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MARMARA SEA POLLUTION WITH ENVIRONMENTAL IMPACT

Sukru Dursun^{1*}

**Konya Technical University, Environmental Engineering Department, Konya, Turkey;*

**Corresponding Author Sukru Dursun, e-mail: sdursun@ktun.edu.tr;*

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ABSTRACT

Thus, it is important to protect the seas from pollution. Due to domestic pollution, especially in our Mediterranean coasts, the Endemic Sea Grasses known as *Posidonia oceanica* are affected due to habitat loss. Since the construction of steel ships, ballast water has been used to stabilize the ship in navigation. Ballast water is pumped throughout the voyage to ensure safe cruising conditions. Although ballast water is necessary for safe and efficient modern maritime operations, it can cause serious ecological, economic, and medical problems depending on the amount of marine life carried in it. These marine creatures transported, bacteria, microbes, small invertebrates, and eggs, cysts, and larvae of many species. Transferred species can survive long enough to form populations that can reproduce in their new environment, become invasive species, suppress native species, and reach difficult-to-manage numbers. Known as blowfish, this type of fish entering the Eastern Mediterranean and Turkish waters from the Red Sea is poisonous. It is a poisonous species for consumption. The Marmara Sea and its surroundings are an environment with some special conditions. First, it has a large surface area to be considered a sea, but it is also vulnerable to atmospheric precipitation and the limitation of its connection with the strait connections and large seas. However, the interactions between air-water and the discharge of polluted water have revealed that pollution will occur, which may lead to the cleaning of the water environment, with the significant pollution events that have occurred. Another important point is that there are important industrial zones in the Marmara Sea basin. Most of them discharge their waste waters to this inland sea or the streams reaching it without applying any treatment process. Nitrogen reaches the sea from domestic and industrial point sources and agricultural areal sources. Nitrogen and phosphorus are a source of nutrients that accelerate the growth of microorganisms in water and cause excessive growth of algae and water invasion. Pollution in the Marmara Sea has been one of the most serious problems in the region. With these events, decreases in the oxygen of the aquatic environment are observed. The excess of nitrogen and phosphorus in the environment can cause this excessive growth and the release of some poisons.

Keywords: Marmara Sea, Pollution, Water resources, Nutrient elements, Ecology.

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TECHNOLOGY APPLICATIONS IN PATIENT TREATMENT AND SURGERY SOLUTION FOR CANCER TREATMENT AT BAI CHAY HOSPITAL, QUANG NINH

Nguyen Trong Hung^{1*}, Dinh Tran Ngoc Huy^{2*}, Tran Thi Tra Phuong^{3*},
Le Ngoc Nuong⁴, Ninh Thi Nhung^{5*}

^{1*}National Institute of Nutrition, Hanoi, Vietnam;

^{2*}Banking University HCMC, Ho Chi Minh City Vietnam - International University of Japan, Japan;

^{3*}Nutrition and Sports, Exercise Medicine Centers System-Nutrihome, Vietnam;

^{4*}Thai Nguyen University of Economics and Business Administration, Thai Nguyen Vietnam;

^{5*}Thai Binh University of Medical and Pharmacy, Thaibinh, Vietnam;

Corresponding Authors Nguyen Trong Hung^{1}, Dinh Tran Ngoc Huy^{2*}, Tran Thi Tra Phuong^{3*},
Le Ngoc Nuong⁴, Ninh Thi Nhung^{5*}, e-mail: nguyentronghung9602@yahoo.com;
dtnhuy2010@gmail.com; ngocnuong85@gmail.com;

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ABSTRACT

With the immune system and resistance weakened due to long-term treatment, COVID-19 infection will be a concern for patients with underlying medical conditions, especially cancer. Our study goal is to show analysis of cancer treatment in Bai Chay hospital Quang Ninh by using methods of A cross-sectional descriptive. Tohme et al (2017) showed Surgery is a crucial intervention and provides a chance of cure for patients with cancer. The perioperative period is characterized by an increased risk for accelerated growth of micrometastatic disease and increased formation of new metastatic foci. The true impact for cancer patients remains unclear. Surgery is one of the optimal methods of radical treatment of gastrointestinal cancers such as stomach cancer, colon cancer, gallbladder cancer...

Keywords: surgery, treatment cancer, technology, Bai Chay hospital.

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THE ROLE OF INSTITUTIONAL REFORM IN THE PRIVATE SECTOR DEVELOPMENT: EVIDENCE IN A TRANSITION COUNTRY

Dinh Cong Hoang¹, Phan Huy Duong^{2*}, To Tha Hien³

¹Vietnam Academy of Social Sciences (VASS), Institute for Africa and Middle East Studies (IAMES),
Department for Cooperation Development, Vietnam;

^{2*}Dai Nam University, Vietnam;

³Le Quy Don Technical University, Hanoi, Vietnam;

*Corresponding Author Phan Huy Duong, e-mail: duongph50@gmail.com;

