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**ICSD  
2023**

**9TH INTERNATIONAL CONFERENCE ON  
SUSTAINABLE DEVELOPMENT**

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**BOOK OF  
ABSTRACTS**

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**BOOK OF ABSTRACTS OF THE  
9th INTERNATIONAL CONFERENCE ON SUSTAINABLE DEVELOPMENT (ICSD)  
SEPTEMBER 13-17, 2023 IN BELGRADE, SERBIA**

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Prof. Dr. Özer Çınar

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**info@icsd.eu**

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## ***WELCOME TO ICSD 2023***

*On behalf of the organizing committee, we are pleased to announce that the 9th International Conference on Sustainable Development (ICSD-2023) is held from September 13-17, 2023 in Belgrade, Serbia (Hybrid Conference). ICSD 2023 provides an ideal academic platform for researchers to present the latest research findings and describe emerging technologies, and directions in Sustainable Development issues. The conference seeks to contribute to presenting novel research results in all aspects of Sustainable Development. The conference aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results about all aspects of Sustainable Development. It also provides the premier interdisciplinary forum for scientists, engineers, and practitioners to present their latest research results, ideas, developments, and applications in all areas of Engineering and Natural Sciences. The conference will bring together leading academic scientists, researchers and scholars in the domain of interest from around the world. ICSD 2023 is the oncoming event of the successful conference series focusing on Sustainable Development. The scientific program focuses on current advances in the research, production and use of Engineering and Natural Sciences with particular focus on their role in maintaining academic level in Engineering and Applied Sciences and elevating the science level. The conference's goals are to provide a scientific forum for all international prestige scholars around the world and enable the interactive exchange of state-of-the-art knowledge. The conference will focus on evidence-based benefits proven in clinical trials and scientific experiments.*

***Best regards,***

***Prof. Dr. Özer ÇINAR***



# ICSD

Hybrid  
Event

9TH INTERNATIONAL CONFERENCE ON  
SUSTAINABLE DEVELOPMENT  
September 13-17 2023 | Belgrade

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## **BLUE ECONOMY AND SUSTAINABLE DEVELOPMENT: THE PORTUGUESE CONTEXT**

**Sara Rute Monteiro Silva Sousa<sup>a\*</sup>**

**<sup>a</sup>Polytechnic Of Coimbra, Coimbra Business School | Iscac & Cernas, Coimbra, Portugal**

**\*ssousaiscac@gmail.com**

### **Abstract:**

Portugal is a country located in southwest Europe, and whose territory also includes the Atlantic archipelagos of the Azores and Madeira. Member of the European Union, Portugal has a coastline of around 2 500 km and one of the largest Exclusive Economic Zones in the world, with over 1.7 million km<sup>2</sup>, including a considerable diversity of ecosystems and resources. Hence, the sea has a special meaning for Portugal, particularly for the national economy. In the last decades, the economy of the sea, also known as the blue economy, in Portugal, has been gaining increasing importance. In this context, it is important to ensure that the growth of the national blue economy is done in accordance with the principles of sustainable development that aims to achieve social well-being, economic prosperity, and environmental protection for all individuals, both of current and future generations. It is also crucial that policy makers are attentive to how the economic agents use and exploit the marine resources. The sea is a key source of food, energy, products such as medicine, in addition to providing essential services such as transport, leisure, and tourism. Furthermore, people are increasingly aware that the sea is not limitless, and it is suffering the cumulative adverse impacts of human activities. Without healthy and resilient seas, it is not possible to have sustainable economies. This research study provides an overview of the blue economy in Portugal over the last decade, identifying an important growth in the blue sectors, despite the adverse impacts of some international events such as the COVID-19 pandemic and the military conflict between Russia and Ukraine. This study also shows that Portugal faces global environmental challenges such as climate change, natural resources` overexploitation, and other serious environmental threats affecting the sea`s sustainability. Finally, this paper explores how Portugal has been addressing all these environmental issues in its National Ocean Strategy.

**Keywords:** Blue Economy; Sustainable Development; Portugal





## INCIDENCE OF OBESITY AMONG THE TRIBAL AND URBAN POPULATION OF AN INDIAN STATE, TELANAGANA

Shirisha Junuthula<sup>a\*</sup>, Vijaya Lakshmi V<sup>a</sup>

<sup>a</sup>Professor Jayashankar Telangana State Agriculture University (Pjtsau)

