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CLIMATE CHANGE AND THE CHANGES IN REGIONAL PRECIPITATION

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ABSTRACT

The amount and time period of precipitation by region were affected with occurring global climate change. Similar negative effects have been occurred in Konya closed basin, as well as all over the world. In this study, firstly types of precipitation are discussed. Afterwards, the study was focused on the precipitation types and occurring rain in the region. Also acid rain formation and dry/wet deposition are being discussed as very important environmental problems happening with Global Environmental Change. Importance of precipitation cleaning air pollution is also as a place to answer the question air pollution problem. Increasing urbanization of rural and urban comparison of information on rainfall in this period has been scanned. Why are there different amounts of precipitation in the same place where the two settlements to answer the question. Most recently, several studies have revealed the parameters to be monitored by examining the rain water and the measurement of these parameters / results to be obtained by discussing.

Keywords: precipitation, rainfall, global climate change, Konya, Turkey

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THE ROLE AND IMPORTANCE SYSTEM SAFETY OF FOOD IN THE TOURISM OF MONTENEGRO

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ABSTRACT

Montenegro has taken a very significant place at the world tourist map in the last few years. General touristic offer includes also the food, more precisely gastronomic products which help to develop gastronomic tourism Gastronomic product (food) presents one of the most important elements of the total touristic offer of Montenegro. As tourism is developing, and expecially gastronomic tourism, not only high quality of food is needed, but also safe and healty food. The international standards must be applied. This work presents international standards, ISO standards, ISO 22 000 standards, HACCP concept and the use of HACCP concept as well as its principles in order to insure safe food in hotels.

Key words: tourism, gastronomic product, system

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WEAKNESSES IN SKADAR/SHKODRA LAKE WATERSHED ASSESSMENT AND MANAGEMENT

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ABSTRACT

A review of assessments and managements of Skadar/Shkodra Lake ecosystem in past is analyzed and highlighted main weaknesses, in a mirror of contemporary standard scientific approaches in this field. A holistic approach is recommended based on a comprehensive watershed basis with highly interdisciplinary and international team. An international institute of Skadar/Shkodra Lake watershed is proposed as the most cost-effective solution.

Keywords: watershed Skadar/Shkodra Lake, ecosystem, assessment, management, flooding

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EVALUATION OF THE PROTECTION EFFICIENCY OF 1-DECYL-3-METHYLIMIDAZOLIUM CHLORIDE IN THE CORROSION OF 36CrMo STEEL IN ACID SOLUTION (HCl)

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ABSTRACT

Corrosion is an important factor affecting considerably not only the time of use, but also the mechanical properties of metal objects in general. Moreover, corrosion causes economical loses and has an impact on the environment. This fenomenon is of greater importance for steel equipments and materials used in industry. In many industrial processes acid solutions are used which accelerate corrosion. In order to minimize this fenomenon different approaches have been taken, inhibitor use beeing one of them.This paper reports on the protection efficiency of an ionic liquid, 1-decyl-3-methylimidazolium chloride in the corrosion protection of 36CrMo steel in HCl solutions of different concentrations and temperatures. The corrosion velocity and protection effiecieny have been assessed using the gravimetric method. The results show that an increase in the 1-decyl-3-methylimidazolium chloride concentration results in lower corrosion velocity of the 36CrMo steel in acid environment. The protection effieciency decreased with the increase of temperature. The mechanism of corrosion protection for this inhibitor is also discussed in the paper.

Keywords: corrosion, carbon steel, 1-decyl-3-methylimidazolium chloride, ionic liquid, inhibitor

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POLLEN GRAINS OF ALLERGENIC PLANTS

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ABSTRACT

This article represents data about the morphological studies of pollen grains from different allergic plants. It is a part of the "Allergopalynolologic studies of allergic plants on Elbasan region and all respective allergies caused by them". The article describes morphology of pollen grains taken from 8 allergic plants species. Palynological data for these plants were provided for the first time in the Albania's palynological literature. The pollen size, the feature of the aperture and the exine structure of these plants, were studied by the light microscope. Study provides information on the morphological characteristics of pollen grains, details of how it was been stored and laboratory tested, about the blossoms and pollination period in order to help physicians and citizens by taking all the necessary precautions in preventing allergic diseases caused by pollen. Results of palynological studies of allergic plants submitted in this material belong to the following material: "Full study of allergenic pollen plants in Albania".In the above material there are given data about allergenic pollen plants located in the Elbasan region in Albania that are not being studied before.

Key words: Pollen grains, exine, intine, allergenic plants, region of Elbasan, Albania.

