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ABSTRACT BOOK

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Editors:
Assoc. Prof. Dr. Sukru Dursun, Turkey
Prof.Dr.Massimo Zuchetti, Italy
Prof.Dr. F.K. Vosniakos, Greece
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Conference Coordinator
ICE conference, Tirana, Albania

Prof. Asoc. Dr.Hysen Mankolli, Agricultural University of Tirana, Environment and Agriculture Faculty, Ecology and Agrienvironment Department, Tirana, Albania,
E-mail:mjedisi_shendeti@yahoo.it;mankollih@ubt.edu.al;h_mankolli@yahoo.com;

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ABSTRACT'S

No.	Abstracts

001 **A LIFECYCLE ASSESSMENT FOR HIGH-SPEED TRAIN PROJECTS: ENERGY, EMISSIONS AND CLIMATE CHANGE ISSUES**

Massimo Zucchetti[1,2]

[1]*DENER, Politecnico di Torino, Corso Duca degli Abruzzi 24, 10129 Torino, Italy*
[2]*MIT, Massachusetts Institute of Technology, 77 Mass Avenue, 02139, Cambridge (MA), US*

Email: massimo.zucchetti@polito.it; zucchett@mit.edu

ABSTRACT
One of the main ecological justifications of the High Speed Rail (HSR) projects would be the choice of transferring goods and passengers from road to rail, with a reduction of greenhouse gas emissions and pollutants associated with energy savings, achievable from the use of rail than by truck driven by thermal engines. The supposed virtuosity of the train is not always true, and depends heavily on the investment of energy used for building infrastructure, including energy incorporated in the materials and the necessary management and maintenance. In the case of a gigantic infrastructure project, such as the Lyon-Turin line, there is the risk that the cure is worse than the disease, and it particularly requires a careful analysis of the life cycle of the project. Rail transport, however less versatile than the road, may cause less pollution. But this is only true if you use and / or improve an existing network. But if you design a new giant line, with over 70 kilometers of tunnels, ten years of work, tens of thousands of truck trips, excavated material disposed of, drills, thousands of tons of iron and concrete, in addition to energy necessary to make it work then, it turns out that the consumption of raw materials and energy and related emissions, is so high as to nullify the gain of the hypothetical partial transfer of freight from road to rail. The calculations were done in this paper. As regards passenger transport, we can estimate the total energy spent to transport a passenger for one mile, expressed in units of megajoules (MJ / p-km). The bus has the lowest environmental impact overall, with 0:33 MJ / p-km. The car with one person on board however, is the worst solution, with 1.87 MJ / p-km. As the train classic car shows over the global consumption of energy equal to half (between 0.62 and 0.77 MJ / p-km, depending on usage), shows the TGV train and consumption doubles compared to comparable cars (between 1:02 and 1.44 MJ / p-km). This means that if a TAV were to carry less than 300 people, most energy would become a car with 2 people on board.For freight, the best solution in terms of energy and therefore also of global emissions is represented by Truck (1.25 MJ / p-km). The train shows that consumption may vary depending on if you are traveling at full load or half empty (1.79-2.5 MJ / p-km); The HSR shows consumption ranging from twice to three times (2:17 to 3:09 MJ / p-km).A further consideration: the Frejus highway in the Susa valley has a passing through of approximately 3000 TIR (Big Trucks) per day. The HSR realization would add over 2300 passings per day of trucks, in front of a future benefit that we have seen difficult to evaluate and ultimately not convenient. We can therefore demonstrate that the construction of the HSR Turin-Lyon is not consistent with the requirements of the Kyoto Protocol.

Key words: lifecycle, assessment, energy, emissions, climate change

002 REMEDIATION OF HEAVY POLLUTED SOILS USING SOME TREE SPECIES

Sukru Dursun[1,*], Fatma Kunt[1], Esra Tezcan[1], E. Şule Yanıkaya[1], Hysen Mankolli[2]

[1]Selcuk University, Engineering Faculty, Environmental Engineering Dept., Konya-Turkey;
[2]Tirana Agriculture University, Environmental Ecology Department, Tirana- Albania

Email: *sdursun@selcuk.edu.tr; Tel.:+90 332 2232057; Fax: +90 332 2410635

ABSTRACT
Toxic heavy metals in air, soil, and water are global problems that are a growing threat into the environment. There are hundreds of sources of heavy metal pollution, including the coal, natural gas, paper, and other industries. Soil pollution has a public attention since the magnitude of the problem in our soils needs immediate action. Resulting of the human activities such as mining and smelting, electroplating, gas exhaust, energy and fuel production, fertilizer and pesticide application, *etc.*, metal pollution has become one of the most serious environmental problems in the present time. Heavy metals are a group of pollutants of much concern with their immutable nature. Metal pollution is a problem associated with industry areas. Automobiles and around roadways are considered as one of the largest sources of heavy metals in the past. Lead, copper, and zinc are three of the most common heavy metals released from road travel, most of the total metals in road runoff. However, concentrations of lead consistently have been decreasing since leaded gasoline was discontinued. Many other metals, such as nickel and cadmium, are also found in road runoff and exhaust. Microbial capacity for heavy metal concentrate has known during the two last decades that microorganisms are being used as a potential alternative for heavy metal removal. Biosorption is a process which solids of the natural origin e.g. microorganisms, alive or dead, or their derivates, are employed for sequestration of heavy metals from environment. The transfer of metal ions from aqueous to solid bisorbent phase can be due to passive, facilitated or active transport. The mechanism of uptake can be due to physical sorption, chemical complexation with microbial cell surface groups or bioaccumulation.

Keywords: pollution, heavy metal extraction, degradation, filtration, stabilisation, phyto-remediation.

003 ASSESSMENT OF AIR QUALITY IN TERMS OF PM POLLUTION IN KONYA

Sukru Dursun[1], Fatma Kunt[1], Hysen Mankolli[2]

[1]Selcuk University, Engineering Faculty, Environmental Engineering Dept., Konya-Turkey;
[2]Tirana Agriculture University, Environmental Ecology Department, Tirana- Albania

Email: sdursun@selcuk.edu.tr, fatmakunt@selcuk.edu.tr, mankollih@ubt.edu.al

ABSTRACT
Particulate matter (PM) is the term used for a mixture of solid particles and liquid droplets suspended in the air. These particles originate from a variety of sources, such as power plants, industrial processes, and diesel trucks, and they are formed in the atmosphere by transformation of gaseous emissions. Their chemical and physical compositions depending of location, time of year, and weather. The size of particles is directly linked to their potential for causing health problems. Small particles less than10 micrometers in diameter pose the greatest problems, because they can get deep into your lungs, and some may even get into your bloodstream. Exposure to such particles can affect both our lungs and our heart. Small particles of concern include "inhalable coarse particles" (such as those found near roadways and dusty industries), which are larger than 2.5 micrometers and smaller than 10 micrometers in diameter; and "fine particles" (such as those found in smoke and haze), which are 2.5 micrometers in diameter and smaller. In this study measurement of particulate matter (10 micrometers) were made from 23 points in Konya city centre. According to the results of measuring the day time does not exceed the limit values. However, towards the evening, especially between the measured values of time 20:00-22:00 rises and passes through some of the points limit values.

Keywords : Konya, air pollution, air pollutants, particulate matter, $PM_{2,5}$, PM_{10}

004 INTEGRATED ENVIRONMENTAL MONITORING SYSTEM – ITS IMPORTANCE FOR ALBANIA

Aleko Miho

Department of Biology, Faculty of Natural Sciences, University of Tirana.

E-mails: mihoaleko@yahoo.com; aleko.miho@unitir.edu.al

ABSTRACT
Considerations on present National Environmental Monitoring System (NEMS) and the importance of EU proposed Integrated Environmental Monitoring System (IEMS) will be discussed. The actual NEMS in Albania seems very fragmented and outdated with evident lack of correlation between the different monitoring activities and institutions. The IEMS network was elaborated and proposed through the EU project StEMA (Strengthening of the Environmental Monitoring System in Albania; 2005 - 2008), capable of using environmental standards and EU directives. Hence, 63 separate monitoring areas were selected, shared in five principal types (U, urban; I, Intensive; IB, Intensive; Background; C, Confined; B, Biodiversity), covering the whole territory of Albania, based in their natural conditions and variations as well as by biodiversity, land cover, slope, rainfall, geography, geology, hydrogeology, hydro-morphology, typology, intensity of anthropogenic and lithogenic activities and other relevant characteristics. The size variation of the monitoring areas was to ensure that representative samples of different environmental constituents (water, soil, sediment, bioquality, biomonitoring, biodiversity) can be taken as required. It can enable evaluation of the extent and the impact of pollutant emissions on flora and fauna, air, water, land, soil, sediment, natural environment and human health. In addition, it is proposed that a supplementary number of areas can be selected for the purpose of monitoring emissions from 'Hot Spots' (H), primarily based on the outcome of the emission inventory. The expansion and consolidation of the proposed IEMS is the main objective of the second EU project CEMSA (Consolidation of the Environmental Monitoring System in Albania; 2010 – 2013), running in Tirana. Its specific objective is to support the Ministry of Environment, Forest and Water Administration (MoEFWA) and the Agency of Environment and Forestry (AEF) to implement the IEMS in Albania. Quality and reliability of data flowing in the IEMS are crucial on a long run. Monitoring structures should be legally in place and ensure the sustainability for the operation and maintenance of the whole system. The main benefits of the proposed IEMS consist on: 1) A rapid overview of the environmental situation in different parts of the country initially without the use of GIS based methodologies. 2) The establishment of a data warehouse that can be used in future to interface with GIS. 3) Excellent possibilities for implementing the DPSIR (Drivers, Pressures, State, Impacts, Responses) methodology. The purpose here is to stir up responsible people and experts from the MoEFWA, and the AEF, but also from other responsible institutions, to be aware and take actions in reforming NEMS in the line with the EU recommendations and support.

Keywords: National Environmental Monitoring System (NEMS) in Albania; Integrated Environmental Monitoring System (IEMS); StEMA; CEMSA

005 SKADAR LAKE - BIODIVERSITY AND ENDEMISM OF AN YOUNG ANCIENT LAKE

Vladimir Pešić[1], Sead Hadžiablahović[2] , Ana Pavićević[3]

[1]Department of Biology, Faculty of Sciences, University of Montenegro, Cetinjski put b.b 81000 Podgorica, Montenegro,
[2]Republic Institute for Protection of Nature, 81000 Podgorica, Montenegro,
[3]Ministry of Tourism and Sustainable Development, 81000 Podgorica, Montenegro,

E-mail: vladopesic@gmail.com; seadh@t-com.me; anpavicevic@gmail.com;

ABSTRACT
In Europe, most actual or putative ancient lakes are restricted to the Balkan Region. Skadar Lake is the largest lake on the Balkan Peninsula and recent study of the fauna and flora confirms that the lake harbours an rich biodiversity. Regarding these results Glöer & Pešić (2008) stated that

the Skadar Lake is an ancient lake. Although the Skadar Lake is the younger ones, his importance for evolutionary research should not be underestimated. The preliminary list of the vascular plants living in the area of Skadar Lake National Park based on the published records and original data from recent research, includes 116 families, 494 genera and 1212 taxa (species and subspecies). Despite the fact that some faunistic groups are poorly studied or not studied, approximately 590 animals species are known from the lake, including at least 34 endemic species (mainly freshwater Gastropoda). The adjusted rate of endemicity is estimated at 5.8 % for Animalia. The most endemic biotic groups are snails, amphipods, copepods, fishes and ostracodes. Additional field work is highly desirable for a more appropriate evaluation of the extant biodiversity of the Skadar Lake.

Key words: biodiversity, endemic species, lake,

006 LANDSCAPE INDICATORS TO EVALUATE THE AGROECOSYSTEMS SUSTAINABILITY: A CASE STUDY IN GREECE

Vincenzo Di Felice[1], Roberto Mancinelli[1], Konstantinos Karkalis[1,2], Gerassimos Arapis[2], Enio Campiglia[1]

[1] *University of Tuscia, Department of Agriculture, Forestry, Nature and Energy (DAFNE), Via San Camillo De Lellis, 01100 Viterbo, Italy*
[2] *Agricultural University of Athens, Laboratory of Ecology and Environmental Sciences, Iera Odos 75, 11855 Athens, Greece*

E-mail: persseas@hotmail.com

ABSTRACT
Indicators and indexes are useful tools for experts and decision makers who deal with environmental issues. This research seeks to identify and provide specific agro-environmental information, in the form of indicators (metrics), in order to assess the effects of human activities on the landscape and the degree of sustainability of the ecosystems. Two Hellenic regions were analyzed in order to provide an overview of sustainability at landscape hierarchical level: the first one in northern Greece (Imathia) and the second one in central-northern (Larissa). Results show that in Imathia the land cover is more diversified than in Larissa (i.e., in Larissa the 93% of the area is dedicated to herbaceous crop cultivation); therefore, in Larissa ecological structures such as woodlands are practically absent. Land use homologation represents a driving force working to increase the amount of agricultural outcomes but the environmental costs are frequently underestimated or not considered. In order to pursue the goal of sustainable development it is necessary to improve the landscape management in Greece and under this perspective, agriculture can play an important role, also in view of the arrival of the new European Common Agricultural Policy.

Keywords: indicators, environmental management, sustainable agriculture, landscape ecology, biodiversity, CAP Directive.

007 ASSESSMENT THE IMPACT OF USING THE ALLEY CROPPING IN THE EAST OF MOROCCO

Y. Chebli, R. Mrabet

National Institute of Agricultural Research (INRA), Morocco

E-mail: chebli.youssef@gmail.com

ABSTRACT
Eastern region of Morocco, which is under permanent water shortage and recurrent drought, is facing problems of pastoral land degradation that threaten economic livelihoods of resource-poor farmers. In order to diversify the productivity and meet livestock nutritional requirements during feed gap periods, *Atriplex nummularia* was planted in association with barley (Alley cropping). This study was conducted in Tancherfi area in order to assess the socio-economic impact of changes in farming systems using alley cropping. The vegetation parameters (shrub biomass and canopy cover) were measured during three periods. The results showed that biomass and canopy

cover of *Atriplex nummularia* increased by 15% and 10% respectively due to the inclusion of barley. This association had positive effects on soil properties, which improved soil water status. Farmers expressed their satisfaction with this technique that allowed a 40% increase in barley grain yield. This result could be explained by the microclimate created by fodder shrubs that benefited barley growth and development. As a conclusion, with active involvement of community alley cropping should be introduced in any policy related to development of pasture lands in eastern region of Morocco.

Keywords: Alley cropping, agroforestry, *Atriplex nummularia*, barley, east of Morocco.

008 MANAGEMET PLANS OF THE NATIONAL PARKS IN MACEDONIA

Zoran Sapuric[1], Vulnet Zenki[2]

[1]University American College, Skopje, Macedonia (former minister of environment)
[2]South East European University, Tetovo, Macedonia

Email: sapurik@uacs.edu.mk; v.zenki@seeu.edu.mk

ABSTACT
The national parks have a great importance for nature protection, protections of the ecosystems, and overall environmental protection. In the Republic of Macedonia there are three national parks, (Pelister, Mavrovo and Galicica) which have a long history. Macedonian national parks are protected by special regime which is stipulated in the special legislation. The total protected area of these parks is 205. 235 ha, or 8.07% of the total area of the country. It is possible in the future this area to increase, because have been taken certain activities aimed at declaring the fourth national park at the Shara mountain. The development of the national parks is not possible without the plans for their management. The national parks Galicica and Mavrovo have own plans, but the park Mavrovo still has been preparing the plan. The well designed plans of national parks, can lead to the favorable environmental benefits, but at the same time could bring many economic and social benefits. The aim of this paper is to analyze the managerial capacities and potentials of the national parks in Macedonia and to research the possibilities for sustainable economic development of these parks, especially for greater development of eco tourism. Also the research gives some recommendations for the future development and implementation of the goals that are confirmed in the plans, in the direction of higher economic development.

Key words: National parks, management plans, economic development, nature protection

009 THE CONTENT OF ESSENTIAL OIL OF THYMUS TOSEVII VEL. SUBSP. TOSEVII VAR. DEGENII (LAMIACEAE) PLANTS ORIGINATING FROM PELISTER, BITOLA, MACEDONIA

Dijana Blažeković - Dimovska, Nikola Hristovski

University "Sv. Kliment Ohridski"- Bitola, Faculty of biotechnical sciences, Partizanska bb, Bitola, R. Makedonija

E-mail: dijanablazekovic@yahoo.com)

ABSTRACT
Lamiaceae (syn. Labiatae) herb family consists of more than 252 genera and 7000 species. Among the aromatic plants belonging to the family Lamiaceae, the genus *Thymus* is noteworthy for the numerous species and varieties of wild-growing plants. Many of these species are typical for the Mediterranean area. The genus *Thymus* has numerous species and varieties, and their essential oil composition has been studied earlierThe objective of this study was to determine the hydro-distillation kinetics of *Thymus tosevii* Vel. subsp. *tosevii* var. *degenii* essential oil which is endemic species of Pelister, Baba Mountain, using the Unger-type apparatus. It was also investigated how the raw plant material affect duration of hydro-distillation and the final yield of the essential oil in order to improve the essential oil production process. Production of essential oil and its composition in plants is mainly affected by the combined influences of both genetic factors and cultivation conditions such as climate, plant density and extraction technique.

Key words: thyme, *Thymus tosevii* Vel. subsp. *tosevii* var. *degenii*, essential oil, hydro-distillation

010 DIVERSITY AND COMPOSITION OF THE PHYTOPLANKTON COMMUNITY IN DUSHKU LAKE

Skerdilaid Xhulaj[1], Sajmir Beqiraj[2], Ferdinand Bego[2]

[1]*University of Tirana, Faculty of Natural Sciences, Albanian Center for the Study of Flora and Fauna, Tirana, Albania*
[2]*University of Tirana, Faculty of Natural Sciences, Department of Biology, Tirana, Albania*

E-mail: toxarium@gmail.com

ABSTRACT
The present study on phytoplankton of Dushku Lake was carried out between April, 2009 and October, 2010 to assess various biological parameters including plankton. A total of 92 species of phytoplankton were identified. Bacillariophyceae was found to be the most dominant group at the selected station. The population density of Bacillariophyceae varied from a minimum of 67 cell/ml in the month of June, 2009 to a maximum of 638 cell/ml in the month of January, 2010. The most abundant species in terms of population density were *Fragilaria crotonensis* Kitton, *Cyclotella radiosa* (Grunow) Lemmermann, *Stephanodiscus hantzschii* Grunow. Chlorophyceae formed the second most dominant group of phytoplankton with *Chlorella* sp., *Pediastrum* sp., *Spirogyra* sp. and *Sphaerocystis* sp. as the most abundant species. The number of Chlorophyceae varied from a minimum of 47 cell/ml during December, 2009 and March 2010 to a maximum of 429 cell/ml in May, 2009. Amongst Cyanophyceae, *Anabaena* sp. with population density of 112 cell/ml was found to be the most dominant species at the selected station. Euglenophyceae formed the least represented group of phytoplankton which showed the peak population in spring. Chlorophyceae and Cyanophyceae showed positive correlation with water temperature (r = 0.340 and r = 0.633), respectively, at the selected station whereas Bacillariophyceae and Euglenophyceae showed the negative correlation with water temperature, r = -0.610 and r = -0.297), respectively.

Keywords: Phytoplankton, diversity, Dushku Lake.

011 DETERMINATION OF PHYSICOCHEMICAL PARAMETERS IN WELL WATER USED AS DRINKING WATER IN MILITARY ZONE

Milidin Bakalli[1], Margarita Hysko[2]

[1] *Laboratory of Microbiology Analysis, Tirana-Albania*
[2] *Department of Biology, Faculty of Natural Sciences, University of Tirana-Albania*

E-mail:bakallim@gmail.com; hysko_m@hotmail.com

ABSTRACT
The objective of this study is to determine the physicochemical quality of well water in the religion of south-west of Tirana that is used as drinking water by effectives. In this religion it hasn't a public supply for drinking water. Water samples are taken monthly from May to December 2011 under the aseptic rules. We have analyzed the physicochemical characteristics of the well water samples by various parameters like temperature, pH, total dissolved solids, electrical conductivity, nitrate, ammonium, calcium, magnesium, total hardness and chloride. By observing the results it concludes that the level of some parameters like nitrates, ammonium, calcium, magnesium and total hardness are near the maximum of allowable limit of Albanian standards of drinking water.

Key words: wells water, physicochemical quality, effectives, chemical parameters

012 EXPLORATION AND SELECTION OF THE WILD OLIVE GENOTYPES

[1]H Ismaili., [2]C Cantini., [1]B Gixhari., [2]G Ianni., [3]I Lloshi

[1]*Agricultural University of Tirana, Gene Bank*
[2]*Istituto per la Valorizzazione del Legno e delle Specie Arboree. (CNR) FIRENZE, Italy*
[3]*Agricultural Tingransfering Technology Center, Shkodra*

Email: hairiismaili@yahoo.fr

ABSTRACT
Exploration on wild olive diversity carried out during the period 2000-2011, recorded a number of 37 wild forms. Morphological marker based analysis were performed for olive identity characterization, to determine their localization, usage limits as well as to build in-situ & ex-situ collection of 37 wild olive forms. Morphological description (Rezgen) was done for each olive genotype, in total of 49 characters; of tree, leaf, inflorescence, fruit and endocarp were measured during the study. Information was gathered for 37 forms with local designations, which represent 3 populations. Basing on the endocarp characteristics, as an important morphological marker, wild olive forms have been modelled and analysed (PCA), are clustered in two groups. (i) Olea europaea L. subsp. oleaster (Hoffmgg. & Link) 6 Varity, (ii) Olea europaea L. subsp. sylvestris (Mill.) 1 Varity. According to the oil content, genotypes are clustered in two main groups in: (i) low oil content (>14%), (ii) medium oil content (15% -18%). Some of fruit and endocarp features (D, d, D/d, T/E, weight) were highly related to the oil content (R^2=0.887). The identified material is of great importance when considering genetic – selective work, as well as sapling production. According to the individual possessive characteristics we might classify: (i) Two individuals that possess long internodes with high germination power. (ii) Three individuals with healthy embryos after root taking. (4-D, 8-Kr, 2-KT). The Diversity Coefficient (KD) is classified in three regions. (i) South 2.61 (ii) Central 1.34, and, (iii) nord region 0.223.

Key Words: Olea europaea, Diversity; Genotype; Endocarp; Regions; oleaster; sylvestris.

013 DETERMINATION OF ORGANIC VOLATILE IMPURITIES INSOME MEDICINE FORMULATIONS BY HS/SPME TECNIQUES

Aurel Nuro, Elda Marku

Tirana University, Faculty of Natural Sciences, Chemistry Department,

Email: nuroaurel@yahoo.co.uk

ABSTRACT
This paper presents data obtained for organic volatile impurities (OVIs), residual solvents in some solid medicine formulations of Albanian pharmacies using gas chromatography (GC) with Flame Ionization detector (FID). Organic solvents such as acetone, ethyl acetate, isopropyl alcohol, methanol, tetrahydrofuran and toluene frequently used in pharmaceutical industry for the manufacturing of Active Pharmaceutical ingredients (APIs). Measuring of residual solvents is mandatory in herbal extracts, active ingredients and medicine formulations. Organic solvents are entrapped within the formulation either during the course of manufacture of active pharmaceutical ingredients or during coating of formulation. Residual levels of these organic solvents in tablet cores and film coats are critical as beyond permissible limits they are likely to cause undesirable side effects or alter some kind of physicochemical property of the active pharmaceutical ingredients. Hence it becomes necessary to limit the amount of these residual solvents, which can be called as organic volatile impurities, to a certain levels within the European pharmacopoeias prescribed limits. In the present study gas chromatographic method for the determination of methanol, ethanol, isopropyl alcohols, benzene, dichloromethane and chloroform at residual levels in solid medicines was developed using headspace solid phase micro extraction (HS/SPME) technique. The separation of analytes was carried out on VF-1ms column (30m X 0.32mm i.d. X 0.25µm coating thickness), using GC Varian 450, with nitrogen as carrier gas in the headspace mode injection. Flame ionization detector was used for their detection. The method described is simple, sensitive, rugged, reliable and reproducible for the quantization of methanol, ethanol, isopropyl alcohols, benzene, dichloromethane and chloroform at residual levels from solid medicine formulations also for herbal extracts. Their levels are found to be under limit of detection and within the European pharmacopoeias limits.

Keywords: OVIs, residual solvents, HS/SPME, gas chromatography.

014 **DETERMINATION OF SOME VOLATILE ORGANIC POLLUTANTS IN WATER SAMPLES OF LANA RIVER**

Aurel Nuro, Elda Marku, Ardit Shehi

Tirana University, Faculty of Natural Sciences, Chemistry Department,

Email: *nuroaurel@yahoo.co.uk*

ABSTRACT

This paper presents data obtained for Methyl *tert*-butyl ether (MTBE), *tert*-butyl alcohol (TBA), benzene, toluene, etilbenzene and xylene (collectively known as BTEX) and chlorbenzenes in water samples of Lana River, in Tirana City. Headspace solid phase micro extraction (HS-SPME) technique was used to trace these volatile organic pollutants in water. 1 L water samples were taken on nine stations in Lana River in October 2011.MTBE is used worldwide as an antiknock additive that can increase the octane number. MTBE has gained increasing attention over the past decade because of its widespread contamination in the environment as a result of the leaking of underground fuel storage tanks. TBA is degradation intermediate of MTBE and is also applied as a fuel additive. MTBE and TBA are considered to be probable human carcinogens. Volatile mono aromatic hydrocarbons such as benzene, toluene, etilbenzene and xylene are major constituents of gasoline; they are also key industrial solvents and are frequently required in industrial operations. These compounds are released into the environment during manufacture, transportation, usage, and disposal, leakage in underground storage tanks and pipelines in gasoline industry, and through leachate from landfills. Chlorbenzenes are volatile organic pollutants usually in water. The liquid as well as gaseous states of these compounds in the environment pose a significant threat to human health and the environment due to their toxic and carcinogenic properties. Lana river wide in Tirana, the most big city in Albania in the population and automibilistic point of you. The analysis of the MTBE, TBA and BTEX in water samples was performed by gas chromatography technique using flame ionization detector (GC/FID). VF-1ms capillary column (30m x 0.25mm x 0.25um) was used for isolation and determination of these analytes. The analysis of chlorobenzenes was performed by gas chromatography technique using electron capture detection (GC/ECD). Rtx-5 capillary column (30m x 0.25mm x 0.25um) was used for isolation and determination chlorobenzenes. Relatively high concentrations of BTEX compounds were detected in water samples of Lana River because of automibilistic road near the river. Chlorbenzenes with four, five and six chlorine atoms were dedected almost for all water samples of Lana River.

Key Words: MTBE, TBA, BTEX, Chlorbenzenes, HS-SPME, GC/FID, Water analysis

015 **A STUDY ON ANTIBACTERIAL EFFECT OF EXTRACTS OF SALVIA OFFICINALIS**

Elda Çuka[1], Ernest Gjuraj[1], Lorena Ciko[2], Aurora Buci[2], Sokol Abazi[2]

[1]AKU, Rr. Muhamet Gjollesha 56, 1000 Tiran - Albania
[2]Tirana University, Chemistry Department, Tirana - Albania

Email: sokol.abazi@fshn.edu.al

ABSTRACT

Salvia officinalis is a very well known plant in Albania for its aromatic, nutritive and medicinal effect. There are several studies on chemical composition of essential oils of *Salvia officinalis* from different parts of Albania. Lately we have developed in our laboratory a new method of extracting this essential oil using subcritical CO_2. Also in literature one could find studies on antibacterial and microbial effects of essential oils of salvia taken from steam distillation. In this work we will present the effect of the method used for isolation of different extracts of *Salvia* in their chemical composition and their antibacterial effect. This effect will be later compared to the effect of essential oil received from standard industrial steam distillation. Our main method will be the one using a soxhlet type extraction; where as a solvent subcritical CO_2 has been used. Extracts from different temperature condition will be studied, in order to see what impact the temperature will have in the chemical composition and in the antibacterial effect of these extracts. Also e fractionation of these extracts using column chromatography will be done and the antibacterial

effect of these sub extracts will be measured, in order to better identify the active components. The chemical composition of all extracts has been determined using GC-MS. The antibacterial effect has been measured for different type of bacteria and viruses.

Keywords: medicinal plant, *Salvia officinalis*, antibacterial effect, GC-MS

016 A STUDY ON RECUPERATION OF HYDROLATES PRODUCED FROM STEAM DISTILLATION INDUSTRY IN ALBANIA

Aurora Buci[1], Matilda Cepele[1], Lorena Ciko[1], Elda Çuka[2], Sokol Abazi[1]

[1]Tirana University, Chemistry Department, Tirana – Albania
[2]AKU, Rr. Muhamet Gjollesha 56, 1000 Tiran - Albania

Email: sokol.abazi@fshn.edu.al

ABSTRACT
The environment impact of hydrolates produced from the steam distillation industry of aromatic and medicinal plants in Albania has started to become a concern for local authorities and for the producers themselves. Till now there has been no thorough study on their recuperation or alternative uses. In this work we will represent our studies on the chemical analysis and the quantification of organics that these hydrolates contain. For that purpose samples from industrial plants have been taken. Their organic contain has been studied after their extraction with organic solvents. The identification of organics has been done with GC-MS. Their organic contain is between 0.2-0.9%. Some preliminary work on the formulation of different shampoos and detergents will be represented, too. This alternative is very interesting because these waters are distilled waters and they contain already the aroma for the final product. On the other hand the presence of natural components from aromatic and medicinal plants will allow production of very high quality shampoos and detergents.

Keywords: medicinal plant, hydrolates, GC-MS

017 EXTRACTION OF EUGENOL FROM *EUGENIA CAROPHYLLATA* WITH DIFFERENT EXTRACTION METHODS

Sidita Mance, Sokol Abazi

Tirana University, Chemistry Department, Tirana - Albania

Email: sokol.abazi@fshn.edu.al

ABSTRACT
Eugenia carophyllata is a plant that contains up to 69% eugenol, that's why has been used for obtaining eugenol for aromatic and medicinal uses. Different extraction methods give different yield of extracts and different eugenol content. Very often, the presence of organic solvents in these extracts is not allowed, especially for its use in medical area. In order to ovoid that supercritical fluids have been used. This method does not leave any traces of organic solvents. The disadvantage of this method is that requires high pressures and high temperatures, which increases considerably the cost of extraction equipments.
In this work we will use subcritical CO_2 for eugenol extraction. The pressure and temperature used are moderate, and after releasing the gas we will obtain the extract free from organic solvents.
In order to compare that method with other standard methods we will do the extraction of the same sample with hydrodistillation, soxhlet extraction and ethanolic extraction. The chemical analysis of each extract will be made with GC-MS. The identification of compound will be made with MS and with internal standards.

Keywords: *Eugenia carophyllata*, subcritical CO_2, GC-MS

018 THE IMAPCT OF TEMPERATURE IN THE CHEMICAL COMPOSITION OF AROMATICS PLANT EXTRACTS TAKEN WITH SUBCRTICAL CO_2

Lorena Ciko[1], Ujeba Hyso[1], Elda Çuka[2], Aurora Buci[1], Sokol Abazi[1],

[1]Tirana University, Chemistry Department, Tirana - Albania
[2]AKU, Rr. Muhamet Gjollesha 56, 1000 Tirana - Albania

Email: sokol.abazi@fshn.edu.al

ABSTRACT
The production of essential oil of aromatic and medicinal plants is very well known process in Albania. Several plants are steam distilled every year in Albania in order to get their essential oils. This method has the disadvantage that heats the plants, causing some alteration of chemical composition, and produces thousands of hectoliters of waters that are discharged in the nature. Lately we have developed in our laboratory a new method for extracting this essential oil using subcritical CO_2. From chemical analysis we have seen that this method does not allow the separation of waxes and paraffin form the essential oil.
In this study we will represent our result on the effect that temperature of extraction has on chemical composition of these extracts. We have seen that decreasing the temperature of extraction we could selectively extracts only the waxes, which are in the surface of the leaves. Then by increasing the temperature close to the critical point we get the essential oils pure from waxes. This effect is due the low diffusivity that the CO_2 has in lower temperatures.
Different plants have been used for that study and the temperatures selected are 0°C, 20°C and 35°C
The chemical composition of all extracts has been determined using GC-MS.

Keywords: medicinal plant, supercritical CO_2, GC-MS

019 A CONTRIBUTION TO THE KNOWLEDGE OF THE TRUE BUGS MIRIDAE (HEMIPTERA) IN THE DIFFERENT ECOSYSTEMS IN TIRANA (ALBANIA)

Eltjon Halimi[1*], Anila Paparisto[1], Dritan Topi[2], Kastriot Misja[1]

[1]University of Tirana; Faculty of Natural Science; Department of Biology
[2]University of Tirana; Faculty of Natural Science; Department of Chemistry

e-mail: tonni_75@hotmail.com

ABSTRACT
This study aim to present a sysmtematic and ecological analysis to the family *Miridae* the true bugs, in the different ecosystems of Tirana region, Albania. The collection of biological material is performed during the period 2008- 2010. The study analyzed 119 individuals, which are represented by 21 genus and 31 species.
By analyzing the collected material, the genera *Deraeocoris* is the most represented with 4 species and a frequency of 12.09%. Habitats of Petrela station are represented by more species than the other stations, with 12 species and a frequency of 38.71%, with less species Ndroqi station with 5 species and a frequency of 19.35%. Based on the "*Jaccard index of similarity coefficient*", Dajti with Farka and Krraba with Farka stations, have a higher similarity coefficient than the other stations, of 21.42%, with the lowest coefficient Krrana and Petrela with 5%, showing a similarity of the ecological factors between these stations, which means a similarity between these habitats.Zoogeographic regions of Palearctic, representing most of the species of the species Miridae, with 12 species and frequency 32.36%.

Key words: Hemiptera, Miridae, ekosystems, dominance, habitats

020 PRELİMİNARY DATA REGARDİNG THE ANTHROPOGENİC İMPACT ON THE MURAT RİVER (AĞRI REGİON)

[1]Gina Raluca Kerkmann, [2]Aşkım Hatunoğlu, [3]Yavuz Hatunoğlu

[1]İbrahim Çeçen University, Faculty of Arts and Sciences, Department of Biology, Erzurum Yolu Üzeri 04100-AĞRI/TÜRKİYE
[23]İbrahim Çeçen University, Education Faculty, Department of Educational Sciences,

Email: kerk_ral77@hotmail.com; askimhatunoglu@hotmail.com; yhatunoglu@gmail.com

ABSTRACT
The Murat River (in Turkish Murat Nehri, Murat Suyu or Murat Irmağı) is the eastern branch of the Euphrates and springs in the proximity of the small town Doğubeyazıt. Ağrı city is the capital of the region with same name and is located in eastern Anatolia; in year 2008 the population of this city was officially estimated to 91,817 inhabitants. There are not so much scientific papers regarding the Murat River, despite the great anthropogenic impact, especially in the urban zone. Present papers render the first results concerning the estimation of the saprobity degree of the river using ciliates communities; there have been identified 19 ciliates species so far; most of them belong to the community that characterizes polysaprobic areas. Moreover, this paper presents the results of a questionnaire about environmental protection; the target group was composed of 200 students of the Education Faculty Ağrı, aged 19-23. I thought that they have formed opinions on environmental issues.

Key words: the Murat River, pollution, ciliates, environmental education.

021 ASSESMENT OF THE DEVELOPEMENT OF TEMPERATURES FOR THE REGION OF GJILANI IN KOSOVO: CASE STUDY

Agim ASLLANI[12]

[1*]Environment Association of Gilan, Kosovo; [2]South East European University Tetovo, Macedonia;

E-mail: agim_asllani@hotmail.com

ABSTRACT

The region the study has been conducted in, is that of the Gjilani in Kosovo. Kosovo is located at the heart of the Balkan Peninsula. For the assessment of the development of the temperatures in the region of Gjilani, Kosovo, the time period between 1961 and 1990 is taken into consideration. Based on the conducted analysis, it results that: T_{max} – maximal temperatures. Maximal temperatures in the region of Gjilani are the lowest in the months of January, 3.0 ^{0}C, and December, 4.6 ^{0}C. While the maximal average temperatures are seen in the months of August, 27.6 ^{0}C and July, 27.3 ^{0}C. The annual maximal average temperature is 16.3^{o}C. T_{min}- minimal temperatures. Minimal temperatures in the region of Gjilani are lowest in the months of January, -3.9 ^{0}C and December, -2.2 ^{0}C. While the highest minimal temperatures can be spotted in the months of August, 13.8 ^{0}C and July, 13.9^{0}C. temperaturat minimale më të larta janë në muajin gusht 13.8^{o}C dhe muajin korrik 13.9^{o}C. The annual minimal average temperature is 5.6 ^{o}C. T_{mes}-average temperature. Average temperatures in the region of Gjilani are lowest in the months of January, -0.7 ^{0}C and December, 1.0 ^{0}C. While the highest average temperatures are in the months of July, 20.7 ^{0}C and August, 20.6 ^{0}C. The annual average temperature is 10.8^{o}C.

Key word: temperature: minimal, maximal , average, region, time period

022 DETERMINATION OF Pb-210 AND Po-210 RADIOISOTOPES IN SOIL USING EXTRACTION CHROMATOGRAPHIC TECHNIQUE

Elida Bylyku[1], Brunilda Daci[1], Kozeta Bode[1]

[1]*Centre of Applied Nuclear Physics, Faculty of Natural Sciences, Tirana University, Tirana- Albania*

Email: elidabylyku@yahoo.co.uk

ABSTRACT
Polonium (Po-210) and Lead (Pb-210) are relatively long-lived members of the natural U-238 decay series. They contribute significantly to the radiation dose of the population. For this reason we have analyzed soil samples from different parts of Albania to determine the respective level of Po-210 and Pb-210.
A radiochemical procedure is applied to separate lead and polonium simultaneously from different soil samples in the presence of the standard solution of Po. After adding Po-208 tracer and lead carrier samples are decomposed using mineral acids. Lead and polonium are selectively retained from 2M HCl solution by crown ether resin. Polonium is stripped with 6M HNO3 while lead with 6M HCl solution. The sources of polonium are prepared by spontaneous deposition onto silver disk. The activity concentration of Po-210 is determined by isotope dilution alpha spectrometry. Lead is precipitated as oxalate and the activity concentration of Pb-210 is calculated from the liquid scintillation spectrum. The chemical recoveries for Po and Pb are good and the values range in 70-89 %. Replicates, reagent blank and certified reference materials are used for the quality control purposes. In general Po-210 and Pb-210 activity concentrations in certified reference samples agreed well within the statistical uncertainty with the reference values and confidence intervals reported for these materials.

Keywords: Polonium, lead, soil sample, crown ether resin

023 ULTRASONIC EXTRACTION CHARACTERISTICS OF THE ALBANIAN "MORO" ORANGE-PEEL CULTIVARS

Kledi Xhaxhiu*, Arjan Korpa, Altin Mele, Teodor Kota, Kujtim Dule

Faculty of Natural Sciences, Blv. "Zog I", 1001, Tirana Albania

Email: kledi.xhaxhiu@unitir.edu.al

ABSTRACT
The south-western part of Albania has a long tradition in the citrus and orange cultivation due to the favourable geographical and climacteric conditions. Among the sweet "Tarocco" and "Navel" cultivars present in the Albanian market, the "Moro" variety with its typical apparent caramel-colored endocarp is well known for its sweet juice. After the juice recovery, the orange peel, often seen as a waste of food industry, offers several applications not only in agriculture but as a value added product in food, drug production, cosmetics and biotechnology. Among the diverse techniques used for the recovery of the orange-peel extract, the ultrasonic extraction as a solvent saving and a less time consuming method often reveals high extraction efficiencies. We employed this method for the investigation of the orange peel extract content and its overall efficiency evolution using a ultrasonic device "SONOREX TK 52" 40 – 60V / 100 W, applying sonication times from 5-60 min. while keeping the bath temperature around 25°C. The GC-MS and GC-FID analyses of the extracts using methylene chloride as the extraction environment and a sonication time of 1 hour revealed limonene as the major extract component (91 %) followed by linalool, β–myrcene, decanal, α – pinene and valencene. Except β–myrcene, all the other components were extracted over 90 % within 30 min. of extraction. The use of different organic solvents, not only influenced the extraction efficiency but also changed the extraction component percentage significantly. In the course of this investigation, while using a sonication time of 2 hours, methanol showed the highest efficiency (0.548 %), meanwhile, hexane the lowest efficiency (0.141 %). The addition of acetone in hexane improved the extraction yield up to 0.272 %.

Key words: orange peel extract, ultrasonic extraction, extraction efficiency, extraction evolution, extraction components

024 PITFALL TRAPS: AN ECOLOGICAL METHOD FOR THE EVALUATION OF INVERTEBRATE DISTRIBUTION IN THE TIRANA DISTRICT

[1]Vrenozi B., [2]Haxhiu I. & [1]M. Koni

[1]Tirana University, Faculty of Natural Sciences, Tirana – Albania
[2]Vitrina University, Tirana – Albania

E-mail: blerinavrenozi@yahoo.com

ABSTRACT
Pitfall trapping is one of the most commonly used ecological methods to survey the occurrence and abundance of ground-dwelling invertebrates. Scientific material for a doctoral thesis was collected using pitfall traps. Currently, seven different habitats are being investigated in the Tirana district from the northwest, centre and northeast of Tirana city. The Vora hills have yielded the highest number of invertebrates, as compared to two other areas, from which the locality with *Robinia pseudoacacia* comprises 25.5%. Findings of Mollusca, Annelida and Arthropoda have resulted respectively in records of Gastropoda, Oligochaeta, Arachnida, Diplopoda, Chilopoda and Insecta. Seasonal distribution data reveals a significant spring composition of 38.9% of all invertebrates.

Keywords: Methodology, Mediterranean, terrestrial fauna

025 AGROMORPHOLOGICAL DIVERSITY EVALUATION OF MAIZE GENE BANK ACCESSIONS

Doriana (Bode) Xhulaj [*1], Fetah Elezi[1], Valbona Hobdari[1]

Gene Bank, Genetic Resources Centre, Agricultural University of Tirana.

E-mail:d.xhulaj@yahoo.com

ABSTRACT
The aim of this study was to evaluate the possible genetic variability among maize accessions. Nineteen maize accessions were characterized by means of 15 morphological traits, based on the IBPGR *Descriptors for Maize*. Accessions showed a variation from 5.4% for ear diameter to 31.82% for kernels weight (W). The accession identified with the highest value of ear length was AGB ZM02 (22.2 cm), AGB ZM05 with the highest values in some traits as ear diameter (4.1cm), cob diameter (2.7cm), rachis diameter (2.1 cm) and for kernel thickness (4 mm). Maize accessions presented a variation of 23.13% for number of kernels per row (NKR) with a maximum of 55 kernels (AGB ZM12), and a CV of 24.33% for the number of kernels rows. We observed that 78.94% of the accessions have white cob colour, 57.89% of maize accessions presented conical shape of uppermost ear and rounded shape of kernels. Positive correlations coefficients were observed between several quantitative traits, as in NKR and ear length (r =0.77), rachis diameter and cob diameter (r= 0.67), kernel width and W (r= 0.57). Data were object of the hierarchal cluster analyse, which verified that AGB ZM06 and AGB ZM09 were the two maize accessions with the lowest differences variability in quantitative traits. The assessment of morphological traits in maize could be of an importance for scientists and breeders, and the data recorded in this study are important for the crop accessions information in Albanian Gene Bank.

Key Words: accessions, characterization, descriptors, *Zea mays*.

026 DEVELOPMENT OF "GREEN" CEMENT FOR SUSTAINABLE CONCRETE USING METALLURGICAL WASTE

A.Korpa[1*], K. Xhaxhiu[1], A. Mele[1], E. Spahiu[2], T. Kota[2]

[1] Department of Chemistry, Faculty of Natural Sciences, 1001 Blv. Zog I, Tirana, Albania
[2] Department of Physics, Faculty of Natural Sciences, 1001 Blv. Zog I, Tirana, Albania

Email: arjankorpa@yahoo.com

ABSTRACT
Waste utilization is a superior alternative to disposal in that disposal cost and potential pollution problems are reduced or even eliminated along with the achievement of resource conservation. Nevertheless, the utilization strategy must be coupled with environmental and energy considerations to use available materials most efficiently. One of the most important groups of the industrial waste that is gaining increasingly more application in construction industry is metallurgical slags. The most commonly produced slags are from iron and steel industry, called blast furnace slag (BFS). Properly fast cooled iron blast furnace slags have cementitious properties. The traditional way to utilize metallurgical slags in cementing materials is to partially replace Portland cement, which usually results in a lower early strength and longer setting times. BFS typically replaces 35% to 65% Portland cement in concrete. A 50% replacement of each ton of Portland cement would result in a reduction of approximately 500000 tons of CO_2. Also because the use of these slags as cementing components needs only grinding, it will save substantial amounts of energy compared with the production of Portland cement. The "green" materials are considered as materials that use less natural resources and energy and generate less CO_2. Clinker free cements based on chemically activated ground granulated blast furnace slags are considered green materials. The presence of activator(s) can accelerate the break-up of structure and hydration of slags. The concretes produced with the developed clinker free cements have similar properties with those produced from clinker based cements.

Key words: Green cement, metallurgical waste, clinker free, sustainable concrete

027 STUDY ON THE TENDENCY OF PRECIPITATION IN SOME REGIONS OF KOSOVO

Agim ASLLANI[12]

[1*]Environment Association of Gilan, Kosovo;
[2]South East European University Tetovo, Macedonia;

E-mail: agim_asllani@hotmail.com;

ABSTRACT
The study has been conducted in several years. During the study, climatic datas have been obtained, processed, and analyzed for several areas of Kosova, specifically: Prishtine, Peje, Ferizaj dhe Gjilan. It is focused on precipitation. Based on the study analysis: the Highest precipitation occurs in the area of Ferizaj, with 860 mm; and the Lowest precipitation can be detected in the region of Prishtina, with 598 mm. The Regions where a change in the tendency of precipitaion has been noticed, and where the correlation coefficints supprt the change in the tendency, are the areas of Prishtina and Gjilani. While analyzing the decade between 1998 and 2007 for the region of Prishtina, a change is noticed on the amount of average precipitation which has a lower tendency of about -2.771 mm per month or -33.2 mm per year. The regression eguation is y=-2.771 x + 74.519, and the correlation coefficient is r = 0.681. While analyzing the decade between 1998 and 2007 for the region of Gjilani, a change is noticed on the amount of average precipitation which has a lower tendency of about -1.84 mm per month or 22.13 mm per year. The regression equation is y=-1.8442 x + 71.773, and the correlation coefficient is r = 0.619.

