



# Book of Abstracts

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“GLOBAL CHALLENGES THROUGH THE PRISM OF  
RURAL DEVELOPMENT IN THE SECTOR OF  
AGRICULTURE AND TOURISM”



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ElixirZorka



“GLOBAL CHALLENGES THROUGH THE PRISM OF  
RURAL DEVELOPMENT IN THE SECTOR OF  
AGRICULTURE AND TOURISM“

## **Book of Abstracts**

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# THE LEGAL FRAMEWORK OF A HEALTHY ENVIRONMENT– CHALLENGES OF MODERN SOCIETY

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*„Joint forces for a better future„*

## ABSTRACT

The right to the healthy environment is fundamental human rights without exception that belong to every human being on the planet. Fundamental human rights such as the right to life and the right to health as well as many other rights that correspond to the right to healthy environment just in ecologically acceptable environment can be realized. It is known that many elements and acts on the preservation of the environment and protection of human health date from distant past, and they were created and developed with general development of law. Regarding to this development, there was a large number of acts in the domestic and international legal systems. In the modern society the most important thing is the application and interpretation of regulations, which if not intended for the purpose, can have major harmful consequences for the planet. The number of population on the planet is growing and therefore offer and demand which leads to excessive use of resources, which shall be protected by legal frameworks using the legal instruments. The aim of this work is to elaborate adopted legal frameworks for environmental protection on the international level and to examine their application by analyzing existing literature. In this work, specifically the rapid changes and challenges of modern society will be analyzed. Also, an appropriate activities and measures aimed on the prevention to the pollution, damage and danger of environment will be discussed.

**Keywords:** environment, human rights, legal frameworks, modern society, challenges.

# SYSTEM FOR REARING BEE COLONY AND OBTAINING BEE PRODUCTS INDOORS AT HOME

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## ABSTRACT

The system for rearing bee colony is an innovative product specifically designed to allow you to collect all kinds of honey bee products indoors. The invention relates to the construction solutions of a multifunctional system for rearing bee colony and obtaining bee products indoors at home, consisting of a basic element, which is upgraded with auxiliary elements - modules that allow the collection of honey, pollen and propolis, as well as the possibility for apitherapy through apipunctures and api-inhalations, feeding and colonization of the same system, without contact and disruption of the work and function of a bee colony. The invention ensures rearing and exploitation of a bee colony without the use of beekeeping protective equipment indoors. Considering its multifunctionality, the invention enables the user, using the attachments, to obtain bee products such as honey, pollen and propolis, without coming into contact with the bees, as well as services relating to the application of apitherapy - through the process of apipuncture (injection of bee venom) and through api-inhalation (inhalation of air originating from the bee colony).

**Keywords:** Indoor beehive, honey bee, bee products, apitherapy.

# AGRICULTURAL TOOLBOX FOR EXPLOITING SENTINEL DATA TO IMPROVE DROUGHT MITIGATION (AGROSEND) – the project proposal

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## ABSTRACT

Annual losses from drought go beyond 1 € billion per European country, and depending on the region, up to 60% of the losses relate to agriculture. AGROSEND is proposed to provide the framework for scientific exploitation of Sentinel-1 and Sentinel-2 satellite missions, for improvement of drought mitigation in Europe at high spatial resolution. The main objective of the project is to provide a toolbox for casting the vegetation drought severity through time series analysis and establishing seasonal profiles of vegetation indices through applications of big data analytics and machine learning. It will focus on croplands (winter wheat, maize, sugar beet, sunflower, soybean and potato) and forests. Relying on soil moisture anomalies, the benchmark profiles of these vegetation types will be provided for dry and wet reference seasons at specific regional level. Vegetation indices of interest are those representing plant health status and moisture content. The toolbox will store the benchmark profiles and make them easily accessible to domain experts in agriculture and forestry through novel visualisation assets. In combination with existing datasets related to drought and vegetation status, new benchmark profiles will provide a scientific basis for an enhanced understanding of drought effects, especially on crop yields and risks on forest wildfire.

**Keywords:** agricultural toolbox, satellite data, vegetation indices, drought, crop yield.

# DAIRY COWS PROTECTION FROM ENVIRONMENTAL HEAT STRESS AND SUSTANABILITY OF MILK PRODUCTION

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## ABSTRACT

In Serbia, as in the whole world, a trend of climate change in the form of an air temperature increase, has been observed in recent years. Temperature increases are especially pronounced during summer months when there are conditions for the development of thermal stress in cows, especially with a simultaneous increase in temperature and relative humidity, which adversely affect the health and productive and reproductive abilities of dairy cows. Heat stress in dairy cows triggers adaptation mechanisms at all levels of the organism in order to maintain the balance of the internal environment (homeostasis). In the case of failure of the adaptation mechanisms of the organism, there is a health disorder and a decrease in the productive and reproductive characteristics of animals. With animals, there is a pronounced decrease in appetite, a decrease in the intake of dry matter and, consequently, a decrease in milk production. In this way, profitability in the production of milk is reduced as a basic and irreplaceable food in the human diet, which contains all building, energetic and protective substances necessary for proper growth and development. Milk production and dairying as an economic branch have an important role in the creation of agricultural farm income. Precisely for this reason, keeping cows in hot and humid climatic conditions will require in the future modifications in rearing that require improvement of the possibility of cooling.

**Keywords:** dairy cow, heat stress, milk production.

# INFLUENCE OF DIFFERENT VARIETIES OF TRITICALE ON PRODUCTION CHARACTERISTICS AND CARCASS YIELD OF BROILER CHICKENS

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## ABSTRACT

Grains of triticale cultivars from Kragujevac Kg 20, Favorit and Trijumf, produced on the field of Small Grains Research Center in Kragujevac, has been used for fodder mixture preparing. In that moment there are formed four groups of chicken: A group: classical mixture for broiler fattening, B group: mixture with genotype Kg 20, C group: mixture with genotype Favorit and D group: mixture with genotype Trijumf. The feeding experiment lasted 49 days. Based on the recorded productive traits of the examined groups of chicks the researches came to a conclusion that the best results for mortality, feed conversion, production index, average body weight before butchery, handled and cooled carcass weight after 49 days of age are achieved by the group C. The average live body weight on the 49 day of fattening was the highest in the experimental groups C and D (2454.39 g and 2348.99 g), which is by 5.09% and 1.71% higher than the body weight of the broiler chicks in the group A. Insignificantly higher values for all three dressing yields ("conventional processing", "ready to roast" and "ready to grill") were found in the group C, with the addition of the triticale Favorit (83.77%, 77.76% and 71.75%).

**Keywords:** broiler chickens, growth, feeding, triticale.

# CONCEPTUAL APPROACH TO CIRCULAR ECONOMY IMPLEMENTATION: CASE STUDY OF COMPANY ELIXIR ZORKA - MINERAL FERTILIZERS

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## ABSTRACT

The circular economy (CE) is one of the five areas of the Green Agenda for the Western Balkans, from November 2020. It is considered a priority, but also one of the possible ways to reduce greenhouse gases both in the region and in the Republic of Serbia. The circular economy is defined as restorative and regenerative by design, and aims to keep products, components and materials at their highest utility and value at all times. CE can be viewed on three levels: macro, meso and micro. As the subject of this paper is the analysis of CE at the level of the company Elixir Zorka, primacy will be given at the micro level. In the direction of adapting to circular economy measures, at the time of the fourth industrial revolution, the priority is the creation of clean technology and products, which will affect environmental, economic and social factors. In addition to the introduction and methods, the work is based on the analysis of the current global principles of CE, as well as the assessment of the success of applying the conceptual approach of CE in the observed company. At the end, the concluding words of the author are given.