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ABSTRACT

The paper analyzes the role of institutional reform in the private sector development in a case of a transition country from 2010 to 2019. Despite the ample theoretical and empirical evidence of institutional reform on business development, only a few research examining this impact in the private sector vis-à-vis state ones. Furthermore, in the context of transition countries, institutional fragmentation (e.g., formal and informal institutions conflict) and political connections (e.g., business-to-state or central to local government) powerfully influence the relationship between institutional reform and firms' performance. Therefore, this study uses sub-nation level data in Vietnam (instead of business survey data) for 2010-2019 to shed light on this research gap with new findings. The study using two-step generalized method of moments (GMM) estimation with two instrumental variables shows: (i) a causal relationship between institutional improvement and private enterprise sector development; (ii) institutional improvement contributing to improved profitability of the private sector; (iii) institutional improvement has heterogeneous effects across regions in Vietnam and tends to increase over time. The results also imply some policy implications for Vietnam's private sector growth in the coming years.

Keywords: institutional reform, private sector development, transitional country, Vietnam.

JEL code: O17, L32, P21

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ANALYSIS OF INDUSTRIAL CLUSTER DEVELOPMENT, FRAMEWORK AND RELEVANT REGULATIONS

Nguyen Dinh Trung^{1*}, Nguyen Trong Diep^{2*}, Le Ngoc Nuong^{3*}, Phan Anh^{4*}, Le Thi Han⁵

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

^{2*}University of Law, Vietnam National University, Hanoi Vietnam;

^{3*}Thai Nguyen University of Economics and Business Administration, Thai Nguyen Vietnam;

^{4*}Banking Academy, Hanoi Vietnam;

^{5*}Banking University HCMC Ho Chi Minh city, Vietnam;

Corresponding Authors Nguyen Dinh Trung^{1}, Nguyen Trong Diep^{2*}, Le Ngoc Nuong^{3*}, Phan Anh^{4*},
e-mail: trungnd@neu.edu.vn; dieptrongngyenvnu@gmail.com;
ngocnuong85@gmail.com; phananh@hvn.edu.vn;

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ABSTRACT

To speed up the construction of industrial clusters, on March 16, 2022, the Hanoi People's Committee issued Plan No. 85/KH-UBND on management, investment and development of industrial clusters in the city. Hanoi in 2022. Along with that, on March 17, 2022, the City People's Committee continued to issue Plan No. 89/KH-UBND on overcoming limitations and shortcomings in investment in infrastructure of industrial clusters which were still slow local progress. This study uses methods of qualitative analysis, induction, synthesis and interpretation. Our study shows that it is necessary to continue to improve mechanisms and policies to support preferential treatment for industrial clusters and craft village clusters; then, it is necessary to study and refer to the advanced successful ecological industrial cluster construction models in the world.

Keywords: existence, difficulties, models, solutions, industrial clusters.

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IMPROVEMENT OF INDUSTRIAL CLUSTERS (IC) INFRASTRUCTURE IN HANOI, CONSUMER PROTECTION IN IC AND REGULATIONS IN INDUSTRIAL CLUSTER (IC) DEVELOPMENT

Nguyen Trong Diep^{1*}, Nguyen Dinh Trung^{2*}, Dinh Tran Ngoc Huy^{3*},
Ly Lan Yen^{4*}, Pham Thi Hong Nhung⁵

^{1*}University of Law, Vietnam National University, Hanoi Vietnam;

^{2*}National Economics University, Hanoi Vietnam;

^{3*}Banking University HCMC Ho Chi Minh city Vietnam - International University of Japan, Japan;

^{4*}Academy of Finance, Hanoi Vietnam;

⁵Ho Chi Minh College of Economics, Vietnam;

Corresponding Authors Nguyen Trong Diep^{1}, Nguyen Dinh Trung^{2*}, Dinh Tran Ngoc Huy^{3*},
Ly Lan Yen^{4*}, e-mail: dieptrongnguyenvnu@gmail.com; trungnd@neu.edu.vn;
dtanhuy2010@gmail.com; lylanyen@gmail.com; hongnhungnce2911@gmail.com;

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DOI: <https://doi.org/10.31407/ijeess13.105>

ABSTRACT

In Hanoi, there are currently 70 industrial clusters (CCNs) operating, contributing significantly to economic growth and ensuring social security. However, besides the CCNs that are invested, built synchronously and strictly managed, there are many CCNs formed many years ago with many shortcomings. In addition to industrial parks that are synchronously invested and strictly managed, there are also many industrial parks with primitive infrastructure systems, poor management, leading to violations of construction order, environmental pollution and pollution. potential risks of fire prevention and fighting. To overcome this situation, in 2018, Hanoi city planned to build a modern industrial cluster network to meet the new wave of investment in the field of industrial production and handicrafts. For speeding up the progress of construction and implementation of investment in construction of technical infrastructure of industrial zones: Develop an investment program to complete technical infrastructure of industrial zones in the city in the period of 2021-2025.

Key words: IC development, industrial clusters, regulations, shortcomings.

