

Vol. 3 (1): 01-04 (2013)

THE COST-EFFECTIVENESS OF SOLAR WATER HEATING IN THE SOUTH EUROPE REGION

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Received November, 2012; Accepted January, 2013

ABSTRACT

Many countries in South Europe region, like Montenegro, are suffering from the lack of energy. The increasing demand for energy is a consequence of switching to the new political system, democracy, free market, and sometimes uncontrolled development. However, only small steps are done to fulfill these requirements by implementing energy efficiencies, alternate renewable energy sources, new energy policy etc. Solar water heating (SWH) is probably the most promising, reliable and mature technology, where the price of saved electricity is less than the current price of electricity in this region. The main reason for that is in simplicity of use such energy without its transformation to the end use, and the savings in costs of energy distribution. Furthermore, the environmental impacts associated with its use, are much less harmful than in other energy sources. There is well developed methodology for estimating the attractiveness of implementation of such technology. Discount cash flow analysis is applied for calculation the price of such kind of energy. The critical factors of an economic analysis are the available quantity of solar energy in the region, the costs of solar system and its energy efficiencies, and the cost of operating conventional or backup water heating systems. These factors severely influence the final costs of energy. The analysis is conducted in accordance to current state of the prices of electrical energy in Montenegro and the current prices of solar water heating technologies. The preliminary results are very promising.

Keywords: renewable, energy, solar, water heating, economics, South Europe region

Vol. 3 (1): 05-10 (2013)

PROPYLENE POLYMERIZATION OVER PLANAR MODEL ZIEGLER-NATTA CATALYSTS: THE ROLE OF MISCELLANEOUS INTERNAL ELECTRON DONORS

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Received November, 2012; Accepted January, 2013

ABSTRACT

An active model for a Ziegler-Natta propylene polymerization catalyst has been prepared by spin coating of a MgCl₂/donor(s) solution in ethanol on a planar silica wafer, followed by crystal growth by Ostwald ripening to give well-defined MgCl₂·donor(s)·*n*EtOH crystallites. The interaction of the internal donors with MgCl₂ by spin-coating onto a silica wafer from a solution of MgCl₂/ethanol containing both a diether and DIBP has been studied. When equivalent amounts of diether and DIBP were used, only 120° edge angles were formed, indicating that the diether donor is more strongly coordinated onto the MgCl₂ surface than DIBP. Decreasing the amount of the diether donor resulted in no change in the morphology of MgCl₂ crystallite face. When the proportion of diether donor was then further reduced; SEM images indicated, formation of 90° edge angles.

Keywords: Ziegler-Natta catalysts, electron donors, scanning electron microscopy

Vol. 3 (1): 11-16 (2013)

LANDSLIDE SUSCEPTIBILITY MAPPING IN THE SULTAN MOUNTAINS (AKŞEHİR, TURKEY) USING A BINARY LOGISTIC REGRESSION METHOD AND GIS

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Received November, 2012; Accepted January, 2013

ABSTRACT

Globally, landslides cause hundreds of billions of dollars in damage and hundreds of thousands of deaths and injuries each year. Therefore, to mitigate any damage arising from landslides, it is necessary to scientifically assess susceptible areas. The purpose of this study is to produce a landslide susceptibility map of the Sultan Mountains in central Turkey, based on a logistic regression method within a GIS environment. The field survey for this investigation mapped the location of landslides, and 90 landslides were determined in the study area. In this study, 19 landslide-affecting factors: geology, relative permeability, land use/land cover, precipitation, elevation, slope, aspect, total, plan, and profile curvatures, wetness index, stream power index, sediment transport capacity index, attitude, distance to drainage, distance to fault, drainage density, fault density, and spring density map, were used in the analysis. The coefficients of the predictor variables were estimated using binary logistic regression analysis and were used to calculate the landslide susceptibility for the entire study area. The accuracy of the final landslide susceptibility map was evaluated based on the observed landslides and by calculating relative operating characteristics curve. By overlaying the predicted landslide susceptibility map with the observed landslides data, the results indicated that 71 of the 90 observed landslides were correctly predicted. The area value of the relative operating characteristics curve model was found to be 0.940. These results indicate that the model is a good estimator of landslide susceptibility in the study area. The interpretations of the susceptibility map showed that geology, slope steepness, slope aspect, and elevation play a major role in landslide occurrence and distribution in the Sultan Mountains.

Keywords: Landslide susceptibility; GIS; logistic regression; the Sultan Mountains; Turkey

Vol. 3 (1): 17-22 (2013)

MONITORING OF LEAD LEVELS IN GASOLINE, MARKETED DURING LAST DECADE, IN ALBANIA

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Received November, 2012; Accepted January, 2013

ABSTRACT

Development of the national economy after 2000 in Albania, and especially the transport was accompanied by the growth trends in consumption of fossil fuels, diesel and gasoline. Benefits that transport impact the economy it also is accompanied from negative environmental impacts. Emission of CO₂, SO₂, and VOx, Heavy metals mainly Pb etc. The consumption of gasoline with/or no content of Pb compared to the diesel consumption for consecutive years 2010-2011, has been relatively low. It has varied between 8.7 and 17.5 %, despite that the contribution to gas emission is relatively considerable in urban areas. After 2000s the domestic hydrocarbon market related to the gasoline, has been mainly derived from the import. The import origin comes mainly from Croatia, Greece and Italy and countries from Black Sea region. Aim of the study is monitoring of the Pb content of imported gasoline for period 2001 – 2011, environmental effect in urban areas, evolution of standards for the marketed gasoline, as well as impact that legislation implementation for that commodity has achieved in Albania.

Key words: Gasoline, lead, environmental pollution, hydrocarbon market, urban areas, the standard

Vol. 3 (1): 23-26 (2013)

SUSTAINABLE ENTREPRENEURSHIP AND UNDERSTANDING GREEN CONSUMER BEHAVIOUR

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ABSTRACT

The importance of entrepreneurship as one of the basic skills to be proved through lifelong learning is increasingly recognized today. Both - the Lisbon strategy and the European Charter for Small Enterprises have stressed this point. In particular, the European Charter for Small Enterprises commits the EU to integrate concept of entrepreneurship at all levels of education. It is pointed out that a culture which supports entrepreneurship will contribute to innovation and economic growth of EU countries. The aim of this paper is to explore the extent to which a concept of entrepreneurship education and sustainable entrepreneurship may represent a realistic approach for implementing innovations in business sector, from perspective of green consumer expectations. Focus of the research is in linking economies of the West Balkans, particularly Albania and Montenegro with the European Union.