**Keywords:** concept, implementation, circular economy, mineral fertilizers.



# SUSTAINABLE TECHNOLOGIES AND THE ZERO EMISSIONS IN THE FOOD INDUSTRY

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## ABSTRACT

In this paper presents an analysis of the nature and importance of the term "sustainability" and an attempt to point out the activities that need to be undertaken in food production. The focus of the analysis is on the description of the connection between the food industry and sustainable development. In order to change the approach to this problem and the way of working in the food industry, it is necessary to identify the potential for change or the so-called commercial drivers/carriers. In a number of developed countries, sustainable development strategies have been elaborated and adopted, and as part of that, sustainable development of the food industry and solutions for strengthening sustainable technologies in food production and processing have been given. The aforementioned strategies contain specific proposals with deadlines within which the proposed solutions should be implemented in practice. In order for activities to introduce sustainable technologies to be more effective, it is necessary to highlight some of the key issues of sustainability and identify the drivers of change for the food industry as a whole. The concept of zero emissions can be an innovative system of sustainable industrial development where the reduction, minimization and utilization of waste are kept. The zero emission system offers a bridge between specific innovative developments in cleaner production and reaching the satisfaction of human needs within global and local capacity. Because of this approach, zero emission techniques have started to be used in some process industries.

**Keywords:** agricultural, ecology, food, sustainable development, zero emission.

# **GEOHERMAL ENERGY SOURCES AND THEIR SIGNIFICANCE FOR THE SUSTAINABLE DEVELOPMENT OF MAČVAN DISTRICT**

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## **ABSTRACT**

The use of geothermal sources for energy purposes shows a growing trend in the Republic of Serbia, which contributes to the improvement of environmental protection and sustainable development. In the current period of the global energy crisis, the use of energy from geothermal sources is one of the ways to overcome it. The Mačvan district has a significant amount of geothermal sources. Their use is present, but it should be increased because there are real grounds for it. The paper analyzes previous research on the available capacity and use of geothermal energy in the Mačvan district. The municipalities of Bogatić and Vladimirci are leading the way in the use of this natural resource and are becoming recognizable as examples of good practice in Serbia. The focus of the research was on the possible application of modern technological solutions for the use of geothermal energy in rural areas - for improving the quality of life. Based on the conducted research, it is concluded that it is possible to intensify the use of geothermal sources in the Mačvan district, thereby contributing to the achievement of sustainable development goals.

**Keywords:** geothermal energy sources, the Mačvan district, sustainable development.

# ASSESSMENT OF HEALTH-RELATED QUALITY OF LIFE IN BURN PATIENTS

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## ABSTRACT

Introduction: Burns are a major health problem. Considering that they can lead to various damages and complications, even the death of patients, the treatment and care of these patients are complex. All this affects the very quality of life of patients. Objective: To assess the health-related quality of life of patients with burns based on a review of science literature. Methods: Review of prevailing attitudes. Discussion: As the assessment of the health-related quality of life (HRQL) deals with the impact of the disease and treatment on the physical, psychological and social functioning of the sick person in everyday life, the HRQL domains are often weakened in people with burns in short term. Over a longer period of time, most HRQL domains improve, while some aspects in the long term (e.g. physical and emotional role participation) have poor results. This means that burn injuries are associated with a significant physical and psychological burden and that assessment of an individual's ability to adapt to the consequences of burns is very important. Conclusion: The association of quality of life with health is a value that describes the length of life limited by existing physical impairment, functional status, perception and social conditions caused by disease, injury or treatment.

**Keywords:** burns, quality of life, patients.

# KNOWLEDGE AND ATTITUDES TOWARD BREASTFEEDING AMONG POSTNATAL MOTHERS AND PREGNANT WOMEN USING PREGNANCY SCHOOL IN ŠABAC, SERBIA

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## ABSTRACT

**Introduction:** It is known that women's knowledge and attitude towards breastfeeding affect their decision to breastfeed. The aim of the study is a comparative assessment of attitudes and knowledge about the importance of breastfeeding among pregnant women and postnatal mothers. **Materials and methods:** A cross-sectional study conducted at the Health center "Dr Draga Ljočić" Šabac, among pregnant women and postnatal mothers using Pregnancy School. An anonymous questionnaire was used specifically designed for the purpose of this investigation. **Results:** The study included 30 respondents divided into two comparative groups (15 postnatal mothers and 15 pregnant women). For half of the respondents in both comparative groups, the source of information was nurses (60.0% and 46.7% respectively), while for the third of the respondents, were doctors the source of information (26.7% and 33.3%, respectively). Almost half of the respondents of both groups believed that the period up to 6 months is the most ideal for breastfeeding, while only every sixth respondent believed that the period of breastfeeding should last until the second year. Awareness of the harmful effects of tobacco smoke was more present among pregnant women compared to postnatal mothers ( $p=0.03$ ). Almost all respondents approved of breastfeeding in public places, while covering the breasts with appropriate cloth. The majority of respondents from both study groups, cited the numerous positive effects of breastfeeding for the health of both the infant and mother. **Conclusion:** Our study shows positive attitudes towards breastfeeding, which may be the result of effectiveness of breastfeeding education through the Pregnancy school.

**Keywords:** breastfeeding, attitudes, pregnant women, postnatal mothers, pregnancy school.

# **RISKS FOR PATIENT SAFETY IN EMERGENCY SERVICES**

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## **ABSTRACT**

**Introduction:** Urgent treatment of patients in the emergency department is of vital importance due to the complexity of the onset of acute symptoms in patients. Patients in need of urgent treatment come to the emergency services every day, and this is unplanned and unpredictable help. Emergency medicine approaches the treatment of urgent patients with a sudden health problem, without prior appointment, with an emphasis on the most efficient medical care. **Aim:** This paper indicates the urgent care of patients in emergency services and the way in which the safety of patients can be violated. **Methods:** Review of available science literature. **Discussion:** Emergency medicine is a field where time is of the essence. The quality of providing medical services in the field and ambulatory depends on the level of knowledge and training of nurses. Threatening immediate situations that affect the safety of patients (transmission of infection, application of drugs, doses of drugs, etc.) also lead to the occurrence of medical errors. **Conclusion:** Due to the specificity of work in emergency services, a nurse should be educated and experienced. Constant improvement and updating of knowledge and skills is necessary. In this way, it is possible to reduce and prevent professional medical errors, and have a favorable effect on patient safety from all aspects of health care.

**Keywords:** emergency medicine, patient safety, nurses, professional errors, education.

# IMPROVING THE HEALTH OF CHILDREN AND YOUNG PEOPLE

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## ABSTRACT

**Introduction:** Health is not only the absence of disease, but also a state of complete physical, mental and social well-being, and young people are a social group with specific problems and needs, so it is necessary to pay more attention to their health. **Aim:** Point out the importance of prevention with a focus on health preservation, and on the role of physical activity in relation to youth health outcomes, cognitive development and mental health. **Methods:** Review and analysis of available science literature. **Discussion:** More and more children and young people spend their free time in activities for which they do not use movement and muscular effort. A sedentary lifestyle is one of the biggest "diseases" of today's society and is closely related to poor health outcomes such as obesity, poor sleep quality, and impaired physical and mental health. **Conclusion:** The physical and mental health of children and young people in the last few decades is far from optimal, and therefore it is necessary to invest resources in preventive interventions aimed at improving both the physical and mental health of children and young people, which are adapted, acceptable, feasible and not stigmatized.