Key words: precipitation, climate, region, regression equation, tendency

028 ORGANOLEPTIC EVALUATION TO OLIVE OIL, TO "FRANTOIO"CULTIVATOR IN ECOLOGICAL CONDITIONS OF THE AREA OF ELBASAN

Alda BIÇOKU

"Aleksander Xhuvani" University, Elbasan, Albania

E-mail: alda_bicoku@yahoo.com

ABSTRACT
The area of Elbasan is placed in the central part of Albania in the valley high of the river Shkumbin. There are fertile areas cultured around the city especially with vegetables, there are also hills cultivated with trees and olives. The valley of the river Shkumbin makes possible that

the olive cultivation to reach even this far away the seacost as its position is protective from the cold winds of west. The ground in which olive is planted is a hilly steep land, dry and relatively poor in nutrient elements, where the other cultures do not provide production at all. Mainly the land in which the "Frantoio" variety is cultivated in Elbasan are the hills of the area of Shirgjani hills, Dumrea's and Sulova's.The study of this is done in the year 2009 in order to observe the quality and the organoleptic properties of the olive oil of the 'Frantoio' variety as well as the advantages that this variety has in comparison with other varieties. The establishment of physic-chemical parameters is done in the analysis lab near DRBUMK in Elbasan. The 'Frantoio' variety is one of the varieties with manufacture and constant production and has a high value of fitness. It provides manufacture every year and it is a cultivator that produces a special oil for the fruit fragrance and stable in time. It is resistant toward: tuberculosis, the olive fly and of cold. It has a powerful vegetative growth especially in its first years of life. It has an oval fruit 2.5-3.2gram.The oil has a golden in light green color, with a kind smell and is nutrient.

Keywords: suitability, quality, **'**Frantoio' variety, area

029 TERRESTRIAL MACROINVERTEBRATES OF SEED BUGS (LYGAEIDAE HEMIPTERA) IN ECOSYSTEMS OF TIRANA (ALBANIA)

Eltjon Halimi[1*], Anila Paparisto[1], Dritan Topi[2], Kastriot Misja[1]

[1]University of Tirana; Faculty of Natural Science; Department of Biology
[2]University of Tirana; Faculty of Natural Science; Department of Chemistry

e-mail: tonni_75@hotmail.com

ABSTRACT
Study of the ecological and systematical aspects for the families *Lygaeidae* in ecosystems Tirana Region is presented in that paper. The biological material was collected during the period of time 2008-2010. In our study, we determined 87 individuals for this family. The family *Lygaeidae* was presented by 13 generea and 17 species.
The systematical analysis to the *Lygaeidae* resulted that the genera represented by the highest number of speies was *Lygaeus* by 3 species, and frecuency 17.65%.
By analyzing the material the station with more species, is Krraba, with 9 species or frequency 52.94%, while with less species, is Vora and K.Kruja with with 4 species or frequency 23.53%.

Key words: Hemiptera, *Lygaeidae*, ekosystems

030 BIOECOLOGICAL AND TAKXONOMIC DATA ON MILIPEDA GROUP IN SOUTH REGION OF ALBANIA

Hajdar KIÇAJ

Faculty of Technical Sciences, Department of Biology, University of Vlora "Ismail Qemali"

E-mail: hajdarkicaj@yahoo.it

ABSTRACT
This article presents some bioecological and taxonomic data about the Class of *Diplopoda (Myriapoda)*, on the South Region of Albania. This article reports species of three orders found in South Region of Albania. The sample sites represent different habitats of the region. According to the published literature for the Albanian Diplopoda, a comparable research is made for their distribution within the country and Balkan region. This study gives an assessment of the biodiversity of the area for this group. The study consists of collecting the samples and in taxonomic determination of the species. This article describes biotic and abiotic factors, wich are related to the distribution of this group in the study area. This is the first study conducted on the Southern Region of Albania. It is of high importance, because it gives a full picture of the Diplopoda group in our country. The research focused in this field gives an important contribution in further recognition of this group.

Key words: Biodiversity, diplopoda, julida, species, geographical distribution, collecting sites

031 OUTLOOK ON THE ANTHROPOGENIC IMPACT TO THE MICRO PRESPA LAKE

Neki FRASHËRI[1], Niko PANO[2], Evis TASKA[2]

[1] Faculty of Information Technology, Polytechnic University of Tirana;
[2] Association of Albanian Inland and Coastal Waters Protection, Tirana;

Email: evispano@hotmail.com

ABSTRACT
Paper presents the results of the integrated and multidisciplinary studies for investigation of the anthropogenic damages to Albanian part of the transborder Micro Prespa Lake. Micro Prespa Lake is lake with international status, as Ramsar Convection, International Park and Special Protection Area-79/409/EEC. According to the studies, investigations and analyses, the following were concluded: Devolli River- Micro Prespa Lake irrigation system was not scientifically supported by environmental engineering, hydro economy and International Rights principles. It does work according to the projected parameters, and also, doesn't supply the agricultural needs. About of 10 % of the water volume, discharges by Devolli River in Micro Prespa Lake during the winter, is taken from this lake for the irrigation in summer. Great surface of Albanian part of Micro Prespa Lake is destroyed. The other part of the lake is atrophied and the habitat and biodiversity are damaged. Important and unique species of fish, birds and plants of national and international values are risked. The underground karstic connection ways for water circulation are blocked. There are ruining the historic values of the area, such the encient Treni cave from the Bronze Age. The Albanian part of the Micro Prespa Lake has been damaged by the human activities. A huge amount of 1,2 million cubic meters alluvium has been deposited on the lake bottom and lakeshore, which was transported by the Devolli River waters, since 1974. This river waters, rich in alluvium and organic coal material from outcropped geological formations, also absorbed free chemical toxic remains by the drainage of Devolli farm ground, which have changed the chemical features of the lake water and degrading it. Micro Prespa Lake communicates with Macro Prespa Lake, and together with Ohrid Lake. Blockage of underground karstic connection ways has diminished not only the components of the lake water balance, but also the decreasing yield of the underground springs, that supply the Ohrid lake and drinkable water springs. The Albanian part of the Micro Prespa Lake plays the role of a gigantic decanter. This is an unprecedented case, not only in Albanian but also in Balkan and World hydrography. Devolli river alluvium deposited in Micro Prespa Lake caused the otherwise of territory of Republic of Albania in this area. Albania will not have any part in this lake after some years. The social and public opinion in Albania, must be conscious for the otherwise of Albanian territory, which in the case of Micro Prespa Lake has a national and international negative effect on destructions of a transborder lake, defendey by Europian Convents.
Key words: habitat, biodiversity, human activities, Lake, Micro Prespa, Albania

032 REMOVAL OF CHROMATE FROM AQUEOUS STREAMS BY CROSFLOW FILTRATION

Danış, Ü[1]., Barlik, N.[2], and Keskinler B.[3]

[1] Ondokuz Mayıs University,Faculty of Engineering, Department of Chemical Engineering, 55139, Kurupelit,Samsun/TURKEY.
[2]Ardahan University, Department of Environmental Engineering, 75000, Ardahan/Turkey,
[3]Gebze Institute of Technology, Department of Environmental Engineering, 41400 Gebze, Kocaeli, Turkey

Email: ummuhanster@gmail.com

ABSTRACT
Removal of chromate ions from aqueous streams investigated using Micellar-Enhanced Crossflow Filtration technique (MEUF) in which the cationic surfactant, cetyltrimethylammonium bromide(CTAB), was used as the carrier for the metal ions. The variation of chromate, and surfactant rejections with time were measured as a function of transmembrane pressure

drop(ΔP), crossflow velocity and CTAB/chromate, while membrane pore size and pH of the feed solution was constant. The method was found to be effective in removing chromate from wastewater. It was observed that the efficiency of chromate removal for low CTAB concentration increased with increasing transmembrane pressure drop(ΔP), but decreased with increasing crossflow velocities. It was also observed that the effect of crossflow velocities on the rejections is decreased at the high CTAB concentration. Surfactant concentration had a significant effect on the formation of secondary membrane.

Keywords: crossflow ultrafiltration, surfactant enhanced filtration, chromate removal.

033 MEASUREMENT OF RADIOACTIVITY IN THE LAKE'S WATERS OF ALBANIA

Elida Bylyku[1], Brunilda Daci[1], Florinda Cfarku[1]

[1]Centre of Applied Nuclear Physics, Faculty of Natural Sciences, Tirana University, Tirana- Albania

Email: elidabylyku@yahoo.co.uk

ABSTRACT
The International Council on Radiation Protection 65 recommendations of the European Community demands in their directives 98/83 EC in 1998 the control of radioactivity levels in water for human consumption. The scope of this work was the collection and radioactivity analysis of the water from some lakes of Albania. The main radioizotopes of interest which are measured are U-238, U-234, Po-210 and total alpha beta radioactivity. Total alpha and beta radioactivity for water samples collected were measured on dry solids from evaporated samples. If the measured concentrations of total alpha beta radioactivity exceeded the screening levels of concentrations of total alpha (0.1 Bq/1) and beta (1 Bq/1) radioactivity nuclide-specific analyses were carried out. Our counting system is ultra low level alpha beta gas proportional counter Protean Instrument Corporation 9604 with software Vista 2000. Efficiency calibration was made using ^{239}Pu and ^{90}Sr standards of known activity. Detection limits were calculated as three times the standard deviation of blank values. The uncertainty given is the expanded uncertainty (k=1). For samples collected during 2008 and 2010, uranium and polonium was determined by alpha spectrometry on large (10 liters) samples following radiochemical separation. The ^{232}U and ^{208}Po standard solutions are used as a tracer to determine the chemical yield of the analytical procedure. The variation of uranium activity concentrations is between the values 3.5 to 14 mBq/1 for ^{238}U and from 2.6mBq/1 to 13mBq/1 for ^{234}U. The variation of ^{210}Po activity concentrations is between the values 1.2 to 6.7 mBq/1.
Keywords: radioactivity, lake water, uranium, polonium

034 EVALUATION OF SOIL EROSION IN THE FOREST AREA OF TIRANA DISTRICT

Dritan Profka[1], Oltion Marko[2]

[12] Polytechnic University of Tirana, Faculty of Civil Engineering, Department of Environmental Engineering, Tirana-Albania

E-mail: omarko_78@yahoo.com

ABSTRACT
Land erosion is an increasing problem that is seriously affecting our country in recent years. During the period October-March on certain low areas of the country there is massive flooding, and on the hills and certain mountainous territories there is a large amount of land and surface erosion. The erosion phenomenon is larger near habitated zones, where the amount of damage is greater and occurs over large areas. One of the areas in our country affected by this phenomenon is the District of Tirana, which has become a periodic.
The main purpose of this study is to define the distribution of the erosion rating relative to the covered area based on, vegetation, chute tilt and precipitation indices. This study should provide information and guidance on land usage to farmers, communities and state regulatory officials, pertinent to agrarian properties and woodland surfaces.

Keywords: areas, eroded, erosion, geomorphological, forest.

035 UNSUSTAINABLE ENVIRONMENTAL DEVELOPMENT - IMPACTS ON HUMAN RESOURCES IN MITROVICA (KOSOVS)

Sami Behrami, Fadil Bajraktari, Nazmi Zogaj

Kosovo Environment Protection Agency, Str. Luan Haradinaj (ex- media palace) 15th floor, 10000 Pristina

E-mail: *sami_behrami@yahoo.com; samibehrami@gmail.com*

ABSTRACT
Mitrovica lies in the northern part of Kosovo. It is known as a major center of industrial and mining waste, not just in Kosovo but also the European dimension. Mitrovica's economic development starts in the period between two World Wars, when the underground recourses of Mitrovica, have been explored and exploited by English companies. From those explorations and the others after that, were found that Mitrovica's district has owns huge wealth of natural minerals (it is estimated that nearly half of Kosovo's mineral reserves 49.7% is concentrated in the area of Mitrovica), which was followed (after the War II) by construction of additional facilities for the processing of various minerals (which was based on the concept of maximum sustainable rather than the concept), which have had consequence on environmental degradation. The most of environmental problems that threaten the existence of the present and future generations are: the high pollution of all elements of the ecological environment (air, soil and water). Especially, uncontrolled air pollution from industrial facilities (until 2000) , containing toxic industrial waste which are located on the river's banks. Mitrovicas environmental, economic and socio-demographic development is far from principles of being sustainable development followed with consequences for the population.

Key words: sustainable development, environmental, pollution population.

036 DROUGHT AND IMPLEMENTATION OF SPI ON THE ALBANIAN TERRITORY

Aferdita Laska Merkoci, Vangjel Mustaqi, Liri Mucaj, Mirela Dvorani

Polytechnic University of Tirana
Institute of Geosciences, Energy, Water and Environment
Department of Climate and Environment

E mail: aferditamerkoci@yahoo.it

ABSTRACT
Drought is a period of inadequate or no rainfall over extended time creation soil moisture deficit and hydrological imbalances. It is an event with adverse impact on the environment, economy, agriculture, energy, social life etc.The evaluation of drought frequency and its severity is carried out using Standardized Precipitation Index (SPI). It has become one of most frequently used tools for drought monitoring throughout the world. SPI is based on statistical techniques, which can quantify the degree of wetness by comparing usually 1, 3, 6, 9, 12 or even (sometimes) 24-monthly rainfall totals with the historical rainfall period over the history. The period 1961-2008 is used to evaluate the value of SPI for 1, 3, 6 months. Regarding to the SPI 3 (for three months period) the cases of moderate, severe and extremely dry for every 10 years shows an increasing trend over the period into consideration. These SPI values point out, that period 1981-1990 has the maximum cases with drought (more than 20 cases per decade) follow by the last period 2001-2008. During the decade 1961-1970 and 1971-1980 number of cases with moderate, severe and extremely drought is around 10 cases per decade. The year 2003 is one of most distinguished regarding the drought. The values of SPI6 varies from -1.5 in southeast to -4.2 in north of Albania (severe to extremely dry).

Key wards: Drought indices, implementation of drought, meteorological drought, SPI index, rainfall regime.

037 A COMPARISON OF ULTRASONIC AND SOXHLET EXTRACTION OF THE ORANGE PEEL FROM "MORO" CULTIVARS GROWN IN ALBANIA

Kledi Xhaxhiu*, Arjan Korpa, Altin Mele, Kujtim Dule, Teodor Kota

Faculty of Natural Sciences, Blv. "Zog I", 1001, Tirana Albania

*Email: kledi.xhaxhiu@unitir.edu.al

ABSTRACT

The cultivation of oranges has a long tradition in Albania. The country's geographic position interlaced with the favourable Mediterranean climacteric conditions, especially in the south-western part, offer advantageous conditions for the cultivation of several varieties of oranges. Among the different varieties experimented over years, three types of them, namely "Tarocco", "Navel" and "Moro" are quite well acclimatised. The last one, known also as a sweet juice orange, has been the subject of our study. The peel of this orange, refused by the food industry often becomes a burden for the environment. Nowadays, the continuous demand increase of the markets for new products has awaked the interest of researchers and producers for its application as a value added product in food, pharmaceutics, cosmetics and biotechnology. In the course of the actual broad range of investigations, we focused our research on the extraction of the orange peel extract of "Moro" cultivars grown in Albania using ultrasonic and soxhlet extractions techniques. The ultrasonic extractions performed in "SONOREX TK 52" 40 – 60V / 100 W, using methylene chloride and applying sonication times up to two hours, revealed the presence of more than 20 components among which limonene, as the major extract component represents more than 91 % of the extract, followed by linalool, β–myrcene, decanal, α–pinene and valencene. More than 90 % of the extraction yield was obtained within 30 min. of extraction. The ratio between extracted components changed significantly in this method while using various solvents. The highest extraction yield was recovered when using methanol (0.548 %) followed by methylene chloride (0.414 %), hexane + acetone (0.272 %), hexane (0.141 %). In parallel to this method, the soxhlet extractions performed in a 20 ml soxhlet extractor for 2 hours (18 cycles) using the same solvents showed surprisingly lower extraction yields and different component ratios for all of them. In hexane + acetone the percentage of limonene was 85 %, meanwhile, in methanol this percentage decreased until 43 %. In this comparison the priority of ultrasounds in desorption, diffusion and dissolution of components from the sample matrices is obvious. Therefore the use of ultrasounds beyond enhanced efficiency is associated with several economical and environmental benefits such as less energy, time and solvent consuming.

Key words: Orange peel, ultrasonic extraction, soxhlet extraction, extraction yield, extraction components

038 CONTRIBUTING TO ECOSYSTEM CONSERVATION VIA UTILIZATION OF BENEFICIATED HIGH CARBON FLY ASH FOR GREENER CEMENT PRODUCTION

A.Korpa[1*], K. Xhaxhiu[1], A. Mele[1], E. Spahiu[2], E. Halimi[3]

[1]Department of Chemistry, Faculty of Natural Sciences, 1001 Blv. Zog I, Tirana, Albania
[2]Department of Physics, Faculty of Natural Sciences, 1001 Blv. Zog I, Tirana, Albania
[3] Department of Biology, Faculty of Natural Sciences 1001 Blv Zog I, Tirana, Albania

Email: arjankorpa@yahoo.com

ABSTRACT

Fly ash represents the particulate matter captured from exhausted gases of coal burning thermal power plants by electrostatic precipitators. Fly ash is a byproduct of coal combustion and it contains many different mineral matters such as carbon, iron oxide and sulfur. Fortunately, fly ash is a desirable raw component in several product applications. However this requires that, as with any other "raw" products, the fly ash meets certain specifications dictated by the ultimate product application. Unburned carbon in fly ash is usually undesirable since it can hamper its utilization. Fly ash with a high volume of unburned carbon not only indicates poor combustion efficiency, which results in a high emission of pollutants and higher fuel requirement, it also prevent power plants from selling the coal fly ash to secondary markets for recycling. Current ash

beneficiation technologies focus on dealing with the unburned carbon (UBC) in fly ash since the most plentiful use of fly ash is in the manufacture of cement and concrete. Like many other industries, the cement sector is a resource intensive business. It affects and depends on the biodiversity and ecosystems. The production of cement and aggregates depends on long-term access to raw materials acquired through quarrying, which as activity has an impact on ecosystems. The deforestation that occurs due to soil excavation affects the bio-diversity. Cement is already the 3rd largest man-made source of carbon dioxide - more than two billion tones of it a year. Because of all the construction going on around the world, cement's carbon footprint is growing rapidly. The "green" materials are considered as materials that use less natural resources and energy and generate less CO_2. Using fly ash can reduce the total amount of energy needed to make cement. Furthermore substituting pozzolans like fly ash for cement clinker can reduce the most significant environmental impact of the manufacturing process and the demand for carbon-intensive Portland cement. The utilization of waste materials for new products rather than land disposal in addition to supporting sustainable development principles contributes directly to the conservation of ecosystems and environmental protection. This paper provides an overview of the current technologies available for fly ash beneficiation, with a focus on the production of greener fly ash cement from beneficiated high carbon fly ash.

Key words: Ecosystem preservation, beneficiated high carbon ash, green cement production

039 FLY ASH BASED GEOPOLYMERS AS POTENTIAL ADSORBENT FOR COPPER REMOVAL FROM AQUATIC SOLUTIONS

Milena Tadic[1], Dijana Djurovic[2], Bojana Mugosa[2], Irena Nikolic[1]

[1] *University of Montenegro, Faculty of Metallurgy and Technology, Dzordza Vasingtona bb, Podgorica, Montenegro*
[2] *Institute of public health, Dzona Dzeksona bb, Podgorica, Montenegro*

Email: milenak@ac.me

ABSTRACT
Fly ash is recognized as by-product material from coal fired power station. Production of large quantity of fly ash impose the finding the solution of fly ash utilization. Currently, especial attention is given to the possibility of fly ash utilization through geopolymerization process into the construction materials. Moreover, fly ash is currently being investigated as an adsorbent for the wastewater treatment. Heavy metals are often present in the wastewaters and currently available methods for its cleanup generate a quantity of toxic sludge.
In this paper we have investigated possibility of fly ash based geopolymers as potential adsorbent for copper removal from water solutions. Two methods have been used for synthesis of fly ash based geopolymes: (1) fusion method with NaOH synthesis and (2) mixing of fly ash with alkali solution prepared by mixing of sodium silicate solution (sodium water glass) and NaOH solution.
Change of Cu^{2+} adsorption efficiency in a function of time was investigated. The results have shown that higher efficiency of Cu^{2+} removal was achieved using the fly ash based geopolymer prepared by fusion methods.

Key words: geopolymers, water, adsorption, copper.

040 ENVIRONMENTAL EDUCATION FOR WASTE ADMINISTRATION IN LOWER SECONDARY EDUCATION (VI-IX CLASSES) IN KOSOVO

Florije Tahiri[1*], Ardian Maçi[2]

[1]*Ministry of Environment and Areal Planning, Prishtinë, Kosovo*
[2] *Faculty of Agriculture and Enviroment, Agricultural University of Tirana, Albania*

Email: floravk@hotmail.com; floravk@gmail.com

ABSTRACT
In our country, environmental education institutions are in construction, curriculum and learning units to the environment are in inadequate level. Environmental protection considered

as a secondary issue. From large quantities of waste scattered everywhere, it is clear that it is necessary to work in environmental education increase. The research in institutional school is done intently an overview of pupils' knowledge of waste management. For research students are taking classes VI-IX, the lower secondary school "7 Marsi", in Prishtina and "Bedri Gjina" in Mitrovica. The questionnaire has included questions about their knowledge accordance with waste management. The results of research are processed by the descriptive statistical methods with SPSS software. Survey noted that the students knowledge of waste management in general have a low level and is necessary to added the fund hours and special subject for the environmental education, in particular the benefits of treatment and recycle waste.

Key words: environmental education, curriculum, research, questionnaire, administration.

041 FAUNISTIC AND ZOOGEOGRAPHICAL ANALYSES OF LINYPHIIDAE (ARANEAE) IN THE TIRANA DISTRICT

Blerina Vrenozi[1], Christo Deltshev[2]

[1]Tirana University, Faculty of Natural Sciences, Research Centre of Flora and Fauna, Tirana - Albania
[2]Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences, Sofia - Bulgary

E-mail: blerinavrenozi@yahoo.com

ABSTRACT
Linyphiidae is a spider family with a great number of genera (587) and species (4412) known worldwide, but insufficiently studied in Albania. Records of 35 species have been published in several papers on Albanian spiders, such as CAPORIACCO 1932, VRENOZI & HAXHIU 2008, DELTSHEV et al. 2011 and VRENOZI submitted. The first author reviewed the Roewer collection at the Senckenberg Naturmuseum, resulting with two new species of Linyphiidae for Albania (VRENOZI & JÄGER b, submitted). The present paper comprises previously and recently published data, and the material from the first author's doctoral study (2010-2011). A total of 18 species are known so far from the Tirana district, seven of which are newly-established both for this district and Albania in general (VRENOZI & JÄGER a, b, submitted). Spiders of the Tirana district can be classified into eight zoogeographical categories combined into three chorological complexes. The composition of the fauna shows a Holarctic and European character.

Keywords: linyphiids, Balkan, distribution

042 PRESENT STATE REGARDING THE DISTRIBUTION OF GASTROPODS FROM THE DANUBE, THE DANUBE DELTA AND THE RIVERS OF ROMANIA

Olivia Cioboiu

The Oltenia Museum, Craiova, Romania,

E-mail: cioboiuolivia@yahoo.com

ABSTRACT
The Danube, the Danube Delta and the rivers of Romania represent a geographical space displaying a gastropod fauna specific to the area located between the Carpathians and the Danube. There are 83 species characteristic to each sector of the Danube: upper (51 species), intermediary (51 species), and lower (64 species). Thus, gastropod populations reflect the ecological conditions of their life environment. The Danube Delta, with a great diversity of aquatic ecosystems, displays the same wide range of gastropods (54 species).Due to their physiological and hydrological features, there can be identified gastropod populations specific to each sector of the Romanian rivers (135 species): 14 species in the mountain torrents and streams, 6 species in the sub-mountain and hill sectors of the rivers, 5 species in the plain rivers, 1 species in the glacial lakes and alpine marshes, 3 species in the lakes and pools from the hilly region, 13 species in the lakes and pools from the plain region, 18 species in the salty and brackish lake ecosystems. According to the ecological character of the rivers, the species *Lithoglyphus apertus, Radix ampla, Radix balthica, Stagnicola palustris* appear more often within the mountain and hilly area; *Bythinella austriaca,*

Amphimelania holandri, Ancylus fluviatilis mostly populate the mountain torrents and rivulets; *Theodoxus fluviatilis, Viviparus viviparus, Lithoglyphus naticoides, Esperiana esperi, E. (Microcolpia) acicularis daudebardii* are characteristic to the rivers from the plain area. The global evaluation of the gastropods populations from the Danube, the Danube Delta, and the other rivers from Romania represents an important part of the European malacofauna. The synthesis we made may represent a parameter in evaluating the distribution of the gastropods populations within the Danube basin.

Keywords: gastropods, the Danube, the Danube Delta, rivers, Romania.

043 INFESTATION OF THE *Carassius auratus auratus* (variety vailtail goldfish) BY THE COPEPOD *Lernaea cyprinacea* (CRUSTACEA)

Ionelia Claudia Goga

The Oltenia Museum, Nature Sciences, Craiova, Romania

E-mail : ioneliagoga@yahoo.com

ABSTRACT
The copepod *Lernaea cyprinacea* Linnaeus, 1758 is known by the large spectrum of fish hosts which it infests, and to which it can cause haemorrhages and ulcerations. The paper focuses on parasitisation degree of parasitic copepodului on a fish in captivity.The field trips organized within Preajba, Romania hydrographical basin in July 2010 allowed us to collect ichthyologic material, namely crucian carp *Carassius gibelio* Bloch, 1782, which was introduced into an artificial basin with a total capacity of 60 l, together with three specimen of *Carassius auratus auratus* (variety vailtail goldfish).The parasitosis appeared at goldfish shortly after the introduction of the sampled specimens of *Carassius gibelio* and water in the artificial basin.The identification of the ecotoparasite was achieved on the base of the general methods of ichthyoparasitological diagnosis, macroscopically by means of clinical examination and microscopically by means of tegumentary curettage from the tegument and fins, as well as through successive washing of the gills and tegument and visualisation at the optic microscope and stereomicroscope in the parasitology laboratory of Dolj Sanitary Veterinary Directorate. After the examination of the tegument and gills, there were sampled the parasites with a clip and dissociation needles. The crustaceans were placed on a mount in a drop of water and then examined at a stereomicroscopic and optic microscope; at the same time, there were taken pictures. The description of the disease makes reference to its etiology and pathology, as well as to the prophylaxis and treatment measures stipulated in the literature in the field .

Keywords: Preajba hydrographical basin, infestation, copepod, *Lernaea cyprinacea*, *Carassius gibelio*, *Carassius auratus auratus*.

044 THE SURFACE CHARACTERISATION OF ACTIVATED CARBON AND ACID ACTIVATED MONTMORILLONITE CLAY

Altin Mele, Bledar Murtaj, Kledi Xhaxhiu, Arjan Korpa

Departament of Chemistry, Faculty of Natural Sciences, University of Tirana, Albania.

Email: altin.mele@fshn.edu.al

ABSTRACT
Olive stones were carbonised to 1120 K and activated in steam at 1100 K. Adsorptive properties were measured by adsorption of nitrogen (77 K) and carbon dioxide (273 K) using the BET and Dubinin equations of adsorption to deduce effective surface areas. The carbonised stones had a surface area of 1070 $m^2\ g^{-1}$. This sample had a micropore volume of 480 $cm^3\ kg^{-1}$ determined using the data of N_2 adsorption and Dubinin Radushkevich (DR) equation and an integral pore volume of 599 $cm^3\ kg^{-1}$ including the mesoporosity. These characteristics make this activated carbon commercially attractive. The Gurvich rule applied to the data of carbon dioxide adsorption at 273 K led to a pore volume of the activated carbon of 122 $cm^3\ kg^{-1}$, corresponding to the difference between the pore volumes determined from N_2 adsorption data using the Gurvich rule

and the DR equation within the measurement accuracy. In the case of one acid activated montmorillonite clay the following values of surface properties specific surface area of 223 $m^2 g^{-1}$, micropore volume of 145 $cm^3 kg^{-1}$ (DR), cumulative pore volume of 161 $cm^3 kg^{-1}$ were obtained from N_2 adsorption-desorption data. A cumulative pore volume of 19 $cm^3 kg^{-1}$ out of the CO_2 adsorption data was determined. Theoretical basis of those complementary pore volumes are discussed.

Key words: activated carbon, micropore volume, porosity, isotherm analysis, adsorption isotherms

045 ASSESMENT OF GROUND WATER FROM TOKSIX METALS IN TAPIZA AREA OF TIRANA, ALBANIA

Mirela Alushllari, Nikolla Civici, Antoneta Deda.

Centre of Applied Nuclear Physics, Faculty of Natural Sciences, University of Tirana, Albania.
Centre of Applied Nuclear Physics, Faculty of Natural Sciences, University of Tirana, Albania.
Faculty of Natural Sciences, University of Tirana, Albania.

Email: m.alushllari@gmail.com

ABSTRACT
Groundwater contains some impurities. The types and concentrations of natural impurities depend on the nature of the geological material through which the groundwater moves. The presence of toxic metals in waters is hazardous; it is a serious problem for human health and ecosystems. This study is an attempt to assess the extent of toxic metals, including lead - Pb, cadmium - Cd, in groundwater, potable water, collected from Tapiza area of Tirana Albania, with respective coordinates: Latitude 41.4213889° and Longitude. 19.7641667°. We have collected total number of 8 groundwater samples. Groundwater samples were collected from wells installed in the aquifers of Tapiza area.The analyses of toxic metals Pb and Cd , were performed at the Centre of Applied Nuclear Physics of the Faculty of Natural Sciences, University of Tirana, using Graphite Furnace Atomic Absorption Spectrometry. The result obtained shows that the concentration of toxic metals, Pb and Cd in groundwater samples is low. Concentration of the lead in the groundwater samples was found to be in the range 1.2 - 5.4 (µg/L), while concentration of the cadmium, was found to be in the range 0 - 0.45 (µg/L). It can be observed that the measured concentrations are lower than the Maximum Contaminant Levels (MCL) specified by the Environmental Protection Agency (EPA) and World Health Organization (WHO).

Keywords: toxic metals, groundwater, Atomic Absorption Spectrometry (SAA).

046 THE RELATION BETWEEN CONCRETE, FORMWORK AND REINFORCEMENT COST WITH TOTAL COST OF THE EDUCATIONAL BUILDINGS

A. İlgün[1], M.Gülerce[2]

[1]Civil Engineering Department, Selcuk University, 42031 Konya
[2] Municipality of Okurcalar, 07033 Okurcalar/Alanya/Antalya

Email: aki@selcuk.edu.tr

ABSTRACT
Project management concept is becoming a current issue in recent years. Especially the construction firms show great interest in project management. In this study, cumulative cost was estimated by applying concrete, formwork and reinforcement costs into regression method to facilitate and gain time for a project manager or a cost estimator.

Key Words: Cost estimation, regression analysis, concrete costs, formwork, reinforcement costs.

047 AN INVESTIGATION OF THE BEHAVIOURS OF REINFORCED CONCRETE LOAD BEARING SYSTEMS UNDER SEISMIC LOADS

Adnan Karaduman[1], Selçuk Soysüren[2]

[1]Selcuk University, Civil Engineering Department, Konya - Turkey
[2]Selcuk University, Konya - Turkey

Email: akarduman@selcuk.edu.tr

ABSTRACT
In this study, a dynamic analysis of two different constructions having L and T-shaped geometry in their plans was carried out. Our structural systems having L-shaped (Model 1) and T-shaped (Model 2) plan views have fifteen storeys respectively. For the periods of each mode, the displacements, forces and moments in each three dimensions are obtained. Besides, the A1 twisting irregularity controls have been made for each model. According to the results obtained, structurel behaviour which undfer dynamic loading is determined. A reliable software (SAP 2000) is used in the study.

Keywords: Plan, dynamic analysis, SAP 2000, geometry, Load-bearing system

048 USING WASTE RUBBER ON BEAM TO COLUMN CONNECTION AS DAMPER

Ali Köken[1], Mehmet Alpaslan Köroğlu[2]

[1]Selçuk University,Civil Engineering Deparment Turkey,
[2]Selçuk University,Civil Engineering Deparment Turkey,

Email: *akoken@selcuk.edu.tr; makoroglu@selcuk.edu.tr*

ABSTRACT
In this study, a damper which was developed in order to avoid damages during an earthquake on steel frames was investigated. The goal of this system is to limit plastic deformation on the dampers which can be easily repaired or changed after a heavy earthquake. To investigate the performance of the proposed system, 3 full scale cyclic tests were investigated. The first specimen was a beam to column connection with U shaped slit damper. The second one was beam to column connection with rubber damper and the last cyclic test was conducted on the specimen with a slit damper system with rubber damper. It is indicated from the test results that, the energy dissipation and plastic deformation in this system were concentrated only at the dampers.

Keywords: Metallic damper, waste rubber, steel frame, energy dissipation, slit damper

049 DATA ON THE AREAL OF POMEGRANATE (*PUNICA GRANATUM* L.) IN ALBANIA

Arselida Koçi, Mersin Mersinllari

Department of Biology, Faculty of Natural Sciences, University of Tirana, Albania

Email: arselidam@yahoo.com; mmersinllari@yahoo.com

ABSTRACT
Punica granatum L. is a fruit-bearing delicious shrub or small tree, which grows from 0-700 meters height in Mediterranean climate. It is associated often with other shrubs, spreading in wide areas.
This study consists in locating the areas where Punica granatum is spread in the territory of Albania. For this purpose GPS coordinates are used to show the exact areas we observed during the expeditions.
In Albania, Punica granatum is spread from Hani i Hotit, in the north, to Milot in the center of the state.Pomegranate is easily found in all over the county, but not naturally, in the wild form.
During the expeditions several damaged areas of Punica granatum are observed, mainly near the villages. The implementation of traditional and new management practices will be suitable for decreasing the damaged areas.

Key words: Punica granatum, areal, pomegranate, mediterranean climate,

051 PRELIMINARY DATA REGARDING PRESENT STATE OF PHYTOPHILOUS FAUNA FROM FORTUNA LAKE – DANUBE DELTA

Pavel Ana Bianca[1], Stefanescu Diana[2], Silviu Radan[1]

[1]The National Institute for Research and Development of Marine Geology and Geoecology – GeoEcoMar,
Bucharest – Romania
[2]University of Bucharest, Faculty of Geography, "Simion Mehedinti" Doctoral School, Bucharest – Romania

E-mail: ariadnas30@yahoo.com, marie_diane_2005@yahoo.fr

ABSTRACT
In the last years, numerous researches conducted in aquatic ecosystems of the Danube Delta have drawn attention on eutrophication processes and their effects on benthic fauna. The considerable decrease of biological diversity is one of the major consequences of eutrophication and pollution.Researches carried out by GeoEcoMar within the Danube Delta geo-ecologic monitoring programme aimed complex assessment of sediments and present state of phytophilous populations of Fortuna Lake, one of the largest from the Danube Delta. Sampling was performed in September 2011, the climax month of larval development. Qualitative samples were collected from 9 stations, taking into account the lenthic system characteristics (presence of submerse vegetation, access places to the lake, water depth etc). Zoocoenosis occurrence on submerged aquatic macrophytes is essential for secondary productivity of aquatic ecosystems due to their abundance and diversity. Main macrophytes species in Fortuna Lake were *Ceratophyllum submersum, Ceratophyllum demersum, Salvinia natans.* Eight faunistic taxonomic groups have been identified, out of which the chironomids larvae group had the greatest density and constancy, followed by oligochaets, trichopterae, and turbelarians. The relative high diversity of species found in each station (15-20 species) situates Fortuna Lake among the richest lakes of the Danube Delta.

Keywords: Danube Delta, Fortuna Lake, phytophilous fauna, biodiversity

052 SURFACE CHANGES OF BENTONITE CLAYS AFTER THE MODIFICATION WITH H_2SO_4 AND NITROGEN ORGANIC CATIONS.

Altin Mele, Morsina Çipa, Krenaida Taraj, Kledi Xhaxhiu

University of Tirana, Faculty of Natural Sciences, Department of Chemistry, Tirana – Albania

Email: altin.mele@fshn.edu.al

ABSTRACT
The acid activated clays and the organoclays have versatile applications as in environmental industry, coatings, cosmetics etc.In this work the effect of sulphuric acid activation in three different concentrations, in the surface properties of a natrium-montmorillonite (Na-MMT), one kind of bentonite clay, is studied. Two different organoclays are prepared as well by exchanging the Na^+ of the clay is in one case with a trialkyl quaternary ammonium cation and with butyl-methyl immidazolium (BMIM) cation in the second case. For every modified clay and the untreated one the specific surface area, cumulative pore volume and pore size distribution are determined using the gaseous nitrogen adsorption technique at 77 K. It results that the change in these properties during the acid activation is much higher than during the orcanic modification. The specific surface area after the acid activation grows up to 10 times from 13 m^2/g to 133 m^2/g and the pore volume from 49 cm^3/kg to 149 cm^3/kg. In the case of the organic modifications the increase in the specific surface area and pore volume was higher when using $BMIM^+$ (S_{SA} = 35 m^2/g ; V_p = 62 cm^3/g) than trialkyl quaternary ammonium cation (S_{SA} = 22 m^2/g ; V_p = 48 cm^3/g).

Key words: organoclays, acid activation Na-MMT, surface characterisation

053 THE LEVEL OF CONTENT OF ALKALI AND ALKALINE METALS IN DRINKING WATER SUPPLY IN TIRANA, ALBANIA

Mirela Alushllari, Nikolla Civici, Antoneta Deda

Centre of Applied Nuclear Physics, Faculty of Natural Sciences, University of Tirana, Albania.
Centre of Applied Nuclear Physics, Faculty of Natural Sciences, University of Tirana, Albania.
Faculty of Natural Sciences, University of Tirana, Albania.

Email: m.alushllari@gmail.com

ABSTRACT
Water is essential for life. The amount of fresh water on earth is limited, and its quality is under constant pressure. Preserving the quality of fresh water is important for the drinking-water supply. The quality of drinking-water is a powerful environmental determinant of health. All natural water contains a range of inorganic and organic chemicals. In this study we have determination level of content alkali and alkaline metals in drinking water. When the concentration's level of alkali and alkaline metals in water is high, they are a serious problem for human health and ecosystems. Atomic absorption spectrometry (absorption and emission methods) is one of the most widely used methods for quantitative elemental analysis. The purpose of this study was determination of the level of content of these metals from the source of water to the consumer, through the public system of drinking water supplied in the city of Tirana, Albania. During this survey a total number of 24 samples were collected at different points of the water supply. Four samples were collected directly at the sources of water, six samples were collected at the water storage and 14 samples were taken at different consumers. The analyses of alkali and alkaline metals in drinking water samples were performed at the Centre of Applied Nuclear Physics of the Faculty of Natural Sciences, University of Tirana, using Graphite Furnace Atomic Absorption Spectrometry and Flame Atomic Absorption Spectrometry. The results are presented in graphical form, while the concentration ranges of metals in samples collected at different points are presented in table form.

Keywords: alkali and alkaline metals, drinking water supply, Atomic Absorption Spectrometry (SAA).

054 STATUS AND REPRESENTATION OF FRUIT TREES IN FOREST ECOSYSTEMS IN THE REGION OF NORTH-EASTERN BOSNIA

Noćajević Sead, Ferhatović Džemail, Noćajević Mensur

Faculty of Natural Sciences, University of Tuzla

Email: sead.n_63@hotmail.com

ABSTRACT
During the vegetation season in 2009 and 2010 was found a few phytocoenological shots in the mountains Konjuh and Javornik (northeastern Bosnia). The aim was to see the status and representation of fruit trees in forest ecosystems of these areas, constrained by abiotic factors. Fruit trees, a noble broadleaves that appear in the woods are wild cherry (*Prunus avium* L.), wild pear (*Pyrus communis* L.), wild apple (*Malus sylvestris* Mill.), Cherry (*Torminalis clusii* M.Roem.), Whitebeam (*Sorbus aria* L.), rowan (*Sorbus domestica* L.) and other. The Wild cherry (*Prunus avium* L.) is best known, also the most common forest fruit trees, they are as a single tree or in small groups in regia of northeastern Bosnia NOĆAJEVIĆ, (2009). In forest ecosystems occupy an important place voćkarice. One are significant at a special time of flowering, when you embellish the forest and its edges, providing a rich bee pasture in autumn and an early (wild cherry), bringing the fruits of which are eaten by many members of the forest fauna OREŠKOVIĆ et al (2006). Non-existent pure forest fruit trees.

Key words: fruit trees, forest ecosystems, distribution, abiotic factors

055 NATURAL ECOSYSTEMS, SUSTAINABLE DEVELOPMENT OPPORTUNITIES: CASE STUDY MUNICIPALITY "ISHEM"

Shkëlqim Sirika

High School of Paskuqan-2, Tirana-Albania

E-mail:shkëlqim.sirika@yahoo.com

ABSTRACT

Global warming and inappropriate utilization the functioning of natural resources is endangering natural ecosystems. Human activity, such as agricultural activity, transport development, the development of tourism, the scale-up of the population and its uncontrolled dispersion, irrational utilization as well as interferences in the environment are some of the underlying causes that damage the ecosystems. In Albania it was the transition itself that showed its symptoms not only in the social-economical spheres of policy but it didn't spare the systems of administration of natural resources either. The purpose of our research is to spot the current state of renewable natural resources (woods, pasture land, flora , faunas, touristic areas) and to give the guidelines for a stable development. The territory of Ishem Commune lies in the central lowland climate zone characterized by a climatic element that favours prolonged droughts in the warm half of the year. The climate factor and the inappropriate utilization of natural resources of the area supports erosion. Erosion that comes as a consequence of this aridity, lack of vegetation is leading to the land degradation by markedly making inroads into the ecosystems of the area. Biodiversity of Ishem Commune is eminently rich in kinds and qualities, but as a consequence of the aforementioned phenomena we witness some rigidity habitat. Despite these problems it must be stressed that in the last years the natural resources of Ishem Commune have had a regeneration, a development and considerable growth as far as volume and the land area are concerned and as a consequence in an evolution of biodiversity in general. The impact of ecosystems in the environment is marked because of their multifunctional role. Environmental impacts are expected to be positive especially thanks to the amelioration of forest ecosystem of oak the largest in national scale. These impacts will be spotted in the improvement of the area microclimate, the increase of the capacity of the reservoirs, the scale-down of erosion level, the reduction in a satisfactory level of arid and frosty days as well as many other effects over the area environment. All in all we might say that with the current ways of utilization, the methods of land protection, natural forest, and water ecosystems of the areas that are under study by having low investments until these resources reach a rational utilization and by protecting them from contamination will have not only stability, but a continuing growth of this environmental stability and the functioning of these ecosystems.

Key words: Global warming, ecosystems, biodiversity, stability.

056 CHARACTERISTICS OF SOME PHYTOCENOSIS IN THE URBAN AREA OF SHKODRA

Aurora Dıbra, Hajrije Dıbra, Valbona Trungaj

Department of Biochemistry, University of Shkodra

E-mail: adibra@yahoo.com

ABSTRACT

In this article are presented the most important characteristics of some phytocenosis located in the urban areas of Shkodra.

The city is a special areal for plants and rich in the biodiversity.

Some phytocenosis are studied and characteristics like dominance fidelity, diversity etc, are evaluated. Datas are elaborated with PC- s and presented with graphics and maps.

Key words: phytocenosis, biodiversity, area, plants.

057 EVALUATION OF SOME ECOLOGICAL PARAMETERS IN SHKODRA`S LAKE WATER

Aurora Dibra [1], Hajrije Dibra [2]

[1] Department of Biochemistry, University of Shkodra
[2] Department of Nursing, University of Shkodra

E-mail: adibra@yahoo.com; shabanizamira@yahoo.com

ABSTRACT

In this article are presented some ecological parameters in the water of Shkodra Lake. The actual situation in the lake makes Important the study of these parameters in order to evaluate the quality of water and the ecological situation in the lake. The study of the biodiversity too, needs some index of pollution, the presence of CO2, o2 and other gases, the presence of metals etc.

Key words: chemical, water, pollution, lake.

058 RELATIONSHIP BETWEEN TOXIN LEVELS AND ABUNDANCE OF POSSIBLE CAUSATIVE PHYTOPLANKTON SPECIES IN BUTRINTI LAGOON

Marsela Bregaj[1], Mynyr Koni[2], Edmond Panariti[3], Erlinda Koni[1], Merjem Bushati[1]

[1]Department of Food Safety, Food Safety and Veterinary Institute, Aleksander Moisiu Str., No.10, Tirana, Albania.
[2]Department of Biology, Faculty of Natural Sciences, University of Tirana, Albania
[3]Municipality of Tirana, Albania

E-mail: marsbregaj@yahoo.com

ABSTRACT
Shellfish products may be contaminated with marine biotoxins which, after consumption, may lead to human illness.Albanian has a regular monitoring programme for marine biotoxins and the possible toxic phytoplankton in shellfish production waters since 2002. The aim of the current study was to evaluate the presence of potential toxic phytoplankton species and marine biotoxins in Butrinti Lagoon in 2009-2010 and to analyse the relationship between toxin levels in *Mytilus galloprovincialis* and abundance of possible causative phytoplankton species. Butrinti lagoon is known for the aquaculture activity (cultivation of the blue mussel, *Mytilus galloprovicialis*) and fishing. The results of the monitoring programme for this period shown that the presence of *Pseudo-nitzschia* spp.were negligible and the presence of *Alexandrium* spp causing PSP (paralytic shellfish poisoning) were present in only a few samples.The main DSP toxin-producing species was *Dinophysis sacculus, Dinophysis acuminate*, *Gonyaulax spinifera.* Positive cases where found in this period for the presence of ASP with HPLC analyses and DSP toxicity based on the mouse bioassay results. There was a slight positive correlation between concentrations of ASP toxin-producing phytoplankton and levels of ASP toxins. The correlation of DSP toxin-producing phytoplankton and DSP toxins is very weak in future research we need to use chemical methods to quantify the presence of PSP toxins and lipophilic toxins group.

