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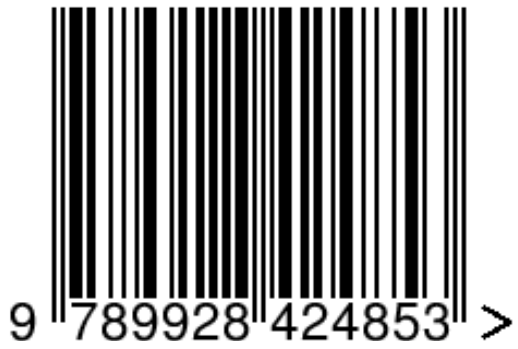

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Prof. Hysen Mankolli, Albania, Prof. Sukru Dursun, Turkey,
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ICE 2016 ABSTRACTS

001 APPROACHES OF INDUSTRIAL SOLID WASTE MANAGEMENT AND SOLID WASTE RECYCLE

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ABSTRACT

Industrial solid waste management has been accepted as a priority in many countries which are developing their environmental control systems. This research explains the purpose and objectives of the management and recycle sets it in the historical context of industrial waste management internationally. It explains the importance of developing a industrial waste management programme, and equally importantly, of doing so in a realistic manner, a step at a time. It also sets out the main issues which need to be addressed to improve industrial waste management in developing economies, and identifies some of the lessons which can be learned from the mistakes of developed countries as they made the same issue. Reduce, Reuse and Recycle includes information on solid waste source reduction, recycling, and composting and provides information on the wastes. Developed countries have now established industrial wastes management systems which, while not foolproof or problem-free, largely treat and dispose of the wastes in an environmentally sound manner. Waste minimisation measures are now in place in developed countries, but developing economies can learn from their mistakes and implement waste minimisation programmes at a much earlier stage. Across the country, many communities, businesses, and individuals have found creative ways to reduce and better manage industrial solid waste, through a coordinated mix of practices that includes source reduction, recycling (including composting), and disposal. The most environmentally sound management of industrial solid waste is achieved when these approaches are implemented in the preferred order of source reduction first, reusing and recycling second, and disposal in suitable landfills or waste combustors last. This research will entail a wealth of information on industrial solid waste, including the following: Basic Facts, providing an overview of industrial solid waste management and describes key facts about the industrial solid waste stream. The research will provide answers to questions the general public often asks about recycling and solid waste management programs. Recycling turns materials that would otherwise become waste into valuable resources and generates a host of environmental, financial, and social benefits. After collection, materials (e.g., glass, metal, plastics, and paper origin) are separated and sent to facilities that can process them into new products and materials

Keywords: Industry, Solid Waste, Management, Recycle, Reuse, Economy

002 REMOVAL OF HEAVY METAL FROM THE METAL FINISHING INDUSTRY WASTEWATER BY CHEMICAL PRECIPITATION

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ABSTRACT

In recent years with the increase in population, threatening the nature of human life contaminated with the increase in industrial activity it has reached such dimensions. These problems are due to the rapid industrialization and population growth began frequently to appear on the agenda. In particular, heavy metals leaked into the environment from industrial waste pollution are a very important pollutant that is treating wildlife. These pollutants, firstly from the plants through the soil and water, and then reaches through the food chain to animals and humans. Heavy metals pollution is very important, because they are resistant to biodegradation, and also turn into complex structures combine with other molecules such as proteins. Chromium (IV) is located in the most important heavy metals in waste water and chromium quickly transformed into stable structures, which leads to long-term contamination in the environment. There are many methods, including mainly chemical procedures in wastewater treatment plant metal coating industry. In this study, the chromium metal coating plant, aimed nickel and identification of factors affecting the chemical precipitation and precipitation wastewater contains heavy metals. Studies on the costs for all three metal of 99.9% recovery were obtained.

Key words: Heavy Metal, Wastewater, Metal Finishing Industry, Chemical Precipitation

003 CORE SEDIMENTS FROM THE PERTUSILLO FRESHWATER RESERVOIR (AGRI VALLEY, SOUTHERN ITALY)

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ABSTRACT

15 cores, up to 2 m long, were collected in May 2014 from Pertusillo Lake, to study the sedimentological, mineralogical and geochemical characteristics of sediments of this vulnerable freshwater reservoir, occurring within the largest onshore oil field in Italy (Agri Valley). Other human activities are located in its watershed: waste-water treatment plants, landfills, farms, plastic and other industrial activities. Pertusillo Lake provides drinking water to Puglia and Basilicata regions. The lithofacies variability of subaqueous lake sediments is the result of complex sedimentary processes, related both to the complex morphology of the elongated Pertusillo Lake, feeded longitudinally by the main Agri River and laterally by 7 minor tributaries, and to the strong seasonal fluctuations of water level. On the basis of sediment core analysis, two main different depositional areas were recognized in the Pertusillo reservoir. The northwestern proximal sector, strongly affected by dramatic water-level fluctuations with episodes of lake-floor emersion, shows prevalent coarse sediments sourced by the main Agri River, with sandy-pebbly beds separated by erosional surfaces and locally with pedogenic levels. The southeastern distal sector, constantly submerged, is characterized by muddy sediments with locally thin dark grey to black beds, presumably anoxic, that become more frequent towards the distal and deeper areas. Anoxic beds are quite common in lacustrine waters affected by eutrophication processes, like the Pertusillo ones, where oxygen depletion in the deeper layers of lakes occur, particularly in late summer. An ongoing geochemical study will provide other useful data on the nature of these beds.

Key works: sediment cores, sedimentary processes, freshwater reservoir, Pertusillo Lake, Agri Valley, Southern Italy

004 COMBINING SATELLITE, IN-SITU AND CLIMATOLOGY DATA FOR SNOW DEPTH ESTIMATION OVER HIGH-MOUNTAIN REGIONS

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ABSTRACT

The objective of this paper is to present a blended snow depth analysis method applied to high-mountain regions. The blended analysis is running operationally at NOAA within a system called Interactive Multi-Sensor Snow and Ice Mapping System (IMS), generating daily snow depth output over Northern Hemisphere at 4-km resolution. Snow depth obtained from satellite passive microwave measurements are blended with snow depth measured at ground stations using a 2-Dimensional Optimal Interpolation (2D-OI) method. Unique to the production is that the analyst-derived data (snow depth and associated confidence values) are also blended into the analysis consistent with the 2D-OI method. Pseudo-observations of snow depth are also blended to improve analysis over high-elevation terrain where in-situ stations are sparse and satellite-derived estimates are less reliable. These are computed from temporally smoothed snow depth-elevation analytical expressions fitted to historical in-situ snow depth reports. Example applications of the analysis over high-mountain regions in US and elsewhere will also be presented.

Key words: Satellite Remote Sensing, Snow Depth, High-Mountain Regions, Optimal Interpolation, Climatology

005 THIRTY YEARS SINCE CHERNOBYL: LEGACY AND LESSONS LEARNT

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ABSTRACT

The nuclear accident at the Chernobyl nuclear power plant in Ukraine, by then USSR yet, took place thirty years ago, in the night of April 26th, 1986. The RBMK-type reactor, water-cooled and graphite-moderated, was intrinsically unstable at low thermal power levels, and its main building had just radiation shielding capabilities, and any effective containment of a massive accidental radioactive release could not be performed. During that night, a scheduled experiment on the reactor was carried out without respecting many (actually, seven main ones) safety prescriptions. Eventually, this resulted in an uncontrolled power excursion in the reactor core, with fuel melting and Zr-water reactions releasing hydrogen. A series of chemical explosions took place, literally destroying the reactor building and setting the graphite moderator on open fire in contact with the outer atmosphere. A massive airborn release of radioactivity (mainly, I-131, Cs-137, Sr-90 and other fission products, Pu and other transuranics) resulted due to the accident, lasting for around one week. The fire brought some 50 MCi of fission products to the height of about 1500 m, and the wheather conditions that week took the radioactive plume westwards, to Northern and Central

Europe. Doses to population in a wide area around the plant were in excess to safety limits. Radioactive contaminants from Chernobyl were detected in most European countries. The paper aims at summarize, ing the last findings about the health and environmental impact of the accident, at the light of the actual and recent data, 30 years after the event. Lessons finally learnt from the Chernobyl accident are discussed too.

Key words: nuclear accident, nuclear power plant, Chernobyl, Ukraine, Legacy, Lessons Learnt.

006 ECOSYSTEMS AND NATURE MUSEUMS IN TURKEY

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ABSTRACT

The center of Biology and Nature Museums promote environmental education and best practices in conversation and also studies how ecosystems and species change either naturally or in connection with human activity World's biggest natural history museums are the Smithsonian National Museum of Natural History in Washington,D.C.,Natural History Museum in Helsinki, Museum of Biology in Stockholm and the others.The exhibited marine species could not receive the required care and attention in the natural history museums in Ankara,Izmir and consist of relatively small number of samples represented naturally or artificial materials in these museums. At the same time,we have four nature museums in Turkey located at Ege University, MTA Nature Museum, and to other nature museums. With this project it is aimed to resolve the gaps in understanding of the marine ecosystem and live organisms in our seas. The examples obtained by scientific field work and collected by fisherman from the Agean Sea, Marmara Sea, Mediterranean Sea, and the Black Sea as well as those donated are exhibited in the museum founded by our university. The exhibited objects contain 318 marine species,188 of which are vertabrate and 130 of which are invertabrate. In total 187 fish species of 90 families are exhibited and 164 of these species belong to osteichthyes while 23 to chondrichthyes. Besides, a sea turtle (*Caretta caretta*) is also exhibited in the museum.

Keywords: Sea museum, Marine species, Exhibition, Seas of Turkey

007 MODELLING OF SO_2 POLLUTION IN KARATAY DISTRICT OF KONYA WITH ARTIFICIAL NEURAL NETWORKS

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ABSTRACT

SO_2 is one of the mostly known air pollutants which cause serious effects on both humans and other livings. It is harmful for tissues and mucous membranes of the eyes, nose and throat because of the irritating odour and the upper part of respiratory system and bronchi. Moreover, it could be lethal for people who have some problems like asthma and lung failure. In addition, vegetation and animals are

affected negatively from SO_2 gas. According to exposure period, chronic injuries occur in the plants such as decrease in growth and yield, increase in senescence, and colour problems. When all problems caused by SO_2 are considered, understanding the future concentration of it is very significant. In this study SO_2 pollution in Karatay district which is one of the biggest towns of Konya located at the centre of city was tried to be predicted with artificial neural networks using meteorological factors and so other air pollution. Artificial neural networks use interconnected structures in order to make parallel computations. The working principle of human brain is used in artificial neural networks. As a data of second part of winter period of 2016 measurements of both pollutants such as O_3, NO_x, PM_{10} and meteorological factors such as wind speed, temperature, and humidity were used. Pollutants and meteorological factors are integrated to the model as input parameters and SO_2 concentration was predicted for five day and one day with comparison of method efficiency.

Keywords: Artificial neural network, modelling, air pollution, SO_2 meteorological factors

008 ENVIRONMENTAL EFFECTS OF URBAN SPRAWL IN KONYA CITY

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ABSTRACT

Urban sprawl is usage of land and transportation with different and disordered way. It has negative effects on social and economic and development of public and also environment. It is a world-wide land use planning and management issue faced with many big cities. Konya is the biggest city in Turkey with surface area of 40,814 km^2. This amount covers 5% of total surface area of Turkey. Also, population of Konya is growing fast owing to the effect of developing industry with immigrations. One of the main reasons of urban sprawl in Konya city centre is uncontrolled and unplanned housing in order to provide demand of settlement. Moreover, because high-rise concrete buildings and small houses are at the same area, both landscape and historic fabric of the city is seen unpleasant. Especially at the centre districts of Konya and around Seydişehir ring road urban sprawl is seen mostly. There are also some environmental consequences of urban sprawl such as air pollution, infrastructure problems, increase in impervious areas and negative effects on ecology of green places of city. In this paper, urban sprawl in Konya city and environmental impacts of urban sprawl were assessed and possible solutions were offered.

Keywords: urban sprawl, Konya, environmental effects, pollution, air pollution

009 AQUATIC ENVIRONMENT OIL POLLUTION - DATA AND FACTS

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ABSTRACT

Certainly oil pollution is a threat for the natural balance of ecosystems. The pollution sources are very

different as well as their determinants. Depollution methods in case of oil pollution caused by tanker collisions are physical and chemical. This process induced by bacteria has a big disadvantage: biodegradation time is too long. The accidental oil spills affect biodiversity of aquatic and terrestrial ecosystems. The immediate consequences of oil pollution could be directly monitored using inventory of invertebrates. The test of the role played by ciliates in oil biodegradation process was made based on an interesting experiment performed on a small beach located in Constanta, Romania; The taxonomical aspects were completed by ecological aspects; the study is based on a complex geological analysis about the granulometry of beach sediments; the sands from Cazino Constanta beach are mainly represented by coarse and very coarse sand while gravels range from fine and very fine. During the experiment when performing the 48 hour control after adding the oil pollutant 13 ciliate forms were identified alive in the sand sample from Navodari station, their evolution being different.

Key words: oil pollution, biodegradation, ciliates

010 SOME DEMOGRAPHICAL AND ECOLOGICAL ASPECTS OF AGRI REGION WITH A SPECIAL FOCUS ON AGRI TOWN (TURKEY)

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ABSTRACT

Agri region is located in Anadolu province from Turkey, at an altitude of 1,632 m. Most of its population is of Kurd origin. The capital of the region is Agri town. The area in question has both natural ecosystems (Agri Mountain, Diyadin hot springs) and anthropogenically influenced ecosystems (the Murat River). The increase of the region population has a dynamic character being a result of both high birth rate and migration of the inhabitants from other regions of the country. Consequently, in 2007, there were 530,879 inhabitants, while seven years later, the population reached 549,435 inhabitants. In 2014, 30.91% of the mothers were between 25 and 29 years old. The distribution on age groups emphasizes that, in the same year, 13.30% of the population were represented by children aged between 0 and 4, while 24.57% were between 10 and 19 years old. In 2012, the urbanization rate of Agri town was of 52.95%; a possible explanation of this situation may be the gradual migration of the population in search of new job opportunities from the neighbouring rural areas. Thus, the town inhabitants' number gradually increased from 99,276 in 2009 to 112,339 in only five years. The distribution of the population on sex groups is relatively well-balanced, 52% men and 48% women (in 2014). Agri urban ecosystem may prove to be an interesting case study due to its rapid and dynamic evolution. There are numerous positive aspects if we refer to the investments made in education field (Ibrahim Cecen University, Cultural Centre, etc.), health system (the two regional hospitals, as well as numerous private clinics) or religion (the new mosque, which is almost finished). However, all these achievements are somehow diminished by the reduction of green spaces in favour of built surfaces, the lack of large parks and open spaces within residential areas, large amounts of domestic wastes improperly stored because of the lack of ecological education of most of the inhabitants, the pollution of the Murat River that crosses the town and of the air as the main heating source during the cold season is represented by fossil fuels. The present paper aims at analysing certain demographic and ecologic aspects of Agri region with a special focus on the town with the same name; it is the result of an intense documentation activity completed by field observations supported by suggestive original photographs.

Key words: Agri region, demography, urban ecosystem

011 EFFECTS OF HEAVY METALS ON BEAN PLANT

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ABSTRACT

In this study, the effect of heavy metals on the bean plants have been investigated. Heavy metals cause environmental pollution. Various drugs and fertilizers in agriculture, and in particular fields can lead to heavy metal dirty thereto. Heavy metal elements are essential nutrients for plants.. Normal concentrations of heavy metals serve as a cofactor necessary for the structure of proteins and enzymes that play an important role in plant growth and development. Heavy metals reach various vegetables mixed with various juices and thus these fruits and vegetables are exposed to heavy metals. Heavy metals, usually goes to the plant by mixing industrial waste waters. The studies show that more heavy metal accumulation in plant tissue changes the enzyme activity. In addition, it is reported recently that, the property of heavy metals in plants causes the degradation of hormone balance. In the studies, the existance of Pb, Cd, and Hg in high levels have significantly decreased the cytokine levels in bean seedlings. Heavy metals affect adversely the stability of the cell turgor and cell wall. Also, due to reduced stomatal movement and the leaf area, plant water regime is also affected. Heavy metals are generally accumulated more in plant roots. Skin contact during walking or running people can be seen in heavy metal accumulated soil so that these metals reach the human body through the respiratory tract and ingestion of vegetables grown. Heavy metals, particularly some enzyme activities including amylase activity and reducing the embryos sugar transport and prevents germination as a result of increasing the protease activity Conclusion: Heavy Metals on Bean Plant can be affected.

Key words: Bean Plant; Heavy Metals; Environmental.

012 NEW FINDINGS ON THE ANOMALOUS LAROSSA COLLOIDAL GROUND WATER GURGLING TO THE SURFACE OF THE AGRI VALLEY OIL FIELD (SOUTHERN ITALY

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ABSTRACT

On the basis of the concerns raised by findings from previous research, the study of the anomalous Cd. LaRossa waters of the Agri Valley (Basilicata, Southern Italy) continued, by realizing new physico-chemical analyses and by summarizing new scientific information. LaRossa colloidal waters suddenly appeared in 2011 on a bucolic farm field of the Agri Valley oil field, 2.3 km far from the Costa Molina 2 injection well, were an oil company several years ago had begun pumping oil produced waters at a depth of about 3500 m. The new observations and analyses: 1) confirm the anomalies of LaRossa waters, contaminated by chemicals typical of oil produced waters, 2) show the occurrence of mixing of spring water with colloidal anoxic ground water, 3) document the diffusion of contamination to the adjacent areas and springs. The Istituto Nazionale di Geofisica e Vulcanologia produced a scientific report in 2014,

documenting the occurrence of two faults in the area of Costa Molina 2 well. This geologic setting is favourable to the diffusion in the ground and to the upwards migration of oil produced waters eventually leaked from the injection well. In addition ARPAB in 2015 documented the contamination of ground water by oil produced waters in the area where they are transported by a pipeline from the COVA treatment plant to the injection well. In particular filming amines were found in ground water: they are used by the oil company as additives to inhibit corrosion and as tracers of the oil produced waters.

Key words: findings, the anomalous larossa colloidal, ground water, gurgling to the surface, the agri valley oil field, southern Italy;

013 IMPORTANCE OF *LILIUM CANDIDUM* (WHITE LILY) GROWTH IN ECOLOGICAL CONDITIONS OF TURKEY AS A POTENTIAL FOR LANDSCAPE AND FOOD SECTOR IN TOKAT

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ABSTRACT

Because of their flowers, leaves, scent, texture ornamental garden plants are very popular among people who live in urban and rural areas. Most commonly, they are grown for the display of their aesthetic features. Bulbous plants (*i.e.* Geophytes) are the best example for this purpose. Even in history there is a certain era in Ottoman Empire can be said to have begun to orient itself towards Western Civilization is called “Tulip Period” or “Tulip Era”. Bulbous plants have a significant place in history. *Lilium candidum* is a perennial, ostentatious and approximately one meter high, pleasant-smelling bulbous ornamental garden plant. It is an important mark in the culture of Tokat city. This bulbous plant has a very strong place both in cuisine and in home gardens of Tokat. This precious plant began to disappear because of increase of industrialization causing pollution and loss of planting areas due to the demand for new residential areas caused by increasing population. In this study, cultural and landscape values of *Lilium candidum* is analysed by SWOT analysis methodology. The aim of study is to emphasize the importance of *Lilium candidum* in many fields such as agriculture, chemistry, nutrient (food), landscape and increase the usage of this plant in these sectors.

Key Words: Tokat, White Lily, bulbous plants, cultural landscape.

014 THE EFFECT OF USAGE FOR RECOVERING ENERGY FROM WASTE TO THE GREENHOUSE GASES

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ABSTRACT

The problem caused by the usage of storage and incineration methods for disposal of waste is one of today's most important environmental problems. The usage of waste as alternative fuels or raw material in the cement industry reduces the consumption of nonrenewable energy resources and prevents the rapid depletion of natural resources. Co-processing of waste with raw materials in cement industry is an opportunity to reduce the carbon dioxide emissions. In cement industry, cement clinker kiln with a long wait period and an oxidation atmosphere at high temperature provides complete combustion of waste. On the other hand, the usage of alternative energy resources has a positive impact on reducing dependency of fossil fuels and emissions. Co-processing of waste reduces carbon dioxide emissions resulting from the use of fossil fuels during production in cement industry as well as prevents carbon dioxide emissions caused by incineration of waste in waste incineration plants except for the cement industry. With the usage of waste instead of fossil fuels in cement industry, nonrenewable energy resources in the world can be evaluated economically, waste disposal can be carried out and carbon dioxide emissions caused by a possible waste incinerator can be prevented. The aim of this paper is thus to reveal the effect of usage for recovering energy from waste to the greenhouse gases.

Keywords: Cement Industry, Waste, Carbon Dioxide Emissions, Energy Recovery

015 RENEWABLE ENERGY BASED MICROGRIDS FOR SUSTAINABLE ENERGY DEVELOPMENT IN THE WESTERN BALKANS

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ABSTRACT

Distributed Generation based on Renewable Energy Sources and Microgrid based Electrification offer unprecedented solutions to energy problems. Developing countries in Latin America (LA), South Asia and Sub-Saharan Africa (SSA) investigate these technologies for increasing their rural electrification with smaller investments. Renewable Energy is a distributed source and it tackles issues related to isolated communities and insufficient electrical infrastructure. On the other hand, developed countries such as high-income EU countries have an interest in these technologies for meeting their carbon emission reduction targets stated in Kyoto Protocol or EU 2020 Targets. Green electricity generation offers great potential for meeting the developed world's energy thirst with less greenhouse gas emissions. Western Balkans sit in a very special place in energy-investment-carbon reduction trilemma. While their GDPs mostly float around with developing countries (such as LA and SSA) they have much better infrastructure and higher electrification rates. On the other hand, their systems are based on old technology which has very high COx emissions. None of the WB countries have oil and all of them import energy. Some of them are EU candidates which necessitate them to reduce their emissions and move to a clean and sustainable energy sector. However, WB countries do not have large budgets as most of EU countries but they have promising RE potential which constitutes a solution for this dead-lock. While developed countries are looking for ways of retro-fitting Renewable Energy based generation to their existing system, WB countries can leap-frog and design their expansion on these clean alternatives. This research focuses on Renewable Energy based Microgrids and their use in WB countries for a transition to low-carbon energy sector with small investments. The countries renewable energy potentials and their investment costs are investigated. Finally, possible investment and energy transition roadmaps are discussed.

Key words: Sustainable Development; Off-grid electrification; Leap-frogging in Energy Systems; Energy Independence; Novel Electrical Systems;

016 THE ECOLOGICAL STATUS OF NATURAL ELEMENTS IN SOME PROTECTED AREAS

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ABSTRACT

The object of the research includes some state protected areas, located in the North of the Republic of Moldova, in the Dniester river basin. The studies are based on field research. It is assessed the general ecologic condition and determined the sources and the level of pollution of the environmental components. There were also highlighted the specific elements of protection categories. The natural ecosystems were evaluated in the main phenological development phases of vegetation and animal world, the rare species were registered and their abundance was described. On the basis on the obtained results, it was stated that the local and transboundary sources of pollution don't have a significant impact on the researched objects. The investigated areas contain a rich diversity of plant and animal species and serve as a favorable habitat for 16 rare species protected at national, regional and international level.

Keywords: Natural protected areas, local and transboundary impact, heavy metals, biological diversity, rare species, abundance, habitats.

017 FAVORABLE ECOSYSTEMS FOR BIODIVERSITY CONSERVATION

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ABSTRACT

The paper includes the results of the researches on the ecological condition and biological diversity of the representative forest ecosystems Stanca and Humaria, located in the Dniester River Basin. An emphasis has been placed on the biological diversity, the distribution range of flora and fauna, the endangered status in accordance with the IUCN classification and protection status in accordance with the annexes of International Environmental Conventions. The examination of flora and fauna was made seasonally and in their different phenological development phases. The species' systematic origin was established with the help of field reference books and specialized microscopes such as Micmed-5 and MBS-10. The valuable biodiversity of the researched forest ecosystems records species of plants and animals that are protected by both national and international laws. Based on the investigations, new habitats for a number of rare species were observed, and it is suggested that the studied forest ecosystems to be taken under state protection.

Keywords: Forest ecosystems, biological diversity, valuable species, flora and fauna conservation, protected areas.

018 DETERMINATION OF NATURAL RADIOACTIVITY IN CEMENTS AND RAW MATERIALS

IN KOSOVO

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ABSTRACT

In this study, we present the results of the first survey on the determination of natural radioactivity in raw materials and cements. Seven different raw materials, including industrial residues, clinker and three different cement types are investigated by 53 samples. The activity concentrations of ^{40}K, ^{226}Ra and ^{232}Th are determined by using gamma-ray spectrometry method with HPGe detectors. The activity concentrations of ^{40}K in raw materials are found to vary from <6 Bq/kg (limestone) to 133±9 Bq/kg (marl), while ^{226}Ra activity concentration is reported from <2 Bq/kg (limestone) to 105±6 Bq/kg (opalite) and as for ^{232}Th is found to vary from <2 Bq/kg (limestone) to 65±5 Bq/kg (opalite). The mean activity concentration in clinker is found to be 189±15 Bq/kg for ^{40}K, 21±2 Bq/kg for ^{226}Ra and 26±3 Bq/kg for ^{232}Th. The activity concentrations of ^{40}K, ^{226}Ra and ^{232}Th are found to be comparable with those in the clinker. These results are used to assess the radiological hazard due to the use of cements as building material. The absorbed dose rates in indoor air vary from 69±6 to 89±5 nGy/h and the corresponding average annual effective dose equivalent vary from 0.34±0.03 to 0.44±0.03 mSv/y. These results are also confirmed by evaluating the activity concentration indices (ACI), which varied from 0.29 to 0.37 (<1), indicating that the annual effective dose criterion of less than of 1 mSv/y. Therefore, the authors can exclude any restriction of the use of cements as building material.

Key words: determination, natural radioactivity, raw materials, cements

019 DETERMINATION OF NATURALLY OCCURING RADIOACTIVE MATERIALS (NORMs) IN Pb-Zn INDUSTRY IN KOSOVO

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ABSTRACT

In this study, we present the preliminary results on the identification of Naturally Occurring Radioactive

Materials (NORMs) in minerals, products, and residue streams coming from Pb-Zn industry in Kosovo. The activity concentrations of ^{40}K, ^{226}Ra and ^{232}Th in 10 samples are determined by using gamma-ray spectrometry method with HPGe detectors. The activity concentration of ^{40}K, ^{226}Ra and ^{232}Th in minerals is found to be 123±9 Bq/kg, 9±1 Bq/kg and 6±1 Bq/kg respectively. In general, we observe and depletion of radionuclides in the Pb and Zn concentrate (half-product). On the other hand a relative increase of the activity concentration of ^{40}K, ^{226}Ra and ^{232}Th was recorded in tailings, respectively 202±12 Bq/kg, 18±2 Bq/kg, 5±1 Bq/kg for Artana tailings and 342±20 Bq/kg, 17±1 Bq/kg, 15±1 Bq/kg for Kishnica tailings. However, according to the Council Directive No. 2013/59/EURATOM, the NORM concentrations in residues from the floatation stream process are much lower than the exemption reference levels for ^{238}U, ^{232}Th and ^{40}K, respectively 1 kBq/kg, 1 kBq/kg and 10 kBq/kg. Therefore, these residues do not pose any radiological hazard due to their management and further disposal. Regarding the radiological hazard, these residues are studied for the possibility of recycling them as building materials and further investigations of the physical-mechanical and chemical properties need to be undertaken.

Key words: identification, Naturally Occurring Radioactive Materials (NORMs), minerals, products

020 LARGE-SCALE SNOW DEPTH – ELEVATION RELATIONSHIPS OF MAJOR MOUNTAIN REGIONS

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ABSTRACT

The objective of this paper is to present statistical analysis results on the large-scale dependency of snow depth on elevation over major high mountain regions. Routine in-situ measurements of snow depth are concentrated in low-elevation sites. Satellite remote sensing data on the other hand are available but they are considered inaccurate over mountainous terrain. Canadian Meteorological Centre (CMC) daily snow depth analysis data over the Northern Hemisphere at 24 km resolution are available from 1998 to 2015. Snow depth is estimated using optimal interpolation of in-situ measurements and a snow model driven by analyzed precipitation and temperature. To derive snow depth-elevation relationships, CMC monthly snow depth data were used and matched to elevation at the same resolution, the latter obtained from US Geological Survey (USGS). Of particular focus were the mountain regions over Continental US, Alaska, The European Alps and Himalayas.