Key words: entrepreneurship education, sustainable entrepreneurship, green consumer behavior, Shkodra

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PHYTOTOXIC POTENCY ASSESSMENT OF NËNSHKODRA LOWLAND WATER BODIES ENRICHED WITH CHROMIUM (VI)

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Received November, 2012; Accepted January, 2013

ABSTRACT

Chromium is a common contaminant of surface and ground waters, because of its natural sources, industrial applications, mining, smelters, combustion by-products and fuel. In the present work the *Allium cepa* L test was used to detect the root growth restriction effect of some chromium (VI) doped riverside waters of NënShkodra lowland (North-West Albania), because of chromium mine presence down streaming Drini River and this area's 2010 flooding. Filtered tap water from the main supply of Shkodra city was used as control. The visible toxic effects of Cr (VI) were: root bending in concentrations higher than 2.5 mg/L, rigid tips and shrinking in all samples in concentrations higher than 7.5 mg/L. The inhibition of root growth was statistically significant only in natural samples at concentration 2.5 mg/L ($p < 0.05$). Significant changes ($p < 0.01$ and $p < 0.001$) were detected at Cr (VI) concentrations higher than 5 mg/L in all samples, demonstrating cumulative inhibitory effect of Cr (VI) on root growth. Cr (VI) in treated drinking water showed a strong phytotoxic effect, affecting *A. cepa* at the concentration 5.36 mg/L. This investigation was able to screen quantal and toxic tendency of contaminants in analyzed natural waters taken from NënShkodra lowland, where chromium concentration is present only at level of $\mu\text{g/L}$. It resulted to be a simple and sensitive experimental tool, which can be successfully applied in Albania to screen heavy metal concentration and toxicity increase.

Key words: water chemical pollution, *Allium cepa* test, phytotoxicity, mining contamination, chromium (VI)

IMPACTS ON WHEAT YIELD AND QUALITY OF PRODUCTION TECHNIQUES AND ENVIRONMENTAL CONDITIONS

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Received November, 2012; Accepted January, 2013

ABSTRACT

Grain yield and quality of bread wheat in dry farming can be significantly affected by environmental conditions and fertilizer applications. This study was conducted to determine the effect of environmental conditions, nitrogen (N) sources and topdressed times on the some yield and quality traits of bread wheat (*Triticum aestivum* L.) in calcareous soils over two years, 2007/08 and 2008/09, in Central Anatolia environmental conditions. Three N sources, urea (46% N), ammonium nitrate (33% N) and ammonium sulphate (21% N), were applied as hand broadcast on the soil surface during spring at four different times (15 December, 15 February, 15 April and control). As the base fertilizer, 200 kg ha⁻¹ manure (13% N, 24% P₂O₅, 12% K₂O) was used during sowing and 74 kg ha⁻¹ nitrogen were applied as topdressed to all plots. Traits investigated were grain yield per spike, test weight, wet gluten and gluten index. Effects of environmental conditions, N source and timing on yield and quality traits differed significantly. Grain yield (p<0.01), test weight (p<0.05), wet gluten (p<0.01) and gluten index (p<0.01) was significantly affected by environment. Enviromental conditions of second year increased grain yield by 52.4% and gluten index by 45.2% while it decreased test weight by 5.4% and wet gluten by 15.5% compared to those of first year. Early spring applied N (February) increased grain yield and wet gluten, but decreased test weight, while control (N₀) increased test weight, but decreased wet gluten.

Keywords: Yield and Quality, Production Tecniques, Environment

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THE SULFUR CONTENT IN DIESEL TRADED IN TIRANA ALBANIA DURING 2010-2012

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Received November, 2012; Accepted January, 2013

ABSTRACT

The aim of this research is to assess the content of sulfur in Diesel samples that traded in Tirana. This study has rich for a period January 2010 to June 2012. All samples are taken random in fuel station in axe of the road. The total of analyzed samples are 47. Results show that 7 samples analyzed in 2010 have high sulfur content over 350 ppm which has been allowed until January of 2011. In 2011 we have 7 samples with sulfur content above 10 ppm and in 2012 we have 4 samples over 10 ppm. From the results obtained from this study show that 18 of total samples analyzed is above the adopted standard for sulfur content. This relatively high percentage of the analyzed samples may come as a result of the use of diesel D2 which is allowed for consumption by heavy agricultural vehicles as levels of sulfur content in these samples is much higher than the level required. Given this result the level of SO₂ emitted into the environment is very high and is one of the most important pollutants in the quality of air in urban areas.

Keywords: sulfur, Tirana, diesel, environment, fuel station

Vol. 3 (1): 43-48 (2013)

TALL AND SHORT WINTER WHEATS' ROOT DEVELOPMENT IN GREENHOUSE ENVIRONMENTAL CONDITIONS

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Received November, 2012; Accepted January, 2013

ABSTRACT

This study was conducted at Plant Growth Center of Montana State University in 2011. Experimental design was “in completely randomized design” with four replications. Varieties with different average plant heights (Yellowstone, 87.9 cm; CDC Falcon, 78.5 cm) were determined in 30 locations of Montana State during 2007-2011. Seedlings subjected to vernalization during 7 weeks were planted to higher pots (50 cm), which were filled by mixing of peat (70%) and perlite (30%). Plants were harvested in 22-24, 69 and 92 growth stages of wheat (Zadoks Scale). Results of this study showed that dry root weight increased by GS 69 but, decreased 39.8 % in CDC Falcon and 13 % in Yellowstone from GS 69 to 92. Dry root weight in GS 69 and 92 of Yellowstone was greater than CDC Falcon. Increase and change in dry root weight have increased yield and yield components of Yellowstone compared to CDC Falcon. Dry root weight significantly increased when plant height increased.