Keywords : Butrinti lagoon, ASP, PSP, DSP, phytoplankton

059 BIOMONITORING OF ATHMOSPHERE AIR QUALITY

Begu Adam

Institut of Ecology and Geografy, Ecobioindication and radioecology Department, Chisinau, Republic of Moldova

Email: adambegu@gmail.com

ABSTRACT
The foundation of the sustainable ecological balance in the functioning of forest ecosystems serve Critical Loads established by the Geneva Convention (1979) for SO_2, NOx and NH_3. Through

critical loads concerning the harmfulness of sulphur and nitrogen on ecosystems are understood the acidification deposition concentration levels, which cause no long-term adverse effects on the structure and functionality of ecosystems. Within our research, the air quality of 62 forest ecosystems from Republic of Moldova was assessed, taking into consideration the lichens indicator species specific diversity, abundance and toxitolerance. It was established that the Moldavian forest ecosystems do not contain reserves concerning critical loads for SO_2 pollution, the annual average for the vegetation season for dendrological species being 0,02 mg/m^3 air, and for communities of lichens and cyanobacteria, organisms sensitive to pollution, represented only 0,01 mg/m^3. Lichen indication demonstrated that the current level of pollution is between 0,05 and 0,5 mg/m^3 SO_2 air, thus long-term harmful effects are manifested in all 62 studied forest ecosystems.

Keywords: lichen indication, forest ecosystems, pollution with SO_2, toxitolerance.

060 THE STATUS OF THE HABITATS OF EUROPEAN CONSERVATION INTEREST ALONG THE ADRIATIC COAST OF ALBANIA

Ferdinand Bego[1], Alfred Mullaj[2], Lefter Kashta[2], Albana Zotaj[3]

[1] University of Tirana, Faculty of Natural Sciences (FNS), Tirana, Albania
[2] University of Tirana, FNS, Research Center for Flora and Fauna. Tirana, Albania
[3] National Planning Agency, Albania.

Email: ferdibego@gmail.com

ABSTRACT
This paper provides an assessment on the current status of the habitats of European Conservation Interest along the Adriatic coast of Albania, both in terms of habitat size and quality. Through remote sensing and GIS changes in size and habitat composition and dynamics of coastal wetlands along Adriatic coast are assessed and reasons of such changes are discussed. Special attention is paid to priority habitats of EU Habitats Directive (43/92 CEE) occurring along the Adriatic coast, shown with an asterisk (*). The following habitats are assessed: 1150 *Coastal lagoons; 1210 Annual vegetation of drift lines; 1410 Mediterranean salt meadows (*Juncetalia maritimi*); 1420 Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*); 1510 * Mediterranean salt steppes (*Limonietalia*); 2110 Embryonic shifting dunes; 2120 Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes'); 2190 Humid dune slacks dominated by *Erianthus ravennae* and *Schoenus nigricans*; 2250 * Coastal dunes with *Juniperus* spp.; 2270 * Wooded dunes with *Pinus pinea* and/or *Pinus pinaster;* 91F0 Riparian mixed forests of *Quercus robur, Ulmus laevis* and *Ulmus minor, Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (*Ulmenion minoris*); 92A0 *Salix alba* and *Populus alba* galleries. Each habitat type has been assessed based on naturalness degree, distribution pattern, and threatening factors.

Key words: habitats, status, threats, Adriatic coast, Albania

061 THE INCIDENCE OF SHIGELOSIS AND SALMONELLOSIS IN SHKODRA REGIONAL HOSPITAL DIURING THE PERIOD 2008 –2010

Zamira Shabani[1], Aurora Dibra[2], Nevila Bushati[3], Gentiana Qirjako[4]

[1] University of Shkodra, Department of Nursing, Shkoder - Albania
[2, 3] University of Shkodra, Depatment of Biochemistry, Shkoder - Albania
[4] University of Tirana, Department of Public Health, Tirana - Albania

[1]E-mail: shabanizamira@yahoo.com

ABSTRACT
Infections of the gastrointestinal tract are caused by a wide variety of enteropathogens, including bacteria, viruses, and parasites. Generally, inflammatory diarrhea is associated with Aeromonas, Campylobacter jejuni, Clostridium difficile, enteroinvasive E. coli, Salmonella, Shigell. Shigellosis and salmonellosis are increased in most developing regions and this fact is related to rapid

population growth, increased urbanization, inadequate human waste treatment, limited water supply, and overburdened health care systems, the hygienic condition of population, the health education, the quality of food.In this article we have considered all hospitalized cases in Regional Hospital of Shkodra, with acute diarrhea during 2008-2010. The morbidity of these diseases is studied according selected age - groups, gender and place of residence. All cases diagnosed as shigellosis, salmonellosis typhoid's are diagnosed with culture proven because we don`t effort the serology method cause of expensive kits and provisions) in our hospitals. It is impossible to have this information because the hospital has not the high technology laboratory. It has very old equipments in the current laboratories and we use only the culture proven instead. The elaboration of datas is made by a simple method, descriptive and cumulative. Some dates analyzed with Microsoft Office Excel method are presented through graphics. The data are taken from the Statistic Office of Hospital and Statistic Office of Public Health.

Keywords: diarrhea, infection, morbidity, mortality, salmonella, shigella, sewage, water.

062 COLLECTING MAIZE LANDRACES IN ALBANIA

Fetah Elezi[1*], Alban Ibraliu[2], Belul Gixhari[1]

[1]Center for Genetic Resources, Agricultural University of Tirana, Tirana - Albania
[2]Department for Plant Production, Agricultural University of Tirana, Tirana - Albania

Email: elezi_fetah@yahoo.com

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

Keywords: Maize, local landraces, collecting missions, germplasm.

063 BIO-MORPHOLOGICAL CHARACTERIZATION OF THE AUTOCHTHONOUS GRAPE CULTIVAR "KALLMET" IN KOPLIK, MALËSIA E MADHE, ALBANIA

Elisabeta Susaj [1]*, Lush Susaj [2], Baki Dervishi[3], Irena Kallço[4], Bedri Dragusha[5]

[1] Agricultural Technology Transfer Center, Fushë Kruja, Albania,
[2] Agricultural University of Tirana, Department of Horticulture, Kodër Kamëz, Tirana, Albania
[3]Ministry of Environment, Forests and Water Administration, National Agency of Environment, Tirana, Albania
[4]University "Fan S. Noli", Faculty of Agriculture, Korçë, Albania
[5]University of Prishtina, Agricultural Faculty, Prishtina, Kosovo

*E-mail: susaje2003@yahoo.com

ABSTRACT
"Kallmet" is one of the most sprout autochthonous wine grape cultivar in the North-western and

Central part of Albania. Study was conducted in three consecutive years, 2009-2011, in Koplik, Malësia e Madhe, 250 m above the sea level, in the North-western part of Albania, in a 10 years old vineyard. For evaluation of the main characteristics the IPGRI Descriptors of Grapevine was used. Form of the new shoot tip of "Kallmet" is half-open, with no anthocianic coloration, and densely prostrate hairs. The upper surface colour of new leaf is green with bronze spots. Flower type is functional female, and the first florescence appears at the 4-5th nodes. Mature leaf size is medium, leaf shape is pentangular, shape of the lateral teeth is convex in both sides, shape of the base sinus is half-open, shape of the upper lateral sinus is closed, and the depth of the upper lateral sinus is 63 mm. Bunch weight is small and bunch density is medium. "Kallmet" has medium-sized spherical deep red to violet berry with soft colourless pulp. Berries are not uniform and there occur a high rate of millerandage because of the lack of pollination during flowering time. Grape yield is 175 kv ha^{-1}, grape must content is 67 ml/100 g fresh grape, sugar content is 21%, total acidity 5.7 g/l.The time of bud break is medium, while the number of inflorescences for fruit-bearing offshoot is 1.7. The annual vegetative growth is 180 cm. "Kallmet" leaves are susceptible to *Plasmopara viticola,* while the berries appear a relatively high resistance to *Plasmopara viticola,* and high resistance to *Uncinula necator* and *Botrytis cynerea.*

Key words: autochthonous, bio-morphological, cultivar, "Kallmet", high production rate.

064 THE ROLE OF NRMP IN BIODIVERSITY CONSERVATION

Liogchii Nina, Begu Adam, Ala Donica
Institut of Ecology and Geografy, Ecobioindication and radioecology Department, Chisinau, Republic of Moldova

E-mail: ninaliogchii@mail.ru

ABSTRACT
The Natural Reservations of Medicinal Plants (NRMP) are a category of land that are protected with the goal of conservation and reproduction of species of rare medicinal plants. The natural reservations of medicinal plants occupy 2796 ha or 0,83% of the country's surface and are located, preponderant, in the forests fund.In the research were included: NRMP Rosoşeni, NRMP Loganeşti, NRMP Sarata Galbenă, NRMP Selişte, NRMP Cahul. During the research it was appreciated the general ecological condition, were established the sources and level of pollution of the environmental components from the studied ecosystems, the vegetation was described and species of flora and fauna were registered, with the highlight of species of medicinal plants, rare plants and plants protected at national and international level. Based on the investigated indices, we determined that the investigated objects are characterized by a good ecological condition, they have a rich diversity of medicinal plants and serve as favorable habitats for a lot of rare species of flora and fauna.The obtained results serve as scientific support for the argumentation of meeting the protection category of the mentioned objects, evaluation of the raw materials resources for pharmaceutical industry, filling in the ecological passports and the database regarding the Cadastre of Natural Areas Protected by the State.

Key words: Natural Reservations, ecological condition, medicinal plants, rare species, biodiversity conservation.

065 ASSESSMENT OF AIR POLLUTION USING THE GLOBAL POLLUTION INDEX FOR CITY OF KORÇA, ALBANIA

Robert Damo, Pirro Icka

"Fan S. Noli" University of Korça, Agronomy Department, Korça – Albania

Email: damo-ro@hotmail.com

ABSTRACT
The air quality has been recognized as an important public health issue.The impact of humans on their environment has been increasing dramatically over the last decades and economic activities are accompanied by emissions of air pollutants, thereby degrading the environment, and in particular the urban environment. In order to protect public health from the impacts of air

pollution, governments and nongovernment agencies have been working on tools and strategies to monitor, assess and reduce their public health risks due to air pollution. Air quality indices currently in Albania have been criticized because they do not assess additive effects of multiple pollutants, nor relationship between air pollution and health. The assessment of air quality in Albania is made by comparison of measure value for each indicator with allowed norm value or EU standards. This means that it is not used an index which shows the quality of the environment and the relationship with the environmental impact and with the human health. Our study assesses the air pollution degree into Korça city by using alternative method of global pollution index (I^*_{PG}). Applying this assessment methodology, the data from the three year period correspond to the situation of "environment modified by human activities within admissible limits", when the indicators compared with the maximum allowed concentrations according with Albanian standard, and with an "environment modified by human activities causing discomfort conditions' when the indicators compared with the maximum permitted concentrations according with EU standard.

Key words: air pollution, environment assessment, global pollution index, health risks.

066 SOME ECOLOGICAL ANALYZES OF BENTHIC FAUNA OF OSUMI, DEVOLLI AND SHKUMBINI RIVER DURING SUMMER- AUTUMN 2011

Bledar Pepa[1*], Anila Paparisto[1], Erjola Keçi[1]

[1] *Faculty of Natural Sciences, Tirana University, Albania*

E-mail: bled_pepa@hotmail.com

ABSTRACT
Nowadays in Albania, monitoring of aquatic environment has a high interest and an efficient element in this direction are and biological monitoring. Our country has a high number of river and they are constantly under numerous nonpoint polluted sources, so they may indicate on degradation of water quality. Our study is part of this contribution and it is focused on assessment of benthic macro-invertebrates of Osumi, Devolli and Shkumbini River during summer 2011. The biodiversity of this species represent different, richness and very specific for aquatic environment related this with typology of watershed and impact of anthropogenic factor. Samples taken from three rivers shown that: Osumi river represent in total with 1113 organisms that belong 3 types 4 classes and 17 families. Devolli river represent in total with 1597 organisms that belong 3 types, 3 classes and 18 families. Shkumini river represent in total with 809 organisms that belong 4 types 4 classes and 25 families. The group of insects known as EPT(E-*Ephemeroptera, P-Plecoptera and T-Trichoptera*) has the high value of Frequencies (F) and Constant (C).Based on data of macro-invertebrates we can say that, Osumi, Devolli and Shkumbini river has a high value of biodiversity.

Keywords: Biodiversity, macro-invertebrates, Albanian River, frequency.

067 MEASURES FOR THE PREVENTION OF NATURAL DISASTERS (AVALANCHES) IN THE REGION OF KUKES

Blerta Avdia

Geography Department, University of Tirana, Albania

Email: blerta.avdia@hotmail.com

ABSTRACT
Kukes region lies in the northeast, the border with Kosovo, Montenegro and Macedonia in the Mediterranean region of Southeast Europe. This region consists of three districts (Kukes, Has, Tropoja), 24 muncipalities with cover a suface of 237 348 hectares. Information from the prefect office show that the population is 116 911 inhabitants.In this paper treat the possibility of prevention of natural disasters in the region ofKukes. At the same time emphasize character disasvantageous and advantageous geographical of position and the natural conditions, know each with causes and consequences of that cause environmental problems and the possibility of

preventing the fall of an avalanche.Treat me that we should take measures to prevent environmental disasters (avalanches) placing emphasis on afforestation as a key instrument to prevent the fall of avalanches in the Kukes region. In the paper promoting protective measures for the prevention of natural disasters as a key element to solving environmental problems and sustainable environmental development. Through this paper we aim to achieve awareness of the population of the Kukes Region for the role they have in the prevention of environmental disasters, which will affect and improve socio-economic life of the area. The working of close with the SWOT analysis, stressing the importance of awarensness of population about the role they have in environmental proctection and prevention of environmental disasters.

Key words: environmental problem, avalanches, Environmental Sustainable Development

068 PERELIMINARY DATA ON ABUNDANCE OF OITHONA NANA (CRUSTACEA, COPEPODA) IN BUTRINTI LAGOON, ALBANIAN COAST

Fundime Miri (Osmani)[1], Nikolla Peja[2]

[1] *Research Centre of Flora and Fauna, Faculty of Natural sciences, University of Tirana*
[2] *Department of Biology, Faculty of Natural sciences, University of Tirana*

E mail: fundime_osmani@yahoo.it

ABSTRACT
Abundance of the *oithona nana*, the prominent copepoda in Butrinti lagoon is presented here. The study was carried out between February and June, 2010, arranged in two temporal sampling; spring (monthly samples from February to April, 2010) and summer (June, 2010)
Oithona nana was the dominant copepoda specie during all the investigated period. Other copepoda species were really scarce, occurred only accidentally.
Stages of the development of *O. nana* are divided into three groups, the nauplii, the copepodid and adult stages. Variations on the abundance of *Oithona nana* were noted, higher abundance recorded in June. Variations on the abundance of the development stages of this species were treated in synchronism with some physico-chemical parameters (temperature, salinity and dissolve oxygen). Abundance of *O. nana* increased with rising of temperature. Among biotic factors, the food availability is an important factor controlling the abundance of zooplankton. Generally, maximum copepoda population density is coupled to the maximum biomass of phytoplankton. A more complete study on the seasonal abundance of *Oithona nana* in Butrinti lagoon requires a series of samples collected periodically for a long - term period coupled with biotic and abiotic data.

Keywords: *Oithona nana*, copepoda, Butrinti lagoon, development stages, abiotic factors

069 A STUDY OF BLOOD CONSTITUENTS OF CARP IN SHKODRA LAKE.

Suzana Golemi, Donalda Lacej

Departament of Biochemistry,University of Shkodra "Luigj Gurakuqi"

Email: zanakuci@yahoo.com

ABSTRACT
Lake Shkodra is characterized by a high biodiversity of fish fauna. The high biodiversity that characterizes the lake is the result of a good communication with the sea, and of an extensive network of rivers and streams, communicating with the lake. The present study describes different blood parameters of (Cyprinus carpio, Linneaeus,1758) population in Shkodra Lake. The samplings were made by catch from the local commercial fishery. The main parameter's measured in fishes blood where: pH, hematocrit, hemoglobin, urea, glucose and total lipid. It was obtained a survey of the biochemical blood parameters in lake Shkodra fresh water carp.

Key words: Cyprinus carpio,blood parameter's, biodiversity.

070 HEAVY METAL BIOACCUMULATION IN THE RECREATION AREAS OF CHISINAU CITY (REPUBLIC OF MOLDOVA)

Donica Ala

Institut of Ecology and Geography, Ecobioindication and Radioecology Department, Republic of Moldova

Email: alacretu@mail.ru

ABSTRACT

This study comparing the ability of bioaccumulation of heavy metals (Pb, Ni, Cr, Cd) present in the atmosphere of the main recreational areas of Chisinau city. As organisms bioaccumulation were used species of lichens *Physcia ascendens* and *Physcia grisea* and species of moss *Leskeela nervosa*, *Leskeela polycarpa* and *Pylaisia polyantha*. Method used to determine concentrations of heavy metals was that of atomic absorption spectrometry.

The results showed that a higher capacity to bioaccumulate a heavy metals has the lichens, their content is in close dependence on the source of pollution and pollution of biotope investigated. Such recreation areas in the center and some recreational areas in the south of Chisinau municipality recorded the highest concentrations of heavy metals in bioindicator thallus. Exceeding the limit values for Pb were observed in both thallus (lichens and moss), in all recreation areas of the city, indicating that the major source of this metal pollution is local.

Keywords: bioaccumulation, bioindicator, lichens, mosses, heavy metals.

071 MOSQUITO SPECIES TRAPPABILITY DURING THE SUMMER SEASON IN SOME AREAS OF ALBANIA. A COMPARISON BETWEEN THE TECHNIQUES USED FOR COLLECTING ADULT MOSQUITOES

Elton ROGOZI, Enkelejda VELO, Silva BINO

Control of Infectious Diseases Department (CIDD), Institute of Public Health (IPH), Street: "Aleksandër Moisiu", No. 80, Tirana, Albania.

E-mail: eltonrogozi@yahoo.com

ABSTRACT

Mosquito species trappability is related to the capturing techniques used. They show a different attractiveness and capturing rate by the techniques used. CDC attracts different species of mosquito compared to the HLC and RC. Some species trend to be captured with all the three techniques. In order to see and compare the species of mosquitoes in relation with the capturing techniques used, a study was undertaken to classify the mosquito species by these techniques from May to August, 2011. CDC technique was used in almost all the study stations, HLC was used only in Kucove (Kozare); Lushnje (Divjake), and Tirana, meanwhile RC other than these three stations has been performed in Vlore (Panaja); Saranda; Korce (Dishnice and Goskove); Pogradec; Durres (Shenpjeter), and Malesi e Madhe (Rapsh). CDC-s was set in stations of cattle shelters, horses, chickens pen, turkey's pen, ducks, and human houses. Only one person was involved in the HLC and RC collection. In total 1219 individuals of adult mosquitoes were collected with all the three techniques. 567/1219 (46.51%) were collected with CDC; 320/1219 (26.25%) with RC, and 324/1219 (26.58%) with HLC. The most predominant species captured with CDC were *Ae. vexans* (226/567; 39.35%), *Cx. pipiens* (119/567; 20.99%), and *Cx. impudicus* (86/567; 15.17%). The predominant species collected with RC were *Cx. pipiens* (168/320, 52.5%), and *Oc. caspius* (85/320, 26.56%). The predominant species collected with HLC were *Cx. pipiens* (144/324, 43.44%), and *Ae.albopictus* (85/324, 26.24%). Our results showed that *Cx. pipiens* were attracted by the three techniques; *Oc. caspius* trended to be captured only with RC; *Ae. albopictus* was captured only with HLC; *Cx. impudicus* and *Ae. vexans* were collected better with CDC.

Key Words: Mosquito, trappability, attractiveness, CDC light traps (CDC), resting catch (RC), human landing catch (HLC), Albania.

072 GEOGRAFIC DIVERSITY OF CURRENTLY FRUIT TREE SPECIES IN ALBANIA

Belul Gixhari[1], Ilir Çiçi[1], Raimonda Sevo[1]

Albania Gene Bank, Agricultural University of Tirana, Tirana.

E-mail: gixharibelul@yahoo.com; gixharibelul@ubt.edu.al

ABSTRACT
The geographic distribution and diversity of currently fruit trees species using collection data, and a database of 592 geo-referenced observations, including all 32 species, from 12 districts of Albania was carried out. A grid of 25 x 25 km cells was used to asses' distribution, diversity and richness of species. To include all species at least once, 34 grid cells were selected. Geographic spatial analysis (GIS) shows that high species richness occurs in Elbasan, Tirana and Berat districts, where it was observed the highest number of species, respectively 12; 10 and 8 species. For all grid cells selected the summarized results on diversity were: Richness (S) 21, Margalef index 3,133; Menhinick 0,863; Shannon 2,57; Simpson 0,902, Brillouin 2,496. Combination of species occurrence data with climatic data delimitates the potential distribution of each species and allows the modeling of potential richness at the district level. Precipitation of driest month and precipitation seasonality seems to be the most limiting factors for the north-eastern part of Albania, and maximum temperature of warmest month for central Albania, and precipitation of driest month for south-western part of Albania. Based on these modeled richness maps, Elbasan and Berat appears to be the districts with the highest potential fruit trees diversity and with the most potential priority areas for in situ conservation of fruit tree species. GIS analysis shows also new alleles were contributed by additional cells: five alleles from Berat, and one new allele from each district: Dibra, Tirana and Shkodra.

Key words: GIS; geographic information system; species richness, diversity, fruit tree species.

073 ACCUMULATION OF CHROMIUM IN HYBRO CHICKENS LIVER TREATED WITH Cr (VI) AND VITAMIN C

Kemajl Bialimi[1], Avni Behluli[1],Hazbije Bojniku[1],Jeton Halili[2],Ilir Mazreku[1], Fetah Halili[1]

[1]*Faculty of Natural and Mathematical Sciences, Department of Biology, University of Prishtina, Prishtina, Kosoo*
[2]*Faculty of Natural and Mathematical Sciences, Department of Chemistry, University of Prishtina, Prishtina, Kosovo*

Email: kemajlbislimi@yahoo.com

ABSTRACT
In this study the role of vitamin C in the accumulation of chromium in the liver *Hybro chicken* treated with Cr (VI) were investigated. The chickens were divided into 5 groups (I-V), with 10 individuals which and were treated orally for 180 days with different concentrations of hexavalent chromium (Gr. I - 0 µg CrO_3; Gr. II - 25 µg CrO_3; Gr. III - 50 µg CrO_3; Gr. IV - 25 µg CrO_3 + 10 mg/kg of b.w. vit. C and Gr. V - 50 µg CrO_3 + 10 mg/kg of b.w. vit. C). The Cr concentration in the liver was determined by atomic absorption spectroscopy (AAS) via *Perkin Elmer 600 AA* type spectrometer. Vitamin C combined with Cr (VI) doses amplifies the bioaccumulation of Cr on the liver to a considerable degree, compared not only with control group of chicken but as well as with the chicken treated only with Cr (VI). The investigation results show that the bioaccumulation of chromium liver depend on the dose, time of action and the combination of Cr with Vitamin C.

Key words: vitamin C, accumulation of chromium, concentrations

074 AVERAGE PM CONCENTRATIONS OVER THE REGION OF NORTH – WEST OF ALBANIA

Florian Mandija[1], Floran Vila[2], Edmond Lukaj[1]

[1]*University of Shkodra, Department of Physics, Shkoder, Albania*
[2]*University of Tirana, Department of Physics, Tirana, Albania*

Email: f_mandija@yahoo.com

ABSTRACT
Aerosol mass concentrations, called PM_x, are key parameters of air quality index. The most measured mass concentrations are $PM_{2.5}$ and PM_{10}. Despite of this, nowadays exist many international and national limits on these two quantities. Recent studies focus the interest more on smaller aerosol modes (like PM_1), as well as on aerosol number concentrations.
In this study, we have focused our work on estimation of PM_x concentrations over a wide geographical range; north – west of Albania. This region contains urban and rural centers, mountain and remote areas, zones near Shkodra Lake and Adriatic Sea.
Here we present average values of PM_1, $PM_{2.5}$ and PM_{10} concentrations over all above-mentioned areas.
The results of this study give valuable information regarding on air quality index in this region.

Key words: air quality, PM concentrations, north – west of Albania

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Florian Mandija[1], Floran Vila[2], Edmond Lukaj[1]

[1]*University of Shkodra, Department of Physics, Shkoder, Albania*
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Key words: air quality, PM concentrations, north – west of Albania

075 DISTRIBUTION OF ORGANOCHLORINE PESTICIDES (OCPS) IN SURFACE WATER OF LAKE SHKODRA

Anila Neziri, Mukadez Gjini

Department of Biochemistry, University of Shkodra `Luigj Gurakuqi` , Shkoder, Albania

Email: anilaneziri@yahoo.com

ABSTRACT
The Shkodra Lake is located on the border between Montenegro and Albania and is the largest lake in Balkan. During the last decades, the anthropogenic pollution is going to be significant in this area. The exposure of aquatic biota to certain hydrophobic organic pollutants HOPs is of immediate concern because of the ability of some of these compounds to bioaccumulate and induce either lethal or sub-lethal toxicity including mutagenic, carcinogenic, teratogenic and endocrine disrupting effects on species at all tropic levels and in doing so disrupt the normal functioning of the whole ecosystem. In this study, the levels of 10 organochlorine pesticides (OCPs) in surface water from lake Shkodra were investigated to evaluate their potential pollution

and risks. A total of 18 surface water samples at 6 sampling sites were collected along the lake in three seasons of 2011. Water samples provide evidence on the source of OCPs pollution. The total OCPs concentrations in surface water were 1052- 11516 ng/L. Among the OCPs, HCHs, DDTs and heptachlor were the most dominant compounds in water. The concentrations of OCPs in surface water in summer and autumn were higher among spring sampling season. Distribution of HCHs, DDTs and other OCPs were different indicating their different contamination sources. Gas chromatography (GC) technique equipped with micro electron-capture detector (μECD) was technique for pesticide residue analyze.

Key words: OCPs, HCHs, DDTs, HOPs

076 TAXONOMIC AND BIOECOLOGIC STUDY OF A SEA TURTLE POPULATION IN DRINI BAY-PATOK 2010

Vilma Piroli[1], Idriz Haxhiu[1]

[1]*Vitrina University, Center for Research and Developement, Tirana, Albania*

Email: vilmapiroli@gmail.com

ABSTRACT
The taxonomic and bioecologic study realised on Drini Bay- Patok 2010 was based on a Sea Turtle population of 164 individuals of *Caretta caretta* and 4 *Chelonia mydas*. All the turtles studied were caught incidentally by fishing gears of Godulla and 2 Stavnikes, in Ishmi mouth (Martini Stavnik) and Mati mouth (Cali Stavnik). By the taxonomic study had resulted that the majority of turtles captured in Drini Bay (64 individuals) were in the 60- 69 cm size- class. The larger individuals and the smaller ones were respectively 84.5 and 37.5 cm for *C. caretta* and 67 and 33 cm for *Ch. mydas*. We have studied all the epibiont (Algae, Barnacles etc) and parasites (leeches) found in the turtles. The health status of the turtles: Injured 15 *C. caretta* (2 of them hooked), 1 *C. caretta* and 1 *Ch. mydas* dead, all the other turtles were healthy. We found a large number of males 61 and 17 adult females. We studied 10 feacal samples of 35 turtles that have been held on water tanks. We had the firs 50 eggs of a turtle who incidetally lay them on the tank were it have been held. It was very strange because we don't have any evidence of nesting in Albania, yet.

Keywords: Sea turtle, *Caretta caretta*, *Chelonia mydas*, Stavnik, Patok, epibiont, parasite, hook, eggs

077 SOME ENDEMIC SPECIES ON THE FLORA AND VEGETATION OF MIRUSHA REGION AND THEIR CONDIDION BY IUCN

Elez Krasniqi, Fadil Millaku, Ferat Rexhepi

University of Pristina, Faculty of Natural Sciences and Mathematics
Department of Biology, Str. "Nëna Terezë" n.n., 10 000 Prishtinë, Kosovo

E-mail: elez_krasniqi@yahoo.com

ABSTRACT
Mirusha region with its rich fitodiversity occupies a prominent place in the context of Kosovo's biodiversity. Within the flora and vegetation of the Mirusha region of significant value reflect endemic species of vascular flora. With few exceptions, most of these species developed in serpentine substrate. During the research of flora and vegetation of the Mirusha region (2000-2011), in particular during 2011 we found the situation according to IUCN for these endemic species: *Aristolochia merxmuelleri, Aster albanicus, Centaurea albertii, C. kosaninii, Forsythia europaea, Fumana bonapartei, Genista hassertiana, Halacsya sendtneri, Knautia macedonica, Paramoltkia doerfleri, Polygala doerfleri, Potentilla visianii, Scabiosa fumaroides, Scutellaria orientalis, Sedum serpentini, Stipa mayeri* and *Veronica andrasovszkyi*. The presence of these species in plant communities forming specific habitats provides significant value to flora and vegetation of Kosovo in general. Under field conditions, the species of the above should be protected by Law and listed on the Red List of Kosovo's flora.

Key words: Endemic species, Flora, Vegetation, Kosovo, Mirusha, Red List, IUCN.

078 TREES AND SHRUBS Of MIRUSHA REGIONAL PARK

Elez Krasniqi, Hazbije Krasniqi

University of Pristina, Faculty of Natural Sciences and Mathematics
Department of Biology, Str. "Nëna Terezë" n.n., 10 000 Prishtinë, Kosovo

Email: elez_krasniqi@yahoo.com

ABSTRACT
Mirusha Regional Park, protected by law in 1982 and 1983 (555.80.70 ha) within the Protected Areas of Kosovo ranked as a Protected Landscape (According to IUCN Category V). This protected area includes Mirusha River Canyon with successive waterfalls and lakes. Including the flora and vegetation represent important specific scientific, cultural and touristic natural phenomenon. The specific natural phenomenon would be incomplete without flora and vegetation with particular emphasis without trees and shrubs which give special charm to the landscape. Trees and shrubs in the Mirusha Regional Park are represented by 50 species belonging to 16 families of seed plants (*Spermatophyta*). Of the total number of species, 2 species belong to *Pinophyta* type, while 48 species belonging to *Magnoliophyta* type. Of the families, *Rosaceae* family dominates with 14 species (28%). From 8 floristic elements of the element types dominate European floristic element with 19 species (38%). On the report tree-shrub forms, dominate trees with 28 species (56%). Within these species are also endemic and rare species such as *Forsythia europaea* and *Malus florentina*. Trees and shrubs are also good natural protection from erosion.

Key words: Regional Park, Trees, Shrubs, Flora, Vegetation, Kosova, Mirusha, IUCN.

079 MAGNOLIATAE (DICOTYLEDONES) WITHOUT ASTERACEAE ON THE STUDENICA PEAK-KOSOVO

Shkëlzim Ukaj, Fadil Millaku, Elez Krasniqi, Ferat Rexhepi, Albona Shala

University of Pristina, Faculty of Natural Sciences and Mathematics
Department of Biology, Str. "Nëna Terezë" n.n., 10 000 Prishtinë, Kosovo

E-mail: shkelzimukaj@hotmail.com

ABSTRACT
Studenica Peak (600-1723 m) became part of the Sharri Mountains. In research conducted in the period 2008-2009 and 2011 within Magnoliatae (without Asteracea) 238 species are found in 168 genres listed within 50 families of vascular flora. From elements of flora, Euroasiatic floristic element dominates, while the dominant life forms are hemicriptophytes.

Key words: Studenica Peak, Vascular flora, Kosovo.

080 HISTOPATHOLOGICAL ANALYSIS OF LIVER IN FISH (*Chondrostoma ochridense*) IN RIVER CRN DRIM

Lidija Velkova-Jordanoska, Stojmir Stojanovski, Goce Kostoski

SI Hydrobiological Institute, Naum Ohridski, 50 6000 Ohrid, R. Macedonia

Email: lidvejo@yahoo.com

ABSTRACT

Some structural lesions in liver tissue have been accepted as valid biomarkers of anthropogenic stress at fish. Histopathology is the method of detecting chronic effect of exposure in the various tissues and organs to environmental stressors.
Liver samples of fish individuals collected from River Crn Drim were isolated and processed by

standard paraffin procedure for making histological preparations and microscopic analysis. Based on standard histopathological analysis some liver lesions were detected.

Key words: histopathology, liver, River Crn Drim, *Chondrostoma*.

081 **ASSESSMENTS ON THE BEHAVIOR OF BREAD WHEAT CULTIVARS AGAINST** POWDERY MILDEW (***BLUMERIA GRAMINIS)*** **INDEX AND ITS IMPACT ON THE YIELD IN THE ATTC IN LUSHNJE.**

Vrapi Hekuran[1], Gixhari Belul [2], Kashta Foto [3], Varaku Skender [1], Sulovari Halit [2], Ruci Thanas [1]

[1]Department of Plant Protection, Faculty of Agriculture and Environment, Agricultural University of Tirana, Albania.
[2]Albanian Genebank, Agricultural University of Tirana.Albania
[3] Department of Crop Production, Faculty of Agriculture and Environment, Agricultural University of Tirana.Albania.

E-mail: hvrapi@gmail.com

ABSTRACT
Powdery mildew in wheat, caused by (*Blumeria graminis f.spp.tritici*) (syn. *Erysiphe graminis* DC *f. sp. tritici* Marchal), and is one of the most important diseases of wheat leaf Mediterranean conditions. Observations on the behavior of wheat cultivars strong against Powdery mildew in wheat (*Blumeria graminis f.spp.tritici*) was conducted during 2009-2011 on experimental fields of the State of Seed and Saplings in the (ATTC) in Lushnje (Albania) where is defined index of vulnerability (PDI) to Powdery mildew in wheat (*Blumeria graminis f.spp.tritici*). This study was conducted to determine the relationship of the Powdery mildey index at the soft dough stage to yield losses for eight bread wheat cultivars. Regresion was used to determine the relationship of Powdery mildew index to yield and test weight losses. The cultivars showed a large variation in disease index in the field, ranging from 0 to 48 %, with different values in each repetition of the same place due to the spatial irregularity of the inoculum. The yield data collected in each plot of the same cultivar in Lushnje is highly correlated with his final disease severity. In Lushnje the yield ranking of varieties is also correlated with their powdery mildew index. We have not observed other pathogens nor environmental irregularities in the field trials, and we concluded that the reductions in grain yield are mainly caused by powdery mildew.

Key words: Bread wheat, powdery mildew, *Blumeria graminis*, diseases index

082 **ASSESSMENT OF JULIDS POPULATION (*JULIDAE, MYRIAPODA*) AND POTENTIAL FACTORS FOR POPULATION EXPLOSION AROUND DRINKING WATER DWELLS OF KONJAT (LUSHNJE)**

Mihallaq Qirjo [1], Enkelejda Velo [2], Valbona Aliko [1], Lorena Hallko [1]

[1]Tirana University, Faculty of Natural Sciences, Department of Biology
[2]Institute of Public Health "Hulo Hajderi"

E-mail: mqirjo@.rec.org

ABSTRACT
This study represents the findings of two year research (2010-2011), aiming at assessing the level of julides population explotion occuring periodically at Terbufi ex-wetland field, nearby Lushnje city.The sampling area was 630m2 with cordinates 41'00'00.50" N and 19'39'15.40" E. Nine sampling points are established in a matrix shape at three distances (5m, 10m, 15m) from the water dwells building. The material collection is made during spring and autumn seasons. The toxicity trials for a series of pesticides (Cipermetrine, Deltametrine, Willotrine and Kaotrine) is tested in two imitated environments: a) "no plaster" for solid/concrete surfaces b) "wet plaster" for the soil.There are mix populations of two species *Anoploiulus apfelbecki* (Verhoef, 1898) and *Pachyiulus varius* (Fabricius, 1781). Julides density varies from 1.48 ind/l (estimated 647 ind/m^3) on Apr. 2010, to 3.87 ind/l (estimated 1,705 ind/m^3) on Sep. 2010. The identified

sources stimulating the population explosion are: a) the sewerage canal of Dushk village and b) the high soil humidity. The most efficient level of pesticides concentration (applied to reach the biggest death number, in the shortest exposure time with the lowest concentration) is found for Cipermetrine 0,01325% on "no plaster" samples, and Cipermetrine 0,01325%, Willotrine 2,5% and Kaotrina 0,01325% on "wet plaster" samples.

Keywords: millipedes, julides, population explosion, density, toxicity, pesticides.

083 ANALYSIS OF LAND COVER FOR RAHOVEC MUNICIPALITY

Idriz Shala[1], Bajram Kafexholli[2], Shkëlqim Sirika[3]

[1]Statistical Agency of Kosovo str. Zenel Salihu nr. 4, 10000 Prishtinë-Republic of Kosovo
[2]Kosovo Environmental Protection Agency str. Luan Haradinaj, 10000 Prishtinë-Republic of Kosovo
[3]Teacher in Secondary School – Tiranë – Albania

Email: idriz.shala@gmail.com, bajram.kafexholli@gmail.com, shkëlqim.sirika@yahoo.com

ABSTRACT
Development of information systems for Corine Land Cover (CLC) for the municipality of Rahovec is an important element in the classification of land surface and its use. The aim of this paper will be to analyze and obtain information about land cover, and finally the creation of a vector basis for the land cover of the municipality of Rahovec. To make the categorization of land under Corine Land Cover we will use the most advanced GIS technology, Remote sensing and existing raster bases (satellite images, Orthophoto, and topographic maps).Republic of Kosovo has not ever done Corine Land Cover for the whole of its territory, so this initiative of ours will be a great help to the institution and /or organizations that plan to do the CLC for Kosovo.The paper will contain information gained from the use of newest methodologies. Land categorization will be according to the INSPIRE (Infrastructure for Spatial Information in the European Community) directive. The results obtained, will help development of appropriate land use policies and strategies.

Keywords: INSPIRE, GIS, Remote Sensing, Vector data

084 APPLICATION OF ENVIRONMENTALLY FRIENDLY TECHNOLOGIES IN OLIVE INDUSTRY

Dritan Topi[1]✉, Fadil Thomaj[2], Ismet Beqiraj[1], Bujar Seiti[1], Eltion Halimi[1]

[1]Faculty of Natural Sciences, University of Tirana, Boulevard Zogu 1, 1010, Tirana, Albania
[2] Agricultural University of Tirana, Faculty of Agriculture and Environment, Kamez, 1007, Tirana, Albania
[3] University 'Aleksander Moisiu', Faculty of Information Technology, Department of Applied Mathematics, Durres, Albania

E-mail: dritan.topi@unitir.edu.al

ABSTRACT
Recently Olive Oil Industry in Albania has known an expansion. Extraction technologies for Olive oil production have been randomly chosen without any previous study in the environmental impact. It is well known that 2-phase technologies produces small amount of Olive Mill Waste Waters (OMWW) compared to the applied 3-phase technology. Albania has ~6.1 million olive trees, covering a surface of 41 000 ha. Olive plantations cover 6.3% of arable land. The annual producing capacity has reached approximately 50 000 tons of olives and 7000 tons of olive oil. After the '90s the number of olive trees decreased significantly due to abandonment of non productive plantations.The Current OMWW amounts produced during a season are considered to be 400×10^5 kg. due to the fact that Albanian government have issued a national plan on olive tripling the area of olive plantation the amount of OMWW is expected to be triple. this is the reason why application of environment friendly schemes for olive by-products needs to be addressed in both national and regional levels.

Key words: olive mill wastewater, Olea europaea, olive husk, sustainable development, BOD5

085 USE OF ERYTHRONE PROFILE AS BIOMARKER OF CONTAMINANT EXPOSURE IN MARSH FROG (*RANA BALCANICA*)

Aliko Valbona, Qirjo Mihallaq, Biba Adiola, Sula Eldores, Morina Valon

Faculty of Natural Sciences, Department of Biology, Tirana, Albania

E-mail: valbona.aliko@yahoo.com

ABSTRACT
To evaluate the use of blood parameters as non-lethal biomarkers of contaminant exposure, marsh frogs (Rana balcanica) were collected from four sites around Tirana Artificial Lake and ponds in Zoological Park of Tirana; along with two reference sites at Dajti mountain streams. Image analysis was used on fish blood smears to measure major axis, minor axis, area, and shape factor of erythrocytes and their nuclei. These data were used to determine the average proportions of mature, intermediate, and immature erythrocytes. Other types of erythrocytes (karyorrhetic, dividing, enucleate) were also quantified. To determine effects of capture stress, determination of plasma glucose levels were performed. Lastly, the micronucleus assay was used to assess genotoxic exposure. The latter provided another method to quantify polychromatic (immature) erythrocytes. Polluted sites showed lower nuclear area and higher nuclear shape factors than reference ones. Percent immature cells in reference sites were significantly lower than polluted one. Although rare, dividing and enucleate erythrocytes were present. Sediment and water toxicity of Tirana Lake were associated with various nuclear measurements. Glucose levels of individuals from polluted areas were significantly ($p<0.01$) 3 times higher than normal glucose values for ranidae group. There were a correlation between high glucose levels and micronucleus frequency ($p<0.01$). The Micronucleus Test showed significantly more genetic damage at polluted areas than the reference sites. This research suggests that erythrocyte nuclear morphology, percent immature erythrocytes, and the micronucleus test are suitable non-lethal biomarkers of contaminant exposure in frogs.

Keywords: erythron profile, micronucleus assay, biomarkers, marsh frog (Rana balcanica).

086 AIR POLLUTION FROM KOSOVA POWER PLANT INDUCED CHANGES IN THE PHOTOSYNTHETIC PIGMENTS OF SOME PLANT SPECIES

Mirsade Osmani[1], Kasamedin Abdullai[2], Bekim Gashi[2], Fadil Millaku[2], Elez Krasniqi[2], Sali Aliu[1]

[1]Faculty of Agriculture, University of Prishtina, Republic of Kosovo
[2]Department of Biology, Faculty of Mathematical and Natural Sciences, University of Prishtina, Republic of Kosovo

Email: bekim.gashi@uni-pr.edu; bcadja@hotmail.com

ABSTRACT
Study was carried out to assess the impact of power plant pollutions on some plant species grown near in this area. In this paper, content of photosynthetic pigments (Chlorophyll and carotenoids) induced by air pollutants in *Plantago lanceolata* L., *Trifolium pratense* L., *Dactylis glomerata* L., *Rumex crispus* L. and *Convolvulus arvensis* L. leaves were followed. The experiment was conducted three times for the three months (May, June and July) at three localities in southern direction from power plant "Kosova A" and compared with samples from control areas. The highest reduction in total chlorophyll was observed in *Dactylis glomerata* L. (42.42%) whereas, the lowest reduction (19%) was recorded in *Convolvulus arvensis* L.. Similarly in case of carotenoid contents, highest reduction was observed in *Dactylis glomerata* L. (46.99%) and *Rumex crispus* L. (41.39%) and lowest in *Plantago lanceolata* L. (23.53%) and *Convolvulus arvensis* L. (19.67%). The reduction in total chlorophyll and carotenoid for the *Trifolium pratense* L. was observed about 30% for all parameters. The data obtained were further analyzed using one-way ANOVA and a significant change was recorded in the studied parameters. These studies clearly indicate that the power plant induced air pollution reduces the concentration of

photosynthetic pigments in the many plant species exposed to the power plant pollution.

Keywords: air pollution, many plant species, photosynthetic pigments, power plant.

087 ASPECTS OF GLOBAL CLIMATE CHANGE IN ALBANIA BASED ON ANALYSIS OF SEVERAL CLIMATE INDICATORS

Ilir Topi[1*], Hysen Mankolli[1], Pashk Lekaj[2]

*[1]*Department of Agro-Environment and Ecology, Agricultural University of Tirana, Albania*
[2]Faculty of Economy and Agribusiness, Agriculture University of Tirana, Albania

E-mail: ilirtopi2007@yahoo.com;

ABSTRACT
Global climate changes are evident. These changes contribute to undermining the ecological equilibrium in ecosystems. Measurable indicators of the identification of climate changes are part of the climate. Some of them are observed for extended periods of time such as: temperatures, rain showers and snow showers, water level of seas, and drying of lakes and rivers. Overall the above-listed indicators have their impacts on the physical degradation of the environment, the subsidence of biodiversity, and on the reduction of productiveness in agro ecosystems. Based on the data obtained from different climatic regions of Albania, it turns out that there are slight changes to the temperature indicators, the increase of climate extremities; the increase of flooding, the increase of erosion, and to the decreasing of agricultural productivity in agro ecosystems. The data are part of a PHD: "Study of the impact of global climate changes and the analysis of bio-climatic indicators in Albania" years 2010-1012 .

Key words: climate change, indicators, impact, ago ecosystem

088 CHALLENGES OF EUROPEAN UNION INTEGRATION OF KOSOVO IN TERMS OF ENVIRONMENTAL MANAGEMENT

Nexhat Balaj[1], Llazar Haxhinasto[2], Isuf Lushi[3], Filloreta Balaj[4]

[1]European Institute 'JURIDICA'- Faculty of Public Policy and Management, Prishtina, Republic of Kosovo
[2]Agricultural University of Tirana, Albania
[3]Anadrini, Rohovec
[4]University of Prishtina

Email: agroalbi54@hotmail.com

ABSTRACT
Kosovo is oriented on building a modern country and integrated into the European Union, in this way along with other challenges Kosovo will face with the fulfilment of environmental needs and demands as well. Environmental policies aims to improve environmental quality, protect the human health of the population, accurate and rational use of natural resources, promoting international level measures to overcome the environmental problems. Our study is divided into three parts: an overview of the environmental policies of the EU; environmental policies in Kosovo; and the environmental challenges that are expected to be developed in Kosovo in the context of European Integration processes. The European Union has approved the legislative framework for a high level of environmental protection and also they promoted financial and technical instruments within member states. Global warming and climate change in recent years had impact on European Union policies for the environment. The Lisbon Treaty identified as a priority the fight against climate change, for that EU inaugurated a special environmental portfolio "Climate Change" in terms of implementing the EU policies dealing with climate change as a result of global warming. Kosovo has its new environmental legislation created mainly during the last decade. This legislation is generally focused on alignment with EU standards, because it relies on the same principles of European environmental legislation. Despite this Kosovo has made efforts to both the legal framework and the implementation and incorporation of environmental standards and policies in accordance with European Union policies.