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THE HISTORY, CURRENT STATE AND PROSPECTS FOR THE IMPLEMENTATION OF ELEMENTS OF BIOLOGIZATION FOR THE EFFICIENT CULTIVATION OF CORN IN ORGANIC FARMING OF THE SOUTHERN STEPPE OF UKRAINE

Petro Boiko¹, Nataliia Kovalenko^{2*}, Yevgen Yurkevych³, Nataliia Valentiuk³, Serhii Albul³

¹National Scientific Center «Institute of Agriculture NAAS», Ukraine;

^{2*}Institute of Plant Physiology and Genetics of NASU, Ukraine;

³Odessa State Agrarian University of the Ministry of Education and Science of Ukraine, Ukraine;

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

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ABSTRACT

It is established that at the beginning of the 21st century due to significant exploitation of land resources of Ukraine, there was a violation of ecological balance in natural agroecosystems, intensified erosion and other degradation processes in soil, which now reached the highest level in the world. Due to the reduction in the use of organic fertilizers, the use of mineral fertilizers and pesticides has exceeded the permissible limits, which has led to pollution of soils, the environment and agricultural products with harmful chemicals. Currently, the use of physiological and genetic characteristics of crops belonging to different biological groups plays an important role in agrarian production in Ukraine. Along with the productive use of the genetic potential of crops, the use of modern innovative technologies, in particular the elements of biologization in organic farming, is of great importance. These include the systematic use of scientifically sound crop rotations, the use of optimal rates of organic and mineral fertilizers, green manure, post-harvest crops, biohumus, and minimize tillage. With increasing aridity of the climate, they adapt to new climatic conditions due to the accumulation and preservation of moisture, which is an effective measure in regulating soil water regime in the arid Southern Steppe of Ukraine. It was found that among the elements of biologization, the maximum use of natural mass of surface and root crop residues and by-products of crops – cereal straw, tops and stalks of corn and sunflower, root crop buds and green manure – is effective. Along with increasing the production of competitive agricultural products of better quality, their use ensures the efficient use of land resources, preservation and reproduction of soil fertility, improving the ecological state of the environment. It is determined that the use of plant residues actualizes the use of modern biodestructors, which are adapted to different soil and climatic conditions of Ukraine and technologies for cultivation crops. Of great importance in the production of corn for grain is the use of effective biodestructors of stubble Ecostern and Cellulad. Such studies are gaining relevance in the arid Southern Steppe of Ukraine, especially in climate change.

Keywords: organic farming, elements of biologization, crop rotations, crop residues, stubble biodestructors, soil water regime, corn for grain.

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NUCLEAR PEACE IN UKRAINE: A ROADMAP

Massimo Zucchetti

Massachusetts Institute of Technology, Cambridge, US;

*Corresponding Author Massimo Zucchetti, e-mail: massimo.zucchetti@polito.it;

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ABSTRACT

Situation. The war in Ukraine in 2022 has again risen concerns about the possible use of Nuclear Weapons: in the conflict itself, or in some fringe malevolent scenarios too. Let us examine three recent events, in chronological order, that had the “tag” of nuclear weapons use, related to Ukraine war: The U.K. then-secretary of foreign affairs and now Prime Minister, stated to be ready to use nuclear weapons against Russia [1] as a retaliation for Ukraine invasion and, more in general, as an answer to Russian nuclear threats to Europe. The Russian President, blaming western countries for helping out Ukraine with plenty of modern weapons, stated that “Russia has those modern weapons too” and that if the security of the Russian Federation (RF) would be in danger, they are ready to fight and defend it, without excluding any option” [2]. However less explicit, this statement has been interpreted with attention, if we consider that Russia’s doctrine for nuclear weapons excludes a first strike, but admits a nuclear strike in case of enemy nuclear attack, and/or - beware! - if the “existence of the RF is in danger”. The passage from “existence of RF” to “security of RF” is a *diminutio* that sounded an alarm bell to the analysts. The Ukrainian President, probably unaware of the actual consequences, asked to NATO a “preventive nuclear attack to Russia” [3]. Having Russia nearly 6370 nuclear weapons, either in underground bunkers or in submarines, any “preventive attack” would bring to an immediate full-scale nuclear war. Luckily, the request by Zelensky has not found any credit with his allies, which also convinced him to “clarify” (in practice, retreat) his statement. Mrs. Truss also, once in office, did not repeat her bold nuclear weapons statements anymore. Finally, there is luckily no actual threat to RF existence that could imply the use of nuclear weapons: actually, the threat would be the almost certain (however mutual) assured destruction if RF would use nuclear weapons. The three above statements could then be interpreted just as peculiar but minor misunderstandings. However, the escalation to nuclear war could be paved by misunderstandings like these ones, or by an increasing employment of non nuclear weapons, as it is happening now in Ukraine [4]. The world public opinion must not only repudiate nuclear war, but also the escalation to nuclear war itself. This is a possibility that us, as humanity in its whole, would simply repudiate and make it impossible even to conceive, or put in any political agenda or statement. There must be never any justification ever for even thinking to the use of nuclear weapons. Full stop. Furthermore, many strategic scenarios that have been studied, in the past, about an initially limited use of “strategic” low-yield nuclear weapons in a local war; global thermonuclear war and the end of the world is the most probable outcome of any of those scenarios. [5]

Keywords: risk of nuclear war, nuclear peace, Ukraine.