Keywords: Plant Height, Wheat Root Development, Greenhouse

Vol. 3 (1): 49-52 (2013)

**DETERMINATION OF PHYSICO-CHEMICAL PARAMETERS IN WELLS
WATER IN GERDEC VILLAGE OF ALBANIA**Milidin Bakalli¹, Margarita Hysko²¹ *Laboratory of Microbiology Analysis, Central Laboratory of Armed Forces, Tirana ALBANIA*² *Department of Biology, Faculty of Natural Sciences, University of Tirana ALBANIA*

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Received November, 2012; Accepted January, 2013

ABSTRACT

The present paper shows data related to a physico-chemical parameters of water wells located near the blast zone in Gerdec in 2008. Gerdec village located in north-west of city Tirana, the blast zone has this coordinates 41° 24' 18.70 " latitudes, 19° 37' 59.63" longitudes. The purpose of this study is to evaluate the well water quality through the physico-chemical parameters. The study has started in August 2011 and actually is going on. We have analyzed nearly 240 well water samples in this area. Analysis was performed with standard methods for these parameters as follows: pH, temperature, conductivity, TDS, ammonia and nitrates. From the data obtained result that all the samples containing amount nitrate and ammonia over the maximum values of the standard of drinking water. The presence of undesirable substances is the source for the development of bacterial microorganisms. The presence of chemical contaminants can come from the location of wells, soil composition, no periodic maintenance and use of organic fertilizers on the soil near the wells.

Keywords: nitrates, ammonia, well water, Gerdec, physico-chemical parameters

Vol. 3 (1): 53-58 (2013)

PHOTOSYNTHETIC ACTIVITY IMAGING OF STRESSED-POLLUTION PLANTS

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Received November, 2012; Accepted January, 2013

ABSTRACT

Air pollution by the metallurgical units, as the other stressors, can modify the optical and fluorescence properties of leaf plants either directly or indirectly. Therefore stress effects on plants are detectable via changed on fluorescence signature of leaves. Air pollution could induce decrease of chlorophyll (*Chl*) content as well as significant decline of photosynthetic activity. The chlorophyll fluorescence as a nondestructive method for the *in vivo* analysis of plants allow to study the photosynthetic light processes and quantum conversion to detect stress effect on the activity of the photosynthetic apparatus. Metallurgical factory in Elbasan that release chemicals and particulates into the atmosphere is considered a source of air pollution. Some plant species grown in area near the factory were studied to evaluate the efficiency of photosynthetic apparatus in pollution conditions via chlorophyll fluorescence imaging during induction kinetics. Different fluorescence ratios which describe the photosynthetic light processes and the potential and effective quantum yields of Photosystem II were considered too. Chlorophyll fluorescence images were measured using the FluorCam 700MF imaging system (Photon Systems Instrument) as a technique that offers the possibility to study the distribution and patchiness of fluorescence signatures over the whole leaf area. *Chl* fluorescence images were measured on the leaves of spontaneous plants grown in sites with different level of steel plant air pollution assessed on base of different distances and different directions from the source of the pollution. Contamination effect reflected on photosynthetic activity of leaves was very high particularly on plants located nearer the metallurgical units.

Keywords: Chlorophyll fluorescence, chlorophyll fluorescence imaging, spontaneous plant, induction kinetics, photosynthetic apparatus.

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CONSIDERATION AND NEW DATA ON CERAMBICIDAE FAMILY (INSECTA COLEOPTERA) IN NORD ALBANIA REGION

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Received November, 2012; Accepted January, 2013

ABSTRACT

The study of Cerambicidae family is of great importance not only for the enrichment of systematical data of Albanian Coleopterofauna, but also for the role that individuals of this family play in food chain and in biological war. Up to now in the world are known 20.000 species and only 97 referred for in Albania. We met 10 of them in Northern Albania. In this paper we present the diversity of species of Cerambicidae Family in Northern Albania. In this study we classified 10 species that belong to 8 genera from which 5 (five) species are reported for the first time in Albania (*Leptura Steveni*, *Trichoferus cinereus*, *Dorcadion holosericeum*, *Oberea Linearis*, *Oberea erythrocephala*).

Key words: Coleoptera, Cerambicidae family, diversity of species, Albania, Northern Albania.

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HOW SOIL POLLUTION IN SOME URBAN AREA OF ALBANIA AFFECT IN AIR QUALITY

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Received November, 2012; Accepted January, 2013

ABSTRACT

The transformation of Albanian economy to an open market during the past two decades caused a significant damage to the natural resources of the country; most of them being the most exposed and unprotected ones. The main environmental problems could be focused at deforestation, soil erosion and environmental pollution. Some important factors cause environmental problems Albania should be from loss of landscape due to mining, mineral processing and transporting, which may cause air pollution, too. 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 some trace and major in air (1elements) by using mosses collected in 1sites. The ICP/AES analysis of 1elements (Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Hg, Mg, Mn, Na, Ni, P, Pb-US, Sr, V and Zn) was performed by the Institute of Chemistry, Faculty of Science, Sts. Cyril and Methodius University, Skopje, FYR of Macedonia. The target elements like 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/kg in dry weight material.

The results are expressed as pollution gradients. The terrestrial moss used was *Hypnum cupressiforme*.

The intensity of metal mean values in moss samples follows the trend:

As<Cd<Li<Pb<V<Cu<Cr<Zn<Ni<B<Sr<Mn<Ba<Na<P<Fe<Mg<Al<K<Ca. The analytical results were compared statistically by linear correlation and cluster analysis. The goal of this study was to survey and asses the air pollution in some part of Albanian. The lithogenic/and or anthropogenic origin of heavy metals as most toxic elements have been in our attention. These elements are present in many different minerals in our country. Industrial processes, such as mining, contribute to the presence of these elements in air, water and soil. From the preliminary data (limited no. of stations and no. of elements) we can conclude: Most of elements follow crustal distribution; Traffic vehicles, PM1and road dust emission, are evident for Zn; Industrial processes, such as mining, contribute to the presence of HM in air and soil; HM in weathered rock or soil can be picked up and moved by the wind.