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STUDY ON SOME AREAS OF RARE PLANTS SPECIES FROM THE MIDDLE SECTOR OF NISTRU RIVER BASIN (THE REPUBLIC OF MOLDOVA)

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ABSTRACT

The study included researches in the natural areas protected by state, during 2010-2013, in the middle of the Nistru River basin, located on the border with Ukraine, in order to delimit the habitats of rare plants species, with national and international protection status, in the existing areas across Europe and identify new habitats (in the study area) for the most threatened species of flora in the region. Physical and geographical particularities of the surveyed region have conditioned a varied floristic diversity, which included and species found on the limit of their area of distribution. Thus, some plants are at North limit (Galanthus nivalis, Trifolium pannonicum), at South limit (Hepatica nobilis, Poa versicolor, Dryopteris carthusiana) and at East limit of distribution (Doronicum hungaricum, Melittis sarmatica) in the Republic of Moldova, other threatened species – at limit in Ukraine (Lilium martagon, Allium rotundum, Lathyrus venetus, Cephalanthera damasonium) or in Romania (Pulsatilla grandis, Veratrum nigrum, Staphylea pinnata). These species are listed in different Annexes of Environmental Conventions (Bern, 1979, Washington, 1973, Appendix IUCN, 2008, Red Book of neighboring countries) and require additional measures for improving and preserving habitats.

Keywords: natural areas protected by state, rare plants' area, environmental conventions.

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BIOLOGICAL AMMONIUM REMOVAL VIA NITRITE PATHWAY

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ABSTRACT

The main aim of this study is to introduce to the operational strategies of partial nitrification in order to accumulate NO_2-N in the effluent water of the biological reactor. In order to perform nitritation and denitritation process, nitrite oxidation should be controlled without affecting the AOB and NOB must be adapted to high concentrations of NO_2-N. Accumulation of NO_2-N in the effluent water can be achieved by controlling the NOB activity by operating the biological reactor at convenient pH, temperature, DO concentrations, and SRT.

Keywords: biological nitrogen removal, nitritation, nitrite accumulation,

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EFFECT OF TEMPERATURE AND DISSOLVED OXYGEN CONCENTRATIONS ON THE NITRITATION IN A SUBMERGED BIOFILTER

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ABSTRACT

This experimental study focused on the effects of DO concentrations and temperature on the ratio of NO_2-N/NO_x-N and NH_4-N removal efficiency in the submerged biofilter. The highest NO_2-N/NO_x-N ratio was achieved at the temperature of 35^0C. At the DO concentrations of 4.5 mg/L, the removal efficiency of NH_4-N and NO_2-N/NO_x-N ratios were about 91% and 0.52, respectively. Decreasing the DO concentration to about 4.0 mg/L, the removal efficiency of NH_4-N dropped to 73%. However, the ratio NO_2-N/NO_x-N increased to about 0.62. Increasing the DO concentrations at the top of the biofilm reactor, enhance the activity of nitrobacter species and NO_2-N was further oxidized to NO_3-N. The highest NO_2-N production (0.386 Kg NO_2-N/m^3.day) and NH_4-N removal rate (0.750 Kg NH_4-N/m^3.day) were obtained at the DO concentrations and temperature 4.0 mg/L and 35^0C, respectively.

Keywords: Dissolved Oxygen, nitritation, NO_2-N/NO_x-N ratio, temperature

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REDUCTION OF ENERGY AND WATER CONSUMPTION IN SOFT DRINKS PRODUCTION, AS A RESULT OF IMPLEMENTATION OF THE CLEANER PRODUCTION PRINCIPLES

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ABSTRACT

Consumption of energy and water, which is used in the main processes as raw material, as well as in secondary processes (for rinsing and cleaning), makes up a significant part of the overall product costs in the soft drinks industry. [4]. Therefore, to achieve a costs reduction it is required to increase the utilization efficiency of energy and water, especially in cases when the price of energy is high. This study shows just how using available technologies lead to achieve a reduction of energy and water consumption, (mainly consumption of water in secondary processes). The challenge is to maintain the high levels of product quality, regardless of the cost production reduction, aiming at increasing production capacity. As the main production lines depend almost entirely on the consumption of electricity and water, in this study is shown how can be achieved a reduction in energy consumption product unit, by using the maximum capacity of production lines through automation of technological processes and maintenance of equipment in order to operate in optimal parameters, and by reduction of energy losses; as a result power reduction amounted to 13%.

Key words: Cleaner production, energy consumption minimization, costs cutting, water consumption, maintenance, automation.

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COLLECTING MAIZE LANDRACES IN ALBANIA

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ABSTRACT

Conservation of plant genetic resources is very important for protection of biodiversity. Maize is very often cultivated on small plots in backyards and home gardens. The population which had been cultivated for years, usually without irrigation, was reported to have very good drought resistance. Collecting of maize landraces is emergent duty because they are threatened by genetic erosion. Collecting missions in Albania were conducted under the regional project collecting local germplasm during 2009 and 2010. The main goal was preservation of local landraces of maize. Over 69 localities were inventoried in the predicted regions. The extent of the inventoried territory of the entire region: at the northern at the village of Lëpushë (Kelmend) to at the southern at the village of Starje (Kolonje). The result of the collecting was 34 maize accessions collected (29 acc.on 2011 and 5 acc. on 2010). Regarding the status of the samples, they are mainly landraces, which are still grown by some farmers and used as a source of high quality animal and human food. Even more important is the specific use of its flour which is considered the best in cooking of traditional dishes. The next and very important steps will be to multiply, characterize and evaluate the collected samples. This material will be available for breeding programmer and for the sustainable use.