**Keywords:** prevention, sedentary lifestyle, obesity, physical activity, mental health.

# QUALITY OF LIFE OF COLORECTAL CARCINOMA SUFFERERS

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## ABSTRACT

**Objective:** Since ancient times, colon cancer has been a major medical problem, both because of its anatomical characteristics and because of its psycho-social aspect. **Aim:** Show the specifics of the disease and the quality of life of people with colorectal cancer. **Methods:** Review of available scientific literature. **Results:** According to Kimura's research on the quality of life with a stoma in colon cancer patients, there is a worse perception of one's own body, anxiety and depression. Loss of sphincter control, fear of unpleasant odors and leakage of fecal content disrupt interpersonal relationships and the social, physical and psychological dimensions of quality of life, while according to some authors, quality of life improves after early rehabilitation in patients with colorectal cancer. **Conclusion:** It is necessary to continuously assess the quality of life in these patients, and improve it as much as possible.

**Keywords:** colon cancer, classification, quality of life, research on the quality of life of patients.

# ECONOMIC INSTRUMENTS AND SUSTAINABLE DEVELOPMENT IN THE FOOD INDUSTRY

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## ABSTRACT

In conditions where various and numerous external effects lead to inefficient allocation of natural resources, the application of appropriate economic instruments, such as various forms of sanctions, taxes, subsidies and permits, is of crucial importance. Changing the way of production in the food industry, changing inputs, introducing a system to control the reduction of pollution are one of the ways to reduce environmental pollution. In this paper, sustainable development in the food industry is considered. In a number of developed countries, sustainable development strategies have been elaborated and adopted, and within that sustainable development of the food industry, as a segment of the overall development of society. In addition, certain solutions are given for strengthening sustainable technologies in food production and processing. The aforementioned strategies contain specific proposals with deadlines within which the proposed solutions should be implemented in practice.

**Keywords:** ecology, sustainable development, zero emission, external effects, economic instruments.



# THE IMPORTANCE OF THE ACCOUNTING TREATMENT OF PROVISIONS FOR THE REALITY OF FINANCIAL REPORTING

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## ABSTRACT

Financial statements of a company are a particularly significant source of information for all interest groups in the decision-making process, therefore they must contain the information which is reliable and relevant. To begin with a simple presentation of the assets information, capital, income and expense information, financial statements throughout the years have remarkably evolved into the complex statements including the position of provisions as an important item. Provisions are considered to be a company's specific liabilities which have uncertain sum of money and maturity date, where the word uncertainty emphasizes their increasing significance in today's complex business conditions. Therefore, it is of crucial importance for every company to make a regular acknowledgement of provisions and their announcement. The paper investigates the accounting treatment of provisions using the following methods: description, induction, deduction, analysis and synthesis. The aim of this paper is the clarification of provisions and understanding the importance of creating provisions in announcing the accurate financial statements. This paper indicates the importance of the impact of provisions and their adequate presentation on the accuracy of the financial result, as well as on the decisions that the users of the financial statements will make, based on the data presented in them.

**Keywords:** uncertainty, provisions, accounting standards, expenses, employee's fringe benefits.

# THE REPRESENTATION OF WOMEN IN TOP MANAGEMENT POSITIONS IN THE SPORT INDUSTRY

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## ABSTRACT

Sport is a growing social and economic phenomenon that makes an important contribution to the global strategic goals of solidarity and prosperity. Leadership, as a phenomenon, is an increasingly present, significant, and unavoidable factor for all successful professional sports organizations. In this paper, we aim to determine the current representation of women who are directly involved in the management of the national sports federations of Macedonia. According to the relevant data, it is evident that the majority of leaders in sports organizations around the world are men, with only 13 women in the highest leadership positions of the 206 national Olympic committees, and only 14% of them had the opportunity to run for a leadership position. The situation is almost identical with the leaders of the Macedonian national sports federations, where out of a total of 42 Macedonian national sports federations, only two are headed by women, or rather 4.76%. This phenomenon has various effects that make it difficult for women to advance in the corporate world, as certain behaviors are attributed exclusively to men. In this way, the idea that female leaders can be equally good or even better for certain roles and positions is invalidated. The applied methodology consists of qualitative research techniques, such as analysis, comparative analyses, and syntheses. Based on the obtained results, the paper opens space for further research in all segments of sport management and contributes to the understanding of the representation, role, and significance of women in top management positions in the sports industry at the national and world level.

**Keywords:** female leader, leadership, top management, sport industry.

# HUMAN CAPITAL AS A DISPOSITION OF SOCIAL WELFARE

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## ABSTRACT

Human capital is an important production factor of any society. The level of social welfare largely depends on the competence of human capital. The competence of human capital should contain three features: knowledge, experience and morality of the individual. The focus of this paper is the morality of the individual, which is the basis for the previous two features of human capital. For these reasons, it is necessary to make an adequate effort in order to build an adequate system of individual values, which in sublimation with knowledge and experience to influence the standard of living of society in a timely manner.

**Keywords:** human capital, knowledge, experience, morality.

# WINE COMPOSITION AND QUALITY

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## ABSTRACT

Wine is a very complex matrix consisting of variety of compounds, such as polyphenols, aroma compounds, organic acids, proteins, carbohydrates, biogenic amines, minerals etc. The wine quality depends mainly on grape variety, but also on temperature, soil, climate conditions and ripening stage. Also, wine-making practices such as intensity of pressing, fermentation temperature, maceration time, yeast strain, enzymes, SO<sub>2</sub> doses, storage temperature affect the wine composition and quality. Various analytical techniques have been used for determination of wine composition. Reversed phase high-performance liquid chromatography (RP-HPLC) is commonly employed for analysis of polyphenols, biogenic amines, organic acids, carbohydrates and other nonvolatile compounds, using mostly C18 column, and a binary solvent system with an polar acidified solvent, such as aqueous phosphoric acid or formic acid solution (solvent A) and organic modifier such as methanol or acetonitrile, possibly acidified (solvent B). Various detection systems have been coupled to HPLC, such as UV-Vis, DAD, MS and Q-TOF-MS detectors. Gas chromatography is the techniques for analysis of volatile compounds in wine, while multielement analysis is performed with atomic absorption spectroscopy (AAS), electrothermal atomic absorption spectroscopy (ETAAS), inductively coupled plasma - optical emission spectrometry (ICP-OES) and inductively coupled plasma - mass spectrometry (ICP-MS). This paper is focused on the chemical composition of wine and most important advanced instrumental techniques applied for wine analysis, including spectroscopic and chromatographic methods.

