

ICSD 2018



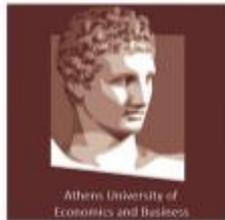
4TH INTERNATIONAL CONFERENCE ON
SUSTAINABLE DEVELOPMENT

BOOK OF ABSTRACTS

April 11 - 15, 2018 Athens

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WELCOME TO ICSD 2018

On behalf of the organizing committee, we are pleased to announce that the 4th International Conference on Sustainable Development (ICSD-2018) is held from April 11 to 15, 2016 in Athens -GREECE. ICSD 2018 provides an ideal academic platform for researchers to present the latest research findings and describe emerging technologies, and directions in Sustainable Development issues. The conference seeks to contribute to presenting novel research results in all aspects of Sustainable Development. The conference aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results about all aspects of Sustainable Development. It also provides the premier interdisciplinary forum for scientists, engineers, and practitioners to present their latest research results, ideas, developments, and applications in all areas of Engineering and Natural Sciences. The conference will bring together leading academic scientists, researchers and scholars in the domain of interest from around the world. ICSD 2018 is the oncoming event of the successful conference series focusing on Sustainable Development. The scientific program focuses on current advances in the research, production and use of Engineering and Natural Sciences with particular focus on their role in maintaining academic level in Engineering and Applied Sciences and elevating the science level. The conference's goals are to provide a scientific forum for all international prestige scholars around the world and enable the interactive exchange of state-of-the-art knowledge. The conference will focus on evidence-based benefits proven in clinical trials and scientific experiments.

Best regards,

Prof. Dr.Özer ÇINAR

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BIOGAS PRODUCTION IN ANAEROBIC TREATMENT: A CASE STUDY OF BREWERY INDUSTRY - ANADOLU EFES

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Abstract:

Anaerobic wastewater treatment is a process in which organic materials are mineralized to the compounds such as methane (CH₄), CO₂ and ammonia in an oxygen-free environment. The anaerobic process utilizes the bacteria to break down biodegradable material in an industrial wastestream. Recently, many industrial facilities have preferred anaerobic treatment for wastewater treatment of several industries: animal manure, brewery, food scraps, domestic wastewater and sewage.

Biogas is one of the most widely used alternative sources for the production of renewable energy. It is the result of the decomposition in the absence of oxygen (a process called anaerobic treatment) of various organic substances, by a large amount of bacteria. Biogas, which is the result of anaerobic fermentation, has flammability due to its methane gas. Methane gas has about 20 to 30 times the heat holding capacity of carbon dioxide. The advantages of using biogas as a fuel are: The production of valuable green energy (electricity, heating, cooling), reduction of greenhouse gas emissions, reduces reliance on fossil fuels, produces good quality enriched manure to improve soil fertility, lower nutrient requirements, and operating costs.

In the process of beer production, yeast, which is responsible for the formation of alcohol, is used more than once in the system until its vitality is lost. Its liveliness and standard function are lost, removed from the system and disposed of as byproduct/waste. In this way, the costs of beer producers are negatively affected. Approximately 80% of the waste yeast produced throughout Europe is recovered by the drying method. On the other hand, close to the whole of the beer waste yeast in our country is passed to the receiving environment through the wastewater treatment facilities. It is aimed to establish a facility for drying the waste brewer's yeast in the Anadolu Efes breweries with energy to be obtained from anaerobic digestion biogas and then converting it into an animal feed additive after processing. In this study, the current research and reuse of waste yeast with biogas energy is discussed.

Keywords: Brewery Industry, Biogas, Anaerobic Treatment

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THE EVALUATION OF GREEN INFRASTRUCTURE PRACTICES IN TURKEY FOR SUSTAINABLE CITY VIA THE EXAMPLE OF AMSTERDAM

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Abstract:

The majority of the people on planet earth live in urban environment. This figure is estimated to exceed % 60 by 2050. Rapid population growth, uncontrolled urbanization, lavish use of resources cause the environmental problems of urban areas. When resource based depletion, unplanned urban development combine with the global (ocean acidification, desertification, climate change etc.) and local (soil, water, air pollution, access to basic services and so on) issues, the urban problems are complexified. Current situation emphasize the importance of urban environments for the future of humanity. Sustainable cities are required in order to overcome this complexity and ensure liveable urban environments for future generation.

The notion states that urban environments is seperate from certain ecosystems situated the urban hinterland needs to be changed for sustainable city. Maintanin the urban metabolism by handling with certain ecosystems ensures the enviromentally sustainable city. In this context, green infrastructure is a powerful tool for natural habitat, biodiversity and ecosystem protection within sustainable city. Consisting of green areas, corridors, roofs, open places and urban gardens, green infrastructure enhances the livability of cities and resilience for responding disasters and climate change. Green infrastructure which provides long term social, economic and environmental benefits is needed to be handled as an important component of sustainable city.

In this study, initially green infrastructure, its components and functions are addressed within sustainable city. Afterwards certain efforts, practices and initiatives for green infrastructure in Turkey and Amsterdam are evaluated. Finally proposals for cities of Turkey are asserted with reference to example of Amsterdam

Keywords: Green Infrastructure, Sustainable City, Cities Of Turkey, Amsterdam

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EVALUATION OF SUSTAINABILITY OF IRRIGATION AREAS IN GAP PROJECT WITH EXISTING APPLICATIONS

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Abstract:

The Southeastern Anatolia Project, its Turkish acronym is GAP, Turkey's semi-arid applied in the Southeastern Anatolia Region, is the most comprehensive regional development project. The Project area covers almost 10% of Turkey, in terms of area and population. The main objective in regional development is to promote the welfare of both the region and the country through the sustainable use of water and land resources in the project area. Within the scope of the project, 22 dams, 19 HEPPs and 1.84 million hectares of irrigation are foreseen. GAP is expected to increase the per capita income by 209% and increase the GDP by 409% in the Region. The basis for these increases will be achieved through the efficient and sustainable use of water and land resources. The GAP irrigation began in Harran in 1995 with an area of 30 thousand hectares and today over 150 thousand hectares. In Harran plain, 88.5% of the gravity irrigation is being done, and problems of water insufficiency in the lower parts of the plain, salinity problems in the middle and in the lower parts of the region are seen. As a natural consequence of this, water levels increase in some areas and in some areas crop losses occur due to water insufficiency. On the other hand, because of the random and unplanned urbanization in Harran, both the amount of fertile agricultural land decreased and water, soil and environmental pollution based on the living centers begin to be seen. There are structural problems arising from irrigation management and irrigation methods in Harran, which creates a pressure and a threat to sustainability. Pressure and water saving irrigation systems should be introduced in these areas, irrigation training should be given to farmers, structural problems of irrigation units should be solved and unintentional urbanization should not be permitted.

Keywords: GAP, Sustainable Development, Water And Soil Resources, Irrigation

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WHAT DO WE KNOW AND DO ABOUT SUSTAINABLE NUTRITION? THE CASE OF TURKEY

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Abstract:

Sustainable nutrition is protective for human and respectful for biodiversity and ecosystems. Consumers' knowledge and awareness about sustainable nutrition is important for reducing hunger risk and protecting healthy food resources in the future. This study was conducted to explore the knowledge and consuming behaviour of various professionals on sustainable nutrition. The study was conducted with 415 (250 female and 165 male) participants who live in the two cities of Turkey namely Ankara and Denizli. Results showed that 31% of the female and 15 % of the male ($p < 0,001$) and totally 24% of participants stated they know what sustainable nutrition is. Civil servants had the highest knowledge score on sustainable nutrition (36,1%) preceding academicians (31,3%) and health officers (35,7%). Interestingly, no dietitians stated they had adequate knowledge about sustainable nutrition. As for the sustainable food consuming, about 50% of the female and 36% of the male stated they consumed sustainable food. Majority of 50 age and over and small number of 29 and younger aged participants stated they consumed sustainable food. Married participants consumed sustainable food more than unmarried participants. The relationship between gender, age group, marital status and education level and sustainable food consuming scores were found statistically significant. About 50% of those who had knowledge about sustainable nutrition had adequate scores in sustainable food consuming. The relationship between sustainable nutrition knowledge level and sustainable food consuming scores was not statistically significant. Consequently it was recommended that more studies should draw attention to sustainable nutrition to make it understood at conceptual level first, and then it should be considered at social policy level to raise awareness. Trainings and professional programs for nutrition and dietetics education should involve sustainable nutrition issues. Also, nutrition and dietetics practitioners and profession organizations should be proactive in implementing sustainable practices and shaping policy to promote healthier individuals, communities and the nation as a whole.

Keywords: Sustainability, Nutrition, Sustainable Food, Knowledge, Dietician

*

CONTEMPORARY ARCHITECTURE AND CULTURAL SUSTAINABILITY IN HISTORIC CONTEXT OF MEDITERRANEAN CITIES

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Abstract:

The historical context requires high sensitivity from the designer to manage any new development within it. Historical heritage forms a unique economic, social, spiritual and cultural resource. International community considers it as one of the main bases of national character and identification. Tensions exist between the purpose of preservation and the need of re-creation in historical context. Nowadays the world has reached a very important stage of progress, and technology reflected on different disciplines, as politics, culture, economy, society, and many others. Culture identity was one of those basics that were ignored within this rush of progress. In addition, most of the modernism movement of architecture was criticized by being regardless of cultural aspects. To conclude, the problem lies in dealing with architecture as a discipline that produces commercial commodities instead of concerning human needs and expressing their way of living, history, and culture, and should respect the Cultural Sustainability in Historic Context of their Cities. This research focuses on the Contemporary Architecture within Historical Contexts in Historic Context of Mediterranean Cities. It points out different approaches to design new buildings in historical contexts from a conservationist perspective in one hand and a contemporary view in the other. Research Methodology is a descriptive analytical one, having mainly qualitative data. It is a positivistic research since it is mainly relied on describing the architectural and cultural features and analyzing causes, without the interference of the researcher own ideas.

Main results of the research indicated that there is a great variety of potential design solutions to the problem of fitting new buildings into historical townscapes. In addition, there should be a thoughtful accommodation between the conservation and the development in order to sustain continuity and rational discourse between architectural forms in historic context.

Keywords: Contemporary Architecture, Historic Context, Cultural Sustainability, Mediterranean Cities

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TOURISM AND MARINE PROTECTED AREAS

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Abstract:

In the last decades, there has been deterioration in the main purpose of tourism, giving way to financial gain. However, in recent years, there has been a change in contrast to mass tourism. There has been a development in certain alternative forms of tourism. From all the forms of tourism, marine tourism perhaps is the most important.

The need for protection and conservation of the natural environment is something that has been acknowledged by the international community. Taking this into account, marine reserves and marine protected areas (MPA) are frequently been suggested as important tools in fighting against the threat to the marine ecosystem.

Largest steps should be done, since the percentage of the Mediterranean area which is under protection is only 3,8% (95.660 km²), whereas the percentage of coastal regions being under protection is just 0,4% (9.910 km²) of the total Mediterranean surface (2.510.000 km²). This is considered as a very small percentage, because the coastal zone and the Mediterranean in general, are very important in the conservation and reproduction of fish population.

These protected areas have become very popular tourists' destinations in the last years. Tourism activity in protected areas may improve their financial abilities, contribute in protecting natural and cultural resources as well as improve the quality of life of the local inhabitants. Such a region may also increase the chances of sustainable economic activity.

Keywords: Ecotourism, Marine Tourism, Marine Protected Areas, Natural Resources, Socio-Economic Impacts, Sustainable Tourism

**This work has been partly supported by the University of Piraeus Research Center.*

HOW INSTITUTIONS CREATE VALUE FOR THE RURAL MARGINALIZED PERSON: A COMPARATIVE ANALYSIS

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Abstract:

Studies on rural development have primarily focused on poverty alleviation (D Gangopadhyay, A.K. Mukhopadhyay & Pushpa Singh 2008). Later on, renewed interest in human development and welfare in developing countries led to broadening the idea of rural development to include social development as a prerequisite (Papakonstantinidis L.A. 2017). According to Mishra and Sharma (1979), rural development includes developing quality of life of the rural masses into self-sustaining and self-reliant modern communities. In developing nations, there has been special emphasis on the role of voluntary organizations in development. This is a due to inefficient bureaucracy and government bottlenecks to execute developmental programs (M Shamsul Haque 1997). This article looks at four kinds of formal institutional structures in India that have evolved for improving the rural livelihood, namely- private company model which is involved in a primary produce, a cooperative model established by act of legislature, a non-governmental organization (NGO) led project-based intervention model, and a producer company (PC) model which has been a recent development in the Indian economic scenario. The paper adopts a quantitative analysis of these models. Data on share of labour in total cost of production for these four models is obtained from secondary sources as well as primary sources. It is observed that an institutional arrangement has a strong bearing on rural development which has not been explored hitherto in literature. Out of the four models studied, the NGO-intervention based model creates the highest value to the rural marginalized person and at the same time, makes the target community a stakeholder of the model. However, one major shortcoming of this model is that is temporary in nature and solutions need to be explored to make it self-sustaining.

