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THE ROLE OF BRADYRHIZOBIUM JAPONICUM EXOPOLYSACCHARIDES IN THE FORMATION OF AN EFFECTIVE SYMBIOTIC APPARATUS OF SOYBEAN

Iryna Gumenuk¹, Lyudmyla Symochko^{1,2,*}, Ivan Mostoviak³, Olena Demyanyuk¹,
Olena Sherstoboeva¹, Vera Boroday⁴, Vitaliy Symochko²

¹*Institute of Agroecology and Environmental Management of National Academy
of Agrarian Sciences of Ukraine, Metrolohichna str., 12, Kyiv, Ukraine;*

²*Uzhhorod National University, 32 Voloshyna Str., 88000, Uzhhorod, Ukraine;*

³*Uman National University of Horticulture, 1, Instytutska Str., Uman, 20305, Ukraine;*

⁴*National University of Life and Environmental Sciences of Ukraine,
03041, 19 Henerala Rodimtseva Str., Kyiv, Ukraine;*

*Corresponding Author Lyudmyla Symochko: e-mail address: lyudmilassem@gmail.com;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.401>

ABSTRACT

There are a number of questions that have remained relevant for a long time when using inoculants based on nodule bacteria. It has been shown that exopolysaccharides (EPS) producing bacterial cells play one of the key roles during interaction and during signal transmission in legume-rhizobial symbiosis, namely, bacterial survival, virulence of rhizobia, shelf life on inoculated seeds and in soil, and efficiency created legume-rhizobial system. In particular, it was found that new strains of soybean nodule bacteria *Bradyrhizobium japonicum* LG 2 and LG 5 synthesize EPS at 3.2 and 2.8 g/l, with an optical density above 0.8 rel. units, the viscosity of the culture liquid – within 270-302 mPa • s. The high level of synthesis and the chemical composition of EPS of the studied strains ensured the preservation of the viability of bacterial cells on the surface of seeds and on a solid medium. Inoculation of soybean seeds with a culture liquid containing EPS of strains LG 2 and LG 5 ensured the formation of an effective legume-rhizobial system, which is confirmed by the formation of 18-21 nodules / plant of soybeans with a nitrogenase activity of at least 2.9 $\mu\text{mol C}_2\text{H}_4$ / plant per hour. A graph model has been developed, which proves the direct dependence of the effect of EPS on the number of nodules formed on the roots, the level of nitrogenase activity of the legume-rhizobial system and their indirect effect on the yield and protein content in soybean grain. Prospects isolated by strains LG 2 and LG 5 of *B. japonicum* for biotechnological production of liquid and gel biopreparations.

Keywords: exopolysaccharides, *Bradyrhizobium japonicum*, soybeans, inoculant, legume-rhizobial symbiosis, nitrogenase activity, nodules.

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DETERMINING CRITERIA IN TECHNOLOGY VALUATION THROUGH THE ANALYTIC HIERARCHY PROCESS: A CASE STUDY IN VIETNAM

Tran Van Nam^{1*}, Trinh Minh Tam², Do Son Tung², Tao Minh Hung⁴

¹National Economics University, 207 Giai Phong Road, Hai Ba Trung District, Hanoi 100000, Vietnam;

²Vietnam Centre for Science and Technology Evaluation, Ministry of Science and Technology of Vietnam
39 Tran Hung Dao, Hoan Kiem District, Hanoi 100000, Vietnam;

³Rouse Legal Vietnam Ltd.-Hanoi Branch, 7th Floor, VIT Building, 519 Kim Ma Street, Ba Dinh District,
Hanoi 100000, Vietnam;

*Corresponding Author Tran Van Nam, e-mail: namtv@neu.edu.vn;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.402>

ABSTRACT

Technology valuation is a bottleneck in the process of commercialization and technology transfer. When applying valuation methods, there are many assumptions set out in the calculation. This article presents very first serious effort to analyse the Analytic Hierarchy Process (AHP) and its initiation in Vietnam. The AHP is a weight calculation method applied to evaluate the importance of each factor affecting technology valuation. However, the AHP has been applied to valuation work in only a few countries in recent years. In Vietnam so far, there has been no research on the AHP in technology valuation; the results of this study are expected to be a breakthrough for the application of the AHP in technology valuation. In this study, the research team uses Saaty's AHP to analyze and identify criteria affecting technology valuation in the current conditions of Vietnam.

Keywords: Technology Valuation, Analytic Hierarchy Process (AHP), Vietnam.