**Keywords:** wine quality, composition, analytical techniques.

# **SUSTAINABLE DEVELOPMENT OF RURAL TOURISM: CASE STUDY OF THE REGION OF WESTERN SERBIA**

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## **ABSTRACT**

Sustainability is related to development and is used in various contexts, including rural development, agriculture, tourism, economy, technology, environment, etc. Rural tourism is one of the most widespread selective forms of tourism, which refers to the development of villages, that is, rural areas. Rural areas have economic potential, which is mostly untapped, or can be better used for the benefit of the rural population and overall national development. Given that financial redistribution and politics based on agriculture are not able to use the potential of rural areas, rural tourism can represent a search for a new future and the driving force of the rural population, which is crucial for the region of Western Serbia. The aim of the research of this work is to point out the importance of sustainable development of rural tourism in Serbia, primarily in the region of Western Serbia. In addition to the introduction and methods, the paper is based on the analysis of the sustainable development of rural tourism, as well as the assessment of the application of rural tourism in the region of Western Serbia. At the end, the concluding words of the author are given.

**Keywords:** sustainable development, rural tourism, Western Serbia.

# **TOURIST DESTINATION OF UPPER SANA AND PLIVA RIVERS AS A FACTOR OF RURAL DEVELOPMENT**

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## **ABSTRACT**

Tourism is an activity that records continuous growth globally, which placed this industry as the most developed activity in the world. The specificity of tourism is the sale of what could not be sold otherwise such as: nature, historical monuments, culture, local cuisine, entertainment. This is where the special value and special economic importance of tourism as a multiplier of earnings and employment for the development of rural areas lies. This paper was created, as a result of engagement on the project in order to increase the competitiveness of local tourism especially in rural area. New tourist packages are being created and promoted on the international level, along the route where a new eco-tourist destination in the open air is developing. The project is implemented by the local community of Mrkonjić Grad, together with the citizens' association. The area is seen as a unique tourist destination, where SWOT analysis points to the key comparative advantages of the destination, sketches the possibilities for rural tourism product and finally points to the optimal model of managing a specific destination. Previous project activities have shown that in a specific project area there is a high chance of forming a strong integrated product from the individual providers of tourism products and services.

**Keywords:** tourism, accommodation, destination, rural areas.

# THE INFLUENCE OF EXCHANGE RATE POLICY ON THE DEVELOPMENT AND COMPETITIVENESS OF COMPANIES IN SELECTED COUNTRIES OF SOUTHEAST EUROPE (SEE)

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## ABSTRACT

Creation and management of exchange rate policy is a complex activity of economic policy holders, which cannot be independent, but in integration with other economic policy measures (demand management policy, movements of monetary aggregates, assortment of exports, etc.). The deficit of the trade balance, together with the constant appreciation of the national currency and insufficient elasticity of imports, in selected countries of Southeast Europe (SEE) (which have kept their domestic currency), causes a deficit of the balance of current transactions and rigorous measures to adjust the balance of payments, primarily through the reduction of imports. This kind of policy cannot be successful in the long term, precisely because of the insufficient elasticity of domestic demand and the impossibility of expansion and development of the export offer, which would lead to balancing the commodity balance and removing the imbalance. Also, looking at macroeconomic aggregates in selected countries of SEE, we come to the conclusion that it is not possible to maintain foreign trade balance in the conditions of growing internal economic contradictions. Here, we primarily mean the growth of aggregate demand, which is conditioned by expansive monetary and fiscal policy, as well as the growth of income above real aggregates (production and productivity).

**Keywords:** exchange rate policy, development, competitiveness, companies, SEE.

# ORGANIC ANIMAL NUTRITION

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## ABSTRACT

Increasing sensitivity to healthy nutrition and ensuring animal food safety in developed countries have led people to consume organic animal products. For this reason, studies on organic agriculture and animal husbandry have intensified in recent years. Organic livestock is a production activity that is carried out in a controlled and certified manner with environmentally friendly production techniques, aimed at the consumer mass demanding high quality, healthy and risk-free products. In organic poultry feeding, the quality, quantity, and delivery forms of the feed raw materials that make up the mixed feeds and the permitted additives affect the poultry health significantly. All feeds used in poultry nutrition should be organic. In organic poultry nutrition should not contain any animal by-products, coccidiostats, medicinal products, antibiotics, or genetically modified feed sources. Like all other animals, cattle require five components in their ration as a food source. These are energy, protein, minerals, vitamins, and water. In case of their shortage or imbalance with each other, growth and reproduction are adversely affected. For this reason, the feed raw materials included in the ration in organic cattle feeding should be in a balanced ratio. In organic animal husbandry, animals that are resistant to the environment, climatic conditions and diseases should be selected for breeding or production. In organic animal feeding, first of all, ruminants need to be fed significant amounts of roughage. In organic animal nutrition, it is recommended to use cereals as a supplement during peak production periods. In this review, the importance of organic animal nutrition and information about organic feeding in different animal species are explained.

**Keywords:** Organic animal nutrition, organic poultry, organic cattle, organic sheep and goat.



# CLASSIFICATION OF NOISE EFFECTS ON WILD ANIMALS

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## ABSTRACT

An analysis of the negative impacts of anthropogenic activities on nature cannot be complete if special attention is not dedicated to noise pollution. Unlike humans and most domestic animals, wild animals are not adapted to noise, which can have significantly more dangerous effects on them. From an ecological aspect, the authors of this article have made a classification scheme of noise effects on wild animals, using the previous knowledge and conclusions in this subject. In the first place, these effects can be classified as autecological (direct) and synecological (indirect). Autecological effects represent the effects of noise at the level of an individual organism; they can be physiological, behavioral, etc. However, to understand the impact of noise in a broader sense, special attention must be paid to its indirect consequences, i.e. the effects that noise has on populations, communities, or ecosystems.

**Keywords:** noise pollution, noise effect, wildlife, biodiversity, animal behavior.

# THE ROLE OF KNOWLEDGE MANAGEMENT AS A STRATEGIC TOOL IN MODERN AGRIBUSINESS

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## ABSTRACT

Technological changes accompanied by changes in consumer habits have a strong impact on the operations of organizations in all economic sectors. In such circumstances, agriculture must be sustainable and economically profitable, which requires the implementation and practical application of modern strategic methods. One of the relevant factors for creating a flexible organization capable of responding to changing market demands is the generation and application of organizational knowledge. Knowledge is a critical enabling factor for healthy agri-food innovation systems, as well as efficient business processes. The purpose of the paper is to present the importance and basic characteristics of knowledge management in modern agricultural business.

**Keywords:** strategic management, knowledge, agricultural business.

# THE CONNECTION BETWEEN APPLIED STATISTICS AND INFORMATION TECHNOLOGIES

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## ABSTRACT

During the 20th century, the rapid progress of information technologies contributed to the faster development of statistical theory. Consequently, contemporary statistics, especially applied statistics cannot be imagined without the use of appropriate information technologies. In addition to the historical overview of the development of statistics and information technologies, the paper also presents an example of the importance of using information technologies to implement the one-way analysis of variance procedure to test the null hypothesis that the average yields of differently treated vegetables are the same against the alternative hypothesis that they are not all equal. Namely, thanks to information technologies, we conducted the testing of three null hypotheses in a simple and understandable way. In the first case, we tested the null hypothesis that neither the method of fertilization, nor the presence of fertilizer affects the average yield of vegetables, in the second, that the method of fertilization, and in the third, that the addition of fertilizer  $P_2O_5$  (phosphorus pentoxide) does not affect the average yield of vegetables.

**Keywords:** Probability theory, mathematical and applied statistics, Cybernetics, information technologies, one-way analysis of variance.