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THE ECONOMIC TRANSFORMATION IN CA MAU PROVINCE IN THE INDUSTRIAL TIME AND MODERNIZATION, 1997 - 2017 YEARS

Pham Hung Nhan^{1*}, Dinh Tran Ngoc Huy^{2*}

^{1*}Political School of Ca Mau Province, Vietnam;

^{2*}Banking University HCMC Ho Chi Minh city Vietnam – International University of Japan, Japan;

*Corresponding Author Pham Hung Nhan, Dinh Tran Ngoc Huy², e-mail: hunghantct@gmail.com;
dtnhuy2010@gmail.com;

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ABSTRACT

In the context of the country's economy is developing strongly, the research project on the economic transformation process of Ca Mau province (1997-2017): Growth rate, economic restructuring; economic sectors, and impacts on social life. This change stems from the objective impacts and economic development policies of our Party and State and the creative application of the Party Committee of Ca Mau province to local realities in economic development. Since then, the study has noted that the economy of Ca Mau province has made remarkable changes compared to the period before the re-establishment of the province.

Keywords: Ca Mau, development, economy, social life.
JEL:M10, M21

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DIGITAL TWIN OF SOLID MINERAL DEPOSITS, DIGITAL TWIN OF SUBSOIL USE: IS IT NEEDED AND WHY

Trinh Quoc Vinh^{1*}, Dinh Tran Ngoc Huy^{2*}, Yakutseny Sergey Pavlovich^{1*}

^{1*}Gubkin Russian State University of Oil and Gas, Moscow, RU;

^{2*}Banking University HCM city Vietnam - GSIM, International University of Japan, Niigata, Japan;

*Corresponding Authors Trinh Quoc Vinh, Dinh Tran Ngoc Huy, Yakutseny Sergey Pavlovich, e-mail:
vinhtq95@gmail.com; Dtnhuy2010@gmail.com; spyakutseni@yandex.ru;

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ABSTRACT

As Litvinenko (2020) describes the impact of the global digital economy on the technological development of the mineral sector in the world. The goal of this study aims to figure out What are related studies on digital twin model? And second, What are description of the primary model and difficulties? This study finds out that: digital models of subsoil use are a modern technological basis for planning the development of subsoil use, designing mining enterprises, planning and managing their work. When developing a model for the functioning of a mining enterprise, a group of enterprises, it is necessary to develop modules for technological processes, technical-economic and organizational-economic processes.

Key words: digital twin model, primary model, solid mineral deposits, digital twin, subsoil use.

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RECOMMENDATIONS FOR POLICIES ON INFRASTRUCTURE CONSTRUCTION FOR INDUSTRIAL ZONES IN HANOI CITY

Nguyen Dinh Trung^{1*}

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

*Corresponding Author Nguyen Dinh Trung, e-mail: trungnd@neu.edu.vn;

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ABSTRACTS

Our research paper points that The majority of industrial infrastructure investment projects are in the implementation stage, the number of completed projects to construct industrial infrastructure is not much. By using qualitative analysis, inductive and synthesis methods, our study findings recommend Measures to build industrial infrastructure in Hanoi are: Improve the quality of industrial development planning and detailed planning on construction of industrial infrastructure; Focus on building infrastructure in association with environmental protection requirements of industrial parks; Improve the quality of industrial infrastructure construction works; Speeding up the construction of the infrastructure of industrial parks; Training human resources for CCNs in Hanoi; Completing policies to support the construction and development of industrial infrastructure;

Keywords: policies, industrial clusters, infrastructure construction, Hanoi, infrastructures.
JEL code: M10, M21

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CLASSICAL TOXICOLOGY AND MAIN TASKS OF GEOTOXICOLOGY AND ANALYSIS OF ENVIRONMENTAL RISKS IN THE DEVELOPMENT OF HYDROCARBON RAW MATERIALS

Trinh Quoc Vinh^{1*}, Sergey Yakutseny^{1*}, Dinh Tran Ngoc Huy^{2*}

^{1*}Gubkin Russian State University of Oil and Gas: Moscow, RU;

^{2*}Banking University HCM city Vietnam – GSIM, International University of Japan, Niigata, Japan;

Corresponding Author Trinh Quoc Vinh^{1}, Sergey Yakutseny^{1*}, Dinh Tran Ngoc Huy^{2*},
e-mail: vinhtq95@gmail.com; spyakutseni@yandex.ru; dtnhuy2010@gmail.com;

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ABSTRACT

The purpose of this study aims to describe Classical toxicology and main tasks of geotoxicology and second, present PREVALENCE HYDROCARBONS ENRICHED WITH ELEMENTS. By using description, qualitative analysis including synthesis and inductive methods, This study finds out that The principles of approach to problem solving should not be prohibitive, and at their core, they are simple - it is necessary to know in a timely manner the initial biotoxic characterization of the composition of raw materials in their natural state. This will ensure correct the choice of technologies for the complex processing of raw materials in order to produce an environmentally friendly marketable products, as well as to constantly monitor the composition of raw materials supplied to implementation. Then, Justification and formation of such an approach to solving the problem of environmentally friendly development of hydrocarbons enriched with biotoxicants has become an important practical goal of our research.