Key words: Snow Depth, High-Mountain Regions, Optimal Interpolation, Climatology

022 UNKWON FEVER AS A CHALLANGE FOR PHYSICIANS

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ABSTRACT

Children frequently present with fever at the emergency department. They pose a diagnostic challenge, since fever may be a symptom of either life-threatening diseases like septicemia, meningitis or other serious bacterial infections, but more often it is a symptom of self-limiting viral diseases. A review of the literature for evidence of best practices regarding the diagnosis of fever of unknown origin. To deal with increasing number of patients visiting the emergency department in out-office hours, we need discriminators for absence and presence of serious conditions, to triage patients at presentation. The inability to identify the cause of the fever can undermine the physician's credibility and can affect rapport with patients. The longer the fever persists, the more concern is raised by the parents. This discussion focuses on these prolonged fevers and their evaluation. To successfully proceed in diagnostic research of children suspected of serious infections, several issues need to be addressed. What is the most important outcome to focus diagnostic research in children with fever on? How to improve generalisability of research observations to broader settings? Can we decide on acceptable thresholds of risk in febrile children at which clinicians should be expected to take further action? What should be the content of safety-netting to avoid missed diagnoses? In the presentation these questions will be discussed in the perspective of current literature.

Key words: children, fever, origin, unknown, challenge

023 THE IMPACTS OF METEOROLOGY ON FINE AND COARSE PARTICULATE MATTER LEVELS OVER GIRESUN, TURKEY

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ABSTRACT

Particulate matter (PM) is recently one of the most harmfull pollutants in urban region because of known adverse impacts on human health. The severity of the health impact is related in particle size since fine PM can penetrate deeply into respiratory system. Epidemiological studies have presented an association between exposure to elevated PM10 and PM2.5 levels concentrations and increased mortality and morbidity. PM can be directly released from different sources, both natural and anthropogenic, or occurred by atmospheric reactions, leading to a complex mixture of solid particles and liquid droplets with different size and chemical composition. Coarse PM is mainly created by natural and anthropogenic mechanical processes and comprise largely of crustal species, sea spray, and biogenic organic particles. Fine particles arise predominantly from combustion processes within the atmosphere, the major components being elemental and organic carbon, ammonium sulphate, and nitrate, as well as certain transition metals. Meteorology is a major factor in outside PM levels since dispersion processes, removal mechanisms, and chemical formation of atmospheric particles depend on parameters such as wind speed, rainfall.In this study was aimed, daily mass concentrations of PM2.5 and PM10 were measured along with meteorological parameters from January 2014 to January 2016 in Giresun, situated Blacksea coast of Turkey. PM data were analyzed to understand frequency distribution of their concentrations and impact of meteorological parameters on distribution of particulate matter levels on time scales. In addition to, the contribution of road traffic to the levels of fine PM2.5 and coarse PM10 particles was examined by correlating PM concentrations with NO2. It was evaluated also impacts of other pollutants such as SO2, O3, CO on PM levels.

Key words: air pollutants, fine particulates, coarse particulates, meteorology, statistical analyses

024 THE IMPORTANCE OF PLANTING DESIGN IN SCHOOL GARDENS AND RECOMMENDATIONS FOR THE CASE OF TOKAT PROVINCE IN TURKEY

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ABSTRACT

Children spend a large part of their daily lives at school. The school garden where they spend their time during short breaks within this time period is not only a learning area, but it must also be a habitat, that is, a place for moving, playing games, recreation, social learning (communication corners, meeting points) and exploring the nature. Therefore, school and school garden are each spaces and tools for children and their healthy development. Plants, as well as equipment elements, have an important place in a well-designed school garden. This study was carried out in the state schools of Tokat province. The outdoor foliage plants used in 33 primary and secondary schools and 17 high schools of the Directorate of National Education in Tokat province were determined through field observations, and the usage, intensity, and purpose of the plants were investigated based on their landscape features. As a result of this research, the appropriateness of planting work in the school gardens was determined, and planting design proposals relating to the use of foliage plants suitable for growing in Tokat ecological conditions were presented so as to eliminate the identified shortcomings. It was also observed as a result of investigations that the planting design in the gardens of some primary schools and high schools with a historical background in the city center (such as Gaziosmanpaşa High School and Tokat İmam Hatip High School) may be appropriate with the influence of time factor, however that planting design was not given enough importance in newly built schools.

Key words: School garden, design, outdoor foliage plants

025 ANASTOMOTIC LEAKAGE: A MAJOR COMPLICATION OF RECTAL CANCER SURGERY

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ABSTRACT

Anastomotic leakage is a major complication of rectal cancer surgery. We present our modest experience in upper and lower anterior rectal resection. The aim of this study was to investigate risk factors associated with symptomatic anastomotic leakage after total mesolectal excision (TME). This is a retrospective study. Between 2005 and 20015, patients with operable rectal cancer were randomized to receive short-term TME

followed by radiotherapy or to undergo TME alone. 13 patients underwent an anterior resection and 3 patients underwent Miles intervention. Symptomatic anastomotic leakage occurred in 2 patients (12.5per cent). In all the patients underwent an anterior upper and lower rectal resection is executed direct anastomosis by hand or stapler. Pelvic drainage and the use of a de-functioning stoma were significantly associated with a lower anastomotic failure rate. A significant correlation between the absence of a stoma and anastomotic dehiscence was observed in both men and women, for both distal and proximal rectal tumors. In two patients with anastomotic failure and surgical re-intervention, the presence of pelvic drains and a covering stoma is executed. Placement of one or more pelvic drains after TME may limit the consequences of anastomotic failure. The clinical decision to construct a provisory stoma is supported by us.

Key words: anastomotic leakage, cancer surgery, rectum

028 USAGE OF FORAGE PLANTS TO PREVENT EROSION

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ABSTRACT

Today, soil erosion is considered as a natural disaster that affects direct or indirect many countries. It isn't thought merely soil loss. Along with soil loss, nutrients, organic matter of soil and wildlife disappear, at the same time it is observed that increasing the global warming and flooding. Besides these events don't only influence negatively the ecosystem but also it affects human life. Because 95% of food stuffs is provided from soil. In the face of disaster many techniques are used in all around the world and unfortunately these techniques are inadequate. This review reveals that what is the size of erosion in world and importance of using as a method of the forage plants on erosion control comparison of other method. It is known as true that there is inverse proportion between rates of plant cover and erosion intensity. The advantages of forage plants are cheaper and easy implementing, results of applications can be seen in short time as per other methods. Thanks to forage plants can grow in conditions of extreme soil and climate, they are unique plants for erosion control. Therefore, these plants can be easily used primary erosion areas, fallow lands and as second product to be summer and winter output in agriculture lands. Additionally, they develop structure of chemical and physical of soil and capacity of water hold is increased. On the other hands forage plants constitute basis of livestock sector. If we develop using the forage plants for erosion control also feeds of animal and vegetal will be increased.

Key words: Soil Loss, Erosion, Forage Plants.

029 EVALUATION OF PRIMARY OPEN–ANGLE GLAUCOMA IN A TERTIARY HOSPITAL

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ABSTRACT

Glaucoma is an optic neuropathy with characteristic optic disc changes and visual field defect. Primary open angle glaucoma (POAG) is the most common type of glaucoma. The aim of this study was to report the frequency of POAG in patients attending the glaucoma clinic of the University Hospital, Centre "Mother Theresa" in Tirana, Albania. Consecutive new glaucoma patients who presented over a 1-year period between January and December 2014 were evaluated. Each patient had a complete ophthalmic evaluation, including intraocular pressure (IOP), visual acuity, visual field, optic disc assessment and gonioscopy. A total of 84 patients (168 eyes) presented with glaucoma (mean age was 59.4 ± 15.6, 62% male) during this period. The mean presenting IOP was 25 ± 11.2 mmHg and 50% of the eyes evaluated had severe glaucoma (MD > −12.5dB, cup to disc ratio of ≥0.94). POAG was the most common form (59%), glaucoma suspects were 55 (21%), 66 (9%) patients had normal tension glaucoma (NTG), 28 (7%) patients had primary angle closure glaucoma (PACG), and 15 (4%) patients had secondary glaucoma. POAG is the most common form of glaucoma seen in the glaucoma sub-specialty clinic. A large proportion of the patients had advanced disease at presentation and the higher their presenting IOP the poorer their visual acuity.

Key words: primary open angle glaucoma, types, severity

030 ABILITY OF OPTICAL COHERENCE TOMOGRAPHY FOR EARLY DETECTION OF GLAUCOMA

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ABSTRACT

Glaucoma represents a wide range of eye diseases that have in common an optic neuropathy characterized by specific morphological changes, papillary and retinal fiber layer and characteristic visual field changes. The aim of the study was to assess of the efficacy of imaging methods OCT in early glaucoma diagnosis and prevention of ocular pathologies. This is a prospective study in which they are evaluated 141 eyes of 111 patients who were diagnosed with primary open-angle glaucoma after the specialist ophthalmologic visit, at the "Eye Clinic Italiana" in Tirana, Health Center No. 3 and UHC "Mother Teresa" conducted during 2011-2014. Patients with POAG were compared with a group of normal individuals, matched by sex and age and were examined with imaging methods OCT and HRT II. The mean age of patients was 60.1 (± 12.8) years of age with a range from 40 to 89 years predominantly males (71%). Average RNFL thickness in patients with POAG is 67.69 ± 8.33 compared with normal subjects (99.42 ± 10.15). Peripapilary average of retinal nerve fiber layer (RNFL) thickness, assess by OCT was reduced from 33% in eyes with glaucoma group as compared to normal subjects. Sensitivitety of OCT method was (88%) and specificitetywas (74%%). OCT is a modern non-invasive method in the diagnosis of various eye pathologies.

Key words: glaucoma, optic neuritis, OCT, RNLF

031 INHIBITION OF EAAT1 BY THE AMPK ENZYME PROTEIN

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ABSTRACT

The glutamate transporter EAAT1 (SLC1A3) is expressed in the plasma membrane of neurons. It contribute to the cellular uptake of glutamate and aspartate and thus to remove the excitatory transmitters from the extracellular space. EAAT1 acts as a homotrimer that mediates the transport of glutamate and aspartate with the cotransport of three Na^+ and one H^+ cations and counter transport of one K+ cation. This simporter provides the transport of glutamate into neurons against a concentration gradient. During several conditions, including ischemia, extracellular accumulation of glutamate may trigger excitotoxicity. Energy depletion causes the activation of the AMP-activated protein kinase (AMPK), a kinase increasing energy production and limiting energy expenditure. The present study thus explored the possibility that AMPK regulates EAAT1 carrier. To this end, EAAT1 was expressed in Xenopus oocytes with or without wild type AMPK and electrogenic glutamate transport was determined by two electrode voltage clamp (TEVC) setup. Co-expression of wild-type AMPK (AMPKα1 + AMPKβ1 + AMPKγ1) significantly decreased the glutamate maximal current $I(_g)$ in EAAT1-expressing oocytes, thus, showing that the AMPK is a powerful regulator of EAAT1 and therefore involved in EAAT1-dependent functions. The observations show that AMPK inhibits the Na^+-coupled glutamate transport.

Key words: AMPK; EAAT1; brain; energy depletion; excitotoxicity; hypoxia, ischemia.

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032 DOWNREGULATION OF THE GLUTAMATE TRANSPORTER EAAT2 BY AMPK ENZYME

INHIBITION OF EAAT1 BY THE AMPK ENZYME PROTEIN

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ABSTRACT

The glutamate transporter EAAT2 (*SLC1A2*) is expressed in the plasma membrane of neurons. EAAT2 is a Na^+ coupled carrier responsible in clearing excitatory transmiters, amino acids glutamate and aspartate, from the synaptic cleft and thus participating in the regulation of neuronal excitability. EAAT2 mediates the transport of glutamate and aspartate with the cotransport of three Na^+ and one H^+ cations and counter transport of one K^+ cation. This simporter provides the transport of glutamate into neurons against a concentration gradient. During several conditions, such us hypoxia and ischemia, extracellular accumulation of glutamate may trigger excitotoxicity. Energy depletion leads to the activation of the AMP-activated protein kinase (AMPK), a kinase that sense and regulates the cellular metabolic state through increasing energy production and limiting energy expenditure. The present study explored the effect of AMPK on the excitatory glutamate transporters EAAT2 and accordingly participating in the regulation of neuronal excitability. To this end, EAAT2 was expressed in *Xenopus* oocytes without or with additional wild-type AMPK and electrogenic glutamate transport was determined by two electrode voltage clamp (TEVC) setup. Co-expression of wild-type AMPK (AMPKα1 + AMPKβ1 + AMPKγ1) significantly enhanced the glutamate maximal current $I_{(g)}$ in EAAT2-expressing oocytes, thus, showing that the AMPK is an important regulator of EAAT2 and thus involved in EAAT2-mediated actions. The observations have shown AMPK decreases the Na^+-coupled glutamate transport by EAAT2.

Key words: EAAT2; AMPK; brain; energy depletion; excitotoxicity; ischemia; hypoxia.

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033 THE INVENTION BELONGS TO THE FIELD OF TRADITIONAL MEDICINE, ESPECIALLY RELATED TO A COMPOUND OF PLANTS FOR TREATMENT OF EXTERNAL AND INTERNAL HEMORRHOIDS

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ABSTRACT

During the study phase, attributes of the plants mentioned below have been studied from various literature explaining their effect on our organism. On the other hand studying the ailment from various literature, on how and why it is caused. Following, is the order of plants used for the medication: *1) Achillea Milllefolium; 2) Aesculus Hippocastanum; 3) Querkus Petraea; 4) Ulmus Campestris; 5) Corylus Avellana; 6) Cupressus Sempervires; 7) Alchemilla Vulgaris; 8) Capsella Bursa Pastoris; 9) Linum Usitatissimum; 10) Rubus Fruticosus; 11) Sempervivum Tectorum; 12) Sambucus Nigra.* It has been tested clinically, with 100 percent success on patients suffering various forms of hemorrhoids - including cases recommended for surgery. Utilization is convenient, it has no side effects whatsoever, and it has had positive healing impact on both external and internal hemorrhoids.

Key words: traditional medicine, plants, internal hemorrhoids

035 THE IMPLEMENTATION OF EUROPEAN UNION ELECTRICAL AND ELECTRONIC WASTE LEGISLATION AND STANDARDS IN MACEDONIA

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ABSTRACT

Development of technologies produces increasing of electrical and electronic equipment and amount of generation of its waste. Electrical and electronic waste sector is one of the fastest rising sectors in waste area. This waste is a very complex mixture of components which because of hazardous characteristics can produce environmental and health problems. It has caused an urgent need for reducing the hazardous substances in the electrical and electronic equipment. The European Union as one of the world environmental leaders has developed a comprehensive legislation that introduces a high level of standards on electrical and electronic waste management. Macedonia as a country with candidate status for membership of the EU has many obligations in this waste sector. Despite beginning the transfer of EU legislation the country has poor results. The level of recycling and recovery is very low. More than 90 % of the electronic and electrical waste is deposited on the landfills without any treatment. It produces the numerous of risks. Separate collection has not established yet. The current situation disables achievement of the targets from national legislation. In the future Macedonia has to make significant efforts to improve the electrical and electronic waste management. The main goal of this paper is to analyze the implementation of the EU electrical and electronic waste legislation and standards in Macedonia. Also the paper makes efforts to give some recommendations and to initiate further researching in this waste sector.

Key words: electrical and electronic waste, equipment, standard, legislation, equipment.

036 INHABITED CAVES IN KOSOVO

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ABSTRACT

Man and nature have coexisted, in harmony, from the prehistoric era, having always been considered as an integral part. The generations of humanity have lived by using caves as shelter places for their families and descendants. The culture and civilization of humanity has been guarded in caves. The caves are known as the "memories" to our planet. They tell the story and geomorphologic processes, in which our planet has passed through. Therefore, by saving and taking care of our caves, we preserve and commemorate the history and development of our planet. Unfortunately, man in the modern times, are destroying the natural heritages and precious treasury of the caves more than they used to in the ancient times. Every historical

period and geological science has its own importance and vitals, therefore, protecting, managing, and researching the caves, nowadays, is considered as a challenge for preserving the cultural heritage and our history of many generations. In Kosovo, there are a large number of inhabited caves, starting from the prehistoric times until the middle ages. The inhabited caves with archaeological and historical values are: the Radacit Cave (archaeological locality), Nekoci Cave, Black Cave (Karmakaz), Demes Cave, Kishnareka Cave, Zatriq Cave, Murgj Cave, Princesses Cave, Kallaba Cave, Bresalc Cave, Resuls Cave and Verbovc Cave, etc. Kosovo is considered as a country of many geo-diversities and a rare scientific, archaeological, historical, educational, and touristic value. Caves, as a natural heritage, in Kosovo, have been left on their own fate, without any specific special professional and institutional care. Besides the numerous values that these caves contain, they now constitute a significant sustainable development, which would be potential for tourism.

Keywords: Kosovo, caves, heritage, prehistoric, geologic

037 HYDROCHEMICAL AND WATER QUALITY OF UNDERGROUND WATER OF 2nd ORGANIZED INDUSTRIAL AREA IN KONYA CITY

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ABSTRACT

The study area is approximately 18 km from Konya. The oldest rocks in the study area are composed of Upper Miocene-Pliocene old formation of Dilekçi. On this formation, the Pleistocene old formation of Yılanlıkır lies with an angular unconformity, and the Late Pleistocene old formation of Konya lies on it with an unconformity. The formation of Konya is followed by Pleistocene- Current formation of Sakyatan, the formation of Göçü and the formation of Aslımyayla respectively. The Quaternary old formation of Karahöyük lies with an unconformity on the uppermost part. According to the results of the sieve analysis, the average grain diameter of the material constituting the formation of Karahöyük is (d_{10}) 0.10 – 1.2 mm, the average grain diameter is (d_{50}) 0.7 - 14 mm, and the gradation constant is between (S_0) 2.3 – 5.7 mm. According to these data, the gradation of the samples is very bad. Temperature of groundwater range of 16-18 ^oC, pH values are between 6.9 and 7.01, the electrical conductivity values range from 1893-3880 µS/cm. The water temperatures were measured using a glass thermometer. The pH of water was determined thought the use of Hanna mark (HI 93503), pH meter and the electrical conductivity (EC) was determined the use of type HI 9812-5 Hanna mark portable conductimeter. As a result of chemical analyses (June and October) of the samples taken from the wells located at the study area, the water samples were determined to be of the same origin according to the Schoeller diagrams. According to the Piper diagram, most of the waters at the study area are in the class of Ca+Mg> Na+K carbonated and sulphated waters at the 1st region. They also exist in the 5th, 6th, and the 9th regions. According to the Wilcox diagrams, while some of the waters are located at the region of "good-usable", the waters of Zade and Selva are located at the region of "suspicious-not available" in June, whereas the waters of Birlik Değirmen, Şifa Kimya and Medikal 2000 are located at the region of "not available". On the other hand, the waters belonging to Şifa kimya, Medikal 2000 and MPG Acar Hidrolik are located at the region of "not available" in October. According to the U.S.A Salinity Laboratory diagram, most of the waters are in the class of C3-S_1, C_4-S_1 and C_4-S_2, in other words the waters are extremely salty and they are the ones that must not be used for plants. It was determined that two of the analyzed wells (the ones taken from the points of Şifa Kimya and Medikal 2000) exceed the limit values given in the regulations in terms of analyzed pollutant parameters, whereas the other water samples taken from the other wells are generally below the limit values.

Key words: Konya, Schoeller diagram, groundwater, Formation,Hydrochemıstry

040 GENOTOXIC EFFECT OF FUNGICIDE EQUATION-PRO TO CHROMOSOMES IN BLOOD RED BLOOD CELL TO KARASHI I ARTE FISH (*CARASSIUS AURATUS*)

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ABSTRACT

Based on result we can indicate for the effect Equation-pro genotoxic fungicide, in the genetic material of fish which results in the appearance of micronucleus which arise as a result of damage to genetic material, these genetic damage are measured through counting the number of micronucleus at 2000 red blood cells for each fish. In our study are analyzed five groups of fish each group contain with 10 fish, 10 of them have been in controlled. Four groups of fish were treated with different concentrations of fungicidit Equation-pro and from (1,2, 3, 4, 5 ml/40 l water) for a period of 72 hours of aqurium fish first and second respectively, 7 days fish aquarium of the third and fourth and the control and involving the control too. For each fish are prepared 2 preparations and are analyzed 2000 erythrocytes (red blood cells are numbered 1000 for a preparation). From this study proved the high frequency of MN in peripheral blood erythrocytes to the Carassius auratus in comparison with the group of control fish. Based on our results we can conclude that Equation – Pro fungicide can cause chromosomal damage to the gold fish and depending on the duration, respectively time of exposure to fungicide, the longer it is time and dose number of MN is the biggest and conversely. Based on conducted research on the genotoxic fungicide effect equation-pro. Micronucleusi nduction in peripheral blood erythrocytes to *Carassius auratus* can draw the following conclusions: 1 High frequency of micronucleus in aquarium 1 (185.8 MN) (5 ml fungicide / 40 liter of water) to a significant degree (P <0.001), compared to aquarium 2 (155.4 MN) (4ml fungicide / 40 liter of water). 3. High frequency micronucleus in aquarium 2 (155.4 MN) (4 ml fungicide / 40 liter of water) in a significant degree (P <0.001), compared with aquarium 5 (control) (139.9 MN). 4. High frequency of micronucleus in aquarium 3 (200.7 MN) (3 ml fungicide / 40 liter of water) in a significant degree (P <0.001), compared with aquarium 1(185.8 MN) (5 ml fungicide / 40 liter of water). 7. High frequency of micronucleus in aquarium 4(225.4MN) (2 ml fungicide /40 liter of water) in a significant degree (P <0.001), compared with aquarium 1(185.8 MN) (5 ml fungicide / 40 liter of water).

Key words: genotoxic effect, fungicide equation-pro, fish (*Carassius Auratus*)

041 SOME DATA ABOUT THE DISEASE OF ANEMIA, IN THE GJILAN TOWN, KOSOVO: CASE STUDY

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ABSTRACT

Based on the results of the acquired may be noted that the population of Gjilan and the surrounding is affected by anemia, where the standard of Hb p.sh.sasia the noun is 135-174 g / l, while the residents of Gjilan men is 132.57 g / l while the standard value of Hb women is 120-160 g / l and the result obtained in Gjilan and the surrounding residents is 114.02 g / l. While the number of erythrocytes noun standard value is 4.2-5.8 * 1012, while the residents of Gjilan and the surrounding noun is 4.85 * 1012. Where these changes can be noticed even in the tables presented. The main causes of anemia presented to the people of different ages in Gjilan with the surroundings are: Poor diet, impurity as the cause of various infectious diseases, then air pollution by burning of various wastes, the addition of vehicles and especially the bombing different committed during the war, then the low level of civilization and many other factors.

Key words: data, anemia, Gjilan town, Kosovo

042 ASSESMENT OF MICROBIOLOGICAL AND PHYSICO-CHEMICAL PARAMETERS IN GJAKOVA WATERSHED

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ABSTRACT

Gjakova watershed - Lake "Radoniqi" is situated 14 km from the city of Gjakova and was build in year 1978. Water catchment area to fill the "Radoniqi" Lake is 120 Km2 and it lies at an altitude of 600-2500m, which is a clear indicator that the catchment area is far from settlements and sources of pollution. The main water supplier is river Lumbardh of Deqani with an average flow 5m3/s. This study was conducted over a period of one year from February 2015-February 2016. Water samples were taken twice a month in three locations: River Lumbardh, Derivative channel and in the Lake. Samples were analysed for microbiological parameters: total coliform bacteria, fecal coliform bacteria, aerobic mesophilic bacteria and streptococcus faecalis as indicator of water pollution and physico-chemical parameters such as: temperature, turbidity, ph, dissolved oxygen, chloride, ammonium, nitrites, nitrates etc. Enumeration of bacteria is made by membrane filtration method and by counting colonies on plates with RBA, M-Endo Agar less, PCA and BEA agar. According to preliminary results as it was expected, there is a high load of coliform bacteria in the river Lumbardh comparing with two other locations (Derivative channel and Lake "Radoniqi) due to increased rainfall and summer season.

Key words: Lake "Radoniqi", Coliform bacteria, physico-chemical parameters

043 MONITORING OF YEAST VITALITY IN THE FERMENTATION PROCESS OF WORT FOR BEER PRODUCTION

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ABSTRACT

The yeast performance, during the alcoholic fermentation, directly depends on its activity – a function of the vitality and the physiological state of the viable cells. In order to undertake corrective actions before the inoculation process, it is important to predict the yeast vitality. Yeast vitality is the life span of the vegetative cells and their ability to reproduce. The most used method is the selective staining of the cells and then the averaging of results obtained in over 10 microscopic plots. The most used stain colors are methylene blue or methylene violet, which penetrate the damaged membranes of dead cells becoming stained, unable to penetrate the impermeable membranes of viable cells which remain transparent. The accepted level of vitality is 80% of viable cells, meanwhile the second and the third generations, which are highly adaptive rather than the first generation, may reach a vitality level up to 90%. A vitality analysis was carried out for the bottom-fermentation yeast S. cerevisiae sp. carlsbengensis, during 2015 (January – December), considering the generation I up to generation IX. In the first three generations the average vitality was almost the same, 85%. There was a slight decline from the generation III to generation VII, 85% to 81%, and a sharp increase to generation VIII and IX, 87% and 86%, respectively. As a conclusion, there are different levels of vitality among the generations, but the difference is not significant, which means there isn't noted any important changes in the biotechnological abilities of the fermentation yeast strain.

Keywords: vitality, yeast, S. cerevisiae, fermentation

044 THE IMPORTANCE OF FORAGE CROPS FOR SUSTAINABLE AGRICULTURE

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ABSTRACT

In traditional agriculture, there are many harmful effects for environment in obtaining adequate and quality food production which is need for rapidly growing world population. Chemical fertilizers and pesticides that are used for resolving the lack of nutrients and improving the fertility in soil, bring important hazards with the time. This creates unfavorable condition for the concept of sustainable agriculture that on the basis of conserve the natural resources without damaging cycle of ecological agriculture. Forage crops which have an important role in conserving soil fertility, have the possibility of being a solution against the harmful effects caused by traditional agriculture. Forage crops that need to be emphasized more in the concept of sustainable agriculture, are cultivated in high rates in developed countries, despite it is not being sufficiently in our country. Furthermore rangelands decrease their fertility and quality because of excessive and untimely grazing for supplying quality roughage that is needed by animals. Erosion problem is increasing as a result of weak vegetation in rangelands and therefore our plant diversity is damaged.As a result of this review, it is emhasized that a remarkable improvement will be provided without doubt on behalf of sustainable agriculture, if we attach importance to product forage crops. Therefore, all the benefits and advantages of forage crops in the farming system must be explained to farmers practically and the production of forage crops must be encouraged and supported by government.

Key words: Forage crops, soil fertility, sustainable agriculture.