Keywords: Maize, local landraces, collecting missions.

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THE QUALITY OF THE SHARRI CHEESE IN THE MICROBIOLOGICAL AND PHYSICO-CHEMICAL ASPECT

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ABSTRACT

"Sharri" cheese is called so because it is made in the earlier years of Sharr Mountains with an altitude of 800-1200m. "This type of cheese is produced from a combination of half sheep milk and half cow's milk and the Sharr flagrance or aroma". "Pathogenic microorganism, if present in untreated milk, thought to be present in the cheese if the cheese is prepared several months before consuming. Escherichia coli is the most common cause of failure of cheeses and other foods. The purpose of this paper is to check the microbiological quality of "Sharri" cheese in a dairy licensed in the Republic of Kosovo. Work methodology: sampling, transport and analysis of samples in the laboratory is done according to standards. Samples were taken during 2012. During 2012 samples were taken for the analysis of physico-chemical microbiology. Our results speak in favor of that 8% of the samples resulted in bacterial contamination, which is isolated: Escherichia coli, while after the implementation of HACCP no bacterial contamination has been confirmed. All samples analyzed in terms of physico-chemical standards are in conformity with what works IKSHP. Implementation of HACCP in the dairy has given satisfactory results. HACCP is an immediate need to be implemented in all other subjects that deal with food activities.

Key words: sample, contamination, bacteria, hygiene, "Sharri", HCCP.

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OVICIDAL AND ANTI-OVIPOSITIONAL ACTIVITIES OF SOME PLANT EXTRACTS ON THE EURYGASTER MAURA L. (HETEROPTERA: SCUTELLARIDAE)

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ABSTRACT

The Sunn pest, Eurygaster maura L. (Heteroptera: Scutellaridae) is the most economically important pest of wheat and other graminae in Middle Anatolia, Southeast Anatolia and Thrace in Turkey. In this study, the methanol extracts of Foeniculum vulgare Miller (Umbelliferae), Lavandula angustifolia Miller (Lamiaceae), Cuminum cyminum L. (Umbelliferae), Thymus vulgaris L. (Lamiaceae), Achillea millefolium L. (Asteraceae), Artemisia absinthium L. (Asteraceae), Hypericum perforatum L. (Hypericaceae) and Pimpinella anisum L. (Umbelliferae) were tested for ovicidal and anti-ovipositional properties against E. maura L. under laboratory condititons. Extracts were applied in 2.5%, 5% and 10% (w/w) concentrations. One-to three-day old eggs were dipped in to treatments. As a result, except A. millefolium and T. vulgaris, the other extracts decreased hatching of treated eggs in comparison with control. According to the extract concentrations the percentage of unhatching egg masses increased mostly. At a concentration of 10%, F. vulgare extract was the most effective with the ratio of 76.22% egg mortality followed by P. anisum and C. cyminum (53.93% and 51.74% respectively). Achillea millefolium extract was the most active in terms of anti-ovipositional effect with result of 40.28 percent in comparison to other extracts. These results showed that A. millefolium, F. vulgare, P. anisum and C. cyminum extracts may be used in integrated sunn pest management, however should be evaluated for field efficacy.

Key words: Ovicidal activity, oviposition deterrent, plant extracts, Eurygaster maura L.

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THE TOBACCO IS ESPECIALLY USED TO DETECT AND MEASURE ATMOSPHERIC OXIDATION POLLUTION BY OZON (O-3)

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ABSTRACT

The tobacco react to the air pollution. A varietie of plant of tobacco is sensitive to a particular pollutant: the ozone. Form a certain leve of ozone in the atmosphere, the plant of tobacco react by developing necroses (zones of dead cells on the these sheets: these necroses show themselves in the form of small white spots to brunettes. We can estimate the level of pollution in ozone by estimating the percentage of surface necrosed on the leaf. We use survery stations: these are consituted by some plants of tobacco of sensitive varietie to the ozone ande some plants of resistant varietie, which serve as witnesses. We raise every week the quantity of necroses on the sensitive plants, and we calculate an average by biostation. Surveillance of the air quality sets up regularly bioresort to realize studies on the ozone. The bioindication or the biosurveillance does not aim at supplying quantified data on the concentrations of atmospheric pollutants. She allows, in complementarity of the physico-chemical measures which she cannot replace, to estimate the impact of present pollutants in the environment.The bioindication allows a qualitative approach of the pollution which brings a relative comparison of varous geographical zones. Besides a low cost, compared with the physico-chemical sensors and a relative ease of implementation, the bioindication has major interest: the use of plants allows to visualize the impact of the pollution on human beings and to make sensitive better the population in this problem. There is an increasing interest in the technique of using indicator plants as tobacco to detect and to monitor the ambient levels of photochemical oxidants. The bio-indicator plant «tobacco BEL W-3» shows characteristic responses, visual foliair injuries, that are specific of ozone. The development of leaf necrosis is used to calculate the «Leaf injury Index». This index does not give the absolute concentration of ozon in the atmosphere, but it provides estimates of relative levels of this pollutant. From the information given by the different bio-stations with tobacco, position, leaf injury index, it is easy to map the spatial and temporal distribution of ozone at ground level.