Keywords: Rural Development, Institutions, Production, Labour, Cooperative Model, Producer Company, Non-Governmental Organization

**This study is sponsored by the SoULS project in the Department of Energy Science, Indian Institute of Technology (Bombay)*

ENCOURAGING INDIGENOUS ARCHITECTURE FOR SUSTAINABLE URBAN GROWTH – CASE OF KOLKATA

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Abstract:

Aim and Objective: Over the last few decades, urban centres all over the world have experienced a steady change in their climatic conditions. Several environmental degradations have contributed to an overall lack of comfort in these settlements. Cities of the developing countries, India being one of them, have been experiencing a rise in the annual average temperature. Kolkata, a prime urban megalopolis in the Eastern Gangetic plain of India, is no exception to this phenomenon. In today's city-centric development, urban centres have slowly morphed into reverse-oasis -surrounded by cooler hinterland. They have turned into heat sinks. On one hand the steady inflow of heat from various sources is contributing to the soaring of mercury. On the other this rise in temperature is instigating the citizens to contribute in the sink by adopting to controlled interior environments. It is fact that these artificial mechanisms, such as air conditioners, are contributing to the cause of which they are the direct consequence – thus initiating an endless cycle. Sustainable development approaches of Smart City initiative have recently encouraged planners and architects alike to think and act in order to break this cyclic climatic degradation. **Method:** The first part of the paper intends to inspect these critical climatic conditions on a tangible measurable platform, thus establishing the need for a planned intervention into it.

This paper then intends to tap a non-conventional solution to the problem. It hypothecates the comparative supremacy of old indigenous buildings of the existing urban fabric of Kolkata over its newer buildings, and then inspects and tests the hypothesis through climatic observations carried out in both indigenous and newer buildings.

Result and Conclusion: Once the supremacy is proven, it would then be the onus on urban development and control legislations (like Byelaws), to incorporate the unique design inputs of the old buildings into the newer architecture judicially in order to achieve a better thermal performance of the latter genre.

Keywords: Indigenous, Thermal Performance, Sustainability

*

PERFORMANCE ANALYSIS OF PIEZO-CERAMIC AS WEARABLE TRANSDUCER FOR EFFICIENT ENERGY HARVESTING

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Abstract:

A piezoelectric predicated wearable shoe transducer has been designed which has the competency to harvest the energy from the human load during walking and energy thus, harvested can be applied to recharge mobile phone/portable electronic devices. The output of the piezoelectric patch is rectified and conditioned by using full wave bridge rectifier circuit. The analysis has been done by mounting the piezoceramic on different locations in shoe for energy harvesting utilizing real time LABVIEW software. MATLAB software has also been used to take responses of the proposed system. The input to the 12V battery from the piezoceramic is maintained by using 7804 IC. Power output of single patch has been obtained by implementing the circuit in a shoe at three locations and a comparison of outputs has been done. It is observed that different locations of piezo-patch in shoe give different outputs and to obtain maximum output, piezo-ceramic should be optimally placed. It is also observed that by walking approx. 1300 steps/780 meters can charge a battery of 4.7Wh.

Keywords: Piezoceramic, MATLAB, LABVIEW, Shoe

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NEGOTIATING SUSTAINABLE DEVELOPMENT: HUMAN SECURITY AND THE SÁMI INDIGENOUS PEOPLE OF THE EUROPEAN HIGH NORTH

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Abstract:

Indigenous peoples are distinct and have been the native peoples in the territory in which they live. They maintain a separate identity around the language they speak, culture and religion they practice and the ways of lives, they traditionally preserve and promote. The Sámi indigenous peoples are no exception to that regard. The Sámi are a group of indigenous people in Fennoscandia in habiting in the Northern parts of three Nordic countries and in the Kola Peninsula in Russia – the region known as Sápmi. While, many of the Sámi live outside of the Sápmi region, a significant number of populations living in their homeland in remote areas are engaged in hunting, fishing, farming, and reindeer herding. Many of them also increasingly engage themselves in modern activities, and take the opportunities from the development, such as from mining developments, taking place in the region. The presentation will explore how the concept of human security is framed in connection to the rights of the Sámi indigenous peoples. In this context, the presentation will also explore how sustainable development and human security are interlinked. It will further show the need for effective engagement of the Sámi in the process of decision-making in order to ensure for them a human secure sustainable living environment.

Keywords: Sustainability, Human Security, Indigenous Peoples, The Sámi

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APPLICATION OF FLY ASH FROM COMBUSTION IN FLUIDAL BOILERS AS ADDITIVE FOR UNDERWATER CONCRETE

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Abstract:

The paper presents the method of using fly ash from the combustion of solid fuels in fluidized bed boilers as valuable constituents of cement concretes. Fly ash as a coal by-product of combustion (UPS) is an important and valuable raw material for the industry building materials, especially for cement and concrete producers. The research was conducted in two directions. The first one is to obtain such consistency of a concrete mixture modified with fluidized ash, to ensure the required consistency for concreting underwater, the second direction included the study of basic features physico-mechanical hardened underwater concretes with the addition of fluidized ashes and their development in time. Underwater concretes with fluidized bed ash content, used as a cement substitute in the following quantities: 10, 20, 30, 40 and 50% of cement weight were subjected to testing. Mixing tests, carried out according to valid standards and recommendations they included the following properties:

- consistency determined by the taper method after mixing and after 60 minutes from completion of mixing;
- mixing time of the mixes through the funnel V-funnel;
- evaluation of the mixture flow through J-ring reinforcement;
- air content.
- weight absorption.

The compression strength after 28 days was also determined for the designed concretes. On the basis of the obtained results, a mixture with a content of 30% of fluidized ashes was selected for further tests as a cement substitute. The development of strength over time after 7, 14, 28, 56 and 90 days was tested and an attempt was made to determine the efficiency coefficient k for the tested fluidized ashes. The tests confirmed the possibility of using fluidized ashes as a substitute for cement in concretes placed under water. The coefficient k for tested concrete was 0.8 in a wide range of strength, which indicates very good binding properties of fluidized ash, in comparison to silica ashes for which a factor of 0.4 is used.

Keywords: Fly Ash, Fluidized Combustion, Development Waste, Concrete, Durability

**This research was funded by the National Centre for Research and Development within SEFIRCAOM 2/KONNECT/2016 (KONNECT Joint Call*

QUOTIENT BASED ANALYSIS ON THE RIVER HEALTH: CASE STUDY OF KELANG RIVER, MALAYSIA

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Abstract:

The health of a river is paramount if importance, mostly as the source for water treatment plant, irrigation and local community livelihood. The rapid development in Malaysia not only changes the neighbouring land use but also put a strain on the waterway's ecological state. The River Kelang flows right down in the middle of Kuala Lumpur, whereby its health is frequently monitored. This study attempts to investigate the feasibility of a temporal risk quotient (RQ) based analysis on establishing an accurate assessment of the water health. We focus on the evaluation of water quality using existing datasets of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS) and ammonia. The temporal risk quotient is calculated for each parameter based on the Malaysian National Water Quality Standard (NWQS). The analysis of ammonia pollution is not only based on design limit for the river but also was extended to three other standards including for raw water for the treatment plant, human health and fish population. The temporal health of River Klang was evaluated using the Risk Matrix Approach (RMA) based on the frequency of $RQ > 1$ and associated impacts. Using the developed RMA, the risk hazard for each water quality parameter was assessed and mapped using the Geographic Information System (GIS). The risk hazard mapping can be used as a preliminary basis for cost-effective countermeasures and future development.

Keywords: Temporal Risk Quotient, Risk Matrix Approach, River Health, Kelang River

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THE STRESS EFFECTS ON TAREK (ALBURNUS TARICHI, GULDENSTAEDT 1814) FISH CAUSED BY SAND PITS AND SAND EXTRACTIONS ACTIVITIES IN KARASU (VAN, TURKEY) STREAM

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Abstract:

The Tarek (*Alburnus tarichi*, Guldenstaedt 1814) is an endemic fish species for the Van Lake Basin, which migrates for reproductive. Karasu is the most important rivers in the Van Lake Basin where tarek migrates. However, many sand pits and sand extraction activities on Karasu are an important environmental problem during the breeding period of tarek. In this study, stress effects on tarek were analyzed in order to determine the effects of sand pits and sand extraction activities in Karasu Stream. The blood samples were taken from a total of 84 tarek, 55 females and 29 males in Karasu Stream (Ablanges, Teave, Topaktas and Zeve sampling locations, respectively) during the breeding period. Cortisol and glucose levels were measured to determine stress levels in blood samples. The levels of cortisol were 50.96 ± 2.68 , 34.49 ± 3.72 , 27.97 ± 4.05 and 45.69 ± 3.61 $\mu\text{g dL}^{-1}$, while glucose levels were determined as 278.95 ± 18.36 , 212.64 ± 12.47 , 235.15 ± 16.93 and 235.09 ± 14.29 mg dL^{-1} , respectively. The average levels of cortisol and glucose in female and male tarek were 39.65 ± 2.55 and 40.06 ± 3.26 $\mu\text{g dL}^{-1}$, 240.87 ± 9.95 and 237.38 ± 13.89 mg dL^{-1} , respectively. Total suspended solid (TSS) levels at the sampling points were 123.1, 135.0, 90.5 and 63.5 mg L^{-1} , while turbidity was measured as 104.5, 102.5, 71.2 and 37.1 NTU respectively. The analyzes shows that, the stress on tarek was determined as high level in TSS and turbidity due to sand pits and sand extraction activities. The stopping of these activities during the breeding period of the tarek is important to ensure continuity.

Keywords: Total Suspended Solids, Sand Pits. Tarek, *Alburnus Tarichi*, Kortizol, Glucose, Environmental Assessment.

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ANTI-DUMPING TAXES AND THEIR EFFECTS IN THE EUROPEAN UNION

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Abstract:

As is known, free trade policy is applied in foreign trade. This situation brings with it negativity besides many positive effects. The best example of this is dumping. That is, an exporting firm is exporting its goods to a price below normal value. Due to the dumping product, unfair competition arises absolutely. Hence anti-dumping tax against dumping is inevitable. At this point, the main purpose of anti-dumping tax is to protect domestic producers.

Along with globalization, various associations (integrations) have been established in the world. One of them is the European Union (EU). The EU is a democratic European country with a single-minded and thoughtful goal to improve the lives of its citizens. Anti-dumping tax for this structure is an important foreign trade policy tool. The protectionist structure in the EU is increasing the use of anti-dumping tax. It is not uncommon for the EU to use it because anti-dumping tax is considered to be a protective legislation.

The use of anti-dumping measures by the European Union has increased rapidly in the 1980s, but since then a number of these measures have followed a steady process. While there were 139 anti-dumping measures in force in 1990, this number increased to around 150 in 1993 and 1994, and dropped to 141 and 142 in 1997 and 1998, respectively. The product categories most affected by anti-dumping measures are iron and steel products, electronic products and chemicals.

Anti-dumping duties applied in the EU will be examined during in the study. Thus, it is aimed to determine the effect of targeted anti-dumping on the EU. It is therefore possible to assess the effects of anti-dumping taxation in the EU in terms of international trade. This frame will be evaluated over the data and a number of suggestions will be made.

Keywords: Anti-Dumping Taxes, Trade, EU.

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IDENTIFICATION OF HELICOBACTER PYLORI APPLICATION OF DIFFERENT METHODS

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Abstract:

This study was planned in order to investigate the presence of *Helicobacter pylori* by culture, serology, histopathology and PCR in gastric biopsy specimens obtained by endoscopy from the patients with upper gastrointestinal tract complaints and to compare the results obtained from the used methods. In this study, 45 patients and 23 biopsy specimens of *H. pylori* was determined, and the rate was 51.1%. According to the serological tests; IgA antibody in 18 patients (78.3%), and IgG antibody in 22 patients (95.7%) were identified. The sensitivity and specificity of IgA IgG, respectively, 78.3% and 95.7%, while 81.8% and 72.7%. In this study we were investigated *H. pylori* strains genotypes studied, and their relevance to disease. As a result of analysis of 23 strains of *H. pylori* *vacA* 22, *cagA* positive strains have been identified as a 15. *cagA/vacA* genotype, while the number of strains were found to be 12. In this study, *vacA* s1 allele carrying the *H. pylori* infection with 10 (43.5%), whereas 12 (52.2%) strains are allele s2. However, m1 allele carrying the 13 (56.5%), with 6 m2 allele (26.1%) s1/m1 allele carrying six (26.1%), which s1/m2 alleles2 (8.7%), s2/m1 allele carrying eight (34.8%), with s2/m2 allele 8 (34.8%) strains were identified. *vacA*, *cagA*, *vacA / cagA*, s1/m1, s1/m2, s2/m1, s2/m2 genotype strains were found that have no relationship with gastritis, peptic ulcer or gastric cancer. The results of the biopsy to determine the presence of *Helicobacter pylori* culture "gold standard" in this study was taken as the PCR method is defined as the highest test sensitivity, the cost is relatively high, in spite of the disadvantages, such as the application requires specific experience and laboratory equipment, diagnostic method is easy and fast, and not too small materials that allow for the detection of a very small number of bacteria, and even in epidemiological studies can be preferred due primarily to identify different strains of the possible.

Keywords: *Helicobacter Pylori*, Identification Methods, REP PCR, RAPD PCR.

