

FOREWORD

Dear Readers, I feel honoured by the invitation to present the next issue of Geomatics, Landmanagement and Landscape Journal – GLL.

The preservation of the natural environment and a responsible use of natural resources, including the landscape, is our duty before the future generations. The effective management of sustainable development and supporting the global response to adverse impact of the climate change is an extremely important issue. As Stanisław Lem said in one of the interviews ‘we live in a time of incredible acceleration’. We can also observe the negative effects of global warming and other related phenomena on the natural environment. Intensification of agriculture and forestry, accelerated urbanization processes and other forms of anthropopressure limit the area of natural ecosystems and fragment their structure, which is accompanied by processes of biodiversity reduction. Contemporarily the Earth’s landscape is undergoing one of the fastest transformations in history. Scientists as well as increasingly societies around the world are aware of the negative effects of the devastation of landscapes and the deepening of spatial chaos. With the expansion of civilization there is a growing number of economic and climate challenges to be met. Not only it is important to describe the current state, but also to focus on proper spatial development and landscape protection.

This issue of the GLL journal is presenting a wide variety of research topics, ranging from methodology matters related to land and building records as well as ecological approaches to various low aspects of land management.

The first article is a methodological work devoted to the comparison of various measurement techniques: LIDAR (in this case ground and aerial laser scanning), photos taken with the use of UAV and GNSS measuring the volume of soil masses of the earth mound in Dębnicki Park in Kraków, and indicating their suitability for determining the cubature these kinds of objects.

The second article is dedicated to methodological issues. The essence of the article is a projection of a rotational hyperboloid on a plane. The study found that cone mapping produces less distortion than cylindrical projection for the hyperboloid cooling tower. We think that in conical projection the shape of a hyperboloid cooling tower and theoretical conic shape correspond to each other better than in cylindrical projection.

Additionally, as the Polish energy network requires modernization by 2030, numerous activities are planned in this area. They will undoubtedly change the quality of landscape and result in the fragmentation of forest habitats. The aim of the third paper

was to outline the impact of the power line corridors on forest habitat fragmentation, as well as to present the GuidosToolbox software used for determination of the degree of fragmentation of forest habitats.

Most of the changes resulting from the transformation of the environment have a negative impact on the spatial order, resources and conditions for the functioning of ecological systems, and on the aesthetic values of the landscape. The next paper concerns the application of Terrestrial Laser Scanning (TLS) in preserving precious objects of architecture. The aim of the next study was to present the possibilities of the use of the unmanned aerial vehicles (UAVs) for land and building records in a selected area. The next two publications are related to the implementation of the legal requirements imposed by the Renewable Energy Sources Act (2015) and Land Surveying and the Cartography Act (2021).

The first act mentioned introduced the concept of an energy cluster into the legal system. The article attempts to answer the question of what actually an energy cluster is and whether it meets the requirements of a cluster in the classical approach to economics. The article considers the organizational attributes of clusters, based on the conducted analysis of historical, structural and definitional aspects.

Pursuant to the second mentioned act, keeping both soil science classification of land as well as land and building records is the responsibility of the governor. The aim of the next article was to present the irregularities resulting from the lack of updating the land and building register, as well as the lack of uniform administrative procedures in the field of soil science classification of land, which translate into the quality of the work performed.

I sincerely believe that the reading of the current issue of GLL Journal will be extremely stimulating and fruitful. I wish you all an inspiration, new ideas and good health.

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