Keywords: Classical toxicology, geotoxicology, environmental risks, hydrocarbon raw materials.

JEL: L52, L60, L71

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MEASUREMENT OF VIETNAM CULTURAL RESOURCES ATTRACTIVENESS: THE CASE OF VIETNAM

Minh Ngoc DAO¹, Thi Hong Viet BUI^{1*}

^{1*}National Economics University, Vietnam;

*Corresponding Author Thi Hong Viet BUI, e-mail: vietbh@neu.edu.vn;
daominhgoc@neu.edu.vn;

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ABSTRACT

This study is conducted to measure cultural resources' attractiveness in the circumstance of Vietnam. Data were collected from 558 international tourists who chose Vietnam as the destination of tourism. By employing quantitative method to process data collected from the survey, the results show that interesting cultural atmosphere, beautiful landscape, attitude of local people, friendliness, hospitality are important attributes to influence the cultural resources' attractiveness in the destination. This is an issue deserving attention from managers and travel agencies to give out solutions in order to improve the Vietnam cultural resources' attractiveness. This is very important to attract both local and international tourists in emerging countries and Vietnam as a case study.

Keywords: Cultural attractions, cultural resources' attractiveness, international tourists.

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DISCUSSION ON EXISTING PROBLEMS AND RECOMMENDATION BASE FOR PROVISION OF ENVIRONMENTAL CRIMINES IN CRIMINAL LAW

Ngo Ngoc Diem^{1*}

^{1*}Hanoi University of Culture, Vietnam;

*Corresponding Author Ngo Ngoc Diem, e-mail : diemnn@huc.edu.vn;

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ABSTRACT

This paper purpose aims to present Existing problems and Recommendation Base for PROVISION OF ENVIRONMENTAL CRIMINES IN Criminal Law. By using qualitative and analytical methods, descriptive method for primary model, synthesis and discussion methods. This study find out that: After implementation, the Law on Environmental Protection, besides advantages such as curbing the increase in environmental pollution, is an effective legal tool to contribute to more effective environmental protection also revealed some shortcomings and limitations that need to be amended and supplemented to match the development trend of the country. Also, during more than 30 years of doi moi in Vietnam, serious environmental violations have become a challenge for authorities in law enforcement and law enforcement.

Key words: problems, Environmental law, regulations, rules, revisions, environmental crimes, Criminal Law.

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PRELIMINARY STUDY ON THE REPRODUCTION PARAMETERS OF CATTLE IN SOME DAIRY FARMS IN THE WEST OF ALGERIA

Bouricha Zineb^{1,2}, Chikhaoui Mira^{1,3,*}, Abdelhadi Si Ameer^{1,2}

¹*Institute of Veterinary Sciences, University of Tiaret, Algeria;*

²*Reproduction of Farm's Animals Laboratory, University of Tiaret, Algeria;*

³*Laboratory of Research on Local Animal Products, University, Tiaret, Algeria;*

*Corresponding Author Chikhaoui Mira, e-mail : zaoiraomar@yahoo.fr;

Co-Author Bouricha Zineb, e-mail : bourichazineb11@gmail.com;

Co-Author Abdelhadi Si Ameer, e-mail : si_ameur@yahoo.fr;

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ABSTRACT

This study aimed to assess the reproduction parameters of modern dairy cattle in the west of Algeria. Our experimentation included 2270 dairy cows selected from three different farms; two of them situated in the Sidi Bel Abbes region (Taleb and Sidi Lahcen) and the third farm situated in the region of Temouchent (Oued Sebbah). These cows were followed from January 2017 to December 2018 to determine their reproduction performance. Our results recorded that the mean cows' age during the first calving was 30 ± 2.2 months with an extreme of 22 to 43 months. The interval registered between the first calving and mating was 85.0 ± 6.3 days with extremes of 40 to 110 days. In our results, an average of 94.6 ± 7.5 days with extremes of 38 to 152 days was recorded between calving and the fertilizing protrusion. The cow's interval between calving was 423 ± 63.2 days with extremes of 301 to 601 days. Modern infrastructure, food in terms of quality and quantity as well as employing a qualified workforce in farms can significantly improve the performance of our animals.

Key words: Dairy Cattle, Reproduction Performance, Calving interval, Calving-Fertilizing interval.