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THE EFFECT OF THE PEDAGOGICAL FORMATION PROGRAM ON NURSING STUDENTS' ATTITUDES TOWARDS TEACHING PROFESSION

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Abstract:

Teacher's education can be described as a process involving in-service training activities that run regularly throughout the pre-service and teacher's professional lives. Teacher's training; the selection of candidates to be trained, the provision of pre-service training, the selection of candidate teachers to be appointed, and the professional development stages. Teacher candidates' attitudes towards the teaching profession also reveal their behavior over time they are teaching. The attitude towards the teaching profession is defined as the individual's thoughts about the teaching profession, his / her performance towards him / her and his / her profession's performance. Teach the person to be modeled in school. For this reason, it is necessary to determine the attitudes of prospective teachers towards the profession and to change positively if the attitudes are negative, in order to increase qualified teacher training and program success. With the decision of Higher Education Council dated 28.01.2010, pedagogical formation education is given from 2010-2011 academic year with certificate education, not with master's education without thesis. Regardless of which faculty or department, students of all faculties and departments who meet the conditions required after graduation or after graduation can take pedagogical formation training. Since teachers can influence their students positively or negatively, it is considered that the attitudes of the prospective teachers who will perform this profession in the future towards the teaching profession are extremely important. Teacher candidates' attitudes are closely related to their reasons for choosing a teaching profession, how they see the teaching profession, and whether they are teachers in their family. Genetic factors, environmental conditions, learning experiences, cognitive, emotional and psychomotor skills are influential in choosing an individual's occupation. Candidates who receive training in pedagogical formation will become certified and perform their teaching profession after receiving this training. Therefore, candidates who have chosen the teaching profession and who are waiting to be appointed are very important subjects to be investigated as to what they think about the teaching profession. In this respect, it becomes even more important when considering the contribution of this lack of work to the field. Considering the potential of students to be educated in Health Care Profession High Schools, it is necessary to take into consideration the points of view of students of nursing department receiving pedagogical education. In this study, it is aimed to examine the attitudes of teacher candidates towards teaching profession in the light of the literature in the nursing department which received pedagogical formation education.

Keywords: Nursing, Pedagogical Formation, Teaching

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OPTIMAL INVESTMENT PLAN FOR PRICE REGULATED STATE SERVICE FIRMS

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Abstract:

The objective of the study is to determine the optimal investment plan in labor and capital for price regulated state service firms which has to meet fluctuating and growing demand. The Optimal Control Theory will be employed to determine the optimal paths of investment in labor and capital and the switching times between periods of investment and no investment assuming Cobb-Douglas and CES type of production functions. Rates of change of demand, attrition rate of labor and the depreciation rate of capital are the primary parameters determining optimal investment behavior. Switching times between four phases of investment where (1) both labor and capital investment are positive, (2) capital investment is zero but labor investment is positive, (3) capital investment is zero but labor investment is positive and (4) where both investments are zero (excess capacity) are identified. The same analysis is repeated using Constant Elasticity of Substitution (CES) type of production function. The solution of the necessary conditions of the optimal control problem determines the switching times between phases and the optimal level of investment in labor and capital in each phase.

Keywords: Optimal Control, Investment Planning, Service Company

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OCCUPATIONAL DISEASES IN MARBLE INDUSTRY

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Abstract:

Occupational diseases are the common name of the illnesses caused by the effects of the factors in the workplace environment. Occupational diseases are defined as the group of illnesses in which a cause-effect and action-reaction relationship, specific to that occupation, can be presented between a harmful agent and the affected human body in the international sources such as World Health Organization (WHO) and International Labour Organization (ILO). Descriptive criteria for a disease to be added into the list of international occupational diseases are those:

- The strong and scientifically proven relationship of exposure and influence
- The emergence of the disease in certain occupations or workplaces
- The strong relationship between the number of workers exposed to the disease and the severity of the risk
- The presence of the disease on the national occupational disease list of many countries

Mines and marble industry are among the business sectors that are most affected by dust. Marble dust is the smallest size of marble wastes which is removed during the processes such as cutting and polishing of blocks and plates in marble processing plants and the majority of which is less than 1 mm. Marble dust, as well as being inert dust, contain silica in different proportions. Silica (silicon dioxide SiO₂) is the main component of the earth's crust and accounts for about 90% of the earth's crust, so it is the most common dust encountered by mine workers and quarry workers. Silicosis is a disease resulting from the inhalation of silica dust in the crystal form, accumulation in the lung, and fibrosis developing in the lung in reaction to silica dust. As a result, proper ventilation, wet working method, appropriate personal protective equipment should be used, and regular dust measurement, periodic checkup, pre-employment medical examination (Those who are at risk of getting lung disease and who smoke excessively should be identified and prevented from working in dust-exposed work) should be done carefully to avoid occupational diseases. In addition, to protect workers from many occupational diseases, particularly silicosis, it is of great importance to increase their awareness about the issue by giving them regular training.

Keywords: Occupational Diseases, Marble Industry, Awareness

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OBESITY RELATED DISEASES

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Abstract:

Obesity, which is rapidly increasing in all countries of the world, is one of the most important factors in the development of chronic diseases. The increase in the prevalence of obesity leads to an increase in obesity related diseases. According to the World Health Organization (WHO), obesity is an abnormal and excessive accumulation of fat that can destroy human health. The most common method of determining obesity is body mass index (BMI) calculation. This calculation is made by dividing the weight by the length of the body (kg / m^2). Those with BMI equal to or greater than 25 are overweight; Those who are equal to or greater than 30 are defined as obese. According to WHO determinations; globally obesity has doubled daily since 1980. It is reported that WHO is 18 years old and over 1.9 billion adults are overweight and 650 million of them are obese. According to Turkey Health Research 2016 report, the proportion of obese individuals aged 15 and above, were found to be 19.6%, 23.9% of women compared to the same survey results, 15.2% of men were reported to be obese. In obesity formation; many factors such as malnutrition, sedentary life, genetics, prenatal conditions, endotoxins and inflammation causing bacteria, vitamin D deficiency, dysbiosis, endocrine diseases, drug use, maternal age and fertility are influential. This study was carried out to reveal the diseases caused by obesity which is common in the society. The researchers investigated the causes of obesity in the literature and the diseases caused by obesity. In conclusion, obesity is the most important health problem of all the countries of the world, which has a serious negative impact on mortality and morbidity rates, which is related to all segments of the society today, especially diabetes mellitus, rheumatologic diseases, hypertension, coronary heart diseases, pulmonary diseases, arthritis and cancer appears to be a risk factor for many diseases.

Keywords: Obesity, Body Mass Index, Chronic Diseases

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THE IMPORTANCE OF EQUALITY FOR ACHIEVING SUSTAINABLE DEVELOPMENT

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Abstract:

It is vital to focus on equality in the transition to sustainable societies. More unequal societies consume more, have larger ecological footprints and marginalise the views of the poorest, those most vulnerable to unhealthy environments. The paper is based on a mixed methodology, drawing on secondary data, interview material, participant observation and documentary analysis. It particularly focuses on research based in Bolivia and South Korea, and the UK. The analysis and conclusion discuss the seven kinds of change required to create a sustainable society, based on equality: 1) organisational change - participatory practice (2) legislative change - make class an equalities and human rights issue (3) policy change – redistribute wealth (4) social movement change — radicalise the environmental movement and support the environmental working-class (5) political change - create an eco-social state based on sharing (6) cultural change - integrate social and environmental justice, and (7) revolutionary change - dismantle capitalism.

Keywords: Equality, Transition, Sustainability, Capitalism

**Economic and Social Research Council UK*

MONITORING BIOLOGICAL POLLUTION IN MUSSELS IN IZMIR PROVINCE COAST

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Abstract:

Infections by biological agents spread due to rapid and irregular urbanization play an important role in pollution of sea waters. Due to their ability to filter water and accumulate biological pollutants in their tissues, mussels have been used as bioindicators of marine pollution. Despite being a potential health hazard for the people living in the city of Izmir, Turkey, parasitic and viral contaminants in mussels in the coastal areas of the province bordering eastern Europe have not been investigated. Objective of this study was to determine the relationships between pollution levels by hepatitis A virus, norovirus and a gastrointestinal parasite, *Giardia* spp. and to evaluate seasonal variability in contamination in coastal regions in the Izmir province. Study areas were inner, middle, and outer regions of Izmir Bay, Gediz River basin and Mersin Bay near to the Izmir Bay. Mussel samples were collected four times a year from eight stations with different pollution levels. Direct PCR, RT-nested-PCR and RT-booster PCR were used to investigate the parasite and viruses. Viral contamination was detected in all but the Foca and Gediz stations. Our results show viral contamination in the inner, middle, and outer regions of the Izmir Bay. HAV and NoV positivities in the mussel samples were 26.7% and 30%, respectively. *Giardia* parasites were detected in winter and spring in Bayrakli station located in the inner Bay. Molecular analysis revealed that it was genotype B. In summary, contamination with HAV, NoV and *Giardia* pose a potential public health risk in the region.

Keywords: *Giardia*, HAV, Mussels, NoV, Pollution

*TUBITAK

INVESTIGATION OF ENTAMOEBIA HISTOLYTICA / DISPAR IN MUSSELS (M. GALLOPROVINCIALIS) IN IZMIR PROVINCE COAST, TURKEY

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Abstract:

Turkey is a peninsula and especially people living in coastal areas eat frequently seafood. The edible mussels in Izmir bay which is located on the west coast of Turkey are traditionally prepared and presented differently. The main problem is collecting the thousand of tons mussels in poor sanitation conditions by illegally every year. Mediterranean mussel is one of the most commonly consumed bivalve mollusks among the mussels from sea. Shellfish contaminated with human waste are important in the transmission of infection to human. Especially eating raw or undercooked mussel poses a risk for infections. Entamoeba histolytica and Entamoeba dispar are two genetically distinct but morphologically indistinguishable species living in the human colon. E. histolytica can cause invasive intestinal and extra intestinal disease while E. dispar has been thought in the past to be non-pathological. But in vitro and in vivo experiments suggest E. dispar is capable of causing liver damage.

The goal of this study is to investigate E.histolytica / E. dispar in mussels in Izmir coastline using a Real-time PCR. A total of 50 samples of Mytilus galloprovincialis were collected from 8 stations in Izmir province coast. Mussel samples were collected with a bucket or by hand at four different seasons of the year (in February, May, August and November). Of 50 mussel samples, 8 samples (%16) were positive for E. dispar. But there was no positive for E. histolytica. E. dispar was detected in samples from 5 stations in different seasons. The samples from one of the station (Mordogan) were positive in all seasons except summer. This is the first report of E. dispar in M. galloprovincialis in worldwide. Necesserary measures need to be taken to prevent this potentially serious public healt risk

Keywords: Entamoeba, Histolytica, Dispar, Mussel, PCR, Izmir, Turkey

**This study is partially supported by TUBITAK*

EXPLORING THE CAPABILITY OF EARTH OBSERVATION FOR ACHIEVING SUSTAINABLE DEVELOPMENT GOALS IN MALAYSIA

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Abstract:

The world population increased to 7.3 billion in 2015 and it is expected to grow to 8.5 billion by 2030. Rapid population growth and the growing demand for development and resources have increased the emissions of greenhouse gases particularly carbon dioxide 12-fold in the 20th century. The added load of greenhouse gases have resulted in various impacts i.e. climate change to the planet and to the eco-systems residing in it. These development challenges have forced the global leaders to adopt “The 2030 Agenda for Sustainable Development” in September 2015. A total of 17 Sustainable Development Goals (SDGs), 169 targets, and 244 global indicators were recommended to be used by all countries as a blueprint for action to develop social, economy and environment in a sustainable manner by year 2030. Similar to many other countries, Malaysia also committed to adopt and implement the SDGs. In order to measure and monitor the progress of the targets and indicators, the 2030 Agenda requests for acquisition and use of new data sources. Remote sensing could provide consistent, reliable, and free operational geography data. Nevertheless, the importance of remote sensing in sustainable development process is not well recognized in Malaysia. The objective of this study is to explore how satellite information can contribute to achieving the SDGs in Malaysia by providing case studies demonstrating the capability of remote sensing in monitoring the targets and indicators of the SDGs in Malaysia. The potential of earth observation for achieving SDGs 2, 3, 6, 11, 12, 14, and 15 in Malaysia are explored in this study. Finally the main challenges to use earth observation to achieving SDGs are also identified in this study.

Keywords: Remote Sensing, Malaysia, City, Climate, Air Quality, Land Cover

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INFLUENCE OF A TURKISH NGO ON SUSTAINABLE FARMING SUPPLY NETWORKS

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Abstract:

In recent years, human beings have become more conscious of how much damage they have sustained through farming activities to the living and non-living environment they have lived with. Therefore, new approaches that are harmonious with nature, use resources properly, consider animal welfare, target sustainable development, and imbued every chain of farming supply networks with sustainability awareness have started to spread all over the world. During utilization of these approaches, it is important that ministries, universities, public institutions, non-governmental organizations (NGOs), professional organizations act in cooperation. This study focuses on the potential influences of one of the Turkish NGO on sustainable farming supply networks. By conducting a case study, that NGO is analysed in its embedded network of supply management processes. We focus on the case NGO's stakeholder management processes and organizational structure as compared to the NGO's sustainability goals. Supplier development, sourcing, resource enhancement, coordination and training issues are analysed. The study concentrates on the possible social, environmental and economic influences of that case NGO on sustainable farming. We also try to understand how the case NGO influences and forms public opinion by utilizing instruments such as campaigns, meetings, protests and suing. In addition, the study aims to identify possible cooperation areas for organizations and NGOs towards sustainability targets for future researches.

