ABSTRACT

The unfolding dynamics of international cooperation and political, economic and territorial integration in Europe, the ongoing societal transformations and the flying progress in digital technologies have contributed to the advancement of modern instruments supporting decision-making in the regional development. These include: geographical information systems (GIS), project management applications and monitoring systems for growth processes. Following the increasing importance of the regions in European policies, it has become indispensable to study their growth pre-requisites, factors, trajectories and results as well as to provide an organisational and institutional framework for managing the growth. The monitoring systems for regional and sustainable development serve this purpose. They encapsulate a wide array of issues, stemming from research approaches through hardware and software, databases (including benchmarks and indicators) – to the required personnel resources. Such systems, operating at the international, national, regional and local levels, deal with manifold social, economic, environmental and spatial aspects. In Poland, the monitoring systems have been assigned the role in appraising public intervention effects and are found particularly helpful in evaluating, controlling and reporting the material and financial outcomes of EU-co-funded programmes and projects. The accumulated experience has given ground to a discussion on a more comprehensive application of the monitoring systems in policymaking and management praxis in regional development and spatial planning, which – despite almost 10-years' long record – have evolved without any legislative and organisational setting. Consequently, the bottom-up approaches adopted by regional self-governments in that respect are caused by deficient information on growth requirements, conditions and implications.

The thematic scope of this book is determined by the author's overview of needs in designing an essential framework for regional growth monitoring systems. Compliant with that, the book integrates concepts used in geography, spatial economy and the management science. Contrary to economical and statistical outlooks featured in monitoring routines related with development policies, strategies, programmes and projects (often associated with controlling and evaluation obligations) the author brings closer the spatial dimension of the monitoring systems. This responds to the necessity of rendering access to more detailed spatial data in managing the regional territory. The use and distribution of information retrieved from the monitoring systems are emphasised as an imperative for sustainable development with embedded public participation process. The author then presents organisational solutions for the monitoring system at the regional level. The regional monitoring model addresses the issues of institutional setting, functional relations, organisational structure, and data extents as well as qualitative criteria for constructing monitoring indicators. The discussed regional monitoring fundamentals feature both legal and normative environments at the European and national (Poland's) levels, and methodological provisions based on business management methods for continuous improvement of processes and products – PDCA (*plan-do-check-act*, also known as the Deming cycle) and the OODA loop (*serve, orient, decide, and act*). In that

context, the author reflects upon the relevance of the monitoring in development policies; presents theoretical aspects of data, information and competence management; highlights the problem of asymmetry in information; analyses sources of data and operational features of the monitoring (vision, goals, standards, functions and tasks); scrutinises geospatial information and meta-data, and inspects data processing tools. This section discloses relations between the monitoring system and the procedures for managing the regional development and implementing development programmes. Due attention is given to the issue of data integration and integrity as a basic precondition for efficient performance of the monitoring system. The book features also the European experience in conceptualising and applying the regional monitoring systems.

Finally, the author concludes on the outcomes of a pilot implementation of the regional monitoring system carried out together with the regional administration. They have provided a valuable input in directing the methodological solutions proposed in this publication to ensure an ultimate stability and durability of the monitoring system.

Key words: Spatial information, spatial monitoring, monitoring of regional development, regional geography, GIS, models of regional monitoring, spatial planning, development policy.