\*siriinscience@gmail.com

### Abstract:

The nutritional status of the individuals determines whether the persons were nourished or not through the information collected from the methods of anthropometry. These methods help in visualizing and measuring inadequate intake of food for longer periods or seasonal fluctuations in food intake (UNICEF, 2009). In the present study, the nutritional status of the tribal and urban populations was assessed through anthropometric methods. The anthropometric measurements of height, weight, and mid-upper arm circumference were recorded in centimetres (cm) (Ricalde et al., 1998 and UNICEF, 2009), and waist hip circumference was taken from respondents. The calculated Body Mass Index (BMI) for each respondent was classified according to WHO, 2011 standards. For the study, 200 tribal (100 males, 100 females) and 200 urban (100 males, 100 females) populations were included. The mean BMI (kg/m<sup>2</sup>) was 19±4 and 25±3 among males, 25±3 and 27±4 in females from tribal and urban respectively. There was a significant difference in BMIs of tribal and urban males (P=0.01), tribal and urban females (P=0.000), between both tribal and urban population (P=0.000). The other parameters measured also indicate that the metabolic disorder risk was higher for the urban population than for the tribal population. The percentage of obese people was high in the urban population when compared to the tribal population, Underweight was noticed to be high among the tribal respondents when compared with urban respondents. Tribal respondents had healthy nutritional status as per the anthropometric measurements when compared to the urban respondents, as evidenced by the data. Hence, their lifestyle and food habits should be further studied and encouraged.

**Keywords:** Anthropometry, Food And Nutritional Security, Lifestyle, Nutritional Status, Tribal Population, Urban Population



## **VALIDATION OF NUTRITION-SENSITIVE AGRICULTURE (NSA) SCALE TO MEASURE THE TRAINING NEEDS OF AGRICULTURE EXTENSION ADVISORY STAFF (EAS)**

**Shirisha Junuthula<sup>a\*</sup>, Chittur Srinivasan<sup>b</sup>, Veenita Kumari<sup>a</sup>**

**<sup>a</sup>National Institute Of Agricultural Extension Management (Manage)**

**<sup>b</sup>School Of Agriculture, Policy And Development, University Of Reading, Whiteknights, Reading Rg6 6eu, United Kingdom**

\*siriinscience@gmail.com

### **Abstract:**

The world is still facing malnutrition, and nutrition-sensitive agriculture (NSA) is foreseen as one of the greatest solutions to combat it. To implement the NSA up to the grass root level, the most connected points are EAS (Extension Advisory Staff) providers, and we are proposing to develop a validated standardized scale for EAS staff in the context of the NSA. Governments and policymakers can use the scale as a standard throughout the country to assess the training needs of EAS staff. The scale will measure EAS knowledge on 9 important dimensions of NSA and training priorities. The scale developed and validated with qualitatively and quantitatively methods. The Content Validity Index of the Item-CVI (I-CVI) and the Scale-level-CVI (S-CVI), for internal reliability Cronbach's Alpha, content validity ratio (CVR) was calculated. The average proportion of items judged as relevant across the 16 experts was also calculated. The 16 experts (10 men, 6 women) from the fields of agriculture (5 N), nutrition (4 N), extension (4 N) and policy research (3 N) based at different government institutions and nongovernmental organizations (NGOs). Calculation of the item level CVI (I-CVI) for relevancy, comprehensibility, and level of difficulty for each item showed that 30 items were below 0.79 CVI scores, S-CVI was above 0.82 within the acceptable range. CVR of 11 items were below acceptable range. The average proportion of items judged as relevant across the 16 experts is 0.89, which shows good agreement between the panellists. Cronbach's alpha was 0.96, indicating excellent internal consistency. Scale was standardized by using scientific methods and will measure EAS knowledge on 9 important dimensions of NSA and training priorities, which help in the tailoring of specific training programs.

**Keywords:** Agriculture, Extension Advisory Staff (EAS), Content Validity, Nutrition Sensitive Agriculture (NSA), Policymakers



## EVALUATION OF DISABILITY STANDARDS IN PRIMARY SCHOOLS: THE CASE OF NORTH MACEDONIA GOSTIVAR MUNICIPALITY

Ayşe Arıcı<sup>a\*</sup>, Pinar Usta<sup>b</sup>

<sup>a</sup>International Vision Universty

<sup>b</sup>Isparta University Of Applied Sciences

\*aysearici.iut@gmail.com

### Abstract:

This article includes research conducted to evaluate disability standards in primary schools and an evaluation study presented on the example of Gostivar municipality in North Macedonia. Access to the right to education of persons with disabilities and providing appropriate educational environments are essential elements of an inclusive education system. The aim of the article is to examine the extent to which disability standards are implemented in primary schools. School standards for the disabled aim to meet the physical accessibility, communication opportunities, safety, and learning needs of people with disabilities. In addition, sustainability, engineering principles, and designs for disabled people play an important role in designing school buildings in accordance with disability standards. It is investigating the compliance of primary schools in Gostivar municipality, North Macedonia, with disability standards. Factors such as structural deficiencies, local building materials, and sustainable structures are among the focal points of the assessment. The extent to which disability standards are met and how it affects the safety and learning experiences of students with disabilities is examined in detail. As a result of this study, it is emphasized that measures should be taken to implement disability standards more effectively in primary schools. Effective implementation of disability standards is of great importance in order to facilitate the participation of disabled students in education and social life. In addition, the importance of engineering and architectural studies for sustainability is emphasized, and it is discussed that factors such as conservation of natural resources, energy efficiency, use of local materials, social participation, economic sustainability, and risk management should be taken into account in order for the studies in this field to be successful. This study also aims to emphasize the importance of engineering and architectural disciplines working together in the process of ensuring sustainability in rural areas.