Keywords: Sustainability, Farming, Supply Network, Case Study, Ngo

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AN EXPERIMENTAL INVESTIGATION OF EFFECTS OF CYLINDRICAL FINS ON ELECTRICAL EFFICIENCY OF A PHOTOVOLTAIC THERMAL SYSTEM

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Abstract:

Renewable energy sources are increasingly important in our time. Solar energy has shown the greatest development among renewable energy sources. It is known that photovoltaic cells convert about 15% to 20% of the theoretical solar radiation flow to electricity. As the temperature of each item increases, the temperature increases in the panels as well. It is seen that this temperature increase decreases the yields of photovoltaic cells both as a result of experimental data and also when literature information is examined. There is an increase in the electrical efficiency of the photovoltaic cells when they are cooled with a gas or liquid fluid. An experimental setup has been designed and manufactured in order to avoid this temperature rise. For recycling solar radiation as thermal energy, the aluminum fins with different geometries have been arranged with different surface areas and different transport surfaces. The effects of these fins on total yield were evaluated by making different array configurations within the designed control volume. As a result of the evaluations made, it has been seen that an array has exhibited better performance despite a smaller surface area. In the test system, fins with different geometries (3mm, 6mm axial flow and fins with helical shape) and alignment positions (straight array and staggered array) were used. When these fins are used, the electrical efficiency increased depending on the air velocity entering the control volume (3,3m / s - 3,9m / s - 4,5m / s) and the radiation intensity (700W / m²). Efficiency in ordinary PV system is around 6.9 – 7.9%. Thus, it was concluded that fins with different surface areas are drawing heat from the photovoltaic cells and thus play a major role in maintaining the efficiency of the photovoltaic panel by decreasing the cell temperature.

Keywords: Renewable Energy Sources, Solar Energy, Photovoltaics Panel Cooling, Fins, Increase Efficiency

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ENCAPSULATED PHASE CHANGE MATERIAL SLURRIES (EPCM-S) AS WORKING FLUID IN HEAT TRANSFER APPLICATIONS

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Abstract:

In PV systems, much energy accumulates as heat, due to lower conversion efficiency, which in turn lowers the efficiency further. PVT systems use air, coolants and various fluids to maintain efficiency and utilize from heat. Air systems can be upgraded with low-cost add-ons and integrations. However, due to lower heat capacity, and limited application area of warm air; PVT air systems lose the upper hand in converting this waste heat into useful work. Therefore, studies on development and use of fluids having high specific heat capacity, such as water and compounds are gaining momentum. Specifically made fluids are costly, and water is somewhat suboptimal for the purpose. Water with additives was considered to be a solution, but it increases pumping power required to circulate the water through the system, whereby a greater amount of electrical power is spent for meeting it. Therefore, it is important to develop new fluids with higher specific heat capacity but are inexpensive, readily available and require lower pumping power.

Using fatty acids and salt hydrates; organic and inorganic encapsulated phase-change-materials (EPCM) can be produced in a wide variety of morphologies with different core and shell materials, thereafter they can be added to water used as carrier fluid at a ratio of ranging from 1 to 15% by weight. This is called EPCM slurry (EPCM-S), which helps increase the amount of energy stored per unit volume by 5 to 14 times as they also store energy as latent heat. Hence, same amount of heat can be circulated with a pump power of up to 5 folds lesser.

EPCM-S should offer; minimal volumetric change between phases, high thermal conductivity and density; stable and uniform phase changes, large nucleation rate and crystal growth, low-viscosity, long life-cycle and which is non-toxic to be used in heat transfer applications.

Keywords: Phase Change Materials, Nano/Micro Encapsulation, Thermal Conductivity, Pvt Water Systems

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FUZZY BASED MODELLING FOR CITY POLLUTION

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Abstract:

Urban pollution is a growing problem. It is suggested that while the world population is doubling, the world's urban population is tripling. Due to uncontrolled urbanization, environmental degradation has been occurring very rapidly and large cities in particular face many problems like worsening water quality, excessive air and land pollution, noise, radiation and problems of waste disposal and high concentration of substances dangerous for human health. This study concentrate on both a fuzzy simple additive weighting system and PROMETHEE method to evaluate environmental pollution in large cities by using objective and subjective attributes under group decision making conditions. These two methods have proven their analytical power in various multi-criteria evaluation problems over the past years The proposed fuzzy system combines fuzzy set theory with simple additive weighting to evaluate the weights of the types of pollutions and PROMETHEE method which has the possibility of taking into account several different types of data is utilised for ranking large cities from the least polluted to the most polluted according to these pollution types. The data taken into consideration for ranking was originally collected from different municipal and governmental sources. The proposed methodology has potentially a decisive positive contribution to the process of environmental decision making. The results are discussed in terms of the ability to combat different types of pollution in the cities studied. The paper concludes with some policy perspectives like the employment of renewable energy sources, the development of public transport, the effective coordination of environmental actions among different government agencies, the enforcement of environmental regulations and the definition of the critical parameters that may serve as policy handles for a successful urban development.

Keywords: Urban Pollution, MCDM, Fuzzy Sets

**This research has been financially supported by Galatasaray University Research Fund (18.402.002)*

CHINESE EXPERIENCES AND LESSONS LEARNT IN AGRICULTURAL DEVELOPMENT SINCE 1949

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Abstract:

The Chinese agricultural development has made remarkable achievements, especially in recent four decades, while as several issues also emerged at the same time. This paper uses a historical view to find out the facts that exist in the agricultural development experiences in China since the People's Republic of China founded in 1949, both achievements and major issues. In this paper, the Chinese development experiences have been divided into three phases in accordance with the developmental characteristics in each stage, this three phases are 'the agricultural development in early days after the founder of People's Republic of China (from 1949 to 1957)', 'the establishment and development of the people's Commune period (from 1958 to 1978)', 'the construction of the new era of modern agriculture (since 1978 until now)'. Therefore, by analyzing the characteristics of these three phases, to search for the main achievements in the past decades and problems that need to solve currently.

Keywords: Chinese Experiences, Agriculture, Rural Development

**China Scholarship Council*

A FRAMEWORK DESIGN FOR SUSTAINABLE TOURISM IN COASTAL AREAS

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Abstract:

This research delineates a stepwise framework design process focusing on sustainable tourism in coastal areas to be addressed by decision makers for coastal destinations. The framework design process integrates different ways and tools like twelve aims for sustainable tourism development principles in a long-term planning scope. The most important dimension of the designing framework process involves the need for establishing a common vision and mission of sustainable tourism development scenarios and for a continuous assessment of the outcomes of the decision-making process. The recommended level of analysis is the destination; local expert and planners are proposed to clearly identify the initial condition of sustainable tourism development in the destination as a result of the initial analysis. The framework design process anticipates the definition of a strategy and implementation plan for sustainable tourism in order to integrate future sustainable tourism development with competing economic, social and environmental activities. Policy setting stage is largely inspired by the implementation of sustainability principles helping decision-makers in the formulation of a main framework. This framework must consider other relevant strategies at the local, regional and national scale in order to integrate sustainable tourism development in a broader development strategy in coastal areas. Finally, the implementation, monitoring and review of the whole framework design and planing process represent probably the most critical steps of the process. There will be a continuous need to adjust and change goals and strategies, as scenario conditions also change. The decision-making process should be supported by a strong political will and count on a broad consensus among citizens, interest groups and other economic actors. The model presented in this research recommends a flexible design strategy in order to support decison makers' capabilities to take into account external factors in framework design process and strategic sustainable tourism planning for coastal destinations.

Keywords: Sustainable, Tourism, Coastal Area, Framework, Design

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SUSTAINABLE URBAN TRANSPORTATION: AN ASSESSMENT SAMPLE CASE OF BURSA AND GAZIANTEP

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Abstract:

Today, half of the world's population lives in cities and urbanisation is expected to continue. The intense population growth, the rapid urban and industrial cycle of the service sector, increasingly threaten the health of urban life. Urban transport activities are also one of the factors that increase the risk dimension. As well as, the city is profoundly affected by transport priorities – as with other infrastructure networks. In this context, although cost of transport infrastructure is enormous, it is required to follow a sustainable urban transport policy in order to conserve natural resources and life within urban metabolism. Recently, efforts of local governments related to urban transport policy have become prominent on the basis of sustainability.

In this study, light rail system services, urban cycling and the creation of hiking opportunities are evaluated at the point of ensuring sustainable urban transport of city administrations of Bursa and Gaziantep. Also, this paper is set out to determine an outline of certain key influences on urban transportation development and in particular how they relate to the characteristic properties of the cities.

Keywords: Sustainability, Urban Transportation, Bursa, Gaziantep.

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USING A MODELLING SOFTWARE FOR DETERMINING LOCATIONS OF CAGE FARMS

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Abstract:

The number of marine fish farms increased rapidly of late years both in Turkey and Europe. This increase in the number of cage farms led to serious environmental concerns. Fecal waste and uneaten food particles are continuously formed as a result of fish feeding accumulates over the sediment in the form of particulate organic materials which is considered as the major component of negative environmental impacts. Determination of the deposition rate and deposition area of particulate organic materials derived from marine cage farms is important to predict negative impacts. There are some determinative factors about organic materials accumulation such as current speed, depth and feeding rates depending upon fish stocks per cage. Generating some simulations using these factors are quite important with regard to put forward an idea about fish farm locations whether its acceptable or not. So these simulations provide foresight relating to environmental effects of farms in the future. In the present study, we have used a commercial modelling software (Meramod, v.1.4) for evaluating future farm locations in coastal areas. Especially, different current speed, current direction, depth data were used. And some simulations were made using these different hydrodynamic and production data to symbolise different locations. And also organic deposition flux zones were compared between each other. Results indicated that, although not definitive, hydrodynamic characteristics (esp. current and depth) of area provide prediction about true site selection. So, modeling can be an useful tool for predicting and monitoring the potential impact of cage farms on aquatic environment before its establishment.

Keywords: Fish Farms, Environmental Impact, Solid Accumulation, Meramod, Modelling.

**This study was funded by TUBITAK grant no #105G038.*

PLAGIARISM RETHINKING, ISSUE AND CHALLENGE: A CONCLUSIVE VIEWPOINT

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Abstract:

This article unveils rethinking, issue and challenge of plagiarism with various evidence based examples. The digital world suffers from a plague of plagiarism. Most academic scholars, they have been committed that plagiarism is a serious violation of publication ethics. Scientific publications and open access have a glut of information affected the security of scientific knowledge and destroy all social realms. Duplicate and redundant publication betrayed the readers and devastate genuine credibility of the journal publication. Student's are given concocted stories about plagiarism. Due to the sensitivity of plagiarism imperfection, no one is involved in direct discussion of genuine cases which are not feasible. No doubt anti- plagiarism software has been drastically changed mindset students as well as teachers. For the sake of API (ACADEMIC PERFORMANCE INDICATOR) everyone tried to publish more and more papers without seen of qualitative research. Anti –plagiarism software like TURNITIN given a genuine plagiarism detection report instead of any freely open anti plagiarism software like EVE 2, URKUND,VIPER. The author also highlights some anti-plagiarism software and this software has been a blatant method for reduced copying.

Keywords: : Plagiarism Dishonesty, Anti-Plagiarism, Software Tools, Copyright Law.

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PESTICIDES: A THREAT TO SURVIVABILITY OF EARTHWORMS

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Abstract:

Earthworms are the efficient biotransformers of soil as they crush, macerate, aerate and convert organic waste into nutrient rich manure. But, pesticides pose a big threat to the worm's survivability and reproduction capability. The present study of 60 days was carried out to analyze the impact of six pesticides' viz. Cartap (1.0 mg/kg, 1.5 mg/kg and 2.0 mg/kg), Pinoxaden (0.8 mg/kg soil, 1.5 mg/kg soil, 3.0 mg/kg soil), Thiram (0.75mg/kg, 1.00 mg/kg and 1.25mg/kg soil), Phorate (1.0 mg/kg, 1.5 mg/kg and 2.0 mg/kg), Carbendazim (0.75 mg/kg, 1.00 mg/kg and 1.25 mg/kg) and Sulfuron (0.8 mg/kg soil, 1.5 mg/kg soil, 3.0 mg/kg soil) exposure on the reproduction and survivability of *E. fetida*. Reproduction test was carried out in terms of cocoon production per worm and hatchling per cocoon, while survivability was analyzed in terms of growth rate and mortality of worms exposed to pesticides. Thiram (1.25 mg/kg) exposure resulted in 72.06%, 98.7% and 65.2% reduction in survivability, cocoon production and body weight of worms, respectively. Carbendazim (1.25 mg/kg) exposure resulted in 65.6%, 97.8% and 48.91% reduction in survivability, cocoon production and body weight of worms, respectively. 44.59%, 23.07% and 17.77% reduction in survivability, cocoon production and body weight was observed in worms exposed to Pinoxaden (3.0 mg/kg soil), respectively. When worms were exposed to Sulfuron (3.0 mg/kg soil), 41.38%, 22.45% and 16.68% reduction in survivability, cocoon production and body weight was observed. 22.72, 9.63% and 22.19% reduction in survivability, cocoon production and body weight was observed when worms were exposed to phorate (2mg/kg). 27.27% , 22.02% and 35.94% decrease in survivability, , cocoon production and body weight was observed in worms exposed to cartap (2 mg/kg).

