged, the basic hydrological characteristics, as discharge variability in time and values of extreme flows, belong to basic subjects to be investigated. The Water Frame Directive has put new focus on agriculture and diffuse pollution from agricultural activities. The farmers need recommendations on best management methods that can minimise the losses and their cost-effectiveness. These topics, and many related unanswered questions, were the inspiration for Polish-Norwegian research teams to submit proposal for joint research project on „Prediction and the reduction of diffuse pollution, solid emission and extreme flows from rural areas”, within the grants from Iceland, Liechtenstein and Norway through the EEA Financial Mechanism and the Norwegian Financial Mechanism and Resource for Sciences. This research project, granted by the a.m. institutions, has also been supported by Polish Ministry of Sciences and Higher Education.

Research consortium has been formed by the following institutions:

- Warsaw University of Life Sciences – SGGW, Department of Water Engineering,
- Bioforsk – Norwegian Institute for Agricultural and Environmental Research, Soil and Environment Division, Aas,
- Norwegian University of Life Sciences, Department of Plant and Environmental Sciences, Aas,

- Institute of Soil Science and Plant Cultivation – State Research Institute (IUNG), Puławy, Poland, and
- Kozienice Landscape Park, Pionki, Poland.

Methods and importance of the investigation, as well as partial results, were presented during two seminars of the researchers with end users, i.e. agricultural, forest and ecological agencies' representatives from Mazovia Region of Poland, at Jedlnia and Czarna near Radom in October 2008 and in October 2010. The research teams had three workshops to exchange knowledge, discuss the progress and results of the investigations, twice in Warsaw: in October 2008 and October 2010, and one time in Aas in September 2009.

This volume presents the final results of cooperation conducted by all research teams in the period of 2008–2011, with the use of hydrological and water quality data that had been gathered in earlier studies and data collected within this project.

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