Key words: Environment, UE, acquis communautaire, Kosova, integration

089 THE RELATIONSHIP BETWEEN THE AIR POLLUTION ELEMENTS AND ENVIRONMENTAL MICROORGANISMS, CAUSERS OF HUMAN DISEASES IN DURRES, ALBANIA

Mirela Lika (Çekani), Hysen Mankolli

[1]*Department of Biology, Faculty of Natural Sciences, Tirana University, Albania*
[2]*Department of Agro-Environment and Ecology, Agricultural University of Tirana, Albania*

Email: mirela2422@yahoo.com, mankollih@ubt.edu.al

ABSTRACT
The bacteria's are the main causers of the upper respiratory tract infection. The knowledge of the etiology and behavior of the bacteria's is so important and especially the correlation of factors of the air pollution with bacteria's. Upper respiratory tract infection (URI) represents the most common acute illness evaluated in the outpatient setting. The upper respiratory tract includes the sinuses, nasal passages, pharynx, and larynx, which serve as gateways to the trachea, bronchi, and pulmonary alveolar spaces. Rhinitis, pharyngitis, sinusitis, epiglottitis, laryngitis, and tracheitis are specific manifestations of URIs. We have studied the most air pollution areas, in Durres, and the cases with upper respiratory tract infection. Microorganisms, including bacteria and fungi are important as an index of the environment. Samples were estimated during 2010-2011, in Durres city in 4 sites, the most pollution locations of the city. The level of LGS has been 214 µg m^{-3} and for PM has been 108 µg m^{-3}. The result of the microorganisms isolations in the airborn microorganisms have been *S. aureus* (285 cfu/min), *S. epidermidis (*263 cfu/min), *S. ß hemolitic (*200,4 cfu/min), *Bacillus sp.* (198 cfu/min), *Candida sp.* (138 cfu/min). The common bacteria's from biological samples from the people who suffered from the illness caused by airborne microorganisms have been *S. aureus* (10%) and *S.ß hemolytic* (14%). The highest percentage of the bacteria is during the warm and wet period, May and June. *S. aureus* is in the highest percentage of the females (5.4%), while *S. ß hemolitic* is of the males (7.8%). The analyses showed the linkage between the air pollution elements and airborn microorganisms which are the important causers of the different diseases in the up respiratory tract.

Key words: LGS, PM, *S. aureus, S.ß hemolitic,* etiology, air pollution.

090 COMPARATIVE INDICATORS OF PHYSICAL – CHEMICAL CHARACTERISTICS OF FULL FEED AND STARVED COMMON CARP (CYPRINUS CARPIO L.)

Vesna Karapetkovska Hristova, Dijana Blažeković Dimovska, Vangel Stevanovski[1]

[1]*University "Sv. Kliment Ohridski", Faculty of biotechnical sciences, "Partizanska" bb., Bitola, Macedonia*

Email: dijanablazekovic@yahoo.com

ABSTRACT
Common carp (*Cyprinus carpio* L., 1758) originated in Europe in rivers around the Black Sea and the Aegean basin, especially the Danube. Common carp (*Cyprinus carpio*) is one of the most cultured fish in the world. In 2008, the world and the European production was 2 987 433 tons and 144 747 tons, respectively (FAO, 2011). It is consumed as a traditional food in central Europe. Carp is an omnivorous species eating plankton and benthos (worms, insects, molluscs) as well as detritus in the natural conditions. Carps are an important food source, especially in countries or regions with lower financial resources.
The aim of the study was to determine and compare some physical – chemical characteristics between fillets of common carp fed with plankton and benthos supplemented by cereals and starved carp.
The samples of five two-years old carps were taken from cyprinid fish pond Žabeni, Bitola, Macedonia. On this farm the production is take place in the semi-intensive system of production with the addition of corn in the diet.
Protein content was determined by Kjeldahl, water content was determined by drying at 103±2°C

to constant weight and for determination of total fat, sample was hydrolyzed with 4M hydrochloric acid and extracted with petroleum ether by Soxhlet apparatus.
We concluded that effects of starvation have influenced on fat, protein and water content in common carp.

Key words: common carp, chemical composition

091 VİRUS DİSEASES OF CUCURBİTS İN KARAMAN PROVİNCE

Serkan YEŞİL[1], Filiz ERTUNÇ[2]

[1]Selçuk University, Faculty of Agriculture, Department of Plant Protection, Konya-Turkey
[2]Ankara University, Faculty of Agriculture, Department of Plant Protection, Ankara-Turkey

E-mail: serkanyesil@selcuk.edu.tr

ABSTRACT
Viral diseases are very destructive especially on squash (*Cucurbita pepo* L.) which is grown for seeds in Karaman province. In this study, it's aimed to determine viruses in the major cucurbit growing areas of Karaman province. Totally 135 plant samples which showed the most common virus symptoms like mosaic, curling, blistering, mottling, distortion, shoestring, stunting and vine decline were collected from squash, zucchini, melon, watermelon, cucumber and pumpkin plants during 2009 and 2010 years. The viruses were identified from the collected samples by DAS-ELISA. The results showed that 83 % of plant samples were infected with *Zucchini yellow mosaic Potyvirus* (ZYMV), *Watermelon mosaic Potyvirus-2* (WMV-2), *Cucumber mosaic Cucumovirus* (CMV), *Papaya ringspot Potyvirus*-watermelon strain (PRSV-W) and *Squash mosaic Comovirus* (SqMV). ZYMV was the most prevalent virus in the infected cucurbit plants with the ratio of 53.4 % and occurred in squash, pumpkin, watermelon, melon and cucumber samples. WMV-2 was detected in squash (50 %), melon (43.1 %), cucumber (12.1 %) and watermelon (5.2 %). Also mixed infections were observed in squash, melon and cucumber more frequently than others. *Cucumber green mottle mosaic Tobamovirus* (CGMMV) were not detected in any tested cucurbit samples.

Key words: Cucurbit plants, plant viruses, Das-Elisa, determination, Karaman.

092 AIR QUALITY ASSESSMENT USING THE AIR STRESS INDEX (ASI) AND THE AIR QUALITY INDEX (AQI) FOR CITY OF KORÇA, ALBANIA

Robert Damo, Pirro Icka

"*Fan S. Noli" University of Korça, Agronomy Department, Korça – Albania*

Email: damo-ro@hotmail.com

ABSTRACT
In the last decades urban air pollution and its impacts on the quality of life in urban areas is a world-wide problem. The degradation of the atmospheric environment is intensified during the last years in the major cities of Albania. In order to assess the extent of impacts due to rapid human activities in Korça city, the air quality was continuously monitored for the last decade. The assessment of air quality is made by comparison of measure value for each indicator with allowed norm value (exceedance factor). It is gives an overall assessment of air quality, but does not include the combined effects of the air pollutants. This assessment method is insufficient for the evaluation of the air quality, which is not limited to a single air pollutant. Therefore, we are using two of many air quality indexes, which represent the global urban air pollution situation. The air stress index (ASI) and air quality index (AQI) gives an overall assessment of air quality, including the synergistic effects of the major air pollutants. The annual average air quality indexes are calculated by using both these methods. Sulfur Dioxide (SO_2), Oxides of Nitrogen (NO_2), respirable Particulate Matter (PM_{10}) and Suspended Particulate Matter (SPM) were used for the development of AQI, and SO_2, NO_2, PM_{10} and benzene for the ASI. Calculated values of ASI tell for strong air stress and the values of AQI tell for extreme air pollution with warnings of emergency conditions.

Key words: air quality assessment, air pollution, air stress index (ASI), air quality index (AQI)

093 WATER QUALITY INDEX ASSESSMENT OF POGRADEC WATER- SUPPLY, IN ALBANIA

Pirro Icka, Robert Damo

"*Fan S. Noli" University of Korça, Agronomy Department, Korça – Albania*

Email: pirroicka@yahoo.com

ABSTRACT
In this paper is applied for the first time in Albania Water Quality Index (WQI) of the Canadian Council of Ministries of the Environment (CCME) for assessment of water quality of water supply network in Pogradec. CCME - WQI, a technique of rating water quality, is an effective tool to assess spatial and temporal changes on the quality of any water body. Calculations of the index are based on a combination of three factors: scope - the number of variables whose objectives are not met; frequency – the frequency with which the objectives are not met, and the amplitude – the amount by which the objectives are not met. The squares of these values followed by the square root of the final value divided by 1.732 produces a value from 0 to 100. The CCME WQI a value of 100 is the best possible index score and a value of 0 is the worst possible. Calculations show that index of water quality for the Pogradec water supply system is ranked "good", and the turbidity is main problem in water quality.

Key words: health quality, physic-chemical parameters, turbidity, water quality index.

094 DETERMINATION OF THE KONYA CITY AIR QUALITY USING PASSIVE SAMPLER METHOD

Fatma Kunt*, Sukru Dursun

Selcuk University, Environmental Engineering Department, Konya - Turkey

**E-mail: fatmakunt@selcuk.edu.tr*

ABSTRACT
Air pollution is one of the most significant problems in the present days. It is one of the threats to human health and our environment. Air pollutants (O_3, SO_2, NO_2, HC, Heavy metals etc.) can have the temporary or permanent serious affects including cancer. The most common activity of pollutants is causing upper respiratory tract diseases and asthma, especially in children and in elderly peoples. On the other hand, it has given rise to the risk of heart attack and to the increasing health problems. Therefore, the measurement of O_3, SO_2 and NO_2 values are crucial in the way of public health and general environment. Passive sampling technology is one of air pollution measurement method. It is requires no electric power, is much simpler and cheaper to deploy. Therefore, it is more appropriate for screening applications and long-term sampling. In particular, passive samplers may be more useful for sample collections over extended periods of time (weeks to months) that require nonattendance at remote locations, regional-scale air quality investigations and monitoring of time-averaged concentrations. In our study, outdoor air samples, using passive sampling technique, were used for collection at fifteen different points and four different periods. Four periods were conducted as March (the first spring), June (summer), October (autumn) and January (winter) in 2011-2012. Also air pollution maps were prepared for O_3, SO_2 and NO_2 using *Arcgis 10.0* package programme.

Keywords: Air pollution, Passive sampler, Konya, Air quality, Arcgis, O_3, SO_2, NO_2.

095 GENETIC DIVERSITY AT SOMBORKA POPULATIONS (*CAPSICUM ANNUUM* L.) FOR SOME QUANTITATIVE PARAMETERS

Sali Aliu, Shukri Fetahu, Imer Rusinovci, Skender Kaçiu and Faruk Beqa

Faculty of Agriculture and Veterinary, Department of Crop Science, University of Prishtina, Kosovo

Email: salialiu02@gmail.com; sali.aliu@uni-pr.edu

ABSTRACT
Pepper (*capsicum annuum* L.) is important vegetable species both worldwide and in Kosovo, which is very useable for human food. Genetic diversity was assessed for quantitative traits in a collection of Somborka populations (*Capsicum annuum* L.) from different locality of Kosovo include; Krusha, Shtime, Lipjan, Viti and Mitrovica. A total of 5 genotypes in 5 localities were studied under different field conditions over summer 2011. All accessions were characterized for different agro-morphological traits from seedling emergence to crop maturity. The experimental design was a split plot with randomized complete block with three replications. The quantitative and agronomic traits assessed showed variation. The total genetic variation for Plant height (PH) was +11.72 or 27.94%. On maximum leaf area (LA) per plant was determined in locality Shtime on value 2308.38 cm^2 per plant, while the lowest value for LA was 1136.82 cm^2 per plant (locality; Mitrovica). The total genetic variation was +1171.56 cm^2 or 64.92%. Also, the genetic variation for yield per plant was significantly higher at level of probability (LSDp=0.01). The average values at all accession for yield per plant was 466.34 g per plant. The differences between them were +425.96 or 91.34%. The high genetic diversity found in the collection showed its great potential for improving agronomic traits in somborka populations.

Keywords: capsicum annuum, genetic diversity, morphological characterization.

096 LIVESTOCK PEST CONTROL FLY CONTROL IN CATTLE BREEDING FACILITY

Natalia Shoshi*, Drita Kaci

Faculty of Veterinary Medicine, Agricultural University of TIRANA, Albania

E-mail: natali_sh@hotmail.com

ABSTRACT

Livestock "Pest Control" aims animal's protection from infectious diseases; prevents these diseases and ensures food safety and public health. Fly control plays an important role in it. This study aimed at the realization of two important tasks: The argument of the "Pest Control" importance. Implementation of HACCP procedures in breeding is a revolutionary step; "Pest Control" has an important role in this revolution. Flies Monitoring on cattle breeding facilities is focused on house and stable fly monitoring at a beef cattle breeding facility in Fllake – Durres (in the second week of June 2011).Methodology used: for house fly monitoring in a stall (240m2 area) were used 5 index "spot" cards. the estimate (based on the spots' numbers left by the flies) was made after 7 days. (The considerable Infestation: Avg. 100 spots/card/week) The results after 7 days: Alarming situation. Very high infestation for stable fly monitoring, flies were counted on all four legs of every 15 Calves (from 70 in total), judging on the level of infestation (based on the consulted literature). The considerable infestation: Avg. 10 flies per animal. The results after 7 days: Avg. 7 flies per animal. (Doesn't appear any problematic situation). Action taken: Use of insecticides for the house fly control was inevitable. Product used: TWENTY ONE WP[1][Contains 10% Azamethiphos, Adulticid Mesatar (WHO EPA Kl.III)] The result: Immediate, Situation: Stabilized.

Key Words: Pest Control, Infectious Diseases, Monitoring, House fly, Stable fly

097 HEAVY METAL CONTENTS OF SOIL AND NATURAL PLANT AROUND AN OLD Pb-Zn MINE AT BOZKIR, KONYA-TURKEY

Aysen Akay[1], Mehmet Bas[2], Sukru Dursun[3]

[1,2]Selcuk University, Agriculture Faculty, Department of Soil Science and Plant Nutrition, Konya - Turkey
[3]Selcuk University, Environmental Engineering Department, Konya - Turkey

Email: aakay@selcuk.edu.tr, sdursun@selcuk.edu.tr

ABSTRACT
Mostly old mine left uncontrolled condition and upon to effect of meteorological factors. These areas have toxic levels of heavy metal content for growing plant around polluted area. Content of heavy concentration affects to underground water pollution and heavy metal levels of plant growing around activity. Also usage of polluted water may affect the heavy metal contents of the soils and natural plants collected from the vicinity of an old lead-zinc mine and the waste dump area located within the borders of Konya province were determined in the present study. As the result of the study, it was primarily found out that the Pb and Zn contents of the soils located in the close vicinity of the old mine were above 10.000 mg kg-1. Al and Fe contents were found to be particularly high around the dam where the waste of the aluminium plant was dumped and in the red mud dumped to the dam. Fourteen different plant species were determined among the samples taken from the natural plants existing in the vicinity of the study area. The Pb contents of these plants were found to be between 422-5083 mg kg-1 and their Zn contents were found to be between 969 - >10000 mg kg^{-1}. As the result of this study, it was found out that these wild plants could be used as bio accumulators owing to their high Pb and Zn accumulation capacities and they could also be used in phytoremediation studies.

Key words: Phytoremediation, heavy metal, mine soil, natural plant.

098 MEASUREMENT OF HYPER-ACCUMULATION CAPACITY OF NATURAL PLANT GROWN AROUND OLD MERCURY MINE IN KONYA, TURKEY

Aysen Akay[1], Tunc Guner[2], Sukru Dursun[3]

[1,2]Selcuk University, Agriculture Faculty, Department of Soil Science and Plant Nutrition, Konya - Turkey
[3]Selcuk University, Environmental Engineering Department, Konya - Turkey

Email: aakay@selcuk.edu.tr, sdursun@selcuk.edu.tr

ABSTRACT
Heavy metal pollution levels of soil and water environment was increased recently due to industrialization activities. In our country, water and plants are under major environmental pollution problem; heavy metal released from abandoned mine areas and waste materials stored in open land and around. Increasing this metal pollution is a threat for the ecological environment. Human health has been threatened in the food cycle of human beings by the heavy metal residues. There are number of scientific studies on removal of heavy metals in aquatic environments related to the environment; but there is little research on removal of heavy metal pollution from soil environment.The process of metal uptake and accumulation by different plants depend on the concentration of available metals in soils, solubility sequences and the plant species growing on these soils. Phytoremediation studies for Turkey pollution lands are relatively new and especially, there is not sufficient information on the determination of appropriate plant species for pollution removal. For this issue, heavy metals content in plants grown in primarily pollution occurring areas, it is necessary to identification of plant species and determination of rates of heavy metals uptake. For this reason performed this study, heavy metal contents were determined in naturally grown plant species around old mercury mine stored and exposed soil. In the present investigation, the study has been performed for distribution pattern of Pb, Ni, Co, As, Sr, Cd, Sb, Cr, Ba, Al, Hg, Se, Mo, Cu and Zn contents in different parts of 24 plant species grown in the dump site located near an old mercury mine site(Kursunlu, Konya-Turkey).The present study was carried out to investigate the distribution pattern of Pb, Ni, Co, As, Sr, Cd, Sb, Cr, Ba, Al, Hg, Se, Mo, Cu and Zn contents in different parts of 24 plant species grown in the dump site located near an old mercury mine site. The findings showed the existence of particularly mercury and also arsenic accumulation in these plants. Regarding the mercury content accumulated in plant organs, mercury accumulation in plant roots were found to be higher compared to that in the leaves and other organs. The accumulated mercury contents of the investigated 24 plant species were found to vary about between 200-40.000 mg kg-1. It was found that of the 24 plant species taken from the vicinity of the old mercury mine, only two species had high mercury accumulation capacities, and these plants could be used as mercury hyperaccumulators and for the removal of mercury from the polluted sites.

Keywords: Hyper-accumulation, mercury mine, Konya, Kursunlu, phytoremediation, heavy

metal.

099 SOME ECONOMIC EVALUATIONS OF THE ECOSYSTEM OF PRESPA, ALBANIA

Memedije Hoxhalli[1], Stiljan Apostoli[2], Pashk Lekaj[2]

[1]Environment and Health Association, Tirana, Albania
[2]Faculty of Economy and Agribusiness, Agriculture University of Tirana, Albania

Email: memedije@yahoo.com

ABSTRACT
The ecosystem of Prespa is located within 900 to 2200 m above the sea level in the region of Korca, Albania. It borders parts of Macedonia and Greece. Characteristic is the presence of the lake, and the hilly and mountainous landscape of the Dry Mountain. From the total agricultural land of 2277 hectares, 1749 hectares are cultivable land by farmers. Fruit trees are (45%). The cultivation of leguminous plants and vegetable ranges (30%). Grains go up to (25%). The tendency is that of an increase in area with fruit trees. Average yield is 400 quintals/ha for fruit trees and 35 quintals/ha for grains. To achieve a significant increase in productivity it is important to establish irrigation systems and create a market for the sale of surplus products. About 95% of the population is employed in agriculture. Economic benefits per family in a year from the sale of agricultural products and livestock averages to about 4000-5000 dollars. These revenues tend to increase because farmers are focused on cultivating more efficiently in order to have a greater production. The employment rate in 2010, is 27.3% of the population. By sector the number of employees is: The public sector employs 2.7% of the population, employed in the private sector are 1.6% of the population, self-employed in agriculture 23%. From that we can drw conclusions that the income of the population is obtained through self-employment in agriculture, migration and employment in the federal government. Ecological and touristic resources in the ecosystem of Prespa are put into use. Their use provides an economic sustainability of the area of Prespa.

Key words: ecological resources, tourism resources, ecosystems, agricultural land, agricultural farm, economy

100 SOME ANATOMICAL CHARACTERS OF STEM AND SPIKE IN DIFFERENT WHEAT GENOTYPES

Enver Sherifi[1], Marija Kraljevic-Balalic[2], Naser Shabani[3]

[1]Faculty of Natural Sciences, University of Pristine – Kosovo
[2]Agricultural Faculty of Novi Sad -Serbia
[3]Institut of Environment and Health, SEEU Tetovë - Macedonia

Email: e_sherifi@yahoo.com; kraljevicbalalic@yahoo.com

ABSTRACT
Resistance of plants has a great importance in cultivation programs and more dependent on the anatomic construction stem and spike. Investigated show the plants sustainability depends of the development of mechanical tissue (sclerenchyma) and vascular bundles on the stem and spike. There are investigated some anatomical characters of stem and spike, where as based on the data from the literature, those organs are playing very important role on the fruit production. On the cross section of the stem (six genotypes) and spike(seven genotypes)are analyzed: number and surface of vascular bundles, number of chlorenchyma bands ,number of sclerenchymal cell rows. Achieved results shows that those parameters have varied subject to the genotypes and internodes position on the stem, respectively spikelet's on the spike.

Key words: genotypes, stem, spike, spikelet's, vascular bundles, chlorenchyma bands

101 DEVELOPING A WATERSHED MANAGEMENT PLAN FOR WATER QUALITY IN BOVILLA WATERSHED (TIRANA)

Aleko Miho

Department of Biology, Faculty of Natural Sciences, University of Tirana;

E-mails: mihoaleko@yahoo.com; aleko.miho@unitir.edu.al

ABSTRACT
Bovilla Reservoir was formed since year 1998, damming the River Terkuza, about 15 km North-East of Tirana city. Since the first forming it is the main source (up to 1'800 l/s) of drinking water for Tirana and its suburbs. An integrated study was carried on, through the joint project SCOPES 2005-2008, aimed the knowledge of physical-chemistry and biology of the waters, the impact from the water inflows, the knowledge of natural and biological values in the whole terrestrial watershed, and especially the human impact (agriculture, livestock, forestry, etc.). The study was initiated in response to concern over the deteriorating water quality manifesting by an unpleasant smell and taste first detected on September 2001; to improve the situation, since the year 2004 the Drinking Water Treatment Plant of Bovilla, Kodra Kuqe, Tirana, added the treatment with powdered activated carbon during the emergency period, increasing further the treatment costs of drinking water for the town.From the study it was concluded about the not friendly human impact in the zone, enhanced also from the climate, the torrential character of rainfall and the schist-clay nature of the surrounding hills. Hence, poor vegetation cover and erosion were quite evident almost in the whole watershed area; the Reservoir is under the strong sedimentation process from the rivers, enhanced from the woodcutting mainly for firewood, overgrazing (especially from goats) and fires. Meanwhile, there exist a poor management of solid waste or wastewater from the local inhabitants and their livestock. This presentation aims to help responsible units of local government, non-profit organizations, and citizens in Tirana municipality about the importance of the application of a watershed management plan (WMP) in the zone, to protect and improve the water quality. The most important potential stakeholders of the WMP would be the Municipality of Tirana (Directory of Drinking Water Supply, Bovilla Treatment Plant, environmental engineers, public works staff, territorial planners, managers/supervisors, etc.), Tirana County Council (Prefecture), municipalities of Culli (Kruja district) and Zall Bastari (Tirana district), as well as representatives of Dajti National Park (*extended*). Their representatives can form the WMP Steering Committee to ensure the watershed planning and implementation process. All surface waters of Bovilla watershed are designated for and shall be protected mainly for public water supply of Tirana Municipality. It was observed that the Bovilla water-body is not meeting its main designated use. The typical pollutants that affect were the strong erosion and poor vaste management, i.e. observed high content of suspended solids (TSS), nutrients (nitrates), bacteria (fecal coliforms and streptococci), etc. The principal causes were poor vegetation cover, enhanced from the woodcutting, overgrazing and fires, poor storm water management practices, presence of livestock in stream, failing septic systems in villages etc.It is strongly recommended a sustainable watershed management, focused on protection of water quality, preventing the strong sedimentation and eutrophication phenomena in Bovilla Reservoir and human health in Tirana zone. Principal WMP goals and Best Management Practices (BMPs) would consist on: 1) Strict protection and continuous restoration practices of Vegetation Riparian Belt (Critical Area) around the lakeshores (320-400 m a.s.l.), considered as strictly protected Core Zone of the Dajti NP (extended) (VKM, 402:2006). 2) Runoff control and storm water management through the restoration of vegetation cover within the whole watershed through: stopping the woodcutting; continuous reforestation activities, control of fires; friendly agriculture activities, abolition of goat growth; etc. 3) Decentralized management of wastewater for the separate settlements (villages), groups of households and their livestock. 4) Urgent measures to keep the livestock away from the Reservoir and the running water courses. 5) Continuous water quality monitoring, physical-chemistry, nutrients, microbiology. 6) Strengthening, training and motivating the Watershed Protected Area Administration. 7) Efforts on awareness increase: among the inhabitants and local responsible within the watershed; among the authorities in Tirana, interested directly to public water supply. 8) Efforts in reducing the poverty in the zone that is quite evident, despite only few kilometres far from the Capital. Soft loans supporting the sustainable activities for: forestation; upgrading the inhabited centres; houses; connecting roads; facilitate the free movement of the people. 9) Encourage the development of the natural tourism as a mutual interest for all interested parties in a high drinking water quality in Bovilla area.
Keywords: Bovilla watershed; Tirana public water supply; Watershed Management Plan (WMP); WMP goals; Best Management Practices (BMPs).

102 A COMPARASION OF DIFFERENT SPATIAL INTERPOLATION TECHNIQUES FOR GROUNDWATER LEVEL CHANGES

Tayfun Cay[a] and Mevlut Uyan[b]

[a]*University of Selcuk, Faculty of Engineering –Architecture, Department of Geomatics Engineering, 42031 Konya, Turkey;*
[b]*Selcuk University, Directorate of Construction & Technical Works, Konya, Turkey*

Email:tcay@hotmail.com; muyan_42@hotmail.com

ABSTRACT
Interpolation techniques are using in many different areas. The techniques give many advantages to scientists during the investigation. Different interpolation techniques were also used in environmental and geomatical researches especially determination of groundwater level changes. In this study, three spatial interpolation techniques (inverse distance weighted, local polynomial interpolation and universal kriging) were implemented and compared to determine the best spatial distribution of changes in the level of groundwater. 48 wells are used for study during the period 1999 to 2008 in the city of Konya, Turkey. Experimental variograms were fitted for three interpolation techniques and calculation of root mean square error (RMSE) values. Values for inverse distance weighted, local polynomial interpolation and universal kriging found as 2.92, 3.16 and 2.89 respectively. On this field, universal kriging gave the best results for changes in the groundwater level.

Keywords: Interpolation techniques, universal kriging, groundwater, Konya

103 GROUNDWATER PH, SULFATE AND MAGNESIUM CONCENTRATIONS MAPPING USING GIS

Mevlut Uyan[a] and Tayfun Cay[b]

[a]*Selcuk University, Directorate of Construction & Technical Works, Konya, Turkey*
[b]*University of Selcuk, Faculty of Engineering –Architecture, Department of Geomatics Engineering, 42031 Konya, Turkey*

Email: muyan_42@hotmail.com; tcay@hotmail.com

ABSTRACT
Groundwater is the most important resources used for drinking, utility and irrigation purposes in many areas of Konya city, Turkey. Quality of groundwater is very important for public health. Some of the criteria for quality of groundwater are pH, sulphate and magnesium values. The purpose of this study is to evaluate the spatial changes of groundwater pH, sulphate and magnesium concentrations by using geostatistical methods based on data from groundwater wells. Geostatistical methods have been used widely as a convenient tool to make decision on the management of behaviour of hydrochemical parameters in groundwater. To evaluate the spatial changes pH, sulphate and magnesium concentrations in groundwater, GIS are used for the application. According to spatial distribution map, value of these concentrations is evaluated.

Key Words: Geostatistics, Groundwater, Geographic Information System (GIS)

104 NATURE MONUMENTS OF THE MIRUSHA RIVER BASIN

Fadil Bajraktari[1], Elez Krasniqi[2], Sami Behrami[1]

[1]*Kosovo Institute for Nature Protection, Prishtinë, Kosovo*
[2]*University of Prishtina, FNSM-Department of Biology, Prishtinë, Kosovo*

Email: fadilbajraktari@yahoo.com

ABSTRACT

Mirusha River basin lies in central Kosovo, on the east side of the Dukagjini Plain. Represents the left branch of the White Drini River area of 337 km^2 or 3.1 % of the area of Kosovo. Includes most of Llapusha region and is largely hilly-mountainous region. This pond is qualified with rich biodiversity as a result of geographical position, climatic conditions, geology and pedology. This area is rich in plant species important to the flora and vegetation of Kosovo. On the basis of categorization of Protected Areas according to the IUCN, in the territory of the basin are Nature Monuments which represent the natural, scientific, educational and touristic value of Kosovo. In this case we refer to caves, water sources and old trees from species of genders *Quercus (Oak)* and *Fraxinus (Ash),* recorded in the period 2000-2011. The Geo monuments of this basin are: Cave of Panorci, Cave of Dushi, Cave of Zatriqi and the Canyon of Mirusha River. The Hydro monuments are: Thermo mineral water source in Banjë, Water sources in Carravranë and Mirusha River Flow with their Lakes and Waterfalls. Evaluated Bio monuments are: *Pubescent Oak* trees (*Quercus pubeescens* Willd.) in Llazicë, *Turkey Oak* tree (*Quercues cerris* L.) in Drenoc, *Turkey Oak* tree (*Quercues cerris* L.) in Bubël, *Turkey Oak* tree (*Quercues cerris* L.) in Carravranë, *Narrow Leaved Ash* tree (*Fraxinus angustifolia* Vahl.) in Javiq, *Turkey Oak* tree (*Quercues cerris* L.) in Lladrovc and *Turkey Oak* tree (*Quercues cerris* L.) in Bellanicë.

Key words*:* Kosovo, Mirusha River Basin, IUCN, Nature Monuments.

105 INVESTIGATING THE EFFECTS OF ANAEROBIC/AEROBIC PHASE DURATIONS TO REACTIVE RED 198 AZO DYESTUFFS ANAEROBIC/AEROBIC SBR REMOVAL USED IN TEXTILE INDUSTRY

Hasan KOÇYİĞİT[1], Ayşenur UĞURLU[2]

[1]Aksaray University, Environmental Engineering Department, Aksaray, Turkey
[2]Hacettepe University, Environmental Engineering Department, Beytepe, Ankara, Turkey

Email: hkocyigit@aksaray.edu.tr**;** ugurlu@hacettepe.edu.tr

ABSTRACT
Treatment of azo dyes by conventional aerobic biological wastewater methods is difficult. There is no single treatment method for the wastewaters containing azo dyes. For this purpose, Reactive Red 198 (RR 198), an mono azo dye, in an anaerobic/aerobic sequencing batch reactor (SBR) the effects of different anaerobic/aerobic phase durations. Waters used in the experimental studies is prepared in laboratory condition as synthetic. The active total volume of the SBR system was 10 l where 25 % volumetric exchange ratio was applied, in a cycle. In this study, COD: N: P ratio 100: 8: 2, the solid retention time (SRT) was maintained at 15 days by removing certain amount of sludge from the reactor.In the study, the effects of different anaerobic/aerobic phase durations to color and COD removal was investigated. In thus stage, the cycle time was 12 and 24 h. Anaerobic/aerobic phase was 5/5, 8/2, 10/10 and 16/4 h. Increase in the anaerobic phase duration from 5 to 8 h resulted in increase in color removal from 76 to 82 % and in the effluent COD concentration from 47 to 97 mg/l, respectively. As paralel to these results, increase in the anaerobic phase duration from 10 to 16 h resulted in increase in color removal from 94 to 98 % and in the effluent COD concentration from 28.7 to 60.9 mg/l, respectively. It has been seen that, increasing anaerobic phase duration has effected on color removal positively.

Keywords: RR 198, color, SBR, textile industry, anaerobic/aerobic phase durations

106 IMPORTANCE AND AGRICULTURAL USAGE OF *ATRIPLEX NITENS* SCHKUHR

[1]Ramazan Acar, [2]Şükrü Dursun

[1]Agriculture Faculty, [2]Engneering Faculty, Selcuk University, Konya- Turkey

Email: racar@selcuk.edu.tr

ABSTRACT
Atriplex nitens Schkuhr. is located in natural areas of Central and Eastern parts of Anatolia in Turkey, that naturally grown at Central Europe, South-West Asia and Central Asia. *Atriplex nitens* Schkuhr is used as human food both in Europe and Anatolia as fresh and cooked in the

early days of plant growth (10-20 cm). It can be used for animal feed as bait during flowering time and then. It has high of adaptation capacity and can growth in adverse soil conditions such as drought and salinity in the tolerant and easy training plant. It is annual crops growth with seeds. Since it has some problems with seed multiplication, emphasis has been given to propagation using different methods. Agricultural research is needed to establish the exact characteristics. Although it is used worldwide for soil rehabilitation, erosion control and forage production in problem areas, it is now well known in our country. Its taxonomic order is Kingdom *Plantae*, Subkingdom *Tracheobionta*, Division *Magnoliophyta*, Class *Magnoliopsida*, Subclass *Caryophyllidae*, Order *Caryophyllales*, Family *Chenopodiaceae*, Genus *Atriplex*, Species *Atriplex nitens* SCHKUHR.

Keywords: Atri*plex nitens* Schkuhr., Human food, animal feed plant, plant properties

107 THE ECOSYSTEM OF BIVOLAC MEADOWS

Ferim GASHI, Ardian Millaku

Kosovo Forest Agency, Kosovo,

E-mail: ferimgashi@yahoo.ca; ferimgashi@gmail.com; armimi_83@hotmail.com,

ABSTRACT
In this paper we have done research of the biodiversity of ecosystem of Bivolak ecosystem, concretely we have done some research of vascular flora and representing fauna (Amphibians, Reptiles, Poultry and Mammals). The importance of this paper consists of: research of vascular flora and representing fauna in order of biodiversity inventory, researches in order to determine present associations (phytocenosis) in the researched territory, anthropogenic influence as well as giving recommendations and relevant conclusions. The research was based on wood plants, bushes, on ore many years herbaceous, higher aquatic plants as well as fauna. This was realized through expeditions to this ecosystem as well as usage of data from researches taken before. During the onsite terrain work, gathering and photographing flora and fauna material was continued to be done, as well as measurement by GPS. In the end of the research the registration of flora and fauna was done in the meadows of Bivolak.

Keywords: flora, fauna, ecosystem of Bivolak, Kosovo, GIS

108 ADSORPTION OF EXHAUST GASES ON RHODIUM CATALSYST: AN OVERVIEW OF A SPECTROSCOPIC STUDY

Adelaida Andoni[1], Alexander P. van Bavel[2], Hans (J.W.) Niemantsverdriet[3]

[1]*University of Tirana, Faculty of Natural Sciences, Department of Chemistry, Tirana, Albania.*
[2]*Shell Global Solutions Int. B.V., Amsterdam, The Netherlands*
[3]*Eindhoven University of Technology, Schuit Institute of Catalysis,Department of Inorganic Chemistry and Catalysis, Eindhoven, The Netherlands*

Email: adelaida.andoni@unitir.edu.al; adelaida.andoni@fshn.edu.al

ABSTRACT
The adsorption of exhaust gases CO and NO on metal surfaces is of significant interest, scientifically and technologically. The reduction of NO_x in N_2 is a key chemical reaction which takes place in the three-way car exhaust catalysts. NO is an important byproduct in the ammonia oxidation process as well. Among transition metals rhodium appears to be predominantly efficient for NO reduction and selective for N_2 production. The three way catalyst, consisting of Pt, Rh and Pd particles supported on a ceramic monolith, controls emissions of CO, NO and hydrocarbons from automotive exhausts and represent a remarkably successful peace of technology. In the present work we have we employed a spectroscopic technique to give a brief overview on the adsorption of CO and NO on rhodium catalysts at low adsorption temperature. We have identified the preferential adsorption site and bonding geometry of both gases at all coverages and investigated NO-CO interactions at different coverages as well. Both gases conserve their binding geometry in comparison to the pure adsorption on rhodium catalyst at the

same adsorption temperature. The frequencies of CO shift upon coadsorption on rhodium in comparison to the single adsorption. It is suggested that CO and NO can form mixed islands of CO and NO upon coadsorption at this low temperature.

Keywords: Exhaust gases, adsorption on rhodium catalyst, spectroscopic study

109 ENDANGERED PLANT SPECIES OF GJIROKASTRA PREFECTURE AND THEIR THREATS

Sadik Malo, Lulezim Shuka

Department of Biology and Chemistry, FNS, Gjirokastra University
Department of Biology, FNS, Tirana University, Albania

E-mail: sadikmalo@gmail.com

ABSTRACT
Biodiversity is an important part of the life in our planet and key factor for the equilibrium of living organisms. Plants are also important component of biodiversity and Gjirokastra prefecture on itself represents one of the most important regions with higher biodiversity values within the country. Despite of them, 62 plant taxa of the prefecture are listed as endangered (CR, EN,)in the Albanian Red List of Flora and Fauna. Ten other new taxa: *Gymnospermum maloi* Kit Tan & Shuka, *Noccaea cikaea* F.K.Meyer, *Crocus hadriaticus* Herbert, *Viola epirota* (Halacsy) Raus, *Aristolochia lutea* Desf., *Cymbalaria microcalyx* subsp. *minor* Greuter, *Galanthus reginae-olgae* Orph. subsp. *vernalis* Kamari, *Minuartia pseudosaxifraga* (Mattf.) Greuter & Burdet and *Heliosperma pusilla* Wald. et Kit. subsp. *tymphaea* Greuter, which are recently described from the Gjirokastra district are not included in the red List of flora, even though they are endangered.
In many causes of threats on the flora of Gjirokastra Prefecture is climate change, uncontrolled collection for medical or industrial purposes, overgrazing or erosion, especially in the above upper tree line ecosystems.

Key words: Gjirokastra Prefecture, ecosystem, endangered plants, threats, uncontrolled collection.

110 EVALUATION OF BIO-MORPHOLOGICAL VARIATION OF WINTER SAVORY (*SATUREA MONTANA L.*) IN THE VALBONA VALLEY, TROPOJE

Ndoc Faslia[1], Agim Pepkolaj[2]

[1] Agricultural University of Tirana
[2] Head of IPARD control sector ARDA/MAFCP

Email: ndocf@icc-al.org

ABSTRACT
Medicinal plants of the Albanian Alps and especially in Valbona's have a very high diversity, regarding ecotypes (high density of ecosystems) and high diversity in the range of essential oils among the same species. This very high diversity of the habitats in the zones of Valbona, together with the indication of mountain Mediterranean climate conditions during the centuries "elaborate" a quite high range of diversity of the natural plants. Valbona vally is part of Margegaj Comune (Tropoja District). Area of Valbona is characterised by high natural resources like different kinds of forestry species and domestic species. In these ecosystems there is growing up a very diverse world of plants and animals. The starting point for selection of samples has been Shoshan village near Valbona's vally (Villages like: Dragobi, Cerem,Valbonë, Rrogam). The main objektive of the study is to present actual situation of morphological diversity for Winter sovary in Valbona's vally. Since all above mentioned situations appears for plants in the zone of Valbona valley, by this study we tried to present a short panorama for the actual conditions and for the necessary measurements and interventions which will contribute to improve the management of medicinal and aromatic plants (mainly winter sovary) . If the measurements and interventions will be efficient, for sure they will have a great indication for protection of biodiversity of winter savory in the zone which has the scientific importance as well.

Key worlds: medicinal plants, aromatic plants, biodiversity, winter savory, endemic plants, ecosystem.

111 THE STUDY OF RAINFALL QUANTITY AND THEIR TENDENCY IN SOME AREAS OF THE BALKAN REGION

[1*]Mankolli H, [2]Lika (Çekani) M, [3]Zucchetti M, [4]Dursun S, [5]Mancinelli R, [2]Mersinllari M, [6]Thomaj T

[1]Department of Agro-Environment and Ecology, Agricultural University of Tirana, Albania
[2]University of Tirana, Faculty of Natural Sciences, Albania
[3]DENER, Politecnico di Torino MIT Italy, Massachusetts Institute of Technology, USA
[4]Selcuk University, Engineering Faculty, Environmental Engineering Dept., Konya, Turkey
[5]University of Tuscia, Department of Agriculture, Forestry, Nature and Energy (DAFNE),Viterbo, Italy
[6]Ministry of Agriculture, Food and Consumer Protection, Albania

[1*]E-mail: mankollih@ubt.edu.al

ABSTRACT
The more important eco-climatic indicators for study aspects are: sun-light, precipitations, temperatures, relative air humidity, wind and other atmospheric phenomenon. Bio climate is considered as a combination among the vegetation area and climatic elements with indexes: temperature, precipitations, wind, air humidity etc. This combination creates a complete, continued and stable view of an area or some ecologic areas in relation to indexes of bio-climate content elements. The basic indexes of use on bioclimatic study are: month temperatures, precipitations etc. They present a special importance from the point of study, evaluation, usage, preservation and improvement of natural resources. Their interaction has an impact on evolution and balance ecosystem progress. The value of precipitations is important on the bioclimatic study for index calculations. This study based on precipitations in some areas of the Balkan region, after 1960 year. The results are significations; there show the tendency on the time.

Key words: index calculations, precipitation, eco-climatic indicators.

112 THE EFFECT OF FLOWER BULBS IN THE URBAN LANDSCAPE ARCHITECTURE – TULIPA X HYBRIDA AND GLADIOLUS CULTIVARS

Nexhat Balaj [1]*, Llazar Haxhinasto[2], Isuf Lushi[3]

[1]Ministry of Environment and Spatial Planning – Republic of Kosovo
[2]Department of Horticulture, Agricultural University of Tirana, Albania,
[3]Anadrini, Rahovec, Kosovo

Email: agroalbi54@hotmail.com

ABSTRACT
In recent years in the Republic of Kosovo, is increased the tendency for environmental regulation with differents ornamental plant, in parallel with the expansion of urban centers, large cities, new houses, residential areas, etc.The purpose of study has been the study of characteristics of flowering stage, ornamental values and used flower bulbs (Tulipa and Gladiolus cultivars), as integral component in landscape architecture and urban design in Kosovo. During the vegetation were measured:blooming seasons, number of flowers, diameter of flowers colour, length of growth, etc.Two flower bulbs with three cultivars have been studied:Tulipa×hybrida 'Canasta' , 'Pink Impressions','Strong Gold' and Gladiolus 'Charming Beauty', 'Super Star' , 'Manhattan'.The cultivars studied have a rich range of colors in garden, from white, yellow, dark red to blue-lavender,etc. Plants height of Gladiolus cultivars was over 100cm, the most vigorous were'Manhattan', while the variety 'Super Star' was less vigorous, less than 100 cm. The average value for this character was 113.21 cm. Blooming time depends on cultivar, flowering begins for Tulipa Cultivars in March and for Gladiolus begins in July. Flower bulbs have manifested high decorative values in urban landsacape in Kosovo climate condition.

Key words: Kosovo, Ornamental plant, Fower bulbs, landscape architecture.

113 DETERMINATION OF NITRITES, NITRATES, PHOSPHATES AND SOME PHYSICO-CHEMICAL PARAMETERS IN WATER OF NARTA AND ORIKUMI LAGOON AND VLORA BAY

Sonila Kane[1], Pranvera Lazo[2]

[1]*University "Ismail Qemali" of Vlora, Faculty of Technical Sciences, Dept. of Chemistry, Vlora, ALBANIA*
[2]*University of Tirana, Faculty of Natural Sciences, Dept. of Chemistry, Tirana, ALBANIA*

E-mail: sonilafr@yahoo.com

ABSTRACT
The study discusses the environmental situation of Vlora Bay and two important lagoons (Narta and Orikumi Lagoons) located in this environmentally valuable area. Monitoring activity was realized by using a network of 15 sampling points, including tow lagoons (Narta and Orikumi Lagoons) and sea. The study is based on the evaluation of physico-chemical parameters and inorganic nutrients of sea water samples collected in open sea (3 m deep and 300 m from the shore) and in 4 points of each lagoon. Nutrients content were determined by spectrophotometric methods. A higher Nitrites content has been found in Narta Lagoon followed by Oricumi lagoon and sea water. Nitrates content tend the same order as nitrites. Phosphates resulted in same levels in both systems: lagoons and sea water. Based on the results of inorganic nutrients, it is showed that Vlora Bay was characterized by generally oligotrophic conditions. The absence of rigorous land and water management criteria, as well as anthropogenic activities in the coastal area may cause the increasing of a relevant anthropogenic risk of the bay.

Key words: Vlora Bay, lagoon, sea water, pollution, nutrients, physical-chemical parameters.

114 THE EXTRACTION OF BIOPOLIMERS FROM THE ENDOSPERMS OF SOME *LEGUMINOSAE* PLANTS, IN ORDER TO BE USED AS CORROSION INHIBITOR.

Efrosini (Teli) Kokalari, Alketa Lame, Adelaida Andoni, Albana Jano

Department of Chemistry, Faculty of Natural Sciences Tirana

Email:efrosiniteli@yahoo.com

ABSTRACT
The loss from corrosion in the world economy is always a serious issue. Some organic compounds have shown inhibitor properties to protect the metals against the corrosion. It is important to find compound that are not expensive and have no hazardous properties to living creatures and environments. The recent research tried to find naturally organic substances or biodegradable organic materials to be used as inhibitors, which are friendly with the environment. Such compounds are some biopolymers, extracted from *leguminosae* plants, called galactomannans.Galactomannans are polysaccharides with high molecular wheight, that make up near 50% of weight of extracted polysaccharides.The chemical structure of galactomannans, consists of β - (1→4) – D mannopyranosyl linear backbone, to which α - (1→6) – D galactopyranosyl simple units are linked.They are water soluble forming hydrocolloids. An increase in the degree of galactosylation of the mannans may increase the degree of solubilisation of galactomannans. Galactomannans from the endosperms of *leguminosae* plants were obtained by aqueous extraction in temperature 25°C followed by a precipitation with ethanol (C_2H_5OH), in ratio extract: ethanol 1:2 (v/v). In order to profit pure galactomannan, without lipids and proteins the endosperms of coffee bean were treated first, with toluene: ethanol ($C_6H_5CH_3$:C_2H_5OH) in ratio 2:1(v/v).The product of extraction was analyzed with infrared (IR) and nuclear magnetic resonance (NMR) spectroscopy, in order to define it's chemical structure. Also we defined the density, pH and molecular wight of the product. The product of extraction was galactomannan and we propose to use it as corrosion inhibitor.

Keywords: extraction, *leguminosae* plants, galactomannan, corrosion inhibitor.

115 IDENTIFICATION OF CAUSE OF ABORTIONS IN COWS FROM LIVESTOCK COMPLEXES.

Besa Ndoci[1], Pellumb Muhedini[2], Etleva Hamzaraj[3].