Key words: bio-indicator, pollution atmospheric by ozon, percentage of necrotized, guard plants

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ASeC SOFTWARE APPLICATION BASED ON FMEAE IN A MECHANICAL SAMPLES POSITIONING SYSTEM ON A RADIAL CHANNEL FOR IRRADIATIONS IN A NUCLEAR RESEARCH REACTOR WITH CONTINUOUS FULL-POWER OPERATION

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ABSTRACT

Safety of nuclear installations and devices is an important feature in order to achieve their environmental acceptability. This paper presents an application of the industrial engineering tool to assess the reliability of a mechanical samples positioning system, for irradiations on a radial channel, at nuclear research reactor in a full-power continuous operation. The objective was identifying their most critical elements with respect to their failure-modes, and proposing the corresponding improvements.The system has been introduced into practice since 2007, in channel BH#3 of the IEA-R1 reactor at the Instituto de Pesquisas Energeticas e Nucleares (Brazil), and has been successfully operated and allowed the conducting of important experiments. The advanced reliability analysis is performed using Failure Mode and Effects Analysis-expanded implemented at the ASeC software. Based on the results, it was showed that the mechanical samples positioning system for irradiations on a radial channel, at nuclear research reactor, in a full-power continuous operation, is reliable and safe, for an appropriated reactor channel functioning.

Keywords: FMEAe, Failure Modes, Failure Effects, risk, reliability, safety, maintenance

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EFFECTS OF LACQUER VISCOSITY IN WOOD FINISHING QUALITY

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ABSTRACT

Wood finishing quality is affected a lot from the viscosity of the finishing material, especially during the alignment of the material into the wood surface. In wood finishing technique, lacquer viscosity is expressed by the time in seconds in which a certain volume of liquid leaks from a cup with a specific geometric form, passing through the calibrated open hole on the bottom. Measurement results are affected from the environment temperature. The viscosity measurements of finishing materials such as nitrolacque (nitrocellulose paint) and polyurethane were made at different temperatures, starting from 6^oC – 30^oC. The measurements were made with FORD-4 cup. From observed data, when temperature is 20^oC, the viscosity of nitrolacque (nitrocellulose paint) is 30 seconds, polyurethane viscosity is 25 seconds. At temperature 28 ^oC nitrolacque (nitrocellulose paint) viscosity became 20 seconds and polyurethane viscosity became 16 seconds. By lowering the temperature the viscosity increases. This should be taken in consideration to achieve good quality results from spraying finishing in different seasons of the year.

Key-words: viscosity, lacquer, finishing, temperature, wood.

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THE ROLE OF NATURAL FOREST RESERVATIONS IN THE CONSERVATION OF BIOLOGICAL DIVERSITY

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ABSTRACT

Natural Forest Reservations (NFR) are protected territory categories that have the objective to assure optimal conditions for the protection and reestablishment of the species, vegetal communities and animals that are nationally significant.In the Republic of Moldova there are 51 objects that have the status of Natural Forest Reservation and are taken under the State's protection. In the study are included 22 Natural Forest Reservations, which are geographically located in Danube's Basin (Republic of Moldova). The investigated areas are located in the forest fund that creates favorable conditions for growth and development of a rich flora and fauna diversity. As a result, it was found that the investigated objects are characterized by a satisfactory ecologic condition and contain a rich diversity of flora and fauna rare species. For some of the identified species, the evaluated areas serve as new habitats. The obtained results serve as scientific support for proving the protection category of the investigated objects, filling up the Ecologic Passports and the Database regarding the Cadastre of the State Natural Protected Areas.

Key words: State Natural Protected Areas, Natural Forest Reservations, Danube's basin, ecologic condition, rare species, conservation of biological diversity.

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NEW UTILIZATIN TECHNOLOGIES OF THE BEECH FORESTS IN ALBANIA

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ABSTRACT

Forests in our country are a very important component for the environment, considering the fact that they cover more then 1 031 000 ha or 36% of total Albania surface. 47% of the total timber volume comes from the utilization of beech forests. In our country beech forests are located in steep and very steep terrain. Taking into account the above facts silviculture and utilization study of these forests is of great interest to identify different conservation and development technologies. Is very important for the future the evaluation of new utilization technologies in the context of a sustainable forestry and silviculture considering the experience we have had in the past has not been very generous. This study has compared different utilization methodologies of beech forest in Albania and Italy. To identify the weak points of utilization works in Albania and the possibility of their improvement has also been of interest to evaluate the productivity of various working sub phases. This study aimed also the study of the actual infrastructure of Albanian beech forest which is very defective and needs maintenance.