Key words: soil pollution, heavy metal pollution, air quality, moss biomonitoring technique, ICP/AES,

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AN OVERVIEW OF THE PEDIATRIC MORTALITY IN THE PEDIATRIC HOSPITAL OF ELBASAN DURING 2000-2011

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Received November, 2012; Accepted January, 2013

ABSTRACT

During 2000-2011 in the Pediatric service of Elbasan there have been hospitalized 20,370 cases, while 96 of them have passed away. In this research can be easily seen that during a period of 10 years, the number of cases hospitalized in the hospital have variations and not that high decrease, compared to the number of cases of mortality where from 18 cases in 2000 have decreased in 3 cases in 2011. This is a very positive indicator which is connected with some factors, like the improvement of socio-economic level and health service. This is connected also with the decrease of the number of births, immigration, etc, quoted even from other authors.

Key words: indicator, mortality, pediatric service

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ENVIRONMENTAL EFFECTS ON GRAIN YIELDS AND QUALITY PARAMETERS OF WINTER BARLEY OF BEER IN THE REPUBLIC OF KOSOVO

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Received November, 2012; Accepted January, 2013

ABSTRACT

The object of this paper is the study of environmental effects on grain yields and quality parameters of winter barley beer in the Republic of Kosovo. In analyzing the chemical composition of several parameters that affect the quality of beer have a total of five barley cultivars: Bingo, Zlatko, Vannesa, Esterel and Rex as comparative (standard). Environmental effects of planting barley cultivars in the Dukagjini area and area of Kosovo is based on a study that determines the influence of climatic factors, temperature and moisture, the quality of barley for beer production. Analysis of chemical composition of several parameters that affect the quality of beer were conducted in two regions of Kosovo (in Arbnes in research farm of the agricultural institute of Kosovo, Peja – Dukagjin Plain, and Pestova – Kosovo Plain, privately owned company "Pestova". Experiments were set according to the method of randomized blocks in three repetitions. Area of each experimental plot was 10 m². In the laboratory at the Agricultural Institute of Kosovo, and close laboratory brewery in Pec were analyzed: the content of protein (%), weight (1000 seeds in grams), hectoliters weight (kg), humidity (%), yield (kg/ha), starch, color, aroma, impurity. Results obtained showed that there were significant statistical differences at different levels to investigate the features of all the parameters involved in plots compared with the standard (Rex) and between localities.

Key words: barley, proteins, sedimentation, starch, quality beer.

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EVOLUTION ON THE DIESEL FUELS NATIONAL STANDARDS DURING LAST DECADE AND ITS ENVIRONMENTAL IMPACT

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Received November, 2012; Accepted January, 2013

ABSTRACT

Demands in the hydrocarbon market which have shown a continuous increase, as well as sensitivity of society to the environmental issues, in Albania, in past years have dictated improvement of national standards to the fossil fuels. In this situation, a special importance has taken the control on the quality parameters for the fossil fuels, with focus monitoring of sulfur content on fuels of domestic production and the negative proved impacts of this commodities in the environment. The consumed diesel during last decade is mainly furnished by the import and only a small proportion (25 – 30%) has been of domestic origin. For Albanian crude oils is characteristic High sulfur content up to 6.5%, hence it is reflected on the by-products, especially to the diesel, mazut and solar and heavy oil by-product fractions. The national Standard (S SH 31:1997) with object on total sulfur content in diesel with time limit until 31/12/2009 has imposed to the market shifting of the diesel consumption with up to 2000 ppm total sulfur content. Aim of this study is analyzing of the evolution trends on the quality standards in the diesel commodity during last decade, and its environmental effects on the SO₂ emissions. It has analyzed improvements by time that have accompanied the environmental issues linked to the hydrocarbon market.

Key word: Petroleum by-products, Environmental Impact, Evaluation, Standards, Diesel, SO₂

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**POOR MANAGEMENT OF WASTE HYDROCARBONS AND INERT
OBSTACLE TO SUSTAINABLE DEVELOPMENT. CASE STUDY:
SEMAN COASTLINE - VJOSË**

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Received November, 2012; Accepted January, 2013

ABSTRACT

Seman - Vjosa coastline with picturesque beaches and curative value has become an attraction for tourists not only in Fier region but also beyond. As a tourist destination prior to 1990, the interest of tourists to this beach is steadily increasing. This beach forest vegetation near shore and shallow for a family holiday with children has become more visited. Recent years have started increasing investment by treating services not as a local beach. But in listing the requirements of vacationers put in the foreground, solid waste (bunkers, beach cabins built before 1990, oil well) and hydrocarbons. Holiday makers caught between desire and fear have to focus on some of its segments. Eliminating these problems with a management plan will make this the most frequent coastline, but also a national destination and perhaps even internationally.

Keywords: management, attraction, destination, investment

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ENVIRONMENT AND TOURISM CASE STUDY OF ALBANIA COASTGjergji Shqau¹, Shkelqim Gjevori²¹*Department of Business-Administration, University "Aleksander Xhuvani", Economic Faculty of Elbasan, Albania*²*Ministry of Public Works and Transport. Institute of Transport, Albania*E-mail: gjevorish@yahoo.com; shkelqim.gjevori@ital.gov.al

Received November, 2012; Accepted January, 2013

ABSTRACT

Tourism is considered as one of the most important sectors of the economy of a country. Various studies have identified the significant impact that the environment plays in the development or curbing of tourism in general. The *methodology* of this paper is based on the collection of primary and secondary data from various sources, use of questionnaires and interviews with choice, tourists and business entrepreneurs across all the coast line, and data processing with different computer programs. Albania is a country where tourism has a significant impact on the economy by about 20%, and has activated a diverse tourist offer, such as coastal tourism, mountain, etc. The most important offer in Albania of all these is of course coastal tourism, both for the number of participants and for the percentage to the structure of total incomes from tourism. The *purpose* of this research is how the environmental problems can affect tourism. Problems are different, starting from urban waste, sewage, air pollution, dirty sand, various garbage, and unpaved roads or still under construction, etc. The trend of visitors is increasing from 353 thousand in 2001 to 2417 thousand in 2010, again there is a deviation of visitors by about 15%.

Keywords: tourism, environment, Albania, coastal line, visitors.