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EFFICIENCY OF USING ORGANO-MINERAL BIOPREPARATIONS AS ELEMENTS OF BIOLOGIZATION IN CHICKPEA CULTIVATION TECHNOLOGIES IN THE ARID SOUTHERN STEPPE OF UKRAINE

Volodymyr Orekhivskiy¹, Anna Kryvenko¹, Nataliia Kovalenko^{1*}, Svitlana Burykina², Maxim Parlikokoshko², Antonina Drobitko³

¹*Institute of Plant Physiology and Genetics of the National Academy of Sciences of Ukraine, Ukraine;*

²*State Enterprise "Research Farm named after M. I. Kutuzov" of the Odessa State Agricultural Research Station of the Institute of Water Problems and Land Reclamation of the National Academy of Agrarian Sciences, Ukraine;*

³*Mykolaiv National Agrarian University of the Ministry of Education and Science of Ukraine, Ukraine;*

*Corresponding Author Nataliia Kovalenko, e-mail: BoikoNP@ukr.net;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.403>

ABSTRACT

The article establishes the effectiveness of three foliar feeding of chickpea plants with various organo-mineral biopreparations without the application of mineral fertilizers, as well as along with the application of N₃₀ at sowing and N₃₀ for fertilization. Such organo-mineral biopreparations are created on the basis of beneficial microorganisms and provide destruction of phytopathogens, as well as have a positive effect on the formation of legume-rhizobial symbiosis and productivity of chickpea, especially in climate change. It was found that fertilization of chickpea crops with Fulvo TE, Anti-stress, Polymicrostim, Extra and Root Most biopreparations on an unfertilized background provide 0,23-0,27 t/ha of yield increase. Against the background of mineral nitrogen application, when using Fulvo TE and Polymicrostim biopreparations, the maximum increase in chickpea grain yield was 0,34-0,30 t/ha, and when using Anti-stress biopreparation - 0,25 t/ha. The largest mass of 1000 grains of chickpea on an unfertilized background, which was 249,3 g, was obtained using Polymicrostim and Anti-stress biopreparations. In these variants, the protein content ranged from 25,17-25,53%, which is 0,84-1,20% more than the control variant. With the combined application of mineral nitrogen and the use of Anti-stress biopreparation, the protein content increased to 29,10%, and with the combined application of mineral nitrogen and the use of Seed Treatment and Root Most biopreparations, received the largest mass of 1000 grains of chickpeas, which was 258,3 g. Coefficient of utilization of chickpea plants introduced mineral nitrogen depended on weather conditions and the introduction of biopreparations. In particular, in 2019 with the use Amino and Anti-stress biopreparations it was 22,3-22,6% and increased with the use of Seed Treatment and Fulvo TE biopreparations to 46,8-50,4%. In 2020, when using the Amino biopreparation, the coefficient of utilization of chickpea plants introduced mineral nitrogen was 18,7%, which when using Polymicrostim and Fulvo TE biopreparations increased to 63,8-71,3%. On average, over the years of research, along with the application of mineral nitrogen, we can highlight the positive effects of Fulvo TE, Anti-stress and Polymicrostim biopreparations, which significantly improved plant growth and development, as well as the yield and grain quality of chickpea. These drugs are recommended for use in chickpea cultivation technologies as elements of biologization, especially in the arid Southern Steppe of Ukraine.

Keywords: organo-mineral biopreparations, elements of biologization, chickpeas, plant growth and development, yield, product quality, climate change.

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MANAGEMENT IMPLICATIONS WITH RISK MANAGEMENT FROM REGRESSION MODEL APPROACH: A CASE IN VIETNAM CONSTRUCTION SECTOR

Hoang Van Long¹, Le Thanh Cong^{2*}, Dinh Tran Ngoc Huy³

¹Faculty of Management, Ho Chi Minh city University of Law, Vietnam;

^{2*}MBA (corresponding) RMIT University, Vietnam;

³MBA Banking University HCMC, Ho Chi Minh city Vietnam - International University of Japan, Japan;

*Corresponding Author Le Thanh Cong, e-mail: hvlong@hcmulaw.edu.vn;
Conglethanh1305@gmail.com; dtnhuy2010@gmail.com;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.404>

ABSTRACT

Coteccons Group (CTD) has done a good job in construction sector with many big projects and affirmed its brand. By using a combination of quantitative methods and qualitative methods including synthesis, inductive and explanatory methods. For quantitative analysis, the study is supported with OLS regression. And Data is collected from reliable internet sources and websites. Our study findings show that: because CTD Net profit (Y) has negative correlation with lending rate, inflation, VNIndex and exchange rate: governmental agencies need to decrease exchange rate little bit to increase net profit. It means that, for government agencies, Macro policies implied: economic development policies to limit the negative effects of exchange rate, and inflation, i.e not increasing much. Our limitation of research is that We need to propose more management strategies.

Keywords: macro influence, CTD net profit, stock price, cost management, micro and macro variables, JEL: M21, N1.