Key words: beech forest, utilization, real productivity, potential productivity, gross working hours, net working hours.

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PRELIMINARY DATA ON EXTRACTION, ISOLATION AND CHEMICAL ANALYSIS OF VOLATILE COMPOUND OF TUBERS OF GYMNOSPERMUM ALTAICUM SUBSP. SCIPETARUM WITH DICHLORMETHANE

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ABSTRACT

Recently Albanian biologist discovered a new plant unknown before in Albania. The DNA analysis showed that this is a species of Gymnospermium altaicum scipetarum (Tan K., Mullaj A.,2001) that grows mainly in Albania(Mayer, E.,1983). For this plant there are proofs that grow even in Montenegro, Rumija Mountain (Green P., Tutin G., Heywood H., Burge A..,1972). The name Scipetarum was proposed by Albanian biologists but is not registered yet. In our laboratory we were interested in screening the chemical composition of tubers of this plant. In this paper we will present the preliminary results on the analysis of the tubers of this plant extracted with dichloromethane (DCM). The extract obtained was analyzed by thin layer chromatography and gas chromatography. Based on the large variety of compounds that were extracted was necessary to use separation with column chromatography and then the identification of these compounds with mass-spectroscopy. The analysis and identification was made with GC-MS. Are identified some triterpenoids like squalene, different derivatives of stigmasta, Cholest-5-en-3-ol and some alcohols, alkanes, alkenes and esters. For full identification is needed further work with different techniques like NMR or MSMS identification.

Key words: Gymnospermium, medicinal plants, GC-MC analysis

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DETECTION OF CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS ANTIBODIES IN LIVESTOCK IN HAS AREA

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ABSTRACT

Crimean-Congo hemorrhagic fever (CCHF) virus is the causative agent of a serious human hemorrhagic fever with mortality rates ranging from 15 to 60%. CCHF virus is a member of the genus Nairovirus within the family Bunyaviridae. Bunyaviruses are enveloped particles with a tripartite, singlestranded RNA genome of negative polarity; the particles contain highly conserved complementary nucleotide stretches at the segment ends. The three genome segments encode four structural proteins: the RNA dependent RNA polymerase (L protein) is encoded by the large (L) segment, the glycoproteins (G1 and G2) are encoded by the medium (M) segment, and the nucleocapsid protein (N) is encoded by the small (S) segment. The Nairovirus genus includes 34 described viruses and is divided into seven different serogroups. Crimean-Congo hemorrhagic fever virus (CCHFV) is transmitted to humans by Hyalomma ticks or by direct contact with the blood of infected humans or domestic animals. All members of the genus Nairovirus seem to be transmitted mainly by hard ticks (family Ixodidae); CCHF virus is transmitted most efficiently by members of the genus Hyalomma (e.g., Hyalomma marginatum), followed by Rhipicephalus and Dermacentor spp. This study is based on the prevalence and the presence of CCHFV in Albania's agricultural animals such as sheep, cattle and goats. We collected sera from Has area where we had indication about the presence of CCHFV in humans, respectively 108 serum samples from cattle. These sera were tested with immunological methods using indirect ELISA assay in Friedrich-Loeffler Institute (FLI), Greifswald Germany. Through this technique it was possible to identify IgG antibodies in infected sera. From the results we detectied the presence of IgG antibodies in 4 of 108 serum samples from cattle in Has area. From these preliminary results the presence of CCHFV in livestock in Albania is clearly proved. We also collected ticks from different area's of Albania such as Kukes, Has, Torovice and Vrepcke. In Kukes we collected 5 ticks from the land using the flag as a method. We made the identification of these ticks in The Faculty of Veterinary Medicine Prishtine/Kosove and from the results we had a conclusion that ticks were from spp Rhipicephalus bursa.

Key words: CCHFV, ssARN(-), Indirect ELISA, IgG, Rhipicephalus bursa

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COMPARISON OF TWO FULLY AUTOMATED IMMUNOASSAYS: ELISA (CHORUS) AND ELFA

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ABSTRACT

Toxoplasma gondii is a parasitic protozoa which can be transmitted by eating infected meat or from mother to fetus during the first trimester of pregnancy. This microscopic parasit can cause fetal infection with unpredictable consequences in later life. Medical diagnostic is working to determine the most sensitive techniques for the detection of T. gondii antibodies, in the framework of which is developed this scientific work. An enzyme-linked immunosorbent assay (ELISA, applied in CHORUS instrument) and an enzyme-linked fluorescent assay (ELFA, applied in Mini-Vidas instrument) have been compared with each other for the detection of Toxoplasma IgM antibodies. There have been analyzed 200 patients with each technique. 189 out of 200 samples (94,5%), gave compatible results. In particular, 155 samples gave negative results, 31 samples gave positive results and 3 samples gave doubtful results with both techniques. It was observed that 11 samples were positive in Vidas instrument and doubtful in Chorus instrument. Comparative evaluation of the two assays demonstrated a comparable sensitivity for all systems. ELFA technique showed a better ability to detect Toxoplasma IgM antibodies during the early stage of acute infection. Analysis of the results revealed a good level of concordance between the two assays and confirmed the usefulness of ELFA technique to diagnose acute toxoplasmosis.