# **ENVIRONMENTAL METAPHORS AND NATURAL WORLD IDIOMS WITH IN ENGLISH AND SERBIAN: CONTRASTIVE ANALYSIS AND IMPLICATIONS FOR ESP TEACHING**

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## **ABSTRACT**

The paper looks at some English idioms and metaphors whose domains are various environmental concepts, which can be commonly found in course books and other suitable materials for teaching English for Specific Purposes (ESP). The selected metaphors are analysed with ecolinguistics and its differentiation between destructive and beneficial stories we live by in mind. The method of contrastive analyses is used to compare and contrast the selected English idioms with their Serbian counterparts. The implications for teaching ESP are discussed and conclusions on further incorporation of ecolinguistics into ESP teaching practice are drawn.

**Keywords:** environmental metaphors, natural world idioms, English for Specific Purpose (ESP), ecolinguistics, contrastive analysis.

# REGIONAL TOURISM IN VOJVODINA, SERBIA: HOTSPOTS FOR FUTURE

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## ABSTRACT

Many regions in the world are developing tourism that is based on locations that are more or less regularly distributed on the territory. When looking at Vojvodina, there are several dominant tourist spots, which are called tourist hotspots: Novi Sad, Fruška Gora, Palić, Gornje Dunavlje, Vrdnik. In order to maintain and increase tourist traffic in the future, it is necessary to activate new tourist hotspots, which could be valorized due to their peculiarities, such as: Pačir, Pannonia, Zasavica, rivers Sava and Tisa, gastro and vine tourism. Rural areas should feel the benefits especially from the development of gastro and wine tourism.

**Keywords:** Tourism, Hotspot, Vojvodina, Serbia.

# HEALTH STATUS OF WOMEN

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## ABSTRACT

**Introduction:** Primary health care means the first line of health care, which is not limited to patients with specific diseases and is the field of health care where patients make the first contact with a doctor and have direct access and contact with a doctor. **Aim:** To present statistical data of research on the health status of women. **Methods:** Analysis of available science literature. **Discussion:** Women, as the most frequent users of health care services and employed workers, should have the most important role when it comes to health care, so it must be borne in mind that women most often complain that no one listens to them, no one believes them, that they treat them without their consent, without warning them about the dangers and effects of the medicine. **Conclusion:** Point out the importance of physical activity, healthy eating, avoiding stress and all that can damage women's health. Provide health, social and financial well-being to both health workers and women who need help.

**Keywords:** emergency medicine, patient safety, nurses, professional errors, education

# THE EFFECT OF THE APPLICATION OF DIFFERENT QUANTITIES OF NITROGEN FERTILIZER ON THE GRAIN YIELD OF DIFFERENT CORN GENOTYPES

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## ABSTRACT

In today's climatic conditions, corn nutrition, in addition to irrigation, is the most important agrotechnical measure for achieving high yield of corn grain. The aim of the paper is to examine the influence of different quantities of nitrogen fertilizers on the grain yield of different corn genotypes. A three-factor experimental trial was set up in the region of Posavotamna in the period between 2016 and 2018. Factor A was different quantities of nitrogen in the corn nutrition system. Nitrogen fertilizer KAN 27%-N was introduced to the crop nutrition in quantities that correspond to 160, 120 and 102 kg N ha<sup>-1</sup>. Factor B: three hybrids ZP 427, ZP 548 and ZP 684. Factor C are different treatments: T<sub>1</sub>-without treatment; T<sub>2</sub>-25 kg ha<sup>-1</sup> ZnSO<sub>4</sub> brought into soil during preliminary preparation; T<sub>3</sub>- seed priming was done immediately before sowing ZnSO<sub>4</sub>; T<sub>4</sub>-foliar treatment of crops with microbiological means twice during vegetation in quantities of 6 l ha<sup>-1</sup> for each treatment. T<sub>5</sub>-microbiological means EM Aktiv was inserted into soil 7 days before sowing in quantities of 30 L ha<sup>-1</sup> and it was applied foliary in the same way as in treatment T<sub>4</sub>. On average, the yield was mostly affected by the quantity of 120 kg N ha<sup>-1</sup> (7.86 t ha<sup>-1</sup>). During this fertilization, hybrids ZP 427 (8.17 t ha<sup>-1</sup>) and ZP 548 (8.02 t ha<sup>-1</sup>) had the highest yield. Hybrid ZP 684 with 160 kg N ha<sup>-1</sup> had the highest grain yield (7.81 t ha<sup>-1</sup>).

**Keywords:** corn, hybrids, nitrogen quantity, grain yield.

# **APPROACHES TO THE IMPLEMENTATION OF THE EFFICIENT FUNCTIONING OF THE MECHANISM OF ECOSYSTEM SERVICES TO REDUCE RISKS IN THE AGRO SECTOR.**

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## **ABSTRACT**

The relevance and necessity of solving this problem is determined by the modern risks that all states face on the way to climate neutrality. In Ukraine, at the moment there are negative factors influencing the rational use of natural resources. Among them, the belligerative consequences of the military conflict in large areas occupied in agriculture, climate risks play a big role today. They necessitate the development of a unified systems approach in the field of ecosystem services (ES) as soon as possible. The plan for the implementation of this concept should take into account: amendments to the legislative framework; development of the conceptual apparatus (terminology, structural-logical matrix); consolidation in environmental law of the concepts of division of the environmental sector into spheres - material production and non-material production; scientifically substantiated methodological economic apparatus (payment for compensatory activities, for violation of standards, for use, environmental insurance).

**Keywords:** ecosystem services, risks for the agricultural sector, climate neutrality.



# THE ROLE OF DIGITAL TEHNOLOGY IN MODERN AGRICULTURE

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## ABSTRACT

Agriculture is turning into a sector with an intensive flow of data; the data aggregate processed by modern programs provides information of a new quality allowing us to find patterns and make forecasts. The goal of digitalization is to maximize automation of all stages of production and optimize resource management based on decisions made by software tools and database management systems. The intention of digital transformation of agriculture is to modernize and increase the efficiency of the industry, the introduction of digital technologies and platform solutions to ensure a technological breakthrough in the agricultural sector. The purpose of the work is to present the role of digital technology in today's agribusiness. Through a literary review of eminent experts, the importance of the application of digital methods in modern agricultural business was pointed out.

**Keywords:** digital technology, agriculture, agricultural business

# **CHILDREN'S EDUCATIONAL TOURISM AS A COMPONENT OF LIFELONG ENVIRONMENTAL EDUCATION FOR SUSTAINABLE DEVELOPMENT**

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## **ABSTRACT**

Tourism contributes to the establishment of intercultural dialogue between the EU member states, which contributes to the process of European identification as a single cultural and historical entity. The European Agricultural Governance Fund finances rural development activities and provides assistance to the population engaged in subsistence production, including promoting the development of agro- and ecotourism. The most relevant and promising is to inform the younger generation and the public about the need to change approaches to the management of educational skills based on sustainable development in order to adapt to the requirements of the European space. familiarization with cases of adaptation in the field of environmental protection and adaptation to European legislation; studying the experience of European ways of practical implementation of environmental policy in the field of enterprises, natural parks, ecological networks; study of the European experience of the interest of the structure of production in reducing the negative impact on the environment and the search for ways to implement it in domestic practice.