Keywords: Pesticides, Cocoon Earthworm, Reproduction Biochemical Composition

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SUSTAINABLE AND RECYCLABLE PROCESS FOR THE SEPERATION OF CR(VI) FROM INDUSTRIAL WATER BY CARBON NANOTUBE FUNCTIONAKIZED MEMBRANE

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Abstract:

In this study, we developed sustainable and recycleable process for the seperation of Cr(VI) from industrial water. New generations of carbon nano tubes are the most important ingredients that affect the membrane performance in the production of nano-reinforced membranes. We used carbon nanotube functionalized membrane for the recyclable of Cr(VI). The membrane was modified with graphane oxide which improves the mechanical properties and permeability of the polymeric membranes. Graphane oxide added to the membrane structure caused a visible increase in the rate constant, permeability, flux, and recovery factor. The functionalized membrane affords great opportunities to work with a wider range of pH levels, changes of which in membrane-based experiments with unfunctionalized membrane have caused significant decreases in flux and permeability. The ease of use, applicability, and high permeability and flux values of the modified membrane at high temperatures afford significant advantages over the unmodified membrane as well. The usage of this system is very sustainable and commercial for industrial waste water applications due its high resistant.

Keywords: Sustainable, Carbon Nanotube, Membrane, Industrial Water

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RECYCLABLE SYSTEM FOR THE TREATMENT OF WASTE WATER BY USING POLYMER INCLUSION MEMBRANE WITH MODIFIED GRAPHANE QUANTUM DOTS

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Abstract:

In this study, we carried out recyclable system for the treatment of waste water by using polymer inclusion membrane with modified graphane quantum dots. The polymeric membrane supported by GQDs for the recovery of Cr(VI) from waste water for a sustainable process. The modified membrane was characterized by surface scanning methods (SEM and AFM). Surface characterization demonstrated that there are much larger visible pores on the membrane surface after modification of polymer inclusion membrane with GQDs and the micropores in the membrane surface were vanished and performed with GQDs after modification of membrane. The modification of the membranes with novel materials is attractive topic on membrane separation and treatment technology. The system is recyclable, sustainable, economic and available for long-term usage. The highly selective and mechanical strength of membrane is developed by adding GQDs. Modified membrane exhibits significant stability and selectivity, and the system is used for the real samples.

Keywords: Graphane Quantum Dot, Waste Water, Cr(VI)

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TRANSPORT AND RECOVERY OF Cr(VI) BY USING POLIMERIC SUPPORTED LIQUID MEMBRANE

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Abstract:

In this study, the separation of Cr(VI) metal cation was achieved by using the supported liquid membrane technique, which is an effective and sustainable separation method. The transport properties of the Cr(VI) metal cation have been investigated, and the removal of Cr(VI) has been effectively carried out by using a calixarene derivative as a carrier. Calixarenes have the ability to complex with cations, anions, and neutral compounds—both in the solid phase and in the solution—as they have cavities in which different guest molecules can be placed. For this reason, they are widely used as a molecule and ion carrier. In this study, the aim was to compare the transport efficiencies of different parameters and then compare them with each other. The kinetic values of rate constant (k), flow (J), permeability coefficient (P), and recovery factor (RF%) were calculated. As a result of the experiments, it was seen that the flow rate changed linearly with the studied parameters for the transport of the Cr(VI) metal cation. The separation of Cr(VI) metal cations was achieved by using the supported liquid membrane technique, which is an effective separation method with 88.1% recovery factor.

Keywords: Resorcinarene, Liquid Membrane, Cr(VI)

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HIGHLY EFFICIENT PHOTOCATALYST BASED ON BISMUTH NANOPARTICLES INVOLVED BORON ENRICHMENT WASTE FOR PHOTOCATALYTIC DEGRADATION OF REACTIVE RED 2

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Abstract:

In this work, a novel composite containing bismuth nano particles (BiNPs) and boron enrichment ore waste (BW) was synthesized and tested in adsorption and photocatalysis to remove Reactive Red 2 (RR2) from aqueous solution. Transmission electron microscopy (TEM), X-ray photo electron spectroscopy (XPS), and X-ray diffraction patterns (XRD) showed the formation of the nano composite (BiNPs / BW). The BET surface area increased after intercalation of BiNPs onto BW. BiNPs / BW was found to be a good material for RR2 adsorption. The effects of operating variables such as initial dye concentration, pH and contact time in adsorption were studied. The kinetics, isotherm and thermodynamic parameters for the adsorptive removal of these dyes were also investigated. In addition, BiNPs/BW also shows high photocatalytic activity for degradation of RR2 from aqueous solutions. The combination of adsorption and photocatalysis using BiNPs / BW is demonstrated as a more effective technique for contaminant removal from aqueous solution.

Keywords: Photocatalytic Degradation, Bismuth Nanoparticles

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MAINSTREAMING OF TRANSGENDERS: TOWARDS WELL-BEING FOR ALL

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Abstract:

Sustainable development is a joint venture towards our common future and developmental goals are the pathways to achieve that venture. The 17 targets of 2030 agenda for sustainable development include preserving nature, wholesome human life, equality in education, health care, sanitation facilities, economic growth, climate awareness, peace and justice including ensuring healthy lives and promotion of well-being for all at all ages which are covered under these sustainable development goals. There is no international data available on the size of transgender population. But as per Gardiner's article on Quora, globally there are 1.4% of counted transgenders who spread evenly across the planet. The majority of transgenders irrespective of place and age are mentally unhealthy. The research paper is an attempt to study mental health of transgenders in relation to social acceptability and their coping strategies through qualitative approach- in depth interviews of 30 transgenders in Punjab (India). The results reveal that due to the problems in their social acceptability, they are facing discrimination in various walks of life – a danger to harmonious social life. Because of this, there are different symptoms which reflect negatively on their normal behavior such as frustration, aggression, anxiety and depression. There is problem in their coping behavior which is predominantly avoidant. Consequently, they have become victims of social isolation, withdrawal and helplessness. Some of them, playing a lead role, talk about their education and rehabilitation as human rights. Thus, it may be seen from the above facts that undoubtedly transgenders are facing problems in attaining optimal level of their mental health which is necessary for good, peaceful and honorable living. So, it is suggested that the educational and rehabilitation programs for transgenders should also include awareness and sensitization of general public.

Keywords: Transgenders, Mental Health, Coping, Public Sensitization

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SOCIAL NETWORKING SITES USAGE AMONG UNDERGRADUATE STUDENTS IN RELATION TO THEIR MENTAL HEALTH

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Abstract:

Sustainable development goals represent sustainable development agenda, an agenda “of the people, by the people and for the people”. These goals are framed to prevent environmental degradation, to check over exploitation and wastage of human resources for ensuring a safe human life. These 17 sustainable development goals are so framed to transform the world to be a peaceful and beautiful place to live in and to ensure a conducive environment for individual’s wholesome development of personality. Mental health is of utmost importance for wholesome development of personality is evidenced by the fact that mental health is included in sustainable development agendas at UN general assembly in 2015. As per report by WHO almost 7.5 % of Indians suffer from mental disorders (Times of India, 2017). Various factors that leads to distorted mental health are low socio economic status, alienation, loneliness, poverty, abuse (emotional, physical, sexual) and excessive use of social networking sites is a new addition in this list of factors. This research paper is an attempt to study relationship between social networking sites usage and mental health as well as to examine mental health as a predictor of social networking sites usage. Quantitative method of research was used to meet the objectives of present paper by using a sample of 793 undergraduate students of Indian origin. Results of correlation and regression analysis revealed that social networking sites usage was negatively related with mental health as well as mental health was found to be significant predictor of social networking sites usage.

Keywords: Mental Health, Social Networking Sites Usage, Undergraduate Students

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REMOVAL OF CR(VI) FROM WATER WITH THE CALIXARENE DERIVATIVES CARRIER BY PIM

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Abstract:

In this work, the transport of Cr(VI) ions from an aqueous donor phase solution to an acceptor phase that contained an acetic acid/ammonium acetate buffer at pH 5 through a polymer inclusion membrane (PIM) containing p-tert-butylcalix[4]arene amine derivative as carrier was studied. The Cr(VI) passed through a PIM comprised of cellulose triacetate as a support and 2-NPOE as a plasticizer. According to the World Health Organization (WHO), Cr(VI) is one of the most toxic metal in the nature. The transport efficiency of Cr(VI) was observed to be 95.07 % after 10 h under optimized conditions. The experimental results showed that the calix[4]arene had a great selectivity to Cr(VI) metal cation and the diffusion transport process can be also performed with a temperature. The PIM membrane was stable, recyclable and showed excellent transport activity. Therefore, the PIM membrane can be used for the treatment of chrome plating bath water and the removal of heavy metals and organic pollutions from industries.

Keywords: Polymer Inclusion Membrane, Calixarene, Transport Of Cr(VI)

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SEPERATION OF CHROMIUM AND SUSTINABLE PROCESS FOR WASTEWATER

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Abstract:

In this study, it has been purposed and inquired that the removal of Cr(VI) through the polymer inclusion membrane (PIM) from industrial waste waters. We have developed a basic, clean, fast, inexpensive, stable, recyclable, eco–friendly and highly efficient calix[4]arene based PIM membrane. The Cr(VI) transported from a chrome plating bath water to an acceptor phase that contained a buffer solution through a PIM consisted of macrocyclic carrier, CTA as a support and 2-NPOE as a plasticizer. The kinetic parameters were calculated. The transport efficiency of Cr(VI) was analyzed with efficiencies 97.69% under optimized conditions. The kinetic results demonstrated that Cr(VI) can be transported from the chrome plating bath water to the acceptor phase with high selective and efficiency and the temperature is an important parameter on the transport process which generally has not investigated in other PIM's studies. In addition, the removal of Cr(VI) from chrome plating bath water by using PIM contributed to the environment and the PIMs can be used in the long term for advanced applications.

Keywords: Chrome Plating Bath Water, Polymer Inclusion Membrane, Calixarene, Transport Of Cr(VI)

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WATER CONSERVATION PRACTICES AT HIGHER EDUCATION INSTITUTIONS: THE CASE OF THE AMERICAN COLLEGE OF GREECE

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Abstract:

Sustainable use of water resources comprises a big challenge when it comes to higher education campuses. Although there, water consumption is mainly attributed to toilet and tap water use and showers installed in sports facilities, it is notably high. The average water consumption in educational buildings rises to 257 lt/user/day (EIA, 2012) in the USA and to 100 lt/user/day in the European Union (EU), in comparison to the average domestic water consumption which is 333 lt/person/day (USGS, 2014) and 153 lt/person/day (Bio & E.U. DG Env, 2009) respectively. Many universities have started an effort to become sustainable and minimize water consumption in both continents. The current paper presents the findings of two water audits performed at the campus of Deree – The American College of Greece (ACG) with a time interval of 5 years. The audits were performed in the context of the “Greening the Campus” course with the active participation of students. The research aimed at identifying water use patterns, water consumption levels and changes over time, and perception and behavioral changes after introducing water saving appliances at the ACG campus. The research was ultimately aimed at formulating recommendations for sustainable water use on-campus. Consistent methodology was followed in both audits, including measurements in flush toilets, taps and showers to identify water consumption rates and leaks; readings of water meters to document water consumption; perception surveys addressed to campus users to identify water use patterns; and interviews with key departments on matters of water consumption.

The research concluded to interesting findings indicating reduction in water consumption on campus in the recent years and increased public awareness on sustainable water use. Furthermore, recommendations were formed on how to improve water efficiency, increase water savings and reuse, raise student and staff awareness on sustainable ways of using water and support environmentally friendly behaviors.

Note: Authors are listed in alphabetical order. Both authors contributed equally to this work.

Keywords: Sustainable Water Use, Water Audit, Water Conservation

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APPROACHES TO RESIDENTIAL OPEN SPACE DESIGN IN SEARCH OF SOLUTIONS TO PROBLEMS OF URBAN LIFE

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Abstract:

The dynamics of modern life and the urban spaces in where it takes place are being perceived as connected to numerous problems. Especially noise, air and water pollution, waste materials, migration to the cities and crowdedness, attendant urban densification and sprawl, as a result of these fast changes increasing identity loss, and irregular and chaotic perception of urbanscapes, traffic, increasing loss of green spaces, grey and unfriendly built environment, higher rates of crime, social inequity; the anxiety and stress that all these problems caused are now become defining characteristics of urban life. Open and gated housing estates appear in housing market as an alternative post-modern lifestyle which is reflected as opposed and solution to the problematic life that urban spaces presents. Subjects such as how environmental quality in gated communities comprises, how it contributes to committed lifestyles are becoming popular in researches. But these quality of life or neighborhood satisfaction studies, while deal with objective (physical) quality and subjective perception of this quality, generally neglect landscape architects and their design approaches. However, how student designers approach to this subject must be understood in order to encourage them to develop innovative and creative design approaches.