Keywords: ELISA, ELFA, Toxoplasma IgM.

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THE ROLE OF FOREST ROADS FOR MANY PURPOSES

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ABSTRACT

Forest roads with their multifunctional role (ecological, productive, social, relaxing, scenery, etc.), in order of achieving the necessary effectiveness, require a sustainable, long-term maintenance, as well as opening new road paths, throughout their attainability with the road infrastructure. Amongst evaluated instruments, in the current forestry practice, considered as the "key" to road opening of forests, which provide access to their inland, for people and working machinery, are as follows: treatment with complex silvo-technical activities, including harvest activities, implementation of prevention and protection measures against sicknesses, perpetrators and fires, not mentioning their use for other purposes, other than of the forestry nature, such as: connection of rural areas, tourism purposes, etc. Expansion of road arteries in forests corresponds to finding a solution for the complex problem, concluding the set of services to be applied, from the field of road infrastructure, referring to three classes of forest services, out of motorways. Precisely, the purpose of a study, carried out some time ago, is to find a perspective solution for the forests in Kosovo, according to a contemporary methodology, oriented towards main indicators of forest resources of Kosovo, especially to the characteristics of forest groups and the actual state of road network within, characteristics of forest terrains (inclination, configuration, etc.); recommended silvo-technical activities (treatments, forestry measures etc).Methodological operation, followed by field operation, is based on the synthetic indicator of "density" (ml/ha), the optimal value of which aims that the total expenses for each unit of wood product (leke/m^3), profited by the forests, are at their minimum value, and following the determination of which, we shall continue with other more optimal solutions of expansion of new road networks.

Key words: forests, attainability, infrastructure, motorways, service class, optimism

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RANGELAND IMPROVEMENT METHODS IN ARID AREAS OF EASTERN MOROCCO

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ABSTRACT

Rangelands are the most important feed sources for sheep and goats in the Eastern Morocco. This study aimed to investigate the effect of two improvement treatments on pasture production in Eastern Morocco. This study was conducted in pasture areas (M'Brek El Ibil) exclusively used by sheep herds. We used three treatments: open grazing, protection from grazing, shrub plantation (Atriplex nummularia). The vegetation parameters (consumable biomass and plant cover) were measured during three periods of the year. According to the results, the consumable biomass and the plant cover were significantly different ($P < 0.05$) according to the applied treatment and the period of measurement. The consumable biomass was 814 KgDM/ha, 463 KgDM/ha and 41KgDM/ha respectively in shrub plantation, protected and open grazing. The average vegetation cover was 34%, 47% and 18%, respectively. Rangeland improvement methods, Plantation of Atriplex nummularia and protection from grazing, increased the consumable biomass and plant cover of pasture areas. These methods are necessary to insure sustainability of pastoral resources.

Keywords: Rangeland, improvement methods, consumable biomass, cover, arid, Eastern Morocco.

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THE RESTORATION OF THE DANUBE FLOODPLAIN, A FUNDAMENTAL ECOLOGICAL ISSUE FOR ROMANIA

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ABSTRACT

The Danube floodplain represented the largest wet area located along a river in Europe and one of the biggest in the world. From the ecological point of view, the area was characterized by the presence of a great variety of biotopes and biocoenosis characteristic to permanent and periodical ecosystems. The populations of plants and animals reached thousand species, the area in question displaying one of the greatest biodiversities in Europe. Due to its particular ecosystem structure and natural resources, the floodplain located within the territory of Romania is considered the richest in Europe. However, the development of industry, agriculture and human settlements triggered a reduction or even the disappearance of the floodplain. Thus, a major issue, publicly debated, is the restoration of the floodplain. This process represents a complex action both technically and economically, but we consider that the ecological restoration of the Danube Floodplain is an issue of general European interest.

Keywords: the Danube floodplain, the ecological restoration, Romania.

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RESEARCH ON the INFECTION OF THE CARP Cyprinus carpio (CYPRINIDAE) WITH THE ACANTHOCEPHALUS Pomphorhynchus laevis (ACANTHOCEPHALA, PALAEACANTHOCEPHALA)

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ABSTRACT

The acanthocephalan worm was identified only in the carp (Cyprinus carpio), in the intestine and visceral peritoneum of the liver. It affects a wide range of host fish in both natural and aquaculture environments, causing the illness called acanthocephalosis (MUNTEANU & BOGATU, 2008).