Vol. 3 (1): 97-102 (2013)

THE ANALYSES OF URBAN DEVELOPMENT PLANS IN SHKODRA CITY

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Received November, 2012; Accepted January, 2013

ABSTRACT

This paper analyzes the relations between spatial configuration and GiS urban activities in Shkodra city. The effects of such transformation, good and bad, have become very visible in physical or spatial terms, and in the daily lives of people in urban areas of Shkodra city, especially those that have expanded rapidly. The landscape of Shkodra city is the result of architectural-urban-historical development during centuries. This paper focuses on trends and issues that have come to the fore with rapid urbanization and with the recent decentralization. At the same time analyzes a good urban plan with GiS to support the sustainable development of the city while defending all its identity, its assets and its historical and cultural values. Therefore, Shkoder needs something of its own: a plan reflecting its typical spatial organization evolved through years, the symbiosis relation with its lakes, rivers, mountains and flood plains, it's historical past and it's buildings with typical traditional architecture just to guide it's development.

Key words: landscape, traditional architecture, GiS, development, Shkodra

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THE IMPORTANCE OF TOURISM MARKETING IN LOCAL RURAL DEVELOPMENT

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Received November, 2012; Accepted January, 2013

ABSTRACT

In this article is treated widely and profoundly the final examination of tourism marketing content's of rural areas in Albania where still has lacks about the context of the discussion. This Paper describes an analysis of various brochures, which represent different regions of our country, he reveals some distinct models of marketing images, that occur during these destinations. Tourism marketing in certain areas is going toward development and the destinations with the fastest growth are exactly from these areas (Charlotte M, Pushkala P. 2001). Currently about 30% of all tourists arrivals in national ranking are in rural areas (Dardha, Voskopoja, Thethi, Valbona, Skrapari, etc.) and this ratio is almost doublet in the last years. However, during the last decades has resulted a critical growth of the portrayal of these destinations from the people who represent them with promotional materials. Mostly the previous research focuses on the marketing's content examination of tourism for rural areas. Finally, there remains an apparent lack of critical attention over the content about defining these representations.

Key words: Tourism marketing; Sustainable Development; Developing Regions; Marketing Processes.

Vol. 3 (1): 107-112 (2013)

BACTERIAL LOAD OF BOVILLA RESERVOIR DURING MASSIVE RAINFALL

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Received November, 2012; Accepted January, 2013

ABSTRACT

Bovilla reservoir is situated 15 km North-East of Tirana the capital city of Albania and is the main source of drinking water supply for this city. The reservoir is fed mainly from Terkuza River with an annual average flow 3.3 m/s. Approximately 1800 l/s of raw water is abstracted from the reservoir and is delivered toward Bovilla Water Treatment Plant. The beginning of rain season or massive rainfall, frequently are accompanied with an increase of turbidity due to runoff from Terkuza River. Therefore, is expected an increase of bacterial load. The purpose of this paper is the determination of Bovilla's bacterial load during massive rainfall and comparison with bacterial load in normal condition. This study was conducted from October 2010 until April 2012. Water samples were collected near the withdrawal tower in 15 m deep, which corresponds with the depth of water that is abstracted for treatment for human consumption. The samples were taken weekly and were analyzed for some physical-chemical and microbiological parameters such as: water temperature, pH, turbidity, ammonium, nitrates, nitrites, ferrous, total coliforms, fecal coliforms, faecal streptococci, bacterial microflora in 22⁰C and bacterial microflora in 36⁰C. Results have shown that during rainfall the values of turbidity, ammonia and ferrous differed clearly from the values obtained for samples in normal conditions. Most of microbiological parameters investigated increased considerably during massive rainfall events.

Keywords: Bovilla Reservoir, massive rainfall, chemical and physical parameters, Faecal coliforms, Faecal streptococci, Total coliforms.

Vol. 3 (1): 113-118 (2013)

PRELIMINARY DATA ON MYCOTIC EVALUATION IN CHEESES SOLD AT TIRANA MARKETS

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Received November, 2012; Accepted January, 2013

ABSTRACT

Contaminated cheese has been responsible for outbreaks of food poisoning by several types of bacteria and molds. Based on the importance of mold, they are classified as pathogenic and non-pathogenic one. A mycological survey of different kinds of cheeses sold at five big markets in Tirana city is conducted during July 2011- May 2012, in order to identify if potentially toxigenic and pathogenic fungi were or not present. A total of 80 samples of cheeses (soft, hard, semi hard, edam cheese) etc, available at 5 different markets, were tested for mold and yeast counts. For moulds, satisfactory level $<10^4$ cfu/g results 50 cases 62.5%, unsatisfactory level 10^4 cfu/g - 10^6 cfu/g results 16 cases 20% and potentially hazardous level $>10^6$ cfu/g results 14 cases 17.5%. For yeasts, satisfactory level results 34 cases 42.5%, unsatisfactory level results 33 cases 41.25% and potentially hazardous level results 13 cases 16.25%. Samples also were tested for the presence of TBC (Total Bacterial Count) and the 30 samples. On our samples, 66.6% of them have resulted in rate and 33.3% of them resulted to be over rate. The most common moulds found in analyzed cheeses were *Aspergillus* spp, *Penicillium* spp, *Fusarium* and *Mucor*. In total are analyzed 16 samples, that have resulted in a load $>10^6$ cfu / g, which are considered as samples with high potential risk. In 31.25% of the samples was present *Aspergillus* genus, in 37.5% was determined genus *Penicillium*, 18.75% *Fusarium* genus and in 12.5% was identified *Mucor* genus. Despite the high mould and yeast counts, the analyzed products didn't show any visible signs of contamination.

Key words: Mold, yeast, cheese, *Aspergillus* spp, *Penicillium* spp, *Fusarium*, *Mucor*.

Vol. 3 (1): 119-124 (2013)

THE STUDY OF BEER QUALITY PRODUCED OF DIFFERENT CONCENTRATIONS OF A BASIC EXTRACTION

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Received November, 2012; Accepted January, 2013

ABSTRACT

Based on the idea of improving the quality of beer as well as optimizing the production process in the "Birra Peja" factory - Peja, Kosovo the study in question has been conducted by producing and comparing three basic level extracts: E = 10.5%, E = 13.0%, and E = 15.0%. For this study was involved the entire chain of production of beer, in close cooperation with the production and the laboratory staff of the factory in Peja, and the laboratory of the Brewery "Union" from Ljubljana. Were studied the characteristics of beer during the manufacturing process and upon the expiry of the considered period. Production and beer tasting for this study were done in two time-intervals by two tasting groups; "Birra Peja" and Brewery "Union" from Ljubljana. Regarding the main components affecting the taste and quality of beer were studied ingredients such as polyphenols, esters and higher alcohols in these beers. Chemical and microbiological tests are done based on the methods under the European Beer Convention (EBC) and the MEBAK Regulation. Based on the analyses and assessments made for the quality of the beer we concluded that the beer produced by the basic extract 15% corresponds to better a quality beer which we should produce.