AMPELOGRAPHIC EVALUATION OF THE MAIN PHENOLOGICAL, VEGETATIVE AND PRODUCTIVE CHARACTERS OF WHITE SHESH GRAPEVINE CULTIVAR, UNDER TIRANA CLIMATE CONDITIONS

Gjokë Duhanaj^{1*}, Elizabeta Susaj², Lush Susaj³

¹University "Haxhi Zeka", Faculty of Agribusiness, Peja, Kosovo;

²Faculty of Urban Planning and Environmental Management (FUPEM), Polis University, Tirana, Albania;

³Agricultural University of Tirana, Department of Horticulture, Kodër Kamëz, Tirana, Albania;

*Corresponding Author Gjokë Duhanaj, e-mail: gjoke.duhanaj@unhz.eu; susajelizabeta@gmail.com
elizabeta_susaj@universitetipolis.edu.al; lsusaj63@hotmail.com;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.405>

ABSTRACT

White Shesh is a native (indigenous) cultivar selected and cultivated in centuries from winemakers of Tirana's Shesh and Ndroq areas, in the middle of Albania, where it gets its name. Study was conducted during three consecutive years, 2019-2021, in a representative sample of 10 vines, in a nine years old vineyard, located in a flat land 76 m above the sea level, in Zallherr, Tirana. Observed results showed that under Tirana climate conditions, bud burst of White Shesh occurred in April 6, full bloom on May 28, berries veraison on August 2, grape maturity on September 27, and natural leaf fall occurred on December 15. Vegetative period extended 244 days and the period from blooming to harvest was 122 days. Three years mean of the sum of active temperatures (>10°C) was 2196°C and the sunlight radiance was 1267 hours. Insertion of the first inflorescence starts at 5-th node and each shoot generates 2 inflorescences. The flower type was hermaphrodite (fully developed of male and female organs). Bunches were medium dense, with a conical shape. Length was long 260 mm and weight was 410 g. Yield per vine was 3.1 kg or 117 quintals ha⁻¹. Berries were round and uniform with a mean weight of 3.2 g. Must yield was medium (63 ml juice 100 g berries⁻¹), total sugar content of must was medium (19%), and total must acid content (tartaric acid) was medium (6.4 g L⁻¹).

Key words: ampelographic, berries, characters, climate, descriptor, evaluation, flower, phenology, White Shesh.

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CONTINGENT VALUATION STUDY IN THE PREVENTION OF AIR POLLUTION IN CABANATUAN CITY

Alvarez, S.C., Carreon, P.A.D., Tumbaga, J.R.A, Arneil G. Gabriel*

**Nueva Ecija University of Science and Technology, Cabanatuan City, Philippines;*

*Corresponding Author Arneil G. Gabriel, e-mail: Gabrielarneil77@gmail.com;
gabrielarneil77@gmail.com;

Received April 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.406>

ABSTRACT

Air pollution is a worldwide problem that needs to be address. Climate change and human health effects are considered the major concerns on this event. On this note, one of the policy tools that could help to resolve the issue is by adopting the contingent valuation method (CVM). CVM is a stated preference approach and can be done through conducting a survey which directly asks the respondent's willingness to pay (WTP) towards a service (i.e. contingent scenario). This paper identified the socio-demographic profiles of the residents in Cabanatuan City, assessed their knowledge and attitude about air pollution and its prevention, policies and programs currently implemented in each selected barangays, described the willingness to pay of the respondents in relation to contingent scenario, and assess the relationship between the profile and the respondents' WTP. Respondents have very high knowledge in the concepts of air pollution that leads to a very positive attitude regardless of their socio-demographic profiles. However, Logistic regression analysis revealed the insignificant relationship between the respondents' profile to their WTP. Respondents have very high knowledge and very positive attitude, which contributes to the positive WTP. Hence, a positive outcome in WTP. Therefore, residents are willing to pay and prevention of air pollution has a potential market value for the city.

Keywords: contingent valuation methodology, air pollution, willingness to pay, knowledge

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SAFFRON (*Crocus sativus* L.) AS A PROSPECTIVE AND SAFE NATURAL TREATMENT FOR MENTAL DISORDERS

Pavlo Lykhovyd*

*Institute of Irrigated Agriculture of NAAS, PostDoc, Kherson 73483, Ukraine;

*Corresponding Author Pavlo Lykhovyd, e-mail: pavel.likhovid@gmail.com;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.407>