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PHYSICO-CHEMICAL CHARACTERISTICS OF SEA WATER OF BEACHES ALONG VLORA BAY, ALBANIA

Flora Qarri¹, Sonila Shehu^{2*}, Pranvera Lazo²

¹University "Ismail Qemali" of Vlora, Faculty of Technical & Natural Sciences,
Department of Chemistry, Vlora, Albania;

²University of Tirana, Faculty of Natural Sciences, Department of Chemistry, Tirana, Albania;

*Corresponding Author Sonila Shehu (Kane) email: sonila.kane@gmail.com;

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ABSTRACT

This study presents an assessment of marine water quality in beaches along Vlora Bay, as important areas for recreation and tourism in Albania, based on physical-chemical parameters and nutrient content (nitrites, nitrates, and phosphates). Changes in the physico-chemical characteristics such as pH, temperature, dissolved oxygen (DO), biological oxygen demand (BOD), particulate material (TSS), etc. and nutrients give information on the quality of the water, the source(s) of the variations and their impacts on the functions and biodiversity of the water body. For this purpose, parameters such as pH, temperature, Electrical Conductivity (EC), salinity, dissolved oxygen (DO), biological oxygen demand (BOD), total suspended solids (TSS), total dissolved solids (TDS) and nutrients (N/NO_2^- , N/NO_3^- , $\text{P}/\text{PO}_4^{3-}$) were determined in eight water samples collected in beaches along Vlora Bay (in city of Vlora). Although physico-chemical parameters, including dissolved oxygen (DO), and nutrients resulted in normal levels, it is recommended to strengthen the measures that could be taken to reduce the level of urban discharges near the coastal area of the beach.

Key words: Beach, Vlora Bay; Seawater, Physico-chemical parameters, Nutrients.

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ASSESSMENT OF NOX CONTENTS BY MEANS OF A SENTINEL LICHEN *XANTHORIA PARITIENA L* IN THE TOWN OF TIARET, ALGERIA: POLLUTION CLASSES AND MAPPING

Leila Soudani*, Meriem Chafaa, Mohamed Islem Bouacha, Omar Safa,
Moukheir Selmani, Mhamed Maatoug

*University of Tiaret, Faculty of Nature and Life Sciences, Laboratory of Agro Biotechnology and Nutrition in Semi-Arid Zones. Algeria;

*Corresponding Author Leila Soudani, e-mail : soudani_leila@outlook.fr;

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ABSTRACT

Estimating the extent of pollution by measuring the amount of pollutants accumulated in the atmosphere by living beings is a relatively recent and highly successful environmental technique that has been utilized for decades. The assessment of bioaccumulation in these organisms, such as lichens, alleviates the issues that can arise during direct physico-chemical tests, which can be highly complex and time-consuming. The purpose of this research is to determine NOx emissions from a road source in Tiaret and its vicinity, as measured by the lichen *Xanthoria parietina*. Infrared spectroscopy was used to determine the NOx contents of 33 *Xanthoria parietina* lichens. The lichens were planted at different times of year and in different locations near major roadways. With maximum values of 35,00% and 34,70%, respectively, The Winter and Autumn seasons had the highest percentages of nitrogen oxides. High NOx concentrations are also present throughout the Spring season, with a maximum of 33.40%. Low values, with a maximum value of 10%, were seen throughout the Summer season. The obtained results clearly show high NOx concentrations in this species' thalli, indicating a high level of pollution at the city level.

Keywords : *Xanthoria parietina L*, NOx, air pollution, mapping, Tiaret.

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IMPORTANCE OF SOCIO-ECOLOGICAL RESEARCH AND THE SCIENCE-POLICY INTERFACE IN ENVIRONMENTAL SUSTAINABILITY IN ALBANIA

Aleko Miho^{1*}

^{1*}*University of Tirana, Faculty of Natural Sciences, Department of Biology, Albania;*

*Corresponding Author Aleko Miho, e-mail: aleko.miho@fshn.edu.al;

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ABSTRACT

Here it is discussed the importance of socio-ecological studies and close cooperation between the academic world, decision-making and investors in environmental sustainability. It is based on our experience in years of environmental studies in Albania, with the focus mainly the river Vjose/Aoos. The aim is to stir up the efforts to strengthen the quality of knowledge for all actors in this process as a need in balancing better the development with the conservation natural resources. Setting up a round table Science-Policy is recommended as interface between the academic world and decision-making in all major infrastructure projects. Such an experience can be of interest not only for Albania, but also for other countries on a Planet, suffering today from severe environmental concerns.

Keywords: the socio-ecology concept, infrastructure projects in Albania, Vjosa/Aoos River, Science-Policy interface.

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FORMATION OF MICROBIAL COMPLEX OF THE SOIL IN AGROCENOSE OF SPRING BARLEY USING ECOLOGICALLY SAFE CULTIVATION TECHNOLOGIES

Iryna Mosiychuk¹, Iryna Beznosko^{1*}, Julia Turovnik¹ Alla Lishchuk¹,
Tatiana Gorgan¹, Yurii Ternovyi²

¹*Institute of Agroecology and Environmental Management of NAAS, Metrologichna st., 12, Kyiv, 03143, Ukraine;*
²*Skvyra Research Station of Organic Production of the Institute of Agroecology and Nature Management of NAAS, region, Skvyra, Selection st, Kyiv, Ukraine;*

*Corresponding Author Iryna Beznosko, e-mail address: beznoskoirina@gmail.com;