Keywords: Preajba hydrographical basin, infestation, acantocephalan, Pomphorhynchus laevis, Cyprinus carpio.

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THE IMPLEMENTATION OF EUROPEAN UNION NATURE PROTECTION LEGISLATION IN MACEDONIA

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ABSTACT

Nature protection is an important part of environmental activities in the field on protection and improvement of the environment. Activities, measures and standards in the nature protection should be drafted in the strategic documents. The strategic documents can be implemented only with the accurately and comprehensive legislation. Legal regulation significantly contributes toward to better nature protection. European Union, as a community with the highest environmental standards, since 1972, has been acting in the improvement of common nature protection activities which are stipulated in the common legislation. Besides the problems with the practical implementation, Macedonia has been harmonizing its environmental legislation since 2004, a year before obtaining the candidate status for the membership of the EU. This harmonization has been moving relatively successful. Nature protection legislation has been harmonizing slower compared to the other environmental sectors. The same situation is with the practical implementation of nature protection legislation, although The Law on nature protection, adopted in 2004, is one of the first adopted laws in the sphere of the environment. It is caused by the numerous of subjective and objective reasons. The Law on nature protection has been changed and amended seven times. After it's entering into force there were adopted a small number of strategic documents and sub law legal acts. The main aim of this paper is to analyze the process of the harmonization of national nature protection legislation with the EU legislation and the possibilities for the acceleration of this process. Also the paper gives some recommendations for the future improvement of the Macedonian, s nature protection legislation and its more successful practical implementation.

Key words: nature protection, environment, legislation, harmonization, European Union

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ECONOMIC DEVELOPMENT IN THE WESTERN BALKAN REGION

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ABSTRACT

In recent years, the World Bank's Environmentally and Socially Sustainable Development Department, has published some reports covering most part of the Western Balkan countries, in collaboration with the Food and Agriculture Organization (FAO) and the Directorate General of the European Commission for Rural Development. These reports clearly present the obstacles to economic competitiveness, carefully examine public expenditures, diagnose key policy challenges and suggest strategic objectives and priorities in order to move forward. This paper aims at providing an overarching analysis in view of the challenges facing the region's policy makers and the strategies for transforming, reorganizing and modernizing different economic sectors, which in time will result in a new economic growth and a healthy rural sector. This paper comes at a critical time for the Western Balkan region. While its countries are experiencing an overall healthy growth, agriculture and rural areas are falling behind, trade deficits are constantly expanding, climate change is becoming more and more of a problem and many rural workers are being pushed to urban areas. The need to meet EU standards while addressing the food and financial crisis, are powerful external policies to improve and give a boost to the agricultural policy.

Key words: economıc development, western balkan regıon, EU standards.

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SURVEILLANCE OF MEASLES AND RUBELLA IN ALBANIA

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ABSTRACT

The aim of the research is the description of the Measles and Rubella surveillance system in Albania Measles and Rubella. Clinicians across the country and in each health service mandatorily report all suspected cases to the Institute of Public Health for laboratory confirmation. Albanian strategy of elimination began with two mass immunization campaigns with bivalent vaccine for children aged 1-14 years and for women of reproductive age 15-35 years. Despite the high immunization coverage two measles outbreaks occurred in 2006. Additional vaccination campaigns were organized in communities affected by these outbreaks. National Laboratory participates in the annual proficiency tests and has been accredited by the WHO Regional Office since 2004. Despite the high vaccination coverage enhancement of surveillance and elimination of vaccination gaps is needed to reach the goal of elimination of the disease by 2015.

Key words: measles, rubella, surveillance, system, laboratory, immunization

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PREDICTION OF PANDEMIC A/H1N1 2009 IN ALBANIA

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ABSTRACT

Mathematical modeling of infectious diseases is a way of supplementing traditional surveillance to forecast future events, including future influenza activity. It is a helpful tool to understand the speed and impact of pandemic and to plan for better countermeasure against pandemic. The aim of the study was to project the pandemic wave in the country to describe what would happen under certain assumptions and hypotheses. We developed a population stochastic compartmental SEIR (susceptible-exposed-infectious recovered)-model of pandemic influenza A/H1N1pdm transmission in Albania. Based on the best-fit transmission probability in the total population of the country we estimated the possible future outbreak scenario. As our initial state, we take one infected cases and the total country population as susceptible individuals. Some of the parameters used are natural history, $R_{0,}$ period when the patient is infectious, rate and infectiousness of asymptomatic patients etc. From the first July 2009, theoretically and in the absence of intervention influenza cases start to increase toward the end of November. The figure shows prediction results over the whole course of the pandemic, and its predicted peak would be reached on the 10 February 2010. The number of patients was estimated to reach 126000 at the peak. Mathematical models based on epidemiologic data can provide estimates around the risk of transmission. Reducing contact with infected individuals, prevents outbreaks of influenza.