Key words: Beer, basic extract, KEB, MEBAK.

Vol. 3 (1): 125-130 (2013)

RURAL MIGRATION IN SHKODRA REGION AND ITS IMPACT ON ENVIRONMENT AND DEVELOPMENT

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Received November, 2012; Accepted January, 2013

ABSTRACT

The relationship between population and environment is as old as the humankind. Environmental changes have always been the cause and the consequence of population movement. The effects of migration as one of the main features of the Albanian population after 1990s are displayed in economic, social or environmental aspects. On one side we face the pressure on land in urban areas and on the other side the abandonment of entire areas in the rural ones. Population movement is a typical feature of everyday life in agricultural context. It can be appeared in the form of permanent or seasonal migration, rural-urban or rural-rural, or even international. Therefore, in recent years more attention is paid to the connection between population change and especially migration, environment and economic development. Environmental changes in the chaotic movements are displayed in the cases of land desertification as a result of their abandoning or construction on agricultural land, deforestation due to logging without any criteria or arson, overuse of inert from river beds or mountain sites, non-selective hunting etc. Migration - displayed in the form of permanent or seasonal migration, is seen as one of the main mechanisms that bring the backwardness of rural areas and the main reason that deepens the gap between regions expecting immigrants and the areas where they leave. Still most nations with the best economic performance over the last 40 years are those with the largest rural to urban migration (Tacoli 2003:2). As a result of migration rural areas loose labor force because the population in working age occupies the highest percentage of emigrants. This includes the most active economic and innovative groups of the population, which means the young and the educated ones. Therefore the negative effects start to appear in decreasing the agricultural productivity and the decline of interest for renewal or modification of rural production system in general. Remittances have come to fall and are used more for consumption spending (e.g. housing construction) than in investments to increase production and rural incomes (e.g. investments in new agricultural technologies that would increase the value of products). Immigrants back in their homeland, when they return from urban areas bring with them, their working experience more convenient for the towns. But there are cases of returnees who use their skills gained in rural areas of developed countries to successfully apply in their farms.

Key words: rural area, migration, environment, sustainable development, abandonment

Vol. 3 (1): 131-134 (2013)

A CONTRIBUTION TO THE KNOWLEDGE OF THE SEED BUGS (LYGAEIDAE, HEMIPTERA) IN THE DIFFERENT ECOSYSTEMS IN ELBASAN

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Received November, 2012; Accepted January, 2013

ABSTRACT

Study of the ecological and systematical aspects for the families *Lygaeidae* in ecosystems Elbasani Region is presented in that paper. The biological material was collected during the period of time 2008-2010. In our study, we determined 34 individuals for this family. The family *Lygaeidae* was presented by 10 genera and 12 species. The systematical analysis to the *Lygaeidae* resulted that the genera represented by the highest number of species was *Lygaeus* and *Ischnodemus* by 2 species, and frequency 16.67%. By analyzing the material the station with more species, is K.Kasta, with 8 species or frequency 66.67%, while with less species, is Peqin with 3 species or frequency 25.00%.

Key words: Hemiptera, *Lygaeidae*, ecosystems

Vol. 3 (1): 135-138 (2013)

**APPLICATION OF MARKETING - A PROBLEM AND A CHALLENGE
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Received November, 2012; Accepted January, 2013

ABSTRACT

Application of marketing mix by manufacturing companies in Kosova market was first introduced as something new, a segment to which earlier has not been paid special attention. In the last five years enterprises in Kosova have started to pay more attention to the marketing area and to consider it as an important segment in the development of their activities. Problems and challenges accompanying the Marketing sector of manufacturing companies in Kosova, were mainly appeared in financing way. In order to apply Marketing strategies companies had to spare a sufficient budget. A challenge for the entrepreneurs in Kosova was the following of trends in this broad field, creation of marketing departments within companies, and later on the application of leadership of this sector by the specialized Marketing agencies. Manufacturing enterprises/ companies in Kosova apply highly advanced forms of marketing, respectively give ideas on promotional models, which present attractiveness to customers, lower costs as well as closer and faster contact with the consumers. The purpose of this research is reflection of models, promotional and practical ideas of low-cost products, pricing strategies used by manufacturing companies, the acquisition of new customers. Problems faced by manufacturing companies in the marketing sector, as well as providing alternatives to overcome problems. In this research there are applied both quantitative and qualitative methods of research which serve us to analyze the facts relating to the promotion of products by manufacturing enterprises in Kosova.

Key words: Marketing, promotion, market, manufacturing companies.

Vol. 3 (1): 139-144 (2013)

CHEMICAL COMPOSITION OF VIRGIN OLIVE OIL OF “KALINJOT” AND “FRANTOIO” CULTIVARS FROM 2010/11 AND 2011/12 CROPS

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Received November, 2012; Accepted January, 2013

ABSTRACT

The chemical composition of Kalinjot and Frantoio VOO's produced in the Vlora Region South of Albania was studied as was its relationship with oil quality and the influence of the extraction method and production year. The main characteristics of these oils were phenolic compounds content was 368.8 ± 60.6 for 2011/2012 and 593.1 ± 81.5 for the 2010/2011 for the Frantoio cultivar, and 759.0 ± 36.5 and 445.7 ± 44.4 mg/kg (as caffeic acid) for the two respective year crops for Kalinjot; oleic acid 74.06 ± 0.8 %, linoleic acid 7.46 ± 0.6 %. From the results we can state that no clear differentiation can be made based on the extraction system (three phase decanters and pressure system) for the quality indexes, although oil produced by pressure system showed higher Oxidative Stability and phenolic content for Frantoio Cultivar. All the parameters tested varied according to the crop production year. The fatty acid profile of each cultivar was different showing a relation to the cultivation area and type of cultivar. In general, both type of oils showed high antioxidant content and have high oxidative stability.