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ABSTRACT

Soil microbiota is one of the most important factors that determine the formation processes as well as the biological properties of the soil. The use of microbiological preparations in modern technologies not only increases the resistance of plants, productivity, and quality of products, but also contributes to the formation of the microbial complex inherent in each plant. The aim of our study is to determine the number of microorganisms of individual ecological and trophic groups of the rhizosphere soil for spring barley plants depending on the elements of the cultivation technology (application of the preparations). The number of the main ecological and trophic groups of the soil during the ontogenesis of spring barley of Sebastian and Helios varieties changes depending on the elements of cultivation technology (application of the preparations), the phase of ontogenesis, as well as soil-and-climate conditions. During the ontogenesis of spring barley plants, the increase in the number of pedotrophic micromycetes was observed. The most of pedotrophic micromycetes was found in the soil were plants of Sebastian and Helios varieties were planted, with the use of Vimpel 2 and the mixture of Vimpel 2 + Oracle multicomplex. This confirms that the soil contains a sufficient amount of organic matter. Also, throughout the vegetation season, the pathogenic mycobiota was characterized by a high number in agrocenoses of spring barley. The variants in which Vympel 2 and mixtures of Vympel 2 + Oracle multicomplex had been used, the number of pathogenic micromycetes in the soil were the spring barley plants were planted decreased significantly. That shows the fact that the preparation Vimpel 2, both individually and in a mixture, is able to protect plants from diseases by improving their immunity. The number of oligotrophic microorganisms was the highest in the control variant, and it was the lowest with the use of all the studied preparation, respectively. The number of humate-forming micromycetes also decreased by 1-1,5 times compared to the one in the control variant. The application of Vimpel 2 and Oracle brought to the situation in which multicomplex significantly intensified the development of ammonification microorganisms. Amyolytic microorganisms and cellulose-destroying micromycetes also increased. These microorganisms degraded cellulose-containing substrates in the presence of enzymes. They don't require a large amount of the nutrients, but thereby provide an opportunity for the development of other micromycetes that absorb hydrolysis products. Therefore, rhizospheric soil under sowing of spring barley plants is able to form a microbial complex that significantly depends on the elements of growing technologies. The confirmed coefficients of mineralization-immobilization nitrogen, pedotrophicity, and oligotrophicity, determined the regularities of the processes of nitrogen mineralization and immobilization as well as the availability of easily digestible organic substances in the soil depending on the elements of cultivation technology (application of the preparation). A clear relationship between the number of micromycetes in the rhizosphere soil of spring barley plants and the value of HTC was determined.

Key words: soil mycobiota, agrocenosis, number of micromycetes, hydrothermal and microbiological coefficients, plant root secretions, elements of cultivation technology.

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PHYSICOCHEMICAL QUALITY DETERMINATION OF PASTEURIZED AND UHT MILK MARKETED IN TIARET REGION, ALGERIA

Amina Belkhemas^{1*}, Abdellatif Niar¹, Bouabdellah Benallou², Abdelkader Difallah¹,
Sabrina Ait Abdelkader², Mohamed Badrane³

¹*Nature and Life Sciences Faculty, University of Tiaret (14000), Algeria;*

²*Farm Animal Reproduction Laboratory, Veterinary Institute, University of Tiaret (14000), Algeria ;*

*Corresponding author Amina Belkhemas, email : amina.belkhemas@univ-tiaret.dz;

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ABSTRACT

The purpose of this study was to evaluate the physicochemical properties of processed milk in Tiaret City. From different points of sale, ninety random samples of processed whole milk (60 UHT milk and 30 pasteurized milk) were obtained. The physicochemical parameters analyzed comprise fat, protein, lactose, solids not fat (SNF), minerals, pH, density, freezing point, and conductivity. The results can be summarized as follows: The physicochemical components of pasteurized milk samples were fat (27.27 ± 1.12 g/l), protein (31.43 ± 0.15 g/l), lactose (84.57 ± 1.04 g/l), SNF (84.57 ± 1.04 g/l), minerals (6.7 ± 0.07 g/l), pH (6.77 ± 0.01), density (1030.16 ± 0.17 mg cm⁻³), freezing point (-0.54 ± 0.0 °C) and conductivity (5.06 ± 0.11 μS cm⁻¹). For UHT milk, the physicochemical components of pasteurized milk samples were fat (28.75 ± 0.26 g/l), protein (30.06 ± 0.35 g/l), lactose (51.39 ± 0.03 g/l), SNF (82.65 ± 0.78 g/l), minerals (6.77 ± 0.21 g/l), pH (6.73 ± 0.01), density (1028.83 ± 0.32 mg cm⁻³), freezing point (-0.53 ± 0.01 °C), and conductivity (4.49 ± 0.06 μS cm⁻¹). Based on our results, it was revealed that all physical characteristics were in accordance with national and international standards. However, the majority of chemical parameters, minerals, SNF, and fat were lower than Algerian regulatory limits.

Keywords: physicochemical properties, Tiaret, UHT milk, pasteurized milk.

