FOREWORD

Dear Readers,

It is with great pleasure that I present to you the latest issue of the *Geomatics, Landmanagement and Landscape* journal, featuring a range of articles on a variety of research findings in the fields of environment, urban planning and engineering studies. The topics covered in this issue cover a wide range of subjects related to the challenges facing modern societies, particularly with regard to natural resource management, climate change, and sustainable development of cities and rural areas.

The first paper analyses the impact of the construction of the Boukhrouf dam on wetland ecosystems in the El Taref region. Although the dam provides benefits, such as flood control and water supply for agriculture, the authors point to a number of negative consequences it has for the ecosystem, including soil erosion and a decline in water quality. They draw attention to the need to balance the benefits of the investment with its environmental impact.

The second article examines the characteristics and susceptibility to swelling of soils in the Tebessa region, which pose serious challenges for construction. The geotechnical and mineralogical analyses indicate the occurrence of smectites – minerals with high swelling potential. The article highlights the importance of considering these factors in infrastructure planning.

The third article concentrates on the quality of groundwater in the Remila Plain in order to assess its suitability for irrigation. Hydrochemical studies show differences in the mineralisation of the water, pointing to mineral dissolution processes as the main cause of the variation in quality. The results suggest that the water can be safely used for irrigation, but it requires further monitoring.

In the fourth article, the authors analyse karst waters flowing from springs in the Tezbent Mountains. Isotopic and chemical studies help to understand the origin and variability of groundwater in the area. The results indicate a meteoric origin of the waters and a minor influence of evaporation, which has major implications for water resource management in the region.

The fifth paper concerns the state of residential areas in the city of Batna. The authors investigate the problems associated with the degradation of urban spaces and the lack of adequate planning. They point out the need for urban planning interventions that can improve the living conditions of residents.

The sixth article addresses the relationship between image file formats and the accuracy of photogrammetric models. The study shows that the RAW format provides the highest precision, while JPEG compression leads to the highest distortion. The article stresses the importance of selecting the right file format based on accuracy requirements.

The seventh paper addresses heavy metal pollution in the Drean Plain. The authors carried out a detailed analysis of groundwater quality, revealing high levels of contamination that exceed WHO standards. The results suggest that these waters are unsuitable for drinking, highlighting the need for ongoing monitoring and remedial action.

The eighth article presents an assessment of the quality of school spaces in the city of Oum El Bouaghi. Based on a field study, the authors identified key factors affecting students' wellbeing, such as greenery, ergonomics and innovative surroundings. According to the results, better designed spaces can improve the wellbeing and performance of students.

The ninth article analyses the impact of climate change on the spread of wild boar in Mexico, using RCP scenarios. The authors predict an increase in the numbers of this invasive species, threatening local flora and fauna. They suggest the need to strengthen conservation efforts in vulnerable ecosystems.

The final paper focuses on urbanisation dynamics and spatial transformations in the city of Djelfa. The authors analyse the changes in the social and spatial structure of the city, identifying the transition from a monocentric to a polycentric model. The paper provides valuable insights into sustainable urban planning in developing cities.

I trust that this collection of articles will inspire and deepen the understanding of environmental and urban challenges of our Readers.

The combination of issues addressed in this scientific issue of the GLL journal follows from their common denominator, which is the sustainable management of natural resources and space in terms of environmental protection and infrastructural development. Articles discuss key challenges such as groundwater and surface water management, ecosystem degradation, urban environmental quality, and the impact of human activities on space and landscape. Each of these topics has direct implications for the practice of land and water management, which are critical for long-term sustainability. The issues are interdisciplinary, combining geomatics, civil engineering, spatial management and environmental protection, allowing for a holistic approach to urbanisation and environmental problems. The publication of these articles in a single issue encourages the exchange of knowledge between researchers from different disciplines, promoting the integration of technical, scientific and practical solutions for better environmental and spatial management.

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