[1] Department of Animals health, Food Safety and Veterinary Institute, Tirana, Albania.
[2] Department for the Production of Veterinary Bio-products; Food Safety and Veterinary Institute, Tirana, Albania.
[3] Department of Biology; Faculty of Nature Sciences; Tirana University; Tirana, Albania.

E-mail: bgora@live.com

ABSTRACT
Brucellosis is an important zoonotic disease with significant economic and social impact in our country and in many developing countries, which is caused by different species of the genus *Brucella*. The aim of the study is isolation and identification of the cause of this infection in farm animals, evaluation of serological tests, as well as formulation of strategies to control / eradication of this infection, in order to decrease in maximum the prevalence and incidence of this disease in farm animals and protection the veterinary public health. For isolation of perpetrators in the aborted fetuses and aborted cows we used the method "gold standard" that of isolation on solid medium, selective supplement *Brucella* and normal horse serum. In aborted fetus *Brucella* spp was isolated in 100% of cases from the content of abomasum and spleen. In aborted cows, they were isolated in 100% of cases from mammal lymph nodes and spleen, while from the other lymph nodes they were isolated by 20-80% of cases. The isolates were characterized by an oxidative metabolism and showed no ability to acidification of carbohydrates in the cultural medium. They were positive for catalase and oxidase, reduced nitrate to nitrite. Was observed their growth in solid medium with thionine and basic fuchsin (20μg/ml)For the biocharacterisation of *Brucella* we realized sera-characterization test with specific sera type A and M, tests from Durres complex, identified the isolates as *Brucella abortus* biovar 6 and from Lushnja complex isolates *Brucella melitensis* biovar 3.

Key words: *Brucella abortus* biovar 6, *Brucella melitensis* biovar 3, aborted fetuses and cows, solid medium, specific type serums A and M.

116 AGRICULTURAL PRODUCTION AND THE RISKS TO AGRICULTURAL LAND FROM THE USE OF PESTICIDES IN ENVIRONMENTS

Isuf Lushi[1], Llazar Haxhinasto[2], Nexhat Balaj[3]

[1]SH.F.K.P. "Anadrini" Xerxë, Kosovo
[2]Department of Horticulture, Agricultural University of Tirana, Albania,
[3]European Institute 'Juridica'- Faculty of Public Policy and Management, Prishtina, Kosovo

Email:apanorama@hotmail.com

ABSTRACT
The main purpose of this study is to present the current situation and the level of the risks by uncontrolled use of pesticides in the Republic of Kosovo, the negative effects of their use for human health, environment and agricultural crops. Anywhere in the world the use of pesticide has been and remains essential to ensure high yield and sustainable production. Their use requires a management to meet the above parameters, and the challenges of the time, to be less harmful to human health, environmental pollution and for the agricultural crops. The use of pesticides has increased 50 -fold since the 1950s and 2.5 million tons (2.3 million metric tons) of industrial pesticides are used each year, 65% of all pesticides in the world are used in developed countries, but their use also recognizes the growing in countries that are under development.
Even today, the use of pesticides in the world is considered as a necessary evil; because humankind still is not able to provide its daily needs with the required level of agricultural production about 81 million people today suffer from hunger. The reduction of poverty cannot be done with biological products or by other methods of parasitic control. That is way the negative effects of using pesticides that are studied today in the worldwide, aiming the introduction of negative impact, to reduce harmful impacts to human health, environment and agricultural crops.The policies of production and controlled use of pesticides obliges Kosovo to implement a

management system for pesticides, in accordance with Community legislation and European Directives "*International Code of Conduct on the Distribution and Use of Pesticides*".

Key words: Agricultural production, pesticides, environment, European Directives, etc.

117 THE IMPACT OF INTEGRATED PRODUCTIVITY IN AGRO-ENVIRONMENT

Isuf Lushi[1], Llazar Haxhinasto[2], Nexhat Balaj[3]

[1]*SH.F.K.P. "Anadrini" Xerxë, Kosovo*
[2]*Department of Horticulture, Agricultural University of Tirana, Albania,*
[3]*European Institute 'Juridica'- Faculty of Public Policy and Management, Prishtina, Kosovo*

Email:apanorama@hotmail.com

ABSTRACT
Integrated productivity is an agricultural system that deals with the production of high quality food by using the natural resources. Such criteria intend to replace the use of polluted products and at the same time ensure a sustainable agriculture. The main purpose of this study is to present the current situation and the level of integration of Kosovo agriculture, in integrated productivity as a precondition of a sustainable agriculture development. Integrated productivity in the Republic of Kosovo more and more is being treated as a segment with a special agro-environmental importance, that ensure sustainability of agricultural productivity and ecologically safe products. Integrated productivity shall be implemented with the involvement of all agricultural farm, agro-system and biological diversity should be preserved as a main component, nutrient circulations should be balanced, fertility of land to be conserved and improved continuously. The producers should fulfil certain criteria: selection of location, good soil quality, land management, vegetable circulation, seeds, certified cultivars, fertilization, soil tests at least once every four years. Integrated management of diseases and pests is done to achieve results and measures to fight them. Therefore, in the future in Kosovo it should be oriented policies towards integrated productivity, which provides high quality food, productivity through advanced technologies and ecologically safe, and eliminates sources of air pollution as well.

Key words: Integrated productivity, Kosovo, natural resources, integrated management.

118 IMPACT OF URBAN ENVIRONMENT IN THE QUALITY OF WATERS OF THE ERZENI RIVER (ALBANIA)

Klementina Puto[1], Efrosini Kokalari[2], Naxhije Hila[3] & Hajdar Kiçaj[4]

[1]*Department of Biotechnology, FNS, Tirana University*
[2]*Department of Inorganic Chemistry, FNS, Tirana University*
[3]*Department of Biology and Chemistry, FNS, Elbasani University*
[4]*Department of Biology, FNS, Vlora University*

Email: tina_kora@yahoo.com

ABSTRACT
Even though Albania is very reach with water resources due to wide river nets and mountains direction from east to west, their quality have been long discussed. Increase of the population on urban zones by migration from rural ones and uncontrolled development, especially in Tirana, have impacted on quality of surface waters and rivers in the recent two decades. Erzeni River with a length of 109 km collects waters of Tirana and Durresi watershed, which holds ca. 60% of the country population. Erzni River flows into the Adriatic Sea. Discharges of untreated urban waters into Erzeni River have significantly changed its biological, physical and chemical parameters. *Fecal coliforms* bacteria and physical-chemical parameters (temperature, pH, suspended matter, salinity, DO, nitrates and phosphates) were analyzed to assess water quality of Erzeni River during years 2010 and 2011 in eleven sampling points.The analyses show a high level of contamination with *fecal coliforms* bacteria (10^5MPN/100 ml) in five sampling points. The present result is 3 to 4 times higher than the allowed levels, Directive 2006/7/EC and legislation approved by Albanian institutions. The quality of Erzeni waters from physical and chemical point

of view, asses different levels of contamination, beginning from class I, only in few points, to class III and IV (based on NIVA classification) in several other sampling points. High levels of pollutants in the waters of Erzeni River require immediate intervention by establishing of the Wastewater Treatment Plants in two mega centers of Albania, Tirana and Durrësi.

Key words: Albania, Erzeni River, water quality, *fecal coliforms*, physical and chemical parameters.

119 EVALUATION OF GENETIC DIVERSITY FOR REPRODUCTIVE AND PRODUCTION ABILITY AMONG MAIZE LANDRACES (Zea mays L.) IN KOSOVA

Shukri Sh. Fetahu[1], Imer Rusinovci[1], Sali Aliu[1], Ismet Bajraktari[2] and Avni Behluli[1]

[1]University of Prishtina, Faculty of Agriculture and Veterinary, Str. "Bill Clinton" nn. 10000 Prishtina, Kosovo.
[2]University of Prishtina, Faculty of Mathematics and Natural Science. Str. "Nëna Terezë" 10000 Prishtina, Kosovo.

Email: shfetahu@hotmail.com

ABSTRACT
Kosovo has an area of 10,889 km^2 or 1,185 million ha. About 430.000 ha are forested (39%) and 577,000 ha are agricultural land or (52%). Maize is one of the most important crops in Kosovo in the past, was planted more than 100,000 ha. Currently planted area with maize landraces is only 5 to 8. 42%, from 70 to 80.000 ha, other areas planted with maize hybrids. In Kosovo, there is a wide genetic diversity of maize landraces. Reduce areas with maize landraces, is one of reasons for collection, but main goals were evaluation of maize landraces from different locality for genetic diversity and variability of productive and reproductive ability. The investigations include maize landraces from localities: Podujevë-L1, Sllatinë-L2, Klinë-L3, Ferizaj-L4 and Fushë Kosovë-L5, with an altitude from 414 to 617 masl. The experimental design was a randomized complete block (RCB), Split-plot method, with three replications. Statistical analyses package were conducted using program MINITAB-16.During 2008, maize landrace were analyzed in the locality of its origin, while in 2009, was tested in experimental conditions. Research was conducted according to the formula: (ML_5 x V_2 x R_3 x P_9) = 270 combinations. Obtains results are with a wide range variability, with high significant differences for the investigated parameters between populations as: Grain weight/ear (GW/E) and Yield (Y) was 60%, Ear weight (EW) 59%, Weight of 1000 grains (WG) 49%, Row number (RN) 33%, Number of grains/ear (NGE) 27%, Ear length (EL) 19% and the Ratio ear/cone (RE/C) was 6%.

Key words: Maize, landrace, diversity, variability, production.

120 FOREST STANDS REGENERATION GUARANTY FOR SUSTAINABLE MANAGEMENT OF FOREST ENVIRONMENT

Vasillaq Mine[1], Admir Seci[2], Oltion Marko[3]

[1]Faculty of Forestry Sciences – Agricultural University of Tirana
[2] Ministria e Mjedisit, Pyjeve dhe Administrimit të Ujrave
[3]Department of Environmental Engineering, Faculty of Civil Engineering.

E-mail: vasillaqmine@yahoo.com

ABSTRACT
This presentation gives briefly the importance of silvicultural methods, used techniques, environmental and economic profitability in carrying out renewable forests operations. Natural regeneration of forests is of interest to our country because it is not only of lower cost and in accordance with environmental requirements, but it is also favored more by ecological conditions of forest populations installed in our country. Renewal of the forests should be done to ensure the continuity of sustainable development of natural forest resources for present and future but also to enable the completion of their ecological, economic and social functions, at local, national and global level, without causing any damages to other ecosystems. To achieve natural

regeneration of forest stands, is applied their treatment with shelterwood cutting, of course respecting the necessary space of time for the creation of optimal conditions for germination and development of seedlings under massive. In our country, this practice is applied with much success, especially to natural regeneration of beech and black pine forests. Also, interventions with artificial seed or sapling a forestations are necessary to reduce aggression and further elimination of erosion. Recently, this phenomenon is quite evident in our country and thus has brought not only the degradation of forest and abandoned agricultural lands but also pollution in the lower coastal areas due to floodings.

Key words: seedlings; forest stand; environment; regeneration; terrain.

121 THE SANITATION OF SOME OLIVE CULTIVARS FROM VIRAL INFECTIONS BY IN VITRO TECHNIQUES

Elektra Spahiu[1], Aulona Veizi[2].

[1] [2]Centre of Agricultural Technology Transfer (ATTC) Vlore.

E-mail: elektrakrist@yahoo.com

ABSTRACT
Identification of basic herbs for which is known the health conditions and varietal validation is very important for the qualification of the production of shoots and all ortho-fruit growing. Selection of clonal sanitary genetic guarantee the improvement to local and national varieties in the recovery of indigenousfruit-growing germoplasma. The in-vitro culture is an efficient method for multiplication and healthy forms of species and olive trees. Are studied some olive cultivars native: Kalinjot, Kruja White Olive ,Bighead Olive of Portland and foreign cultivars of Frantaio, Termite di Bitetto, Cellina di Nardo ,in order to define and implement the strengthening of efficient methods from viruses as ArMV, OLV-2 OLYaV, TNV. For olive healthy technique was used by previous in vitro culture in all its stages like: inoculation, propagation, anchoring, setting. After 40 days sorrounding setting plant was sanitary situation assessment with molecular method RT-PCR for the presence of viral infection in olive cultivars.From the results of serological evidence of infection resulted:Bigheaded olive of Portland with ArMV virus (virus of the mosaic of Arabia) and olive termite di Bitetto, Cellina di Nardo OLV virus-2 (latent virus 2). Also were conducted the healthy form of infected olives by techniques:
-The technique of in vitro culture of meristhematic yeast.
-Termotherapy-technique in vitro and in vivo.
After surrounding set plants underwent molecular testing withRT-PCR method for the presence of infection after 40 days viral conditions.The verification of photosanitary confirmed the purity of olive cultivars.Termotherapy gave complete result in strengthening the plant.

Keywords: culture "in vitro", sanitation, thermotherapy

122 POTENTIAL OF RECYCLABLE MATERIALS IN AKSARAY CITY, TURKEY

Melayib Bilgin

Aksaray University, Environmental Engineering Department, 68100 Aksaray, Turkey

Email: melayib@gmail.com

ABSTRACT
Growing population, advancing technology and correspondingly increasing day by day needs of people and as a result of a change in the amount of solid waste is a significant increase. This is to minimize waste accumulation, collection, transportation and disposal of solid waste management stages of a great responsibility falls to local governments to create.
Aksaray is one of the most important cities in Cappadocia. With development in the province of Aksaray with its growing population and increased amounts of solid waste continues to rise. In this study, the city center of Aksaray solid waste production rate of 1.03 kg/ca.day found, the city center of Aksaray in the solid waste and recyclable materials have been identified compared with the average of Turkey. Accordingly, rates of recoverable materials are in Aksaray over the

Turkey's average. Ash and slag in the amount of results stand out close to the average of Turkey.

Keywords: Aksaray, solid waste, recyclable materials

123 CU(II) REMOVAL FROM AQUEOUS SOLUTION BY UREOLYTIC MIXED CULTURE

İsmail Simsek*[1], Mustafa Karatas[1], Emine Basturk[1]

[1] Aksaray University, Engineering Faculty, Department of Environmental Engineering, 68100, Aksaray, TURKEY

Email: ismailsimsek@aksaray.edu.tr

ABSTRACT
The study describes the sorption of living ureolytic mixed culture (UMC) to remove Cu(II) from aqueous solution under various conditions . The effects of various parameters such as optimum biomass, contact time, and Cu(II) concentrations on Cu(II) removal efficiency were investigated. The process was investigated using concentrations of Cu(II) ions ranging from 1 to 200 mg/L in equilibrium batch tests for Langmiur, Freundlich, Temkin and D-R isotherm models. The maximum removal efficiency of 99% was obtained a 1 g/L solid-to-liquid ratio with 1-min contact time for 100 mg/L initial concentration of Cu(II).

Key words: ureolytic mixed culture (UMC); copper removal; biosorption; isotherms; reaction kinetics

124 DOG BITE WOUNDS, ISOLATION, IDENTIFICATION OF DOG ORAL CAVITY MICROORGANISMS AND ANTIBIOTIC SENSITIVITY

Vinela Refugjati [1], Endri Haxhiraj [2], Pranvera Çabeli Kusi [3], Domenico Bonavoglia [4].

[1] Faculty of Veterinary Medicine, Tirana, Albania
[2] Institute for Environmental Policy, Tirana, Albania
[3] Faculty of Veterinary Medicine, Pre-clinical Department, Tirana, Albania
[4] Faculty of Veterinary Medicine, Microbiology Department, Bari, Italy

E-mail : vinela@tirana.gen.al ; legeartis52@yahoo.com

ABSTRACT
Animals bites with or without infections of the wound should not be underestimated because they can lead to serious infection such as abscess to bone and joint, endocarditis, septicemia, tetanus, etc. Animals bites especially bite from companion animals (dogs and cats) are a serious problem for Public Health.The microorganisms involved in wounds infections include aerobic and anaerobic organisms which tend to originate from oral cavity of the animals as well the environment where the injured occurred. Immediate wound management including identification of the most commonly infectious pathogens and appropriate antibiotics use are crucial in providing the best treatment after a bite. Due to the information above the aim of this study is to evaluate the oral microbial flora of healthy dogs and to determine the antibiotics sensitivity in order that sanitary structure will develop a specific therapeutic protocol. Oral material from dogs' cavity was cultured for aerobic and anaerobic microorganisms at the Institute of Food Safety and Veterinary in 2008. Our results show that Clostridium species were the more frequent microorganisms in dog oral cavity with 80% followed by Staphylococcus spp 66.6%, Enterobacter 40%, Pasteurela spp 33.3%, Acinetobacter spp and Diplococcus spp 6.6%. Gentamicin was the most effective antibiotic followed by Beta lactamid and Cephalosporin.

Keywords: dog bite, wounds, antibiotic sensitivity, oral cavity

125 *IN VITRO* PROPAGATION OF PLANTLETS OF WILD PEAR (*PYRUS PYRASTER* L.) USING SHOOT TIPS AS PRIMARY EXPLANTS

Valbona Sota (Mata)[1], Efigjeni Kongjika[2]

[1]*Tirana University, Faculty of Natural Sciences, Department of Biotechnology, Tirana - Albania*
[2]*Academy of Sciences, Section of Natural and Technical Sciences, Tirana – Albania*

Email: bona_sota@yahoo.com

ABSTRACT
Wild pear (*Pyrus pyraster*, syn. *P. communis* var. *pyraster*) is considered to be the most important relative form that gave rise to all other members of the genus *Pyrus*. *P. pyraster* is important species, both for its relative closeness to cultivated pear and for reforestation of marginal farmland and for the production of timber. Shoot tips were used as primary explants. In order to study *the in vitro* proliferation of wild pear explants were used two different media containing: a) MS macronutrients, micronutrients, vitamins and phytohormones 0.3 mg l^{-1} BAP, 0.1 mg l^{-1} IBA, 0.3 mg l^{-1} GA_3; b) WPM macronutrients, micronutrients, vitamins and phytohormones 1 mg l^{-1} BAP, 0.1 mg l^{-1} NAA. All media were combined with 3% sucrose and 0.57% agar. For the subcultures were tested again the two different media (MS and WPM) both containing 1 mg l^{-1} BAP, 0.1 mg l^{-1} NAA. After multiplication, best results were observed on WPM medium during proliferation and subculture stage. The maximum frequency of rooting and highest number of roots was produced on MS medium containing 0.1 mg l^{-1} IBA. Acclimatization was affected directly by rooting conditions. Survival was best when plantlets were transferred to pots after a short period of root emergence on rooting media.

Keywords: micropropagation, shoot tips, nutrient medium, phytohormones, Pyrus pyraster L.

126 EFFECTS OF DYESTUFF CONCENTRATION ON COLOR AND COD REMOVAL PERFORMANCE OF SEQUENTİAL ANAEROBİC-AEROBİC SYSTEM

Mustafa Karatas[1], Sukru Dursun[2]

[1]*Aksaray University, Engineering Faculty, Department of Environmental Engineering, Aksaray, Turkey*
[2]*Selcuk University, Engineering & Architecture Faculty, Department of Environmental Engineering, Konya, Turkey*

E-mail: mkaratas33@gmail.com; sdursun@selcuk.edu.tr

ABSTRACT
The effect of initial dyestuff concentration on color and COD removal potential of the sequential anaerobic-aerobic system was investigated in this study. Reactive Black 5 (RB 5), reactive azo dye was used in the study. An upflow anaerobic sludge blanket (UASB) reactor and continuously stirred aerobic reactors (CSAR) were used to remove color and COD. The methane gas production efficiencies were also investigated under the anaerobic conditions. The color removal efficiencies decreased from 100 to 93% when the increases initial dyestuff concentrations from 150 to 2400 mg/L in the sequential UASB-CSAR reactor. The COD removals decrease from 92 to 63% with increased in dye loading rates from 8.4 to 134,4 g.dye/m^3h. The amount of methane produced in anaerobic reactor was 433 mL/day (71% methane in total gas) and 109 mL/day (30%) for organic loading 8.4 and 134,4 kg g.dye/m^3h., respectively.

Key words: Reactive Black 5, color and COD removal, initial dyestuff concentration, UASB-CSTR

127 THE ROLE OF AGRITOURISM ON BIODIVERSITY AND ECOSYSTEM

Endrit Bruci, Erdit Nesturi, Edmond Kadiu, Stilian Apostoli

Faculty of Economics and Agribusiness, Agricultural University of Tirana, Albania

Email: endrit_bruci@hotmail.com

ABSTRACT
Agritourism has its ideological roots in the romanticism of nature and social tourism. Many people today embrace the 18th century view of nature as pure and good in opposition to the moral decay and dehumanizing experiences of urban environments. Agritourism has long been

considered a "clean industry", without any negative effects on the environment worthy of mention. However, this image is now outdated. Most parties are aware of the possible negative impacts and see the need for action. At the same time, agritourism is able to contribute to a growing awareness of the value of nature and, hence, to public support for the protection of biodiversity. Development of agritourism can also be a way to make nature reserves economically viable and to provide employment and income for the local population. In this manner, it can provide a viable alternative to other more damaging activities such as slash and burn agriculture, cattle farming, hunting, wood collection, mining, and the like. These characteristics give tourism an ambivalent position in relation to biodiversity. The agritourism industry very much represents "a double edged sword for the socioenvironmental movement, in that it is an activity which is both reviled and revered. It has become a focus of criticism, as a result of its impacts and a focus of promotion, as a means of achieving sustainable development". This means that it occupies a specific position in policies aimed at the conservation of biodiversity. This article aims to contribute to the discussion on agritourism in relation to biodiversity. It reconstructs some of the theoretical discussions concerning the relation between the two and possibilities to measure impacts. It will be argued that measuring impacts of agritourism on biodiversity is highly complex and costly and so-called "dose–effect relationship studies" show several weaknesses. Therefore, setting priorities for interventions is not just a matter of knowledge on impacts. Such attempts in the relation between tourism and biodiversity should also be based on considerations of legitimacy, feasibility, and effectiveness. This paper will also evaluate different types of interventions currently undertaken and propose some leads for future intervention.

Keywords: Biodiversity; interference; sustainable rural development.

128 MOSS BIOMONITORING TECHNIQUE OF AIR IN SOME URBAN AREA OF ALBANIA

L. Bekteshi[1], P. Lazo[2], M. Vasjari[2]

[1]Ph student University of Tirana, Albania
[2]University of Tirana, Albania

Email: lirimbekteshi@ymail.com

ABSTRACT
Atmospheric particulates with trace metals have an important impact on human health. Moss biomonitoring is a technique used in many parts of the world to determine the concentrations of HM in the atmosphere and their potential sources. In the present study we determined the concentrations of HM (Cu, Fe, Mn, Zn, Cr, Co, Cd, Hg) in air using mosses collected in rural sites (23 sampling stations). The terrestrial moss used was *Hypnum cupressiforme.* The locations of the sampling sites were determined by GPS and represented by maps. The target elements like The intensity of metal mean values in moss samples follows the trend: Cu, Pb, Zn, Ni, Co, Cr, Mn, Fe, As and Cd, as most toxic elements, were determined by ICP/AES method.The metal concentrations of were reporter as mg/lg in dry weight material. The results are expressed as pollution gradients.The intensity of metal mean values in moss samples follows the trend: As<Cd<Pb<Cu<Cr<Zn<Ni<Mn<Fe. The analytical results were compared statistically by linear correlation and cluster analysis. The goal of this study was to survey and asses the air pollutin in some part of Albanian. Elbasan area heavy metal in mosses survey.

Key words: mosses, heavy metal pollution, moss biomonitoring technique, ICP/AES,

129 GENETIC DIVERSITY OF MINOR FRUIT IN ENVIRONMENTAL CONDITION

Tatjana Koka

Agriculture University of Tirana/ Center of genetic resources

Email: tatjana.koka@hotmail.com

ABSTRACT
Plant genetic resources are indispensable raw materials required to insure sustainable production of food, medicines and several industrial products to the current and future

generations. Their essential role to prevent environmental degrading and generally maintain a balanced, healthy and murturing eco-system has been repeatedly established. Mainly objective of study is: exploration, study, documentation for to more knows ecosystem and new species, forms, ecotypes discover. Exploration is base on expeditions for to know genetic resources, to know wild relatives, to know the adaption, to identification of biodiversity, research, understand ecosystem. The presence of Alps, valleys, rivers, sea, etc , create diverse climatic conditions and allows to grow a lot of species, ecotype, forms of minor fruit in our country. We can found such is: pomegranate, date tree, jujube tree, muelberry tree, loquat tree, mediar tree, blackberry, etc. In this study at all species is investigation, descoverey, characterization, collection, documentation. Evidentation is realisated in different zones, typical zones tradition, macrozones and microzones, mainly in in situ and on farm zones.

Keyword: diversity, environmental, climatic, geographic, minor fruit

130 ENVIRONMENTALLY FRIENDLY DIRECT METHANOL FUEL CELL WITH CARBON SUPPORTED Pt-Ru ANODE CATALYST

Ozlem Sahin[1]*, Hilal Kivrak[1]

[1]Selcuk University, Chemical Engineering Department, Konya, 42079, Turkey

Email: ozlem@.selcuk.edu.tr

ABSTRACT
Fuel cells have received great attention due to the depletion of fossil fuels, increase in environmental pollution and also global warming problems. In this respect, direct methanol fuel cells (DMFCs) are promising power source for portable applications. Furthermore, it has a high termodynamic efficiency compared to other thermal energy conversion systems. Pt is highly active catalyst for the oxidation of methanol. However, it is poisoned by CO and other reaction intermediates under low-temperature reaction conditions. The addition of second metal to form bimetallic catalyst can promote the oxidization of Pt–COads and thus reduce the poisoning effect. Among the binary catalyst, Pt-Ru has been the most studied and effective anode catalysts beceause of its excellent electrocatalytic properties. In this study, carbon supported catalysts were prepared at different platinum-ruthenium ratio (Pt-Ru (25:1), Pt-Ru (3:1), and Pt-Ru (1:1)) by polyol method. The effect of ratios of Pt to Ru on the electrocatalytical properties of Pt–Ru/C electrode was investigated by cyclic voltammetry. The results show that the peak potential for methanol oxidation shifts to more negative potentials and the presence of ruthenium can improve the stability and activity of electrode for methanol oxidation.The electrochemical activities of the prepared Pt–Ru/C catalysts towards methanol oxidation were monitored and compared with eachother. In this respect, the effect of experimental parameters such as sulfuric acid and methanol concentration, scan rate, temperature are considered and examined.

Keywords: Methanol electrooxidation; PtRu/C catalyst; direct methanol fuel cells.

131 PHOTO-CATALYTIC HYDROGEN PRODUCTION FOR A CLEAN ENVIRONMENT

Hilal Kivrak[1*], Ozlem Sahin[1], Derya Duzenli[2], Arif Kivrak[3]

[1]Selcuk University, Chemical Engineering Department, Konya, 42079, Turkey
[2]General Directorate of Mineral Research and Exploration, Ankara, 06800, Turkey
[3]Yüzüncü Yıl Üniversity, Department of Chemistry, Van, 65080 Turkey

Email: hilalkivrak@googlemail.com

ABSTRACT
Solar energy was used by humans since ancient times using a range of ever-evolving technologies. The most urgent energy problems the world could be solved by solar energy technologies including solar heating, solar photo-voltaics, solar thermal electricity and solar architecture etc. The sun provides a broad range of energy, primarily concentrated around the visible and infrared regions. Photo-catalytic reactions using visible light are able to produce useful higher hydrocarbons from methane gas. Furthermore, CO_2 gas causing the global warming could be reduced photo-catalytic reactions. In addition, the harmful exhaust NO_x gases could be

transformed. Oxidizing harmful bacteria in water and air and producing hydrogen gas from water are also performed photo-catalytic reactions. In this respect, titanium dioxide (TiO_2) is a widely used photo-catalyst because of its relative superior efficiency, stability, cheapness and non-toxicity. However, large band gap (3.2 eV) of TiO_2 cannot be excited under visible light (>450 nm). The photo-catalytic efficiency increases when Ti atoms are highly dispersed in the silica framework as opposed to bulk titania. Thus, herein, tetrahedral single sites were formed by dispersing Ti atoms in the framework of high surface area mesoporous silica MCM-41. Ti loaded photo-catalysts were synthesized by direct synthesis method and photo-electrochemical hydrogen production measurements were performed by photo-electrochemical measurements. These results will be presented in meeting.

Keywords: TiO_2, photocatalyst, hydrogen production.

132 RISK ASSESMENT OF ORGANIC SOLVENTS; EFFECTS FOR THE HUMAN HEALTH AND ENVIRONMENT

Arif KIVRAK[1]*, Hilal KIVRAK[2], Ozlem SAHIN[2]

[1]Yüzüncü Yıl University, Department of Chemistry, Van, 65080 Turkey
[2]Selcuk University, Chemical Engineering Department, Konya, 42079, Turkey

Email: arifkivrak@yahoo.com

ABSTRACT
Organic solvents have been used not only small amount for chemical research but also large amount of many process including detergents, perfumes, pharmaceutical industry etc. Organic solvents are useful because they can dissolve oils, rubber, resins, fats and plastics. In recent years, 18 million tons per a year of solvents have been produced all of the world. Most organic solvents have lower boiling point, which means easily evaporated in the atmosphere, large quantities of this ozone may be harmful to people, vegetation, forests and crops, etc (Figure 1). In addition, organic solvents have toxicity for human health and environment. They affect the human nervous system, reproductive damage, liver and respiratory impairment and cancer. They also can damage internal organs like the kidneys, or the brain . Therefore, production, handling and storage of organic solvents are very important to human or animal health and protect the environment. In study, the risk assesment of organic solvents was done to reduce the harmful effects to the environment and human health. The detailed results will be presented in meeting.

Keywords: Organic solvents, human health, environment.

133 THE ECOLOGY KNOWLEDGE CONCEPTS IN MANDATORY EDUCATION

Hajdar Kiçaj

Faculty of Technical Sciences, Department of Biology, University of Vlora "Ismail Qemali"

Email: hajdarkicaj@yahoo.it

ABSTRACT
This article presents in a chronological order the environmental knowledge's that should be treated in biology, a subject of the mandatory education. The environmental knowledge's in this cycle are integrated in the subject of Natural Knowledge and Biology. The subject of Biology is represented by four main topics: the cell, biodiversity, ecosystems and the human knowledge about man and nature. In the subject of biology, ecology presents a view of the species' interaction with each other and their surrounding environment. The ecosystem and evolution knowledge's, together with the life conditions and the relations between the plants make up the basic initial theories. Also there are information's about the relations including the feeding materials, producers, consumers, circulation, and the dynamic processes in ecosystems, as the matter flow and energy etc. The live creatures, populations and the different communities are the care of this area. There are also the esthetic aspects of the experiences that come out of the relations with the nature, the issues that deal with the preservation of species, the human actions etc. This article stresses the benefits of these professional programs in giving these

environmental education knowledge's in the subject of Natural Knowledge and Biology. We also give the necessary recommendations for the actual treatment of these issues, in the function of environmental education, and the pro choices of environment protection.

Key words: Ecosystem, species relations, mandatory education, the species protection.

134 ESSENTIAL ELEMENT CONTENTS OF SOME NATURAL PLANTS GROWN AROUND THE OLD MINE AREA CONTAMINATED WITH HEAVY METALS POLLUTION

Aysen Akay[1], Tunc Guner[2], Sukru Dursun[3]

[1,2]Selcuk University, Agriculture Faculty, Department of Soil Science and Plant Nutrition, Konya - Turkey
[3]Selcuk University, Environmental Engineering Department, Konya - Turkey

Email: aakay@selcuk.edu.tr, sdursun@selcuk.edu.tr

ABSTRACT
Uptake rates of necessary nutrients from the soil vary for the plants development growing under natural conditions. It is known that uptake of many soluble elements in plant growing environment are different proportions. Many factors such as plant type, age, state and development organ, plant root, and structure of plants effect uptake of these elements amounts from contaminated soil and waters. Recently, many relatively new plants species growing natural conditions were determinate for phytoremediation studies at removal studies in soil pollution. These studies are quite new in Turkey conditions. The existing natural vegetation types around polluted areas in Central Anatolia and old mining areas are not being determined yet. In performed this fully commissioned study, existing plant species thought as hyperaccumulators growing around closed mercury mine in Central Anatolia region was studied. In the study, plants samples have taken from 24 natural plant root, stem, leaf and flower. Essential element contents were examined in these samples. Taken samples during land plants scans, Poaceae *Triticum* Sp., Euphorbiaceae *Euphorbia* Sp. and Labiatae *Phlomis* Sp. types were determined as Mn taking higher than other plant varieties (449, 813 and 462 mg kg^{-1} respectively). Cr uptake values of these plants were also between 3.7 - 68 mg kg^{-1}. Calcium uptake of Compositae Circium Sp. varies between 0.82 - 6.10%, Sulphur content of Lepidium *Cruciferae* sp. Is about 3-3.14% and potassium content of Boraginaceae *Anchusa* Sp. was determined as 4.86%.

Keywords: Essential element, natural plants, heavy metals, pollution, phytoremediation, uptake.

135 THE STADY OF ATMOSPHERIC DEPOSITION OF HEAVY METALS IN THE REGION OF KOSOVO BY USING MOSSES AS BIOINDICATORS

Albert Maxhuni[1] Pranvera Lazo[2] and Musaj Paçarizi[1]

[1]Department of Chemistry, Faculty of Natural Sciences, University of Prishtina, Kosovo
[2]Department of Chemistry, Faculty of Natural Sciences, University of Tirana, Albania

Email: albert_maxhuni@yahoo.com

Abstract:
For the first time in the whole territory of Kosovo heavy metals are analyzed from atmospheric deposition through the use of biomonitoring technique in Kosovo by using flame atomic absorption spectroscopy (AAS) and furnace AAS. Mosses are used as bioindicators due to the purpose that they take the food from the rain fall and atmospheric dust. Mosses samples (Pseudosclerpodium purum and Hypnum cupressiforme) were collected according to the guidelines of the UNECE ICP Vegetation, in June – July 2011 at 25 sites evenly distributed over the whole region of Kosovo, and was used in this study. From the obtained results we can see that the concentration of heavy metals varies for: Pb (3.6-47 mg/kg, DW), Cd (0.028-3.053 mg/kg, DW), Zn (14.3-76 mg/kg, DW), Co (0.5-1.38 μg/kg, DW), Hg (0.04-3.47 mg/kg, DW) and Cu (2.46-3.93 mg/kg, DW), depending from the polluted area.

Key words: atmospheric deposition, trace elements, heavy metals, air pollution, mosses.

136 HEAVY METAL LEVELS IN SOIL SAMPLES IN WHOLE REGION OF KOSOVO

Albert Maxhuni[1] Pranvera Lazo[2] and Avni Berisha[1]

[1]Department of Chemistry, Faculty of Natural Sciences, University of Prishtina, Kosovo
[2]Department of Chemistry, Faculty of Natural Sciences, University of Tirana, Albania

Email: albert_maxhuni@yahoo.com

ABSTRACT
The purpose of this work is to estimate level of some heavy metals in soil samples in the whole region of Kosova. Soil samples are taken in different places, in relatively equal distances. Collection of samples is done in the period June- July, 2011 in twenty-four locations. The levels of heavy metals Pb, Cd, Hg, Zn, Cu and Co are analyzed by using flame and furnace atomic absorption spectroscopy (SAA). From gained (obtained) results we can see that the concentration of heavy metals varies for: Pb (11-416 mg/kg, DW), Cd (0.124-3.082 mg/kg, DW), Hg (3,3- 14.58 mg/kg, DW), Zn (35.8-277 mg/kg, DW), Cu (10-202 mg/kg, DW) and Co (20-140 mg/kg, DW). Aiming to asses the lithogenic/and or anthropogenic origin of these elements in the area, some of major/and or crustal elements are determined (Fe, Ca, Mg, Li, K and Na) were analyzed and linear correlation analysis were performed. In comparison to other samples, one of the most polluted sample is KS2, due to the fact that this sample is near by the Trepça metallurgic complex.

Key words: heavy metals, atomic absorption spectroscopy, soil pollution, linear correlation analysis.

137 ELECTROCHEMICAL INVESTIGATION OF HEAVY METALS IN HONEY IN SOME REGIONS OF KOSOVA

Albana R. Mehmeti, Merita Shehdula, Ismet Hashani, Selim Jusufi, Musaj Paqarizi

Department of Chemistry, University of Prishtina, Rruga "Nëna Terezë" Nr.5; 10 000 Prishtinë, KOSOVË

E-mail: albanamehmeti@yahoo.com

ABSTRACT
To investigate heavy metals (Cu, Pb, Cd, Zn) in honey as a method of investigation we have used Differential Pulse Polarography. Samples have been collected in some regions of Kosova, polluted considered areas but also some spots from unpolluted zones as a reference of comparison with the first ones. Based on the literature data regarding the method we've used, wave polarographic potentials show presence of heavy metals in their own potentials whereas : $E_{cu^{2+}}$ = 86 mv, $E_{Pb^{2+}}$ = -313 mv, $E_{Cd^{2+}}$= -503mv, and in our experimental conditions it was harder to detect the presence of Zn, sometimes due to hydrogen wave interference. From obtained polarograms we have constructed calibration plot for each metal where from we conclude the quantity of metals in analyzed samples. Measurements were conducted in a pure electrolyte HNO_3 at same conditions as in honey samples for metal concentrations from: $1*10^{-7}$mol/dm^3 – $1*10^{-6}$mol/dm^3 while we followed potential from 0,25 - 0,8 V. Values of the current intensity expressed in nA show no high values but the presence of heavy metals in analyzed samples is very clear.

Key words: heavy metals, honey, differential pulse polarography

138 ASSESMENT OF ATMOSPHERIC DEPOSITION OF HEAVY METAL IN THE SOUTH OF ALBANIA BY USING MOSS MONITORING

F. Qarri[1], P. Lazo[2], M. Vasjari[2], M. Terpo[3], I. Gjika[4]

[1]University "I. Qemali", Vlora, [2]University of Tirana, [3]University "E. Cabej", Gjirokastra, [4]Polytecnic University, Tirana

Email: flora.qarri@gmail.com

ABSTRACT
The aim of this survey is the comparison of air pollution in the different sites of Southern area of Albania.The use of mosses as biomonitors of heavy metal deposition has been extensively applied in numerous studies in the last years. This type of organisms acquires almost their nutrients from the atmosphere, by dry or wet deposition. This study is presently being implemented, where samples are collected in the south of Albania and a comparison is make between the results of the three cities. This work presents the results obtained for the South region. Samples of Hypnum cupressiforme, or whenever unavailable, Scleropodium purum were collected in 24 sites in this area, and the concentration of Cd, Cr, Cu, Fe, Mn, Ni, Pb,Hg,K,Na and Zn was determined for each sample. Heavy metals (Cu, Pb, Zn, Mn, Fe and Cd) were determined by atomic absorption spectrometry by using flame/and or electrothermal system. CVAAS was used for mercury determination and atomic emission spectrometry for K and Na determination. The map for deposition was drawn after estimation of the metal concentration in the mosses. The spatial variations in the distribution of metal concentration are discussed. We have been tried to categorize different places in the South of Albania on the basis of metal concentrations in the mosses and data statistical treatment.

Key words: biomonitoring, heavy metals, air pollution, moss survey, AAS method, statistical analysis

139 STRAWBERRIES CULTIVATION IN PVC SILVER FOIL

Sylë Sylani, Vahid Avdiu, Rexhep Shoshi

*University of Prishtin*a *Fakulty of Agriculture & Veterinary, Department of Fruits & Grapes*
Bul. „Bill Clinton"10000 Prishtinë, KOSOVA.

E-mail: ssylanaj@hotmail.com

ABSTRACT
In this research are presented the investigations results of the impact of the silver foil in pomological traits of three strawberry's cultivars (*Fragaria ananassa* Duch) Alba, Elsanta, Sonata and Dora planted in the open field. Researches were conducted during 2010-2011 in the testing field of the Faculty of Agriculture and included: the time of flowering, fruit maturity and pomological parameters (fruit mass, size and shape index). The designed experiment was approached with random method on four repetitions, for each repetition were investigated 25 plants x 4 repetitions = 100 plants for each parameter. Planting distances of cultivars were 40 x 30 cm in 2 rows per bed with drip irrigation system.Based on the obtained results, the strawberries cultivars differ among themselves according to its pomological traits. The average of the fruits beginning maturity was earliest for cultivar Alba (13.05), while the latest maturity average was for cultivar Sonata (16.06). Duration of fruits maturity was 35 days. The lowest yield for shrub is registered to cultivar Dora (0.434 g/shrub), while higher yield had Sonata cultivar (0.841 kg/shrub). Differences between cultivars for investigated parameters were significant for both levels of 0:05 and 0:01.

Key words: strawberries, PVC silver foil, fruit traits

140 NEW BIOPESTICIDES FOR *Bactrocera oleae* Gmelin MANAGEMENT IN ORGANNIC PRODUCTION TO OPTIMIZING THE EFFICIENCY IN OLIVE OIL PRODUCTION AND ITS QUALITY

Fatmira Allmuça[1], Stefan Dano[2], Dhimiter Panajoti[3]

[1]*Ministry of Agriculture, Food and Consumer Protection*
[2]*Institute of Quality for Integration*
[3]*Agricultural Center for Technology Transfer in Vlora*

Email: miraallmuca@yahoo.com

ABSTRACT
Olive fly (*Bactrocera oleae* Gmelin) is a key pest for olive in Mediterranean basin, where Albania locates. In particular areas, years and for susceptible late cultivars, damage can be calculated up to 99%. Furthermore, in organic agriculture, while allowed inputs are limited, such damage is more difficult to be managed. In this content, a study of using biopesticides and traps for olive fly management was undertaken by Crop Production Department in the Ministry of Agriculture, Food and Consumer Protection in collaboration with the Institute of Quality for Integration. Field tests were conducted in 2010 – 2011 in the experimental olive groves of the Agricultural Center for Technology Transfer of Vlora. These tests showed a satisfactory efficacy of OLIVE traps used and biopreparates on the olive fly control. The most effective traps were those with juniper extract attractive and ammonium bicarbonate, which are recommended for broad application. However, in years where the population of pests is expected to be high or in susceptible cultivars, in irrigated conditions and for those producers of extra-virgin oil quality, the application of both methods (biopreparates + traps) would be the best strategy that will ensure maximum results.The BIO treatment unaffected the nutritional and sensory quality parameters of the corresponding virgin olive oils, obtained by a laboratory scale olive mill, thus satisfying the present quality requirements.

Keywords: *Bactrocera oleae*, OLIVE traps, biopesticides, olive oil quality, Albania.

141 BACTERIOLOGICAL INVESTIGATION OF WATER DOWNSTREAM THE RIVER "SITNICA" IN KOSOVO

F. Gashi[1]* N. Troni[1], R. Hoti[1], F. Faiku[a] K. Kurteshi[2], M. Thaqi[1], M. Domuzeti[1] & Sh. Kastrati [1]

[1]Departament of Chemistry, [2] Department of Biology, , Faculty of Natural Sciences, University of Prishtina, Kosovo.

Email: fatbardh_gashi@hotmail.com

ABSTRACT
Objective of this research is Bacteriological investigatin of water downstream the river "Sitnica" in Kosovo. Experimental results show that some microbiological parameters of water quality are very differently. Investigation is done in ten localities. This river is exposed to different pollution (waste water, factory of meat, etc.) and the impact of anthropogenic effects is very high. This study could be also explained from the study guide (Data base) for our country in transition about the quality of natural water resources in Kosovo as human enrichment. Bacterial monitoring of the water quality that exists in Kosovo underlines the necessity and importance of reliable potable water control to ensure that the tolerance limits for the various bacterial types and are under control. In the end of whole project will be a message to authorities for preparing national waste management plan of hazardous waste and enforcement hazardous waste facilities.

Key words: Sitnica river (Kosovo), Bacteriological, pollution assessment.

142 DETERMINATION OF AS, CD, CU, ZN, PB, FE & MN IN LAKE'S WATER OF BADOVCI (KOSOVO) BY ICP-MS TECHNIQUE

F. Gashi[1]*, M. Bacaj[1], N. Troni[1], R. Hoti[1], F. Faiku[1], F. Isufi[2], E. Dreshaj[1] & R. Gashi[1]

[1]Departament of Chemistry, [2] Department of Geography, Faculty of Natural Sciences, University of Prishtina, Kosovo.

Email: fatbardh_gashi@hotmail.com

ABSTRACT
A considerable amount of Kosovo's surface water is exposed to high level of pollution that actually can not be use for potable water supply, irrigation and recreation purposes etc. Heavy metals are persistent and non-biodegradable and they can be bioaccumulated through the biologic chains. So, the presence in high amount of heavy metals in environment represents a

potential danger for human health and for environment dueto their extreme toxicity. Sampling of water was performed at 06.10.2010. For determination of Sb, As, Cd, Cu, Zn, Pb, Fe and Mn in water of Lake's Badovci we have used ICP-MS technique. Samples were collected in different pollutions places, and sampling sites are geographically positioned using Geographic Information System (GIS). The concentrations of metals: Sb (0.32-0.46 μgdm^{-3}) As(6.39-7.23 μgdm^{-3}), Cd(0.25-5.91 μgdm^{-3}), Cu(2.00-9.90 μgdm^{-3}), Zn(11.20-62.5 μgdm^{-3}), Pb(4.42-23.60 μgdm^{-3}), Fe(40-60 μgdm^{-3}) and Mn(2.10-5.70 μgdm^{-3}) presented the approcsimative value in the different samples points and results are compared with the value of elements after physical and chemical treated. Also the results have been compared with WHO and DEU standards.

Key words: Surface Water, Water Quality, ICP-MS, Kosova, Badovci,

143 MICROBIAL CONTAMINATION OF DRINKING WATER AND ITS IMPACT ON PUBLIC HEALTH FOR LEZHA REGION

Rozarta (Turku) Nezaj[1], Klementina Puto[2], Donika Vuka[3]

[1]*National Center of Quality, Safety and Accreditation of Health Institutions*
[2]*University of Tirana, Faculty of Natural Sciences, Department of Biotechnology*
[3]*Public Health Directory of Lezha, Epidemiology Department*

Email: rezarta8@hotmail.com

ABSTRACT
Microbial contamination of drinking water can pose a potential public health risk in terms of acute outbreaks of disease. The illnesses associated with contaminated drinking water are mainly gastro-intestinal in nature, although some pathogens are capable of causing severe and life-threatening illness. Waterborne diseases result from drinking fecal contaminated water. Others who have a disease or who are carriers of a disease-producing microorganism are a more obvious source of waterborne infections. Estimates indicate that about five percent of those who have contacted an enteric or intestinal disease remain life-long carriers, even after having recovered from the disease. That these intestinal microbial contaminants can infect a drinking water source may at first seem puzzling, especially to citizens of a country that prides itself on its public health standards. So we undertake a study to evaluate the level of microbial contamiantion of drinking water for Lezha Region and assess the impact on public health. Study and analyzing all the data and comparing the period 2009 – 2011 in order to see the trend of the pollution level of the drinking water. We have taken an average of 12 water samples for each month, from 15 monitoring points, per year.Method of analyzing the samples and finding out the Coli contamination is via Multiple -Tube Fermentation Technique Based on WHO standard for drinking water the level of *Coliforme Total* for Drinking Water must be 0 MPN/100ml, but during our study it resulted MPN 9 MPN/100ml.

