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LEGACY AND LESSONS LEARNT FROM THE CHERNOBYL ACCIDENT

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ABSTRACT

The nuclear accident at the Chernobyl nuclear power plant in Ukraine, by then USSR yet, took place almost thirty years ago, in the night of April 26th, 1986. The paper aims at summarizing the last findings about the health and environmental impact of the accident, at the light of the actual and recent data, more than three decades years after the event. The consequences of the release of around 85 PBq of Cs-137 and 1760 PBq of I-131, estimated by the GENII-FRAMEScode, sum up to a huge Collective Dose to European and Asian population of around 172.000 Svperson. Health effects of the Chernobyl accident are estimated to be around 10.000 total excess cancers.

Key words: nuclear accident, Chernobyl nuclear, power plant, Ukraine

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**WASTE WATER SLUDGE WITH AGRICULTURAL WASTE COMPOST
USAGE FOR SOIL QUALITY****Sukru DURSUN***Environmental Engineering Department, Engineering Faculty, Selcuk University, Konya, Turkey;*E-mail: sdursun@selcuk.edu.tr;

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UOI license: <http://u-o-i.org/1.01/ijeess/54584079>**ABSTRACT**

Increasing population was need natural sources demand for world countries which already effected on water, food and health problems. Agriculture activity deeded more water and land for food sources of increasing population. Management of agricultural might be coordinated and integrated with natural source management of world counties. Sustainability of public health and environment protection is key factors for countries' development. Solid waste composts are used in the agriculture for soil conditioner but also fertilizer to increase food production. Proponents of this practice consider it an important recycling tool since municipal solid waste and also waste water treatment sludge otherwise would be land filled and critics are concerned with its often elevated pollutant concentrations in the field. Large amounts of municipal solid waste compost are frequently used in agriculture to keep crop N requirements and for the addition of organic matter. The main concern is loading the soil with the pollutants as well as metals that may result in increased pollutant content of crops. One of the significant issues of agricultural soils in the world area is the low organic natural matter substance. Composted organic material is being connected on rural fields as an alteration to give supplements and furthermore to upgrade the natural matter substance and enhance the physical, chemical and concoction properties of the developed soils. The composted organic material contains essential nutrients for plant growth, especially N and P. The reusing of agricultural product waste that Includes Tree leaves, Roots, Twigs with Land application of composted material as a fertilizer source not only provides essential nutrients to plants, it also improves soil quality and effectively disposes of wastes. The return of organic wastes to the soil is a step towards more closed nutrient cycles, greater sustainability, and reduced environmental loads. The regulation on fertilizers of organic origin describes the allowed use of organic waste products in agriculture and in landscaping. Waste from agricultural harvesting process contains high organic matter and increase organic matter content of soil if the leaved enough time periods on the soil at naturally decomposition process. In this research, concerning to investigate the positive effects on increase possibility of soil organic matter advantages for inefficient or unsuitable field soils.

Keywords: Municipal solid waste; Organic waste, Compost; Population, recycling, production

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WIND ENERGY AND ITS STATUS IN TURKEY

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ABSTRACT

Turkey's geographical location ensures that the country has a very high potential of wind energy, which is around as 48,000 MW. This number is equivalent to 1.30% of the total surface area of the country. In accordance with the technological developments, the need for energy has been increased for the last few decades in Turkey. To cover this energy need, the studies have been directed to generate renewable energies and this effort also ensures the employment growth in the country, accordingly. In this academic work, the latest position of wind energy in Turkey has been dealt with including wind energy potentials, productions, wind energy utilizations, governmental incentives. Thusly, by preparing this study, it has been intended to give support to the improvements in renewable energy fields, to all production sectors, to the academic and industrial studies in Turkey.

Key words: Wind Power, Turkey, Green Energy, Renewable Energy

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THE CONSERVATION OF REPRESENTATIVE NATURAL COMPONENTS IN SOME PROTECTED AREAS IN MOLDOVA'S CENTRAL REGION

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ABSTRACT

The paper includes the research results of 6 State Natural Protected Areas, which are located in the Central Region of the Republic of Moldova. The research purpose is to establish the representative natural components and rare species of some protected areas and submit the proposals for ensuring an argued scientific sustainable management. The results were obtained on the basis of a comprehensive study conducted during field expeditions and laboratory research during 2015-2016 years. As a result of the research it was found that in most investigated Natural Protected Areas the specific elements correspond to the category of protection and their state is satisfactory. The investigated areas contain a rich diversity of plant and animal species. As conservation measures of the endangered species in the studied areas it is necessary to take under protection the growing areas and perform the periodic control of their populations state. It is argue the possibility to transfer two protected areas from the category of Forest Natural Reservation into Landscape Reservation.

Key words: conservation, state protected natural areas, representative natural components, rare species, abundance, human impact.