045 FIVE YEAR MONITORING OF BREEDING SUCCESS OF THE WHITE STORK (*CICONIA CICONIA* L.) IN ALBANIA

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ABSTRACT

The breeding success of the White Stork (*Ciconia ciconia*) was surveyed during the five years time 2011-2015 in the Southern region recognised as the only breeding place of the stork in Albania. Five breeding sites have been surveyed, of which four in Vurgu field (Delvine-Sarande) and one in Drinos valley (Gjirokaster).The number of breeding pairs (HPa) fluctuates between 3 and 4 (average 3.5), the number of pairs with fledging young (HPm) between 2 and 4 (average 3), while the breeding pair occupying a nest but without fledging young (HPo) has been recorded in the year 2011 (in Vrion), and 2013 (in Çaushi). In one case, year 2012, in Finiq a single nest visitor (HB1) was observed. The lowest number of breeding pairs with fledging young (HPm=2) was registered in year 2013, while the highest number of breeding pairs with fledging young (HPm=4) was registered in year 2014.The total number of fledged young per year in the surveyed area (JZG) fluctuates between 8 (year 2014) and 13 (year 2015), with an average of fledged young (JZm=JZG/HPm) per nesting pair of 3.63 (ranging from 1 to 5 fledging per nesting pair).Four out of five nests were located on worship buildings, such as church or monastery belfries in Çuka, Finiqi (graveyard), Vrioni and Çaushi, while the single nest in Drinos valley was built on the top of the high voltage power line, close to Viroi lake. The latter was occupied only once, in 2014, and the breeding pair could raise only one fledging. Monitoring of breeding success in the surveyed breeding area shows that the population of the white stork in southern Albania is stable. Based on the spatial distribution and the location of nests, it is concluded that human disturbance plays a major role in breeding site selection and behaviour of the white stork in the surveyed area. Killing of single adults and taking the adults from the nests have been recorded in Vurgu field during the surveyed period. A breeding pair taken from Vurgu field is being kept in captivity in Shkodra, in one of the resorts of the city suburb. Awareness raising campaigns combined with law enforcement and construction of artificial nesting platforms in safe locations may increase the breeding success of the white stork in the southern region of Albania. Designating the Vurgu field as Specially Protected Area (SPA) as part of Natura 2000 sites in Albania could be used as an important legal tool to safeguard the only breeding area of the white stork in Albania. Maintaining landscape composition and land-use practice in the agri-environment of Vurgu field is vital to the long-term breeding success of white stork in Albania.

Key words: White stork, monitoring breeding success, Southern Albania

046 CAVE ECOSYSTEMS OF TURKEY AND NORTHERN CYPRUS: A HİDDEN WORLD FOR BATS

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ABSTRACT

Cave ecosystems along with particularly its unique and fragile biota are very sensitive to degradation and destructions caused by human. Bats are one of the considerable components of the cave biota and classified as trogloxenes. Most of the bat species mainly prefer karstic caves for forming various clusters. Thirty-nine and 22 bat species are distributed in Turkey and Cyprus, respectively. Egyptian fruit bat, Greater and lesser mouse-eared bats, common Bent-wing bat, Kuhl's pipistrelle and Greater horseshoe bat are the most abundant species encountered in the field trips. Two major periods are mostly important for bat life cycle; gestation along with lactating periods that formed in spring and summer months and hibernation period in winter months. Besides, many invertebrate species adapted to living in the darkness are also detected from various caves in this study. Major threats to both caves and cave biota in Turkey and Cyprus are recorded as; use of cave enters as animal shelters, wastewater drainage and dump, marble quarrying, inappropriate guano mining, cave tourism, treasure hunting, cure for illness, dam construction and mushroom cultivation. Studies were initiated for the conservation of caves in both countries.

Key words: Cave ecosystems, fragile biota, degradation, conservation

047 GEOCHEMICAL BACKGROUND HEAVY METALS AND SPATIAL DISTRIBUTION OF STREAM SEDIMENTS IN DUKAGJINI BASIN

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ABSTRACT

Heavy metal concentrations of stream sediments from Dukagjini Basin was investigated to evaluate the geochemical distribution of selected elements. Dukagjini basin together with the Kosovo Basin represents the largest sedimentary basins in Kosovo. Tertiary basin of Dukagjin, with an area of 1700 km^2 is located in the western part of Kosovo. The soils in this basin are used mainly for agriculture. The aim of this paper is to determine threshold values using statistical methods that can explain their spatial distribution. Stream sediment geochemistry can be used to quantify natural geochemical baselines and anthropogenic effects. A total of 657 stream sediment samples were analyzed for arsenic (As), chromium (Cr), copper (Cu), mercury (Hg), manganese (Mn), nickel (Ni), lead (Pb) and zinc (Zn). The mean concentrations of heavy metals are in decreasing order as follows: Mn > Cr > Ni > Zn > Cu > Pb>As. Analysis of samples has shown no evidence of Hg content. The results show that the elements Cr and Ni exceed the threshold values according to the method Median and Median Absolute Deviation (Median+2MAD) for 130 respectively 123 samples. Spatial distribution for Cr and Ni reflect the elevated geochemical background of the wider area due to the presence of ophiolites therefore it may be considered their geogenic origin. This work is important to register the current levels of metals so that any change in concentration can be monitored and managed.

Key words: Dukagjini basin, stream sediment, heavy metals, statistical analysis, spatial distribution

050 STUDY OF SOME QUALITY PARAMETERS OF DIESEL IMPORTED IN ALBANIA FOR THE PERIOD 2008 – 2011

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ABSTRACT

The transport sector in Albania is dominated by diesel vehicles which account of about 85%. About 75% of the market needs for diesel fulfilled from imports and the rest from domestic production. In the period under study imports are dominated by Greece with 60%, followed by Romania with 24%. Fuel used associated with negative consequences on the growth of environmental pollution due to the discharge of the fuel combustion gases from vehicles especially in urban areas. This problem is overcome in developed countries, while in our country for various reasons is not fully resolved. The data ISSHP study shows that air pollution for some cities is significantly above the allowed quantities in the EU, e.g. in 2010 calculated a measure pollution at 200-300% of Tirana, Vlora, Fier, Durres, Shkodra and Korca. Legal measures taken in the EU to improve the quality of vehicle fuels have contributed to promoting the improvement of the National Standards for these products in our country. From analytical testing noted a clear improvement of quality indicators of diesel after the adoption of Decision 147, dated 21.03.2007. From the tests at Customs Laboratory results that the distribution of samples containing S <10 ppm for the year 2008 is 0% for 2009 is 36% and for 2011 is 92%. Also, observed improvements in other indicators. In this paper are study some analytical indicators of imported diesel obtained by laboratory testing, like sulphur content, density, viscosity, parameter of distillation, comparison of these with values defined in standards adopted; methods and standards used.

Keywords: diesel, standard, method, sulphur content, density, distillation.

051 INCIDENCE OF RASH AFTER ANTIBIOTICS TREATMENT IN CHILDREN WITH INFECTIOUS MONONUCLEOSIS

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ABSTRACT

The Epstein-Barr virus, a member of the herpes virus family, is known as the cause of Infectious Mononucleosis. Acute infection of EBV in childhood is usually asymptomatic, whereas it often presents as typical Infectious Mononucleosis symptoms such as fever, pharyngitis, cervical lymphadenopathy and hepatosplenomegaly. Antibiotics-induced rash in EBV acute infectious mononucleosis, especially the aminopenicillins-induced type, was first described during the 1960s, with a reported incidence of 80-100%. This phenomenon was not further investigated but is well-established in pediatric textbooks. We sought to establish the current incidence of rash associated with antibiotic treatment among children with AIM, so we conducted a retrospective study of all hospitalized children diagnosed as having AIM based upon positive Epstein-Barr virus serology in the Pediatric Infectious Disease Ward of the University Medical Center “Mother Teresa” Tirana during a 5 years period (2010-2014). 107 children aged 0-14 years diagnosed as having AIM and a positive serology for immunoglobulin M viral capsid antigens were enrolled in the study. Clinical and demographic parameters including age, gender, presenting symptoms, signs on physical examination, antibiotic treatment, and laboratory results were extracted from hospitalization records. A rash was attributed to antibiotic treatment if it developed after administration of the first dose and up to 48 hours after treatment ended. 16(15%) of cases developed rash during AIM,

13(12%) were associated with antibiotic treatment. 12 cases after amoxicillin treatment and 1 case after ampicillin treatment. The most effected age group was 0-5 years (69%), male gender was more effected 12(75%), fever accompanied all the cases, pharyngitis was present in 10(62%) cases, cervical lympadenopathy was present in 10(62%) cases, hepatosplenomegaly in 4(25%) cases, white blood cells level ranged 8700-36600, the median period of hospitalization was 6(2-11) days. It is generally accepted that viral infections enhance the risk of developing drug allergy. The concomitant use of antibiotics during acute faze of Infectious Mononucleosis increases the occurrence of skin eruptions, aminopenicillins rash in children is significantly lower than the 90% incidence rate reported in earlier studies.

Keywords: Infectious Mononucleosis, EB virus, rash, antibiotic, cervical lymphadenopathy

053 HYDROLOGICAL RISK DUE TO EXCAVATION OF THE TURIN-LYON HIGH-SPEED RAIL TUNNEL

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ABSTRACT

The construction of the High Speed Railway line (HSR) between Turin and Lyon, is designed to cross the Susa Valley (at the Italian-French border) and the Alps. The project includes the excavation of a 52-km long, double way tunnel. The Turin-Lyon HSR construction carries a number of environmental problems, highlighted by several past studies. Concerning the hydrological risks connected with the HSR tunnel construction, about 30 superficial water springs were identified by the HSR proponents along the old track version of the national segment rail line. Same situation verifies in the Municipalities impacted by the actual international segment project, where the number of water sources and creeks is quite high, with the further issue that several ones are utilized for drinkable water supply. Therefore, the excavation activities can drain or divert springs, leaving population without water, and sources can be polluted, becoming undrinkable and unusable. The first consequence has already happened in 2015 in some villages, close to the sample tunnel in Chiomonte. In the presence of very deep tunnel design, sampling surveys are not so easy because of the depth of some sites and because of the difficulty to reach the surface sampling sites located in the mountains. Just to mention an example related to the Susa Valley, during the activities for the construction of the "Pont Ventoux" hydroelectric power plant, a large number of high pressure water jets have been found, together with an underground lake of hundreds of thousand cubic meters. Moreover, the artificial lake of the Mont Cenis, a 333 million cubic meters water reservoir at 2000 meters of altitude, supplying power plants in France and in Italy, is located in the area. Interception of very high-pressure jets cannot be excluded a priori during excavations. The territory of Italy is small and over-populated. Water natural resources are limited and they should be preserved. We think that real progress means optimizing, increasing the efficiency and durability of already existing infrastructures. The HSR represents the exact opposite of this idea: wasting resources for no benefit.

Key words: hydrological risk, excavation, Turin-Lyon, high-speed, rail tunnel

056 THE INFLUENCE OF TUMOR VOLUME IN THE DOSE DISTRIBUTION DURING

TREATMENT OF BREAST CANCER

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ABSTRACT

The aim of this investigation is the study of dose distribution during treatment of breast cancer. The idea is the comparison of dose distributions of 6MV photon's energy with 15 MV photon's energy in the cases of mastectomy, when the breast is not present in the body and in cases when the breast is present. In these cases, the tumor volume (TV) is larger than in mastectomy cases. We have used Dose Volume Histogram (DVH) for analysis of dose distributions. The results were different. In the cases when the tumor volume was larger, the photons with energy 15MV have given better dose distribution, as long as in cases of smaller tumor volume, when the dose distribution was worst and viceversa. The conclusion is that, in cases of patients with mastectomy is better to use photon's energy of 6MV, because the tumor volume is smaller, and as a result the dose distribution is better and vice versa for photons with energy 15MV.

Key words: Dose distribution, mastectomy, breast, DVH, TV

058 THE CRITERIA FOR DIAGNOSIS OF BRUCELLOSIS IN THE MICROBIOLOGICAL LABORATORY, GJIROKASTRA ALBANIA

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ABSTRCT

The Brucella species most frequently pathogenic to humans are: Brucella melitensis (goats and sheep), Brucella abortus (cattle), Brucella canis (dogs), Brucella suis (swine). Members of the gender Brucella are gram-negative, have a coccobacillar form, aerobic, spore-forming, non-capsulated, intracellular, which measure 0.5-0.7 to 0.6-15 micrometers. The samples that are sent more frequently in the laboratory for the detection of Brucella are blood and bone marrow. The criteria for diagnosis of Brucellosis in the microbiological laboratory in Gjirokastra are: 1. The Gram staining of Brucella: Brucella is a small Gram-negative coccobacillus that can show a look at "fine sand". 2. The growth on chocolate agar: Brucella species grows on chocolate agar. The colonies are small, round, raised, white to cream colored and shiny. 3. The favoring of growth of Brucella abortus by the CO_2 Brucella abortus grows best in presence of 5-10% CO_2, while the other Brucella species don't. 4. Serological assay for Brucella. During a ten years period of our study, January 2002 – January 2012, there are suspected for Brucellosis 12246 samples and 22% of them are detected positives for Brucella's infection. The difference between Brucella abortus and other types of Brucellas was detected with the favoring of growth in the presence of 5-10% CO_2.

Key words: Brucella, Serologia, Coccobacillus, Colonies, Chocolate agar.

060 PREFERENCES FOR STREET CONFIGURATION AND STREET TREE PLANTING IN KOSOVO URBAN AREAS: CHALLENGES AND BENEFITS

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ABSTARCT

As a growing number of people live and work in cities, urban green space is likely to play an increasingly important role in promoting well-being. However, increasing building density means that space for ground-level urban vegetation is becoming rarer. Street trees are an integral element of urban life. They provide a vast range of benefits in residential and commercial areas and they support healthy communities by providing environmental, economic and social benefits. Green space in an urban environment promotes contact between community residents, encourages physical activity, reduces stress and stimulates social cohesion. Information on urban green structure (e.g., number of trees, species composition, and tree health) is essential to improve urban forest management and enhance the ecosystem services provided by trees and other vegetation. During the year period 2013-2014 the subjects of the research in our experimental field are five urban trees cultivars: Acer platonoides, Platanus orinetalis, Catalpa bignonoides, Tilia argentea, Prunus kanzan have been studied in Kosovo urban areas. In recent years in our country, increased the tendency for environmental, regulation with green plants, in parallel with the expansion of urban centers, large cities, new houses, schools, residential areas, etc. The area of Prishtina (572 km2, about 600.000 inhabitant) represents one of the largest Kosovo metropolitan areas. Parks and green space areas are less than 5% of total area. The five most common species in the urban forest were Tilia argentea (35 percent), Acer platonoides (9 percent), Platanus orientalis (8 percent), Catalpa bignonoides (8 percent) and Prunus kanzan (6 percent). Other species are about (21 percent). The studied urban trees species have an impact on urban landscape architecture, achieving the maximum aesthetic appearance, with beautiful colours (leaves) in urban environments.

Key words: Street trees, urban areas, benefits, green structure.

061 MICROBIOLOGICAL SAND QUALITY OF RECREATIONAL BEACHES OF VLORA BAY (ALBANIA) AND THE RELATIONSHIP WITH ADJACENT SEAWATER QUALITY

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ABSTRACT

The present study estimates microbial sand quality of four recreational beaches of Vlora Bay (Plazhi i Ri, Akademia e Marinës, Plazhi i Vjetër, Plazhi i Nartës) using as bioindicator faecal streptococci. Hundred twenty samples from dry sand, wet sand and the adjacent seawater were collected and analyzed monthly from January to October 2014. Referring to the results it was observed that faecal streptococci were detected in all sampling sites and environments (in dry sand, wet sand and seawater). Statistical analysis of these data demonstrated that Akademia e Marinës beach had the highest concentration of indicator bacteria. Also, environment had a significant effect on faecal streptococci concentration, which was statistically higher in wet sand. Faecal indicator concentration was about 2 to 27 times higher in dry sand than in seawater and 2 to 10 times higher in wet sand than in seawater. Correlation test indicated a significant correlation between dry sand and seawater ($r = 0.34$, $p < 0.05$), and between wet sand and seawater ($r = 0.35$, $p < 0.05$) but not between dry sand and wet sand.

Key words: Vlora Bay, faecal streptococci, wet sand, dry sand, seawater.

062 ECONOMIC EVALUATION AND PERSPECTIVES OF THE MAGNESITE MINE IN THE DEPOSIT "DUBOVC"

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ABSTRACT

The magnesite deposit “Dubovc” is located in the area of the village with the same name, about 10 km, in Southwest of Vushtrri in the north slopes of Çiçavice mountain. The deposit has been explored in the great mass with a relatively dense network of underground mining operations and drilling so today we can say that the exploration level of deposits is satisfactory. The deposit is represented by two great magnesite veins laying in the North west and South southeast direction, and according to the data of exploration operations it lays in the NE direction, except in the deeper parts dictated of surrounding rocks the vein will entirely change the angle and direction of dipping. The done studies in the period from the mining interruption until now has denied the opinion of some previous researchers of this deposit, that calculate only for main veins of the deposit “Dubovc”, the deposit contains 1,5 - 2 million tons of reserves. The general final calculated reserves for all deposit “Dubovc” are 964 949 tons, from which the North part 409 898 ton, and South part 555 051 ton magnesite. Also two extensions in dipping of main magnesite strings that are about 55 000 tons, have been added to this quantity of reserves. The comparison of percentage of some determinate categories of mineral reserves in the deposit “Dubovc”, leads to conclusion for a satisfactory level of the exploration of deposit and that it is a base for opening of mining operations of deposit.

Keywords: Deposit, magnesite, Dubovc, Reserves, explorations.

063 PHYSICO-MECHANICAL AND THERMAL PROPERTIES OF COMPOSITES BASED EPOXY-TUFF

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ABSTRACT

The use of newer materials to resolve various problems has resulted in the emergence of a polymer-based system. Polymer and their composites are increasingly employed because of their strength and low densities (Acharya and Mishra, 2007). Polymer composite materials combining polymers and filler have attracted researchers in the academic and industrial areas. Polymer composites have many using areas such as buildings, automotive, aerospace, and packing industries (Saba et al., 2014). Polymer composites are being increasingly used in industry because of their unique combination of mechanical, electrical, and thermal properties. Typically they have high specific strength and modulus, excellent fracture toughness and fatigue properties, good corrosion, thermal and electrical resistance properties (Cenna et al., 2000). Epoxy resins are widely used in different industrial sectors due to their good chemical and physical properties. However, their extensive applications are restricted due to high flammability properties. The flammability properties of epoxy resins can be improved by the additives and/or reactive approach (Unlu et al., 2014). Various fillers like different types of clay, metal powders, industrial waste materials such as fly ash, red mud etc. can be widely used as flame retardant and to increase mechanical properties with epoxy resins (Zhou et al., 2014; Rout and Satapathy, 2012). In this study, epoxy composite materials were prepared using tuff as a filler, polyethylene glycol (PEG) and hardener. Tensile, hardness, adhesion, water sorption, corrosion resistance, freezing tests and thermal analysis were carried out to determine composite material properties. The result of all analyses and tests was compared pure epoxy material.

Keyword: epoxy, tuff, composite

064 PROPERTIES OF PVC COMPOSITES INCLUDING KAOLIN AND CARBON BLACK

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ABSTRACT

Polymer-clay nanocomposites have attracted intense interest from academic and industrial researchers in the past decade. While many polymer-clay nanocomposites including polyamide-6, polystyrene, poly (methyl methacrylate) and polypropylene have been reported and little attention has been given to poly(vinyl chloride) (PVC) (Du et al, 2003). Clays which possess different structures and properties have utilized as filler in many application areas (Abdallah and Yilmazer, 2013). Within the last 15 to 20 years, an increasing number of research papers have dealt with thermoplastic/thermoset matrix composites containing natural fillers such as wood flour, hemp, sisal, jute, kenaf, almond husk and other natural fibers (Faruk et al., 2007 and Crespo et al., 2008). In this study, kaolin and carbon black have been used as filler to combine with PVC thermoplastic matrix. In order to identify the influence of filler amount and filler type on the properties of PVC composites, their some properties such as vicat softening point, density, hardness, weldability etc. were tested and compared with PVC material including calcium carbonate as standard filler.

Keyword: PVC, kaolin, carbon black, composite

065 THE EVALUATION OF KNOWLEDGE UPON ANTIBIOTIC RESISTANCE AMONG HEALTH STAFF

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ABSTRACT

Since their introduction into medicine in the 1940s, antibiotics have been central to modern healthcare. Their role has expanded from treating serious infections to preventing infections in surgical patients, protecting cancer patients and people with compromised immune systems, and promoting growth and preventing disease in livestock and other food animals. Antibiotic resistance is a direct result of antibiotic use. The greater the volume of antibiotics used, the greater the chances that antibiotic-resistant populations of bacteria will prevail in the contest for survival of the fittest at the bacterial level. The goal of this research was the evaluation of knowledge on antibiotic-resistance in medical staff on January 2016 in south-west Region of Albania. This cross-sectional study was conducted in January 2016 and was based on a survey done on 16 November 2015 during World Antibiotic Awareness Week 2015, following a study carried out in many countries of the world. We selected questions from the questionnaire done in several countries and the on line quiz done from the WHO web page. Participants included 328 individuals aged 25–60 years, from health institutions (doctors and nurses). Participants were from south-west area of Albania including rural and urban areas. Respondents provided demographic data along with statements on knowledge and attitudes towards antibiotic use and resistance. 328 health staff (239 nurses and 89 physicians, of which 32% males and 68% females) were asked for their knowledge on antibiotic resistance. 22% were from rural area and 78% were from the city. Only 26 nurses or 8% of the participants had completed the upper secondary education, the rest of 92% had completed university studies. Respondents demonstrated some misunderstanding around the terms 'bacteria' and 'virus.' About 63 % of participants agreed that antibiotics are effective against bacteria; however, 27 % also agreed that antibiotics are effective against viruses. They have very good knowledge of the way bacteria antibiotic-resistant spread to humans. Only 36% of them think that the resistance to antibiotics is actually out of control and the situation is getting worse. They can do nothing about that. 17% of them do not see resistance to antibiotics as a major global problem. 12% of them were not interested at all. The study findings demonstrate that respondents have several misconceptions and lack knowledge on antibiotic resistance. High proportions of nurses think they can do nothing to improve the situation and only experts can do something about that. Furthermore, the information should be utilized in future educational and antibiotic resistance awareness raising campaigns.

Key words: Antibiotics, antibiotic-resistance, doctors, nurses.

066 THE EFFECT OF WATER POLLUTION ON THE ACTIVITY OF SOME SERUM ENZYMES IN THE FISH C*yprinus carpio* FROM THREE LAKES OF KOSOVO

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ABSTRACT

The aim of this research was to evaluate the effect of water pollution on the activity of some enzymes of *Cyprinus carpio* fish caught in three different lakes of Kosovo: Batllava Lake, Radoniqi Lake and Vasileva Lake. In this research were used 56 fishes, in which were analyzed the activity of enzymes: aspartate amino-transferase (AST), alanine amino-transferase (ALT), lactic acid dehydrogenase (LDH) and alkaline phosphatase (ALP) in the blood serum. The enzyme activity is determined by the kinetic method, using ready reagents from ELITECH and modern equipment SCREEN PLUS. The research results shown a high significant increase ($P<0.01$ and $P<0.001$) in the activity of enzymes ALP (172.97 IU/L), LDH (1205.28 IU/L), AST (1048.72 IU/L) and ALT (72.79 IU/L) in the serum of fish caught in the Radoniqi Lake compared to fish from Batllava Lake ALP (54.82 IU/L), LDH (568.31 IU/L), AST (510.87 IU/L) and ALT (48.84 IU/L) and Vasileva Lake ALP (49.26 IU/L), LDH (377.04 IU/L), AST (572.33 IU/L) and ALT (32.88 IU/L). Significant differences ($P<0.05$ and $P<0.01$) in the activity of mentioned enzymes were also observed among fishes of Vasileva and Batllava Lake with a higher enzymatic activity of the fish from Batllava Lake. The results of this research showed a significant implication of water pollution in blood serum enzymatic parameters in fish *Cyprinus carpio*.

Key words: Fish, lake, enzyme activity, pollution

068 ENERGY AND ECONOMIC ANALYSİS OF A HYDROELECTRIC POWER PLANT: A CASE STUDY

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ABSTRACT

In this study, the electricity production and energy costs of hydroelectric power plant is analyzed by using an actual power plants data. Using long term actual data, the capacity utilization rates of the hydroelectric power plant were estimated on an hourly basis. Economic analysis of the power plant and factors affecting the energy production costs (initial investment cost, operating-maintenance costs, etc.) were researched and the energy production costs of the power plant were assessed in detail. Additionally for the first time in this study, a dimensionless number was defined to denote the variation of electricity consumption in the country on an hourly, monthly and yearly basis. This number was called the 'hourly electricity consumption coefficient (HECC)'. Detailed investigation of the electricity consumption in Turkey was analyzed.

Key words: electricity production, hydroelectric power plant, energy analysis, economic analysis

070 WATER VAPOR DIFFUSION AND CONDENSATION CONTROL IN MASONRY WALLS IN ALBANIA

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ABSTRACT

In the last 50 years (1961-2011) the number of residential buildings in Albania has increased by 8 times, while the number of dwellings has increased by almost 4 times. The increase of the required comfort inside the apartments, except for the well known problem of low energitic performance, appears to show a problem in connection with condensation of water vapor in the outside contruction walls. The aim of this study is to evaluate the structures used in Albania regarding water vapor diffusion and condensation and to propose appropriate measures in building structures to avoid the condensation phenomena. There will be condensation of water vapor when the partial pressure of water vapor, which diffuse from the inside-out during the winter, is higher than the saturation pressure of water vapor. The latter is a function of temperature decrease in building constructions and as such can be avoided when the wall presents a higher thermal resistance.

Key words: water vapor condensation, partial pressure of water vapor, saturation pressure, construction wall, thermo insulation.

072 SOME DATA REGARDING AGRICULTURE IN AGRI REGION (TURKEY)

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ABSTRACT

Agri region is located at an altitude of 1,632 m in the Turkish province Dogu Anadolu. Among the main crops cultivated on arable surfaces, we mention – barley, wheat, fescue, celery, sugar beet, etc. The study made between 2012 and 2014 included ten villages and aimed at rendering information about their population, number of farmers, surface of arable land, number of large and small animals raised in small farms. The paper also includes information on the amounts of fuel used by agricultural equipments and of substances administered to control crop pests and diseases in 2014. In 2014, the arable surfaces varied between 3,227 decares and 10,145 decares. The highest number of domestic animals was registered at Aşağı küpkıran village (7,496), while the lowest number at Badilli village (only 143). The same village (Aşağı küpkıran) also registered the greatest number of inhabitants (1,339), while in Ağılbaşi, there were only 77 inhabitants. In the same reference year (2014), Tezeren village counted the highest farmers' number (301). Official records indicated only 39 farmers at Ağılbaşi village. In the ten analysed villages, there were used 6,000 liters of insecticides and 10,617 kg herbicides for weed control and 40 kg of chemical substances to control rodents. There were also taken soil samples from the arable land of Tezeren village and tested in order to establish the presence and concentration of heavy metals.

Key words: Agri region, agriculture, heavy metals

073 ALGOCENOSIS OF LAKE RADONIQ (KOSOVO), DURING SUMMER SEASON 2013

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ABSTRACT

The present paper describes the distribution of 126 freshwater algae species collected from lake Radoniqi. The investigation is done during summer season 2013 year. The determined taxa of the Lake Radoniqi are 126 species of algae, belonging to 5 divisions. By their abundance the algae from the division Bacillariophyta predominated in all areas of the longitudinal profile of the lake and by their relative occurrence. Bacillariophyta 81 species (64.28 %), Cyanophyta 22 species (17.46 %), Chlorophyta 11 species (8.73 %), followed by and Euglenophyta with 9 species (7.14 %) and Xanthophyta 3 species (2.38 %). Determined 51 bioindicators species, where dominate bioindicators species (30) which belongs to Bacillariophyceae. Chlorophyta bioindicators species are 5 species, Euglenophyta bioindicators species are 6 species, Cyanophyta bioindicators species are 9 species. While the Xanthophyta bioindicators species are 1 species. Based to these investigation can conclude that the water belongs to the betamesosaprob level.

Keywords: algocenosis, water, lake, summer, Radoniqi.

074 AN EXPERIMENTAL INVESTIGATION ON THE EFFECT OF ACIDIC AGGRESSIVE MEDIUM TO THE STRENGTH OF LIGHTWEIGHT CONCRETES

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ABSTRACT

In this experimental investigation, the effects of salty water to the strength of lightweight concretes produced with pumice, fly ash were studied. In this purpose, exactly 90 lightweight cubic, cylindrical and beam specimens were produced with 350 and 450 dosages and cured under acidic aggressive medium and normal water conditions for selected 7, 28 and 90 day-periods. After the curing periods, the specimens were subjected to axial compression, split cylinder and flexural beam tests to investigate the variations in the compressive and tensile strengths of the specimens.