ABSTRACT

Natural treatment for various health conditions is growing more and more popular since the evidence of greater safety comparing to conventional chemical drugs. Saffron (*Crocus sativus* L.) is a prospective herbal remedy for people suffering from mental disorders and facing health issues with synthetic psychotropic drugs. The number of studies devoted to investigating the efficacy of saffron efficacy in various psychiatric conditions is gradually increasing. It is a need to incorporate the scientific evidence on this herbal agent in the form of a meta-analysis. The objective of this study was to evaluate the real efficacy of saffron in major depressive disorder (MDD), sleep disorders (SD), and anxiety compared to placebo using up-to-date data, available in randomized placebo-controlled trials (RPCT) published in PubMed, Scopus, and Web of Science Core Collection journals. Meta-analyses were performed in Meta-Mar using the standardized mean difference (SMD) model using five RPCTs regarding MDD, four on SD, and two – regarding anxiety. The results of the meta-analyses proved that saffron is significantly superior to placebo for all the studied mental disorders and could be recommended as an alternative for synthetic antidepressants in MDD. More clinical trials are required to surely recommend saffron for the treatment of SD and anxiety-related mental disorders.

Keywords: anxiety, depression, herbal remedy, meta-analysis, natural drug, sleep disorder.

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BURNOUT RATE IN HEALTH PROFESSIONALS DURING COVID PANDEMIC-19

Argjiro Alija^{1*}, Vesa Rraci², Njomza Shosholli Peja²

^{1*}University of Gjakova "Fehmi Agani", Medicine Faculty, Nursing and Physiotherapy Department,
Gjakova, Kosovo;

²Royal Medical Hospital, Pristina, Kosovo;

*Corresponding Author Argjiro Alija, e-mail: argjiroalija@gmail.com;
vesaa_rr@hotmail.com; njomza.shosholli@gmail.com;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.408>

ABSTRACT

Introduction: Burnout is defined as a state of physical, emotional and mental fatigue that results from long-term involvement in work situations that require great intensity for work. According to Maslach burnout is a multidimensional syndrome that includes emotional fatigue, depersonalization, and diminished sense of personal accomplishment. Purpose: Is to determine the degree of burnout at work of health care workers caring for patients with COVID-19 at the Gjakova Regional Hospital. Methodology: The working method used is a quantitative method. Most are the health workers - nurses and doctors during the Covid-19 pandemic. The work is carried out at the General Hospital of Gjakova. The instrument for data collection is the questionnaire Burnout Inventory from Maslach. Results: the research found that the burnout rate at work among health careworkers at the regional hospital was high. The level of emotional fatigue is found in 42.9% of health workers. The main source of stress identified by workers was overwork and coping with a patient infected with Covid-19. The level of depression was high at 54.3% and the level of personal results was low at 85.7%. Chi-square analysis for emotional fatigue (p .228), depersonalization(p .456), and personal success (p .346) with the question of whether you have contact with people with Covid-19 has no significant value. Also the Chi- square analysis for emotional fatigue (p .635), depersonalization (p .193) and personal success (p .199) with the question of whether you have been infected with Covid-19 has no significant value. Conclusion: The high level of burnout in health workers should be monitored in order to identify individuals who require great care and support.

Keywords: burnout, healthworkers, Covid 19 pandemic.

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USING OLS MODEL TO ANALYZE MACRO INFLUENCE ON BANK PROFIT AND PROPOSALS FOR BETTER BANK MANAGEMENT

Trinh Xuan Viet¹, Nguyen Thi Thuy Huong^{2*}, Nguyen Minh Phuong³, Ly Lan Yen²

¹Political Academy, Hanoi Vietnam;

^{2*}Academy of Finance, Hanoi Vietnam;

³Foreign Trade University, Hanoi Vietnam;

*Corresponding Author Nguyen Thi Thuy Huong, e-mail: Mrsugar9999@gmail.com;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.409>

ABSTRACT

BIDV Bank (BIDV) in Vietnam maintained a higher growth rate than the industry average on all indicators of scale, quality, efficiency, and labor productivity and became Best retail bank in Vietnam in recent years. By data collection method through statistics, analysis, synthesis, comparison, quantitative analysis to generate qualitative comments and discussion; using econometric method to perform regression equation and evaluate quantitative results, the article analyzed and evaluated the impacts of EIGHT (8) macroeconomic factors: BIDV profit (Y) has negative correlation with inflation and lending rate, whereas it has positive correlation with risk free rate and stock price. We also recognize that Rf, GDP growth and lending rate have the highest impact on BIDV profit. This research finding and recommended policy also can be used as reference in policy for commercial bank system in many developing countries.

Keywords: bank net profit; stock price; GDP growth; inflationary; risk free rate; lending rate.