Key words: Chemical composition, Albanian Cultivars, Virgin Olive Oil, Production year

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SERUM LEVELS OF CALCIUM, PHOSPHOROUS, VITAMINE “D” AND PRATHYROID HORMONE IN INDIVIDUALS WITH PRIMARY HYPERPARATHYROIDISM IN ALBANIA

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Received November, 2012; Accepted January, 2013

ABSTRACT

To assess the present situation of laboratory profile of the individuals diagnosed with primary hyperparathyroidism in Albania. Primary hyperparathyroidism is characterized by incompletely regulated, excessive secretion of parathyroid hormone (PTH) from one or more parathyroid glands. Hypercalcaemia, hypophosphatemia and deficiency of vitamin D is caused in cases of increased PTH levels. 125 patients, aged 18-78 years diagnosed for primary hyperparathyroidism in the University Hospital “Mother Theresa “ in Tirana from 2009 to 2011 were enrolled in the study. A 10 ml fasting blood sample was collected in pre-chilled tubes for determination of PTH and 25- hydroxyvitamin D, as well as other biochemical parameters. Serum concentration of 25(OH) D and PTH were measured by Electrochemiluminescence immunoassay on Roche Coobas 6000 system. The mean (SD) age was 43.5 (14.14) years (range 18-72); Mean (SD) body weight was 55.7 kg (range 36-78). The mean serum calcium concentration was 12.47(1.58) mg/dl; 12 patients had the serum calcium < 8.6; 37 had the serum concentration 8.6-10.2 mg/dl and 76 had the serum concentration > 10.2 mg/dl. Serum phosphate level fell to 2.1 mg/dl. 39% of the patients had severe vitamin D deficiency (serum 25 OH D, <5ng/ml). Serum 25 OH D concentration were 10-20 ng/ml in 25% , 20-30 ng/ml in 34% and more than 30 ng/ml in 3% of the patients.

Key words: PTH, Hyperparathyroidism, hypercalcaemia, hypophosphatemia, vitamine D.

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USE OF ENZYMES IN THE BEER PRODUCTION

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Received November, 2012; Accepted January, 2013

ABSTRACT

Beer and wine are two spirits that have been part of our social life for thousands of years. Both these drinks are produced by fermentation of sugars by yeast. Wine is based in grapes and beer in barley traditionally. Grapes that mature after holding the necessary sugars for fermentation, while we have barley starch content that must be broken down into sugars before yeast ferments to produce alcohol. From this traditional beers contain additional step in comparison with the production of wine, named malt in which the enzymes needed for degradation of starch to fermentable sugars. Also enables improving the quality of beer with commercial enzymes, avoiding the bitter taste. Also comes in focus the concerns of the release of CO₂ gas from industrial production of beer. With the use of exogenous enzymes can extract than by raw materials, can be used with many seeds of unmalted saving considerable amount of energy and transport. Alternative production processes for manufacturing beer to wine and beer with higher productivity and reduced amounts of waste and byproducts are in progress.

Key words: enzyme, starch, amylase, amylopectin, degradation, beer.

Vol. 3 (1): 155-162 (2013)

BANKING SECTOR DEVELOPMENT AND CHALLENGES IN ALBANIA**Soniela Grazhdani***"Fan S. Noli" University, Korçë, Albania*Email: s.grazhdani@gmail.com

Received November, 2012; Accepted January, 2013

ABSTRACT

Albanian banking system during its development has faced a lot of challenges that differ in time. This paper discuss the problem of its development from the early stage of transition until nowadays and give some suggestions in order to address current problems of Albanian banking system. The present analysis focuses on developments in the second half of the current decade (2005 - 2010). As for the general lines of banking sector transformation, we chose a somewhat longer time frame, starting from the 1990s, so as to put developments into perspective. The analysis of banking development through level of financial intermediation, supervision framework changes, level of competition, financial performance etc is at the very core of our topic and thus we explore it in greater detail than the other aspects. This focus is underlined by our paper of both country and cross-country data. A set of key structural and prudential indicators as well as different study regarding banking sector development are used. Bank development in CEE, SEE countries serves as a benchmark against which developments in Albania are assessed.

Key words: Albania, banking system, problems, progress

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RECYCLING AS A CORE ELEMENT OF GREEN WASTE MANAGEMENT: A CASE STUDY IN MACEDONIA

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Received November, 2012; Accepted January, 2013

ABSTRACT

Recycling as an essential element of green waste management significantly contributes to solving the waste problems. It contributes to sustainable use of natural resources and protection of ecosystems. Waste has been becoming one of the major problems of contemporary living, on the local, regional and global level and on the other hand, it is one of the main future challenges. Waste in Macedonia is one of the largest environmental problems. Generation of all types of waste has been increasing, but recycling does not follow the level of generation. Taking into account that in Macedonia, it is only one landfill, which meets environmental standards, the significance of recycling becomes greater. Since 2004, Macedonia has been making efforts to harmonize waste regulation with the Union's regulation, which gives relatively successful results, but there is a huge problem with the implementation. There are some results in recycling of plastics and metal, but recycling of glass, paper, electronic waste, and wood is still in an early stage. Investments in recycling and in new green technologies are very low. The aim of this paper is to analyze the current situation and to put lights on the future possibilities in the area of recycling. For the purpose of this paper, it was made a research, which makes efforts to give some figures about generation and recycling of different types of waste, with recommendations for the future activities.

Key words: Recycling, waste, waste management, technology, regulation.