**Keywords:** children's agro-, eco-tourism, education, sustainable development goals.

# EVALUATION OF THE BIOLOGICAL AND TECHNOLOGICAL CHARACTERISTICS OF THE FRUITS OF EARLY STRAWBERRY VARIETIES

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## ABSTRACT

Successful production of strawberries is based on the successful monitoring of trends in modern cultivation technology. In addition to the cultivation technology itself, the choice of variety is also very important for production, as well as the area on which plantation production is planned. The assortment of strawberries in the orchards in Serbia is quite heterogeneous. During the last decade, significant dynamics were observed in the group of table (consumer) varieties. In strawberry plantations in Pocerina, the most common varieties are Alba, Lycha, Aprica, Clery, and Joly. Research that was carried out in the two-year vegetation period of 2021 and 2022, on production plots of the field type of cultivation in the village of Grušić- 44°38'05"N 19°33'22"E /44.634666°N 19.556166°E. The following chemical analyses were performed in the tested varieties: the content of total acids, the content of soluble dry matter in the fruits. Determination of the content of total acids (%) was determined by titration and the content of soluble dry matter determined using a refractometer. In addition to chemical analyses, the fruits were subjected to pomological measurements such as fruit firmness, fruit weight, average yield per bush and average yield per hectare. This work aims of is to analyses the biological-technological characteristics of the fruits of early strawberry varieties grown in the open field, and to compare the obtained results with those of the selected varieties, which are important for the market.

**Keywords:** strawberry, acids, brix, fruit firmness.

# INTRODUCTION OF A NATIONAL SYSTEM OF FOOD QUALITY AND SAFETY CONTROL IN UKRAINE

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## ABSTRACT

Ukraine, as a candidate for European Union accession, is implementing a national food quality and safety control system equivalent to that of the European Union, based on the important principle of ensuring control “from field to table”, although there is a debate in the press about whether it really excludes risks such a principle for direct manufacturers. One of the important steps now is to comply with the requirements of Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002, namely with the aim of properly and effectively monitoring any risks related to the protection of health and food safety. Further study and testing of the effectiveness of the European Rapid Alert System for Food and Feed (RASFF), which is a system for the rapid exchange of information on the presence of a risk to human health associated with food and feed in order to identify unsuitable food products.

**Keywords:** food safety, EU quality system, Ukraine.

# **TOURISM DEVELOPMENT TRENDS IN THE REGION OF THE ADRIATIC COAST IN THE POST-COVID PERIOD**

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## **ABSTRACT**

After 2010, tourist traffic in the region of the Adriatic coast recorded constant growth. A stable economic and political situation for the development of tourism existed until the onset of the corona virus at the beginning of 2020, after which there was a major recession in most economic activities, including tourism. The slight recovery of the tourism industry starts to be felt already at the beginning of 2021 and has maintained an upward trend to this day. Numerous studies in almost all spheres of society show similar results of the impact of the COVID 19 virus. The purpose of this work is to point out the possibilities of successfully overcoming crisis situations in the tourism industry in order to ensure a positive development trend, using examples of good practice. In the region of the Adriatic coast, using a comparative method, we obtained data on the trend of the tourism industry before and after the corona virus. The results highlight the trend of growth in the number of tourists in the entire region caused by the stabilization of the health situation, and the analyzed data can be a good example for other tourist regions on how to behave in similar circumstances. Adequate projections and measures that can be applied to mitigate the consequences of any type of disruption in the economy should be one of the priorities of good planning in order to successfully overcome crisis situations and continue the positive growth trend, for which the Adriatic coast region is clearly a good example.

**Keywords:** Adriatic coast, tourism, COVID 19, trend.

# RESEARCHING THE DEGRADATION OF ROADSIDE AREA PLANT COMMUNITIES

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## ABSTRACT

Biodiversity loss is one of the global problems of mankind. The article studies the impact of the road use on biodiversity loss and, as a result, the degradation of plant communities which occupy large areas and are the basis of ecosystem development. It is defined that they degrade due to man-made soil salinisation, physical vegetation destruction, dust and chemical pollution. The paper assesses the level of such degradation of the roadside plant community at the representative road section in terms of quantity and quality. A significant level of destructive impact has been detected which results in the loss of species composition, displacement of glycophytes by halophytes, reduction of grass density by over 70 % compared to the checkpoint as the highway nears. Practical approaches to the development and implementation of a roadside vegetation management system are proposed.

**Keywords:** environmental safety, soils pollution, motortransport, plant community.

# TREATMENT OF BIOREMEDIATION AND PHYTOREMEDIATION OF LAND IN THE PROCESS OF RETURNING LAND TO AGRICULTURAL PURPOSES

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## ABSTRACT

Bioremediation and phytoremediation are technological measures that belong to the remediation process, i.e. remediation of contaminated soil. Bioremediation treatment is the use of microorganisms, which with their activity break down dangerous substances and stimulate autochthonous microbial populations in the soil, important for preserving or increasing its fertility. Phytoremediation treatment involves growing plants on polluted surfaces, which initiates biological, physical, microbiological and chemical processes that affect the reduction of pollutant toxicity. The aim of the research is the application of the mentioned measures, the necessary conditions to carry out the measures, as well as the limiting factors.

**Keywords:** bioremediation, phytoremediation, pollution, soil, microorganisms.

# THE USE OF NITRATE IN ORGANIC AGRICULTURE AND GOOD AGRICULTURAL PRACTICE IN THE MEANING OF EU LEGISLATION

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## ABSTRACT

Good agricultural practice is a phrase that is heard very often when talking about sustainable agriculture and responsible land use in general. However, even though the land is their basic resource, a large number of farmers, and also livestock farmers, behave very irresponsibly towards this very important and difficult to renew resource. The European Union has recognized the problem in question as one of the fundamental ones, and has taken a very serious approach to solving it through a large number of very strict regulations. The first part of the paper deals with the method of identifying the problem and gives a brief review of the actions of the European Union in the subject field, while the second part of the paper is devoted to the use of nitrates, as the most controversial element of fertilizers that is used abundantly in order to increase agricultural production. The authors further introduce us to the basics of the code of good agricultural practice and the general meaning of the term, while the central part of the paper is dedicated to the possible application of the code, as well as the implementation of the nitrate directive in the legislation of the Republic of Serbia. At the very end, according to the current state of affairs, we can conclude that the state of the environment in agriculture is not at a satisfactory level, as well as that it is necessary to take many more measures in order to approach the generally accepted standards of the European Union.

**Keywords:** Nitrate Directive, EU Commission, good agricultural practice, environment, nitrate.



# REENGINEERING OF MARKETING AND BUSINESS PROCESSES IN THE COMPANY

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## ABSTRACT

The basis of reengineering is a fundamental and radical change that dramatically improves the company, and is defined as a fundamental rethinking and radical redesign of business processes in order to achieve better performance. The goal is to improve customer service, reduce operating costs and become a leading competitor on the market. Strategic goals change over time and certain organizational processes should change accordingly. These changes must have their own mission. Business process reengineering is seen as a combined application of theory and concepts from Marketing (in terms of competitive advantage, focus on consumers, industrial value systems), Organizational theory (includes aspects of human resource management and organizational strategy) and Informatics (using IT to execute processes using appropriate information-architectural systems). Through reengineering, the company perceives its advantages and disadvantages and forces those processes that enable a kind of competence in relation to other market participants. The basis of the strategic choice is the processes that create appropriate values for consumers, so during reengineering appropriate changes and adjustments are made. Business strategy can be aligned with processes through market development, a more diverse offer, innovations, etc. After all, through reengineering, capabilities for better forecasting of consumer needs and development of new products and redesign of existing ones are strengthened, as well as more complete after-sales services.