Key words: Aggressive environment, acidic mechanical properties of concrete, lightweight concrete, pumice, fly ash, sulphate-resistant cement

075 SHORT TERM BUILDING ENERGY CONSUMPTION FORECASTING USING ARTIFICIAL NEURAL NETWORK MODEL

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ABSTRACT

Concerns of energy security and a rapid destruction of natural resources have caused energy solutions to gain worldwide attention. An element to maximize energy resources is to apply existing technologies in different ways. The lead time to develop an energy efficiency product is relatively short, and less capital intensive versus energy producing plants. The use of intelligent technologies to increase the bottom line is an example of a viable energy efficiency product. These technologies combines clever energy savings scenarios with improved performance of the engineering systems of the buildings. Forecasting energy demand of building for next hours a day ahead is one of the most used clever energy savings techniques. In this work we develop a load forecasting model using artificial neural network (ANN) based on historical measurement of building models. Forecasting model is evaluated in a retail building, where one year hourly values of outside air temperature and building power consumption are taken into consideration. Method consists of training and testing period - dataset is split in training and testing period. We evaluate the model performance for a testing period of one, two and three months. Performance level of the model shows high accuracy predicting electricity demand, with evaluated error values of MAPE (mean average percent error) and MAE (mean average error) under the values that standards accept. The results obtained with the proposed model show that ANN model can be very useful predicting short term energy consumption when as measured input data is only the air temperature.

Keywords: Energy prediction, artificial neural networks, energy efficiency, commercial buildings, weather forecast.

076 THE EFFECT OF WHEAT GERM ON THE TOTAL OXIDATIVE STRESS *DROSOPHILA MELANOGASTER*

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ABSTRACT

Wheat germ is rich in polyunsaturated fats and affected the storage qualities of flour. Diet content is important for the oxidant-antioxidant system because insufficient or excessive nutrition can cause health problems in human diet. This study was investigated the effects of a wheat germ flour diet on total oxidation and antioxidant levels and the relationship between them in *Drosophila melanogaster* Meigen (Diptera: Drosophilidae) adults. *D. melanogaster* (W1118) larvae were fed with wheat germ flour (1-5%) until the adult stage. Total oxidant stress (TOS), total antioxidant capacity (TAS) and oxidative stress index (OSI) were determined in adult individuals, and obtained data were compared with SPSS.17 ($p<0,05$). It's stressed that a good amount of increase will occur in the activity of TOS (13,55 µmol/l) which the insects fed by the highest concentration (5%) compared to controls. It is detected that adding wheat germ to nutritional compounds in low concentrations reduces the level of oxidation whereas the consumption of large amounts increases the level of oxidation. The usability of wheat germ was investigated as a source of dietary supplement and determined that wheat germ will be used easily at level of 1% in non-target organisms by paying attention to usage doses and storage conditions.

Keywords: Wheat Germ Flour, *Drosophila melanogaster*, Nutrition, Oxidative Stress.

078 WILD EDIBLE MUSHROOMS OF ŞIRVAN (SIIRT) DISTRICT (TURKEY)

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ABSTRACT

In this study, 20 wild edible mushroom species, naturally growing in Şirvan (Siirt-Turkey) district, were reported. Local consumption status, habitats, substrates, collection dates and personal voucher numbers of the samples are provided. Edible mushrooms growing in the research area are *Helvella leucopus, Morchella elata, Verpa conica, Agaricus bisporus, Agaricus urinascens, Bovista plumbea, Macrolepiota excoriata, Macrolepiota mastoidea, Calvatia cyathiformis, Bolbitius titubans, Mycena epipterygia, Pleurotus eryngii, Pleurotus ostreatus, Coprinellus disseminatus, Coprinellus micaceus, Hypholoma capnoides, Melanoleuca brevipes, Melanoleuca substrictipes, Tricholoma atrosquamosum* and *Lentinus tigrinus*. Though 20 wild edible mushroom taxa were determined in the region, only two of them, *Pleurotus ernygii* and *Pleurotus ostreatus*, are collected and consumed or sold in public bazaars.

Keywords: Wild edible Mushroom, Siirt, Turkey

079 THE DISTRIBUTION AND ANALYSIS OF GREEN SPACES IN AMASYA CITY, TURKEY

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ABSTRACT

The arrangement of green spaces in urban development plays an important role in the rebuilding of lost ecosystems connected with urban development dynamics. It is important that these green spaces serve the people living in the city and that planning be undertaken to protect green spaces. ArcGIS will be used for the analysis on green areas in Amasya. It will make an understandable approach of green areas distribution and help to analyze of urban green areas. This study will present the distribution of active and passive green spaces in Amasya by neighborhood, and green areas will be calculated according to the square meters per person at the neighborhoods. It will also determine whether the green space is planned or not and the relationship between active-passive green space and population using Pearson's product-moment correlation.

Key words: green space, population, Amasya City

080 ASSESSMENT OF PCBs POLLUTION IN MAIN DRAINAGE CHANNEL IN KONYA

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ABSTRACT

Persistent organic pollutants (POPs) can be found in all types of environmental media. Polychlorinated biphenyls (PCBs) are one of the important groups of POPs, which have recalcitrant and hydrophobic character. Their occurrence in aquatic environment is common worldwide and sediment accumulation is an important source for a new suspension in water media. The present paper aims to determine occurrence of PCBs (PCB 28, 52, 101, 138, 153, 180) in Konya main drainage channel (MDC) sediment, excavated sediment and water samples. Determinations of PCBs were carried out with a GC/MSD (Agilent 6890 N) after soxhlet extraction and clean-up according to column chromatography method (US EPA Method 3630C) for sediment samples. Besides, toxic effects of these samples on a terrestrial plant *Lepidium sativum* and a decomposer *Vibrio fischeri* were investigated. According to conducted results, maximum total PCBs determined in sediment sample was 22.8 µg/kg and max. total PCBs in excavated sediment samples was 26.2 µg/kg. 0.20-0.45 mg/L total PCBs were determined for wastewater samples. PCB 153 (16 µg/kg) was determined in maximum concentrations among PCBs. 71.21-83.19% inhibition effect on *Vibrio fischeri* was determined for the sediment samples taken from third pump station on MDC. While no inhibition effect on *Lepidium sativum* was determined for sediment samples, 64.40-78.36% inhibition effect of wastewater samples on this organism was determined. Our findings demonstrate that, there are PCBs accumulation in sediment of MDC and this can be a pollution source for environment.

Key words: Sediment pollution, polychlorinated biphenyls (PCBs), contamination, toxicity.

081 ORGANOCHLORINE PESTICIDES IN HUMAN MILK SAMPLES

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ABSTRACT

This study aims to determine levels of Organochlorine Pesticides (OCPs) contamination in human milk. Human milk samples were taken from 45 healthy mothers living in the Konya area for at least 5 years. General demographic characteristics of mothers were determined in the means of age, diet, smoking habit, occupational exposure etc. Sample extraction was performed by vortex and cleaned up by column chromatography. OCPs (α-, β-, γ- and δhexachlorocyclohexane (HCH), heptachlor, heptachlor epoxide, dieldrin, aldrin, endrin, endrin aldehyde, endrin ketone, endosulfan I, endosulfan II, endosulfan sulfate, p,p'-DDE, p,p'-DDD, p,p'-DDT, methoxychlor, chlordane I, chlordane II) analyses of the extracts were carried out using gas chromatography micro electron capture detector (GC/µ-ECD, Agilent 6890N, Agilent Technologies, CA, USA). Recovery ratios were between 70±5 % and 109±5%. The mean age of mothers was 28.2. The lipid content of the milk samples was ranged from 0.43 to 6.47% (average 2.20%). Mean total OCPs concentration was determined as 276.71 ng/g lipid. Dieldrin was determined in highest concentration (483.87 ng/g lipid). Total mean HCH (α, β, γ, δ), DDT (p,p-DDE, p,p-DDD, p,p-DDT),

heptachlor (heptachlor, heptachlor epoxide), endosulfan (endosulfan I, endosulfan II, endosulfan sulfate), endrin (endrin, endrin aldehyde, endrin ketone) were determined 42.45, 37.13, 14.54, 37.13 and 62.49 ng/g lipid, respectively. OCPs concentrations determined in this work were below the values reported in similar works carried out in Turkey and in the World.

Keywords: Organochlorine pesticides (OCPs), human milk, contamination, risk.

082 EFFECTS ON DIMENSION STABILITY OF SOME WOOD SPECİES AND ENVIRONMENTALLY-FRIENDLY NATURAL PAINT PRODUCTION (WASTE TEA)

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ABSTRACT

This study was designed to determine dimensional stability values of some species wood according to leachability test. leachability test were conducted for 6, 24 , 48, 72, 96 hours leaching penods. The tea plant extract is obtained in compliance with ISO 1574 -TS 1563 and impregnated in compliance with ASTM D 1413-76. The tea plant extract is obtained in compliance with ISO 1574 -TS 1563 and impregnated in compliance with ASTM D 1413- 76. Scotch Pine (Pinus sylvestris L.), Black Pine (Pinus nigra Arn.), Beech wood (Fagus orientalis Lipsky), poplar (Populus nigra), iroko (Milicia excelsa) and European larch (Larix decidua) were used as wooden material.According to the results, the highest shrinkage rate belongs to larex wood (15.29 %-96 hours), the lowest to ıroko wood (6.71 %-24 hours); the highest swelling rate belongs to larex wood (18.52 % -96 hours), the lowest to ıroko wood (5.46 % -6 hours) determined. The organic material obtained from the tea plant extract is determined to be used as upper surface- impregnation material in the wooden materials.

Key words: Waste tea extract, physical properties, natural dye, environmetal.

084 SMALLHOLDER'S PERCEPTION ON CLIMATE CHANGE

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ABSTRACT

Many scientific studies, emphases that climate change is going to have an adverse effect on agriculture productivity and local livelihoods worldwide. Our focus is to present a problematic situation of smallholders in Shkodra region which is located in north of Albania, and at the same time understanding their perceptions to climate change. The study area is characterized by high level of temperatures during summer and abundant precipitation in winter season. Beside social and economic problems now this region

has to cop with consequences of increased frequency and severity of extreme weather events, shifting seasons, as well as changes in the structure of precipitations. The main problem appears on high level of vulnerability that this region face. For this study we have selected four geographical areas. In 2015 we have interviewed 185 farmers regarding to general question about farm characteristics and their perceptions on climate changes. Our analysis is concentrated in statistical and descriptive methods by using cluster techniques, tabular and graphical presentation. Participatory approach will be based on the perceptions and assessments of the farmers in the selected region. Based on these analyses we can determine what are the barriers farmers are facing and what are their needs in order to adapt to impact of climate change.

Key words: Climate Change, Smallholders, Vulnerability

085 PRELIMINARY FLORISTIC RESEARCH ON HILLY-MOUNTAINOUS AREA OF PASHTRIK (PLANEJ-GOROZHUP)-REPUBLIC OF KOSOVO

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ABSTRACT

Based on specific conditions, Pashtrik represents one of the most interesting areas from natural ecosystems of the Republic of Kosovo. In continuation of our researchs of flora and vegetation of Kosovo (2000-2016), during the last decade we have also devoted to attention Pashtrik. Compared with other Kosovo's areas, we noted that Pashtrik with special natural features, provides specific conditions for the growth of vascular flora. Our research has intensified in recent years, although field conditions are in permanent danger of mined areas as a result of the recent war in Kosovo. In this paper we present more detailed floristic datas of hilly-mountainous area of Pashtrik in relation Planejë-Gorozhup (south to the southeastern part to Pashtrik). Explored space it has pronounced slope, lies at an altitude of about 300 to more than 1000 m. The substrate is rocky limestone. The climate is continental, with the influence of the modified Mediterranean climate. In the phytocenological terms, exploring space is represented by forest areas and forest clearings which most belong to class *Querco-Fagetea* dominated by phytocoenose *Quercetum trojanae dukagjini*. Our research confirm the presence of the Balkan endemic species, nutritional species, medical-aromatic and poisonous plant species.

Key words: Natural ecosystems, Pashtrik, Vascular flora, endemic plants, Republic of Kosovo.

086 VASCULAR FLORA OF THE NECI MEADOWS-REPUBLIC OF KOSOVO

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ABSTRACT

Meadow ecosystems are also part of the natural heritage of the Republic of Kosovo. Nec meadows (Municipality of Gjakova) are explored in the floral aspect during 2014 (with some additions during 2015). Neci meadows (altitude 402 m) stretching from the Southwest part of the Republic of Kosovo, in the lowland-hilly area of Kosovo. In these meadows there are areas that flooded (inundated) during the rainy seasons of the year. Pedological substrate mainly composed of loamy alluvium. The climate in these terrains is moderate continental climate with Mediterranean influence. In the phytocenological aspect these meadows belong to the alliance *Trifolion resupinati*, ordo *Trifolio-Hordetalia* and to the class *Molinio-Arrhenatheretea*. Within these meadows has watercourses along which developed phytocenosis from the orders *Populetalia albae* or *Alnetalia glutinosae* and while the wider area around these meadows dominated by oak order *Quercetalia pubescentis*. Our results are similar to those on previous research conducted in Kosovo meadows. Anthropogenic factor operates in favor of agriculture, but these meadows still retain their physiognomy.

Key words: Natural ecosystems, Meadows, Neci, Vascular flora, Anthropogenic factor, Republic of Kosovo.

087 DIVERSITY AND DISTRIBUTION OF INVERTEBRATES OF CONSERVATIVE INTEREST FROM PLATFORMA COTMEANA, A ROMANIAN NATURAL PROTECTED AREA

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Knowing the distribution of species of conservative interest is of a great importance when management activities have to be carried out in order to ensure a sustainable good conservation status as required by Natura 2000 regulations. Besides supporting local management planning, studying species distribution and their conservation status it is also an important data source for reporting under article 17 of EU Habitat Directive at national level. Current work was done on a Natura 2000 site of community importance, ROSCI 0354 "Platforma Cotmeana", with a surface of 12.529 ha, located in the Central Southern part of Romania in a hilly area. The site is mainly dominated by broadleaf forest, from which 30% consists of beech species, an important habitat component for studied species. Focal species of this research were: *Lucanus cervus*, *Cerambyx cerdo*, *Morimus asper funereus* and *Rosalia alpina* as they are listed on the annex of EU Habitat Directive. For each species, sex ratio, numerical abundance and population size were estimated. Habitat preference and the occurrence of individuals were recorded in order to map and model species distribution in the site. Future perspectives on species conservation status in site were assessed by evaluation of human impact activities affecting species habitat quality. It was noted that most dominant species is *Lucanus cervus* with an occurrence of 314 individuals, followed by *Morimus asper funereus* with 92 individuals, and *Cerambyx cerdo* with 41 individuals. In the case of *Rosalia alpina* only an exoskeleton was found, fact explained by the limit of species distribution area in this site. Maps of species distribution were made for the first three species using a maximum entropy approach.

Key words: Natura 2000, saproxylic beetles, diversity, species distribution, conservation status

088 IRON GATE I RESERVOIR – ECOLOGICAL EVOLUTION

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ABSTRACT

The construction of the dam on the Danube in the area known as the Iron Gates led to the formation of the biggest reservoir of the river the length of which is of about 100 km. The depth of the reservoir near the dam is of 30 m. Due to the construction of the reservoir more than 10,000 ha of Romania's territory were flooded. Under these circumstances, there took place major transformations in the structures of the Danube's biocoenosis. In this new environmental conditions certain species disappeared (those characteristic to the springs and to the terrestrial liable to floods areas), some restricted their spreading areas (it is about fish especially), while the others, which occupied a limited space within the structural spectre of the biocoenosis before the construction of the reservoir, rapidly increased in number and became dominant species in the ecological configuration of the ecosystem (as it is the case of the mollusc *Dreissena polymorpha*). Thus, there appeared biocoenosis characteristic to the lacustrine ecosystems. The research emphasized three major stages in the ecological evolution of the reservoir: 1971-1972, disappearance of the reophile biological processes, as well as the intensification of the eutrophication process characterized by the increase of phytoplankton and zooplankton production; 1972-1973, stabilization of plankton production; 1973-1974, diminution of plankton production; 1974 and further on, setting up of a dynamic balance of the fluvial-limnic ecosystem. At present, the structure of the zoobenthos, as well as of the phytoplankton and zooplankton is characteristic to the limnic-reophilic ecosystem.

Key words: reservoir, ecological evolution, Iron Gate, Romania.

089 PRELIMINARY INFORMATION ABOUT THE ICHTHYOFAUNA'S SITUAŢION FROM THE CILIENI LAKE - BĂILEŞTI (DOLJ – ROMANIA)

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ABSTRACT

The purpose of this paper ist to present the actual situaţion of the ichthyofauna from the Cilieni Lake. I tis an alarm signal to the mode of how some protected areas are explorted distructively forom the piscicultural point of view, without repopulating and cleaming aut these basins. Being situated in Băileşti Field, on the terrace formed during the Danube water's retirement, the Cilieni Lake- Băileşti, a fourth category protected area, is spreading aut on a surface of 47 ha an don 3 km length. Taking into account the data received from AGPS Zărganul, i have found aut that in 1980 there were many species of fish: carp, crucian carp, bream, pike perch, cisco, bleak, sheat fish, chinese carp, the las one having the biggest way and being introduced to clean the lake in order to clean the water from the phytoplankton but also to the sportive fishing. During my visit in the area in august 2015 i have observed a raised mortality of the fishes, respectively perch, crucian carp, allof them being very numerous on the lakeside. The collecting water evidences for finding the physic- chemical indicators of the water's qualiti was made on the lakeside and they were analysed in the A.P.M. Dolj's laboratory

Key words: protected area, ichthyofauna, Cilieni Lake – Băileşti, Danube

090 COST ANALYSIS IN EXPROPRIATION AND LAND CONSOLIDATION FOR EXPROPRIATION WORK

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ABSTRACT

In order to increase the land transport network, to modernize the existing routes to adapt to contemporary conditions in Turkey, required lands are to be obtained. Public institutions and organizations in Turkey obtain lands required for public investment by expropriation. Many problems and unrest occurs when public institutions and organizations obtain lands required for public investment by expropriation. These problems and unrest gain new dimensions as the applications increase. Diversities such as economic, sociological, psychological and managing money obtained from treasury department occur. In order to minimize the negativity during the expropriation process, current laws and regulations of the country are to be benefited. In this paper, expropriation cost paid to the people in Delice, Tatlıcak and Yeniyapan villages in Yozgat city and the engineering cost of nationalization Project are studied in Delice Tatlıcak, Yeniyapan villages in Yozgat city which is on the destination of Ankara –Sivas High speed train where expropriation method is applied. The costs of Yozgat city- Delice Tatlıcak and Yeniyapan villages on the destination of Ankara –Sivas High Speed Train and Konya city- Kadınhanı district-Kolukısa and Sarikaya neighbourhood on the destination of Ankara –Konya High Speed Train which has same length and same agricultural feature are compared in point of economical aspect.

Keywords: Expropriation, Land Consolidation, Land Consolidation for expropriation

091 SNOW DEPTH AS AN IMPORTANT SNOW PARAMETER AND AN INPUT TO NUMERICAL WEATHER PREDICTION MODELS

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ABSTRACT

Snow depth is an important snow parameter and an input to numerical weather prediction models. A snow depth analysis over the Northern Hemisphere has been developed at NOAA and integrated into the Interactive Multi-Sensor Snow and Ice Mapping (IMS) System. The analysis is an optimal interpolation algorithm that blends snow depth from various sources including microwave satellite data and surface snow depth from in-situ (ground) stations, as well as IMS analyst estimates to generate an optimal snow depth product at 4-km resolution.

Key words: Snow depth, snow parameter, input, numerical weather, resolution.

092 MODULAR CLIMATOLOGICAL ANALYSIS, BASED ON DATA OF SNOW DEPTH - HEIGHT

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ABSTRACT

The in-situ snow depth data used to run the analysis on a daily basis comes from synoptic weather stations across the globe and cooperative weather stations across CONUS US. Over high-mountain areas, however, retrieval accuracy deteriorates significantly due to the lack of in-situ stations and inaccurate passive microwave retrievals. To improve analysis over high-elevation areas, snow depth climatology in the form of snow depth-elevation relationships is used and weighted with other data. However, the snow depth climatology is derived from a small region over Western US that is not representative of the high altitude regions of the globe.

Key words: in-situ snow, depth data, analysis, synoptic weather stations

094 COLLABORATION BETWEEN VACCINE SAFETY STAKEHOLDERS IN ALBANIA

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ABSTRACT

In the last decade there has been a large usage of vaccines worldwide and new vaccines are being added to the immunization schedule rapidly. The principal adverse events that follow immunization are studied during clinical trials of vaccines and all the vaccines of immunization schedule are safe. However during these studies the number of volunteers is limited and it is not possible to study rare adverse events that occur rarely. Besides this there are groups of populations with specific pathological and genetic characteristics which are not represented during clinical trials and the adverse events that follow immunization in these individuals cannot be detected. More new vaccines are introduced in the immunization schedule, more are increasing the concerns of public about them. Internet, media, television and other sources of informations enables the population to have access in a lot of unreliable sources. For this reasons it is important post-licensure surveillance of adverse events following immunization. It is the responsibility of different stakeholders to ensure vaccine safety and each of them plays an important role in monitoring post-licensure safety of vaccines. The false concerns about vaccine safety damage the immunization program leading to drop out of the program and dissemination of vaccine preventable diseases.

Keywords: vaccines, vaccine-safety, vaccine-stakeholders, adverse events following immunization

096 DETERMINATION OF MOISTURE AND SUCROSE DURING STORAGE OF POTATO TUBER ''LADY ROSETTA''

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ABSTRACT

Cultivated potato "Lady Rosetta" is appropriate to make chips, French fries. Color and taste depend largely on the amount of reducing sugars primarily glucose and fructose. Tubers of potato "Lady Rosetta" were stored at 8-10 °C for 30, 60, 90 day then reconditioned for 2 days at 20-22 °C. Some were conditioned for 5 and 10 days ay the some temperature. Storage at 8 °C stimulated sucrose accumulation and reducing sugar. Reconditioning helps reducing sugars to rearrange in starch molecule. During storage the loss of moisture increase according initial humidity. The evaluation of initial humidity of potato tuber has interest in economic terms.

Keywords: potato tuber, sucrose, moisture, color

097 GEOGRAPHIC INFORMATION SYSTEM (GIS) BASED APPROACH FOR SITE SELECTION OF MEDICAL WASTE LANDFILL IN KONYA/ KARATAY

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ABSTRACT

Medical waste generally consists of many different types of materials so it cause environmental hazards and public health risks.Therefore to protect public and enviroment local authorities must take special measures associated with medical waste management . Medical waste site selection has been taken into account for better management in urban areas. In this study, candidate sites for an appropriate landfill area in Konya are determined by using the integration of Geographic Information Systems. For this purpose,six input map layers including, settlements (urban centers and villages), roads (Highway and village roads), railways, ,slope, irrigation canal, grasslands are prepared and simple additive weighting method is implemented to a geographical information system. A final map was generated which identifies regions showing suitability for the location of the landfill site. At the end of the analyses, five candidate sites are determined.Among these candidates,the most suitable potential landfill site should be selected by decision makers in Konya/Karatay.

Key words: Gis, Medical Waste, Site Selection.

098 EVOLUTİON OF LAND TENURE FORMS AND SİZE OF AGRİCULTURAL HOLDİNGS İN TURKEY USİNG GEOGRAPHİC INFORMATİON SYSTEM (GIS) TECHNOLOGİES

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ABSTRACT

Agriculture sector plays strategic roles in the process of economic development because agriculture is the basic source for food supply of all countries in the world.While population increase day by day ,global resources like oil, fresh water , topsoil and also agricultural products decline so land management is very important for haritage of sustainable planet. The legal expression of farmlands among with operator is land tenure which is a significant compenent in agricultural land use. Determination of land tenure and the farm size is important for a better understanding of the structure of the agricultural land. Geographical Information Systems emerge that can expressed such as situation. Geographic and non-geographic attributes of spatial datasets enable them to be integrated and analyzed in GIS applications through visualization and analysis tools. The purpose of this paper is evualute to land tenure and the farm size in provinces of Turkey using GIS. The land operated by size, number, rented land, share basis, their own land of agricultural holdings and land tenure forms analysed. ıt is detected the differences among provinces from analysed results taking everything into account. The results obtained from the study are discussed and suggestions are made.

Key words: Agriculture, Agricultural Holdings, Land Tenure, Gis.

099 STUDY OF TWO DIFFERENT IMMOBILIZED YEAST TECHNIQUES AND THEIR FERMENTATION PERFORMANCE COMPARED TO FREE YEAST CELL PROCESS

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ABSTRACT

In this study we have compared two different immobilization techniques of beer yeast in alginate beads. Yeast was immobilized with two different methods of immobilization, entrapment and capsulation, in alginate. Objective was to compare immobilized wort beer fermentation rate compared to free yeast cells process. Comparison was made in terms of substrate consumption rate, and fermentation kinetic coefficients. We have used both batch and continuous fermentation. There were no notable differences between two methods of immobilization but there are some compared to free yeast cell fermentation rate. Immobilized yeast fermentation results very productive in continuous fermentation compared to free yeast cell fermentation. Comparing two immobilized yeast cell techniques we prefer entrapment technique because we take more uniform and consistent beads. Bead diameter was also smaller in entrapment technique compared to capsulation, resulting in a higher wort diffusion rate.

Key words: yeast, immobilized cells, entrapment, capsulation, free cell, fermentation rate.

100 KINETICS OF THE EXTRACTION OF CAROTENOIDS FROM TOMATO SKIN IN PRESENCE OF OLEIC ACID

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ABSTRACT

Lycopene and β-carotene were extracted from tomato skin using as solvent the liquid dioxide carbone under its liquid-vapor equilibrium conditions. In this study we investigated the kinetics of the extraction of carotenoids in the presence of oleic acid as modifier. The experiments were carried out in a Jennings-type autoclave after the Soxhlet principle with and without modifier at 299 K, using as solvent liquid carbon dioxide under its vapour pressure of 64 bar. The extraction yields and the lycopene and β-carotene content of the liquid CO_2 extracts were determined after 0.5, 1, 3, every three hours, up to 30 hours of extraction in the presence or not of oleic acid as modifier. HPLC-DAD was used for the quantification of the lycopene and β-carotene in the extracts. The highest amount of lycopene is extracted after 3 hours of extraction (0.26μg/g sample) and β-carotene (0.44 μg/g sample). The amount of lycopene extraction from skin tomato in presence of oleic acid, becomes higher that when no modifier is used, only after 21 hours of extraction (0.6 μg/g sample).

Keywords: tomato, lycopene, β-carotene, near critical liquid CO_2, oleic acid.

101 POSİTİONİNG WİTH THE HELP OF GEOGRAPHİCAL INFORMATİON SYSTEMS FOR ALTERNATİVE TOURİSM ACTİVİTİES: KONYA PROVİNCE EXAMPLE

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ABSTRACT

Tourism is an important activity in our country just like it is all over the world. Countries should manage, develop and advertise their tourism opportunities properly in order to ensure the contribution of tourism sector to economic development. Tourism planning widely means usage and management of data. Konya privince is famous with religious tourism. It is known that Mevlana Celaaleddin Rumi, in other words Mevlana shows are followed by whole world. The province also used to be the capital of Anatolian Seljuk Empire so it contains many Islamic pieces of art. It owns a living history with inns, hostels, cupolas and mosques and left behind from Seljuks. In this study researches were made for alternative tourism activities so as to let our province be known for the other types of tourism activities. The suitable areas for alternatife activities were aimed to be determined by geographical information systems. Natural and cultural properties of reseach area were determined and numerical database ses formed. By using the database and

with the help of ArcGIS program altitude, slope and exposure maps were produced. For determination of suitable areas according to alternative tourism type, national and international legislations were taken as a basis so as to determine technical and economical criteria in location selection and the limitations to be taken as a basis during application were detected. Location selection process was realized with the help of CIS, ability to analyze and visualize positional data.

Key words: Konya, alternative tourism, CIS and analysis

103 KINETICS STUDY MODEL OF IMMOBILIZED AND FREE YEAST FERMENTATION

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ABSTRACT

Ethanol production during wort fermentation depends directly from glucose concentration. For a certain glucose concentration ethanol production and fermentation time are controlled by catalytic beads concentration and their diameter. Catalytic beads impact on glucose diffusion and substrate consume kinetic. Fermentation experiment was carried in a 5 liters bioreactor. Free cells S.cerevisiae yeast and immobilized cells in alginate beads were used for comparatives study. Alginate beads had a 3 and 5 mm diameter. Volumetric fraction of immobilized beads was 0.1. Fermentation medium was beer wort 11 and 15^0 Plato. Fermentation temperature 25^0 C. Increasing bead diameter we increase also substrate diffusion resistance. These phenomena results in a decrease effect of substrate inhibition especially during the initial fermentation time. Free cell fermentation gives better productivity in both cases compared with immobilized fermentation. As conclusion ethanol productivity decreased with increasing beads size. Increasing bead size we decrease substrate inhibition phenomena which are very important when we ferment high gravity substrates.