JEL: M21, N1

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REGULATORY REFORMS FOR STRUCTURED GREEN FINANCE: EXPLORING THE CASE OF INTERNATIONAL FINANCE SERVICE CENTRE, INDIA

Amit Kumar Kashyap^{1,2,*}, Vijaylaxmi Sharma¹

¹Faculty of Law, Manipal University Jaipur, Rajasthan, India;

²Institute of Law, Nirma University, Ahmedabad, India;

*Corresponding Author Amit Kumar Kashyap, e-mail: amit.kashyap@nirmauni.ac.in;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.410>

ABSTRACT

Sustainable infrastructure is essential for a brighter future when India has committed to starting its decarbonization journey to accomplish specific green targets. According to IEF Survey, India would need infrastructure investments of US\$ 777.73 billion by 2022 if it wants to expand sustainably. To fulfil the Sustainable Development Goals (SDGs) and Paris Agreement, the emerging economies are shifting toward low-carbon avenues, wherein green investment and ESG-enabled bonds are among the most sought-after alternatives. Given these trends, India intends to issue green bonds and refer to climate action as the "sunrise sector. To augment the goal of net-zero emission and boost financing in infrastructure, the Government of India has been working on strengthening the international finance service centre (IFSC) in India to attract the world global financial Institutional investors, such as international banks, pension funds, investment banks, insurers and sovereign wealth funds and also to match up with Public policy priorities are quickly shifting to include green financing. International Financial Service Centre Authority (IFSCA) was established by the Government of India in 2020 under the International Financial Services Centers Act 2000. Just after its establishment, the first breakthrough in green financing and fulfilling the needs of the environment, social welfare, and governance were that it suggested a new framework for Green Bonds at the International Financial Services Centre (IFSC). This paper examines changes in green financing with particular reference to IFSC Initiatives in India, which eventually contribute to the SDG 2030 agenda to which India is a signatory and analyze its critical issues, challenges and developing regulatory aspects.

Keywords: Green Bond, Green Finance, International finance service centre, SDG, ESG, Investment.

USING NEW MODEL APPROACH FOR ENHANCING RISK MANAGEMENT MECHANISM IN A CASE OF VIETNAM LISTED BANK

Dinh Tran Ngoc Huy¹, Phan Ngoc Quynh Nhu^{2*}, Tran Thi Thanh Nga³, Ta Van Thanh³

¹Banking University HCMC, Ho Chi Minh city Vietnam and International University of Japan, Japan;

^{2*}Human resources management Royal Holloway, University of London, UK;

³University of Finance-Marketing, Vietnam;

*Corresponding Author Phan Ngoc Quynh Nhu, e-mail: Nhu.phanngocquynh0110@gmail.com;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.411>

ABSTRACT

The purpose of this study is to figure out what are results of VAR model - a New Model approach for Enhancing Risk Management Mechanism in case of Vietinbank CTG in our country. This study mainly use combination of quantitative methods (statistics, calculation formulas) and qualitative methods including synthesis, inductive and explanatory methods. The research findings tell us that - Risk free rate reduce in short term will reduce beta; second, Industrial manufacturing stabilize in medium term will cause beta CTG stable; third, Also we see that increase in lending rate in medium term will cause beta CTG increase; fourth, a reduction in trade balance in short term will reduce beta, but in long term, stability in trade balance will stabilize beta CTG; fifth, Fluctuation in exchange rate will influence beta, in long term recover and increase in exchange rate will stimulate beta increase. Hence, authors would recommend that: Ministry of Finance, State bank of Vietnam, Treasurer, and relevant agencies need not to increase Rf (to increase bank beta); then, Not increasing lending rate too much to increase beta; next, Not increasing trade balance too much as well. Last but not least, Management implications: Improving MIS system to provide information. Besides, this study also give out recommendations for enhancing socio-economic roles of Vietnam banks in future.

Key words: socio-economic roles, VAR approach, risk model, Vietnam banks, beta CAPM, inflation, economic development, Vietnam

JEL: M21, G30, G32, G38

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SUSTAINABLE ENVIRONMENT AND THE IMPACT OF ECOTOURISM IN AURORA PROVINCE IN THE PHILIPPINES

Geoffrey A. Librero¹, Arneil G. Gabriel^{2,3*}, Olive Chester M. Cuya-Antonio^{2,3},
Vilma B. Ramos^{2,3}, Jennifer G. Fronda³

¹Department of Environment and Natural Resources-CENRO, Casiguran, Philippines;

^{2*}College of Public Administration and Disaster Management, Philippines;

^{3*}Nueva Ecija University of Science and Technology, Philippines;

*Corresponding Author Arneil G. Gabriel, e-mail: gabrielarneil77@gmail.com;