**Keywords:** Reengineering, Benchmarking, Methodology, Marketing processes, Continuous improvement.

# **ANALYSIS OF HOW POWISLANSKI UNIVERSITY STUDENT ARE INVOLVED IN LOCAL DEVELOPMENT INCLUDING RURAL AREA DEVELOPMENT**

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## **ABSTRACT**

The authors have made an attempt to analyze how Powisłański University students are involved in local development. They presented the results of quantitative and qualitative analysis of the problem. They pointed out the important results of the research of students' involvement. The polling method was used in the research. In the conclusions it has to be underlined that students should be more involved in local development especially these young ones. The recommendation for future are to be close with regions strategic goals and managing the time in the right way.

**Keywords:** local development, rural area development, the role of student in the local development.

# THE ROLE OF INTERNATIONAL ORGANIZATIONS IN ENVIRONMENTAL PROTECTION

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## ABSTRACT

The right to a healthy environment is a fundamental civil right. The health crisis has shown us that it is necessary to change our habits and the way of manifesting and implementing our future activities. Enormous industrialization undoubtedly contributed to increased global pollution that has reflections on climate change, but what must be apostrophized is that the awareness of the current problem developed late, when there was the disappearance of certain species from the animal and terrestrial world, damage to the ozone layer, global warming and environmental pollution. Despite the existence of planetary awareness and consensus around environmental protection, it is still evident that this issue is not represented as much as it should be and is not given the importance it certainly deserves. In the paper, in addition to the introductory remarks, the author will deal with determining the degree of efficiency and contribution of the International Organizations through their activities at the global level in mitigating climate change, especially through the functions of monitoring and cooperation in the execution of climate policies by state actors. A special focus will be placed on the work of the United Nations and the European Union in the implementation of activities arising from international environmental principles, as well as the three key roles in environmental protection.

**Keywords:** International organizations, common regulation on the micro and macro level, environmental principles, climate policies.

# REVISED GREEN AGENDA DOCUMENTS FOR DAJÇI, PREZA AND VOSKOPJA: A TOOL FOR SUSTAINABLE TOURISM IN RURAL AREAS

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## ABSTRACT

The Green Agenda is an instrument for the Western Balkan Countries to achieve the European Green Deal, a long-term development strategy of EU countries, which aims to prevent climate change. Rural Albanian areas like Dajçi, Preza and Voskopja have already their Green Agenda documents since 2010-2011. These areas are well known for their interesting natural values, their specific biodiversity, and several ecosystems with beautiful landscapes. At the same time these areas are known also for their traditional, historical, and cultural values. For years the local community has worked for a better social and economic life standard, based on some objectives of sustainable development. Sustainable agriculture and tourism are economic activities based on sustainable development principles. Taking into consideration the important role of the community in the decision making process and their commitment to implement several activities proposed in Green Agendas documents, we are trying through this study to analyze these activities linked with tourism development, agrotourism and at the same time to give some important recommendations especially linked to the increase of the capacity of businesses in these areas and implement the best practices for rural development, increase the partnership within the Regions for enforcement of local economies based on rural development, rural tourism and agrotourism and increase of the investments in the areas with a benefit for the local community.

**Keywords:** green agenda, specific biodiversity, sustainable development, eco-tourism, rural development, agrotourism.

# ENVIRONMENTAL PROTECTION IS THE BASIS OF SUSTAINABLE DEVELOPMENT?

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## ABSTRACT

Sustainable development (SD) as a sociological-economic-political category rests on three pillars: environment, society and economy. The intersection of these three sets of immeasurably different sizes is defined as SD. Essential SD is the unhindered flow of substances and energy, *i.e.* the unfolding of biogeochemical cycles. Established in 2015 by the United Nations, it contains 17 interrelated and interdependent goals, such as the circulation of substances and energy in nature. Practically every goal is directly or indirectly related to the environment, with goal 13 explicitly apostrophizing it: "Climate Action-Climate Changes". The environment is indeed the central entity of civilization and together with food, health, energy and transport and information forms its framework. The question is how sustainable are the environment and SD, especially in the context of global perturbations, such as the CoViD-19 pandemic and the war in Ukraine, and almost daily disasters such as the recent earthquake in Turkey and Syria? The evidence is that the environment, as the carrier of SD, suffers unpredictable, uncertain and sudden changes, which it cannot compensate with natural mechanisms, and especially to be sustainable, since SD does not have a risk assessment. That is why we should certainly move from suitable to: smart development.

**Keywords:** environmental protection, sustainable development, smart development.

# AGRICULTURE AND THE PROFESSIONAL REHABILITATION OF PERSONS WITH MENTAL DISABILITIES

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## ABSTRACT

The bio-psycho-social and human rights-based model marked a change in the paradigm, policies and legislation around the world in the field of disability. The right to live in the community is clearly emphasized in the United Nations Convention on the Rights of Persons with Disabilities. Work is one of the very important aspects of life. It is not only a way to gain economic independence and stability, but an opportunity to acquire a professional identity of a person with a disability. In Serbia, professional rehabilitation of persons with disabilities is mostly realized in companies for professional rehabilitation and employment of PwD while occupational therapy within organization of social protection system. The aim of this paper is to show the connection of agriculture activities and professional rehabilitation and occupational therapy as a process of inclusion in the society of persons with mental disorders. The analysis will be based on the experiences of two day care centers for adults with mental disorders, as well as the experiences of the company for professional rehabilitation and employment of persons with disabilities, the Courtyard of Sustainable Development, whose founder is Caritas Sabac.

**Keywords:** agriculture, professional rehabilitation, employment, people with disability, occupational therapy.

# APPLICATION OF VEGETABLES IN THE PREPARATION OF EXPRESS RESTAURANT DISHES

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## ABSTRACT

An Express restaurant is a catering facility in which service is provided on the principle of self-selection and self-service of pre-prepared and displayed hot or cold dishes, drinks and beverages. The busy lifestyle, field work and shift work impose the need for the population to eat in restaurants of this type more and more. Each prepared dish should meet the nutritional and energy requirements of the consumer. The modern nutritional principles dictate that nowadays the entire process of food preparation cannot be imagined without the use of vegetables. Vegetables are an indispensable part of every balanced meal and are an excellent source of vitamins, minerals and plant fibers. The task of this paper was to analyze vegetable dishes and the methods of heat treatment that are used for their preparation. The goal of the research is to determine the structure of vegetable dishes, ie. to determine their participation in the offer of the company "Balkan Ekspres" in Šabac. The menu in this restaurant is very diverse and consists of 120 dishes, out of which a total of 57 dishes were discussed in the paper. The analysis found that vegetables are used in the preparation of all analyzed dishes (100%). The most commonly used vegetables in this facility are onions, peppers, tomatoes and potatoes. The lowest representation of vegetables was recorded in soups and stews (13.80%), while the highest representation of vegetables was registered in salads (97.85%) and appetizers (71.94%). The most common methods of thermal processing of vegetables, which are used in the preparation of dishes, are cooking (41%) and stewing (32%). The thermal treatment of frying in deep fat was the least represented, with a share of only 2%. This kind of analysis provides a detailed account of the representation of vegetables in various dishes that are of great importance in the diet of the population.