Key words: kinetic, ethanol production, immobilized cell fermentation, free cell fermentation, substrate inhibition

104 EVALUATION OF EXPORT COMPETITIVE ABILITIES USING DEA IN THE PRODUCTION CIRCULATION DYNAMICS, AN OPTIMUM PRACTICE IN ECONOMY

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ABSTRACT

Rationality of the economy science is maximizing needs and requirements satisfaction for goods and services by discovering cost and risk minimizing ways. Comparative evaluation law, as utility level, requires also the selection of applicative and scientific models and approaches for the enhancement of retroactive interpretations and attitudes power. Therefore, the evaluation of competitive abilities for the

conditional export of goods and services connected in a balance with the import would require firstly: reading the reality by clarifying the objectives of performance progress and efficiency increase as optimal instrument. This study includes variables with impact in the economic balances and unbalances, in the circulation of products and services in the European region, that need to be evaluated and recognized by the policymakers of any country. Investments to the benefit of consumers, optimum practice in economy, and definition of priorities remain first material for macroeconomics. Recognition of reciprocity interests and stratification of production identities remain premises for the economic development.

Keywords: Performance, economic efficiency, DEA analysis

105 A SURVEY OF CHLORINATED POLLUTANTS LEVELS IN DRINKING WATER SAMPLES OF PATOS, BALLSH AND KUCOVA CITIES

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ABSTRACT

In this paper are presented concentrations of organ chlorinated pesticides and polychlorinated biphenyls (PCB) in drinking water samples of Patos, Ballsh and Kucova areas. These areas are known for the intense agricultural activity, production and industry of petroleum in Albania. Fifteenth drinking water samples were taken in different stations of these areas in February 2015. For isolation of organ chlorinated pesticides and PCBs from water samples Liquid-Liquid extraction using Hexane as extracting solvent and a florisil column for clean-up procedure. Analysis of organ chlorinated pesticides and PCBs were realized in simultaneously in Rtx-5 capillary column (30m x 0.32mm x 0.25µm). HP 6890 Series II, gas chromatograph equipped with µ ECD detector was used for this study. Concentrations of chlorinated pollutants were found almost for all water samples taken in Patos, Ballsh and Kucova areas. The main origin of organ chlorine pesticides could be as result of their previous uses in agricultural areas near the lagoon, rainfall and their stability. Volatile PCBs were found also for all samples. This fact confirms atmospheric origin and petroleum industry impact of these compounds in the ecosystem. All levels were lower than limit of chlorinated pollutants in drinking water according Albanian and EU norms.

Key words: Chlorbenzenes; Organ chlorinated pesticides, PCB s, GC/ECD; Drinking water

106 ENVIRONMENTAL POLLUTION AND HEAVY METALS, METALLOIDS CONCENTRATION AND ANTIOXIDANT STATUS OF MEDICINAL PLANTS

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ABSTRACT

Industrial area, respectively pollution released especially from Thermo Power Plants, is one of the main problems of environmental pollution in the world and global concern. The substantial analyses in polluted regions have shown the significant concentration of e wide range of metals and metalloids with high toxic potential in samples from soil, water and ash (fly and bottom), as: Pb, AS, Cd, Ni, AL, Hg, Cr, Zn, Cu and Fe. Different plants cultures, grown in contaminated soil and exposed to contaminated water with metals and metalloids have indicated significant difference in the rate of the metal accumulation, absorption and their distribution, and also reflect significant difference in the heavy metal concentration in different parts of plant (leaves, shoots and bark). Botanical samples, including higher plants are used as bioaccumulations and in the analyzing of the phytoremediation process. The air, soil and water pollution with heavy metals from industrial and other sources, have been reported that have potential to stimulate the formation of free radicals and reactive oxygen species, which mean that heavy metals have impact in the antioxidant capacity/status of plants in polluted regions. This review article is based on the research findings which summarize the correlation between environmental pollution, heavy metal concentration and antioxidant status of different species of higher plants in polluted regions.

Key words: environmental pollution, heavy metals, bioaccumulation, antioxidant status.

108 GENETIC VARIATION FOR SPIKE PRODUCTION CAPACITY IN F3-GENERATION IN WHEAT

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ABSTRACT

The aim of the research was to identify genotypes with high genetic production potential, one of the ways of development and selection of new wheat cultivars, with experimental formula: 10 genotypes x 3 replication x 10 plants = 300 spikes x 4 parameters = 1200 results. While the main purpose of this research paper was the presentation of results for the spike genetic variation for the number of grains (NGS), the spike weight (SW), the grain weight per spike (GWS), and spike harvest index (SHI), for 10 genotypes in F3-generation. The variation of the spike production capacity depends on main components: the spike weight and grains weight per spike, which resulting in the spike harvest index or yield as gram per spike or per unit area. Interaction of genetic, agroecological and agrotechnical factors determines the spike production capacity. The spike components for 10 genotypes were compared with the average effects of genes or μF3. The genotypes of F2-generation were sowed in 2014, while the spike components were analyzed in 2015. The interval of variation for spike components was analyzed, and is compared with the effects (μF2), for number of grains per spike NGSμ=42.12 spike^{-1}, the spike weight SWμ=3.32 g spike^{-1}, the grains weight per spike GWSμ=2.45 g spike^{-1} and spike harvest index SHIμ=0.73%. The genotype G-8/F3, is very promising for the spike production capacity. Research results identified a highly significant difference for the spike components for genotypes in F3-generation, on the level of LSDp=0.05 and LSDp = 0.01.

Key words: Spike, component, generation, grain, harvest index.

109 INVESTIGATING CHANGES ON SOME SOIL PROPERTIES DEPENDING ON LAND USE AND DEPTH LAYERS: A CASE STUDY FOR THE GODRAHAV CREEK WATERSHED IN ARTVIN, TURKEY

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ABSTRACT

The Eastern Black Sea Region is characterized with mountainous and steep terrain, limiting agricultural activities. This, in turn, has been causing the natural lands of mostly forests and grasslands in the region to be converted to other uses, mostly agriculture as an alternative income for the local people. However, it is well known that such conversions negatively affect all the natural resources including soil properties. Therefore, in this study, changes on some soil parameters in the forest and the neighboring agriculture (converted from forest) lands within the watershed of Godrahav Creek Watershed were investigated in respect to current land use type and soil depth. For this purpose, total of 36 soil samples based on land use types (forestland, agriculture) and soil depth (0-10 cm and 10-20 cm) were taken to be analyzed for texture, permeability, bulk density, organic matter (OM), pH. Differences and relations among these properties were statistically examined using analysis of variance analyses (ANOVA). It was determined that the most of the soil characteristics analyzed were significantly different between the lands of forest and agriculture in the study area. For example, as expected, the amount of OM was significantly higher in forestlands with 6.71% than the agricultural land with 5.50% while the pH was increased from 5.51 to 6.88 after conversion. In addition, bulk density was also increased from 1.07 gr/cm^3 in forests to 1.23 gr/cm^3 in agriculture areas whereas better permeability was found for forestlands (302.32 mm/hr) than agricultural lands (110.96 mm/hr).

Keywords: Land use types, soil depth, soil properties, Godrahav Watershed, Artvin

110 USING A GEOSPATIAL INTERFACE (GeoWEPP) TO PREDICT SOIL LOSS, RUNOFF AND SEDIMENT YIELD OF KOKOLET CREEK WATERSHED

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ABSTRACT

Soil loss and sedimentation processes currently stand as one of the most serious environmental issues in Turkey. Improper use and conversion of lands along with recent shifts in precipitation and runoff frequencies caused by the global climate change are thought to be the main reasons for these issues. However, in order to take necessary precautions against these problems, firstly, both the amount and the degree of soil erosion must be determined. Recently, the efforts on obtaining data on soil erosion have shifted towards using prediction models including GeoWEPP, a geospatial interface software integrating the WEPP (Water Erosion Prediction Project) with GIS. In this research, soil loss, runoff and sediment yield from the Kokolet Creek Watershed (4057.02 ha) was predicted using GeoWEPP. Required soil, climate, management and slope files were established and the watershed was subdivided into 15 smaller hydrological units (SHUs) for easier run. The results showed that the annual total soil loss amount was 23559 tons for the watershed. While the total sediment reaching to the channels was around 10225 ton/yr, the sediment yield was 2.52 ton/ha/yr, over the trash hold value of 1 ton/ha/yr. Moreover, the GeoWEPP predicted about 735 mm of total annual precipitation for the watershed and almost no runoff generated in the SHUs containing more than 70% forest and/or grassland areas. On the other hand, 209.73 mm of runoff

was produced within SHUs where the majority of the land was converted to agriculture. The sediment delivery ratio (SDR) was around 0.782 for the watershed.

Keywords: Sediment yield, Watershed, GeoWEPP, Artvin

113 ESTIMATION OF EXPORT OF FIBERBOARD BETWEEN TURKEY AND ALBANIA BY THE TIME SERIES METHOD

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ABSTRACT

Export provides to remain in the balance of foreign trade by supply the amount of foreign currency going abroad. In addition, Companies are becoming more powerful in global competition by expanding the market network with export and as well negative trend of exports in the future, which is in a close relationship with macroeconomic variables that are vital to the national economy (GDP, interest rates, inflation and so on.) may threaten the country's economy crisis. Therefore, the estimation of accurately value of exports of has a major impact on this country in the future is very important. In this study, it is aimed that the analysis of export of fiberboard between Turkey and Albania with Box-Jenkins forecasting techniques which has an important role in the time series analysis and estimation of values of export for next term to the most appropriate time series model. The data used in this study were obtained from Trade statistics for international business development (TRADEMAP) and monthly data covering the period of January 2007 and December 2015. Augmented Dickey-Fuller test is used for the stationarity test. Temporary model which have significant parameters and the smallest values of akaike information criterion (AIC) and schwartz information criterion (BIC) was determined. Model which is suitable (whether plot of autocorrelation has white noise) was determined using the Box-Ljung test. As a result, the most appropriate Box-Jenkins model was estimated until 2020.

Key words: Time series, Box-Jenkins, Export, Fiberboard

114 CERVICAL CANCER SCREENING PRACTICES AND CURRENT STATUS OF VACCINATION IN ALBANIA

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ABSTRACT

Our study aimed the review of the current cervical cancer screening practice and the HPV vaccination status in Albania. Data were collected by surveys conducted during the period of 2013-2015 based on HPV

screening in women from 18 to 65 years old. Opportunistic cervical screening based on HPV-testing, was performed in Albania. HPV cervical infection presents a high prevalence (16.7%), despite of a relatively low incidence rate of cervical cancer in Albania. Overall, the prevalence of infections with hr-HPV was found the highest among 25-34 years old women (36%). The HPV 16 and HPV 18 were the two high-risk HPV genotypes targeted by the HPV prophylactic vaccines, together accounted for 37.7 % of HPV infections in the country. In the last years, the interest regarding prevention through vaccination has considerably increased. The vaccine, targeting high-risk HPV 16 and 18 types, was registered and offered in the private market. The new screening recommendations address age-appropriate screening strategies, including the use of cytology and high-risk human papillomavirus (HPV) testing, alone as a primary screening approach, follow-up, age at which to exit screening and screening strategies for special population. We concluded that in order to integrate vaccination and screening optimally, Albania has to define the HPV disease burden locally, finding out the prevalence of HPV and CIN in each age groups, as well as use the data of the present screening and disease management.

Key words: cervical cancer, screening practise, vaccination, Albania.

115 PSYCHIATRIC DRUGS IN WASTEWATER AND RISK ASSESSMENT

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ABSTRACT

Psychiatric drugs are a group of pharmaceuticals commonly used. Psychiatric drugs are not completely metabolized by the human body and they are excreted the unchanged parent compound, metabolites or conjugates. Psychiatric drugs are one of the important concerns for non-target organism in aquatic and terrestrial environmental because they can affect the endocrine system and the nervous system. In this study, the analytical methods optimization for analysis of psychiatric drugs (diazepam (DZP), lorazepam (LZP), carbamazepine (CBZ), fluoxetine (FLU)) in wastewater were carried out. The presence of the compounds in Konya Urban Wastewater Treatment Plant influent and effluent samples was investigated and the ecotoxicological risk was evaluated. The extraction of the samples was performed with SPE system using Oasis HLB cartridges. Quantitative analysis of the target compounds was performed by HPLC/MS system. The effect of sample volume and pH, different pharmaceuticals concentrations, pretreatment and matrix on extraction procedure was investigated. Optimum carrier phases, flow rate, injection volume for HPLC/MS system were also investigated. DZP and LZP were not detected in influent and effluent samples. FLU was not detected effluent samples. CBZ was determined 3.7-135 ng/L in influent wastewater, 6.0-245 ng/L effluent samples. FLU was detected <dl-2.3 ng/L. The hazard quotient (HQ) values were calculated according to EU guidelines. The HQ values for DZP, LZP, CBZ, FLU compounds were determined below 0.1 which means insignificant risk to aquatic organisms.

Key words: Psychiatric drugs, risk assessment, wastewater.

116 DETERMINATION AND ENVIRONMENTAL RISK OF ANTI-INFLAMMATORY DRUGS IN URBAN WASTEWATER

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ABSTRACT

Pharmaceutical compounds are the chemical groups having medical properties. The presence of these compounds have been detected in ecosystem. A large proportion of pharmaceuticals are discharged to sewerage system after human use. Also hospital wastewaters are discharged to sewage system without any treatment. These compounds reach to urban wastewater treatment plants. Some researchers investigated and reported concentration of anti-inflammatory drugs in wastewaters. In this study, anti-inflammatory such as diclofenac (diclo), ibuprofen (ibup), naproxen (naprox), ketoprofen (ketop), mefenamic acid (mefen. acid) were determined in wastewaters and environmental risk level was evaluated using obtained results. Firstly, analytical method for determination of anti-inflammatory in wastewater was optimized. Solid phase extraction (spe) procedure was carried out at different conditions. The detection of anti-inflammatories was carried out by hplc-ms. Wastewater samples were taken from Konya urban wastewater treatment plant input and output. Anti-inflammatory drugs were detected as diclo 35.8-533 ng/l, ibup <dl-4597 ng/l, naprox 25.5-6476 ng/l, ketop 11.6-579 ng/l, mefen acid 13.9-50.2 ng/l in influent water. Diclo compound was detected <dl-574 ng/l, ibup <dl-108 ng/l, naprox 20.8-114 ng/l, 8.5-180 ng/l, mefen acid 20.6-54.3 ng/l in effluent water. The hazard quotient (hq) ratio is calculated according to eu guidelines as the quotient between the measured environmental concentration (mec) and the predicted no effect concentration (pnec). Diclo compound was determined moderate environmental risk for fish (pec/pnec: 1-10) in three sampling. Ibup compound was determined low environmental risk for fish (pec/pnec: 0.1-1) in three sampling. The hq values of naprox, ketop, mefen acid were determined <0.1 for fish, *daphnia magna* and algae which means insignificant environmental risk to aquatic organisms.

Key words: anti-inflammatory, ecotoxicological risk assessment, pharmaceutical, wastewater.

118 LAND DEGRADATION IN KOSOVO

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ABSTRACT

Besides other environmental problems, a particular concern in Kosovo constitutes the fast and uncontrolled degradation of land, first of all agricultural land. The purpose of this paper is that using maps and documents of different periods of time to analyze this phenomenon and to present the driving factors and different environmental and social problems deriving from that. The construction sector, first of all housing, is one of the most problematic sectors in this aspect. As a case study is one of the most intensive construction sides with residential houses in an area of expansion of the Mitrovica city. During a period of 12 years (2001-2012) were built 193 individual houses or other annexes within an area of 105 ha of agricultural land. Besides the use of an effective surface of 9.14 ha of land for construction, the remaining area is fragmented and has lost its value to use for agricultural purposes. The results show that such a development of settlements with individual residential buildings and no urban planning has caused significant loss of the most valuable areas of land and that this trend is continuing. Unfortunately this case can be taken as representative sample for the whole Kosovo, especially in the nonurban areas.

Key words: Land use, degradation, construction, environment, planning

121 NURSES' ENVIRONMENTAL RISK PERCEPTION

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ABSTRACT

This study was carried out as a descriptive study in order to determine nurses' environmental risk perception. Two-hundred (200) nurses who had been working in a state hospital in Ordu city centre were involved in the study. The data was collected from February to March 2016. In this study, the research population comprised of all nurses (n=250), however 50 nurses were rejected for participation in the study. The data was collected via a questionnaire containing nurses' demographic characteristics and the "Environmental Risk Perception Scale". The sample consisted of 200 nurses, of whom 165 were women (82.5%) and 35 were men (17.5%). The mean age of the nurses was 36.53±8.61 (18-58 range) years. It was found that 76% of the nurses were married, 46.5% of the nurses graduated bachelor degree, 46.5% of the nurses worked in medical clinics and their working years were 15.38± 9.16 years. It was determined that the mean score of the environmental risk perception was 6.17±0.83 and environmental risk perceptions of the nurses were high. In pair comparisons, it was found that there was a significant difference between the subtitle 'Chemical waste risks' and nurses' demographic characteristics including working year, follow-up the updated information on environmental health and the status of finding the studies related to the environment sufficient ($p>.05$). There was also a significant difference between the subtitle 'Exhaustion of resource risks' and nurses' clinics ($p>.05$). In this study, it was found to be higher environmental risk perceptions in nurses.

Key words: Environmental risk, nurse, risk perception

122 DOES SAFETY CLIMATE AT WORKPLACES AFFECT THE PROTECTIVE SAFETY EQUIPMENT USE?

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ABSTRACT

Objective: This study was performed in order to determine the effect of safety climate on the personal protective equipment use at workplaces. Material and methods: This descriptive study was performed between January-March 2016 with workers working in workplaces which were audited by a Mutual Health and Safety Unit in Ordu province. The universe of the study was composed of 120 individuals and the

study group was composed of 104 workers who accepted to participate in the study. The data of the study were collected by using 'Information Form' and 'Safety Climate Scale'. Results: The mean age of workers was 31.29±7.95, 76.0% of them were male, 47.1% of them were graduated from high school and 32.7% of them were working in shifts. Of all workers, 85.6% of them thought that the use of personal protective equipments was important, and 72.1% of them stated that they were regularly using personal protective equipments at workplace. According to our results, there was a statistically significant difference between the safety climate scale mean scores of workers and the status of using personal protective equipments ($p<0.05$). It was determined that workers who had higher safety climate mean scores were using personal protective equipments more regularly compared to ones who had lower mean scores. Conclusions: In this study, the safety climate perceived by workers affected the status of using personal protective equipments.

Key words: Workplace, Safety Climate, Personal Protective Equipment, workers

123 ENERGY CONSUMPTION IN DIFFERENT MECHANIZATION METHODS FOR SUSTAINABLE RAPESEED CULTIVATION

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ABSTRACT

In this experimental study, conventional tillage, reduced tillage and direct sowing methods were applied to rapeseed cultivation in the province of Adana, Turkey. The amount of energy that is consumed in tillage, planting, fertilizing, agricultural spraying, harvesting and transportation stages were calculated during the rapeseed cultivation. Human labor, tractors, tools/machineries, fuel/oil, fertilizers, pesticides, irrigation and seed obtainment processes were taken into consideration as energy inputs to determine the amount of energy that is used in rapeseed cultivation. For the determination of the energy outputs in rapeseed cultivation, the lower heating values of winter oilseed rape was taken into account as 26.5 MJ/kg for grain and 17.1 MJ/kg for straw of the plant. For the determination of the energy efficiency, input and output values that acquired under the field conditions were defined by measuring data in the calculations. In all three type of applications, the energy input for fertilizer was 7242.50 MJ/ha, compared to other inputs in total energy input rate which was used in cultivation had the highest level, determined as %, 69.07%, 78.32% and 85.13%, respectively. The energy input for fertilizer was followed by energy inputs for diesel, machinery, seed, human labor and oil, respectively. The energy ratios of these rapeseed cultivations were determined as 7.30, 7.55 and 7.24, respectively for each application. When examining the energy efficiencies, the application of the reduced tillage method has the highest energy efficiency in the rapeseed cultivation that compared to other two applications.

Keywords: Conventional tillage, reduced tillage, direct sowing, energy efficiency, rapeseed, Turkey

124 A RESEARCH ON WATER PUMPING THROUGH SOLAR ENERGY

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ABSTRACT

Photovoltaic water pumping (PWP) systems are particularly suitable for water supply in remote areas where no electrical energy is available. Due to the high initial costs of the PWP systems, it is necessary to dimension photovoltaic installations as accurately as possible. In this study, some technical properties of a solar water pumping system have been researched and determined in terms of using electrical energy that obtained from solar energy through photovoltaic (PV) principles to assure mechanical energy for the operation of submersible pumps. For this purpose, electrical properties like current, voltage and power and the efficiency of the PV system have been determined. The system was made up of 3 arrays, consisted of 4 modules each, for a total of 12 modules and every module had a total of 12 × 6 = 72 PV cells. The flow rates of the pumped water, the hydraulic power values of submersible pumps and their efficiencies were calculated using three different submersible pumps, which operated electricity that produced through the PV system. Electrical power, transferred to the accumulator by a module was calculated as 656.23 W in the PV system. The average electrical power produced by the PV system was calculated as 2982.72 W. Electrical power generation efficiency of the PV system was calculated as 17.86% in average. The average flow rate, hydraulic power and efficiency values of the submersible pumps that have been used for the studies were calculated as in the range of 21.6-28.8m^3/h, 1270.58-1694.11 W and 42-56.6%, respectively.

Keywords: Solar water pumping, Photovoltaics, Submersible pump

125 ASSESSMENT OF SOLAR ENERGY, ITS POTENTIALS, ENERGY POLICIES AND CURRENT DEVELOPMENTS IN TURKEY

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ABSTRACT

Thanks to its perfect geographical position, Turkey has a huge solar energy potential. According to Turkey's Solar Energy Potential Atlas (GEPA), total sunshine duration is 2737 hours, annually and the quantity of average total incoming solar energy is 1527 kWh/m² year. Today there is great tendency towards clean, dependable and sustainable renewable energy productions to cover the increasing energy demands in all over the world. Renewable energy productions are subsidized by the governments and also, these energy productions assure new employment opportunities. Renewables are also accepted as an alternative solution to fossil fuels not only for the generation of clean energy, but also for the protection of the environment and the entire life on earth. In this study, present status of solar energy, its potentials, productions, government incentives and solar energy usage in Turkey have been examined according to the

latest developments. In this way, it has been aimed to contribute to improvements in renewable energies and bring forth people's awareness to the subject.

Key words: Renewable energy, solar energy, incentives, Turkey

126 AN EVALUATION OF ENERGY AND EXERGY EFFICIENCIES FOR A BIOGAS COGENERATION PLANT

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ABSTRACT

The objective of this paper is to evaluate energy and exergy efficiencies of a biogas cogeneration plant. The total and net energy efficiencies for this biogas cogeneration plant were calculated as 91% and 85%, while the total and net exergy efficiencies were 55.5% and 51.7%, respectively. Electric and heat efficiencies and equivalent electrical efficiency of the plant were 37%, 48%, and 80%, respectively. The primary energy savings and relative primary energy savings were found as 264 kW and 22%, respectively. The relative CO_2 emissions savings were calculated as 0.62286 $kgCO_2/h$ for the plant.

Keywords: Cogeneration, energy efficiency, exergy efficiency

127 ENERGY EFFICIENCY INVESTIGATION OF A FURNACE BURNER REPLACEMENT AT REFINERY DISTILLATION UNIT

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ABSTRACT

The reduction, of energy cost related to the oil final product, related to energy efficiency is gaining importance day by day. Oil refineries contain high energy consuming systems. The refinery furnaces used in various places become at the top of these systems. The flue gas oxygen level can be reduced by replacing old type burner with ensuring better combustion in furnaces. In this study, the effect of energy efficiency was investigated for replacing burner in a furnace that supplies heat to reboiler side. The flue gas

oxygen values were measured during operating conditions and after application in the furnace burners. According to the results, while the flue gas oxygen value before application of the burner replacement is 5%, it can be reduced to 2,1%. Thus, the efficiency of the furnace has increased from the 88.7% to 90.08%.

Keywords: Energy efficiency, Burner replacement, Oil Refinery Furnace, Crude Oil Distillation Unit

128 SAFETY PRECAUTIONS AND REGULATION ON INDUSTRIAL BIOGAS PLANT: TURKISH MARKET

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ABSTRACT

Biogas, as one of the renewable energy sources, has become increasingly an important alternative energy source. Plants, which treat waste to produce energy, have moved to industrialized size with intensive studies in recent years. Efficiency and safe operation of these plants are very important for plants sustainability. For this purpose, safety measures must be standardized and applied to whole process from manufacturing to energy production within a biogas plant. In this study, all potential risks and necessary precautions taken against these identified risks are listed in a continuously running biogas plant. Moreover, it is also emphasized the necessity of drafting a regulation and the content of this regulation on this issue within Turkey.

Keywords: Biogas, plant safety, precautions, regulation

129 DETERMİNATİON OF OPTİMUM CONDİTİONS FOR CO-DİGESTİON OF CATTLE MANURE WİTH CHİCKEN WASTES AND CHEESE WHEY

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ABSTRACT

Aim of this study determine the optimum conditions for producing biogas by co-digestion of cattle manure, chicken waste and cheese whey. The amount of cattle manure was kept constant and chicken waste and cheese whey was fed at different organic loading rates. The system was operated on batch mode under mesofilic (40 ^{o}C) conditions. Effects of pH, stirring speed and temperature on the biogas yield was evaluated at the same time. Results show that co-digestion of this wastes provided increase of biyogas yield of cattle manure.

Keywords: Cattle manure, chicken waste, cheese whey, biogas, anaerobic co-digestion

130 CARYOLOGİCAL STUDİES ON SOME SUBGENUS *POCİLLA* (*VERONİCA* L.) SPECİES İN TURKEY

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ABSTRACT

This study was carried out between the years of 2012-2015. Up to date the karyological studies on *Veronica argute-cerrata* Regel & Schmalh. and *Veronica campylopoda* Boiss. was completed about natural poliploidic taxa. With the present study non poliploidic *V. argute-cerrata* and *V. campylopoda* species was first time determined. The karyological studies of the taxa was completed and basic chromosome number was determined to n (x) = 7. The data was supported with 5.8 S ITS region. The chorology and the origin of the taxa was also determined. The dustribuion of vernal taxa was determined on terrestrial ecosystem and alpinic pasture.

Key words : Subgenus *Pocilla*, Chorology, Karyology, Turkey

131 THE CHOROLOGY OF GENUS LAUROCERASUS DUHAMEL (ROSACEAE) İN EAST BLACK SEA REGİON - TURKEY

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ABSTRACT

This study was carried out between 2009-2011. The aim of the study was to determine Laurocerasus Duhamel genus grown in East Black Sea Region. With these ecolgical and chorological studies on Cherry laurel belonging to Laurocerasus Duhamel genus grown in East Black Sea Region was determined. In this study Cherry laurel, with regional names “ince, kiraz, geç, vavul, yürek, karpuz, siyah, fındık, beyaz, sivri, yabani” which grown in East Black Sea Region have been used. According to our study 11 taxa of local culture was observed and first time the Laurocerasus officinalis Roemer c.v. “beyaz karayemiş” was determined in Turkey. With this study, chorology of determined taxa in Turkey has been shown by the grid square system.