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DISTRIBUTED ENERGY RESOURCES, THEIR GENERATION SYSTEMS, AND TURKEY**Mehmet Keskin KILIC¹, Fatma CANKA KILIC^{1,*}, Durmus KAYA²**

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UOI license: <http://u-o-i.org/1.01/ijeess/58541161>**ABSTRACT**

In order to meet the growing energy needs in rapidly developing technology in today's world, energy production from renewable and sustainable energy resources, other than traditional energy resources is the basis of the distributed energy systems. Distributed energy production is an energy production technology that uses clean, environmentally friendly, many different fuels and it improves systems reliability. It is well known that the electrical energy production and consumption are factors to determine countries' civilization levels. Disruptions in the electrical energy production affect basic industry, commercial developments and daily life, negatively. 80% of the world's commercial electrical energy production depends on finite and non-renewable resources such as coal, oil, natural gas and uranium. In this study, for the purpose of gaining awareness about the harms of these resources to environment and human life, it is emphasized the importance of distributed energy resources and also examined and given knowledge about distributed energy generation technologies and their place in Turkey.

Keywords: Distributed energy resources, distributed energy generation, renewable energy, clean energy generation, energy and environment, energy supply security, Turkey.

CAPACITY INCREASE AND ENERGY EFFICIENCY IMPROVEMENT STUDIES IN A BIOGAS POWER GENERATION PLANT

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ABSTRACT

Today, biogas, which is a type of renewable energy source, has been increasingly used in various fields around the world. Energy from biogas is an effective and non-externally dependent energy production model that best utilizes the economic and local resources, also the least harmful to the environment with its technologies. In addition, with biogas productions, the contribution to the energy productions can be made by realizing conversion of waste. As it is well known, waste is an inevitable result in the life cycle of the living and it needs to be evaluated successfully for the sustainable energy developments. In today's fast-paced technology, all natural and local wastes used for biogas production, which are not only considered as waste but as resources that awaiting for the conversion to energy. Therefore, it is necessary to convert waste to energy by using biogas technologies to have green energy. At the present time, while the numbers of industrial facilities are increasing rapidly, the improvement and development studies are also increasing accordingly, in the existing facilities. In this study, the improvement efforts that have resulted in success of a biogas plant in Kocaeli-Turkey have been examined in detail. Initially, the production capacity of the biogas plant was 305 kW, then it has been powered by an additional gas engine, which at the power of 415 kW and with this new addition, the plant production capacity has reach the level of 720 kW. The capacity and efficiency increase options that have been carried out during the process are presented in this work in technical and economical point of view.

Key words: Energy from waste, Biogas, Renewable energy, Energy efficiency

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INVESTIGATION OF INDUSTRIAL SOLID WASTE MANAGEMENT PRINCIPLES IN A FIRM SAMPLE

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ABSTRACT

It is a fact that the Organized Industrial Zones are an important contributor to the development of cities. In order to achieve a planned urban development, firstly the planned development and sustainable production of the industry should be aimed. For sustainable production, it should be directed the use and development of clean technologies, which are among the basic principles of modern waste management, where the least use of natural resources is being used. In addition, it should be made to minimize the harmful effects of waste on human and environment by applying the appropriate techniques to minimize the dangerous effects on the environment in the production, use and final disposal of the products. In the management of industrial wastes as well as in the whole of waste types, it is aimed to ensure sustainability in terms of both environmental and economic as well as socially. The Organized Industrial Zone, an important dynamism of the Sinop province, is intended to have a sustainable management plan for the environment, economy and, certainly human beings. Therefore, evaluations were made on a sample of a company that produces a PVC window and door accessories.

Key words: waste management, industrial waste, industrial organized zone, Sinop

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SUMMARY OF SIGNIFICANT PARASITIC INFECTIONS IN MOLLUSCA

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ABSTRACT

The adverse social, economic and environmental consequences of uncontrolled movement of live aquatic animals and their products have increased global awareness of the need for improved health management standards. The serious impact of unrestricted international movement of aquatic animals has led to the development of health certification and risk reduction methodologies. Increasing development of shellfish aquaculture, and recent advances in diagnostic techniques, along with diversification of cultured species, continue to provide a seemingly inexhaustible reserve of new or emerging infectious disease problems. Numerous species of parasites have been described from various species of Mollusca. Some of them have had a serious impact on wild populations and shellfish aquaculture production.