Key words: Influenza, pandemic, prediction, model.

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BIODIVERSITY AND PROTECTED AREAS IN KOSOVO

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ABSTRACT

Kosovo even a small country, it is distinguished with rich biodiversity. Its geographical position, geological factors, hydrology and climate are some of factors that enabled Kosovo to have rich biological diversity, rich flora, fauna and vegetation as well as presence relict, endemic and other important species. Based on researches made so far, in Kosovo are inventoried about 2.000 species of vascular flora, but it is supposed this number is much higher and reaches about 2.500 species. It means the Kosovo species inventory is not completed yet. According to the researches made so far, in Kosovo are identified more than 250 wild vertebrate species (215 bird species) as well as a number of invertebrates (so far recognized 200 butterfly species, over 500 macrozoobentos species). The nature protection through protected areas is an important legal tool that enables protecting the values of natural heritage and biodiversity. Currently the national network of protected areas is consisted by 98 nature areas with the total surface of 124.204 ha (11.5 % of the territory of Kosovo). Greatest territory of protected area is taken up by the "Sharri" and "Bjeshket e Nemuna" National Parks, with 94 % of the total territory of protected areas. Recently over 160 new areas of various categories of protection were proposed for protection. Several gaps and problems within protected areas in Kosovo which even now most of them continue to follow the nature conservation. If we are going with those steps and dynamic, in a few years' highly valued natural areas in Kosovo will lose their values and many endangered species of fauna and flora will be extinct as a result of the conversion of land for agricultural purposes, infrastructure development, infrastructure (unplanned and uncontrolled constructions), fragmentation of habitats (especially by streets and quarries), unsustainable exploitation of forest ecosystems, herbs, certain animals, etc.

Keywords: Protected areas, Kosovo, biodiversity, National Parks, Nature Reserves, Nature Monuments, problems, flora, fauna.

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MICROBIAL POLLUTION ASSESSMENT OF ALBANIAN LITTORAL WATERS IN OHRID LAKE

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ABSTRACT

Lake Ohrid, straddles the mountainous border between south-western Macedonia and eastern Albania. It is one of Europe's deepest and oldest lakes, preserving a unique aquatic ecosystem that is of worldwide importance, with more than 200 endemic species. Lakes are divided into subsections based on morphometric (depth, dimension, geology of shores, currents, etc.) and physicochemical (temperature, pH, oxygen content) parameters. Apart from their bacterial and algal populations, stream, rivers, and lakes also contain fungal, protozoan, and viral populations, which interact and contribute to the functioning of the food web. This paper presents pollution aspects of Lake Ohrid at Pogradec. Out of large number of microbial parameters linked with human health, some significant contaminating indicators, namely, total Coli form (MPN/100ml), Fecal coliform (MPN/100ml), Streptococcus feacalis (MPN/100ml) have been identified and measured. Eight sampling locations were selected, three of them in Pogradec city area, (three different bands in each sampling locations) and total of samples sets were collected over a period of three months from June to September. The results taken by the analyses show that the bacterial pollution of the littoral waters of Lake Ohrid, surpasses the UNEP/WHO standards for the microbiological quality of bathing waters (100-1000 E.coli/100ml) in most of the sampling locations.

Key words: pollution, microbiological quality, total coliform, E. coli.

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PERFORMANCE OF MORBIDITY RESPIRATORY TRACT AND TUMORS FOR A PERIOD OF 10 YEARS RELATED TO AIR POLLUTION IN THE DISTRICT OF ELBASAN, ALBANIA

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ABSTRACT

The purpose of this paper is to show the progress of the disease and mortality that affect the respiratory apparatus and tumors for the period of 10 years. This is a 10-year retrospective study that analyzes and studies morbidity caused by chronic bronchitis, asthma and tumors in Elbasan. Criteria of the study includes the diagnosis of chronic lung disease pathologies and these tumors visible disease categories affected by environmental pollution. The pulmonary diseases have increased from 10.5 by 2001 up to 25.3 cases per thousand inhabitants in 2012. While bronchial asthma incidence on national level for the last years is 23-25 cases in 10. 000 inhabitants. We have a large and progressive increase of tumor diseases from 6.2-6.5 / 10,000 in 2002-2003 that goes over 9.0 to 11.0/10,000 inhabitants for 2010-2011. In this study it is found that about 72% of cases are from the city and the villages near the old and new industrial zone. The tumor patients aged 25-50 years constitute about 60%. On the other hand the pollution that comes from industrial areas continue to be sustainable and the urban pollution is increasing. The pollution parameters TSP, PM10, Ozone etc. continue to be more than three times the European community parameters. Clear morbidity and mortality from respiratory diseases like: chronic bronchitis, asthma and maligned diseases are on the rise and the most important factor causing these diseases is that the environment continues to be a very high contamination where industrial areas.

Key words: pollution, environment, diseases, bronchitis, asthma, tumors