Key words: Laurocerasus officinalis, Distribution, Chorology

132 IMPACTS OF GLOBAL CLIMATE CHANGE ON THE BIRDS AND AROUND LAKE VAN BASIN

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ABSTRACT

It is widely accepted that the earth is under the threat of global warming. This affects all the living things including humans and the ecosystems. Climate change also changes the behaviours of the living things and their habitats. Data included in this study is derived from the outcomes of the projects we have carried out in Van, Muş, Bitlis, Ağrı and Hakkari between 2010 and 2016. Five projects were carried out in the field which are officially supported. Although *Oenathe alboniger* (Hume's Wheatear) is spread in southern parts of Turkey, it is recently observed in the basin during summer months. *Vanellus spinosus* (Spur-winged Plover) and *Streptopelia decaocta* (Collared Dove) species are spread in south of Lake Van Basin. However, it was determined that both species recently reproduced in and around the basin with an increasing population. Along with the destruction of their habitat and global warming, other factors may have caused this situation. Pelicans are also one of the species migration routes of which were moved from south to north. Two pelican species which were observed in the wet lands around Lake Van were not seen in last two decades. It is estimated that these birds migrate from north. It was observed that *Otis tarda* (Great Bustard) and *Grus grus* (Crane) which arrive in the area in spring time from south arrived 1-2 weeks earlier compared to the past. *Cygnus cygnus* (Whooper swan) is also one of the species which arrive from north to spend the winter in the basin. Various duck species in the same situation arrive from north later and leave rather early in the spring. Summer immigrants *Ciconia ciconia* (White Stork) and *Oxyura leucocephala* (White – headed Duck) species arrive rather early in the spring and leave late in the autumn. It was even observed that a few individuals of both species spent the winter in the wetlands in the basin which did not freeze. Based on the ornithological findings given above, we can say that climatic southern border continued to move towards north. Borders of the reproduction areas of some bird species which reproduce in south are moving towards north. While birds which reproduce in north used to come southern parts, now they are not going down that much. Thus, they spend the winter in and around Lake Van Basin the climate of which is milder compared to past. It is obvious that the most distinct impact of climate change on birds is on migration dates, migration routes and habitat change.

Keywords: Birds, Avifauna, Climate Change, Global Warming, Lake Van

133 SOME EXTRACELLULAR ENZYMES PRODUCTION CAPABILITY DETERMINATION ALKALI-TOLERANT *STREPTOMYCES* SP. ISOLATED SEDIMENTS OF LAKE VAN

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ABSTRACT

There are many soda lakes which different in size, spread over various continents in the world. Most known of them are Magadi lake, Lake Van, Big Soda Lake and Mono Lake (Grant, 2004). Lake Van has 1648 m altitude of 450 meters depth, 576 km^3 volume and 3,522 km^2 surface area. While it is the world fourth largest indoor lake, it is largest soda lake in the world. Besides, pH of this lake water ranged from 9.7-9.8. In this study, two alkaline *Streptomyces* strains isolated from Lake Van. They are tolerant to produce lipase and cellulase enzymes which is very important for industrial production. Alkali-tolerant *Streptomyces* sp.H0048 strain was isolated from different locations of Lake Van sediments according to the production ability lipase enzyme, called lipase positive (+). In addition, *Streptomyces* sp. H0001 strain is able to produce cellulase enzyme, called cellulase positive (+).

Key words: Lake Van, Alkali-tolerant, *Streptomyces*, Lipase, Cellulase.

134 PRE-STUDIES ON THE 16S RRNA ANALYSIS OF *MICROMONOSPORA* SPECIES ISOLATED FROM VAN LAKE BASIN

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ABSTRACT

In this study, 16S rRNA analysis of isolates were completed by determining the biochemical and phenotypical characteristics of *Micromonospora* strains which were isolated from soil and sediment samples collected from Van Lake Basin. In the research, totally 141 strains were isolated and all of them were classified as in *Micromonospora* genus with respect to their biochemical and phenotypical properties. Because of the fact that the classical taxonomical issues were not unsatisfying for the identification of the members of this genus as it was stated in the literature, by performing sequence analysis of 16S rRNA gen region the identification of the strains were confirmed. According to the results of the analysis of representative isolates, most of them were still the members of *Micromonospora* genus; *Micromonospora sp. Sd-24*, *Micromonospora saelicesensis* strain EB107, *Micromonospora saelicesensis* strain HWG-A31, *Micromonospora sp.* FXJ3, *Micromonospora citrea* strain 22518, *Micromonospora sp.* DS3010, *Micromonospora lupinistrain* 14N, *Micromonospora echinospora* strain 80297, *Micromonospora echinofusca* strain DS43913 but, 5 isolates were determined as the members of Actinobacteria class; *Amycolatopsis sp.* 232068, *Actinomadura hibisca* strain IMSNU 22185, *Saccharotrix taxasensis* strain HBUM173840, *Nocardia carnea* strain HBUM174759, *Nocardia sp*. ET2s3.

Keywords: *Micromonospora*, 16S rRNA, Molecular Characterisation.

135 EFFECT OF CULTIVAR AND MECHANIZATION USED ON ALFALFA HAY PRODUCTION

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ABSTRACT

Alfalfa crop, produced in about 15,000 hectares in Kosovo, is an important product that provides high quality feed for livestock. The average yields of alfalfa hay in Kosovo vary significantly depending upon location, production technology and level of mechanization, rainfall or irrigation, and the season. However the potential for alfalfa hay yield is not achieved due to out-dated cultivars, non-adequate production technology and mechanization. The alfalfa crop production is characterized by a very low yield (between 3–5 t/ha alfalfa hay per year from 3 cuts per year), high production cost and poor quality of hay. Field experiments included three high potential cultivars and 3 seeding rates, ranging from 15 to 25 kg seed/ha, that were established in two regions in Kosovo. The objective was to determine the impact of proper technology and mechanization used on alfalfa hay yield. The effect of mechanization for soil preparation, sowing, plant maintaining, harvesting, and hay field drying, were investigated at two regions. The cultivars

had a significant effect on forage yield, where Banat reached higher hay yield (16.7 t/ha), Mediana (14.3 t/ha), and OS-66 (13.6 t/ha). The highest forage yield was achieved in higher seeding rate (25 kg/ha) with an average of 14.2 t/ha of alfalfa hay, 13.7 t/ha at seeding rate of 20 kg/ha, and 12.1 t/ha at 15 kg/ha of seeding rate.

Key Words: Alfalfa crop, hay yield, cultivar, location, mechanization

138 THE ALLELOPATH'C EFFECTS OF *ACHILLEA FILIPENDULINA'S* WATHER AND METANOL EXTRACT ON CROP AND PURSLANE SEEDS GERMINATION AND ON MITOTIC INDICES

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ABSTRACT

Because of increasing herbicides usage and their damage to the environment there is a need to study about allelopathy as an alternative way fighting. For that purpose, water and methanol extract were used for identifying allelophatic potential of *Achillea filipendulina*. The effect of these extract on *Portulaca oleraceae* L. and *Zea mays* L. seed germination and mitotic index were investigated. From the %3, %5, %7, %9 concentrations of plants pure water and methanol extracts were prepared. 6ml of extract prepared from plants were added on *Portulaca oleracea* , *Zea mays*'s seeds. For the control group same amount of pure water was used. Cytologist preparations were prepared by Feulgen Squash technique. As a result, during the application of the water and methanol extract of *Achillea filipendulina* to corn and purslane seeds, depending on remaining concentration of extract a decreasing was observed in the length of plumule and radicle and in the percentage of germination. In term of Mitotic index, in corn seeds implementation *Achillea filipendulina'*s water and metanol extract according to remaining extract concentration it was determined that the mitotic index value was decreasing, and the minimum value occurred when %9 methanol extract was applied. The purslane seeds applied *Achillea filipendulina* water and methanol extract after control applications, important decreasing was determined at mitotic index value while %3 extract implementation. Any divisions were not observed in other extract implementations.

Key words: Germination, Mitotic index, Allelopathy

139 DIVERSITY OF LEGUMINOSAE IN THE PROVINCE OF ERZURUM

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ABSTRACT

Leguminosae family is one of the richest families in the taxa Number of maintenance over the world. Animal nutrient and soil quality that allows family members to be increasing contains rich in nitrogen. Erzurum is covered with 32% of the plateau. Leguminosae, it is represented by the 225 taxa in Erzurum. Of these, 89 in this study, 139 were identified in previous studies. In addition, these taxa are focused on vegetation characteristics and symbiosis with Rhizobium bacteria capacities. A total of 52 (23.1 %) endemic species have been determined from the area. The distribution of the endemic and rare taxa according to the threat IUCN red data is as follows: 1 takson critically endangered "CR", 2 taxon in endangered "EN", 9 taxa in vulnerable "VU", 9 taxon in near threatened "NT", 25 taxa in least concern "LC" and 9 taxa in data deficient "DD".

Keywords: Erzurum, Diversity, Leguminosae, *Rhizobium*.

140 CORROSION OF CARBON STEEL IN 3% NaCl SOLUTION IN THE PRESENCE OF 1-BUTYL-METHYLIMIDAZOLIUM HEXAFLUOROPHOSPHATE

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ABSTRACT

Carbon steel is one of the most used materials in industry due to its properties. However, carbon steel is exposed to highly aggressive environments and therefore susceptible to corrosion. Ionic liquids have been extensively studied as inhibitors in the corrosion of steel materials. The aim of this study is to test the inhibition performance of the ionic liquid 1-butil-3-methylimidazolium hexafluorophosphate as corrosion inhibitor for 36CrMo steel in a 3 wt.% NaCl solution at 19, 30 and 40 °C. The corrosion rate and inhibition efficiency have been assessed using the gravimetric method. In addition, the possible synergistic effect between 1-butil-3-methylimidazolium hexafluorophosphate and I was also investigated.The results show that an increase in the 1-butil-3-methylimidazolium hexafluorophosphate concentration leads to lower corrosion rate of the carbon steel samples immersed in 3 wt.% NaCl solution. The inhibition efficiency decreased with the increase in temperature. The mechanism of corrosion protection for this inhibitor is also discussed.

Keywords: corrosion inhibitor, carbon steel, 1-butil-3-methylimidazolium hexafluoro-phosphate, ionic liquid, chloride solution

141 1-BUTYL-3-METHYLIMIDAZOLIUM BROMIDE AS CORROSION INHIBITOR FOR CARBON STEEL IN 3% NaCl SOLUTION

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ABSTRACT

Corrosion is an electrochemical process that affects the structure and mechanical properties of metals leading to equipment failure. It is not possible to prevent corrosion, but there are ways to control it. Addition of small amounts of corrosion inhibitors is one of the most effective and practical method to protect metals. Ionic liquids have in the last years drawn the attention of researchers as possible corrosion inhibitors for several metals in general and for steel in particular. This study reports about the corrosion inhibition efficiency of 1-butil-3-methylimidazolium bromide in the corrosion protection of 36 CrMo steel in 3 wt.% NaCl solution.The corrosion rates of the carbon steel samples have been determined using the weight loss method at 18, 30 and 40 °C. The possible synergistic effect from the addition of 0.1 wt.% KI was also explored. The inhibition efficiency of 1-butil-3-methylimidazolium bromide increases with its concentration up to 94.56%. A decrease of the inhibition efficiency with increasing temperature was observed. The mechanism of corrosion protection for this inhibitor is also discussed.

Keywords: corrosion inhibitor, carbon steel, 1-butil-3-methylimidazolium bromide, ionic liquid, chloride solution

142 EFFECTS ON SOİL FERTİLİTY OF FOREST REHABİLİTATİON BLACK ALDER USE

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ABSTRACT

In this study, it has been investigated the effects of nitrogen mineralization over degraded beech field with support of black alder. For this purpose, degraded beech forest area was selected in Arhavi, Artvin. These area were prepared for beech planting, black alder planting, beech + black alder planting and control (non plantation) fields after clear-cutting studies. Soil samples were taken 24 trial sites in these areas. Nitrogen mineralization was determined by using micro distillation method with field incubation. Nitrogen mineralization period were conducted between November 2014 and October 2015. As a results of this period, it has been found that the amount of mineralization in the beech planting area was 25,82 kg ha^{-1}, black alder planting areas 26,24 kg ha^{-1}, beech+black alder areas 25,48 kg ha^{-1} and control areas 22,89 kg ha^{-1} . According to these result, net nitrogen mineralization amount in the planting areas were higher than control areas. Studies show that black alder enriches the soil with nitrogen. This is a three year project and the importance of black alder rehabilitation will emerge more clearly in the future.

Key words: nitrogen mineralization, beech, black alder, field incubation, Artvin.

145 ACTIVATED CARBON PRODUCTION FROM VAN APPLE PULP AND USE OF IN TEXTILE DYES ADSORPTION

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ABSTRACT

In this study, chemical activation of carbon from Van apple pulp isolation, its characterization and use of textile dyes adsorption were investigated. Activated carbon was prepared from apple pulp by chemical activation with $ZnCl_2$ and Malachite Green and Metilen Blue were used as a dying material. In this research, the properties of prepared carbon were determined by BET, XRD, SEM, FTIR systems and zeta potential and the characterization of these systems and the adsorption of liquid phase of dying material are investigated. SEM image, XRD pattern and IR spectrum show that no zinc is fixed at the surface of VAAC depending on the chemical activation process to prepare the activated carbon. There is no any zinc particle at the surface on SEM image and no characteristic peaks and IR bands belonging to zinc or zinc forms are not detected in the XRD pattern and IR spectrum. Experimental data were analyzed using the Langmuir and Freundlich equations and constants equations were determined in this these. Adsorption enthalpy (ΔH^0) of thermodynamic parameters, Gibbs free enthalpy (ΔG^0) and adsorption entropy (ΔS^0) values were calculated. In addition, experimental studies have been conducted at four different temperatures, with different initial concentrations. The activated carbon which was obtained from apple pulp impregnated with ZnCl2 has remarkable BET surface area (1067.01 m^2/g) with a well-developed pore structure and the average pore diameter is 2.46 nm. It is produced with a reasonable yield, 43%.

Keywords: Activated Carbon, Adsorption, Reactive dyes, Waste Van Apple Pulp.

147 AGE AND GROWTH OF *APHANIUS SPLENDENS* (CYPRINODONTIDAE) FROM LAKE SALDA-TURKEY

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ABSTRACT

This study concerns an investigation of the population structures and some growth properties of *Aphanius splendens* living in Lake Salda (Turkey). For this purpose the population densities, age and sex compositions, growth in length and weight, length-weight relationships of *A. splendens* have been obtained and compared with other studies. We examined a total of 525 individuals, of which range in size between 2.8 and 5.2 cm in total length, 0.18 and 1.03 g in total weight. The 525 *A. splendens* individuals consisted of 445 (84.76%) males, 80 (15.24%) females, sex ratio is significantly different ($P < 0.05$) from the expected 1 : 1 (male, 5.56: female, 1). Ages of captured specimens ranged from I to IV, with third year-class being dominant in the population. The length–weight relationship for all individuals were described by the parameters: a = 0.0133 and b = 2.5869.

Key words: Aphanius splendens, Age, Growth, Lake Salda

148 AGE AND GROWTH OF *APHANIUS SUREYANUS* (CYPRINODONTIDAE) FROM LAKE BURDUR-TURKEY

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ABSTRACT

This study concerns an investigation of the population structures and some growth properties of *Aphanius sureyanus* living in Lake Burdur (Turkey). For this purpose the population densities, age and sex compositions, growth in length and weight, length-weight relationships of *A. sureyanus* have been obtained and compared with other studies. We examined a total of 350 individuals, of which range in size between 1.2 and 4.5 cm in total length, 0.029 and 1.025 g in total weight. The 350 *A. sureyanus* individuals consisted of 103 (29.43%) males, 247 (70.57%) females, sex ratio is significantly different ($P < 0.05$) from the expected 1 : 1 (male, 1: female, 2.40). Ages of captured specimens ranged from 0 to IV, with second year-class being dominant in the population. The length–weight relationship for all individuals were described by the parameters: a = 0.0077 and b = 3.2207.

Key words: Aphanius sureyanus, Age, Growth, Lake Burdur

149 AGE AND GROWTH OF *APHANIUS TRANSGRADIENS* (CYPRINODONTIDAE) FROM LAKE ACIGÖL-TURKEY

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ABSTRACT

This study concerns an investigation of the population structures and some growth properties of *Aphanius transgradiens* living in Lake Acıgöl (Turkey). For this purpose the population densities, age and sex compositions, growth in length and weight, length-weight relationships of *A. transgradiens* have been obtained and compared with other studies. We examined a total of 165 individuals, of which range in size between 2 and 6.1 cm in total length, 0.088 and 2.33 g in total weight. The 165 *A. transgradiens* individuals consisted of 58 (35.15%) males, 107 (64.85%) females, sex ratio is significantly different ($P < 0.05$) from the expected 1 : 1 (male, 1: female, 1,84). Ages of captured specimens ranged from I to V, with second year-class being dominant in the population. The length–weight relationship for all individuals were described by the parameters: a = 0.0118 and b = 3.0274.

Key words: Aphanius transgradiens, Age, Growth, Lake Acıgöl

150 A RESIDENTIAL LANDSCAPE DESIGN MODEL FOR AREA OF DURRES.

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ABSTRACT

Landscape architecture is a relatively new discipline in Europe but virtually unknown in Albania before 1990. It has experienced rapid development during last decade in our country. A residential landscape

design model for a family house in Durres is presented. Durres stretches to the coordinates 41° 18 '40' north latitude to 19° 26 '21 "east longitude. The relief is mainly plain and hilly soft height up to 200 m above sea level. The aim of the paper is to present a residential design process and propose plant species and materials that can be used in residential landscape design for Durres. Three site visits were accomplished during this process; during first visit a general survey of the place and a family interview were done. An imported part of site analyses was soil and climate evaluation. The analysis of data received from the absolute value of annual mean minimum temperature is defined Plant Hardiness of the Durres and based on this has become the choice of ornamental plants. After analyzing this information a design program was composed. The goal of this design program was to create a residential landscape master plan that would combine esthetic, environmental and production aspects of the place. Based on the design plan a functional scheme and a preliminary design were prepared. These were discussed with family members during our second site visit. The first idea, is realized in the project with a 6 meter wide road which starts from the main gate to the main entrance of the house. The project it was foresight a place for parking on the right side of the house so the road at all times be clear, in this approach it can be used by children's. The second idea was without the space for special parking. We have proposed that these place can be use by beneficiaries in the same time as parking for one or two cars without having the need to carry out one another asphalted parking instead of a portion of green. The feedback of the family members was reflected and a master plan was prepared for last variant. This master plan was presented during our third visit. The unity and harmony of the project are achieved by using species like Cycas revoluta , Bougainvillea gabra , and Jasminum spp and by using typical construction materials of the area.

Key words: Residential design, landscape, ornamental species, preliminary project.

151 AN ASSESSMENT OF THE IMPACT OF GREEN AREAS ON PUBLIC HEALTH INDICATORS OF FIERI PREFECTURE

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ABSTRACT

Public health policy in Albania should be based on evidence. Research relevant to public health policy increasingly uses a statistical technique called multilevel analysis. A quick literature search of academic literature shows that during last decade there are many studies that generally support the view that green space has positive effects on health. At any case establishing a causal relationship is difficult, as the relationship is complex. This study uses a Geographical Information System (GIS) to examine the relationships between the presence of green space and commune level mortality in Fieri prefecture. This research shows that the percentage of green space in people's living environment has a positive relationship with the general health situation of residents. The study concludes that the development of green space should have a more central position in urban and rural planning policy.

Keywords: Green space, GIS, public health

152 IMPACT OF CLIMATE CHANGE SCENARIOS ON THE PLANT HARDINESS ZONES OF TIRANA PREFECTURE

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ABSTRACT

Tirana prefecture is one of the most important prefectures of Albania. According to different climate change scientific reports Albania is considered an area of high risk regarding climate change. These changes are expected to be more evident in those parts of the country that have high relive changes like Tirana prefecture. In this study plant hardiness zones are used to analyze different scenarios of climate change. Representative Concentration Pathways (RCPs) are used for climate modeling. They describe four possible climate situations, all of which are considered possible depending on how much greenhouse gases are emitted in the years to come. The distribution and extent of plant hardiness zones was affected by the IPPC5 climate scenarios. The shifts in spatial pattern distribution of plant hardness zones introduces risk for the survival of some plant species, however, it represent at the same time opportunities for introducing new horticultural plants.

Key words: Climate change, plant hardiness zones.

153 MAJOR PRIMARY AIR POLLUTANTS CONCENTRATIONS IN GIRESUN, TURKEY

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ABSTRACT

Air pollution is one of the major environmental problem in urban areas. The problem depends on different factors such as unfavorable meteorological conditions, geopraphical and topography pecularities of urban areas, urban planning and inappropriate fuel consumption. The main causes of air pollution in Turkish urban area low quality coal and fuel-oil consumption, as well as also exhaust gases emitted by transportation vehicles. Meteorology is well known as a major contributor to air pollution episodes. Meteorology impacts levels of air pollution by influencing both directly and indirectly the emission, transport, formation, and deposition of air pollutants. For that reason, the air pollution levels in urban has been correlated with different meteorological parameters in studies. In this study, air pollutants released by heating source were taken into account for the statistical analysis PM10 and SO2 concentrations were measured at two different locations Giresun, situated Blacksea region of Turkey during three years from September 2011 to September 2013. The relationship was investigated statistically between the air pollutant concentrations and meteorological parameters such as wind speed, temperature, relative humidity and pressure. Air pollutants concentrations was evaulated also according to changing season and national air quality standart.

Key words: air pollution, SO2, PM10, meteorological parameters, statistical analysis

154 ESTIMATING AIR POLLUTION QUALITY IN ISTANBUL CITY CENTRE BY GEOGRAPHIC INFORMATION SYSTEM

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ABSTRACT

Air pollution in urban areas comes from a wide variety of sources, including industries, motor vehicles, and in winter due to use of poor quality coal for heating. Istanbul, which is the largest and most populated urban area, and the centre of industry, economics, finance and culture in Turkey, these causing increasing the atmospheric pollution in Istanbul, coal dominated energy structure is also one of the major causes of air pollution in this city. A study involving 28 stations in Istanbul city, monthly average of PM_{10}, SO_2, NO_2, NO, NO_x, CO and O_3 for 2015 was collected from the Government air quality measurement network, the data were interpolated using a geographic information system by IDW technique for each pollutant according to capability of GIS among air pollution modelling, where built model for yearly average of pollutants. The spatial and temporal results showed that PM_{10}, NO_2, NO and NO_x concentrations increased in the industrial and non-green areas such as Esenyurt, Yenibosna, Selimiye, Çatladikapı and Kağithane, and not within the Air Quality Index (AQI) of Turkey, while concentrations of ozone, CO and SO2 did not reveal any significant change throughout the whole studied period.

Keywords: Air, Pollution, Geographic Information system, Modelling. Istanbul, sulphur dioxide

156 SUITABILITY OF WELL GROUND DRINKING WATER IN KONYA CENTRE BY GEOGRAPHIC INFORMATION SYSTEM

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ABSTRACT

Groundwater systems globally provide 25 to 40 percent of the world's drinking water. The groundwater pollution which is of some concern in the area is mainly by industrial waste-Disposals and agricultural activities. Konya is one of the most significant industrial cities in Turkey. Groundwater is essential for drinking water source in the Konya city centre. The purpose of this study is Suitability of groundwater for drinking water in Konya centre by calculating the WQI and using Geographical Information System (GIS) techniques. To evaluate spatial and temporal of the groundwater quality by using geostatistical analysis based on data from 80 groundwater wells, groundwater samples were analyzed for electrical conductivity (EC), hardness, Ca^{2+}, Mg^{2+}, $CaCO_3$, Cl^- and SO_4^{2-} and Water Quality was compared for the World Health Organization WHO drinking water standards. ArcGIS package programme was used for the application of a kriging method, semivariogram model selection, and development of a distribution pattern of groundwater quality parameters. It was specified in many places that (EC), hardness, Ca^{2+}, Mg^{2+}, $CaCO_3$ and SO_4^{2-} in most samples exceeded the maximum contaminant levels according to WHO and EC standards, and the resulting undesirable effect on human system, which indicated that the groundwater might be polluted and unsafe for drinking. For this reason, in this investigation water quality and level in WQI was analysed using computer modelling programme.

Keywords: GIS, Groundwater quality, WHO, Geostatistical analysis, Kriging.

157 STREAM BANK SOIL LOSSES WITHIN THE WATERSHED SCALE

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ABSTRACT

In the watershed scale, streambank erosion, as a source of non-point water pollution, is one of the major contributors to eutrophication of lakes and stream habitat degradation. In this on-going study, streambank erosion rates from 14 different sites in the Oltu watershed in Erzurum were measured. The erosion pin method was used and the pins were measured over sixteen months. Total streambank areas and the lengths by Strahler classification, soil bulk densities from the bank areas and erosion rates by the pins were measured to calculate total soil loss via stream bank erosion. The average erosion rate for the sixteen mouths period was 3.99 cm and the average stream bank soil bulk density was 1.52 g/cm^3. After the stream length and the area measurement, the total soil loss from the stream bank erosion will also be estimated. The conclusion from the study would help the managers of watershed to locate their resources at specific high risk areas to reduce the erosion rates.

Key words: Stream Bank Erosion, Erosion Pin Method, Water Pollution

158 THE EFFECT OF SEEDLING VIGOUR TO THE SUCCESS OF WALNUT BUDDING

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ABSTRACT

Walnut (*Juglans regia L.*) is difficult to propagate by conventional vegetative propagation using rooted cuttings, budding, and grafting.Investigations conducted so far on walnut grafting and budding distinctly indicate many factors determining a high percentage of their successful. The main factors are temperature, methods of grafting or budding, date of grafting or budding and the environmental moisture. Also, the robustness of different plants is important factors for the budding successful. In this experiment was investigated the effect of vigour of the different seedlings on grafting success and scion growth of walnut.To determine the effect of vigour of seedlings to the success of grafting the plants have been grouped into two categories: a-low vigour seedlings (potted seedlings) with an average height 25-35 cm, b-high vigour seedlings (field seedlings) with an average height 55-75 cm. while the mean scion shoot length of low vigour seedlings was more less than the scion length of the high vigour seedlings

Key words: walnut, budding, seedling, scion, low vigour, high vigour

159 EFFECTS OF HAZELNUT ZURUF COMPOST AND TEA COMPOST MIXTURES ON YIELD AND QUALITY YIELD OF LEAF LETTUCE (*Lactuca sativa* L. var. *crispa*)

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ABSTRACT

Objective: In this study, the effects of hazelnut husk compost and tea compost growing mediums in different mixtures were investigated in lettuce cultivation. Material and methods: In the experiment, 100% hazelnut husk compost, 80% hazelnut husk compost + 20% tea compost, 60% hazelnut husk compost + 40% tea compost, 50% hazelnut husk compost + 50% tea compost, 40% hazelnut husk compost + 60% tea compost, 20% hazelnut husk compost + 80% tea compost and 100% tea compost of the growing medium is used. The research conducted in autumn production season. Seedling was transplanted in plastic pods in 19 October 2012 and developed plants were harvested in 21 December 2012. Yield, leaf width, leaf length, and leaf colour (hue, croma) and Vitamin C of lettuce were determined. Results: In terms of yield values of 60ÇK40FZ media (60% tea compost+%40 hazelnut husk compost) gave the highest yield with 5549 g/m2 while 100 ÇK media gave the lowest yield with 4584 g/m2. Varieties in terms of yield value were listed as Campania, Fırtına and Funly. Highest leaf dry weight and Vitamin C was found 100% hazelnut husk medium.Conclusions: Agricultural wastes has become popular growing medium which are likely to be makes for higher quality in greens. They can use as a soil amendment in orchard and greenhouse cultivation with savings in chemicals and fertilizers.

Key words: Lettuce, Tea compost, Hazelnut zuruf compost, Yield, Quality

160 THE EFFECT OF GROWING MEDIA AND ORGANIC FERTILIZING ON SOME YIELD PROPERTIES OF THE SORREL (*Rumex acetosella* L.)

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ABSTRACT

Objective: This study was conducted in the practise greenhouse and laboratories of Ordu University Faculty of Agriculture Department of Horticulture in 2013-2014 production seasons for growing sorrel. Material and methods: Turf, pearlite, cocopeat and naturally composted hazelnut zuruf were used as the growth medium in the study. Commercial organic sedimentary Eko Agri and AKC fertilizers were added into the growth medium in the proportions of 0, 7.5 and 15 percent (%) by volume. The growth mediums prepared were filled up in 50x18x16 cm sized balcony type plastic pots. The study was conducted as 3-repetitive in the experimental design of randomised parcels and standard seeds of sorrel (*Rumex acetosella* L.) were used as the experiment materials. The seeds were sowed as 2 g/m2 on 26.11.2011. The plants were harvested twice on 26.01.2012 and 08.05.2012. The yield, scapus length, leaf blade length, leaf blade width, colour (hue° and chroma values), vitamin C and dry matter quantity at oven values of the harvested plants were determined. The results of the values of each harvest were assessed independently in TARIST

statistical package program. Results: Leaf quality of the sorrel increased when organic fertilizer was added in the study. Increases were observed up to 139% in leaf blade length, 113% in leaf blade width and 150% in leaf scapus length. Organic fertilizer caused a decrease in dry matter, Vitamin C and chroma values. Turf medium showed the highest yield with the yield values of 1682 g/m2 at the first harvest and 1484 g/m^2 at the second harvest. Conclusions: Organic fertilizer gives good results sorrel plants in terms of yield and quality. Hazelnut husk compost is regional agricultural wastes, so it can be a good growing medium in case of enriched with organic fertilizer.