Key words: Parasites, Infections, Mollusca

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**THE LEVEL OF KNOWLEDGE, ATTITUDES ABOUT THE PHYSICAL
ACTIVITY AMONG STUDENTS IN SHKODRA REGION**Artan Kalaja¹, Zamira Shaban², Rina Muka³¹University of Shkodra “Luigi Gurakuqi” Faculty of Education, Department of Physical Education, Shkoder, Albania;²University of Shkodra “Luigi Gurakuqi” Faculty of Natural Sciences, Department of Nursing, Shkoder, Albania;³University of Shkodra “Luigi Gurakuqi” Faculty of Education, Department of Teaching, Shkoder, Albania;Email: artankalaja@yahoo.com; shabanizamira@yahoo.com; gerarina@yahoo.com;

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The physical activity is the most effective way of preventing many chronic diseases, build and maintain healthy bones and muscles, control weight, reduce blood pressure, ensure a healthy blood profile, reduce fat, and promote psychological well-being. Patterns of physical activity acquired during childhood and adolescence are more likely to be maintained throughout the life span, thus sedentary behavior adopted at a young age is likely to persist. School can offer physical education and opportunities, both during and outside the school day, for all students to participate in physical activity and sports. Physical activity helps students to stay alert and concentrate better. Students who are physically active are more likely to have higher academic performance and less disruptive behaviors. The study was conducted during February 2017, in Shkodra Region. This is a transversal study. In this study were completed 200 questionnaires. The information is collected through a self-report. We held random cases in different schools among students of 15–18 years old in Shkodra Region. All data collected were calculated with SPSS 20 program. The questionnaire used is part of the standard questionnaire “Global School-based Student Health Survey” (GSHS) Core Questionnaire Physical Activity Module. The questionnaire measures the frequency of health behaviors such as: physical activity, traveling to school, participation in physical education classes, and participation in sedentary leisure behavior. The privacy of participating schools and students was protected.

Key words: education, health, physical activity, school, student.

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THE LEVEL OF KNOWLEDGE AND ATTITUDES ABOUT HYGIENE AMONG STUDENTS IN SHKODRA CITY

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ABSTRACT

Some research findings related to hygiene shows that diarrheal diseases kill nearly 2 million children every year. Hygiene education and the promotion of hand-washing can reduce the number of diarrheal cases by 45%. About 400 million school-aged children are infected with worms worldwide. The study was conducted in Shkodra city during the period October-November 2016. This is a transversal study. In this study were completed 250 questionnaires by 250 different students (13-17 years old). The information is collected through self-report. We held random cases in different schools among students between 13–17 years old in Shkodra city. All data collected were calculated with the SPSS 20 program. The questionnaire used is a part of the standard questionnaire “Global School-based Student Health Survey” (GSHS) Core-Expanded Questions for the Hygiene Module 24. The questionnaire measures the frequency of health behaviors such as: tooth-cleaning, simple hand-washing, hand-washing with soap. The privacy of the participants was protected.

Key words: hand, hygiene, soap, school, student, tooth, water.

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THE EFFECTS OF RELAXATION EXERCISES ON SLEEP QUALITY AND CONTENT OF ATHLETE'S DREAMS AT NIGHT BEFORE THE COMPETITION

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ABSTRACT

The purpose of this study was to investigate the effect of relaxation exercises on sleep quality and dream content on the night before the competition in female football players. The subjects of this study were 12 female athletes ($M_{age}=22$) who were a member of football team in university of Tehran in 2016. They were purposefully selected and they were randomly divided into the control group ($N=6$) and experimental group ($N=6$) for the participation in a design of this study with pre-test, post-test. The instrument of this study was included Pittsburgh Sleep Quality Index, Sherdel's dream content analytic scale, and Winter and Martin's relaxation program. The intervention lasted 2 weeks in 14 sessions (30 minutes per night). The collected data were analyzed by independent t-test and Mann-Whitney U test ($\alpha<0.05$). The results of this study showed that relaxation exercises had a significant effect on sleep quality in athletes except good sleep components, sleep latency, the use of sleeping drugs, and daytime dysfunction on the night before the competition ($P=0.024$). Also, relaxation exercises had no significant effect on dream content and its components on the night before the competition athletes ($P=0.643$). Therefore, it seems that the application of this intervention can be useful to improve athletes' sleep quality in competition training camps.

Key words: Psychology, relaxation, sleep, dream, sport, competition.

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ANALYSIS OF THE FACTORS INFLUENCING COEFFICIENTS OF PM₁₀ EMISSIONS FROM HOUSEHOLD HEATING IN SKOPJE REGION

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ABSTRACT

This article provides general information about the air pollution in the Skopje valley, its geographical, climatic and meteorological conditions, that contribute to high concentrations of PM₁₀ and PM_{2.5} in the city, especially during the heating season. The measuring network shows that PM₁₀ concentrations in all measuring point in the city of Skopje is drastically above the limit of 50µg/m³, with accident reaching value up to 1000µg/m³. Part of this research is done by conducting a survey on 5044 households in 17 municipalities of the Skopje plan region, with analysis of the type of system they use for heating the household, the surface area of the object they live in, the part of the object they heat during the winter (heating season), the fuel they use or source of energy for heating, and the amount of fuel for one heating season. The analysis of the type of wood fuels used within a the region of Skopje include proportional (percentage) breakdown of the typical types of wood (oak, spruce, pine, etc) and nature of equipment in use (age), maintenance patterns and frequency of wood, the emission factor for PM10 is calculated and proposed that can be used in further TIER1 calculations.

Keywords: household heating system; wood logs combustion, air pollution.

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