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SPECIFIC QUALITY INDICATORS OF MONOFLORAL LINDEN HONEY

Liudmyla Lazarieva¹, Larysa Akymenko¹, Hanna Postoienko^{1*}, Volodymyr Postoienko¹,
Lesia Nikitina¹, Dmytro Zasiiekin², Serhii Razanov³, Vitalii Nedosekov²,
Sergey Amons⁴, Alla Razanova³, Lyudmyla Symochko^{5,6}

¹National Scientific Center "P.I. Prokopovich Beekeeping Institute", Kiev, Ukraine;

²National University of Life and Environmental Sciences of Ukraine, Kyiv, Ukraine;

³Lviv National Environmental University, Dublyany, Lviv region, Ukraine;

⁴Vinnytsia National Agrarian University, Vinnytsia, Ukraine;

⁵Coimbra University, Coimbra, Portugal;

⁶Uzhhorod National University, Uzhhorod, Ukraine;

*Corresponding Author Hanna Postoienko, e-mail: vethannap@gmail.com;

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ABSTRACT

The research was aimed at developing a comprehensive approach and identifying criteria for assessing the quality of monofloral linden honey based on the determination of its organoleptic, physicochemical indicators, pollen analysis and establishing compliance with the requirements of quality standards. 32 samples of honey labeled as linden honey were analyzed. Evaluation criteria for monofloral linden honey in Ukraine have been established. The degree of monoflorality of linden honey can be from 30.0% of linden pollen and higher. According to organoleptic indicators, honey from linden is characterized by a peculiar delicate aroma of linden flowers, mainly has a color from light yellow to white shades, consistency depending on the season (liquid, viscous, very viscous, dense). According to physical and chemical parameters: moisture - 18.5%, proline - 308.12±34.18 mg/kg, electrical conductivity - 0.35± 0.04 M/cm, fructose to glucose ratio - not lower than 1.2, diastasis not less than 11.0 units. Gote, the content of reducing sugars is 85.6±2.47%; sucrose in the range of 2.8-3.9%. It has been established that the quality indicators of monofloral linden honey meet the requirements of the national standard of high-grade honey and the existing EU requirements; the content of dominant linden pollen should not be lower than 30%. It has been proven that the ratio of fructose to glucose for monofloral linden honey should not be lower than 1.2, the proline content is not less than 300.0 mg/kg, and the electrical conductivity is 0.63Ms/cm. A comprehensive approach to the identification and evaluation of the quality of monofloral linden honey has been developed and the main criteria for the degree of monoflorality, organoleptic and physicochemical indicators have been determined.

Keywords: linden honey, quality indicators, monofloracy, organoleptic indicators, proline, pollen analysis, electrical conductivity, diastase.

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DIAGNOSIS OF EQUINE POST-BREEDING ENDOMETRITIS: ULTRASONOGRAPHY, MICROBIOLOGY, CYTOLOGY, AND CORRELATION TO FERTILITY IN TIARET REGION, WESTERN ALGERIA

Sabrina Ait Abdelkader^{1*}, Bouabdellah Benallou¹, Mohamed Amine Ayad²,
Amina Belkhemas¹, Yassine Hadj Boussada², Sara Benouadah³

^{1*}*Institute of Veterinary Sciences, University of Tiaret (14000), Algeria;*

²*Farm Animal Reproduction Laboratory, Veterinary Institute, University of Tiaret (14000), Algeria;*

*Corresponding Author Sabrina Ait Abdelkader, e-mail : abdelkadersabrina.ait@univ-tiaret.dz;

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ABSTRACT

Post-breeding endometritis is one of the most frequent problems of infertility in mares, and it can be difficult to treat and result in significant economic loss. The objective of this study was to diagnose post-breeding endometritis (PBIE) in order to avoid chronic endometritis, to identify the risk factors, and examine the relationship between pregnancy results and the presence of inflammation detected by ultrasound, cytology, microbiological culture, and progesterone measurement. The overall of the 15th mares aged between 4 and 20 years old were randomly selected from the 100 mares examined during the 2022 breeding season. Transrectal ultrasonography (B-mode) was used to examine the mares, when a follicular diameter of at least 35 mm was observed, the first sample was taken 24 hours before mating or artificial insemination, the same sample was taken 6 and 48 hours after including low volume uterine lavage for microbiology, blood sample for progesterone measurement and uterine cytology with a cytobrush. Pregnancy rate was 40%, and plasma concentration of progesterone (P4) was increasing during the 3 samples and less than 1 ng/mL. PBIE was detected by ultrasonography, the presence of fluids 48 hours after mating only in 3 mares with a degree ≥ 2 . Cytology was negative before mating in all mares, a polymorphonuclear neutrophil (PMN) peak was encountered at 6h and the PMN number disappeared at 48h except in the mares where uterine fluid was present and PMN number was >5 by field. Finally microbiology showed the presence of many microorganisms in mares with PBIE and even with no PBIE, and antimicrobial susceptibility were evaluated, the mares developed antibiotic resistance and no antibiotics were effective. These observations showed that PBIE is one of the factors causing infertility to which attention should be paid, ultrasound and cytology are good means of diagnosing it, microbiology helps in the treatment.

Key words: post-breeding endometritis, infertility, cytology, microbiology, ultrasonography.

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