Received January 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.412>

ABSTRACT

Sustainability was defined as the goal of meeting present needs without affecting future generations' capability to fulfill their own. With the growth of tourism economy, sustainability is an increasing concern in tourist destinations like Philippines. This study correlates the socio-demographic and socio-economic profile of the respondents towards sustainable environment practices and the impact of ecotourism. Using purposive sampling and mixed methods design, 168 individuals from municipalities of Aurora province positively implied on the use of renewable resources, ecosystem protection, pollution control, and the concept of reduction, reuse, and recycling. Locals have positive attitudes toward conservation as they believed that there is an established system for conservation and initiated conservation practices. Pearson Correlation found that there was no significant relationship between the profile and their sustainable environmental practices. Moreover, a weak negative relationship between age and the perceived impact of ecotourism was determined indicating that age decreases with the increasing perceived impact of ecotourism on the measured parameters. The impact of ecotourism on community has its advantages and disadvantages. It generates work opportunities, making the residents self-sufficient, yet to improve ecotourism and preserve the environment, innovations are needed. The impact of ecotourism was also prominent as Indigenous Peoples are displaced due to commercialization, increased local migration in the area, and locals adopting different cultures brought by ecotourism. The cultures and sustainable practices of the Indigenous Peoples are valuable and needs to be preserved the same with the environment. Hence the people and the government should be united and proactive in promoting sustainable ecotourism.

Keywords: Ecotourism, Sustainability, Environment, Philippines.

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THE EFFECT OF BUOYANCY AND ROTATION ON THE FLOW AND THERMAL FIELDS AROUND A CIRCULAR CYLINDER

Khelili Yacine^{1*}, Bouakkaz Rafik¹

^{1*}Military academy of Cherchell, Tipaza, Algeri;

*Corresponding Author Khelili Yacine, e-mail: khliliyacine1@gmail.com;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.413>

ABSTRACT

In this paper, a numerical simulation has been performed to study the fluid flow and heat transfer around a rotating circular cylinder over low Reynolds numbers. Here, the Reynolds number range 10 - 40, and the values of rotation rates (α) is varied within the range of $0 < \alpha < 2$. Two-dimensional and unsteady mass continuity, momentum, and energy equations have been discretized using finite volume method. SIMPLE algorithm has been applied for solving the pressure linked equations. The effect of rotation rates (α) on fluid flow and heat transfer were investigated numerically. In addition, time-averaged (lift and drag coefficients and Nusselt number) results were obtained and compared with the literature data. A good agreement was obtained for both the local and averaged values.

Keywords: unsteady flow, rotation rate, Richardson number, circular cylinder.

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RESILIENCY AMIDST VULNERABILITY: A STORY OF THE INDIGENOUS CULTURAL COMMUNITIES-INDIGENOUS PEOPLES' EXPERIENCES IN MITIGATING THE IMPACT OF PANDEMIC IN THE PHILIPPINES

Jacinto Y. Bustamante, Vilma B. Ramos, Feliciano P. Jacoba,
Rhea Lyn F. La Penia, Arneil G. Gabriel*

**Center for Indigenous Peoples Education, Nueva Ecija University of Science and Technology,
Cabanatuan City, Nueva Ecija the Philippines;*

*Corresponding Author Arneil G. Gabriel, e-mail: gabrielarneil77@gmail.com;

Received January 2022; Accepted May 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.414>

ABSTRACT

Indigenous Peoples worldwide are most vulnerable to the impact of the pandemic. They are at a disadvantage when it comes to adequate access to health care services. However, traditional behavior, indigenous health practices, and belief systems make them more resilient to the public health crisis. The study is a narrative of experiences of Indigenous Cultural Communities/Indigenous Peoples' (ICCs/IPs') resilience to the pandemic in the province of Nueva Ecija in the Philippines. It used the mixed-method of research to gather and analyze data within the framework of the resilience-vulnerability model. Findings show that ICCs/IPs, seldom access health services in terms of health practitioners, health facilities, and medical supplies. Through their traditional practices, they develop resilience during the pandemic. While there is no significant relationship between resiliency and vulnerability, there is a significant relationship between the Demographic Profile and the Resiliency of the indigenous peoples. It is recommended that a similar study be undertaken using other ICCs/IPs in other parts of the country as the subject of inquiry to establish a segregated database on the government's access to health services.

Keywords: Resilience, vulnerability, health services, inequity, traditional health practice

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COVID 19 AND FACTORS AFFECTING VIETNAMESE PEOPLE'S CONSUMPTION BEHAVIOR IN FOOD HYGIENE AND SAFETY

Nguyen Thi Phi Nga^{1*}, Le Thanh Huong²

^{1*}University of Economics and Business, Vietnam National University, Hanoi, Vietnam;

²University of Economics and Business, Vietnam National University, Hanoi, Vietnam;

*Corresponding Author Nguyen Thi Phi Nga, e-mail: ngantp@vnu.edu.vn;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.415>

ABSTRACT

In the last two years, Covid 19 has brought heavy consequences on the economy, society and public health of Vietnam. And the origin of this pandemic is believed to be from the consumption of wild animals in China. Besides, the issue of food hygiene and safety in Vietnam is always a painful issue which has not solved until now. Therefore, the topic "Covid 19 and factors affecting Vietnamese people's consumption behavior in food hygiene and safety" was chosen with the desire to contribute a part of solving these problems, contemporary issues of the country in the present and the near future. Research has shown that there are 7 factors affecting consumer behavior including: lifestyle, awareness, knowledge, beliefs, news, Covid 19 pandemic, influencers; and those factors impacted to the consumers with different levels. Hopefully the research results will be the foundation for marketers to come up with appropriate marketing strategies, towards the sustainable development of Vietnam.