**Keywords:** vegetables, menu, the vegetables participation in dishes, food heat treatment methods.

# REAL-TIME PCR DETECTION AND QUANTIFICATION OF HPV GENOTYPES

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## ABSTRACT

**Introduction:** HPV infection is caused by DNA Human papillomavirus (HPV) which in most cases cause no symptoms and spontaneously resolve within two years. However, there are genotypes of the virus with high oncogenic potential that can cause very aggressive cervical cancers. This is precisely why testing and genotyping of the HPV virus is very important. **Method:** DNA was isolated from different types of samples (cervical swab, urethral swab, urine and ejaculate). Detection and quantification of target sequences from the samples was performed using Multiplex Real Time PCR method, using the HPV-QUANT-21 kit (DNA Technology, Russia). **Results:** The results obtained from this analysis help to determine the type of HPV, whether the HPV belongs to low-risk oncogenic group (types 6, 11, 44) or high- risk oncogenic group (16, 18, 26, 31, 33, etc) but also information about concentration of the virus (not clinically significant, slightly elevated, clinically significant and very high concentration). **Conclusion:** The great advantage of this analysis is the high sensitivity and specificity of the detection of the HPV virus, which serves to determine the oncogenic risk of virus present in tested patient and its concentration which is important for the treatment and further monitoring of the patient.

**Keywords:** HPV, Real Time PCR, low and high risk HPV genotypes.



# AGRICULTURAL PRODUCTION AS A RISK FACTOR FOR HUMAN HEALTH IN MACVA DISTRICT

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## ABSTRACT

This study aims to analyze the impact of agricultural production on human health and the environment in the Macva district, Serbia. The use of chemicals such as pesticides and mineral fertilizers has increased the productivity of agriculture but has also led to undesirable effects. Specifically, the study focuses on the impact of nitrates from fertilizers on water quality in the district, which is concerning due to the large reserve of groundwater suitable for drinking. The study highlights that nitrate is present in groundwater throughout much of the district at relatively high concentrations, and in some areas of intense farming, the nitrate concentration may exceed the maximum permissible concentration (MPC) of 50 mg/l. The increasing level of nitrates in some public water supply systems and higher concentrations of nitrates in private wells pose a potential risk to human health. The study emphasizes the need for proper handling and management of chemicals used in agriculture to minimize their negative impact on the environment and human health.

**Keywords:** nitrates, drinking water, pesticides, public water supply system, private wells, Macva district.

# MODERN CONCEPT OF TOURISM DEVELOPMENT IN THE AREA OF THE CITY OF ŠABAC

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## ABSTRACT

For the development of the modern concept of tourism at the level of a mountain, a spa, a rural area or a city, it is necessary to look at it as a whole, as a tourist destination. In accordance with the Tourism Development Strategy of the Republic of Serbia, taking into account the resource base for the development of tourism in the city of Šabac and the requirements of tourist demand, a tourist product was created that is aimed at different market segments. The key elements of the analysis were the Sustainable Development Strategy of the City of Šabac 2020-2025. of the year, Strategy for the development of agriculture and rural areas of the city of Šabac for the period 2016-2024. as well as the Podrinje development program. This work represents a significant source of information on the goals, guidelines and dynamics of tourism development in the area of Šabac, all through the prism of sustainable and responsible development. Such research enables a comprehensive overview of the state of resources and the possibilities of development of the tourism industry, which in the future can be the basis for further proper planning and strategy.

**Keywords:** tourism, strategy, Šabac.

# **YIELD COMPONENTS AND GENETIC POTENTIAL OF WINTER WHEAT ON SMONICA SOIL OF CENTRAL SERBIA**

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## **ABSTRACT**

To determine the effect of genotype and vegetation season on the yield and components of the winter wheat yield an experiment was performed on an agricultural farm in the environment of Čačak. Three wheat varieties (Kruna, Takovčanka and Aleksandra) were examined during two growing seasons in the agro-ecological conditions in the western part of central Serbia. Trials were arranged according to a randomized scheme over five repetitions. Grain yield (GY), 1000 grain weight (TGW) and test weight (TW) in winter wheat grain were analyzed. The highest yield of grain, 1000 grain weight and test weight in all wheat varieties were in the second vegetation period with moderate temperatures at the time of grain filling and a large amount of precipitation. On average, for all wheat varieties, during the two-year trial, the highest yield of winter wheat was 5.664 t/ha. The average 1000 grain weight in the study was 44.82 g. The test weight for all examined wheat varieties in the study was 76.77 kg/hl. Analysis of variance revealed a highly significant effect of the growing season on the yield and test weight of wheat. A highly significant effect of genotype on 1000-grain weight was determined.

**Keywords:** yield components, grain yield, wheat

# RELATIONSHIPS BETWEEN ECOSYSTEM INVASIBILITY AND SPECIES DIVERSITY

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## ABSTRACT

Invasibility refers to the traits of a community, habitat or ecosystem that determine their susceptibility to invasion. The general idea is that species-poor ecosystems are particularly susceptible to invasion. This is explained by the biotic resistance hypothesis: in species-rich ecosystems, there are fewer free resources and vacant ecological niches, so the probability of invasive success of alien species is lower. However, previous studies often gave different or even opposite results: the results of experimental studies indicate a negative diversity-invasibility relationship, while the results of observational studies indicate a positive relationship. In this article, we deal with the explanation of this paradox based on the results of previous investigations on the diversity-invasibility relationship, which were carried out in different types of ecosystems and on different spatial scales.

**Keywords:** species diversity, invasive species, invasibility, ecosystem, biotic resistance.

# **SELECTIVE TOURISM ON DANUBE RIVER IN SERBIA: THE CHALLENGE OF SUSTAINABILITY**

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## **ABSTRACT**

The Danube is the most significant European river, Serbia's position on its course enables the touristic valorization of this river. With its characteristics, it provides the possibility of developing more selective forms of tourism. Problems can occur in valorization, some selective forms can threaten each other. The presence of nautical, eco, fishing, river bathing tourism is desirable, but their characteristics and peculiarities must be taken into account, which are sometimes not compatible and can affect sustainability. One of the possible approaches to solving this problem is the zoning of tourist areas, which would also affect the development of rural regions along the Danube.

**Keywords:** Selective tourism, Sustainability, Danube, Serbia

# IMPROVEMENT AND PRESERVATION OF HUMAN HEALTH

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## ABSTRACT

**Introduction:** Primary health care means the first line of health care, which is not limited to patients with specific diseases and is the field of health care where patients make the first contact with a doctor and have direct access and contact with a doctor. **Aim:** To present statistical data of research on the health status of women. **Methods:** Analysis of available science literature. **Discussion:** Women, as the most frequent users of health care services and employed workers, should have the most important role when it comes to health care, so it must be borne in mind that women most often complain that no one listens to them, no one believes them, that they treat them without their consent, without warning them about the dangers and effects of the medicine. **Conclusion:** Point out the importance of physical activity, healthy eating, avoiding stress and all that can damage women's health. Provide health, social and financial well-being to both health workers and women who need help.

**Keywords:** emergency medicine, patient safety, nurses, professional errors, education