Key words: drinking water, microbial contamiantion, Lezha Region, public health, waterborne diseases.

144 AMBIENT AIR QUALITY OF SHEEP HOUSES IN KONYA REGION

Selda Uzal Seyfi[1]*,Sukru Dursun[2]

[1]*Department of Farm Structure and Irrigation, Selcuk University, Konya, 42003 TURKEY,*
[2] *Department of Environmental Engineering, SelcukUniversity, Konya, 42003 TURKEY,*

Email: seldauzal@selcuk.edu.tr; sdursun@selcuk.edu.tr

ABSRACT
Ambient air quality in livestock buildings is one of the significant factors for worker and animals which must be taken consideration with fastidiously. Animal manure has many organic compounds that may be decomposed at different climatic condition. Mineralization period may be affected environmental conditions. For biological activity to decompose of sheep droppings are very important temperature. There are many types of sheep houses that are closed barn, open barn and sheep housing with slatted floor. Removal of gasses may increase mineralization

processes at cold climatic condition and need to mix semisolid materials. This mixing process is usually not easy and gives much difficulty. Air of hot climate particularly semi-arid and arid zone has low relative humidity then transpiration of water content of muck may be removed with undesired decomposing gasses. These gases may be produced at non-airing condition and ammonia, methane, carbon dioxide and hydrogen sulphide are most significant ones and dangerous for living being in sheep houses. In this study, we tried to investigate important of ambient air quality for animal and worker in sheep barns. We have also researched effect of decomposing processes of sheep wastes on environment in and around sheep housing.

Key words: Air quality, sheep housings, decomposition, animal houses.

145 COMPREHENSIVE AND MINIMALIST DIMENSIONS OF ECOTOURISM IN RELATION TO ECOSYSTEM

Marsela Resulaj, Edmond Kadiu, Eranda Mane

Faculty of Economics and Agribusiness, Agricultural University of Tirana

Email; marsiresulaj@yahoo.com

ABSTRACT
Analysis of core criteria of ecotourism suggests two "ideal types" based on the level of sustainability outcomes.The minimalist emphasizes superficial learning opportunities focused on charismatic megafauna, while its sustainability objectives are site-specific and status quo-oriented. The comprehensive model adopts a holistic and global approach to attractions and interpretation that fosters environmental enhancement, deep understanding, and transformation of behavior. It is argued that the comprehensive model can best promote global sustainability by accommodating selected hard (or small-scale) and soft (or large-scale) characteristics, thereby taking advantage of the economies of scale offered by the latter.While this high level of attention has not yet resulted in a universally accepted definition, there is an emerging consensus that qualifying products must be primarily nature-based, focused on the provision of learning opportunities, and managed in such a way as to maximize the likelihood of environmentally and socioculturally sustainable outcomes, including positive benefits for local communities. It is primarily due to the promise of these latter sustainability outcomes that interest has grown to the extent described above. Yet one may question whether the global sector as it is currently structured actually achieves these outcomes.

Keywords: comprehensive and minimalist ecotourism; hard and soft ecotourism; sustainable tourism

146 EVALUATION OF NET PRIMARY PRODUCTION IN THE AGRO-ECOSYSTEMS AND NATURAL ECOSYSTEMS OF ALBANIA

Pëllumb Harizaj, Foto Kashta Agim Canko, Zeni Myrtollari

Agricultural University of Tirana, Faculty of Agriculture and Environment, Kodër-Kamëz, Tirana, Albania

Email: p.harizaj@yahoo.fr

ABSTRACT
Net Primary Production (NPP) is the basis of existence for all forms of life on Earth. That`s why the evaluation of net primary production is important in calculation of carrying capacity both in agro-ecosystems and natural ecosystems. In this context the evaluation of the dry matter produced during the photosynthetic process is important in defining the quantities of NPP. Although NPP is based on the natural process of photosynthesis, there are differences between the production processes in agro-ecosystems and natural ecosystems. NPP in agro-ecosystems is a combination of natural and human factors whereas in natural ecosystems the process is performed by natural factors only. Identifying these differences may serve to gain further insight for a better evaluation of renewable resources required to sustain human life in the future. It is clear that NPP in the agro-ecosystems is higher than in natural ecosystems due to human

interference to the production process by investing different inputs, thus stimulating higher plant yields per unit of land area. But this type of human interference may not continue for ever in the future to limits imposed by nature to humans to provide endlessly large amount of inputs to stimulate the increase of NPP in agro-ecosystems.

Key words: Net Primary Production, Photosynthetic Process, Inputs

147 STUDY OF GENETIC DIVERSITY AND CORRELATION COEFFICIENT OF QUANTITATIVE TRAITS IN SOME ACCESSIONS OF BREAD WHEAT

Foto Kashta, Pellumb Harizaj, Agim Canko, Suzana Rrushi, Zeni Myrtollari, Dallandyshe Koleci

Agricultural University of Tirana, Faculty of Agriculture and Environment, Kodër-Kamëz, Tirana, Albania

Email: p.harizaj@yahoo.fr

ABSTRACT
The wheat accessions were grown in the field during the growing seasons of 2008-09 and 2009-10 to determine the extent of genetic diversity and correlation coefficient among the accessions for the quantitative traits. Analysis of variance revealed significant differences among the wheat accessions for the 13 quantitative traits; days to heading, days to maturity, grain filling period, number of (productive) tillers per plant, flag leaf area, plant height, spike length, number of spikelets per spike, biomass per plant, grain yield per plant, 1000-grain weight, harvest index (percentage), protein percentage. The results showed also, that grain yield was positively correlated with number of tillers per plant, number of grains per spike and grain weight, with either positive, negative or no correlation between grain yield and plant height. The 1000-grain weight was not correlated with days to heading and days to maturity. These finding suggests that characters showing positive correlation, could effectively be utilized in crop improvement program. The tendency of positive correlation between morphological traits, in spite of wide range of genetic diversity in accessions, could effectively be utilized to develop new wheat varieties.

Key words: wheat accessions, crop improvement

148 RENEWABLE ENERGY SOURCES IN TURKEY

Elif Gökbel*, Ilahe Ibrahimova, Sukru Dursun,

Department of Environmental Engineering, Selcuk University, Konya, Turkey

Email: elifgokbel@gmail.com

ABSTRACT
In our country and world, energy demand is increasing day by day with population growth, industrialization and parallel progressing of economic and cultural activities with the development of emerging technologies. Our energy need would be impossible find without discovering new energy sources or developing existing sources. Environmental pollution problems have increased significantly as a result of using non-renewable energy sources intensively. For this reason, canalizing to the renewable energy sources which has low environmental impacts is more advantageous in all respects.Turkey's growth rate of population, economy and executing cultural activities and emerging the environmental issues is considered, increasing the demand for energy has canalized the people to the renewable energy sources. Turkey is a rich country for the diversity and potential of renewable energy sources. Usage of water, solar, wind, geothermal, water wave, biogas, biomass, hydrogen and aluminium energies which is renewable energy sources are potential alternatives. Our country, capacity of geothermal energy which doesn't exist in many countries, has approximately %8 of the world's potential. Turkey's geographical location is important point in the world countries for solar energy, hydraulic energy and wind energy potential. The cost of this energy sources is very low, hence being renewable sources don't deplete and contrary to conventional fuels don't pose a significant threat to environment and human health.

Keywords: solar, hydraulic, wind, energy, nuclear potential, biogas, biomass, hydrogen

149 SUSTAINABLE TOURISM DEVELOPMENT AS THE BEST PRACTICE FOR THE ENVIRONMENTAL PROTECTION

Parashqevi Proda (Draci)[1], Edmond Kadiu[2], Henrieta Themelko[3]

[1]CEZ – Albania,
[2]Faculty of Economics and Agribusiness, Agricultural University of Tirana
[3]Faculty of Economics and Agribusiness, Agricultural University of Tirana

E mail: paro_1961@yahoo.com

ABSTRACT
Quality of people's lives is reliant upon the health of their natural environment and they have a direct hand in identifying and creating ways to protect and sustainably use their natural resources. The preservation of biological diversity, ecosystems, and natural places is critically important to the survival of us all - people, plants, and animals alike. The people who live near or in a threatened ecosystem are those who are best positioned to repair and protect that system for the long term. Tourist industry has direct impact on nature and the more the growth of global mass coastal tourism and the negative impact of many modern tourist activities on nature and the environment as well the lack of alternatives for sustainable development are a major reason for the degradation of natural resources. For this reason, ecologic acts strategically, building on common interests and goals, to create alliances that will lead to cumulative, positive impacts ongoing are important more and more. Today there is wide acceptance that sustainability is one of the most important issues faced by the tourism industry and researchers are seeking to reorientate tourism along more sustainable lines. In this line, policies for sustainable tourism development tends to achieve environmental objectives by niche tourism marketing and the attempted 'greening' of many aspects of the tourism industry.

Key words: Natural resources protection, sustainable tourism, threatened ecosystem.

SUSTAINABLE TOURISM DEVELOPMENT AS THE BEST PRACTICE FOR THE ENVIRONMENTAL PROTECTION

Parashqevi Proda (Draci)[1], Edmond Kadiu[2], Henrieta Themelko[3]

[1]CEZ – Albania,
[2]Faculty of Economics and Agribusiness, Agricultural University of Tirana
[3]Faculty of Economics and Agribusiness, Agricultural University of Tirana

E mail: paro_1961@yahoo.com

ABSTRACT
Quality of people's lives is reliant upon the health of their natural environment and they have a direct hand in identifying and creating ways to protect and sustainably use their natural resources. The preservation of biological diversity, ecosystems, and natural places is critically important to the survival of us all - people, plants, and animals alike. The people who live near or in a threatened ecosystem are those who are best positioned to repair and protect that system for the long term. Tourist industry has direct impact on nature and the more the growth of global mass coastal tourism and the negative impact of many modern tourist activities on nature and the environment as well the lack of alternatives for sustainable development are a major reason for the degradation of natural resources. For this reason, ecologic acts strategically, building on common interests and goals, to create alliances that will lead to cumulative, positive impacts ongoing are important more and more. Today there is wide acceptance that sustainability is one of the most important issues faced by the tourism industry and researchers are seeking to reorientate tourism along more sustainable lines. In this line, policies for sustainable tourism development tends to achieve environmental objectives by niche tourism marketing and the attempted 'greening' of many aspects of the tourism industry.

Key words: Natural resources protection , sustainable tourism, threatened ecosystem.

150 DETERMINE THE QUANTITY OF CO2 DURING THE PRODUCTION OF BEER, AND POSSIBILITY TO RE-USE IT

Arsim Elshani[1], Kastriot Pehlivani[2]

[1]J.S.C."Birra Peja", Production Engineering Department, Pejë – Kosovë
[2]J.S.C."Birra Peja", Production & Technical Manager, Pejë – Kosovë

Email: earsim@hotmail.com

ABSTRACT
Carbon dioxide, CO_2, causes the greenhouse effect in the earth's atmosphere, and is a product of combustion of organic compounds, for example the methane gas. Carbon dioxide itself does not support burning, and being denser than air it is widely used in fire extinguishers. CO_2 reacts with water producing a weak acid according to the equation: $CO_2 + H_2O = H_2CO_3$.Alcoholic fermentation is the process of sugar converting into alcohol and carbon dioxide. The actual process, as any beer brewers can attest, occurs over time and involves many chemical reactions. However, the ultimate result is the breakdown of sugar (C6H12O6), into alcohol (2C2H5OH) and carbon dioxide (CO_2). If you know the initial quantity of sugar, you can calculate the volume of carbon dioxide that its complete breakdown will produce.Carbonic gas formed during fermentation of beer. Carbon dioxide can be compressed and as such be used in production again, which at the same time we also protect the environment and cost savings in the process of beer production.Given that carbon dioxide gas is heavier than air, he sits at the bottom of workspaces, Which presents a danger to life.

Keywords: Carbon dioxide, fermentation, beer, recovery.

151 COMPARISON OF CORROSION PROTECTION EFFICIENCY OF TWO KIND OF POLYSACCHARIDES EXTRACTED BY DIFFRENT LEGUMINOSAE PLANT.

Alketa Lame[1], Efrosini Teli[1], Albana Jano[1]

[1] Department of Chemistry, Natural Science Faculty, Tirana University.

Email: alketalame@yahoo.com

ABSTRACT
The green inhibitors are friendly with the environment. For this reason they are a good choise for corrosion protection. As green inhibitors, are used some kind of polysaccharides (galactomannan), extracted by *leguminosae* plant as green coffee beans, chickpeas and endosperms of carob tree (*Ceratonia siliqua*). Galactomannans are polysaccharides consisting of a mannose backbone with galactose side groups (more specifically, a (1-4)-linked beta-D-mannopyranose backbone with branchpoints from their 6-positions linked to alpha-D-galactose, i.e. 1-6-linked alpha-D-galactopyranose.). They have shown good inhibitor properties in protection of low allow carbon steel against the corrosion in acidic media (especially H_2SO_4). The aim of this study is to compare corrosion protection efficiency of these extracts, based on their solubility that depends by their mannose/galactose ratio. Material under investigation is low allow carbon steel marked as: Steel 39, Steel 44, and iron B-500 (usually applied to concrete as reinforcing bars). The corrosion media is: 1M H_2SO_4 + 10^{-3}mol/L Cl^- (in form of NaCl). Tafel polarization techniques are using for investigation of corrosion inhibitor efficiency, accompanying with microscopic surface investigation of working electrode. Extract taken by green coffee beans is more soluble than that, taken by endosperms of carob tree. Use of them in the same concentration 0.5 g/L (better solubility for extract taken by endosperms of carob tree), referring the corrosion protection of steel 39 (the best case in the respect of corrosion sustainability), presents protection efficiency respectively 83.41% and 80.89%.

Key words: Galactomannan, protection efficiency, carbon steel, Tafel polarization.

152 ISOLATION, SELECTION, IDENTIFICATION, AND CHARACTERIZATION OF YEASTS WITH ENOLOGICAL IMPORTANCE IN THE FOOD INDUSTRY AND THAT OF ALCOHOLIC BEVERAGES

[1]Matilda Zeqo, [2]Rustem Zenelaj

[1]Faculty of Technical Sciences, University of Vlora"Ismail Qemali"
[2]Faculty of Natural Sciences, University of Tirana

E-mail: matildazeqo@gmail.com

ABSTRACT
This study was conducted during the period 2008-2010. The study was aimed at selecting the grape juice before fermentation as many species is not responsible for the fermentation of wine, with enological interest. While isolated from the yeast fermentation process, these species are selected that are deemed goodfermenting. In these way the cultivar of Merlot grapes before fermentation and the fermentation process are isolated 54 enological interest of yeast cultures. From these were selected for further study 20 strains. Full phenotypic, physiological and biochemical characterization of them is performed. Also the identification of strains characterized, showed that these strains belonged to 8 genres and 12 species. Fermenting power is estimated for 8 strains of the genius Saccharomyces and results: 4 strains are alcoholic power over 11%, of which 2 strains over 14% belonging to the species Saccharomyces cerevisiae; These two strains also have high speed fermentation. They produce 1.5% acohol/day, ie about a week they manage to produce over 10% alcohol; These strains are recomended in microvinification for fermentation process and in the event of a positive outcome, to the extent of fermentation in the wine industry in our country.

Keywords: yeast, isolation, selection, identification, alcoholic power, enological.

153 OCCURRENCE OF SOME PHARMACEUTICALS AND HORMONES IN WATERS OF AKSARAY-TURKEY

Zeynep Ayman, Mustafa Işık*

Aksaray University, Engineering Faculty, Environmental Engineering Department, 68100 Aksaray, Turkey,

Email: mustafaisik55@hotmail.com

ABSTRACT
Pharmaceuticals and synthetic hormones are widely used around the world to maintain human and animal health. There is a growing concern that these compounds pass through sewage-treatment plants and enter the environment for potential harmful effect on living things. In this study, the occurrence of nine pharmaceuticals and hormones in hospital wastewater, sewage wastewater, raw waters used for drinking water, and treated water were studied in three sampling events representing different flow conditions, i.e., December, April and June. Analyses were carried out by using the Agillent 6460 Triple Quadrupole Mass Spectrometer (LC-MS/MS) with Jet Stream Technology. Samples for injection were prepared both with solid phase extraction (SPE) and without extraction. All of nine target emerging organic pollutants (EOC), Acetominophen, Caffeine, Carbamazepine, Codeine, Methyltestosterone, Metoprolol, Propanolol, Stanozolol, Testosterone were detected in wastewater, source water, and finished water, or all. The most target compounds were detected in both hospital and sewage wastewater samples rather than the drinking water samples. The most frequently detected compounds in samples were Acetominophen and Caffeine with their concentrations increased up to 160 µg/L in sewage wastewater while their concentrations samples were significantly lower than those in raw water (0-19.75 ng/L). Results of the investigation showed that waters has polluted with these EOC in wastewater and reached to humans with drinking water although quantities of EOC has decreased with several mechanisms. More comprehensive work is indispensable to investigate the fate and transport of drugs in the environment and to find out cost-effective approaches of removing antibiotics such as advanced oxidation processes from wastewater and contaminated sites.

Keywords: Pharmaceuticals, surface waters, drinking water, wastewater, emerging organic pollutant.

154 THE RELATION BETWEEN AGGREGATE STABILITY AND THE SOME OF MYCORRHIZAL PARAMETERS OF DIFFERENT PLANTS

Emel Karaarslan[1], İlknur Gümüş[1]

[1]Selcuk University, Faculty of Agriculture, Department of Soil Science and Plant Nutrition, Campus 42151, Konya/TURKEY

Email: ekaraarslan@selcuk.edu.tr; ersoy@selcuk.edu.tr

ABSTRACT
This study was conducted to determine the relation between aggregate stability and some mycorrhizal parameters some of cultural and wild plants. For this purpose, mycorrhiza spore counts and mycorrhizal infection incidences in plant roots, grown in the places where the soil samples were collected, were determined by being sampled from rhizospher zone soil present in the depth of 0-30 cm under the major soil groups. Both the highest values of mycorrhiza spore number and plant root infection rate were found as 732.33 spore/10 g soil, % 63.33 respectively in the pasture plants, and the highest aggregate stability values were obtained as 70.47 in the pepper plant. Aggregate stabilities values were shown fluctuate depending on plant kinds, organic matter levels, P_2O_5 contents of soil and count of total mycorrhiza spores. According to the results of correlation, the relation among aggregate stabilities and mycorrhizal parameters was found as positive and negative.

Key words: Aggregate stability, mycorrhiza spore number, infection rate, plants.

155 THE BIODIVERSITY OF FLORA IN PROTECTED AREAS: CASE STUDY IN THE ECOSYSTEM OF MOUNT IVAN I MADH, IN THE REGION OF PRESPA, ALBANIA

[1*]Mankolli H, [1]Peçuli V, [2]Lika (Çekani) M, [3]Dursun S, [4]Zucchetti M, [2]Mersinllari M, [5]Alshabani S

[1]Department of Agro-Environment and Ecology, Agricultural University of Tirana, Albania
[2]University of Tirana, Faculty of Natural Sciences, Albania
[3]Selcuk University, Engineering Faculty, Environmental Engineering Dept., Konya, Turkey
[4]DENER, Politecnico di Torino, Italy; MIT Massachusetts Institute of Technology, USA
[5]Ministry Environment, Forests and Water Administration, Albania

*E-mail: mankollih@ubt.edu.al

ABSTRACT

The ecosystem of the mountain Ivan i Madh, with an altitude of 1768 m, is encompassed by Qafa e Zvezdes at an elevation of 1099 m and Zaroshka's hills with a height of 890 m to the north, by Mount Ivan I Vogel with an altitude of 1365 m to the east, by the river of Devoll and the Pojan field to the west, and by the Dumbrava hills to the south. Prespa is located in the sub zone of the eastern mountainous Mediterranean climate, characterized by cold winters with relatively long freezing periods and not very dry summers. Some key indicators of the climate are: annual average temperature 11.2°C, maximal temperature in the summer ranges 32°C whereas the minimal 1-2°C. Absolute minimum temperature is found in January and ranges at around -16°C. Commonly there are snow-covered areas for over 4 months in the eastern and northern regions. Precipitation in the form of rain reaches values of up to 750-800 mm per year. Snowfall values range from a few cm to over 1 m, with a duration of several days in the western slope and up to several weeks in eastern and northern slopes. A wide variety of forests, bushes and grasses lie in the phytoclimatic areas of Castanetum, Fagetum and Alpinetum. Flora, represented by the area of Castanetum, starts from the lake shore (altitude of 850m) to a height of 1.050 m, in which forest territory lies mainly in hills. The main types of trees are oaks such as: *Quercus petraea*, *Q. cerris*, *Q. Trojan*), *Q. frainetto*, and *Q. pubescentis*; also accompanied by *Fracsinus exelsior*, et.al.

There is also a rare existance of *Celtis tournefortii* as well as *Juniperus excelsa. Bucsus semprevirensis* and the following types of oak: *Quercus Petrea, Quercus cerris, Quercus pubescens* etc. *Bucsus semprevirensis* is characteristic of the ecosystem of mount Ivan. It is found in groups and covers an enormous area. Also it is located at the borders of 45% of the surface vegetation area. In the area of Fagetum, beech (*Fagus sylvatica*) can be found, as well as mountain maple, mellezë, etc. at a lesser rate. Special value this is given to this vegetation by the presence of wild hazelnut (Corylus colurna). Beech forests extend up to a height of 1.700 m on Ivan Mountain. The mountain is covered with rich medical plant resources such as: red flowers (*Papaver rhoeas*), orchids (*Orchis mascula*), *Malva sucvestris*, red juniper (*Juniperus ohycedrus*), ballsani flower (Hyperikum perforatum), hawthorn (Crataegus monogyna), chamomile (Chamomolla recutita), birch (Betula pendula), mountain tea (Sideritis roeseri), wild rose (Rosa Kanina), blackberries (*Rubus fruticosus*), Pyrrus amygdaliformis, and nettles (*Urtica dioica*). This study was conducted in the period 2008-2009.

Key words: Biodiversity, flora, protected area, mountainous ecosystems.

156 COMPEXATION OF Zn(II) IONS WITH NTA IN PRESENCE OF SUCCINIC ACID

Melos Zeka; Albert Maxhuni; Musaj Paçarizi; Fatmir Faiku; Epir Qeriqi

Department of Chemistry, Faculty of Mathematical and Natural Sciences,University of Prishtina

Email: melos_zeka@yahoo.com

ABSTRACT
The object of this study was polarographic investigation of the interaction of ion Zn(II) with complexation agent nitrilotreacetic acid (NTA) in the presence of succinic acid in constant concentrations 0.1 and 0.01 mol/dm^3 in to variable pH values (pH=4 and pH=6). Same measurements were done with perchlorates which are used as comparing standard, as we know perchlorates are inert ligands for complexation. The investigation was conducted with Differencial Pulse Polarography (DPP). It has been worked with Zn(II) ion concentration; C=2x10^{-4} mol/dm^3 . In this concentration of Zn(II) ion we've titrated with complexing agent NTA in concentrations starting from C=2x10^{-5} until 2x10^{-3} mol/dm^3.After the experimental results gained from the registration of polarographic wave, we've came to the conclusion that succinic ions like complexation agents with Zn(II) give no well defined wave but they coexist with Zn(II)ion wave however, we have an avoidance of potencial of half polarographic wave towards negative values.During the titration of Zn(II) ion with NTA, in perchlorates as well as in succinic acid it has bee noticed the formation of stabile complex Pb(II) NTA, which appears in the defined potential -1500 mV towards referent electrode Ag/AgCl.

Key words: succinic acid , Differencial Pulse Polarography , NTA, complexation,

157 INFLUENCE OF (THIRAM) FUNGICIDE ON ARBUSCULAR MYCORRHIZAL AND NITROGEN – FIXING SYMBIOSES IN DRY BEAN (*PHASEOLUS VULGARIS* L.)

Refik Uyanöz[1,*], Emel Karaarslan[1]

[1]Selcuk University, Faculty of Agriculture, Department of Soil Science, Campus 42031, Konya/ TURKEY

Email: refik@selcuk.edu.tr; ekaraarslan@selcuk.edu.tr

ABSTRACT
This study was conducted to determine effect of the pesticide (tetramethylthiuram di sulphide with 80 % active ingredient) on growth, nodulation, root colonization, nitrogen and phosphorus contents of dry bean (*Phaseolus vulgaris* L.). The growth of dry bean was inhibited by pesticide application. Nodule formation was significantly inhibited in *Phaseolus vulgaris* L.) after 40 days of planting by pesticides tested. The pesticides significantly inhibited AM root colonization. The accumulation of N, P in pesticide-treated plants was lower than in control plants. Growth and nutrient status of the legumes varied with nodulation and AM colonization. The results suggest that pesticides affect plant growth, *Rhizobium* and AM fungi at different stages of plant growth

and effects varied with pesticide doses and inoculation.

Key words: *arbuscular mycorrhiza,* dry bean, nodulation, *rhizobium*, thiram.

158 ARBUSCULAR MYCORRHIZAL FUNGI FOR SOME WILD PLANTS IN SALINE SOILS OF CENTRAL ANATOLIAN REGION -TURKEY

Refik Uyanöz[1], Emel Karaarslan[1]

[1] *Selcuk University, Faculty of Agriculture, Department of Soil Science, Campus 42031, Konya/ TURKEY*

Email: refik@selcuk.edu.tr; ekaraarslan@selcuk.edu.tr

ABSTRACT
This study was conducted to evaluate the population of the arbuscular mycorrhizal fungi (AMF) in the semi-arid ecosystem of the Salt Central Anatolian Region of Turkey and to evaluate the effect of soil properties on AMF population. With the purpose, a survey was made of the arbuscular mycorrhizal (AM) status of dominant wild plants species and spore density in saline soils of the Central Anatolian Region that has wild plants diversity and saline soils. According to results, the colonization percentage ranged from 0.0 % to 67 %. Spore density ranged from 0 to 1188 per 10g soil^{-1}. Sampled soil properties in research areas between the spore densities of AMF had generally a very weak and negative correlation. But, only the $CaCO_3$ percentages (0.644) were significantly positively correlated (P>0.05) with spore number of the AMF. On the other hand, the infection rate had negative and positive correlation with soil properties. The Mg, Cu and Zn content of soil were significant positive correlation with infection rate (0.65, 0.732, and 0.686 respectively) and negative and non significant correlation between infection rates with EC, P, Na contents of soil. Also the others soil properties have positive-negative but unimportant effect. The spore isolated from saline soils when examined in terms of shapes and colors, it was determined that they had varied colors changing from transparent-translucent white, pale cream-lemon yellow and blackish brown to black. In conclusion, populations of AMF present saline soils are quite high. There was no host plant specificity but obvious patters associated with geographic location, soil properties and abiotic factors.

Key words: Arbuscular mycorrhizal fungi, saline soils, spore density, Central Anatolian

159 THE EFFECT OF RHIZOBIUM INOCULATION AND THE APLICATION OF ZINC ON MICRO AND MACRO NUTRIENT UPTAKE IN DRY BEAN (*PHASEOLUS VULGARIS L.*)

Refik Uyanöz[1], Ümmühan Karaca[1], H. Hüseyin Özaytekin[1]

[1]*Department of Soil Science and Plant Nutrition, Faculty of Agriculture, Selcuk University, Konya-Turkey*

Email: refik@selcuk.edu.tr; ucetin@selcuk.edu.tr; hhuseyin@selcuk.edu.tr

ABSTRACT
Field experiments were conduct to establish the effect of *Rhizobium* inoculation, Zinc application on yield and yield Components the availability of macro and micro nutrients (N, P, K, Ca, Mg and Cu, Zn, Mn, Fe) in *Phaseolus vulgaris* L. In field experiments, *Rhizobium* inoculation significantly improved both some component and uptake of macro and micro nutrients uptake in leaf and grain. Supplying Zn at 6 and 12 ppm significantly increased Mo uptake but reduced that of Mn, Fe, Cu, Zn and B in the leaf and grain of *Phaseolus vulgaris* L. compared with the zero control. The uptake of Mn and Fe were significantly reduced in treatments supplied with Zn at 6 and 12 ppm relative to the zero control.

Keywords: *Rhizobium*, inoculation, zinc, dry bean, nutrient uptake

160 ZOOPLANKTON VARIABILITY AS A RESPONSE TO VARIATIONS IN THE LIVING CONDITIONS IN A MAN-MADE LAKE AS BOVILLA RESERVOIR

Enkeleda Nikleka (Llukovi)[1], Spase Shumka[1], Rozeta Hasalliu[2]

[1]*Agriculture University, Faculty of Biotechnology and Food, Department of Biology- Chemistry , Tirane, Albania.*
[2]*Agriculture University, Faculty of Biotechnology and Food, Department of Technology, Agrofood, Tirane, Albania*

Email: ledanikleka2002@yahoo.com

ABSTRACT
In May 2006 was implemented an interdisciplinary study for Bovilla reservoir (the main drinking water storage for at least 800 000' inhabitants in the capital city of Albania) and nearby region, having as main aim the evaluation of water quality depending on different parameters (physical, chemical, phytoplanktonical, zooplanktonical, and microbiological). Being rather younger, ten years old, and with such important status, it was the time for studying different changes, which might have starting, in the physical and biological processes. The data presented here are part of that big project (*project nr.IB7320-111032; 71'880 CHF, SCOPES 2005- 2008),* presented in different papers since then.*Sampling data were taken every two months in two years (May2006-May 2008), in the deepest station and also two other stations for the first year, using* Ruttner (Hidro- Bios) 2L, filtrated with Nanzen 25µm, and preserved with formaldehyde 4% (for zooplanktonic samples).Based on the sensitivity to some physical and chemical conditions allow using rotifers and other zooplankton species as bioindicators of aquatic ecosystem saprobity. *As it mentioned in different scientific papers related to topic,* changes in zooplankton species composition along the environmental gradients of trophic state and abiogenic turbidity are highly significant. *From the results it is shown that the greatest number of taxons is found for Rotifers group than the other two, but the total density of individuals shows that Copepoda and than Cladocera are the dominat groups with 85- 90% of whole samples.* We got a list of 26 species from the group of Rotifera,11 Cladocera, and 7 Copepods including copepodit and nauplii stages, where almost all are cosmopolitan species, but still few of them have been spread through all the year. These most dominant species were: *Keratella cochlearis*, *Keratella quandrangula*, *Kellicotia longispina,* and *Polyarthra trygl*a; even in a low densities compare to the other groups of zooplankton that were studied. They are quite tolerant species from changes of temperatures, pH, but the distribution of them follows the distribution of oxygen, or other food sources mostly in the upper layers (3 to 5 meters). *Taxons dealing mostly for other two groups were: Bosmina longirostris F.typical, Diaphanosoma brachiurum, Ciclops vicinus Mesociclops leucarti and Nauplii and Copepodit stage. The presence of cosmopolitan species found, the low diversity and density of zooplankton , but not only, was the result of newly age of this water body (only ten years old). The distribution of zooplankton in depth, depending on other physical and chemical, as well as food source, counts for 27.55% at 10 m to 25.54% at 15 m.* Saprobiological analysis showed that the investigated area during these periods had values from 1.2 to 2.5, which correspond to I, and I- II water category.

Key words: Bovilla reservoir, rotifer, cladocer, copepod, composition , bioindicator, water quality etc.

161 TOXICITY EVALUATION OF LEACHATES FROM SOME URBAN WASTEWATER COLLECTORS OF SHKODRA USING *ALLIUM CEPA* L. TEST

Anila Mesi (Dizdari) [1], Ditika Kopliku [2], Suzana Golemi [3]

[1 2 3] *University of Shkodra "Luigj Gurakuqi„, Faculty of Natural Sciences, Department of Biology and Chemistry,*
Shkodër, Albania

E mail: aniladizdari@yahoo.it

ABSTRACT
Open dumps having not well isolated walls, direct intrusions to collectors from construction industry and the abscence of waste waters treatment are present anywhere in Shkodra city, Albania. Their leachates percolate the soil and can contaminate groundwaters and provide danger for biota and population of Shkodra lake basin. The purpose of this paper was to evaluate

the toxic impact of solid waste leachates from some Shkodra city wastewater collectors, using *Allium cepa (L.)* test. Raw leachates were taken from: Rusi vegetable market (RVM), University campus (UC), a center city domestic dumpsite (CCD), main collector runoff to the lake (MCL) open dump sites. The onion bulbs were grown in 1%, 2.5%, 5%, 20% concentrations of each leachates sample. Cyto and genotoxic parameters as: Mean root length (MRL), 50% toxic effective concentration (EC_{50}), Mitotic Index (MI) and chromosome aberration (CA) rate and types were evaluated. All parameter values were compared with tap water control sample ones. Growth restriction was present in all the leachates increasing the concentrations. The ascending order of MRL and MI values at all concentrations was: CCD<RVM<UC<MCL. The EC_{50} values were reached at: 2.9% (MCL), 3.5% (UC), 5.5% (RVM) and 6.2% (CCD) leachates concentration. The most frequent types of CA were: stickiness, chromosome breaks and fragments, laggard and ring chromosomes. There was a linear relationship between root growth inhibion and genotoxicity parameters. These results indicates the presence of toxic substances in all examined wastewater dump sites leachates, which can seriously threat urban and lake ecosystems health.

Key words: *Allium* test, leachates, Shkodra wastewaters, citotoxicity, genotoxicity

162 TOXICITY EVALUATION OF LEACHATES FROM SOME URBAN WASTEWATER COLLECTORS OF SHKODRA USING *ALLIUM CEPA* L. TEST

Anila Mesi (Dizdari) [1], Ditika Kopliku [2], Suzana Golemi [3]

[1 2 3] *University of Shkodra "Luigj Gurakuqi„, Faculty of Natural Sciences, Department of Biology and Chemistry,*
Shkodër, Albania

E-mail: aniladizdari@yahoo.it

ABSTRACT

Open dumps having not well isolated walls, damages and direct intrusions to collectors from construction industry and the abscence of waste waters treatment, are present anywhere in Shkodra city, Albania. Their leachates percolate the soil, can contaminate groundwaters and provide danger for biota and population of Shkodra Lake basin. The purpose of this paper was to evaluate the toxic impact of raw waste leachates from some Shkodra city wastewater collectors, using *Allium cepa (L.)* test. Leachates were taken from: Rusi vegetable market (RVM), University campus (UC), a center city domestic (CCD) and the main collector runoff to the lake (MCL) open dump sites. The onion bulbs were grown in 1%, 2.5%, 5%, 20% concentrations of each leachates sample. Cyto and genotoxic parameters as: Mean root length (MRL), 50% toxic effective concentration (EC_{50}), Mitotic Index (MI) and chromosome aberration (CA) rate and types were evaluated and compared with respective values of tap water control, using x^2 test. Growth restriction was present in all leachate samples increasing the concentrations. The ascending order of MRL and MI values at all concentrations was: CCD>RVM>UC>MCL. The EC_{50} values were reached at: 2.9% (MCL), 3.5% (UC), 5.5% (RVM) and 6.2% (CCD) leachate concentrations. There was a linear relationship between root growth inhibion and genotoxicity parameters. The most frequent types of CA were: stickiness, chromosome bridges and fragments, laggard and vagrant chromosomes. These results indicated the presence of toxic substances in all examined wastewater dump sites leachates, which can seriously threat Shkodra urban and Lake ecosystems health.

Key words: *Allium* test, leachates, Shkodra wastewaters, citotoxicity, genotoxicity

163 INVESTIGATION OF WASTEWATER CHARACTERISTICS OF PISTACHIO PROCESSING WASTEWATER

Dünyamin Güçlü*, İzettin Şahnali, Elif Gökbel

Selcuk University, Department of Environmental Engineering, Campus, Konya, Turkey

Email: bguclu@selcuk.edu.tr

ABSTRACT
The pistachio processing plants generate various wastewaters to be treated before being discharged into the environment. During the pistachio production, a large quantity of waste water is discharged, making the pistachio processing plants one of the most serious polluting industries. The aim of this study is to investigate wastewater characteristics one of the pistachio processing plants in Turkey. By taking the conditions of current regulations and measures into account, the results were presented and discussed for comparison purposes

Keywords: Pistachio, wastewater, wastewater characterization, Chemical oxygen demand (COD)

164 DATA ON MACROZOOBENTHOS OF THE ROCKY COAST OF ORIKUM

Denada Kasemi

Faculty of Technical Sciences, "Ismail Qemali" University of Vlora

Email: kasemid@yahoo.com

ABSTRACT
Macrozoobenthos of shallow rocky coast of Orikum area (south-eastern part of Vlora Bay) has been studied, focusing on the supralittoral, mediolittoral and upper part of the infralittoral, during 2006 – 2008. This study gives data on species composition of macrozoobenthos and a general assessment of quantitative characteristics, seasonal variations and stability of zoobenthic populations in the studied area. A total of 62 species has been recorded, with a high dominance of mollusks, among other species of crustaceans, annelids, cnidarians and plathelmintes. The crustacean *Maera inaequipes* has been reported for the first time for Vlora Bay. Seasonal variations were high, with a bigger number of species and higher abundance in autumn season. Algal coverage seems to play an important role for the species composition and abundance of zoobenthos in Orikum coast. Stability of zoobenthic community was low and this situation may be related to the high human impact in the recent years, vegetation cover and the substrate typology.

Key words: macrozoobenthos, rocky coast, Orikum, Vlora Bay.

165 DATA ON MALACOFAUNA OF SHALLOW ROCKY COAST OF UJI I FTOHTE

[1]Denada Kasemi, [2]Stela Ruci

[1]Fakulteti of Technical Sciences, "Ismail Qemali" University of Vlora
[2]Fakulteti of Natural Sciences, Tirana University

Email: kasemid@yahoo.com

ABSTRACT
Malacofauna of shallow rocky coast of Uji i Ftohte area (southern part of Vlora Bay) has been studied, focusing on the supralittoral and mediolittoral, during 2006 – 2008. This study gives data on species composition of malacofauna and a general assessment of quantitative characteristics, seasonal variations and stability of molluscs' population in the studied area. A total of 50 mollusc species has been recorded, where trochid gastropods (Fam. Trochidae) were predominant in both species number and abundance. Seasonal variations were high, with a bigger number of species and higher abundance in fall season. Algal coverage seems to play an important role for the species composition and abundance of malacofauna in Uji i Ftohte coast. Stability of molluscs' population was low and this situation may be related to the high human impact in the recent years in this area.

Key words: malacofauna, rocky coast, Vlora Bay, Uji i Ftohte.

166 THE EFFECT OF DIFFERENT SOURCES AND LEVELS OF SELENIUM ON MEAT QUALITY AND FEATHERING OF BROILER CHICKENS

Rabia Göçmen, Oktay Yazgan, Yusuf Cufadar

Department of Animal Science, Faculty of Agriculture, University of Selcuk, 42079, Kampus, Konya, Turkey

Email: seldauzal@selcuk.edu.tr

ABSTRACT
This experiment was conducted to determine the effect of sources and levels of selenium (Se) supplementation on meat quality and feathering of broilers. The experimental diets were prepared by adding certain amounts of organic (Sel-Plex-50) and inorganic Se (sodium selenite) sources which will be provided 0, 0.15, 0.30 and 0.60 ppm Se in basal ration. The treatments were not significantly influenced on thigh and breast values of pH, hardness (penetrometer value), color criteria (L, a, b) and cook loss parameters. Main effect of selenium levels and sources on water holding capacity (WHC) of breast and main effect of selenium levels on WHC of thigh were significant ($P<0.01$; $P<0.05$). Feathering score of the birds which were fed with diet added with organic selenium was greater than the birds fed with diet added with inorganic selenium sources. In conclusion, Se supplementation of broiler diets was not effect meat quality. The supplementation of organic Se sources was improved feathering.

Keywords: Broiler, meat quality, feathering, selenium.

167 HAZARDOUS WASTE MANAGEMENT AND ENVIRONMENTAL RISK ASSESSMENT

Mehmet Emin Argun[1,*], Selim Doğan[1]

[1] *Department of Environmental Engineering, Engineering Faculty, Selçuk University, 42003 Selçuklu-Konya, TURKEY*

Email: argun@selcuk.edu.tr

ABSTRACT:
The World has faced to hazardous materials and wastes during last century and every day big amounts of them have been produced a result of various industrial product or byproduct. Hazardous wastes have a big amount of potential risk on ecosystem and human health. Effects of some hazardous wastes even reach to the size of environmental disaster. Hazardous waste management has been an important issue for governments with respect of economics and pollution control. Many times, a good education, risk assesment and waste management prevent to form disaster and decrease hazards. Also, it provides economic benefits according to applications after disaster. This study focused on the hazardous waste identification and environmental risk assessment.

Keywords: Hazardous waste, management, environment, risk assessment

168 DIVERSIFICATION OF THE ENERGITIC RESOURCES AND THE UTILISATION OF BIODIESEL IN ALBANIA

Bujar Seiti*[1], Arjan Korpa[1], Dritan Topi[1], Kledi Xhaxhiu[1], Ismet Beqiraj[2]

[1]*Universitety of Tirana, Faculty of Natural Sciences, Department of Chemistry*
[2]*Universitety of Tirana, Faculty of Natural Sciences, Department of Industrial Chemistry*

Email: bujarseiti@yahoo.com

ABSTRACT
The utilization of energetic resources in its overall complexity plays a significant role in the sustainable development of the country. For a right balance of the energetic resources utilization it is important the evaluation and management of every resource separately (electric energy, oil, gas, renewable energy, etc.). For this purpose the implementation of state of the art technology is needed in order to cope with both the technical and environmental aspects. The utilisation of biodiesel is a real alternative for the diversification of the energitic market not only to cope with the needs of the consumers but also the obligations toward the European community. The

utilisation of alternative fuel reduces the CO_2 emmisions and is in line with obligations of Kioto protocol. The evaluations linked to the oil byproducts consumption in Albania indicate for a progressive increament with an annual average of 2.2 %. This consumption per habitant though high is relatively low compared to the quantities consumed in Europian countries. It is 5-6 times lower than in the European developed countries and 2-3 times lower than the East and Central European countries. Currently the import of hidrocarbon products in Albania fulfills approx. 60-62% of the market needs. The data indicates that the consumption of hydrocarbon products rises steadily with an average annual rate of approx. 7% in the last years, whereby the main contribution is played by the fuels at approx. 70-75%. Among the alternative energetic products that are those days widespreading in the world market are the alternative burning fuels obtained from biomass, known as biofuels. They are efficiently compensating and replacing the common fuels.

Keywords: renewable energy, biodiesel, hydrocarbon products, green house

169 ENERGY EFFICIENCY AND RENEWABLE ENERGY SOURCES – BENEFIT FOR THE AGRICULTURAL SECTOR IN THE REPUBLIC OF MACEDONIA

Marina Petrovska[1], Dejan Filiposki[2], Svetlana Petrovska[3]

[1] Institute of Agricultural Economics, Faculty of Agriculture and Food, University "Ss. Cyril and Methodius", Skopje, Republic of Macedonia
[23] CeProSARD, Center for promotion of sustainable agricultural practices and rural development, Skopje, Republic of Macedonia

Email: marina2002mk@yahoo.com

ABSTRACT
The agricultural sector is of great importance for the Republic of Macedonia. It covers 10% of the total GDP and almost 20% of the total employees in the country. Today, farmers face difficulties in achieving efficient production and selling their products on the international markets. The reasons are numerous, and the most important are climate changes (high temperatures, floods, and droughts), international agricultural policies and competitiveness between farmers. These challenges are the reason to ask "how to improve conditions in the agricultural production and thereby to increase the benefit of farmers". Therefore, this paper aims to emphasize the necessity of using renewable energy sources and energy efficiency implementation in the agricultural sector in the Republic of Macedonia. The purpose is to increase the awareness of farmers that the properly utilisation of energy and environmental friendly practices can increase the efficiency of production and provide bigger benefits to farmers. The research gives an explanation of terms of energy efficiency and different types of renewable sources of energy, followed by the possibilities for their implementation. The survey is based on the analysis made on the existing farms and the use of efficient and environmental friendly energies in different agricultural sub-sectors in the country. At the end, the use of those technologies is explained and confirmed, not only with the economic benefit to the farmers, but also with the benefit to the whole environment.

Keywords: Agricultural sector, economic benefit, energy efficiency, renewable energy sources, Republic of Macedonia.

170 EFFECT OF DIFFERENT CALCIUM SOURCES ADDITION TO DIETS ON PERFORMANCE AND EGG SHELL QUALITY IN LAYER HENS

Arzu Erol[1], Yusuf Cufadar[2]

[1] Lalahan Livestock Central Research Institute, Ankara, Turkey
[2] University of Selçuk, Faculty of Agriculture, Department of Animal Science, Konya, Turkey

Email: seldauzal@selcuk.edu.tr

ABSTRACT
An experiment was conducted to determine the effect of different calcium sources addition to diets on performance and egg shell quality in layer hens. In the experiment, 198 brown laying

hens at 44 week of age were randomly assigned into 11 treatments groups. The experiment, different levels of limestone, oyster shell and egg shell were tested with 11 different diets with six replicates per treatments and three hens per experimental unit. Large particle sizes of the limestone, oyster shell and egg shell were between 2 to 5 mm. Different calcium sources addition to the laying hens diet were not significantly effect on body weight change, egg production, egg mass, feed intake, feed conversion ratio, egg specific gravity, egg shell weight, egg shell thickness and egg shell breaking strength (P>0,05). Dietary different calcium sources were significantly effect on egg weight (P<0,01).The result of this study that oyster shell and egg shell to the brown laying hens diets can be used instead of half of the limestone as a source of calcium adversely affecting performance and eggshell quality.