Keywords: Covid-19; consumer behavior; food hygiene and safety; life style; awareness; knowledge; faith; news; epidemic; influencers.

JEL: M10, M21

Vol. 12 (4): 137-142 (2022)

INVESTIGATE THE BUSINESS MODEL OF ECO VILLAGE THAI HAI

Nguyen Thi Phi Nga^{1*}

^{1*}*University of Economics and Business, Vietnam National University, Hanoi;*

*Corresponding Author Nguyen Thi Phi Nga, e-mail: ngantp@vnu.edu.vn;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.416>

ABSTRACT

Vietnam is on the way of development quickly and its enterprises follow different styles. The Eco Village Thai Hai has followed the special model that we cannot find from anywhere in Vietnam. Authors mainly use methods of historicalism and dialectical materialism combined with experiences, observations with experiences, practical situation with cases studies in Vietnam combined with qualitative analysis. Through the current paper, the readers may find the unique and interesting model in Vietnam that attracted many people to visit and investigate.

Key words: business model, Eco Village, ethnic value, countryside.

JEL: M10, M21

Vol. 12 (4): 143-150 (2022)

HOSPITAL WASTE AND THEIR IMPACT ON ENVIRONMENTAL POLLUTION AND HUMAN HEALTH

Mexhit Mustafa¹, Afërdita Lahu^{2*}

^{12*}*Alma Mater Europaea Campus College "Rezonanca", Kosovo;*

*Corresponding Author Afërdita Lahu e-mail: afërdita.lahu@rezonanca-rks.com;
mexhit.mustafa@rezonanca-rks.com;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.417>

ABSTRACT

Infections from hospital waste constitute the main challenge of protecting the environment and modern human health. For every year, infections from hospital waste have caused high toxicity of the environment and the health of the population, these infections, which affect hundreds of millions of people around the globe and are the main threat to the safety of living creatures. These infections cause very serious diseases, prolong the stay of patients in the hospital, cause long-term disability, increase the cost for patients and their families, affect massive additional costs in the system of environmental and health protection, and often the affected end up with death. Infections during health care are caused by many factors, which are related to the system and process of providing health care. They are also related to people's behaviors that are conditioned by educational, economic and political limitations in the states themselves, health protection systems, and often also in social norms and beliefs. For their definition, definitions of nosocomial infections are used worldwide, according to the Centers for Disease Control-CDC (Centers for Disease Control) from Atlanta. Health services, including public and private health institutions, must meet quality standards (ISO 9000 and ISO 14000).

Key words: Hospital waste, environment, human health, infections.

Vol. 12 (4): 151-160 (2022)

EVALUATING IMPACTS OF A SIX FACTOR MODEL ON CCI STOCK PRICE: A CASE OF A LISTED TRADING COMPANY IN VIETNAM

Hoang Xuan Lam^{1*}, Tha To Hien², Tran Minh Hai³

¹*Huu Nghi University of Technology & Management, Hanoi Vietnam;*

²*Le Quy Don Technical University, Vietnam;*

³*Joint Stock Commercial Bank for Foreign Trade of Vietnam;*

*Corresponding Author Hoang Xuan Lam, e-mail: buihubvtt@gmail.com; tohientha@gmail.com;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.418>

ABSTRACT

This study considers the impacts of multi macro factors on stock price of Cu Chi Trading company CCI, and it contributes to promoting business plan and economic policies for economic growth and stabilizing macroeconomic factors. By data collection method through statistics, analysis, synthesis, comparison, quantitative analysis to generate qualitative comments and discussion; using econometric method to perform regression equation and evaluate quantitative results, the article analyzed and evaluated the impacts of six (6) macroeconomic factors on stock price of CCI in Vietnam in the period of 2014-2019, both positive and negative sides. Study results, in a six-factor model, show that an increase in GDP growth has a significant impact on decreasing CCI stock price (Y) with the highest coefficient of impact, followed by a decrease in lending rate and increase in risk free rate, then a decrease in VNINDEX, a reduction in inflation and increase in exchange rate.