Vol. 3 (1): 169-172 (2013)

**INFLUENCE OF TOURISM ON THE REGIONAL DEVELOPMENT:
CASE OF ALBANIA AND BOSNIA HERZEGOVINA****Alma Marku***European University of Tirana, Tirana, Albania*E-mail: alma_marku@yahoo.com

Received November, 2012; Accepted January, 2013

ABSTRACT

Tourism is an important sector of the country's economy because it brings a large amount of income in payment for goods and services. Also it creates great opportunities for employment in the service sector of the economy associated with it. To European Union, tourism is an important economic activity because it contributes to employment and economic growth; and development and socioeconomic integration in rural, peripheral or underdeveloped area. Albania and Bosnia and Herzegovina are two potential candidate countries, working on different criteria in order to reach the standards required to be member of European Union. Both countries are developing different strategies to eliminate regional disparities, and tourism is seen as a key factor in this regards. This paper aims to review the strategies of tourism of both countries in order to analyze its influence on regional development. The purpose of this paper is to review the tourist regions and resources of both countries with the intention of analyzing the potential they have to develop tourism. The questions that are raised are if these strategies influence on the regional development of the country, in other words, are they helping the poorest regions to catch up with the richest ones, which are the sector of the economy that benefits most, etc. Conclusion: Albania and Bosnia and Herzegovina have great potential of natural, cultural, religious and historic tourism. These countries have still work to do in the development of tourism strategies on the respective countries in order to have a bigger impact in the regional development.

Keywords: tourism, regional development, strategy

Vol. 3 (1): 173-178 (2013)

AIR QUALITY IN THE CITY OF KORCA AND IT'S IMPACT ON POPULATION HEALTH

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Received November, 2012; Accepted January, 2013

ABSTRACT

The population of the city during the last years has been exposed to polluted air and has accumulated in the breathing apparatus $90.7 \mu\text{gr}/\text{m}^3$ PM10, affecting this way the rising of morbidity and mortality of the habitants. The map of WHO (World Health Organization) for deaths caused by the urban pollution of air classifies Albania among the zones with the risk of 150-200 deaths per year per 1 million inhabitants. Aim: The aim of the study is the identification of the air pollution and the incidence of pathologies of breathing and cardio-vascular apparatus and the identification of the number of pregnancies and births with malformations. Material and method: Type of study: descriptive. The direction of the study was prospective. Was studied the air quality in the city of Korca and it's impact in morbidity and birth malformations. The study was done during the time period 2003-2012. There were compared the level of the air pollution during the last 10 years as well as the comparison with the allowed rates and the definition of incidences for particular pathologies and for pregnancies with malformations of the babies. The polluters measured are: SO₂, NO₂, PM10, lead and iron, assessed by taking the active samples,(all in days base) and O₃ with passive pipes. The analysis of samples are done in the Institute of Public Health. As well as the assessment in the monitoring fixed stations, set in October 2011 in a part of the city at 'Raqi Qirinxhi' school and the Themistokli square. Results and discussions: The results were analyzed separately for all the elements of air pollution and were represented in tables and graphs.

Key words: Air Quality, lethal pathologies.

Vol. 3 (1): 179-182 (2013)

HEALTH RISK ASSOCIATED WITH BATHING IN SEA WATER: STUDY CASE –DURRES BEACH AREA

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Received November, 2012; Accepted January, 2013

ABSTRACT

The European Union Directive 76/160/EEC sets out the limits of certain physical chemical and microbiological parameters in order to ensure that the environment and public health in bathing areas are protected throughout the European Community. The aim of the paper consists in assessing the health risk of exposed population to the recreate polluted water through monitoring of environmental indicators for preventing dangers that affect human health. The method used in the study is based on the collection of statistical data from the MoE, ARM, DSHP for the microbiological indicators of beach waters to predict the relation between bathing and the appearance of some symptoms associated with the exposure to the polluted water. Data on the medical registration records from Durres Regional Hospital were analyzed too, for the period June-August 2010 to evaluate the probable correlation in accordance to the literature. Statistical data are processing with Excel programmer. The result of this study suggests that there is a correlation between the level of biological contamination of recreational waters and prevalence of infectious diseases.

Key words: water quality, environmental indicators, health risk, exposed population, recreational beach water.

Vol. 3 (1): 183-190 (2013)

PGD IN ALBANIA, SITUATION AND PERSPECTIVE QUESTIONS

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Received November, 2012; Accepted January, 2013

ABSTRACT

Preimplantation genetic diagnosis (PGD) is used mainly in couples at high risk of transmitting a specific genetic anomaly. It involves genetic testing of embryos generated in vitro, with the aim of identifying embryos which are normal in terms of the anomaly in question and are therefore suitable for transfer. In March 2005 the Institute for Prospective Technological Studies (IPTS) of the European Commission's Joint Research Centre (JRC), the European Society of Human Genetics (ESHG) and the European Society for Human Reproduction and Embryology (ESHRE) organised a workshop on the interface between genetics and reproduction in healthcare. In the Course of this event it became evident that a full picture of PGD practice and provision in Europe was needed. PGD is subject to different regulations, practices, professional standards and accreditation requirements across Europe. In Albania PDG is new. The low, the experience and the request are in first steps. Many people (couples) in need do not know what is this new technology and for what is used. A good campaign of opinion's promotion is necessary. Better a PDG today, than a future seek child.

Key words: PGD, genetic anomaly, transmitting, PGD practice, different regulations, standards, campaign.

Vol. 3 (1): 191-196 (2013)

PUBLIC PARTICIPATION AS IMPORTANT TOOL TO PROMOTE SUSTAINABLE DEVELOPMENT

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Received November, 2012; Accepted January, 2013

ABSTRACT

This paper will present basic concepts of Public Participation as an important instrument for sustainable development. Modern democratic life requires an active role from the population and needs participation from members of the community. Participation transforms the democratic system, creating a permanent connection between the governed and those who govern. Public participation in decisions about development is an important tool to achieve possible solutions which promotes sustainable development. The challenge of a development pattern striving to harmonize economics with social and environmental needs requires active citizen participation in public issues. The concept of democracy is connected to the idea of public participation because it allows government actions to become transparent and effective by avoiding corrupt behaviors. In order to build a participatory democracy, it is necessary to provide citizens with an institutional framework that will allow for effective participation in public issues. Numerous international documents have expressed the importance of public participation and the need to institutionalize it to move towards sustainable development. Facilitating the access to information by spreading using most important instruments of communication encourage public awareness and participation to the decision making process. States shall provide an effective access to judicial and administrative proceedings, including redress and remedy. The main arguments in this paper, stress the fact that for an effective way of public participation it's important to ensure the access to the decision making process, to the public information and to the justice.

Key words: public participation, governance, information, justice, decision-making, sustainable development