Keywords: Egg shell, egg quality, layer hens, limestone, oyster shell, performance

171 THE ECONOMIC ASPECT IN THE ECOSYSTEM

Fehmije Deliaj[1], Naim Tahiriaj[2] Shefik Imeri[2]

[1]Kosovo Customs – Republic of KosovoStreet " Mujo Ulqinaku" 10000 , Prishtinë, Kosova
[2]New Co Ferronikeli,Drenas,13000,Drenas

Email: fehmije.deliaj@customs-ks.org

ABSTRACT
One of main challenges of Kosova to participate in European Union are the environmental request of EU, accordance with existing legislation and their new standards. To ensure that in accordance with EU normative our country should have lot of internal financial sources (from private sector) and external as well. Interest and susceptibility for Environmental have hade positive impact in increasing of improvements of life conditions. National Priority in environment field is covering all the components: quality of air, specially drinking water and treatment of sewage. Sam of instruments for stimulation and implementation of reforms, which has to do with environment are economical instruments environment impact. Economical and social activity for all social category have right in ownership, ensuring to the national authorizing persons, access in planning, basing in market request and social needs.Citizenship in general are aware for their roll on environment protection, which show that the future is very hopeful and all problems will be solved successfully.

Key words: Citizenship, economical development, social needs, environment

172 PLACE OF ENVIRONMENTAL EDUCATION IN UPPER-SECONDARY SCHOOL CURRICULUM:THE CASE OF NATURAL SCIENCES IN FORMING KNOWLEDGE AND ATTITUDES TOWARDS ENVIRONMENT

Arjan Shumeli*, Albert Kopali

Department of Environment and Ecology, Faculty of Agriculture and Environment, Agricultural University of Tirana

Email: shumeli2012@gmail.com

ABSTRACT
It is common knowledge that education plays an important role in fostering students' attitudes towards environment. The examination of environmental literacy at the school level is very critical in determining appropriate future actions as responsible citizens of environment. Natural sciences occupy a significant place in environmental education, because students acquire knowledge about physical world as well as about quality and quantity of environmental resources along with threats posed to sustainability. The current study examines the types of literacy associated with environment: *functional*, *cultural* and *critical* ones. The study examines closely school textbooks in order to evaluate frequency of environmental topics across natural courses to be followed closely by the administration of a questionnaire which is intended to evaluate attitudes of thirty high school students towards environment. The study is indicative of a common trend as elsewhere in Europe where theme-based approaches to environmental

education is pretty much the case. The study also indicates that there is a significant improvement in development of environmental education in Albania with the introduction of "*Earth Science*" as compulsory course in the first year of upper-secondary education. The findings resulting from the questionnaire on assessing students' attitudes towards environment shows huge inconsistencies between theory and application of environmental knowledge.

Key words: education, physical world, environmental awareness, degradation, pollution

173 EFFECTS OF DIFFERENT SOIL MANAGEMENT PRACTICES ON PRODUCTION AND QUALITY OF THE FRANTOIO CULTIVAR IN VLORA'S REGION - ALBANIA.

Bardhosh Ferraj[1], Ramo Merkohitaj[2], Adhurim Laze[2], Lush Susaj[1], Jorgji Stase[3]

[1]Agricultural University of Tirana, Horticultural Department, Tirana, Albania.
[2]Agricultural Technology Transfer Center of Vlora, Albania.
[3]Agricultural Technology Transfer Center of Fushw Kruja – Albania.

E-mail, bardhoshvl@yahoo.it

ABSTRACT
The experiment was conducted in three consecutive years from 2001 to 2004, in Vlora region, South of Albania, in a 25 years old olive grove, planted with a local cultivar named "Frantoio". The plot was situated in a uniform hill with a sloping gradient of 5 to 6%, and a planting density of 200 plants ha^{-1} (7 m x 7 m). A randomized complete block design (RCBD) with 5 replications and plot size of 245 m^2 containing 5 olive trees was used. The weather was dry in the summer with a typical Mediterranean distribution of precipitation from autumn to spring, and no irrigation was conducted throughout the whole experimental period. Several crop management practices were applied; conventional (no intervention, fallow and grazing), chemical control (glyphosate and diuron applications) and organic (cover crop and straw mulching). Production of olives per plant (POP), drupe mean weight (DMW), drupe oil content (DOC) and drupe oil acidity (DOA) were recorded for a 3 year period. The different soil management practices influenced the olive production per plant and drupe oil content under rain fed growing conditions. Compared to common conventional farmer practices, organic soil management practices and chemical control of weeds provides higher yield due to reduced competition of olive tree for soil water reserves, thanks to reduced number of weeds, and improved soil physical properties. Organic mulching and mixed leguminous cover crops seems to be the most sustainable practices in terms of yearly production and nature preservation.

Keywords: organic mulchin, leguminous cover crop, weed chemical control, fallow, grazing, olive oil quality.

174 STUDY AND CONSERVATION OF GENETIC MATERIAL FOR SOME MEDICAL PLANTS

Vasillaq Mine1, Admir Seci2, Oltion Marko3

1 Agricultural University of Tirana, Faculty of Forestry Science, Department of Forest, Tirana-Albania
2 Ministry of Environment, Forest and Water Administration, Directory of Forest and Pasture Policy, Tirana-Albania
3 Polytechnic University of Tirana, Faculty of Civil Engineering, Department of Environmental Engineering, Tirana-Albania

E-mail: omarko_78@yahoo.com

ABSTRACT
Our country favorable because of his climatic-pedologic conditions, has a great variegation of Ethero-oil and Medicinal plants.The biggest Surface of this plants is spread in Castanetum Zones around 37% and Fagetum Zones around 27%.In a lot of Zones to have the maximum of benefit has been done an exertion out of all due norms and criteria's for their collection,that is doing that a big part of this natural richness is erected to become little and then to extinction.To have the possibility to conserve a considerable quantity of the plant genetic material about 3 cultures

has been done the study of biologic material and some characteristics and behavior of this vegetation. There has been pronounced the best ways for cultures breeding and cultivation: Origanium vulgaris, Salvia officinalis, Lavandula officinalis .The refreshes has been done and has been acquired a considerable quantity of seeds which will be used in a certain moment for breeding as the only hope to conserve the genetic resource in a natural controlled environment.

Keywords: environment, genetic, material, resource, plant.

175 DOES THE TROPHY STATE OF POLLUTED AREAS HAVE IMPACT ON THE PRESENCE OF PICOPHYTOPLANKTON SPS ? – CASE STUDY IN MARINE COASTAL WATERS OF DURRES BAY, ALBANIA

Ariola Bacu[1],Fatbardha Babani[1]

[1]*University of Tirana, Faculty of Natural Sciences, Department of Biotechnology*

Email: ariolabacu@yahoo.com

ABSTRACT
The aim of the study was the use of molecular tools for the determination of the presence of picophytoplankton species, and the evaluation of their distribution in Bay of Durres, were sampling stations represent hot spots of different origins of pollution, like urban waste waters, portual residues, fuels, etc. *Synechococcus* and *Prochlorococcus* are two genera of photosynthetic prokaryotes evolving oxygen as a major component of oceanic ecosystems. These organisms form phototrophic picoplankton (<3µm). The presence of marine *Synechococcus* and *Prochlorococcus* in the Mediterranean coastal waters of Durres, Albania was examined through PCR amplified intergenic transcribed spacer (ITS) fragments. The sample stations were: Golem Beach, Channel of Plepa, Hekurudha Beach, Ex-Fuel Quay in Marine Durres Harbour. Two more samples were taken outside Durres Bay respectively at the Channel of Durres City Waters and Currila Beach. The distribution and ecology of *Synechococcus* and *Prochlorococcus* were studied in relation to biotic and abiotic water factors. Total Chlorophyll a (Chl a) (biotic factor) was used to classify the stations as oligotrophic, mesotrophic and/or eutrophic. Abiotic factors as temperature, pH, salinity, dissolved oxygen content, turbidity, macronutrient (N and P) were used to explain the variability of the presence of marine *Synechococcus* and *Prochlorococcus* populations in the waters of Durres Bay.

Key Words: *Prochlorococcus*, *Synechococcus*, Durres Bay, 16-23S rDNA internal transcribed spacer, biotic and abiotic water factors.

176 COMPARATIVE STUDY OF SOME HYBRID'S CULTIVARS OF SUNFLOWER IN ALBANIA

Nikoll Bardhi[1], Petraq Bame[2], Foto Kashta[1],Erta Dodona[1], Artan Sota[2], Agim Rameta[2]

[1]*Department of Crop Production, Faculty of Agriculture and Environment, Agricultural University of Tirana, Albania*
[2] *Agriculture Directory, Lushnja, Albania*

Email: bardhi.nikoll@yahoo.com

ABSTRACT
Sunflower is olive plant with high economic value. Its seeds are used widely in industry of nutrition oils. Sunflower's oil has considerable quantities of proteins, vitamins, oleic acids, linoleik acids. In different countries genetic improvements of sunflower was given a very special importance, such as cultivar's and hybrid's study to appropriate in different cultivation aeries.The aim of this study is the comparative and the evaluation of hybrids and cv, autochthones and not, in appropriation with ecological conditions. Are studied 8 cv and hybrids in Albania and the best of them will be able to increase the production. Cv. *Përpara CV.* is selected to be the sample. The experiment is carried out according random scheme with 8 variants in 4. Experimental hybrids are of higher capacity than nowadays cv.According the study's data hybrids N-S-H-111, NS-H-43, have very higher oil content. That's the reason of recommendation to the farmers. There are differences between hybrids in pheno-phases but

especially in blooming and going on to ripen except Cv. *Përpara CV.* which has a difference for 8-9 days. In blooming phase all hybrids are unified but the first of them is hybrid Olivko Cv. with 2-7 days precocity than the others. The same phenomenon is determined also in the other cv.

Key word: Sunflower cultivar, randomized block, scone.

177 EVALUATION OF NEW VARIETIES OF POTATO (*SOLANUM TUBEROSUM* L.) IN COASTAL-WESTERN ZONE OF ALBANIA.

Nikollaq Bardhi[1], Krenar Xhela, Artan Sota, Agim Rameta

[1]*Department of Crop Production, Faculty of Agriculture and Environment, Agricultural University of Tirana, Albania*

Email: bardhi.nikoll@yahoo.com

ABSTRACT:

Eight potato varieties (Agata, Junior, Prior, Premier, Impala, Ausonia, Arinda and Liseta) coming from the Netherlands were used the present experiment during 1995 to 1997, to evaluate their adaptation and the productive potentiality. The phenology and several morphogenetic parameters for each variety were observed during the plant growing (height of plants, number of stems, mean size and mean weight of tubers) together with tuber yield. The eight varieties were divided in two main precocity classes according to the harvest period: early varieties (Agata, Junior, Prior, Premier) that were harvested when about 600 Growing Degrees Day (GDD) were accumulated and the late varieties (Impala, Liseta, Arinda and Ausonia) when about 900 GDD were accumulated. Agata was the most productive of the first class (44.1 t ha-) and Arinda and Liseta of the second one (48.6 and 45.1 t ha-1, respectively). The economic output of each variety was evaluated: Arinda, Agata and Liseta were the most cost-effective with a net income of about 7.500 € ha-1. In addition it is necessary to consider the low cost of labour and land lease which have a remarkable influence on the net income as well as the breaking up of land into small plots. In conclusion, for most of the varieties the profit increased with the yield because of fixed management costs.

Keywords: adaptability, growth, precocity, tuber yield, Divjaka

178 DETERMINATION OF SOME TOXIC ELEMENTS OF THE RIVER LUMBARDHI (KOSOVO) BY ICP-MS TECHNIQUE

Fatmir Faiku*, Arben Haziri, Fatbardh Gashi, Naser Troni

Department of Chemistry, Faculty of Mathematical and Natural Sciences, University of Prishtina, Republic of Kosovo

Email: f_faiku@hotmail.com

ABSTRACT
Enormous progress has been made over the last two decades with respect to the knowledge of distributions and chemical behavior of trace elements in earth hydrology. The main goal of this research was to analyze some environmental toxic elements downstream the river were they end up as natural recipients. Sampling of water was performed at 21. 05. 2011. For determination of Cu, Zn, As, Cr, Mn, Fe, Ni, Sb, Cd and Pb in water of River's Lumbardhi (Deçan) we have used ICP-MS technique. Samples were collected in different pollutions places, and sampling sites are geographically positioned using Geographic Information System (GIS). The concentrations of metals: Cu (4.6-12.9 μg dm^{-3}), Zn (9.1-65.9 μg dm^{-3}), As (0.49-0.71 μg dm^{-3}), Cr (0.5-1.8 μg dm^{-3}), Mn (7.8-49.1 μg dm^{-3}), Fe (110-270 μg dm^{-3}), Ni (0.9-3.7 μg dm^{-3}), Sb (0.09-0.36 μg dm^{-3}), Pb (1.46-8.87 μg dm^{-3}) and Cd (0.03-0.17μg dm^{-3}) presented the approcsimative value in the different samples points and results are compared with the value of elements after physical and chemical treated. Also the results have been compared with WHO and DEU standards.

Key Words: Lumbardhi river, water quality, eco-toxic elements, ICP-MS.

179 INDOLE ACETIC ACID IMPACT (AIA) TO IMPROVE GERMINATION POWER OF PALM

Edlira Kukali[1], Majlinda Kasmi [2], Efigjeni Kongjika[1]

[1]Hortikulture Department, Faculty of Agriculture and Environment, Agricultural University of Tirana
[1]Albanian Academy of Science

Email: ekukali@ubt.edu.al; kongjikaef@yahoo.com

ABSTRACT
In a period of 3 years experimented and perform proficiency evaluation of seed germination of three palms: Washingonia filifera, Chamareops humilis and Phoenix daxtylifera. Experimented under the action of AIA 200 PPM sol hydro alcoholic and Control; immersion 24 hours. Were examined 100 embryos seeds, number and length of radicle? Statistical analysis consisted for the diversity of values and correlations for germination capacity, type and impact of AIA. Palma Ch. Humilis, Ph. W filifera Daxtylifera treated with 200 PPM AIA, have had 94 %, 93 % and 97 %, germination when control was: 46%, 44% and 51%. Hormonal effect is 48%, 49% and 46% respectively for the three dates .Influence of AIA has been the ability simultaneously to germination and growth of the numbers of radicle compared with control. Ch Humilis 9.6 to 1.9, Ph Daxtylifera 4.4 to 4.1 and 2.5 to 1.6 W filifera roots. Coefficient variation in each repetition was 1.7, 2.01 and 2.9 % when between alternatives has resulted in 21.7%, 33.4% and 29.6% . Regarding the impact on length, it seems that for every 4.1 average root length were linear size of 10.9 cm with a standard deviation 3.5 and 6.9 and a coefficient of r = 0:23 correlation.

Key words: Germination, AIA, *Washingonia filifera, Chamareops humilis* and *Phoenix daxtylifera*

180 A SURVEY ON THE UTILIZATION OF BIO-INDICATORS FOR THE EVALUATION OF THE ENVIRONMENTAL QUALITIES IN AGRO-ECOSYSTEMS

Albert Kopali[1], , Velesin Peçuli[1], Enver Isufi[2],Arjan Shumeli[1], Simir Krasniqi[3]

[1]Department of Agro-environment and Ecology, Agricultural University of Tirana, Tirana, Albania
[2] Institute of Biological Agriculture, Durres, Albania
[3]Department of vocational education, Prizren, Kosovo

Email: albertkopali@yahoo.it

ABSTRACT
Biodiversity, available to us, as of today, is an outcome arrived at by a process of evolution of life on earth. There occur various processes including the process of extinction and the emergence of new species. But the progressive increase in the extinction of species is heavily influenced by the human activity, which on top of eco-systems is verified even in agro-eco-systems. The considerable changes which have been happening in the field of agriculture have irreversibly upset the equilibrium already existing between agriculture and bio-diversity. Many species, hailed as '*key species*", which carry out fundamental roles, are directly interrelated with agriculture. The measurement and evaluation of their functional roles in agro eco-systems has a direct influence on the productivity, sustainability, and the environmental qualities of agro-ecosystems. The ecological function of species might be significant in the evaluation of biodiversity and their presence might very well be an indicator of the peculiar characteristics of the environment, hence the name for biological indicators. They might easily help create an idea about biodiversity both in the environment and agro-ecosystems. In particular, over the last ten years or so the use of bio-indicators has been hugely encouraged, which is nothing short of a species or a combination of species with special demands and with a combination of physical or chemical variables. This study analyzes a system of bio-indicators at various levels which will in turn reduce the biological complexity and its influence on two types of agro ecosystems (traditional and conventional) alongside the consequences to the environmental quality and its sustainability.

Key words: agro-ecosystem, bio-indicator, species, biological complexity

181 ASSESSMENT STUDY OF FOREST ECOSYSTEMS FOR TOURISM DEVELOPMENT IN KUKES REGION

Vasillaq Mine[1], Luljeta Zylaj[2], Admir Seci[3]

[1,2]Faculty of Forestry Sciences – Agricultural University of Tirana
[3] Ministria e Mjedisit, Pyjeve dhe Administrimit të Ujrave

E-mail: vasillaqmine@yahoo.com

ABSTRACT
This assessment study provides the basic information needed to formulate the strategic recommendations that will be presented in the tourism development plan. A team of consultants from different fields of expertise was appointed to complete this study, comprising specialists in the following areas: Tourism development; Environmental protection; Forest management; Culture and arts; Small and Medium-sized Enterprises (SME) development. The study concluded that the Kukes Region has sufficient strong assets to attract tourists, especially its outstanding natural resources of mountains peaks, alpine pastures, deep valleys and gorges, and spectacular lakes and rivers. However, tourism is not yet well developed. It is an emerging industry in the Valbona Valley where several guesthouses have opened and in Kukes City as the capital of the region which has a number of hotels, mostly catering to the business community. The environment of the Kukes Region is currently seriously threatened, damaged by pollution, neglect and vandalism which, if not checked, could become irreversible thus destroying the very assets that tourists are attracted to in the Kukes Region. The assessment study concludes with the analysis of the Kukes Region's Strengths, Weakness, Opportunities and Threats for the development of tourism and for the support and promotion of the environment, setting out the basis for the formulation of the tourism and environment promotion strategy.

Key words: ecotourism, forest and pasture environment, natural resources.

182 ORIGINS AND IMPLICATIONS OF DRINKING WATER ODOURS IN BOVILLA RESERVOIR

Loreta Vallja[1], Alqi Çullaj

Department of Chemistry, Faculty of Natural Sciences, University of Tirana

Email: lvallja@yahoo.com;

ABSTRACT
The relationship between commonly measured limnological parameters and odours was examined in Bovilla reservoir used as source for drinking water. Since 2001 the Bovilla drinking water treatment plant, has been facing taste and odor problems usually during fall and winter time up to early spring. The nuisance, often quite severe, could only be removed by using advanced and costly treatments through adsorption on activated carbon.It was found that there is an obvious relation between the unpleasant smell and taste periods and the stratification situation: smell starts when stratification begins to weaken, and it ends after the overturn when stratification is again establishing. Maximum values of turbidity and rainfall, a gradual increase of the pH and maximum values of phosphate and iron concentrations have been observed during the smell and taste periods.Odour analysis was conducted using gas chromatography ion-trap mass spectrometry. It seems that neither geosmin nor 2-MIB were definitively present in the water at the sampling time, but an astonishing number of various VOCs were present included lower alcohols and aldehydes, borneol, butyl-4-methylcyclopentene, camphor, carvone, norpinon, pinocarvone, propyl¬cyclohexanone, alpha-terpineol, verbenon and mono- and sesquiterpenes. It was found that Carvone may be a dominating compound causing the smell.

Key words: Bovilla reservoir (Albania), limnology, drinking water, odor and taste, VOCs

183 PREDICTION OF POLLUTANT FORMATION IN DIESEL ENGINE THROUGH NUMERICAL SIMULATION

Altin Dorri

Polytechnic University of Tirana, Albania

Email: adorri@fim.edu.al

ABSTRACT
The need of simulations of diesel engine combustion is increased in order to predict pollutant formations and determine engine specifications. In this paper numerical technique through Computational Fluid Dynamics (CFD) codes was used in order to investigate thermo-fluid-dynamics field (velocity, pressure, temperature) in the combustion chamber. Another important objective was the possibility of modeling and prediction of pollutant formation during the combustion process in these engines. Mathematical model was based on the conservation equations of mass, momentum and energy (Favre-averaged Navier-Stokes equations). To close these equations system was add also: state relations equations, Renormalized Group Theory (RNG) k-epsilon turbulence model and spray mechanism model. Since processes in diesel engine have not only thermo-fluid nature but also chemistry, a special attention was for chemistry models for both chemical reaction simulation and for the chemistry models of pollutants. Formation of NO_x is predicted by Zeldovich mechanism. Soot formation relies on the nucleation, surface growth, coagulation and oxidation process. Result of simulation shown that thermal NO_x is seen at stoichiometric mixture fraction at high temperatures, while soot formation is seen fuel-rich and relatively low-temperature regions.

Key words: NO_x, pollutant formations, temperature regions

184 THE GEOLOGY AND GEOCHEMISTRY OF LATE CRETACEOUS VOLCANIC ROCKS IN THE SİNOP PROVINCE, TURKEY

Hüseyin Kurt , Çiğdem Atay Asan, Kürşad Asan

Selcuk Üniversity, Department of Geology Engineering, 42079 Konya, Turkey

Email: hkurt@selcuk.edu.tr

ABSTRACT
Sinop is situated on the Black Sea coast, Northern Turkey. The geology of Sinop region consists of the volcanic, the central mixed marine, and highland flysch zone. The North of the Sinop area is defined by two volcanıc masses Boztepe and İnceburun. Both volcanic masses formed under the Sea, based on the layers of marls interbedded with mixed volcanic rocks. The aged of the volcanics is Late Crateceous and included basalt, basaltic andesite, andesite, basaltic trachyandesite and pyroclastics. The incompatible trace element and REE patterns of study area volcanic rocks resemble to each other, indicating similar source area for the volcanits.The investigated volcanic rocks have medium enriched LREE and relatively flat HREE patterns.

Keywords:Geology, Sinop Province, volcanic rocks, Geochemistry

185 ENVIRONMENTAL IMPACT OF SHARRA LANDFILL, TIRANA, ALBANIA REGARDING WATER SYSTEM

O. Manastirliu, P. Lazo

University of Tirana, Faculty of Natural Sciences, Dept. of Chemistry, Tirana, Albania

Email: omanastirliu@gmail.com

ABSTRACT
Sharra landfill is designed and constructed in accordance with a quality system acceptable to Albanian legislation and operate on the basis of environment protection regulation, which

function in two stages - planning and operation. Some specific standards regarding landfill's operation are applied regarding some important chemical-physical parameters in ground water and surface water control. Some periodical controls are applied from the beginning of the landfill (before the year 2008) till now. It is clearly demonstrated the parameters under investigation are decreased several times and actually fulfills the approved standards. Most important parameters under investigation are: pH, NH4, NO3, NO2, conductivity, water hardness. Very high level of nutrients like NH4, NO3, NO2 are found on the beginning of the operation of the landfill. After intervention, the improvement on the leaching parameters is evident, followed by the drastically decreasing of the nutrients content in ground water and surface water systems. Ammonium content (NH4+) was the most critical parameter. It was found to be in very high level (fluctuated on the range between 0.15 to 100.0 mg/L) before the intervention and decreased highly reaching the normal level of 0.02 mg/L.

Key words: landfill, chemical-physical parameters, specific standards, environment protection

186 URBAN WASTE MANAGEMENT IN SHARRA LANDFILL, TIRANA, ALBANIA AND AN ASSESSMENT OF ENVIRONMENTAL PROBLEM

O. Manastirliu, P. Lazo

University of Tirana, Faculty of Natural Sciences, Dept. of Chemistry, Tirana, Albania

Email: omanastirliu@gmail.com

ABSTRACT
Sharra Landfill, near Tirana, was identified as 'hot spot', which may cause unacceptable human health risks. Considering the deplorable situation inherited from the past considerable efforts in improving urban waste management were done in Tirana area. Aiming to evaluate the environmental situation of Sharra's Landfill, the assessment of the following parameters are done: Chemical –physical parameters; Heavy metals; Organic pollutants. Most important parameters under investigation are: pH, NH_4^+, NO_3^-, NO_2^-, conductivity, water hardness, heavy metals and organic pollutants. Very high level of nutrients like NH_4^+, NO_3^-, NO_2^- and heavy metals like Pb^{2+} (0.001-0.076 mg/L), Cu^{2+} (0.001-0.0283 mg/L), Co^{2+} (0.01-0.351 mg/L) are found on the beginning of the operation of the landfill. After intervention, the improvements on the leaching parameters are evident, followed by the drastically decreasing of the nutrients content in ground water and surface water systems. NH_4^+ content was the most critical parameter; found to be in very high level of fluctuation (0.15-100.0 mg/L) before the intervention and decreased highly reaching the normal level of 0.02 mg/L. Pb^{2+} (<0.001 mg/L), Cu^{2+} (0.0007-0.0023 mg/L), Co^{2+} (n.d.), Cd^{2+} (<0.0001 mg/L) were drastically decreased by reaching the normal level of each element evaluated on the basis of Italian Standards, adapted as reference standard. The level of the investigated parameters turns Sharra area from a Hot Spot to a normal landfill.

Key words: landfill, environmental problem, human health risks

187 USE OF DIATOM AND INDEX TO EVALUATE THE WATER QUALITY IN OHRID LAKE

Kupe Lirika[1], Imeri Alma[1], Cara Magda[2], Kurti Dashnor[3]

[1]Department of Plant Production, Faculty of Agriculture and Environment, Agricultural University of Tirana,
[2]Department of Plant Protection, Faculty of Agriculture and Environment, Agricultural University of Tirana,
[3]Monitoring Institute of Water in Pogradec, Ministry of Environmental.

Email: lirika_kupe@yahoo.com

ABSTRACT
Ecological evaluation of Ohrid Lake is based in biomonitoring, especially in epileptic diatoms and aquatic macrophytes correlated with organic pollution and nutrient enrichment. Ten sampling sites were selected in the Ohrid Lake of Albanian side. The present study aimed at comparing diatoms and macrophytes indexes as bioindicators of water quality in Ohrid Lake. All two

organisms groups showed significant response to eutrophication organic or inorganic pollution gradients. Submerged macrophytes respond to changes in the nutrient concentrations in their environment. In contrast to diatoms e.g., submerged macrophytes are capable of taking up nutrients from both the sediment pore water and the overlying water. Individual species of diatoms have specific preference to habitat and requirement for water chemistry. In this study there appeared more epiphytic and oligotrophic species (such as *Cymbella* spp., *Gomphonema clevei*, *G. gracile* etc.) while more euplanktonic and meso- or eutrophic species (such as *Achnanthidium pusillum*, *Aulacoseira ambigua* etc.) toward sediment surface. Diatoms and macrophytes therefore function as integrators of environmental conditions to which they are subjected and thus can be used as long-term indicators with high spatial resolution.

Keywords: Biological monitoring, Diatom Index, Macrophytes Index, Nutrients, Water quality.

188 THE EVALUATION OF HEAVY METAL CONTAMINATION IN FISHES ANDMOLLUSKS SPECIES COLLECTED FROM ALBANIAN'S LAGOON.

Fejzo Selami[1], Anisa Aliaj[2]

[1] *Agriculture University of Tirana, Faculty of Veterinary Medicine*
[2] *University of Tirana, Faculty of Environmental Engineering*

Email: selami.fejzo@gmail.com

ABSTRACT
Fishes and mollusks are an important sources of food for humans and are a key component in many natural food webs. Fish and mollusks are also one of the sources of biologically valuable protein, fats and fat-soluble vitamins. The high quality protein of fishes and mollusks are better for health than that in meat and poultry. Fished mollusks an consists of 15-24% protein; 1-3% carbohydrate; 0.1-22% lipid; 0.8-2% inorganic substances and 66-84% water (Suzuki, 1981). Each of these is important for human health, growth and intelligence. This study was conducted to investigate the contamination of three heavy metals in the tissues of commercially important fish and shrimp species and to evaluate risks to human health associated with seafood consumption. The aim of this study is to provide information on the Cd, Pb and Cr levels in the muscle, liver and kidney tissues of species of fish and mollusk (*Merlucus melrucis, Cyprinus carpio, Mytillis galloprovincialis, Ostriches spp.)* .The fishes and mollusks samples for the metal determinations were collected at three sites in Butrinti Lagoon (Sarande) , Karavasta Lagoon (Lushnje), Vain (Lezhe).In addition, this study also attempted to compare the measured values with national and international standards for food and human health. The fishes and mollusks samples will to be analyzed for Cd, Pb and Cr levels with Absorbent Atomic (AA) in Toxicological Department in Food and Safety Institute. The results from this study will to be discussed with CE references about t the concentrations of Cd, Pb, and Cr in the liver, kidney and muscle.

Kew words: fish, mollusks, heavy metals, toxicology

189 STRATIGRAPHICAL AND STRUCTURAL POSITION OF THE HADIM NAPPE (CENTRAL TAURIDES: SOUTHERN TURKEY)

Ahmet Turan

Engineering and Architecture Faculty of Selcuk University, Department of Engineering Geology, Konya, TURKEY

Email: aturan@selcuk.edu.tr

ABSTRACT
The Hadim nappe occurs as shelf type carbonates of Late Devonian-Early Cretaceous age. It is completely allocthonous, and forms a flat lying nappe over the Maastrichtian-Early Paleocene ophiolitic mélange and Middle Eocene flysch/flyschoid. Lowest part of the nappe is made of Late Devonian shales, sandstone, and quartzites, with reefal and dolomitic calcareous intercalations while Carboniferous in the area is represented by abundant fossiliferous limestone and quartzite. The sequence in the nappe continues with Lower Permian biozone and lithozone, such as

Girvenella and Pseudoschwagerina zones, and Upper Permian sequences including 45-50 m thick quartzite level and quite thick algal shallow marine carbonates. Triassic units contain various shallow marine carbonates and clastics; In Lower Triass, stromatolitic limestone deposited conformably first on the Permian base, and continued with deposition of oolitic limestone, shales with various color, marl, and lamellibranche and gastropod-bearing limestone. Middle Triass is represented by plant-bearing sandstone, mudstone, and shale, with nodular limestone intercalations. Lias is characterized by red-colored and cross bedding sediments such as conglomerates, sandstones, and mudstones. These terrestrial sediments were deposited with angular unconformity in relation with Early Cimmerian orogeny. Sedimentation continued in Dogger-Malm with deposition of primarily dolomites and calcareous dolomites. However, limestones are becoming dominant at the top of Malm and in Early Cretaceous sequence.

Keywords: Central Taurides, Hadim Nappe, Girvenella biozone, lithozone, Early Cimmerian,

190 EDRAIANTHUS ALBANICUS LAKUŠIĆ, A NEGLECTED STENOENDEMIC SPECIES OF MOUNTAIN KORITNIK

Zeqir Hashani & Lulëzim Shuka

Department of Biology, FNS, Tirana University, Albania

E-mail: lshuka@yahoo.com

ABSTRACT
The Balkan Peninsula was considered as the center of diversification and speciation of Edraianthus genus. Within the Balkans, the Dinaric Alps and Šara-Korab Mts range are two main centers which hold the largest number of the species of this genus. Even though E. graminifolius subsp. albanicus Deg. & Kumm were recorded and described 90 years before on the Albanian part of Koritniku Mountain, it was not mentioned in the Flora of Albania and Flora Europaea books. In this paper, the poorly known species of E. albanicus Lakušić were taken in consideration and reported to occur also in the Kosovo part of the Koritniku Mt. However, the very narrow distribution areal in Koritniku Mountain makes it a stenoendemic species for both countries, Kosovo and Albania. The morphological differences and relationships between E. albanicus and other species of the genus Edraianthus that occurs in adjacent mountains of Pashtriku, Gjallica and Oshllak are presented and discussed too.

Key words: Kosovo, Edraianthus albanicus, distribution, endemic, Koritniku Mountain.

191 CONSUMER ANALYSIS AND ORGANIC OLIVE OIL SECTOR IN ALBANIA

Linda Luarasi

University of Tirana, Faculty of Natural Sciences, Department of Biotechnology

Email: linda.luarasi@gmail.com

ABSTRACT
Nowadays consumers are interested in ecologically-safe products due to health and environmental reasons as well as increasing concern about food quality. According to market research studies, olive oil is the most preferred organic product in the EU. Although in Europe and USA many studies focus on the organic sector, little is known about this topic in Albania. This research provides an insight into the Albanian organic consumers' attitude, a description of their perception for organic olive oil, and a general overview of the organic olive oil sector. A market survey, including an investigation on organic consumers and interviews to the main organic olive oil processors, was conducted in the main cities of Albania.The main results of the survey show the profile of Albanian organic olive oil consumers who are at a young age; mostly represented by females, and well-educated; prefer to buy healthy products directly from the producers. The most important motivation for buying organic is consumers' health. The health issue is referred to two meanings: the product that they perceive to be healthy, containing less or no pesticides and additives, and the product related to treating illness or special needs. The findings showed that environmental concerns are not less important aspects. Consumers see the

consumption of organic olive oil as a mean of contributing to a sustainable environment, as well as respecting nature. Regarding the current situation of organic olive oil sector in Albania, there is a weak development. Organic olive growers are small in number and the market is fragmented. But despite the difficulties, there is an increase of interest from the farmers and processors in dealing with organic methods, and the government is becoming more sensitive and oriented in giving priorities to development of the sector.

Key words: organic olive oil, market, consumer behavior, producers.

192 EFFECTS OF PLANT GROWTH PROMOTING RHIZOBACTERIA (PGPR) ON GROWTH, YIELD AND FRUIT QUALITY OF SOUR CHERRY

Şeyma Arıkan[1], Lütfi Pırlak[1]

Selçuk University, Faculty of Agriculture, Department of Horticulture Konya-Turkey

Email: arikan@selcuk.edu.tr; pirlak@selcuk.edu.tr

ABSTRACT
This study was carried out at Research and Application Orchard of Department of Horticulture of Agriculture Faculty in Selcuk University in 2010-2011. It was used Kütahya sour cherry cultivars grafted on mahalep in research. At research; it was aimed to be determined the effects of *Bacillus mycoides* T8 and *Bacillus subtilis* OSU-142 bacteria strains on yield, fruit properties and plant growth. The presence of T8, OSU-142 and T8+OSU-142 alone or in combination stimulated plant growth and resulted in significant yield increase. Floral and foliar applications of T8, OSU-142 and T8+OSU-142 on sour cherries significantly increased yield per tree, length of fruit stalk and shoot length respectively, compared with the control in both year. In 2011 year, the highest shoot length was found from the T8+OSU-142 (59.28 cm) application while was found from the T8 (45.75 cm) application in 2010.Floral and foliar applications of T8, OSU-142 and T8+OSU-142 significantly increased yield per tree. Yield per tree were determined to be increased from 3.575 kg/tree and 12.801 kg/tree in the control to 6.388 kg/tree and 29.939 kg/tree by T8 application to 7.396 kg/tree and 15.928 kg/tree by T8+OSU-142 application in 2010 and 2011 years. It was determined that the bacteria applications did not changed importantly width of fruits in 2010 year while decreased width of fruits compared with the control in 2011 but height of fruits decrease in both year. In both year, the bacteria applications reduced titratable acidity and increased rate of soluble dry matter and ph. Lowest Hue values (more intense coloration) were obtained from OSU-142 application in both year. Bacteria applications increased in leaves N, Fe, Cu, Zn, Mn contents compared with the control, K, Ca and Mg contents significantly did not changed. The results of the present study suggested that *Bacilus* T8 and *Bacillus* OSU-142 alone or in combination have a great potential to increase the yield, growth of sour cherry plant and suggested in order to promote growth and development on sour cherry cultivation.

Keywords: sour cherry, PGPR, plant growth, fruit characteristics

193 WATER MANAGEMENT POLICIES IN TURKEY AND SOM SUGGESTIONS

Hasan Kalyoncu*, İsmail Hakkı Kalyoncu**

**SDÜ Science Arts Faculty, Department of Biology, Campus/Isparta*
***University of Selcuk, Faculty of Agriculture, Department of Horticulture, 42031, Campus/Konya*

Email: hasankalyoncu@gmail.com

ABSTRACT
The water is an indispensable necessity for the life of livings.The amount of available water over World is quite limited. Therefore, usage of water must be well organised, regulated and controlled, kept away from pollutants and regulation for sustainable usage must be applied. The number of organisations dealing with water in Turkey are a lots and there is no coordination between them, and regulations are due to the organisations separately and changed from organisation to organisation. In order to become a part of European union, there is some terms due to Water Frame Directive (WFD) which Turkey must obey during the connection process for

EU. Although some regulations and some specified Works are made related to WFD, any no regulations on the water policies in Turkey can be mentioned. %75 of water in Turkey are used in agricultural production but the effect of Agriculture ministry is not so powerful. On the other hand, Hydrobiologists must be encouraged to involve in the works for organise these regulations, data bases for water policies not only for use but also the data basis for the flora and fauna.It can also suggested that a map system for impurities, biological diversity and aquatic areas must be produced using Geographical Data Systems (GDS) in Turkey. A well coordination between different disciplines on the water policies must be applied and conflict with authority between organisations and different research areas. It is also necessary to produce a sustainable, local and national water policies.

Keywors: Water Management, Water Policies, Turkey

194 PUBERTY AND ITS ENVIRONMENTAL CONTROL IN AQUACULTURE SPECIES

Edmond Hala

Agricultural University of Tirana, Faculty of Agriculture and Environment, Department of Animal Production, Kodër Kamëz, Tirana, Albania.

Email: hiedmo@yahoo.com

ABSTRACT
Puberty is the process by which an animal is capable to reproduce for the first time. In aquaculture it is important to know the exact time when fishes reach the puberty and the factors that influence in delaying or advancing this process. In this review is explained how start the process of puberty and after this, there are presented the most recent approaches related with environmental control of puberty in fishes. In teleosts the Brain-Pituitary-Gonads axis participates in the process of puberty and is crucial, to control many processes associated to reproduction. A better understanding of the physiology of this axis will help to control the timing when the fishes reach the puberty. The most important environmental factors that influence in the control of puberty are the photoperiod and water temperature. Encouraging results are obtained in many aquaculture species like trout, sea bream, sea bass and many flatfishes. In the future, further studies are necessary to help and solve the problem of control of puberty in particular and in general all the process of reproduction in fishes.

Key words: puberty; pineal; pituitary; steroids

195 PRELİMİNARY DATA ON THE USE OF MİCROBİAL PHYTASE AND THE EFFECT ON EGG PRODUCTİON

Ylli Biçoku*, Thanas Piu, Lumturi Sena*,**

** Lecturer Agricultural University of Tirana, Albania*
***Advisor of Floryhen Company, Durres, Albania*

Email: bicokuy@yahoo.com

ABSTRACT
The aim of this study was to see the impact of replacing a portion of mineral phosphates by use of microbial phytase in poultry rations for eggs and the impact of this substitution in production indicators and cost of production.The study was carried out in broad terms of production by putting in evidence the two batteries with about 58,000 head of layers between January and March 2011. Layers were hybrid Hy-Line W 36 in both batteries, with the respective age 40-44 weeks. For both batteries were used the same feed ration with the only difference for the battery no. 3 was involved enzyme while in battery no. 7 was used high amounts of monobicalcium phosphate (20% Ca and 20% P). For layers battery No.3 was added to the ration 0,06% phosphorus enzyme with content of 750,000 UF (Phytase Unity) and only1,401% phosphate mineral, while the layers of battery no. 7 had phosphate ore 1,964%. So with additional 450 UF for the layers of battery no. 3 was replaced 0,563% phosphate. At the end of the study no differences were found between batteries for eggs production, feed consumption per egg, and

layers mortality. There were no effects on eggs weight and shell thickness of their shells which resulted to be respectively 63,18 – 67,60 gr and 339-362 micron. Strength of the eggshell was 2976 gr/cm^2 in the battery with the enzyme and 3146 gr/cm^2 in the battery that received only phosphate mineral.

Key words: phytase, layers, strength of eggshell, thickness of eggshell.

196 THE BENTHİC ALGAL FLORA OF SARIYAR DAM LAKE,ANKARA

Cengiz Akköz[1], Tahir Atici [2] & Şirin Dokcan

[1] Department of Biology, Faculty of Science, Selcuk University 42100, Konya, Turkey
[2] Department of Biology, Faculty of Education, Gazi University 06500, Ankara, Turkey

Email: baranasikkutlu@hotmail.com

ABSTRACT
In this study the benthic algal flora of Sarıyar Dam Lake were investigated in samples collected from different habitats (epipelic,epiphytic and epilytic), from seven chosen stations, between February 2009 and November 2009. The benthic algae of Sarıyar Dam Lake composed of 64 algae species belong to Bacilloriophyta, Chlorophyta, Cyanobactreia and Euglenophyta divisions. It was identified that, in general, the members of Bacillariophyta division was dominant organism in Sarıyar Dam Lake.

Keywords: Benthic algae, Epilytic, Epipelic, Epiphtic, Sarıyar Dam Lake

197 REMOVAL OF CADMİUM (İİ) İON FROM AQUEOUS SYSTEM BY DRY BİOMASS, LİVE AND HEAT-İNACTİVATED *OOCYSTİS SOLİTARİA* İSOLATED FROM FRESH WATER (BEYKAVAGİ POND)

Baran Aşikkutlu [1] , Betül Yilmaz Öztürk [1] & Cengiz Akköz [1]

[1] Department of Biology, Faculty of Science, Selcuk University 42100, Konya, Turkey

Email: baranasikkutlu@hotmail.com

ABSTRACT
Today various organisms are increasingly used to remove toxic heavy metals from waters. In particular, studies in which various species of hydrophilic organisms are used for metal removal report various results. In this study, *Oocystis borgei* which has wide distribution in natural waters was used. The alga sample used in the study was isolated from Beykavagı Pond (Konya/Turkey) and was reproduced in culture. After the pure culture obtained, the removal of Cadmium in water was examined in three different conditions of the organism. In the stages of study, direct living organism, inactivated biomass and dead biomass were used, respectively. The rate of Cd ion in the water was diluted down to 0,02-0,30mg/lt so that the amount of Cd ion measured can match with the measuring range of the spectrophotometer used. At stabile temperatures, the pH was kept between 6 and 8. The measurements were conducted periodically: every six hours for four days. As a result, the highest biosorption was in inactive biomass, which is followed by dead biomass and living organisms. Moreover, it was also found out that this species is very effective in the removal of heavy metal. Besides, the samples mentioned above were filtered in appropriate filter paper and their weight was measured to increase the reliability of the study. It was observed that the masses of the samples increased in parallel with absorption amount.

Keywords: Cadmium (II) removal; Biosorption; Bioremediation; Heavy metals

198 SUPPORTİNG OF LİGHT MİCROSCOBE PHOTOGRAPH OF SOME CULTURED ALGAE WİTH ELECTRON MİCROGRAPH

Betül YILMAZ ÖZTÜRK[1] , Baran AŞIKKUTLU [1], Cengiz AKKÖZ [1] & Derviş ÖZTÜRK

[1]*Department of Biology, Faculty of Science, Selcuk University 42100, Konya, Turkey*

Email: baranasikkutlu@hotmail.com

ABSTRACT
The cultured organisms were collected from freshwater (from Apa Dam Lake and Beykavağı Pond in Konya, Turkey), previously isolated and pure culture was grown according to procedure given by Rippka, 1989 on BG-11 medium. The cells were grown in sterile shake flasks containing 100 mL of BG 11 (Rippka, 1989). The cultures were grown under cool white fluorescent light intensity of 3000 lux at 25 °C, in 12 h–12 h light–dark cycle and were incubated for 15–20 days in an incubator (Minitron) which is suitable for photosynthesis. Logarithmic phase of algae proliferation was reached its maximum level within 20 to 25 days. Firstly, obtained pure culture was observed under light microscobe and photographs of algae was taken. After that, electron micrographs of the samples from the same cultures was taken. Therefore, photographs of cultured Anabaena sp., Pediastrum sp, Calothrix sp. ve Haematococcus sp., which was taken under light microscope, were supported by electron micrographs.

Keywords: Cultured algae, BG-11, Electron Micrographs.

199 BURNING OF FORESTS AND ITS ROLE IN THE CONTAMINATION OF THE COMPONENTS OF THE ENVIRONMENT IN KOSOVO

Isa Tahiri*, Faton Kaqkini, Valmira Sejdiu, Sinan Ramadani, Mentor Bejta, Isa Ajeti, Drita Tahiri

Ministry of Education Science and Technology of the Republic of Kosovo

Email: isatahiri1@yahoo.com

ABSTRACT
In this paper are presented basic data regarding the burning of forests, pastures and different spaces greenest are almost all different premises of the territory of the Republic of Kosovo. On the burning of forest destruction manifold made considering their direct negative impacts on the components of environmental pollution (air, water, soil and bio), such as: effects of discharges straightforward gases into the air from burning wood and grassy matter what, negative impacts on streams that undergo manifold changes if burned forest areas around them, the degradation of land through ruinest sled and potential growth of the phenomenon of flooding and erosion during rainfall season, and negative impact on biodiversity of the area which caused fires. The recent years during of the summer when the temperatures have increased by extraordinary problems igniting fires that often times proved that the main cause for this situation to create one factor, and various natural causes. Are also presented data regarding the possibility of managing these situations and capacities of bodies responsibility for the prevention and management of emergency situations.

Key words: Combustion, forests, impact, environmental components, environmental degradation.

200 LIGNITE COMBUSTION IN POWER PLANTS OF KOSOVO AND THEIR INFLUENCE ON THE ENVIRONMENT

Isa Tahiri*, Faton Kaqkini, Valmira Sejdiu, Sinan Ramadani, Drita Tahiri, Shukri Maxhuni, Hajdin Islami

Ministry of education science and technology of the republic of Kosovo

Email: isatahiri1@yahoo.com

ABSTRACT
Here are presented the results of emission and imission of gases and ash in Kosovo power plants. These measurements were done and the results presented in tabular form represent the actual situation of environmental pollution in settlements around the plants. Considerable reserves of

lignite in Kosovo basin, on the one hand represent significant resources for sustainable development of the country's economic power, and another on its use for combustion in power plants of Kosovo, presents an enormous environmental problems. Kosovo's lignite coal represents a kind of poor quality with a low value of thermal energy and a large amount of inorganic substances, the presence of some harmful elements. Due to the current mode of exploitation of lignite in power plants Kosovo A and Kosovo B, the burning of the coal, causing degradation and pollution on a large scale and large spatial dimensions risking public health. Of note in the base paper has a structure that speaks for fuel and lignite of Kosovo as a whole, to continue burning then that is an important process for obtaining KEK electricity, and finally talk about the impact combustion gases into the environment. The purpose of these measurements is to have a picture for pollution and invest in the future and that these gases and fly ash do not exceed limits set by the European Union, that even our country, the Republic of Kosovo to be ready EU membership and the issue of the environment do not be an obstacle to the integration processes.