Keywords: CCI stock price; GDP growth; inflationary; risk free rate; market interest rate

JEL: M21, N1

Vol. 12 (4): 161-166 (2022)

SOLVING CONFLICTS OF INTEREST IN ELECTRONIC CONTRACTS IN E-COMMERCE TRANSACTIONS

Nguyen Trong Diep*

**School of Law, Vietnam National University, Hanoi Vietnam;*

*Corresponding Author Nguyen Trong Diep, e-mail: dieptrongnguyenvnu@gmail.com;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.419>

ABSTRACT

In emerging markets such as Vietnam, electronic contracts have been used more and more and e-transactions have been increasing over years since the time Vietnam allows internet. There are problems arising from e-commerce, seriously implementing, implementing and effectively coordinating the fight against counterfeit goods and goods infringing intellectual property rights on the Internet. Internet environment, and at the same time improving the role and responsibility of businesses owning e-commerce websites in protecting consumers, etc. Beside, in order to protect the interests of consumers, sales acts such as advertising, providing false information are strictly prohibited; The seller must provide detailed and specific information related to products, goods and services. This helps to ensure that consumers are aware of the expiration dates of the products they are purchasing on the e-commerce platform, and it is the responsibility of all sellers as well as e-commerce businesses to update and provide information to consumers, consumption.

Key words: disputes, protect consumer interests, conflicts of interest, e-transactions, Vietnam

JEL: O11, O14, K10, K15

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ASSESSMENT OF MIGRATORY AND RESIDENT BIRDS AT RAGHAGAN DAM, DISTRICT BAJAUR TEHSIL SALARZAI, KPK

Imtiaz Ahmad^{1*}, Ahmad Zamir¹, Arz Muhammad Umrani¹, Umair Safdar¹, Afra Siab¹,
Muhmmad Tallal Tayyab Utmankhel¹, Muhammad Hamza¹, Owais Ahmad¹

^{1*}*Pakistan Forest Institute Peshawar, Pakistan;*

*Corresponding Author Imtiaz Ahmad, e-mail: imtiazahmad4213890@gamil.com;
arz.forest87@yahoo.com;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.420>

ABSTRACT

The study is conducted to document the species richness and abundance of the migratory and resident birds at Raghagan dam district Bajaur. Raghagan dam is situated N 34.800307°, E71.580137° in tehsil salarzai of district Bajaur which is located at the extreme end of Himalayan range and creates variations in the monsoon rainfall from month to month and year to year. The dam support population of migratory bird and important stopover for migratory and native birds. The study is conducted in the month of March 2022 through direct focal observations and binoculars, therein 13 migratory species and 25 resident species are recorded with total numbers 895 and 711 respectively. The highest relative abundance among migratory birds species is family Anatidae followed by phalacrocoracid and the highest relative abundance among resident bird species is family Accipitridae followed by Columbidae. The area has potential for avian biodiversity thus concrete efforts are required to protect the birds diversity. Presence of ferruginous duck species in the month of May shows food richness, further research is required to know the causes and factors behind the presences of such duck species Effective management and monitoring of the dam should be in priority actions. Illegal hunting is another harmful factor for the killing of birds.

Keywords: Abundance, Birds diversity, Family, Species richness, Potential.

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ROAD SAFETY IMPACTS OF SIGHT DISTANCE CRITERIA ACCORDING TO ALBANIAN CODE

Iralda Xhaferaj

Faculty of Civil Engineering, Polytechnic University of Tirana, Albania;

Corresponding Author Iralda Xhaferaj, e-mail: iralda.xhaferaj@fin.edu.al;

Received May 2022; Accepted June 2022; Published July 2022;

DOI: <https://doi.org/10.31407/ijeess12.421>

ABSTRACT

Sight distance is an important criterion in highway geometric design for traffic safety to ensure that the driver can see any possible road hazard insufficient time to take action and avoid an accident. Many Albanian roads have been designed and constructed before 1991 based on standards in place as of the construction time. More recently, investments have been made for upgrading and expanding the transport infrastructure in the country. The importance of providing adequate sight distance for safe and efficient traffic is well recognized by researchers and included in most design manuals. Horizontal curves, crest vertical curves, and rural intersections are the common sight restrictions considered in highway design. Stopping sight distance (SSD) is the most important of the sight-distance considerations since sufficient SSD is required at any point along the roadway. Technical road standards used in Albania before 1991 were based upon outdated standards. Currently, road design standards have been changed receiving considerable European standards. This paper analyses the sight distance estimation criterion using the upgraded manual. For this purpose, road design examples have been studied based on sight design requirements and geometric data. The results obtained through calculation were compared according to upgraded standards to investigate road safety associated with highway geometric design.

Keywords: Highway design, sight distance restrictions, road safety.

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