Key words: Sorrel, medium, organic fertilizer, yield, quality

161 ACCESS OF CCHP SCHEMES IN RESIDENTIAL SECTOR FOR CLIMATIC CONDITIONS OF ALBANIA

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ABSTRACT

The starting point of this paper is the electricity situation of our country, where the electricity demand is increased since 2010 from 6,970 TWh/year, to 7.961 TWh/year in 2013. In addition to the importing financial barriers, the main problem faced today by the Albanian power sector is the limited technical capacity varying averagely 10-12 Million kWh/day for domestic generation and 8-10 Million kWh/day for the import, providing a total average supply of 18-20 Million kWh/day. It should be emphasized that the demand in a normal winter day reaches to 25-27 million kWh. As a consequence, the power system fulfils only 70-80% of the total demand during the peak winter period, causing power suppl y shortages to customers. Relying on measures that must be taken to overcome this situation, which are clearly expressed in the National Strategy of Energy approved by the Government of Albania, one of them is the introduction of Combined Heat and Power Schemes (CHP) and district heating (DH) in a relatively small area. In this context is considered a residential building positioning in four different cities of our country. Each city (Vlore, Tirana, Gjirokastra and Korca) represents a climatic zone. Based on the methodology described in this paper is made analysis and assessments of combined cooling, heating and power systems in different climatic zone.

Key words: CCHP, HVAC, Primary energy saving, Exergy Efficiency

162 GEOGRAPHIC DISTRIBUTION OF PLANT GENETIC RESOURCES DIVERSITY IN TIRANA REGION

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ABSTRACT

Distribution and genetic diversity of 198 geo-observations, including 34 plant species, from the four areas of Tirana region was carried out, using grids of 5 x 5 km, to assess the species richness, the area of occupancy and diversity indices. Geospatial analysis and combination of diversity indices as species richness, Simpson (1–D), Shannon, Evenness, Brillouin, Equitability and Fisher-alpha indices found the areas of Tirana North and South were richer and more even than other observed areas. Observed diversity in Tirana East areas was comparable with diversity observed in Tirana South, Tirana West and Tirana North areas, but the diversity among these three latest areas was non-comparable. Cluster analysis based on Euclidian distance generated a dendrogram of three clusters. Higher similarity positively correlated was found between diversity observed in Tirana North, South and East areas (similarity index range from 41.74 to 43.48 and correlation coefficient r raged from 0.22 to 0.28). Tirana North and Tirana South were the areas with more even (0.806) and equitable (0.924) number of individuals distributed among species. There was a negative relation among the number of species observed in each areas and elevation of present points from the sea level. Results of this study suggest the presence of possible stable ecosystems available in these areas, and diversity of these areas can be used for the assessment of the current status of conservation of plant genetic resources and for the prioritization of potential ecological areas suitable for in situ conservation.

Keywords: Diversity indices, geographic analysis, species distribution.

163 ECOLOGICAL STUDIES ON THRIPS SPECIES IN INFLORESCENCES OF *LOTUS CORNICULATUS* IN A GRASSLAND ECOSYSTEM FROM ROMANIA

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ABSTRACT

Lotus corniculatus, a fabacea important as fodder and having a role in edification of the vegetal layer in the grassland ecosystems, represents a trophic support for many species of insects. Observations made during the period June to September 2012 in a hilly meadow in the central-southern part of Romania reveal a great specific diversity of the Thysanoptera fauna in the inflorescences of *Lotus corniculatus*. As many as 2,412 individuals belonging to 21 species of Thysanoptera were collected, most of them being polyphagous phytophagous species. Aspects of taxonomic and ecological structure of the populations of thrips were highlighted, as well as the sex ratio, the population dynamics, the relationships between the thrips coenoses depending on the time of collection, the structural and functional parameters of thrips populations. The species constantly participating in the cenosis structure, *Odontothips loti* and *Frankliniella intonsa*, have the highest values of structural and functional indices, which attests the attachment to the host plant. The present study adds to the list of taxa that inhabit this fabacea and highlights the importance of the species *Lotus corniculatus* in ensuring and preserving the biodiversity of this group of insects.

Key words: Thysanoptera, *Lotus corniculatus*, specific diversity, ecological indices

164 THE ECOSYSTEMS IN THE MINING INDUSTRY IN KOSOVO AND EU LEGISLATION

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ABSTRACT

Kosovo has considerable coal reserves have introduced a new practice of using coal while maintaining ecosystem .Kapja- Zamen Carbon Carbon Co. greenhouses affects the ecosystem and the dinosaurs in the universe, this southeastern region of Europe, it is the continuous monitoring of professionally with new methods and standards as European EU resources with mining development strategy for Kosovo with the help of experts who are engaged in this study. Aquatic ecosystems are divided: 1. Freshwater ecosystems (rivers, lakes, brooks, marshes, swamps).2. Ecosystems of brackish water (seas and oceans). The ecosystem is an active community of biosphere, which is composed of living organisms, located in a well-defined area. In this space, living organisms are closely related among themselves and with the physical environment, the interaction of diverse energy for sharing files. Aquatic ecosystems include 71,7% and 28,3% terrestrial ecosystems include. In terrestrial ecosystems include: forests, pastures, meadows, tundra, steppe, desert, anthropological (hands). These are areas where the mixing of sea water in rivers as a result of intertidal. Hydrosphere in the entirety of continental waters accounts for 2%. During a trip to the ordinary ear can notice that near the forest and pasture lands are also made of the plant. These are some of the specific ecosystems, relatively young, performed by human activity (deforestation, land reclamation, wetlands drying etc.). These are called the cultivated agricultural ecosystems, forming a landscape other than natural. Agricultural environment, each farmer works and organizes an ecosystem of its own, that cultivated agriculture. Its essence is to change the nature, changing the time of vegetation and production oriented by interests. In the second half of the century. XX in our country, due to changes in the environment, forests were cut and in their place were planted cereals, fruit trees, and vegetables. Along with cultivated plants are also developing other natural plants, no economic value. Mining and agricultural Ecosystem are generally on equal treatment of cultivated trees, other trees and herbaceous species. During the boom of beneficial species, in communion with them comes the species of creatures for which one does not need. Earth quivers. Plants and animals in general fulfill their reproduction. Cultivated agricultural ecosystem is dependent double, both by nature and its elements, the man with his interventions (fertilization, drainage, drainage, irrigation, elimination of unnecessary plants, etc.). Mining landscapes are different ecosystems. Thus landscape planted with wheat differs from that of planted forage, vegetables, or fruit trees. In the creation of agricultural and livestock ecosystems of great importance takes technological progress.

Key words: ecosystem, Carbon (CO), the EU laws and regulations, nature, water, earth minerals.

165 ASSESSMENT OF THE SURFACE WATER POLLUTION FROM THE OIL EXTRACTION INDUSTRY IN MARINZA OIL FIELD OF FIER, ALBANIA

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ABSTRACT

Pollution of surface waters from activity of oil extraction industry a waste. The oil extraction industry in Albania has a long history of polluting the environment including surface waters, groundwater and soil. This study would compare data available from a comprehensive environmental monitoring performed during 2007-2008 and nowadays to review whether the changes in company management and working practices have influenced the pollution level in the area. While there was a public Albanian company in

charge of oil extraction in the area until 2007, there is currently a foreign company in charge of such activities and environmental standards were introduced as part of the company responsibility. The study focuses on the environmental situation within the studied area (Marinza oil field). The new monitoring and championing of representative samples were taken at the same place or in vicinity of samples taken during the environmental baseline carried out in 2007. The environmental baseline at the time used the Location Conceptual Model for sampling. This survey will monitor the current environmental situation to check whether there are any changes from the baseline following the environmental standards which require new working practices in oil extraction. Finally, the study might promote some good environmental practices for oil extraction operators in Marinza oil field and suggest a list of good practices that could be implemented by all relevant stakeholders in the oil extraction industry.

Keywords: Fier, oil extraction, air, environmental pollution, environmental assessment, crudeoil.

166 EFFECT OF DIFFERENT INTENSIVE FIRE ON SOIL MICROBIAL BIOMASS IN BLACK PINE STANDS

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ABSTRACT

Soil microbial biomass (SMB) is important for soil quality and is evulating as a sensetive indicator for soil health. This study was carried out in areas applied high and low intensity ground fire and adjacent control areas in old Black Pine forest stands in Kunduz Forest Sub-District Directorate (Vezirköprü/SAMSUN). Soil samples were taken from surface (0-5 cm) and sub-surface (5-10 cm) layers of soil in each season from December'13 to July'15 in 8 plots. Chloroform-fumigation-extraction method was used to determine the microbial biomas C and microbial biomass N (MBC and MBN). SMB values were higher in control plots than in fire plots except MBC values of subsoil of high intensive fire applied area. MBC and MBN values were changed between 45,78 µg g^{-1} – 892,27 µg g^{-1} and 32,16 µg g^{-1} – 167,23 µg g^{-1}, respectively. In few seasons, significant differences were found out between MBC and MBN values of control and fire plots. This difference was by both fire intensity and values were higher in control than in fire area, except July'14. SMB was effected negatively after fire but this effect was not related to intensity of fire.

Key words: Soil microbial biomass, Test fire, Fire intensity, Black pine

167 DETERMINATION OF THE POTENTIAL OBSERVATION POINTS FOR BROWN BEAR (*URSUS ARCTOS*) INVENTORY: A CASE STUDY FROM NORTHEASTERN TURKEY

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ABSTRACT

Biodiversity, identified in three different levels including species, genetic, and ecosystem, has become a hot topic among earth sciences in the last decades. Forest inventory programs involve not only inventorying the forest tree species' traits but also inventorying the number of wildlife species and their habitats. Brown bear is one of the threatened wildlife species and its habitat must be protected during the natural resources planning processes. Thus, knowing absolute abundance and spatial distribution of the brown bear in a given area helps the managers to plan bear population dynamics and allocate suitable habitats in the critical areas within their planning units. A well-designed wildlife direct and in-direct inventory techniques for counting bear population may be labor-intensive, but not a cost effective methods. The aim of this study was to develop a cost effective, yet well-designed direct inventory methodology to count the brown bear population in the Meydancık Forest Enterprise in Savsat, Artvin, Turkey. In order to achieve the study goal, the visibility, proximity, and many other spatial analyses tools were utilized within ArcGIS software using geological features such as elevation, hill tops, slope, aspect and environmental variables such as land use types, stand types, tree heights and distances to the roads. The analysis results showed that two thirds of the study areas were observable from 15 dominant observation hills with a sight distance of 2 km. Other existed methodologies were observing one third of the same area with 38 observer points. It can be concluded that the final map that showing visible areas for brown bear observation can provide a precious background to natural resource managers for stratification of the planning unit and delineating the hotspots for biodiversity conservation within a multiple-use forest planning approach.

Keywords: Brown Bear Inventory, Visibility Analysis, Artvin

168 NATURAL AND CULTURAL MONUMENTS OF ELBASANI DISTRICT

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ABSTRACT

Elbasan has a great potential for tourism development in the region, thanks to its favorable geographic position, relief, natural potential, history and culture. The purpose of this paper was the identification of natural and cultural monuments in Elbasani district, emphasizing their scientific, ecological, cultural, spiritual and tourist values. Theoretical aspects and analysis have shown that ecotourism is a good opportunity to attract many domestic and foreign tourists to this region. Ecotourism has become one of the world's major economic sectors with the capability to play a significant role in the sustainable development in areas where nature attracts tourists (Powell & Ham, 2008:467; Fennel, 2002:12). White tourism, cultural tourism, mountain tourism, eco-tourism, agro-tourism are forms of tourist movement with development opportunities in the region. The sustainable development in the region requires: proposal and application of the best management models, protection and regeneration of biomonuments values, education on tourism and ecological values.

Keywords: Natural monuments, Cultural monuments, Ecotourism, Sustainable development, Elbasani district.

169 EVALUATION OF CADMIUM REMOVAL USING PRRENJAS MONTMORILLONITE CLAY

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ABSTRACT

Heavy metal ions such as cadmium, zinc, copper, lead and nickel are hazardous to both human life and the environment. The purpose of this paper is to study the possibility of treating wastewater containing cadmium with clay. Clays are found in very large quantities, they are economic and more environmentally friendly. Clays have a high adsorption and ion -exchange capacity. In this study montmorillonite clay is used, which is taken from the spring of Prrenjasi. Clay is washed before use. Firstly, the optimal conditions of the adsorption of Cd^{2+} from clay were determined. The optimal conditions are: pH = 6, the interaction time 120 min, the amount of clay 2g /l for 10ppm of Cd^{2+} in the solution. As a result we can say that this clay adsorbs about 70 % of Cd^{2+}, which is in solution. Langmuir and Freundlich isotherms are applied in order to determine the efficiency of natural clay used as an adsorbent. Results show that all isotherms are linear. The Langmuir model fitted better with the experimental data rather than the Freundulich model. Prrenjas montmorillonite have considerable Langmuir monolayer capacity for Cd^{2+} 6.735 mg/g. The Lagergen pseudo first-order and second-order kinetics model, are utilized to evaluate the kinetics and the mechanism of the immobilization interactions. It is determined that adsorption of Cd^{2+} is well-fitted by the second order reaction kinetic. The thermodynamics of the immobilization process indicates to be endothermic. The interaction with $Cd^{2+}$is accompanied by an increase in entropy and an appreciable decrease in Gibbs energy. The results have established good potentiality for Prrenjas montmorillonite to remove Cd^{2+} from aqueous medium through adsorption-mediated immobilization.

Key words: Adsorption, clay, cadmium, heavy metal, isotherms, montmorillonite, adsorption kinetics.

170 SPECIES MONOCOTYLEDONS (MONOCOTILEDONAE), ON FLORA MOUNTAIN SHARR

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ABSTRACT

In this scientific paper entitled "MONOCOTILEDON SPECIES (MONOCOTILEDONAE) in the Flora of Shara" is provided data on the 3 year scientific research (2013, 2014, and 2015). This scientific research is undertaken for the first time, in particular within the researchers conducted by international and local researchers about the flora of the Shar Mountain. This study will complement research of flora in the Shar Mountain. The study is focusing on more than 20 stations in the Shar Mountain. The collection of scientific material is carried out during the period of vegetation, by preparing herbarium associated with data for landfill, date, biotope, etc. During the study they found about 600 species of plant leaves, within which are collected 21 plant species belonging to the species with one embryonic leaf (monocotiledonae) [Table no. 2]. The Sharr Mountain lies in the southeast-west-southwest direction, and is located in the northwestern part of the Republic of Macedonia. The Sharr Mountain represents the largest mountain massif in Macedonia and lies in the geographical coordinates: between 42o41'43 "and 42o16'34" geographical north latitude and between 20˚34'51 "and 21˚16'00". The Shar Mountain massif stands for a great variety of habitats, which represent the settlements for about 2,000 plant species, or 2/3 of higher vascular plants in Macedonia. -During this study it was accumulated a rich material, of about 600 copies.

From the conducted floristic preliminary analysis it results that the flora of the Sharr Mountain is rich with numerous plant species. The set material consists of 70 families, 216 genuses and 600 plant species. -In The study area (Sharr Mountain) during this research were found 21 plant species belonging to the one core species (monocotiledonae), which comprise 3.3% of the total flora of Shar Mountain and are included in 8 families, 16 genus within 600 species found by us (table no. 2). Their spreading starts from the lower areas of the Shar Mountain ranging from 550 m. altitude up to 2500 m. of higher areas of Shar Mountain. Table no. 2 shows that species with one embryonic leaf (monocotiledonae) are belonging to 8 families, 16 genuses. From 21 plant species with one embryonic leaf (monocotiledone) in the Flora of Shar Mountain some are Mediterranean endemic Illyricum scardica plant species of the Sharr Mountain like: Crocus scardicus kosanini [photo no. 1], Lilium albanicum Griseb [photo no. 2], and Narthecium scardicum Kosanini.

Key words: species, monocotyledons, flora, mountain Sharr

171 ODOR REMOVAL CONTROL METHODS İN WASTE WATER TREATMENT PLANT

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ABSTRACT

Odors occuring from wastewater treatment plants (WWTP) are the most important reason that people complaint nuisance of odors to regulatory authorities.Odors emissions cause publich health concerns such as nausea, headaches, eye irritation. Odors problem generate physiological, socioeconomic, aesthetic in human populations. The increasing number of complaints about odors has result in development and evaluation of odor degreation methods. Two strategies for controlling odor emissions from WWTP are prevention of odor production and removal of odorous compounds from emissions of WWTP. Odor emission from waste water treatment plant have been treated using physicochemical methods such as scrubbing, adsorption, oxidation i.e and biological methods.Biological treatment process has became effecive and economical option for removal of odors in the past few decades. The aim of this study to review literature on control of odors from WWTP and to determination of the compounds and sources of odors in WWTP

Key words: odor emissions, odor compounds, waste water treatment, odor control methods, hydrogen sulphide, volatile organic compounds

172 PROBABILITY ANALYSIS OF AIR POLLUTANTS IN ORDU, TURKEY

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ABSTRACT

Air pollutants have a potential health threatened among the other risk components. It affects not only

human health but also ecology, animals, agricultural crops and building materials. Air pollutants concentrations has increased from different emission source in the developing countries. In the last century, industrialization, motor-driven vehicle, heating purpose are the main sources of air pollutants. The concentrations of air pollutants are usually random variables. They are influenced by emission levels, meteorological conditions and geography. When the probability distribution is correctly chosen, the specific distribution can be used to predict the frequency which exceeds the ambient air quality standards. This study aims that probability analysis of air pollutants in Ordu city of Turkey located in Black sea region. Analyzed data (PM_{10}, SO_2) covers the time span of 2008-2015 years. Daily records were rearranged to describe monthly maximum values. Firstly, data set was analyzed using software to find out likely well-fitted probability distribution. Using the probability distribution, synthetic data were generated for standard recurrence intervals. On the other side, extreme values of the record were also analyzed using likely probability distribution. PM10 data set distribution was well fitted to Log-normal distribution. Findings of this work were interpreted considering human-health criteria used in international standards.

Key words: air pollutant concentration, SO_2, PM_{10}, probability distribution, air quality standards

173 STUDY IN LEGAL FRAMEWORK - LEGISLATIONS AND REGULATORY PLANS FOR IMPROVING URBAN ENVIRONMENT, TIRANA, ALBANIA

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ABSTRACT

The paper presents a study in the legal framework referring to the General Regulation Plan of the Municipality of Tirana, Strategic Environmental Assessment of the Regulatory Plan, the National Agency for Territorial Planning and to the Legislation for buildings. Different interventions are represented in some of their articles, where is presented how they interact in order to resolve the environment pollutions, beginning from the urban spaces and buildings with their architectural elements. Rules on construction phases are much more important, as they are described in the General Regulation Plan, but do they serve the purpose? Several solutions come through reconstruction or redevelopment, restructuring, regeneration, conservation and urban filling in sub-structural units. New recommendations come for contemporary materials which rises the performance of buildings, also at the same time the air quality for the smallest urban units and spaces in the cities and drafting rules. During this study it has been found that buildings with cultural heritage take priority over residential buildings. Preservations of cultural heritage environment come respecting the building lines on the streets and roads, maintaining the architecture language of the monument or the architectural coherence of the monument structure. Also, it has been found that rules on the conservation of natural spaces and regeneration of polluted areas, must keep into consideration the stipulations of environmental protection legislation and the Strategic Environmental Assessment Report that accompanies the Local General Plan. Besides these, new rules must be drafted in order to relate more specifically to the situation of aggravated urban environment.

Keywords: legal framework, environment assessment, rules on construction, interventions, sub-structural units

174 FEASIBILITY ASSESSMENT OF A 600 kW WIND TURBINE IN SAZANI ISLAND, ALBANIA

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ABSTRACT

With the rapid reduction of fossil fuel reserves, the world will soon run out of its energy resources. Wind energy is one of most promising alternative renewable energy sources which could play an essential role in many countries as well as Albania. The object of this study to assess wind potential in Sazani Island, in southwestern part of Albania (40.50°N; 19.27°E; altitude 0 m; air density 1.225 kg/m^3) and the feasibility of a 600 kW wind turbine. A long term data, consisting of thirty-four year (1981 to 2014) of hourly mean wind data, was adopted from Balkan Wind Atlas and analyzed in this paper. It is shown that wind speed follows Weibull distribution function. Numerical values of the shape and scale parameters for Sazani Island changed over a wide range from year to year. The two parameters *k* and *c* (m/s) were 1.62 and 7.07 m/s, respectively. The averagewind speed for whole periodat 50 m height was 6.30 m/s. The predicted average wind speed was 6.33 m/s. In addition, theefficiency of a 600kW wind turbinewas assessed for the site's wind characteristics using RETScreen software, with results suggesting economic viability.The financials feasibility study made based on the assumed financial parameters showed that a positive cash flow could be obtained in 13.8 years. It was noticed such a development at these sites could result in avoidance of 1,497.9tons of GHG from entering into the local atmosphere each year and about 37,447 tons of GHG in 25 years. Cost of energy resulted 77.17 $/MWh.

Keywords: Wind potential of Sazani Island, statistical assessment, wind turbine efficiency, feasibility

175 A POTENTIAL HEALTH RISK OF OCCUPATIONAL EXPOSED WORKERS IN PETROCHEMICAL INDUSTRY OF BALLSH, ALBANIA.

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ABSTRACT

Petrochemical industries are known as sources of many toxic organic chemicals such as n-alkanes, brunched alkanes, cycloalkanes, polycyclic aromatic hydrocarbons (PAHs) and dioxins. Safety and health risk of the petrochemical workers employed at Ballsh oil refinery, located in the Southwestern part of Albania is potentially high. Oil refinery workers are continuously exposed to numerous hazardous materials and working conditions. Nowadays, due to the health problems caused from long-term exposure, the research is putting more efforts in correlating the doses in human body with the levels in the environment. The aim of this study was to investigate the hepatic health effects on occupational long-term exposed workers of this petroleum refinery. Biochemical markers of liver and kidney function were analyzed in serum samples, using turbidimetric method. Liver biomarkers considered on this study were the aspartate aminotransferase - AST (SGOT), alanine aminotransferase - ALT (SGPT) and total bilirubin (TBIL). Furthermore, the kidney function of creatinine and urea were determined as well. Blood samples were collected from 1182 oil refinery workers. The target group control included 263 females from 26 to 63 years old and 919 males, from 19 to 69 years old. Gender differentiation data showed that, even if the mean values for the parameters were higher in males than females, the increases were not significant in

most cases. The data were adjusted for age and gender. A statistical analysis of the obtained data has also been done.

Keywords: Petrochemical worker, liver biomarker, kidney function, serum sample.

176 HYDROGEOCHEMICAL CHARACTERISTICS OF THE GROUNDWATER AQUIFERS IN ESKIL BASIN (TURKEY)

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ABSTRACT

In the last century, the demand for freshwater resources continues to grow due to the rapidly increasing population and industrialization. This study investigated the spatial distribution of the groundwater quality of aquifers in the Eskil Basin in the Central Anatolian region of Turkey using physical- chemical water data and hydrogeological methods. For the assessment of the groundwater quality, 21 water samples were collected from different irrigation wells in the study area. The physical and chemical parameters of the water samples are: temperature (T) 10.5 ºC - 21.4 ºC, pH 6.6 - 8.2, electrical conductivity (EC) 337.4 – 2530.9 µS/cm, total dissolved solid matter (TDS) 208.2 – 1969.5 mg/L. The concentration of the major ions, such as Cl^-, Na^+, SO_4^{2-}, HCO_3^-, Ca^{2+} and Mg^{2+} in groundwater samples changed between (12.6-329.7), (22.7-661.7), (13.5-429.7), (219.9-1877.9), (47.5-178.7) and (9.4-108.9) mg/L, respectively. The groundwater closer to the Lake Tuz has the characteristics of Na-HCO_3 facies. The results of the study showed that depending on the distance from the Lake Tuz, the characteristics of groundwater changes from Na-HCO_3 to Ca-HCO_3 facies. Some of groundwater contains TDS of up to 1000 mg/L. These waters may be characterized as brackish water type according to the TDS value. The order of the relative abundances of cations and anions as measured in the basin are; $Ca^{2+} > (Na^+ + K^+) > Mg^{2+}$ / $HCO_3^- > Cl^- > SO_4^{-2}$. The dominant ions in groundwater are Ca^{2+} and HCO_3^-. The findings of this study can be applied to ensure the quality of groundwater used for drinking and irrigation purposes in the study area.

Key words: Groundwater, water quality, hydrogeochemistry, Turkey

177 PRODUCTION VOLUME, PRİCE AND VALUE ANALYSES OF TURKISH AQUACULTURE PRODUCTS

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ABSTRACT

In this study, production volume, price and value analyses of rainbow trout (*Oncorhynchus mykiss*), sea bass (*Dicentrarchus labrax*) and sea bream (*Sparus aurata*) produced in Turkey for the years 2005-2014 were conducted. Turkey is the second largest aquaculture country after Norway and the annual Turkish aquaculture production has reached 235.133 tons in 2014. 48,31% (113.593 tons) of this production

comprises rainbow trout, 31,75% comprises (74.653 tons) sea bass and 17,81% comprises (41.873 tons) sea bream. Examining the prices for the years 2005-2014, it was determined that the price for rainbow trout varied between 3,82 USD and 3,03 USD while the price for sea bass changed between 5,48 USD and 4,92 USD, and the price for sea bass changed between 5,78 USD and 4,52 USD. It was found that the annual production values of the species increased based on the amount of production, and the highest value was determined in 2014 with 617,7 million USD in rainbow trout (r=0.98). It was found that the selling price and the total value of production of the species were affected by the production volume of the species, domestic and foreign export demand and the exchange rates.

Keywords: Turkey, aquaculture, production volume, average price, total value

178 AN INVESTIGATION OF SINOP SOLID WASTE HANDLING AND COLLECTION SYSTEM

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ABSTRACT

Solid waste amount increases day by day in parallel to rapid population increase, technological developments and rise of the living standards. The municipalities spend considerable sums for collection, transport and disposal of the wastes. A substantial part of these expenditures (85%) comprises waste collection and transport services. In addition, just collecting these wastes and transporting them from various points of the city to the disposal areas does not mean that this problem is solved sustainably in both economic and social terms. For this purpose, numerous studies and methods are applied in regard to collection and transport of solid wastes. The purpose of this study is to investigate the urban solid waste collection and transport system in Sinop province center. It is also to create recommendation plans for remedial of the problems existing in the solid waste management system in Sinop province center. Coordinates of all container points have been recorded in the study. In addition, data such as the time spent by a collection-transport vehicle between two stops, their right/left turn and return times, times spent in picking up waste from the points passed, number of solid waste pick-up points, road widths and distances between containers were determined. Evaluations were made on determination of the most suitable transport-collection vehicle route, container points and distances by means the data obtained taking into account environmental, economic and social factors.

Key words: Solid waste, solid waste management, Sinop, waste handling/collection system

179 SOLID WASTE MANAGEMENT IN SINOP ORGANIZED INDUSTRIAL ZONES

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ABSTRACT

One of the most important present day problems of Organized Industrial Zone is their failure to efficiently manage wastes of the firms carrying out production in the zones. Combination of the concepts of development and industrialization, which do not harm the environment, which reduce consumption of natural resources, and which are sustainable in this respect, has become extremely important in

management planning of the wastes originating from these areas. Solution of this problem is a condition that can be ensured by a good waste management planning and implementation. Creation of a waste inventory which is reliable and up-to-date at the same time, whereby the amount and composition of the wastes are identified for determination of the extent of this problem, is an important practice. Hence, storage and collection of the industrial wastes at the site of origination, and inventory information such as their amounts, provide guiding in prevention, reutilization and disposal of such wastes. In the study, the firms carrying out production in Sinop Organized Industrial Zone and productions by those firms according to their field of activity were examined, and inventory study aimed at obtaining information on any and all activities carried out by the firms within the scope of waste management was applied. Thus, it has been possible to obtain the general waste information of the firms available so far and implementation data pertaining to storage and transport of the wastes. These planning actions have been evaluated as required by the current management guidelines. Furthermore, a recommendation plan has been established for sustainable management of the wastes of Sinop Organized Industrial Zone in the conclusion report created in the light of the findings obtained.