For this aim, senior students of Landscape Architecture Department at Karadeniz Technical University were asked to define design problem of and approach to their Environmental Design Studio IV project which includes a gated housing estate landscape design. 19 of 32 students' design approaches whose problem definitions include urban life or spaces were examined in detail. It was determined that these students generally expressed weakening neighbor relations, the stress or monotony of urban life, detached human-nature relationship or environmental problems. Their spatial suggestions defined in design approaches were grouped as objective and subjective attributes which is a general approach in quality of urban life studies.

Keywords: Landscape Design, Landscape Architecture, Housing Estates, Urban Life, Lifestyles

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EVOLUTIONS OF THE VISITORS AFTER A NATURALISTIC ZOO VISIT: THE DETERMINANTS OF REVISIT INTENTIONS

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Abstract:

Zoos in urban areas are very important as they enable citizens to have relationship with nature. Therefore, zoos strengthen the interest and the sense of protecting animals and required to help visitors to learn by reflecting the interactions of animals in nature. With their design approaches, naturalistic exhibits (third generation zoo exhibits) encourage visitors to know and protect animals and affect positively their revisit intentions. Therefore, within the scope of the study, the attributes that naturalistic exhibits must include were determined by researchers of this study and with a questionnaire in accordance with these attributes the intentions of visitors (n=220) to revisit the zoo have been identified. The answers of visitors to the questionnaire enabled determining factors that affect their intentions of revisit.

According to the results of the study, a zoo with naturalistic exhibits affects the revisit intentions of its visitors positively: The image created by the zoo on its visitors and visitors' opportunities for obtaining information about animal species are the most efficient factors on revisit intentions. A zoo that includes naturalistic exhibits both affects the image of the zoo positively for its visitors and also inspires the visitors for revisiting there by providing information about nature conservation and wild life.

Keywords: Zoo, Naturalistic Exhibits, Revisit Intentions

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INVESTIGATION OF BENEFICIAL USAGE ALTERNATIVES OF DOMESTIC/MUNICIPAL/INDUSTRIAL TREATMENT PLANT SLUDGES: CASE STUDY OF GEDIZ WATERSHED AREA IN TURKEY

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Abstract:

Wastewater treatment should have a holistic approach not only for obtaining a better treated wastewater quality but also for providing an efficient sludge management including handling, disposal and beneficial usage alternatives. The applied treatment processes either in wastewater treatment or in sludge processing have important effects on the final sludge product quality. Especially, sludge treatment processes have an imperative role on the final product quality in terms of the disposal and beneficial usage alternatives of sludges including material and energy recovery.

Recently, sludges have not been considered as waste to be disposed. Depending on their properties, the sludges have been defined as a resource having many beneficial usage alternatives like energy recovery, usage of a construction material, and land application. Most of the research has focused on the material and energy recovery from sludges. The beneficial usage alternatives of sludges should be evaluated based on the environmental sustainability and economical criteria.

In this study, the research results of a large scale research project on domestic/municipal/industrial sludge management including material and energy recovery alternatives in Gediz Watershed Area (GWA), Aegean Region of Turkey were given in detail. This project was done on behalf of the Ministry of Environment and Urbanism to solve the problems related with the sludge produced from domestic/municipal/industrial wastewater treatment plants in GWA. Different beneficial usage alternatives –land application, biomethanization with other organic wastes, pyrolysis, gasification, and usage of supplementary fuel– were investigated depending on their origin and characteristics. This paper presents the important research results and debugs different beneficial usage alternatives for GWA.

Keywords: Sludge Management, Beneficial Usage Alternatives, Energy Recovery, Material Recovery, Wastewater Treatment.

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CHARACTERIZATION OF DOMESTIC/MUNICIPAL/INDUSTRIAL TREATMENT PLANT SLUDGES: CASE STUDY OF GEDIZ WATERSHED AREA IN TURKEY

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Abstract:

The characterization of sludges produced from domestic/municipal/industrial wastewater treatment plants (WWTPs) is very important stage to determine which processes to be applied during processing, reuse/recovery alternatives, and final disposal methods. The characteristics of wastewaters coming from domestic WWTPs are very typical and unvaried with the time. However, the characteristics of wastewaters originating from municipal WWTPs differ depending on the industrial contributions. The important factors affecting the properties of domestic/municipal wastewaters strictly depend on the size of the settlement, water consumption habits, and life quality in a city. Industrial wastewaters have different characteristics due to their origins and applied manufacturing processes. The wastewater treatment processes differ based on the wastewater characteristics. In addition, the sludge characteristics and amounts from the WWTPs vary because of the wastewater type and applied treatment methods. The sludge characterization has critical role for the subsequent treatment operations, beneficial usage and disposal alternatives.

This paper presents the sludge characterization results from a large scale project related with the sludge management of Gediz Watershed Area (GWA), Aegean Region of Turkey. The characterization studies were carried out on the sludge samples taken from the domestic/urban/industrial WWTPs in GWA depending on the Turkish Environmental Legislation- Waste Management Regulation, Landfilling of Wastes, and Regulation on the Use of Domestic and Municipal Sludge in Soil. Hazardous/non-hazardous conditions for industrial sludges were identified according to the determined waste codes and analysis results. Evaluation of the results made regarding the beneficial usage and disposal alternatives for the sludges produced in GWA. The paper gives the sludge characterization results and discusses the reuse/recovery alternatives based on the legislation.

Keywords: Sludge Management, Characterization, Environmental Legislation, Watershed Area.

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IMPORTANCE OF RENEWABLE ENERGY SOURCES FOR SMART CITY APPLICATIONS FROM VIEW OF SUSTAINABILITY

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Abstract:

World population have rapidly increased and especially become intense in city centers. The research need to provide the concrete solutions tackling the environmental problems due to the uncontrolled urbanization with the rapidly increasing population has been at the agenda of the whole world last a few decades. Therefore, new concepts to meet the population demands and ensure sustainability have been come into effects as smart cities. The large or small districts have been proposed a new city model, called “the smart city” representing a community of average technology size, interconnected and sustainable, comfortable, attractive and secure (Lazaroiu and Roscia, 2012). The most common indicators of smart cities are known as smart economy, smart people, smart governance, smart mobility, smart environment, and smart living (Letaifa, 2015). Renewable energy sources have been playing a significant role for smart city applications. The sources including solar, wind, geothermal, and biomass energy are very valuable because of their carbon-natural forms. The development and application of these resources to meet the energy need of the cities can have minimum impacts on the food chain, water supply, land use, and environment (Lee et al., 2013). Among the renewable energy sources, biomass having a high specific energy content coupled with carbon-neutrality and low greenhouse gas emission is considered as a major source. For example, bio-electricity, biopower, and biofuels from biomass are used inroads into transport fuels in Sweden (Web_1). Copenhagen targets to reduce its CO₂ emissions in relation to the city’s energy system. They considered the main tool as renewable energy in the City’s district heating. The City of Essen utilizes renewable energy from biomass, geothermal, solar, and cogeneration for municipal buildings in heating energy consumption more than 30% (Web_2).

This paper reviews the renewable energy usage alternatives its applications in smart cities. Especially, it focuses on the biomass utilization as an alternative energy source for cities.

Acknowledgements: The first author was financially supported by 100/2000 PhD Scholarship Programme of Higher Education Council of Turkey.

Keywords: Renewable Energy, Smart City, Biomass, Gasification

**The first author was financially supported by 100/2000 PhD Scholarship Programme of Higher Education Council of Turkey.*

ENERGY RECOVERY FROM SLUDGE VIA GASIFICATION TECHNOLOGY

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Abstract:

The sludge produced from the wastewater treatment plants has a fuel merit with its high calorific value for usage of supplementary fuel as in the cement factories or recovery of energy from sludge while it is processing with the different valorization processes like gasification.

The crucial target in sludge management is to reuse the waste in a beneficial way while taking necessary precautions for environmental and public health. The need to beneficial uses of sludge-energy recovery from sludge- and to reduce the overall investment and operational costs for sludge treatment and handling is important priority. An enhanced, fundamental understanding of syngas production from sludge could have many practical and environmental benefits. The ability to harvesting energy from sludge using thermal conversion processes will also provide greater insight to the wastewater treatment engineering applications in longer range benefits. Thermal processing of the treatment plant sludges can be promoted as cost effective and environmentally sound alternative in sludge management field.

This paper reviews the energy recovery possibility from sludges via gasification process.

Acknowledgements: This study was supported by TUBITAK-CAYDAG under grant #113Y166 "Investigation of Gasification Potential of Treatment Plant Sludges" Research Project.

Keywords: Treatment Plant Sludge, Biomass, Gasification, Thermal Conversion.

**This study was supported by TUBITAK-CAYDAG under grant #113Y166 "Investigation of Gasification Potential of Treatment Plant Slud"*

SUSTAINABILITY STRATEGIES IN THE HEALTH SECTOR

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Abstract:

Sustainability research mostly focused on manufacturing sector and neglected healthcare aspects. However, sustainability is an issue that concerns all sections of society, also sustainability is a common goal of both businesses and civil society. Therefore sustainability studies in the health sector are important for a healthy society. This study is a literature review on sustainability of health sector. The study involves review of papers analysing sustainability on healthcare as compared to sustainability strategies of manufacturing sector. We try to filter studies in such a way that puts forward conflicts, trade-offs, synergies, strategies and enhancements regarding healthcare goal besides economic and environmental goals. Because sustainability for health sector is divided into two; the first is social responsibility towards society that is external stakeholders, and the second is social responsibility towards employees and patients that are internal stakeholders. Finally, in this study we attempt to investigate in detail sustainability strategy within an organization involved in the health sector in Turkey.

Keywords: Sustainability, Strategies, Health Sector, Review

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SOCIAL SUSTAINABILITY IN FOOD SUPPLY CHAINS

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Abstract:

Sustainable supply chain research mostly focused on economic and environmental dimensions and neglected social aspects. However, to achieve true sustainability social issues such as human rights, employee rights, worker safety and health, organizations that increase employee motivation, ethic, fair business conduct and activities to society should also be incorporated. On the other hand, social sustainability is a common goal of both businesses and civil society. This study is a literature review on social sustainability of food supply chains. The study involves review of papers analysing sustainability on social dimension as compared to environmental and economic dimensions. We try to filter studies in such a way that puts forward conflicts, trade-offs, synergies and enhancements regarding social goal accomplishment besides economic and environmental goals. Moreover, we attempt to investigate whether there is sectorial difference between social sustainability applications. We also try to differentiate social sustainability in terms of negative/ positive and internal/ external impact management.

Keywords: Social, Sustainability, Food, Supply Chain, Review

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OPTIMIZATION OF BIOFILM MEDIATED HYDROLYTIC ACTIVITY OF POME FOR ENHANCED BIOGAS PRODUCTION

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Abstract:

Oil palm industry (OPI) in Malaysia generates a huge amount of palm oil mill effluent (POME) during the processing of crude palm oil. One ton of fresh fruit bunch produces 0.5 to 0.7 tonnes of POME. The generation of POME by the OPI has been a serious issue to handle due to its high content of COD and BOD. These wastes need proper treatment to be handled as without proper management it can create significant impact towards the environment. Therefore, anaerobic digestion of POME for enhancement of biogas production could be an effective treatment process for sustainable development.

In this study, biogas was produced by anaerobic digestion of POME applying biofilm-based technology. Biofilm mediated hydrolysis of POME was carried out to improve hydrolytic enzyme activity towards faster degradation. 2 grams of granular activated carbon (2.8 mg of biofilm per gram carrier) were added as the carrier to the biofilm into the flask experiment containing raw POME and incubated in room temperature with shaking at 150 rpm rotational speed. Several parameters such as hydrolytic activities, free fatty acid (FFA), sugar content were analyzed to evaluate the biofilm performance. A mixture of two to four strains of isolated bacteria had been proven in the earlier study to have better hydrolytic activity with 75.1% improvement (in terms of lipid hydrolysis) compared to control flask (non-sterilized POME with beads addition). Optimization of hydrolytic activity of POME was done using Design-Expert software, Response surface methodology (RSM) based on face-centered central composite design (FCCCD) was used to optimize two important reaction variables – Total suspended solids (TSS) of POME and amount of carrier employed as compared to the hydrolytic compound production. The optimum condition for hydrolysis of POME has been found to be at TSS of 2% with 2 grams of carrier utilized. Using the hydrolysate, the biogas enhancement was observed by 2-3 folds in the treatment process.

Keywords: Palm Oil Mill Effluent, Biofilm, Biogas, Anaerobic Digestion

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DETERMINATION OF SATISFACTION AFTER LAND CONSOLIDATION PROJECTS OF YENIPAZAR DISTRICT IN AYDIN

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Abstract:

One of the ways to increase resource use efficiency and economic sustainability in agriculture is to develop land consolidation (LC) studies. For this purpose in Turkey, after the establishment of General Directorate of Agricultural Reform, LC studies have gained speed. Today primary target of Food, Agriculture and Livestock Ministry is to complete land consolidation in all of the irrigated areas. However, knowing how effective the project and how much it serves to its primary objectives is as important as the completion of the projects. In this study, it is aimed to determine social and economic efficiency value, which is an important criteria for determining the efficiency of LC Projects. Aydin - Yenipazar Participatory LC Project, which was consolidated in 2011, is selected as study area. The data obtained from the survey studies conducted in the 4 villages of the project area were evaluated and the farmer satisfaction rate was determined as 89%. Furthermore, the consolidation rate, which is a significant success indicator, varied between 43% and 46% for these 4 villages. As a result of the study, it has been found that the project has achieved a good outcome in Turkey's conditions.