Key words: Combustion of Lignite, pollution, energy, environmental effect.

201 OUTDATED VEHICLES AND ENVIRONMENTAL POLLUTION

Isa Tahiri*, Sinan Ramadani, Faton Kaqkini, Valmira Sejdiu, Drita Tahiri, Hajredin Islami, Nexhat Balaj

Ministry of education science and technology of the republic of Kosovo

Email: isatahiri1@yahoo.com

ABSTRACT
The paper presents statistical data on imports of oil derivatives and import of old vehicles and large circulation of vehicles in road traffic outdated in the territory of Kosovo. Also in this paper are presented the statistics on the latest data of smuggled oil derivatives and their poor quality. It made a detailed analysis of the impact of environmental pollution and by the use of these derivatives uncontrolled, especially when these derivatives are used by old vehicles when it is well known in what technical condition - those cars are technological. Permission from the Government of the Republic of Kosovo for the importation of old vehicles up to 13 years, has a direct impact on the environment. Also presented in this paper are approximately the number of vehicles which are in circulation within the time limit, a daily, monthly and yearly. Uncontrolled dumping of oil by the centers for servicing of vehicles such as: changing the oil eventually thrown into the city sewage system or heating used by individual households. The environmental impact of selling points for fuel (petrol stations) that are rampant in Kosovo, most of them not nearly do not meet environmental criteria and standards of physical security.

Key words: old vehicles, environmental impacts, gas stations, environmental standard.

202 TRADE LIBERALIZATION EFECTS IN THE ALBANIAN FRESH FOOD AND PROCESSED FOODS SECTORS

Tabaku. I[1*]., Nikolla. M[2]., Belegu. M[2] .,E. Muca (Dashi)[1]

[1]Agricultural University of Tirana, Faculty of Economy and Agribusiness, Department of Economy and Agriculture Policy, Tirana, Albania.*
[2]Agricultural University of Tirana, Faculty of Economy and Agribusiness, Department of Mathematic and Informatics, Tirana, Albania.

Email: irmaqinami@yahoo.com

ABSTRACT
This article seeks to analyze the effects of trade liberalization at the Albanian Fresh Food and Processed Food sectors. To identify these effects we make an analysis of Trade Performance Index for Fresh Food and Processed Food sectors for the market liberalization period from 2003 to 2009. The findings reveal that net exports in the Fresh Food sector, even though still in negative values, have been increasing throughout this period. From 2003 these sectors have experienced constant increase in export values by 14 percent. In correlation with the trade concentration net

exports has been increasing and decreasing during the analyzed period (2003 – 2009), but showing an increasing tendency in the last year. Referring to the importance of the world market share we can say that this indicator became positive in 2006 and in ongoing years. For the Processed Food sector we can say that it shows increasing values in the world market share. What is more important, this sector has had the biggest increase in the world market share comparing to all other Albanian sectors. Such an analysis would be very useful in determining the priority sectors that could benefit from direct or indirect support of Albanian trade policies. To determine where the intervention with trade policies that will promote competition can be useful we should analyze the relative change in world market share for each sector, and identify the sectors that have experienced positive changes as a result of increased competition.

Key words: Trade Liberalization, Trade Performance, Competitive Advantage.

203 EVALUATION OF BIOGAS PRODUCTION FROM DAIRY COWS WASTE

Enkelejda Sallaku[1], Valdete Vorpsi[2] , Ylli Bicoku[1], Etleva Jojic[2], Erta Dodona[2]

[1]Department of Animal Production, Faculty of Agriculture and Environment Agricultural University of Tirana
[2]Department of Crop Production Faculty of Agriculture and Environment, Agricultural University of Tirana

Email: enka_sallaku@yahoo.com

ABSTRACT
Technology of biogas production is considered a renewable energy source and a method for reducing the volume of animal waste that can be deposited with a more positive impact on our health, economy and environment in general.One of the most pressing issues today is the failure of processing animal waste. Instead, one of the possible alternatives, in terms of our farm conditions, used for the processing of animal waste is their optimal management through treatment for biogas production.The aim of our study was the production of biogas from animal waste in laboratory conditions and in addition the construction of mini-plant. The experiments done for the first time in Albania, and was conducted during a period of 3 months, for the period 23/06/2011- 08/09/2011.During the experiment, was observed the effect of environment temperature on biogas production related with the ration of mixture, animal waste:water, in four variants-1: 3. 1:2, 1:1 and 1:3 by adding and corn. Volume production of biogas was made in view of the balloon inflate by measuring it into 5 levels.As a result of the experiment should be noted that: (a) in biogas production has a direct influence the temperature, the temperature above 30^{o}C in the first phase of the beginning of fermentation reduces the time of onset of biogas, (b) the type of mixing (the ratio of animal waste: water) affects the time and biogas production (c) most important is to shake the mixer in the absence of the tool in the the mini-plant, and (d) the best option of mixing animal waste: water is when the ratio is 1: 2, in which shakes the mixing was used and the placement of mini-plant for 10 days, during morning, under sunlight, which was reached level 5 of filling the balloon.

Key words: biogas, mini-plant, temperature, mixture of organic matter.

204 EFFICACY EVALUATION OF SOME INSECTICIDES AGAINST APHIDS IN PEPPER CROP CULTIVATED IN GREENHOUSE

Gyrner Murati[1], Natasha Duraj[1], Skender Ramadani[1], Fadil Musa[2],

[1]Agriculture University of Tirana
[2]Faculty of Agriculture and Veterinary, University of Prishtina

Email: gmurati@hotmail.com

ABSTRACT
Several aphid species attack the pepper crop cultivated both in open fields and in greenhouses as well. The aphids damage the plants directly by sucking plant sap from the plants and indirectly as a vector of different plant viruses. The aim of this paper was to identify the most abundant

aphid species causing damages to pepper cultivated in greenhouse and the evaluation of the efficacity of different insecticides to control these aphids. The experiment was set up in greenhouse located in village Godanci, municipality of Shtimje, while the experiment design was according to randomized Fisher blocks in three replications. Insecticides were from three groups of chemicals: Actara 25 WG (*Thiamehoksan*), Dimetogal (*Dimetoat*) and Deltarin 2,5 (*Deltametrin*) and control as well. The insecticides were used in minimal and maximal doses recommended by the producer, show in the chemical labels. From the total number of aphids recorded the following percentage belongs to the different aphids: *Aphis nasturtii* (71%), *Myzus persicae* (14%), *Macrosiphum euphorbiae* (4%), *Aphis gossypii* (3%) and other non identified aphids (8%). As for the insecticide efficasity the highest value was recorded with Deltarin used in maximal doses (92.88%), while the lowest one with insecticide Dimetogal used in maximal doses (11.48%). According to the ANOVA there were shown to exist statistical significant differences with regard to the number of aphids species compared to control and different insecticide efficacity to control aphids in pepper crop cultivated in greenhouse.

Keywords: pepper, greenhouse, aphid species, insecticide efficasity, chemical doses

205 APPLICATION OF TREE BARRIES AS MITIGATION MEASURES FOR NOISE POLLUTION – ROAD "29 NËNTORI", TIRANA, ALBANIA

Entela Çobani[1], Ledia Aleksi[1]

Department of Environmental Engineering, Faculty of Civil Engineering, Polytechnic University of Tirana,

Email: entelacobani@yahoo.com

ABSTRACT
Noise pollution is becoming a major problem in urban areas, in particular traffic noise. Tirana the capital of Albania is one of the most noise polluted area of the region. The use of trees and shrubs as mitigation measure of noise barriers results effective where the space permits. According to the different studies noise can be reduced by six decibels (dB) over a distance of 30 meters. In our paper we measured the noise levels in the street "29 Nëntori", from "Dogana" to "Kamza Over Bridge", which is in the capital of Albania, Tirana using the Sound meter model 407764, Extech type, certified ISO 9001-2000 (IEC651 type 2, ANSI S1.4). According to our records the level of traffic pollution is high regarding noise pollution. We proposed used of trees and shrubs barriers as ecological mitigation measure. The use of such barriers reduces the air pollution because of photosynthesis; reduce particles as results of leaves filtration; microclimate effects. The paper analyses the different types of tree barriers we can use in this kind of street and the urban space there is needed. We considered the two types of tree barriers such as totally vegetated barriers or mixed structures barriers. The use of such mitigation measures as noise pollution control has a positive impact in social and cultural as well as in urban aspects.

Key words: decibel, tree barriers, noise reduction, mitigation measure.

206 PROCESSING OF PARTICLEBOARD FROM WASTE PEANUT SHELLS

Metin Gürü[1,*], İbrahim Bilici[2], Ahmet Fırat Karabulut[1]

[1]Gazi University, Eng Fac, Chemical Eng Dep, ANKARA/ TURKEY
[2]Hitit University, Eng Fac, Chemical Eng Dep, ÇORUM/ TURKEY

Email: mguru@gazi.edu.tr, ibilici@engankara.edu.tr afkarabulut@gazi.edu.tr

ABSTRACT
When large amounts of industrial waste that occurs after the processing of agricultural products, it is expensive to eliminate waste and also that applied eliminating methods are harmful for the environment. Whereas the ecological and economic evaluation of the recovery of industrial waste provides benefits to large extent. One of these wastes mentioned peanut shell is a very high harvest in Turkey. Manufacture of particleboard with the texture of peanut shells of their own fibber has a nature that can be used as a reinforced material. From the results obtained, these

new materials could be used as an alternative construction material. Alternatively the idea of obtaining this new building material from waste and without cutting trees is very important for the environment. In this study, wood-like composite material is obtained by using peanut shells as a reinforcing material. In these materials, the ratio of filling materials to binding materials, temperature, melding pressure, sensitivity to water features are examined as parameters. LOI of these parameters and mechanical properties of the materials obtained were examined. According to test results bringing the waste peanut shell any non-economic value to economy as particleboard, for both eliminating wastes and meeting the need of wood, it shows that significant gains can be provided to environment in terms of deforestation and economy.

Key words: Peanut shells, industrial waste, economy, particleboard.

207 ASSESSMET OF THE QUALITY OF SEWAGE WATERS ENTERING THE TREATMENT PLANT INSTALLED NEAR THE AGRICULTURAL UNIVERSITY OF TIRANA, ALBANIA

Irena Duka*, Zamira Rada, Ardian Maçi, Julian Shehu

Agricultural University of Tirana

*Email: irenaduka@hotmail.com

ABSTRACT
Monitoring the quality of urban liquid wastes and their treatment is one of the biggest problems in our country today. Field application of modern methods of treatment has prompted institutions to install and apply, in laboratory conditions new technologies in this field. In this framework, in the premises of the Agriculture University of Tirana, a pilot urban wastewater treatment plant, (SBR) with a capacity of 1000 p.e (population equivalent) is installed. This plant is designed and constructed in order to manage the urban wastewater aiming to minimize and remove pollutants such as different forms of nitrogen, before their discharge to receiving waters.As a first stage of assessing the performance of this plant, the quality of urban wastewater in the plant entrance is monitored. The most important indicators were selected such as: physico-chemical parameters as well as nutrients. The selected indicators are: pH, temperature, suspended matter (TSS), electrical conductivity, salinity, dissolved oxygen (DO), chemical oxygen demand (COD), biochemical oxygen demand (BOD), nitrogen as ammonium (NH4-N), nitrogen as nitrates and nitrite (NO3-N, N-NO2), total nitrogen (N-Tot) and total phosphorus (Tot-P). Physico-chemical methods of analysis were in accordance with the ISO standards, etc.

Key words: waste waters, pilot plant, nutrients, physic-chemical parameters.

208 OF BACILLUS SUBTILIS BIOLOGICAL PREPARATION FOR PROTECTING SEED FRUITS TREES FROM FREBLIGHT ERWINA AMYLOVORA.

Dhurata Shehu[1], Harallamb Pace[1].

[1]Agroculture University of Tirana , Plant Protection Department , Tirana, Albania

Email: dhuratashehu@info.al

ABSTRACT
Fireblight Erwinia Amylovora destroys vegetative mass special branch or the entire tree which withers, dry up and turn blue within a few days. This 2-years study from 2010 to 2011 is made in an apple orchard (cv Gala) with natural infection in an experimental field with 4 variants in 4 repetitions. In both years before flowering in all versions are used copper fungicides. During flowering in the first variant is used serenade, in the second Aliette, third without treatment and the fourth which represent treatments of the farmer are used during the flowering Carbendozin, Captan and Dodena, Enovit during fruit growth. After settle of fruits in the first three variants are used copper fungicides and mechanical cutting. The intensity of suffering from fireblight is estimated for both years in July 2010 and 2011. In the second year (2011) crown infection from 20% in 2010 decreased to 15% for the first variant, for the second and third variant 30% for both years and the for the forth from 50% to 60% for 2011.

Key words: Erwinia amylovora, Fireblight, chemical control.

209 THE KINETICS OF FIXED AMMONIUM IN ALLUVIAL SOILS OF XARRA REGION IN ALBANIA

Ajazi Agelda[1], Rada Zamira[1], Duka Irena [1], Maçi Ardian [1]

[1]Agro-Environmental Department, Faculty of Agriculture and Environment, Agricultural University of Tirana, Albania

E-mail: agelda.ajazi@gmail.com

ABSTRACT
It is well established know that many soils have the ability to fix considerable amounts of ammonium under moist condition. Native, non-exchangeable NH^{+}_{4} is not taken up by roots, so that its concentration in the soil close to the root remained unchanged. The objective of this study was to determine the availability and the kinetics of fixed or nonexchangeable ammonium (NEA) in Xarra soils, which are of high importance for Albania agriculture. For this purpose 5 soil sample was collected from each horizon of the profile. The amount of ammonium fixed naturally in the samples was found between 82.80 mg/kg - 108.03 mg/kg ammonium. Fixed NH^{+}_{4}-N accounted for 1.07 - 7.7 % of total N in the Ap-2BCg horizons.

Key words: Native fixed NH^{+}_{4}, total nitrogen, Xarra region

210 pF-SOIL MOISTURE CURVES IN TWO DIFFERENT TEXTURAL SOILS IN KOSOVO

Avdullah Nishori[1], Demë Abazi[2], Besnik Gjongecaj[3]

[1]Regional Environmental Center, Field Office, Prishtina, Kosovo
[2]Public Water Management Company, "Ibër Lëpenc", Prishtina, Kosovo
[3]Department of Agro-environment and Ecology, Agricultural University of Tirana, Albania

E-mail: avdullahn@gmail.com

ABSTRACT
The present study is focused on the determination of the pF-soil moisture curves in two different textural soils, occurred in the Field of Kosovo. The method applied to determine the curves is a combined method, which is also a very well based theoretically. The soils taken into the consideration are fluvisol and vertisol, which seem to be very common within the area of Kosovo. Respectively, the soils into consideration are respectively light soil (fluvisol) and medium towards heavy (vertisol). The two types of mentioned textural soils are taken in three locations, which cover almost the entire north part of Kosovo: Vushtrri, Drenas (Komoran) and Peja (Jabllanicë). The method consisted on finding as many experimental points as it is possible in the area between y axis- pF, or H_m, (soil water suction) and x axis- soil water content on volume basis for each soil taken into the consideration. The pF-soil moisture curves (or soil suction-soil moisture curves) fit the power function. The coefficient b, which determines the slope of the curves results to be between 3.9 (light soil) to 5.9 (heavy soil). This result is in compliance with the studies done in this area of research and also, it is in compliance with the textural nature of soils under consideration. The soil water capacity seems to be closely related with the magnitude of the coefficient "b". It is proportional with the clay content of the soil.

Keywords: pF-soil moisture curve, coefficient "b", texture, clay content, soil water suction.

211 MEASUREMENT AND ANALYSIS OF IAQ(INDOOR AIR QUALITY) IN THE STUDENTS' DORMITORIES

Sukru Dursun, Ertugrul Esmeray*, Saban Azman

Selcuk University, Engineering & Architecture Faculty, Environ. Eng. Dep. 42003-Konya-Turkey

E-mail: eesmeray@selcuk.edu.tr

ABSTRACT
When the people think about air pollution, they usually think of air pollution as being outdoors, but the air in houses, offices, students' dormitories etc. could also be polluted. Therefore many people affected by indoor air pollution sources present in the air within buildings. Some of them are given below.
These are;
* Cigarette smoke
* Mold, pollen or any other same kind of biological contaminants
* Pesticides residues
*Household products
* Gases such as radon and carbon monoxide
* Some Materials such as asbestos, formaldehyde and lead (it used in building) etc.
In this study the measurement of the IAQ was conducted in student dormitories around the Selcuk University Campus The measured datas include Concentration (mg/m3), TWA (mg/m3),STEL (mg/m3) MAX. (mg/m3). The measurement showed that it was necessary to improve the IAQ of student dormitories, which could be done by increasing the ventilation rate by means of automatic or mechanical systems..

Keywords: indoor air quality, pollution, student dormitories.

212 THE RELATIONSHIP BETWEEN URBANIZATION AND WATER QUALITY: AN EXAMPLE OF ALTINAPA BASIN FROM CENTRAL ANATOLIA

Cigdem Ciftci

Selcuk University, Faculty of Architecture-Engineering, City and Regional Planning Dept. Aladdin Keykubat , Konya, Turkey

E-mail: cigdemcif@gmail.com

ABSTRACT
Altinapa Basin is very important for Konya sub- region because of its drought climate zone. Recently using of water and supply is much more vital for the ecosystem. The decision of land using based on the management and planning of river basin should be considered in that perspective. Altınapa is not only a natural river basin but also it supplies fresh water to the Konya Metropolitan by Altınapa Dam. Konya having one million people live in the city centre is one of the sixteen metropolitans in Turkiye. Since the usage of land use in watershed effects metropolitan and river basin ecosystem directly this are therefore it is chosen for surveying. This survey is aimed to reveal the socio economic lifestyle and land using on the river basin. There are seventeen villages, two towns, a lot of scattered upland and com settlements in the river basin. Watershed planning is evaluated by using the adequacy of the natural resources protection standards in limiting impervious cover at full-build out under current zoning. The method of this research grounds on the basis of comparison impervious cover values with site plans and knowledge of building density. In conclusions, depicting the present and future health of river basin will aid in planning development locations.

Keywords: River Basin, Land Use, Basin Planning, Basin Management.

213 STUDY OF ROOTING ABILITY OF THE AUTOCHTHONOUS OLIVE CULTIVARS IN THE AREA OF TIRANA.

Bregu K. Thomaj F. Ferraj B.

Agricultural University Tirana

Email: kozetabregu@live.fr

ABSTRACT
The multiplication technique, mostly used in olive nurseries, consists in the use of semi-dendritic pieces: it is charachterized by a great heterogeneity in the percentage of the rooting.Rooting ability of different olive cultivars depends on various interial/external factors. The purpose of this

study was: the examination of the rooting ability of the autochthonous cultivars in the area of Tirana. The study was conducted during 2011 in the greenhouse builted for the production of olive samplings in the EDE of UBT.The study took into account seven native cultivars in the area of Tirana. (White Olive of Tirana, Kushan, Karre, Boc, Black Olive of Ndroq, Red Olive and Micka). The plant material about the rooting, was gathered in mid-March. The pieces were treated with 400ppm IBA.From preliminary data, it results that the studied cultivars can be grouped as follows:High rooting, over 50% (White Olive of Tirana, Kushan-Preze, Karren); Average rooting, 30-50% (Black Olive of Ndroq, Boc); Weak rooting, below 30% (Red Olive, Micka)

Keywords: cultivar, rooting, plant material.

214 STUDY OF CENTURIES-OLD OLIVE GROVES IN THE AREA OF TIRANA, AND PRELIMINARY EVALUATION OF PLANTS WITH MONUMENTAL VALUES

Thomaj F. Marku F.

Agriculutural University of Tirana, Albania

Email: fadilthomaj@hotmail.com

ABSTRACT
Centuries-old olive groves, in many Mediterranean countries, today are being seen as sources of tourism, landscape improvement, and as a way of transmitting the ancient Mediterranean taste to subsequent generations. They represent a vibrant source of cultural heritage of a nation. Centuries-old olive groves have been subject of intensive studies for the scientific evaluation of age, but even for the characterization of their oil, which is a legacy in the so-called "Mediterranean diet".In this context, through this study we aimed to gather more complete data about centuries-old olive groves, in the area of Tirana an Kruja, like the cultivar structure, cultivation and production processing systems, as well as identifying the oldest plants with monumental values.In order to gather homogeneous data for each olive grove and tree with potential monumental values, we drafted asimple file but which includes the most necessary data.The analysis of the gathered data concluded that: Centuries-old olive groves represent an important source for the production of extra-virgin oil, with defined origin, as it is asked today by international organizations.Centuries-old olive groves carry a rich tradition in olive cultivation in the Albanian terrain. They bring to the cultivator's attention, the necessity of choosing the cultivar according to the conditions of the area, even down to the conditions of the parcel.In the studied centuries-old olive groves, there are individuals evaluated as more than 2500 years old (evaluated with the comparison method). They carry historic, scientific and environmental values, and need to be treated with special procedures.They represent a precious genetic wealth for the increase of the native olive production and successful tackling of domestic production in the context of strong competition for quality products.

Keywords: olive, centuries-old plant, cultivar, heritage

215 ASSESSMENT OF AIR POLLUTION FROM OIL EXTRACTION INDUSTRY IN FIERI REGION OF ALBANIA

Zela, E., Dika, O., Pepa. S., Zela, G., Pepa, S.,

Agricultural University of Tirana

Email: elsamane2003@yahoo.com

ABSTRACT
Objective of this work was to make evident the cause – effect connections between a range of impacted the environment, as result of extraction and processing of crude oil in Patos – Marinza oil field. Furthermore, this study aimed clear identification of which of working practices of oil treatment and extraction impact environment and as consequence wellbeing and health of inhabitants of the area. The study was focused on assessment of environmental situation within the studied area (Patos – Marinza oil field) for surface. Monitoring and championing of representative champions were decided according to the philosophy of championing Location

Conceptual Model. Monitoring points were selected for air monitoring were collected and send for analyses during Winter 2007 and Spring 2008 and later on during early 2012. This study reveals the closed relation between cause – effect of the activity of oil extraction and processing and the pollution of air in concern area. As conclusion, this study defined in quality and quantity wise pollution of environmental media impacted by the practices of uncontrolled release of gases that comes out together with crude oil and as well as made suggestions for a list of measurement to be taken by all relevant stakeholders in order to mitigate the level of air pollution originating from oil extraction and processing industry of Fieri region.

Key words: laboratory analyses, measurement, crude oil, pollution, air.

216 HYDRO-CLIMATIC CONDITIONS AND ENVIRONMENTAL DEVELOPMENTS IN THE LOW PLAIN AREAS OF ALBANIA.

Zela, G., Pano, N., Beqiraj A., Zela, E., Dika, O., Pepa, S.,

Environmental Manager, Antea Cement Sh.a

Email: gavroshzela@yahoo.com; gavroshzela@gmail.com

ABSTRACT
This paper is an attempt to present a general evaluation of the climatic and hydrological resources of the Dumrea area in the low plain territory of Albania. Environmental development is one important component of this paper. Dumrea area is one of the main and most complicated natural territory in low plain areas of Albania; typical Mediterranean climate regime, particular lithotological structures with an important karst formation, the presence of rich hydric systems; rivers, lakes, underground waters, etc. Hydroclimatic conditions assessment is based on multiannual meteorological, hydrometrological and hydromorphological archive data. Human activity and use of surface waters for irrigation purposes have created pollution of aquifers and environmental loses in the karst landscape. This paper will further explore the development of environmental impacts caused by combination of climatic factors with relief, geology, hydrology and human activity in the Dumrea area.

Key words: environment impact, karst, clime, hydrology.

217 MONITORING OF VIABILITY OF SOME MAIZE ACCESSIONS STORED IN ALBANIAN GENEBANK

Valbona Hobdari[1*]; Belul Gixhari[1]; Doriana Bode[1]; Fetah Elezi [1].

[1]Gene Bank, Agricultural University of Tirana, Koder Kamez,Tirana, Albania

Email: bona_hobdari@hotmail.com

ABSTRACT
Seeds are the principal means of conservation, regeneration and distribution of most field plants. They serve as the delivery system for the transfer of genetic materials from one generation to the next. There are more than 650 accessions of maize (*Zea mays* L.) stored as base collection in Albanian Gene Bank. Using standard of germplasm monitoring, we realized the seed viability testing of some maize accessions stored in genebank before 12 years. Ten genotypes were taken randomly from a total of 643 maize accessions. The 400 seeds, replicated four times, were tested for energy and germination capacity. ANOVA analysis shows the presence of significant differences between maize genotypes for germination capacity (F_{factic} 24.3166 > F_{crit}. 2.2501). In all samples (excepted one) the germination capacity was maintanied higher than 85 %. There were significant differences for the range of the germination capacity lost during 12 years. The lost values were less to 5% in 5 genotypes, less to 10% in 2 genotypes, and 11% in 2 other genotypes. In total germination capacity lost values range from – 1% to 24 %.The results of this study show that the maize genotypes in general were conserved in good conditions according to standard of the genebank. At the same time the presence of one sample with germination capacity (74%) show that round 9 percent of maize accessions can be under the 85% of germination level. Therefore, for the sure storage of the maize collection we recommends the next

test viability.

Key words: Viability, accession, collection, ex-situ conservation.

218 EFFECTS OF PLANT GROWTH PROMOTING RHIZOBACTERIA (PGPR) ON GROWTH, YIELD AND FRUIT QUALITY OF SOUR CHERRY

Şeyma Arıkan[1], Lütfi Pırlak[1]

Selçuk University, Faculty of Agriculture, Department of Horticulture Konya-Turkey

Email: arikan@selcuk.edu.tr, pirlak@selcuk.edu.tr

ABSTRACT
This study was carried out at Research and Application Orchard of Department of Horticulture of Agriculture Faculty in Selcuk University in 2010-2011. It was used Kütahya sour cherry cultivars grafted on mahalep in research. At research; it was aimed to be determined the effects of *Bacillus mycoides* T8 and *Bacillus subtilis* OSU-142 bacteria strains on yield, fruit properties and plant growth. The presence of T8, OSU-142 and T8+OSU-142 alone or in combination stimulated plant growth and resulted in significant yield increase. Floral and foliar applications of T8, OSU-142 and T8+OSU-142 on sour cherries significantly increased yield per tree, length of fruit stalk and shoot length respectively, compared with the control in both year. In 2011 year, the highest shoot length was found from the T8+OSU-142 (59.28 cm) application while was found from the T8 (45.75 cm) application in 2010.Floral and foliar applications of T8, OSU-142 and T8+OSU-142 significantly increased yield per tree. Yield per tree were determined to be increased from 3.575 kg/tree and 12.801 kg/tree in the control to 6.388 kg/tree and 29.939 kg/tree by T8 application to 7.396 kg/tree and 15.928 kg/tree by T8+OSU-142 application in 2010 and 2011 years. It was determined that the bacteria applications did not changed importantly width of fruits in 2010 year while decreased width of fruits compared with the control in 2011 but height of fruits decrease in both year. In both year, the bacteria applications reduced titratable acidity and increased rate of soluble dry matter and ph. Lowest Hue values (more intense coloration) were obtained from OSU-142 application in both year. Bacteria applications increased in leaves N, Fe, Cu, Zn, Mn contents compared with the control, K, Ca and Mg contents significantly did not changed. The results of the present study suggested that *Bacilus* T8 and *Bacillus* OSU-142 alone or in combination have a great potential to increase the yield, growth of sour cherry plant and suggested in order to promote growth and development on sour cherry cultivation.

Keywords: sour cherry, PGPR, plant growth, fruit characteristics

219 DATA ON BIOLOGICAL ASSESSMENT OF WATER QUALITY IN ERZENI RIVER USING AS BIO INDICATORS DIFFERENT GROUPS OF BENTHIC INVERTEBRATES

Erjola Keçi, Anila Paparisto, Bledar Pepa

Tirana University, Faculty of Natural Sciences, Tirana, Albania

Email: erjolakeci@yahoo.it

ABSTARCT
Ecological water quality is closely related to the biological communities' conditions. Benthic macroinvertebrates are determinate as crucial elements and have a great importance in biological assessment of water quality (Water Framework Directive - WFD). . Ecosystem biological elements often are influenced by human activity, which acts by modifying or adapting their composition and structure (Simboura, 2008). Erzeni River flows in central Albania in an area with sandy – clay deposits (Saraçi R., 1996). So the geographical position and geologic composition of river basin have a specific study importance. Our study aims to give data on biological assessment of Erzeni River water quality based on insect and invertebrate fauna. From the data analyses is important to mention the presence of benthic sensitive organisms (Environmental Protection Agency- USA) in two stations. Also were present two other groups, benthic invertebrates with a medium tolerance toward pollution and tolerant taxons. The values of EPT (Ephemeroptera, Plecoptera and Trichoptera) and Biotic Index have classified Erzeni River water as good - medium

quality. Also based on this biological assessment during three successive seasons we can conclude that the water quality of Erzeni River shows differences between the study stations.

Key words: *ETP, TV, BI, water quality.*

220 REINFORCED CONCRETE PANEL DESIGN FOR THE IMPROVEMENT OF THE SEISMIC BEHAVIOR OF THE FRAMES WITH INFILL WALL

Arife Akın[1], Rıfat Sezer[2]

[12]*Selcuk University, Civil Engineering Department, Konya, Turkey*

Email: arifearslan@selcuk.edu.tr; rsezer@selcuk.edu.tr

ABSTRACT
Strengthening methods applied frequently are the methods that require the temporary evacuation of the buildings. The method described in this study is a strengthening method applicable to the buildings having reinforced concrete frame system with hollow brick infill walls by not requiring any evacuation process. For this purpose, five panels with different geometric properties were designed and produced. In the scope of the study, the goal was to take the optimum decision about the subjects of design, production and easy applicability when the designed panel shapes had flat-surface or interlocking gear models. As a conclusion, it was observed that the flat-surface panels were produced and applied easier and more practical than the gear panels. Additionally, the aforementioned strengthening method was found to be easily applicable and economic in terms of manpower and time in comparison to the other traditional strengthening methods.

Keywords: Precast panel, strengthening, infill wall, RC Frame

221 AIR POLLUTION MONITORING DURING FINISHING POCESS IN SOME WOOD PROCCESSING ENTERPRISES

Entela Lato[1], Mandi Marku[1], Doklea Quku[1]

[1]*Agricultural University of Tirana, Forest Science Faculty, Tirana- ALBANIA*

Email: entela.lato@yahoo.com

ABSTRACT
Wood is one of the world's oldest and most important raw materials. During wood proccessing, diffrent kinds of material spread out in the air and couse air pollution that can be hazardous for the workers. The vast majority of air emissions are generated from the coatings used in the finishing process. This study monitors five enterprises in Tirana, Durres and Shkodra. These enterprises use solvent-base coating such as polyurethane and the method of application was spray gun in cabins with water curtain, spay gun in cabins without water curtain and electrostatic application. It resulted that the best method with reduced volatile organic compound (VOC) emission was electrostatic coating application and the worst one was the method of spry gun in cabin without water curtain. Taking in consideration not to charge the enterprises with further investments in technology improvements, we recommended just to switch polyurethane with water-base coating, or at least to use heat for better viscosity of polyurethane instead of adding more solvent. Using pollution prevention techniques can help furniture finishers to reduce emissions and waste, and save raw materials and money.

Key words: air pollution, volatile organic compound, polyurethane, water-base coating.

222 COMBINED PROBIOTIC PREPARATION IMPROVED PERFORMANCE PARAMETERS OF WEANED PIGLETS.

F. Shytaj[1], E. Delia[2], J Boci[3]

[1]*Ministry of Agriculture, Food and Consumer Protection, ALBANIA*
[2]*Department of Animal Production, Faculty of Agriculture and Environment, Agricultural University*

of Tirana, ALBANIA
[3]Department of Animal Health, Institute of Food Safety and Veterinary

Email: etlevade@yahoo.com

ABSTRACT
Since probiotics are discussed as alternatives to antimicrobial growth promoters their impact on performance of farm animals is of prime interest. Probiotics have been defined as a live microbial feed supplement which beneficially affects the host animal by improving its intestinal balance. The best studied probiotics are lactic acid bacteria, particularly *Lactobacillus sp* and *Bifidobacterium sp.* A combined probiotic preparation of *Enterococcus faecium* DSM 7134 $1x10^9$ CFU/kg and $2x10^9$ CFU/kg *Saccharomyces cerevisiae* was supplemented to a basal ration with 1 and 1,5g/kg feed and the effects on growth performance, on thirty six weaned piglets (28 days) were studied for six weeks experimental period. The supplementation of combined probiotic improved slightly daily weight gain and feed conversion ratio, kg feed/kg weight gain. Body weight gain was improved with graded levels (1.0 and 1.5g/kg feed) of the probiotic preparation respectively 3% and 2.5%, compare to control group without significance. At the end of the experiment, microbiological charge of faeces was measured also. Because of the low dose-response between 1 and 1.5g/kg feed, the level of 1g/kg feed seems to be the optimal dose.

Key-words: Probiotics, weaned piglets, performance parameters.

223 PELLET FEED USED IN PIGLETS AS A WAY TO IMPROVE FEED INTAKE AND FEED CONVERSION RATIO.

F. Sala[1], E. Delia[2]

[1]Regional Directory of Agriculture, Food and Consumer Protection, Durres
[2]Department of Animal Production, Faculty of Agriculture and Environment, Agricultural University of Tirana, ALBANIA

Email: etlevade@yahoo.com

ABSTRACT
Feed processing used at non ruminant's animal like pigs and poultry is one of the most studied fields and it has a clear effect on the density and microbial population in different part of intestinal tract (IT). The main objective of this study was: to investigate the effects of pellet feed on performance parameters of weaned piglets and to determine the nutrient digestibility like: digestibility of dry matter, of crude protein, crude fat and crude fibre. The study factor was: different form of feed processing, studied in two levels: farinose and pellet feed. After 45 days experimental period, the utilization of pellet feed improved Growth Performance (GP): Average Live Weight (ALW) (kg) and Daily Weight Gain (DWG) g/day compare to the control group. Based on the achieved results in the present investigation, it could be concluded that the utilization of pellet feed lead to an improvement of totally production parameters and nutrient digestibility also, included crude fibre digestibility.

Keywords: weaned piglets, pellet feed, granulated feed, performance parameters.

224 GOLDEN DELICIOUS CULTIVAR EVALUATIONS IN INTENSIVE CULTIVATION, IN THE AREA OF LUSHNJA

Nikoll Bardhi, Hysen Mankolli,

Agricultural University of Tirana

Email: bardhi.nikoll@yahoo.com; mankollih@ubt.edu.al

ABSTRACT
Golden Delicious is a highly valued cultivar that can be found in the markets for the most part of the year. It is resistant to ash, susceptible to stigmatization in fruits and to viruses. In the case of its cultivation in farmland the Golden Delicious can also be subject to rusting. It can be

contained, without risk of decaying, in the refrigerator in conditions of up to 2 0 C for up to 6 months and once the humidity is verified, for 9-10 months. The study of the indicators of the Golden Delicious cultivar in the orchard farm in Dushk, Lushnje has been conducted in the period between 2007 and 2008. The following conclusions were drawn: The farm shows high success in the cultivation of Golden Delicious in the eco climatic conditions of Lushnja. The intensive orchard technically obtains the recommended parameters. The conditions of the cultivation of Golden Delicious are appropriate and the cultivar has shown satisfactory productive potential. The climatic indicators are in harmony with the biological requirements; this is shown through derived product. The physical condition of the cultivar, Golden Delicious, promises sustainable production. Pests and diseases are being combated based on an integrated protection.

Key words: variety, intensive orchard, eco zone

225 FOREST ECOSYSTEMS AND CLIMATIC CHANGES – A CASE STUDY ON ALBANIA COUNTRY "

Hajri Haska[1] , Andrea Seim[2,3], Vath Tabaku[1], Etleva Canaj[4]

[1]Faculty of Forest Science, Agricultural University of Tirana,ALBANIA.
[2]Swiss Federal Research Institute, WSL, Zürcherstrasse 111, 8903 Birmensdorf, Switzerland
[3]Regional Climate Group, Department of Earth Sciences, University of Gothenburg, 405 30 Gothenburg, Sweden
[4]Agency of Environmet and Forestry,Tirana, Albania

E-mail: haskahajri@yahoo.com

ABSTRACT
Albania,with a total surface from 28 748 km^2, a small, but a very beautiful country,is located on the south eastern part of Europe, and concretely in Balkan peninsula.As results of very good geographic positions and climatic conditions , as a mediterranean country , in Albania growth a lot of kind of plants .so , about 3250 kind of vascular plants growth in our country, that represented about 165 family and 910 genders. Flora in Alabania is very rich , here vegetate about 30 % of European's flora , and that is more important and a sinjificativ indicator , in Albania growth around 30 endemic species and about 160 subendemic species.But, more important are natural habitats and ecossytems , where can underline some of them : habitats and ecosystem with shrub (very important are Mediterranean shrubs or makia Mediterranean), conifers, broedaleves or mixed forests, lagoons and other wetland are , agricultural are, rocks area, a lot of pasture ecosystems and meadows. Other very important habitats and ecosystems are and lakes, rivers (very important are and delta of rivers) and marine ecosystems.Forest ecosystems are more interesting, 36 % of total surface of Albania are covered from the forests, 1,042.790 ha. Also 12.57 % against of total Albania surface are Protected Area, that are created according to IUCN criteria.From diferent studies and reseachs in Eurpoe, in MediterraneAn basin but and in Albania, expected to occur important climatic changes. So will have increase of temprtaure in next decades, will have increase of sea level of water, etc. Changes will occur in the fall of rain or high temperatura periods etc. What will happen with forest ecosystems as results of those climatic changes , for examples : growth and vegetation period of forest (extended or will be shortened), composition of forests will change or no, frytification and natural rigeneration of forest in wich directions will go , needs more water during vegetation period of forests etc. And of course a very important question seeking answers today in all the globe : the trees, plants will adapt in those new conditions with climatic changes? A definitive answer is difficult, but many peoples and researcher are working for this. Finally, as results of climatic changes, will have other relations between climatic conditions and forest ecosystems,some of them will be treated in this paper, of course taking into consideration forest ecosystems in Albania.

Key words: Forest, Ecosystem , Albania, climatic changes, increase,habitats

226 POTENTIAL OF MEDICINAL AND AROMATIC PLANTS IN ALBANIA - AN IMPORTANT FACTORS TO IMPROVE THE SOCIAL SITUATION IN RURAL POPULATION AREAS, THROUGH SUSTAINABLE THEIR USING

Etleva CANAJ[1]*, Hajri HASKA[2], Ramiz METALIAJ[2], Marsela LUARASI[2]

[1]Agency of Environmet and Forestry,Tirana,ALBANIA
[2]Faculty of Forest Science, Agricultural University, na,ALBANIA.

E-mail: etlevacanaj@yahoo.com

ABSTRACT
Albania has very good geographical conditions, climate, etc., for growth and development of medicinal plants and edible oils. About 2000 species of medicinal and oil-etero counted today in our country. About 37% vegetate area Castanetum (chestnut) and 27% in the area Fagetum (Beech) etero-herb and oil are regarded as one of the main renewable potential for social development country's overall economic and rural areas in particular. Until 1990 (the time of planned economy) administration, collection and marketing of medicinal plans was done by state, in all of country, and have had enough impact of the country's income at the time of their exports, which had a considerable weight in the nationally production.Medicinal plants generally grow in forests and pastures, which in most part administered by Directory of Forest Services (DFS) in districts. But they grow and part of the territory of agricultural land, pastures and forests that are in private ownership or their communal using.Collecting today is done by private legal entities that enter into contracts with DFS district tariffs that are paid according to areas where these plants are collected. We generally do not become a country of their processing, but exported through private firms exporting country as ALBDUCROS-Tirana, Philip Co-Lac; Koldashi-Elbasan, Xherdo- Tirane,in Koplik,Korce, Delvine, Kelcyre ,Berat etc.Some medicinal plants cultivated today from rural populatons as Lavandula, basil, thymus, sage, mountain tea, etc. to be traded exsport.Some of main species that lies in a lot of districts of Albania are(latin name):*Verbascum thapsiforme,Malva sylvestris,Trifolium pratense,Sideriti roaseri ,Mentha piperita,Urtica dioica,Origonum vulgaris,Erythrea centaurium,Papaver shoeas,Tussilagum farfara,Thymus vulgaris, Scilla maritime, Plantago lanceolata,Gentiana lutea, Calchium autumnale, Chichorium intybus,Salvia officinalis* ect. Medicinal plants are a great national asset, they have been through a great potential for socio-economic development of rural areas, environmental methods applied in their ecological harvesting, to preserve endangered species and threatened to extinction in the context of preserving the BD in Albania, and continuously to this purpose legislation for them is improving.Training of rural populations for their sustainable management, and to organize their collection and the collection of field through NGOs and not in order to collected from separately peoples.The certification of products collected is important.Their cultivation, as a major source of income for rural populations and assessment of abandoned lands and poor, again is very important . In the field of export to international markets operated sure being propagandized in the promotion of high quality herbs in our country contaminated never by any radioactive radiation._Nature, in addition to others, offers the community, and a very large number of products like medicinal and ether plants; is important that these be evaluated and used as environmentally acceptable to have now and in the future permanent resources through their sustainable use.

Key words: medicinal plants, aromatic plants,Albania,rural population,sustainable using,social situation.

227 ELECTROCOAGULATION OF SIMULATED REACTIVE DYE BATH WASTEWATERS BY USING ALUMINIUM ELECTRODES*

Ahmet Aygun[1], Bilgehan Nas[1]

[1]Department of Environmental Engineering, Selcuk University, Konya, Turkey,

Email: ahmetaygun@selcuk.edu.tr, bnas@selcuk.edu.tr

ABSTRACT
The present study focused on the treatability of simulated reactive dye bath wastewaters by electrocoagulation process using aluminium electrodes. The reactive dye bath wastewater was simulated by dissolving proper amount of reactive red 195, reactive blue 221 and reactive yellow 145 with addition of dye assisting chemicals. The simulated wastewater charachterised as initial COD = 416 mg/L, colour absorbance values $A_{o,436}$ = 0.807 cm^{-1}, $A_{o,525}$ = 1.268 cm^{-1}, $A_{o,620}$ = 0.932

cm^{-1}. Response surface methodology (RSM) was applied to evaluate the effects of the three main independent parameters, current density, time of electrolysis and initial pH on the colour removal efficiency. Central Composite Design (CCD) was used for the optimization of the electrocoagulation process. Trial version of Design Expert 8.0.6 was employed for the statistical design of experiments and data analysis. The quadratic model fitted for all responses very well. The optimum current density, time of electrolysis and initial pH of simulated dye bath wastewaters were found to be 33.33 $A.m^{-2}$, 72.50 min and 4.87 respectively. This study clearly showed that Response Surface Methodology was one of the suitable methods to optimize the operating conditions and maximize the colour removal.

Keywords: Electrocoagulation, reactive dye, response surface, dye bath, optimization
*This paper was derived from a part of PhD. thesis fulfilled by Ahmet Aygun.

228 THE ANALYSIS OF PRECIPITATION TRENDS AND DROUGHTS IN BEYSEHIR (TURKEY)

Selim Dogan[1,2,*], Ali Berktay[1], and Vijay P. Singh[2]

[1] *Environmental Engineering Department, Selcuk University, 42031 Campus, Konya, Turkey*
[2] *Department of Biological and Agricultural Engineering & Department of Civil & Environmental Engineering,*
Texas A&M University 77843, Texas, USA

Email: selim@SelimDogan.com; vsingh@tamu.edu

ABSTRACT
Climate is called as the average pattern of weather, generally stays pretty much the same for centuries if it is left to itself. But, the earth is not being left alone. Although controversial opinions still exist, now there are very strong evidences that significant global warming cannot be explained by natural causes. Human activities are changing the climate, especially through emissions of greenhouse gases which warm the atmosphere of the earth. Many panels and scientific studies showed that climate change is fact not a myth or speculation in the light of instrumental observations over 15 decades of surface temperatures have risen globally. One of the key aspects of current researches on earth sciences is the proper understanding of land-atmosphere interactions and the impacts of natural events. Konya Closed Basin (KCB) is located in central part of Turkey. KCB has been affected by many droughts in last 40 years. Beysehir has vital importance in KCB because Beysehir Lake which is the largest freshwater lake in Turkey and is the main source of drinking water in the basin. In this study; the period of 1965-2008 was examined by using Student t, Mann-Kendall and Spearman's Rho test statistics. According to the results of these tests; maximum temperature had significant increasing trends although total precipitation showed no significant trends. The areal extent, severity and duration of a drought can be estimated through drought monitoring which is usually done with the use of drought indices. The period of 1972-2009 was examined by using drought indices, namely Effective Drought Index (EDI) was used with the data acquired from Beysehir station in KCB. Moderate droughts effected region for 8 times and total of 63 months; severe droughts effected region for 5 times and total of 71 months and extreme droughts occurred 2 times, each lasted for 24 months and 27 months.

Keywords: Precipitation, trend analysis, drought index, drought
* This study has been derived from first author's PhD dissertation.

229 ANNUAL TEMPERATURE FLUCTUATION AND CHANGE IN İSTANBUL

Hüseyin Toros

Istanbul Technical University, Faculty of Aeronautics and Astronautics, Department of Meteorology, Maslak, 34469, Istanbul – Turkey.

Email: toros@itu.edu.tr

ABSTRACT

İstanbul is a lies between Europe and Asia so its geographical location is important for different climatic transition regions. Temperature is main parameter for climatic fluctuation and change. Data is very important for climate studies but to find long term data is very limited. In this study, we are using nearly one hundred years daily minimum, maximum and average values in the period of 1912-2009. We used non-parametric Mann-Kendall correlation statistical tests for statistically significant increasing or decreasing trends have been assessed in the 98-year period. The results show that there is significant increasing trend in all minimum, maximum and average temperature.

Keywords: Temperature, Mann–Kendall test, Climate change, İstanbul.

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