**Keywords:** School Standards For The Disabled, Designs For The Disabled, Sustainability, Structural Deficiencies, Local Building Materials,



## EVALUATION OF THE EFFECT OF THE 6 FEBRUARY 2023 KAHRAMANMARAŞ EARTHQUAKE ON RURAL BUILDINGS

Pinar Usta<sup>a\*</sup>, Ayşe Arıcı<sup>b</sup>

<sup>a</sup>Isparta University Of Applied Science

<sup>b</sup>Vision University, Faculty Of Architecture Engineering, Gostivar/Nort Makedonia

\*pinarusta@isparta.edu.tr

### Abstract:

The 6 February Kahramanmaraş Earthquake was a significant seismic event that occurred in the rural areas of Kahramanmaraş, Turkey. This study aims to evaluate the impact of the earthquake on rural buildings and assess their structural performance. By analyzing the damage patterns and structural vulnerabilities, valuable insights can be gained to enhance the seismic resilience of rural buildings. The research methodology involves comprising visual inspections in the affected regions. The collected visual inspection data includes information about building types, construction materials, structural characteristics, and observed damages. The earthquake damage is categorized based on severity levels, ranging from minor cracks to complete structural failure, allowing for a detailed analysis of the performance of rural buildings. The findings of this study will contribute to the understanding of the seismicity of rural buildings in the Kahramanmaraş region and provide crucial insights for future mitigation and preparedness efforts. The results will help inform the development of appropriate building codes, guidelines, and retrofitting strategies to enhance the resilience of rural communities against future earthquakes. Ultimately, the evaluation of the effect of the 6 February Kahramanmaraş Earthquake on rural buildings will lead to improved seismic safety practices, ensuring the protection of lives and assets in similar rural areas prone to earthquakes. The research outcomes will be valuable for engineers, urban planners, and policymakers involved in disaster risk reduction and seismic resilience initiatives at both regional and national levels.

**Keywords:** Earthquakes, Masonry, Rural Area, Rural Building



## EVALUATION OF CONSTRUCTION WASTES AFTER THE EARTHQUAKE IN TERMS OF ENERGY AND SUSTAINABILITY

Pinar Usta<sup>a\*</sup>, Ayşe Arıcı<sup>b</sup>, Melda Alkan Çakiroğlu<sup>a</sup>

<sup>a</sup>Isparta University Of Applied Science

<sup>b</sup>Vision University

\*pinarusta@isparta.edu.tr

### Abstract:

Evaluation of the construction waste generated after the earthquake in terms of energy and sustainability is very important for effective disaster management and sustainable reconstruction studies. Earthquakes often cause significant damage to infrastructure and create large amounts of construction debris. This study aims to evaluate the energy impacts and sustainability aspects of the management and disposal of construction waste after an earthquake.

In general, a comprehensive assessment of the energy impacts and sustainability considerations associated with the management of construction waste after an earthquake can contribute to existing knowledge on the subject. The findings can guide stakeholders in making informed decisions that minimize environmental impact, optimize resource use, and support sustainable rebuilding practices after earthquakes.

The findings of this study contribute to the development of guidelines and best practices for post-earthquake waste management, emphasizing energy efficiency and sustainability. By promoting waste reduction, reuse and recycling, this research aims to minimize the environmental burden of reconstruction efforts while also highlighting opportunities to use waste as a valuable resource. Ultimately, the energy and sustainability evaluation of construction waste after an earthquake provides a more environmentally friendly and resource-efficient roadmap for post-disaster reconstruction practices.

**Keywords:** Construction Waste, Sustainability, Earthquakes, Energy



## DIGITAL SUSTAINABILITY IN AGRICULTURE: TWOFOLD APPROACH

**Andriy Popovych<sup>a\*</sup>**

<sup>a</sup>Independent

\*apopovych@kse.org.ua

### **Abstract:**

The article is devoted to the issues of sustainability of agriculture in the context of active digitalization of the economy. The paper identifies and defines two main areas of digital sustainability of agriculture. On the one hand, the introduction of digital technologies has an impact on the development of agriculture and rural areas, and on the other hand, the process of digital transformation itself has a certain level of sustainability. To study the role of digitalization in achieving the goals of sustainable development in agriculture, a comprehensive analysis was carried out in three areas. Firstly, the theory and practice of introducing digital technologies have been studied, the types and characteristics of sustainability indicators, internal and external factors, as well as tools for improving sustainability in agriculture have been considered. Secondly, the relationship between the indicators of the use of information and communication technologies and the development of economic entities in the industry has been identified. Thirdly, a statistical analysis of the impact of digitalization on indicators characterizing the agricultural sustainability was carried out using the variability indicator as the main criterion. As part of the study of the sustainability of the digitalization process in agriculture, the influence of business models of the digital economy and technology on the businesses was studied in terms of the stages of value creation and directions for ensuring sustainability, the links between the sustainability of the organization and digital transformation strategies were clarified and systematized. The study used FAO statistics and IMD World Digital Competitiveness Ranking.

**Keywords:** Digitalization, Sustainable Development, Agriculture

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