Keywords: Land Consolidation, Consolidation Efficiency, Consolidation Rate, Yenipazar Province

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DOES OIL PRICE AFFECT FINANCIAL STABILITY? AN INVESTIGATION FOR EMERGING MARKET ECONOMIES

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Abstract:

In the post-global financial crisis of 2008, both in developed and developing countries, policy makers began to consider the concept of financial stability in policy-making. When monetary and fiscal policies are implemented to ensure financial stability, new policy instruments are being used. Having witnessed radical policy implementations, especially in developed countries, the global economy has failed to fully weather the effects of the crisis over the past nine years.

One reason for this is that different macroeconomic variables have excessive volatility in this process. For example, the oil is an essential commodity for all economies and because the extreme increases and decreases in oil prices have adversely affected the macroeconomic indicators of the country's economy.

In this study, the direction of the interaction is investigated as to whether financial instability in developing countries is the result of recent rapid declines in oil prices. In addition to the asymmetric relations between the causality tests and the recent developments used in the study, the frequency dimension of the relationship can be measured and short and long term segregation can be made. In addition, the impact of shocks on independent variables due to VAR-based analysis on financial stability can also be seen. Possible consequences of the study will lead to policy outcomes for the development of regulatory policies for oil prices in order to ensure financial stability and in order to ensure stable development path for the emerging market economies.

Keywords: Financial Stability, Oil Prices, Emerging Market Economies

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DOES TERMS OF TRADE EFFECTIVE ON EXCHANGE RATES IN EMERGING MARKET ECONOMIES?

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Abstract:

Exchange rate is an important determinant of both import and export of an economy. Thus, economists try to identify which factors affect exchange rates and how it is important for the exchange rate. In the literature, there are numerous studies including financial and real economic factors. One of them is term of trade. It is described as ratio of export price index of an economy to import price of the related economy. If terms of trade of an economy is high that would be affect real exchange rate of the economy.

In this study, we investigate the relation between real exchange rate and term of trade in twenty emerging market economies between years 2000 – 2015 by employing panel data co-integration and panel data causality test techniques. Empirical findings are important for international trade policies in emerging market economies which target to increase export volume. Empirical results of the study reveals that in some of the emerging market economies terms of trade is an important determinant of real exchange rates.

Keywords: Emerging Market Economies, Term Of Trade, Exchange Rate

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MACROECONOMIC DETERMINANTS OF POLITICAL STABILITY IN CENTRAL ASIAN TURKISH REPUBLICS

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Abstract:

Political stability is defined as an important factor affecting the economic performance of countries. The theoretical basis for the relationship between political stability and macroeconomics is investment and national income growth, which develops in line with stability. Putting forth the macroeconomic determinants of political stability in Central Asian Turkic Republics that transition from a centralized planning to a free market economy will provide significant advantages for policy makers. In this study, the macroeconomic determinants of political stability in Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan and Kazakhstan countries during 2001-2016 period are investigated by panel data method. As a result of the empirical analysis, the unemployment rate and the inflation rate have a negative effect on the political stability. However, per capita national income and commercial openness have a positive impact on political stability. As a result, the commercial openness and income increase provided by the integration of the Central Asian Turkish Republics with the international markets will help to increase political stability.

Keywords: Central Asian Turkish Republics, Political Stability, Panel Data

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HYSTERESIS OF UNEMPLOYMENT: NEW EVIDENCE FROM TURKEY

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Abstract:

Perhaps the most debated macroeconomic case in the economic literature is unemployment and the methodological debates that determine this unemployment. Although unemployment and job creation are important in producing added value and contributing to domestic income, the rate of unemployment in terms of political and economic is indicative of stability. The existence of the effect of Hysteria leads to social and economic disadvantages in economies, as the unemployment dynamics lead to a non-stationary process and therefore to a long term unbalance. In this study, it was researched whether the economic shocks that took place over time using the yearly unemployment rate of Turkey between 1923-2016 were affected by the natural rate of unemployment in Turkey. The extended Dickey-Fuller (1981) arrived at the root of the variable level values using the unit root test. In this study, soft transition autoregressive models (STAR), which are widely used in testing the existence of unemployment hysteresis, have been used in the empirical literature. According to the STAR model application, the Logistic Smooth Transient Autoregressive (LSTAR) model was chosen for the Terasvirta (1994) process and the Escribano-Jorda (1997) procedure. Turkey's unemployment rate 1923-2016 period indicate the existence of hysteria, though weak. Turkey's unemployment rate for the period 1923-2016 series adaptation of the process; shows smooth and slow transitions between the regimes.

Keywords: Unemployment, Nonlinear Time Series,

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THE ROLE OF GREEN CONCRETE AND OTHER SUSTAINABLE CEMENT BASED MATERIALS IN TURKISH CONSTRUCTION SECTOR

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Abstract:

Depletion of natural resources brings about increase in need for energy all over the world. Thus, sustainability concept has become much more critical issue for the construction industry. Building materials industry, which is one of the main part of the construction sector, should be considerably concerned. Among these materials, concrete and the other cement based products constitute a significant proportion. Therefore, investigation of these materials is of great importance for development of sustainability and decreasing energy consumption. Turkey is one of the most important country in production of cement and cement based materials. In this study, interviews were conducted with a variety of manufacturers and distributors who deal with such materials in Turkey. Furthermore, additional information was gathered from different national and international sources. Consequently, it is found that the importance of green concrete and cement based materials have been considerably increased recently, although the desired level has not been achieved yet.

Keywords: Sustainability, Green Concrete, Cement Based Materials, Building Materials

Acknowledgement: *This study was funded by 'COST Action TU1404 Towards the next generation of standards for service life of cement-based materials and structures' (ITC conference grant)*

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APPLICABILITY OF NATURAL QUORUM QUENCHING DISINFECTANT FOR FOOD INDUSTRY

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Abstract:

Food industry has not only a big amount of production also a big ratio as a polluting. Many kinds of chemicals are used as disinfectants for hygiene and sanitation of process area. These chemicals and rinse-water are called as CIP/COP waste-materials. However microbial flora on process area surfaces, especially in a biofilm structure, can become resistant to these chemicals after continuous and incorrect hygiene and sanitation applications. Besides, this type bacteria can transfer this genes to other bacteria in the wastewater treatment systems and environment. Higher doses chemical and/or more complex chemicals are used as a precaution against this problem. Chemical pollutions and disinfectant resistance bacteria and also antibiotic resistant bacteria which can contaminate to wastewater from raw material (milk, fruit, vegetables and meat) dissemination can be observed. This review aims to show usage availability of natural, quorum quenching disinfectants as a suggestion to prevent disinfectant-resistant bacteria formation and environmental pollution.

Keywords: Disinfection, Natural, Quorum Quenching, Biofilm, Resistance

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ENVIRONMENTAL STRESSES APPLIED TO MICROALGAE AND THEIR EFFECT ON BIOMASS, LIPID AND FAME COMPOSITION

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Abstract:

Microalgae based biorefinery is an important concept, based on its nature relies on the commercial by-products. This term has a wide range application from fuel to food ingredients, and variety of products such as protein, antioxidants and oils are produced from biomass in the biorefinery. Lipid and triacylglycerol are preferred microalgae byproducts due to their energy rich nature and their potential of use as a good energy alternative to limit the fossil fuel consumption; conversely, microalgae can have large amount of biomass without large amount of lipid. The lipid accumulation can be induced under some stress conditions such as photoperiod, pH, temperature, light intensity, carbon sources, nitrogen and phosphorus amount, salts can directly affect the lipid production of microalgae.

In this study, *Auxenochlorella protothecoides* was subjected to some environmental stress factors (e.g. Fe³⁺ addition to the normal growth medium). After that, biomass production and lipid production rate and lipid content was monitored under stress conditions. The effects of stress factors to lipid quality and FAME (Fatty Acid Methyl Ester) composition was investigated.

Keywords: Biorefinery, Microalgae, Stress

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EVOLUTION OF PUBLIC PARTICIPATION IN DISASTER RESPONSES IN CHINA

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Abstract:

From ancient time, disaster management had been an issue of life and death to every dynasty. Since the communist party came to power, China has adopted state-led disaster governance. However, this state-centered disaster management system has been challenged by the rising of civil society and social activism in the digital age of social media. With the help of the new ICTs, the Chinese public is becoming more and more actively involved in disaster responses. This leads to the generation and evolution of public participation in disaster responses. This paper aims to show the growth of public involvement in disaster responses in China through the analysis of six different cases under different social and political contexts in a longitudinal order. The general trend of public participation is increasing towards the direction of wide and extensive participation. This trend will be shown by a new ladder of Chinese public participation in disaster responses, which is based on the Arstein's participation ladder, intending to showcase the changes taken place in the past decades. The forms of participation have expanded in a non-linear way. The analysis in this paper focuses on the macro level of the participation forms. However, further studies about the evaluation of the public participation at the statistical level can be conducted.

Keywords: China; Disaster Responses; Public Participation; Disaster Management

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WASTE MANAGEMENT IN THE MUNICIPALITY OF ATHENS

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Abstract:

The city of Athens faces significant issues in the waste management. Every day 850t of recyclable and household waste are collecting from 11,500 collection points with 180 collection programs of which 31 recycling programs and also 4 weekly recycling programs with press containers. The collection programs are planned under the use of G.I.S (Geographic Information systems) and are depicted on maps. Each map consist of data depicting the number, time and district of the collection program, therefore the driver with the two workers of the garbage truck have quick access for their route directions.

The scope of the research is to study the waste management in the Municipality of Athens and to identify the issues of this procedure. For this purpose, non standardized interviews were conducted to eight members of the Municipality of Athens in season December 2017- January 2018. After the classification of the issues were identified shortages of personnel and equipment and also a lack of inhabitant cooperation. It's a fact that the Municipality of Athens must comply according to the European waste management regulations by avoiding producing waste, increasing recycling, recovering and applying the <<pay as you throw>> and <<polluter pays>> principles. So it is required state inspection, recruitment of specialized personnel, purchase of modern equipment and the most important, information campaigns on waste management to the inhabitants, especially to the new generations.

Keywords: [Recycle, Reuse, Landfill, Waste]

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AN EMPIRICAL STUDY ON NATURE CONSERVATION AND ECONOMIC DEVELOPMENT PARADOX OF SUSTAINABILITY

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Abstract:

In this paper it is aimed to analyze and interpret to what extent the balance discourse of sustainability between nature conservation and economic development can be reflected on space in practice at the provincial level in Turkey. Within this scope, various indexes have been produced such as level of nature destruction, agricultural productivity environmental expenditures. These indexes were derived from existing indexes calculated by various institutions and sub-parameters compiled from a number of different sources. For example; some sub-parameters related to economic development are Environmental Impact Assessment (EIA) statistics which contain investment distinction in seven different sectors as energy, transportation-coastal, oil-mining, agro-food, waste-chemical, industry, tourism-housing. Besides agriculture, forest and shrubbery, meadow and pasture areas can be thought as sub-parameters related to the nature conservation or destruction level. Within this framework, based on data can be obtained between the years 1993-2016 to 81 provinces in Turkey, a process analysis was carried out to understand the change between these years.

Therefore, the relationship between economic development and its negative externalities is resolved through statistical analyses such as correlation, regression and hierarchical cluster; and findings are interpreted in relation to their geographical projections. As a result it is seen that while the economic development pressures in some provinces create high negative externalities, economic stability or under-development in some other provinces creates limited negative externalities. Unlike these two types of clusters, there are also some provinces contains findings that reject to such opposition relations. This diversity gives important clues to understanding the conservation - development paradox examined in case of Turkey.

Keywords: Sustainability, Economic Development, Nature Destruction, Environmental Impact Assessment

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HOW SUSTAINABLE IS REGIONAL DEVELOPMENT? : AN APPLICATION OF REGIONAL SUSTAINABLE ACCOUNT (RSA) MODEL IN EAST KALIMANTAN, INDONESIA

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Abstract:

East Kalimantan (Borneo) is one the richest provinces in Indonesia. Endowed with abundant natural resources such as oil and gas, coal, and forest, economic growth in East Kalimantan during the 1990s and the 2000s was among the highest in Indonesia, with an average growth of more than 7% per year. Recently, however, East Kalimantan experienced contraction of -1.28 in its economic growth even though the province has high score in human development index and environmental composite index. This is an interesting sustainable development paradox and worth of further investigation. This study aims to address such a phenomenon using a more comprehensive sustainable assessment so called Regional Sustainable Account or RSA. The RSA is sustainable accounting technique incorporating three sustainable accounts i.e., economic account, social account and ecological account. The approach is a modification of LQ model used in regional assessment combined with Geographical Information System (GIS). The results of study show a classification of region according to their sustainability grade ranging from chronic unsustainable to good sustainable. The results of this study could be used as policy recommendation for policy makers in order to develop their regions in a more sustainable way based on comprehensive measure of economic, social and ecological accounts. The results of this study could also be used as lesson learned for other provinces in Indonesia as evaluation instrument for regional development.