Key words: Industrial waste management, Sinop, sustainability, waste management

180 PROBABILITY SAMPLING METHODS in AQUACULTURE STUDIES

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ABSTRACT

In this study, the probability sampling methods and the questions that have to be taken into consideration in the investigations of the aquaculture are manifested. In the researches the data is produced by the information gathered by the population units. The data could be seen objectionable in the evaluations as they are not able to represent the population enough in respect of qualitative and quantitative perspective. The avaliable sampling methods that are developed depending on the quality of the research, are specified according to the aim and conditions. The most credible result of the population are the results that are taken from the whole population. To get at the whole population is difficult because of the features of the population, and the restrictors such as skilled staff, time and high cost. Thus in scientific studies instead of reaching out the whole population, the representative sampling are made. The aquaculture, though seems a scientific branch that focuses on hunting and cultivation; in fact it is a multidiciplinary branch of science. The researches that are held on aquaculture are conducted more difficultly than other diciplines due to the features of the study area. Consequently, sampling methods are to be selected according to the study. The sampling methods are basically divided into two groups of probable and improbable sampling. In this study, probability sampling methods which are commonly used in aquaculture studies, the crucial points that have to be taken into consideration in the practice of the existed method as well as how the sampling that is going to be achived in the path of accessing the credible data are expressed.

Key words: Sampling, probability sampling methods, sample, fisheries

181 TRACE ELEMENTS EVALUATION IN IRRIGATION WATER MANAGED BY REGIONAL IRRIGATION COMPANIES IN KOSOVO

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ABSTRACT

The quality of the irrigation water in terms of trace elements presence in surface water is assessed for the main water sources of irrigation companies (Regional Irrigation Company Drini i Bardhë, Regional Irrigation Company Radoniqi-Dukagjini, Hydro-System"Ibër-Lepenc") in Kosovo. Water samples were collected in clean bottles at 10cm depth from several irrigation sources (rivers, some reservoirs, pumping stations and canals). The samples collected were analyzed for trace elements content such as zinc, iron, copper, manganese, lead, nickel, cobalt, cadmium, chromium, and molybdenum, by Microwave Plasma Atomic Emission Spectrometry (MP-AES 4100). The findings indicated that there is no significant difference of trace elements content between irrigation water from canals, rivers and reservoirs. Copper, manganese, nickel, cobalt, lead and chromium were found in normal concentrations in all water sources, while zinc and iron were found in deficient concentrations. Cadmium and molybdenum is at recommended maximum concentrations.Therefore, these sources can be used for irrigation purposes without any hazardous effect on soil and plants

Keywords: Trace elements, toxic, irrigation water, quality, irrigation companies, Kosovo

182 EVALUATION OF SOME REDUCED-RISK PRODUCTS FOR MANAGEMENT OF POWDERY MILDEW IN GREENHOUSE TOMATOES.

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ABSTRACT

Tomato powdery mildew, caused by the fungus Leveillula taurica, is more common in greenhouses in Albania especially in second growing season where the infected plants can suffer to the point of severe economical damage if left unchecked. Growers often depend on pesticides for its control. In this study, some alternative reduced-risk products were evaluated for their efficacy to control powdery mildew in greenhouse tomatoes. Trials included Serenade WP (Bacillus subtilis QST 713: 10%), Armicarb® 100 (Potassium bicarbonate 85%), UFO (Ultra Fine Oil), Microthiol disperse WG (Sulphur 80%), compared with the untreated control. Each one of these products was applied as single treatment every 7-10 days to each of four replicates of the experimental plot at the same day. Disease severity, expressed as a percentage of the foliar infected area was assessed before each spray and five days after the last teatment. Obtained data show that Serenade, Armicarb and UFO provided more disease control evidencing a severity level by 9,2%, 12,4%, and 18,8% respectively. Microthiol disperse also shows better control compared with untreated control resulting in a disease severity respectively by 20,5 and 30,4%. Experimental results show that reduced-risk products to human health and the environment tested by this study may be considered as potential substitutes of the synthetic fungicides to control powdery mildew in greenhouse tomatoes especially in organic cropping.

Key words: Tomato powdery mildew disease, reduced-risk products

183 DETERMINATION OF SOME AIR CHLORINATED ORGANIC POLLUTANTS IN KRRABA TUNNEL, ALBANIA, USING MOSS AS BIOINDICATOR

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ABSTRACT

Air quality measurements of highway tunnels have attracted the attention of scientists, as they represent cumulative contribution of different sources of pollutants that include direct emissions and resuspensions. Active biomonitoring, so called "moss bag technique" was used for monitoring of some organic pollutants in Krraba Tunnel (Tirana – Elbasan highway). This is an important tunnel, where a big number of vehicles pass every day. *Hypnum cupressiforme* moss bags were placed in six stations from the entrance to the exit of the tunnel, and kept there for six months. Concentrations of organochlorine compounds, such as organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs), chlorobenzenes and DDTs were determined in moss samples. After collection, the moss samples were extracted in hexane/dichloromethane, cleaned-up in an activated Florisil column and injected in a GC Varian 450, with μECD. A Rtx-5 capillary column (30m x 0.32 mm x 0.25μm) was used for organochlorine pollutants analysis. Moss samples collected in the tunnel entrance had low concentrations of chlorobenzenes and OCPs, from which the HCHs were the most abundant. Highly chlorinated PCB congeners and DDTs were detected in all moss samples.

Key words: moss-bag, OCPs, tunnel, PCBs, Hypnum cupressiform

184 MORPHOLOGICAL AND MOLECULAR CHARACTERISATION OF A NEW *APERTOSPATHULA* SPECIES (PROTISTA, CILIOPHORA) ISOLATED FROM LAKE VAN, TURKEY

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ABSTRACT

Genus *Apertospathula* was established by Foissner et al in year 2002, and so far 11 species recognized and described. In this study, it was observed that a new *Apertospathula* population from coastal regions of Lake Van. The morphology and infraciliature were investigated using live observations and silver impregnation methods. The members of this population was recognised by the combination of the following characters: body clavate to cylindroidal in outline with oblique oral bulge about two-thirds as long as widest trunk region; cytoplasm contains numerous refractive granules and algae taken as food; macronucleus straight to curved cylindroidal with single ellipsoidal to spherical micronucleus; on average 16 somatic ciliary rows and more than 100 circumoral dikinetids; dorsal brush three-rowed, occupies about %5 of body length, each row composed of 6-8 dikinetids with 1,5-2 μm long bristles. Its small subunit ribosomal RNA gene (SSU rDNA) was sequenced and compared with those of other related genera to reveal nucleotide differences. In this study, first phylogenetic analyses of genus *Apertospahula*, indicated that current population is a member of spathidiid ciliates.

Key words: *Apertospathula*, Morrphology, Phylogeny, SSU rDNA

185 AN ORGANOPHOSPHORUS HERBİCİDE *GLYPHOSATE-TRİMESİUM* CONTAMİNATİON İN HAZELNUT GARDENS: CASE STUDY İN GİRESUN TURKEY

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ABSTRACT

Glyphosate and its derivatives are the world's most widely used herbicides. It is nonselective and has been used to control a broad range of weed species. It kills plants by interfering with the synthesis of the aromatic amino acids phenylalanine, tyrosine, and tryptophan [1]. Glyphosate adsorbs strongly to soil, and residues are expected to generally be immobile in soil. Glyphosate is readily degraded by soil microorganisms to aminomethylphosphonic acid (AMPA).It is known that persistence of pesticides in environment depends on the climate of countries, environmental conditions and type of soil. The objective of this study is monitoring of *Glyphosate-trimesium* residue in hazelnut garden soils in Giresun/Turkey. The best quality hazelnuts of the World are specifically grown in the province of Giresun by the Black Sea Coast of Northeastern Turkey. Soil samples were collected at different distances from the hazelnut garden in January, March, May and July 2015. 2.0 g of soil samples were extracted with KOH (15 mL, 0.6 M) and then centrifuged. The supernatant was treated with trifloroacetic acid-triflooroacetic anhydride-trimethyl orthoacetate (TFA-TFAA-TMOA) mixture to obtain volatile derivatives. Solution was pre-concentrated under vacum. The residues were extracted with methanol and analysed with GC-MS immediately. Analyses were performed on a Varian CP3800 GC equipped with a Varian Saturn 2200 MS dedector and DB-17 column [2]. It was observed that, no *Glyphosate-trimesium* residue dedected in January and March. However, high concentration of *Glyphosate-trimesium* was dedected in soil samples both in May and July. Becauce herbicide usage gets higher in the begining of May and during June to kill weeds in Hazelnut gardens.

Key words: herbicide, *glyphosate-trimesium*, contamination

186 EMULSION BREAKING OF ALBANIAN CRUDE OIL BY GASES UNDER PRESSURE

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ABSTRACT

Emulsions in crude oil stabilized by different active components on the surface, are one of the many problems related to oil production. This scientific research presents the results of pressure separation experiments in crude oil emulsions by high CO_2. Efficiency and kinetics of demulsification increases with increasing of CO_2 density. The proposed mechanism for the destabilization of water molecules from crude oil emulsions includes asphaltenic flocculation (sharing asphaltenic) and precipitation. Emulsions broken

by separating absorbed asphalt, thus leading to layer defects, slimming its layer, rupture of the layer and finally to the formation of water molecules. By increasing the CO_2 pressure, residence time, temperature and the degree of mixing, is observed an increasing level of asphalten precipitation. As it is understood from the experiments, CO_2 favors the precipitation of more active parts of asphalten surface resulting in considerable weakening of viscoelasticity of asphalten layer occurred around water spots distributed by the emulsion.

Key words: emulsion, crude oil , CO_2 density, high pressure, asphalten,

187 FINANCIAL VULNERABILITY AND OBSTACLES TO GOOD HEALTH: AN ANALYSIS OF THE HEALTH CARE SECTOR IN ALBANIA

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ABSTRACT

The health care system in Albania has its roots in the Soviet "Semashko" model, and has suffered from many of the same problems that affect health service delivery other Central and Eastern European countries. The Government's priority in health was to provide universal access to primary and secondary care. This policy led to the construction of a relatively large number of local and regional hospitals, which were typically overstaffed and relied mostly on outdated equipment. The reforms to the health sector that followed immediately after the fall of the communist regime focused mostly on reorganizing responsibilities over health care centers. During the 1990s some administrative responsibilities and ownership of many primary health care facilities were shifted to the local level. However, human resource policies and financing for hospitals remains centralized. This level of health spending is comparable to other countries in the region, however, only half of this amount is publicly financed. The share of out-of-pocket expenditures remains high in Albania when compared to similar countries. For households in the lowest quintile the share of out of pocket spending on health is as high as 50 per cent of the total monthly per capita expenditure per one episode. Such high levels of out-of pocket spending for health services can create barriers to access to health care. Using the Albanian Living Standard Measurement Survey (ALSMS) this paper will present a simple methodology to estimate Out-of-Pocket (OOP) health spending and furthermore it will describe the composition of such spending.

Keywords: Healthcare financing, out-of-pocket expenses, LSMS

188 THE EFFECT OF POLLUTION FROM HIDROCARBURES IN FLORA AND FAUNA IN PATOS-MARINEZ DISTRICT

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ABSTRACT

Industrial fuels in hot and polluted regions from hidrocarbures as a result of old and new industrial activites, unstudies for environmental safety, have created an emergency situation according to flora and fauna of those regions. Industrial activities of oil have effected in general on environmental pollution showing direct consequences to ecosystem and living creatures. The study aims: To identify and estimate not only environmental situation in industrial region Patos- Marinez but also environmental risks for flora and fauna. The essential hypothesis of the study is: The environment of oilfield region Patos-Marinez is contaminated from hidrocarbures and this effects on flora, fauna and the health of humans. Objectives of the study are: the identification of environmental aspects of pollution on flora and fauna of the area under study.

Key words: Environmental pollution, Hidrocarbure, Flora, Fauna, Environmental Factors

189 THE USE OF THE ECONOMETRIC ANALYSIS TO SEE THE EFFECT OF ACRICULTURAL ACTIVITIES IN THE ECONOMIC FARMERS GROWTH IN FOCUS PEZA MUNICIPALITY

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ABSTRACT

Rural areas around the world have undertaken profound changes in the last decade. Many rural areas are developing new activities, including tourism, small advances in manufacturing and service businesses. Seventy-five percent of the world's poor live in rural areas, and most are involved in agricultural activities. Participation of farmers plays a leading role in economic development and poverty reduction. Without participation there would be no agriculture or development programs. Lack of participation in decision-making agricultural policy tools may lead to failure of agricultural development. There are five types of farmers participation which are: empowerment, partnership, cooperation, consultation, information and manipulation. There are various reasons why active participation is difficult to be achieved, some of these are people's lack of knowledge, faith, capital and skills. Ignorance is regarded as the main barrier to farmers' participation in planning and decision-making. Reduce the initiatives of those who participate and lack of capable organizations are factors that contribute in farmers participation Aref (2011). This paper is focused on Peza municipality to see the role of farmers in agriculture development and in the contribution that they give in revenue increase. Peza municipality has favorable geographic conditions for its development, but unfortunately like most rural areas of Albania has a number of problems which are related to infrastructure, education, health, water supply, sewerage, sewage and white, etc. These problems are factors that affect negatively the direct socio-economic development of the municipality. According to human resources data of municipality, appropriate climate, proximity to capital, good tradition in the agricultural and livestock production, make Pezë be considered as an area of development opportunity. The main income of the municipality's farm families come their personal activities in the farm. Agricultural production accounts 45% of total production in the municipality. Pezë has a surface area of 1455 ha of agricultural land and the area under crops is ranked: maize, wheat and vegetables, olive groves and orchards, vineyards where is used only 70% of it. The difficulties of Peza muicipality and are similar to the general situation of agriculture development in our country. Agricultural land fragmentation create difficulties for farmers because it creates the possibility of high mechanization, does not allow the full investment and increased unit costs for works surface, irrigation, regulation, etc. The plots also leads to a decrease distractions production and above all the quality of agricultural crops. For further agriculture development is required farmers encouragment to be volunteer in farm unions, even seasonal forms of cooperation, to improve the negative indicators from large agricultural parcelsfragmentation. Another

problem that farmers face is seeds marketingas a result of cooperation lack between local experts and farmers. The sample population surveyed is 75 people, residents of the municipality Peza, whose data will be used to generate valuable results for the study. Pilot survey showed that the specification of the required data brought some difficulties due to the nature of certain information. In Albania, there is often a cultural taboo about giving information to financial data, specifically related to income. In this questionnaire, the pilot survey identified lack of response to the question on their income. Therefore, to resolve this issue, the questionnaire includes monthly income categories, instead of exact revenue. This issue is resolved by providing four levels of average monthly income. Pilot survey facilitated the forecast of expected problems during investigation and enabled the reduction of some of them. He provided care for any possible danger and helped in taking the necessary measures before the survey. It also led to the elimination of problematic questions, obtaining highly sensitive information or questions that could ensure the comfort absence, discomfort and inconvenience for participants. In a second phase, were distributed90 questionnaires, but only 75 were available to be used for the study. The analysis is focused on two main lines, the realization of a descriptive analysis data and second their analysis through binary logistik regression.

Keywords: agriculture, economic development, farming, variables

190 EVALUATION OF LAND USE POLICIES IN ALBANIA

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Abstract

In our days the requests for arable land, pastures, forests, tourism and urban development, are raising day by days. Moreover, in countries with a growing population, these requirements become ever larger. However, it should be noted that even where land is abundant, many people may have inadequate access to land and other productive resources, therefore the benefits of its use are not at the right level. Besides the scarcity, degradation of soils, forests and water resources constitutes a clear problem for all, but to stop it individual land users need to be involved in its planning process. In this context, it should be noted that land use policy is an activity which enables the rational use of land, as well as conflict prevent in its use.

Keywords: land ownership, the land market, leases

191 INVESTIGATION OF WOMEN WITH POSTMENOPAUSAL UTERINE BLEEDING

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ABSTRACT

Postmenopausal bleeding (PMB) is a common complaint in general gynaecological practice. Life expectancy of women has increased during this era, hence, many will experience postmenopausal period. Post menopausal bleeding is defined as bleeding from the genital tract one or more years after a woman's last period. It is a common problem, representing 5% of all gynaecology outpatient attendances1-3 and it is

an alarming symptom in this age group. It is not always possible to assign pathologic cause with certainty in PMB. The dictum is “Postmenopausal bleeding indicates malignancy until proved otherwise”. Women with PMB have around a 10% chance of having endometrial cancer and therefore PMB always needs further evaluation. This article summarises the reviews on the subject and provides an overview of the use of diagnostic tools in patients with PMB. Four types of diagnostic test are described: sonographic measurement of endometrial thickness, endometrial sampling, hysteroscopy and saline infusion sonography. All four have been independently shown to be accurate in excluding endometrial cancer. However, neither in systematic reviews nor in international guidelines is consensus found regarding the sequence in which these methods should be employed in women with PMB. For measurement of endometrial thickness in symptomatic women, a cut-off value of three millimetres is recommended, but the cost-effectiveness of this strategy has yet to be shown. Research should now focus on the incorporation of individual patient characteristics and pre-test probabilities for cancer in algorithms for the investigation of PMB, and the most cost-effective sequenced combination of the four types of tests.

Key words: postmenopausal bleeding, management, systematic review

192 DETERMINATION OF HEAVY METALS IN INDOOR DUST

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ABSTRACT

Indoor air quality which is an important indicator of public health, affects not only human health but also the sequence quality of life significantly more important. Therefore, the monitoring and controlling of indoor air quality is important as well as outdoor air quality. This study aims to determine how the amount of heavy metal pollution in indoor dust. Also a health risk assessment will be made. Factors such as the proximity to major road (in terms of affecting emissions of pollution from traffic), heating source type, and the number of students in the class, building the wall paint type are taken into account when selecting samples to be taken points. Different points of samplers to be taken from various points, such as on the window edge, aerators, ladders, class board, after the solubilization process heavy metal concentrations will be determined using the device of Atomic Absorption Spectrophotometer.

Keywords: Air quality, indoor, health, heavy metal, risk

193 A NOVEL APPROACH FOR ESTIMATION OF PV MODULE SURFACE TEMPERATURE

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ABSTRACT

This study aimed to use a new method to estimate the surface temperature of a photovoltaic (PV) panel. The variations of energy efficiency are investigated using actual experimental data obtained from an

installed PV system in Turkey. The PV energy efficiency decreases with an increase in the ambient temperature. Ambient temperature has a great effect on the temperature of the cell. In this study, the actual data and the new model cell temperature values were determined and compared. The change in the temperature of the cell with respect to the ambient temperature is given in detail Figures. The results provided in the study are expected to be beneficial for researchers, designers and engineers working on PV energy systems and their performance assessment.

Key words: Photovoltaic panel, Outer temperature, Solar radiation, Wind speed

194 ASSESEMENT OF MICROBIAL WATER POLLUTION OF DRINI BAY RIVERS

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ABSTRACT

Drini Bay extends from Kepi i Rodonit to Buna estuari in Northwest Albania. Thewe are some very important rivers that empty into the Adriatic Sea in Drini Bay area: Drini, Mati, Buna. Drin is the longest River of Albania. It is formed by Black Drin River which flow by Lake Ohrid, joining White Drin and some other small rivers. It has two distributaries, one of which gets into Buna River. The other one that is called Drin of Lezha goes to Lezha area, get across Zadrima plain, joins with Gjader River, get throw Lezha City and empties into Adriatic Sea in the Lagoons of Kune -Vain area. Three sampling points in Drini River near Shkodra, two in Lezha Drini River before and after Lezha city, two points in Buna River, two points of Mati River water, before and after Milot City were chosen to test bacterial water pollution. Two samples in sterile containers were taken from each of the above locations in different months during 2014-2015. Microbial water test was made according to international and European standards. Is used plating method for HET in PCA and the MPN test, for faecal coliforms. We found that the Mati River water is good quality, and Drini is good quality most of the time of testing, more polluted was after Lezha. Buna is more polluted than other rivers tested.

Key words: Drin River, heterotrophic bacteria, CFU, water sample, faecal coliforms, PCA, water pollution

195 RELATIONSHIP BETWEEN CLIMATE AND RADIAL GROWTH OF BOSNIAN PINE (*PINUS HELDREICHII* CHRIST.) FROM THREE SITES ALONG THE LONGITUDINAL GRADIENT IN ALBANIA

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ABSTRACT

Global warming is expected to enhance radial tree growth at treeline locations. The aim of our study was to examine: (a) variation in tree radial growth in relation to climatic variability; and (b) relationships between climate and radial growth. We developed three tree-ring chronologies from *P.heldreichii* grown in Thethi (THE), Kala e Dodes (KD) and Llogara (LLO). Tree-ring chronologies developed using standard dendrochronological methods, reaching an age from 182 (KD) to 442 years (THE). They had high values of first-order autocorrelation indicating that climate conditions in the previous growing year are important for radial growth of *P.heldreichii*. Negative correlations between temperature and tree growth were noted only for LLO and KD sites. Thus, radial growth is negatively correlated with previous May-June temperatures and with current February temperatures in case of Llogara site. The negative effect of this climatic driver was stronger from north to south of Albania. At the most distant sites was noted a common positive correlation with current April temperatures but this response was more significant in Thethi site. Negative correlations with precipitation were noted with previous May (THE), November (KD) and December (LLO). The analysis showed that *P.heldreichii* chronology from Kala e Dodes contain a mixed signal of late summer temperatures and July-August precipitation indicating that this species is sensitive to summer drought stress. The current study indicates that *P.heldreichii* response in high-elevation environments vary along the longitudinal gradient and the temperature is the key climatic variable forcing the tree growth variability.

Key words: *Pinus heldreichii*, climate - growth relationship, tree-line, bootstrapped correlation.

196 SPATIAL AND TEMPORAL VARIATION IN PINUS HELDREICHII GROWTH AT TREE LINE LOCATIONS IN KOSOVO

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ABSTRACT

The present study aims evaluating the spatial and temporal patterns of the radial growth of Pinus heldreichii (Bosnian pine) over its tree line locations in Kosovo and at finding how these patterns are related to precipitation and temperature variations. Our study comprises three high- elevation sites between 20° 15’ and 20° 57’ longitude and an elevation range from 1815-1945 m above sea level. At each sites, two cores from 30 to 38 living trees were collected using a Pressler increment borer. The cores were processed, and the tree-ring widths measured, using standard dendrochronological procedures. Finally, chronologies were built for each site and compared, with instrumental records of temperature and precipitation. The Bosnian pine chronologies showed a mixed climate signal of winter and summer temperatures and precipitation. Despite local differences, the decrease in tree- line elevation is associated with a stronger effect of summer precipitation on the radial growth. Tree growth in the southernmost regions showed positive correlations with current January and February and negative correlations with June temperatures. The closer the sites are located to a weather station, the more similar is the relationship between tree- ring growth width and climate data. Our findings indicate that temperature has a spatially larger control on Bosnian pine -growth than precipitation. Further investigations of Bosnian pine growth patterns and their relationship to climate will improve the understanding of climate oscillations during the last two to three centuries and their relationships to climate change at spatial and temporal scales.

Key words: relationships, climate change, spatial and temporal scales

197 ALFALFA (Medicago sativa L.) BIOMASS WITH SOME OTHER BIOMETRIC PARAMETERS RELATIONS

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ABSTRACT

The alfalfa is the main forage plant in Albanian agriculture. Currently, the area planted with alfalfa in Albania has tripled (from 50 000 ha in 1990 to 150 000 ha today). The study compares the biomass production capacity of alfalfa ecotype *Tomin* with some foreign varieties, actually present at the market. It aims to evidentate the existing relations among biomass production and some other parameters for every alfalfa variety taken in consideration. The study is performed at two different experimental stations, in Fushe - Kruja and Diber, from 2010 till 2014. The evaluation of biomass production, height, the number of productive stems and the number of internodes was realized for every year. The statistical analyses of the numerous data show that exist variations among studied alfalfa cultivars not only for forage production, but for the other characteristics mentioned above, too. The height biomass production correlation coefficient is positive and very strong, at every mowing for all studied cultivars. On the other side, the correlation of biomass: the number of productive stems and biomass: the number of internodes is specific for every alfalfa variety taken in consideration.

Key words: *Alfalfa, biomass, height, productive stems, internodes' number, correlation.*

199 PLANNING AND MANAGEMENT OF ECOTOURISM IN THE PROTECTED AREAS: CASE ON ILGAZ MOUNTAINS NATIONAL PARK IN TURKEY

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ABSTRACT

One of the most pressing concerns arising from growth of ecotourism in the protected areas is how to plan the ecotourism to support effective conservation of the natural and cultural values in the sensitive areas and optimize equitable benefits to local people in and around these areas and reduce adverse impacts of tourism. Beside the concerns, there is a high level of expectation among protected areas managers about ecotourism and its opportunities for protected areas , but there is also a great deal of concern about the challenges it creates. It is clear that without planning and management, ecotourism will not succeed. Although, planning for ecotourism very important progress for conservation and development in the protected areas there are very limited number of ecotourism planning studies for protected areas in Turkey. One of them is Sustainable Tourism Planning for Ilgaz Mountains National Park. The plan has four phases; to assess the current ecotourism situation, values and potential; to analyze effects and impacts; to zoning and implementation programs for ecotourism products and activities. Issues to be addressed in

implementing each of these phases are discussed in detail by planners, site managers and other key stakeholdres. The process described is intended as a reference for implementation of ecotourism products and services, governance for ecotourism, sustainability of the activities and training and awareness both visitors, site managers and implementers. The plan is initiated many of the opportunity for managers and decision makers. It also corroborated importance and necessity of the planning for sustainable ecotourism implementation and stakeholder engagement in order to increase effectiveness. Despite the plan is a concrete result, the process is indicate that ecotourism is initiated only when it is the most effective strategy to achieve tangible, lasting results and strong cooperation and collaboration by local people and tourism business. The distinct but intimately interrelated aspects of ecotourism, conservation management, local participation and business development, must be fully understood by ecotourism planners and protected area managers before moving ahead with plans to implement ecotourism activities. This paper sets out to identify a number of elements of good practice in incorporating the fundamental issues of management and development of the ecotourism in Ilgaz Mountains National Park. The process is intended as a reference for the other protected areas ecotourism planning studies.

Key words: ecotourism, protected areas, ecotourism planning, Ilgaz Mountains National Park

200 DESIGNATION OF THE TRAILS AND ROUTS FOR VISITOR MANAGEMENT IN THE PROTECTED AREAS; CASE ON GÖREME HISTORICAL NATIONAL PARK IN TURKEY

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ABSTRACT

The unique and prosperous values such as natural, cultural, historical, archaeological and landscape features of Turkey have been declared as a protected area since 1958 according to the national legislation and international agreements. The protected areas are called that national parks, nature parks, nature protection areas, natural monuments, wildlife development area, Ramsar Site, protection forest. To date, 9.6 million ha of land have been declared as protected areas in Turkey. Moreover, the number of the visitors are gradually increasing to visit and enjoy the natural sites and protected areas. There are 40 national parks and Göreme Historical National Park is one of them. It locates in the Cappadocia Region inside the in-Centre of Anatolia in Nevşehir Province which it's geologic, geomorphologic, historical, and landscape values. Last years, the number of visitors are deeply increasing more than ever before. As far as site management, visitor management has become very urgent and needed subject for the national park. Sustainable visitor management needs some of the informative and regulatory tools and management such as brochures, maps, booklets, visitor rules and guidance materials both before coming the site and in the visiting period. On the other hand it needs some of the visitor infrastructures such as paths, information and sign boards, visitor centers, information centers and etc. The national park is visited above 2.000.000 visitors each year. Developing of the visitor management tools and equipment's for the National Park is urgent and crucial because of increasing of the visitor number. This paper sets out to identify a number of elements of good practice in incorporating the fundamental issues of management of the visitors and development of the visitor infrastructures in Göreme Historical National Park.

Key words; visitor management, protected areas, Göreme Historical National Park, world heritage site

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