Keywords: Sustainable Development, Economic Growth, Regional Sustainable Account, East Kalimantan

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GLOBAL SUSTAINABLE TOURISM COUNCIL STANDARTS: AS A TOOL OF SUSTAINABLE CRUISE TOURISM

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Abstract:

Cruise tourism is one of the world's fastest growing tourist activities. Its traditional function provides transportation, accommodation and destination excursions. Today, more than 450 cruise ships sailing worldwide with almost 25 million of cruisers among more than 2000 destination. Cruise tourism is characterized by bringing large numbers of people to concentrated areas of destinations for brief periods, the industry also has potential to present significant future environmental challenges. A sustainable approach to the cruise industry has emerging worldwide in recent years while sustainability concept became important at the Brundtland Report in the 1987 via "Our Common Future" slogan. This study is reviewed relevant peer-reviewed literature, corporate policies, and reports regarding the cruise industry efforts to develop sustainability. The aim of this research is to examine applicability of current sustainable practices for cruise destinations because industry efforts by ship-side already exceed international standards prescribed by IMO still any common standards for cruise destinations isn't constituted. It is found that Global Sustainable Tourism Council Criteria provide contemporary practices for touristic destinations worldwide while green port practice has carried out around Europe, particularly in Baltic region toward cruise terminals but not on the global scale yet. In this research it is discussed whether GSTC's standards is a useful tool for sustainable cruise tourism destinations according to new Holistic Port-Destination Approach (HPDA). Resulting from each cruise port destinations has their own characters, many of them particularly in the Mediterranean Region may share common values such as history, culture and nature that are to be sustained by common standards developed with a holistic approach as like GSTC's need to be understood as a strong reference for cruise destination policymakers, cruise stakeholders and other beneficiaries.

Keywords: Sustainable Cruise Destination, GSTC Standards, Cruise Port-Destination

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TRACING B-GALACTOSIDASE IN OVARIAN CARCINOMA CELLS VIA A LONG-LIVED LUMINESCENT PROBE

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Abstract:

β -Galactosidase (β -gal) is a glycoside hydrolase enzyme and an important biomarker for ovarian cancers. In this study, a novel iridium(III) based scaffold has been designed and synthesized as discriminating probe 1 for β -gal activity in cellular environment. Upon the hydrolysis of β -gal, the galactose moiety on complex 1 acted both as an enzyme-active trigger as well as a quencher of luminescence. A dealkylated complex 2 was thus formed which emits with a yellow and long-lived phosphorescence by binding to β -gal or other proteins. Probe 1 exhibited selective response and linear luminescence enhancement under highly autofluorescent background at 0–30 U/mL. The detection limit is at 0.51 U/mL. Hence, probe 1 could probably serve as a useful tool for ovarian cancer diagnose via β -gal imaging. To the best of our knowledge, this complex is the first light-up phosphorescent iridium(III) probe for β -gal that can also distinguish ovarian carcinoma cells from normal cells.

Keywords: B-Galactosidase; Iridium(III) Complex; Luminescent Probe

**This work is supported by Hong Kong Baptist University.*

BREAST CANCER IN MEN

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Abstract:

Breast cancer, a major health problem, is less common in men than in women. It accounts for 1% of breast cancers and less than 0.1% of male cancer deaths. It has similar prognosis and pathological features to breast cancer in women. Breast cancer can be seen in all ages, including children and young adults, although in males it is around 60 years of age. Although there is a view that male breast cancers are more aggressive than female breast cancers, studies have shown that this is not true and that the prognosis of male and female breast cancers is similar. The belief that the prognosis of male breast cancer is worse is probably due to the older patients with male breast cancer and the more advanced stage disease. It is more common in the left breast as it is in women, but it is not clear why. It is usually unilateral and bilateral occlusion is less than 3%. Most of the breast cancers in males are in the retroareolar position and central, and the colonies are located on the upper outer face in particular. A small number of epidemiological studies of breast cancer are encountered in men. A number of risk factors have been identified that differ from female breast cancer. Among these risk factors are: Testicular-related, elevated levels of estrogen can be considered as local causes. Estrogen given for treatment in prostate cancer cases increases the risk of breast cancer in men. Breast cancer is relatively more frequent in men who have had orchitis from rubella before. Radiation exposure is another risk factor. Diagnosis includes history, physical examination, mammography, ultrasonography and other imaging modalities. Histopathological examination of the biopsy material is performed. 95% of male breast cancers are infiltrative ductal carcinoma, and about 5% are invasive ductal carcinoma. In males, lobular carcinoma is suspected because lobular differentiation is rare. Treatment is no different from the treatment applied to women. As a result; Although breast cancer is a rare cancer type in men, it is usually diagnosed at advanced stages. It should be remembered that early diagnosis is the most important factor that will affect the success of treatment, because the prognosis is not different from the same stage female breast cancers.

Keywords: Breast Cancer, Male, Prognosis

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DIEFFENBACHIA DANGER

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Abstract:

Dieffenbachia is a tropical plant from the family of the gods and the arum family. It is used as ornamental plant in houses. Due to its wide and variegated leaves, it is used as an ornamental plant in almost all the world. From the end of the seventeenth century it is known to be a toxic plant species. Tikuna Indians who lived in the Amazon used dieffenbachia as poison. Western Indians used dieffenbachia as torture material to punish slaves. They dripped the juice of the plant into the mouths of the slaves, and prevented them from talking with the swelling that occurred in their mouths. The Indians in Brazil, on the other hand, have put food on their heads to prevent the reproduction of their enemies, since they think that dieffenbachian causes infertility. Dieffenbachia is one of the plants that most rapidly reduces the amount of CO₂ in indoor environments. A range of effects can be seen from local irritation to death. Clinical manifestations may occur with eye, skin and oral contact. Serious pain with eye contact, chemosis, eye irritation, light sensitivity, excess tear, eye wrinkle or scratch, inflammation of the cornea and conjunctiva occur; With skin contact, mild dermatitis can progress to a severe burn tab. Any part of Dieffenbachian may develop oral pain, edema, excess in secretions, reoccurrence, lesions, swallowing difficulty after oral contact. If this plant is tried to be eaten, it will be known as a "dumb question" because it causes a burning sensation in the throat of a person, and after being swallowed causes it to be temporarily unavailable. When children or pets are left on their own, thousands of crystal arrows gushing out for play or for different occasional battering leaves or stems can cause injury, especially in the eyes. As a result: This plant, which was used for punishing and torturing slaves in advance, is now used as ornamental plants in homes and offices. It should not be forgotten that Dieffenbachian can cause serious complications and houses should be made safer, especially for children. Parents should be informed that plants frequently found in children's living space may cause such findings.

Keywords: Toxicity, Plant, Pain, Contact

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CAPITAL EFFICIENCY IN TERMS OF ECONOMIC GROWTH IN TURKEY

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Abstract:

Most of the economic growth models consider capital as the main force of GDP increase. Harrod Domar and Solow growth models both mainly focus on capital and savings in order to achieve GDP goals. Rebelo afterwards, in terms of endogenous growth theories also focus on the efficiency of capital for an economy. The possible relation between those two should be investigated in order to implement more efficient policies. The direction of the relation is also important. Turkish economy experiences high economic growth in the last decades with some breaks according to the crises. Our analysis covers a period of 13 years from 2000 to 2013. For the selected period, the growth and capital investment relation will be investigated. In the empirical analysis, first the stationarity of the series is checked, and they all added to the analysis in the first differences according to the unit root test employed. Hatemi J Roca asymmetry causality test is employed and according to the results fixed capital investments are not efficient in Turkish economy as it is expected.

Keywords: Capital Investment, Economic Growth, Gdp, Rebelo Model

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GOVERNMENT EXPENDITURES AS A SOURCE OF GROWTH TESTING BARRO MODEL FOR TURKEY

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Abstract:

In the last decades, modern growth theories consider government expenditures as a source of economic growth. Most of the economic growth models consider efficient government expenditures as one of the main force of GDP increase. Barro Model mainly focus on capital and savings in order to achieve GDP goals. The possible relation between those two should be investigated in order to implement more efficient policies. The direction of the relation is also important. Turkish economy experiences high economic growth in the last decades with some breaks according to the crises. Our analysis covers a period of 13 years from 2000 to 2013. For the selected period, the growth and government expenditure relation will be investigated. In the empirical analysis, first the stationarity of the series is checked, and they are all added to the analysis in the first differences according to the unit root test employed. Hatemi J Roca asymmetry causality test is employed and according to the results government expenditures are not efficient in Turkish economy as it is expected.

Keywords: Government Expenditures, Economic Growth, Gdp, Barro Model

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READING OF URBAN POVERTY ON THE SUSTAINABLE DEVELOPMENT GOALS

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Abstract:

The phenomenon of poverty has gone beyond merely focusing on income towards the end of the 80's and has begun to be examined more comprehensive. Poverty and education, health, socio-cultural needs etc. are connected. In this study, analyzes were made on the reports published by United Nations Development Programme (UNDP). UNDP has brought the "The Human Development Index (HDI)" to the agenda. Which index has basically 3 subtitles: a long and healthy life, being knowledgeable and have a decent standard of living. UNDP has also published Human Development Reports since 1990. Poverty is the biggest obstacle when sustainability is taken into consideration for the purpose of transferring to future generations. Therefore, the goals laid down in order to prevent poverty directly and indirectly within the "Sustainable Development Goals" published by UNDP are remarkable. In this study, these goals have been examined in the context of the changing paradigm of poverty with countries human development indexes.

Keywords: Urban Poverty, Goals Of Sustainable Development, Human Development Index, Undp

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CONVENTIONAL COTTON, FIBER PLANT BREEDING, TRANSGENIC COTTON FIBER IN TURKEY

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Abstract:

Cotton is an important industrial plant with its wide usage and high employment potential. Cotton related textile industry has also a vital economic importance not only for developing countries but also for developed countries. Cotton fiber may be used in textile sector whereas its seed is used for oil-feed industry and its linter is used for the regenerated cellulosic fiber and paper industry. Moreover, recently cotton oil usage has been considered as a good alternative for the petroleum. Fiber yield and quality are the major determinants of the cotton crop. Hence improvement of fiber properties can be provided by the conventional cotton fiber plant breeding. Selection is the basic way for the variety increment of cotton crop. The success of the selection depends on the superior feature of the crops selected. Hybridization breeding technique can also be applied between two different varieties as well as with two inbred lines. Self-fertilization and backcross techniques are also commonly used methods for breeding.

On the other hand, "transgenic cotton" has also been introduced recently which is improved with the aim of increase the productivity with more economical cultivation by using modern biotechnology in cotton. It is claimed that it is a new solution for the fight against climatic or geographical obstacles such as drought and salinity. In this study the detailed information about the cotton cultivation and the breeding techniques in Turkey will be mentioned. Additionally, after giving the detailed information about transgenic cotton, the advantages and the disadvantages of transgenic cotton will be discussed by comparison with the conventional cotton plant breeding.

Keywords: Cotton, Transgenic Cotton, Breeding Techniques, Self-Fertilization

**This study is supported by Cotton Research Institute, Nazilli, Aydin, Turkey*

THE EFFECTS OF HYDROGEN PEROXIDE AND SODIUM HYPOCHLORITE OXIDIZING TREATMENTS ON THE COLOR PROPERTIES OF NATURALLY COLORED GREEN COTTON

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Abstract:

The cultivation of naturally colored cotton has captured the attention lately due to the increasing environmental concerns and problems. The green color in cottons is owing to a lipid biopolymer (suberin) sandwiched between the lamellae of cellulose microfibrils in the secondary wall. Naturally colored green cotton fiber does not need dyeing or coloration process due to their inherent color characteristics leading to more ecological and sustainable textile production. Naturally colored cotton growers and producers have less requirement for the pesticides, insecticides since these varieties have already insect and disease-resistant qualities as well as they exhibit property for drought and salt tolerant leading to more environmental friendly cotton fiber production. Colorimetric (CIE L*, a*, b*, C*, ho, K/S etc.) properties of studied naturally green colored Turkish cotton fiber were also investigated before and after scouring (with NaOH), and oxidizing processes with hydrogen peroxide and sodium hypochlorite in comparison with their greige (un-treated) counterpart.

Keywords: Green Cotton, Naturally Colored Cotton, Oxidizing, Sodium Hypochlorite, Hydrogen Peroxide, Color

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CRUSTACEAN GROWTH ESTIMATION FOR TAG-RECAPTURE DATA

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Abstract:

In modeling growth of crustaceans, we normally encounter some difficulties such as the discrete growth fashion due to a process called moulting. All hard shells are shed periodically that hinder us from determining the age of an individual. To this end, we consider tag and recapture method to quantify growth parameters of wild crustaceans. For tag-recapture data, a sample of population is captured, tagged and released to its natural habitat. Once the tagged animals are recaptured, both time-at-liberty and carapace length will be recorded.

The growth estimation can be challenging, since the exact moulting time is normally unobserved. In this context, the intermolt period is not available for tag-recapture data. There are numerous statistical methodologies can be used for parameter estimations, for instance, the Fabens' method (1965) that uses a least squares approach incorporating the von Bertalanffy growth function in the model. Through this method, we are able to estimate individual growth without the age information.

The conventional tag-recapture studies targeted for single recapture data that may mislead and cause biases when there is individual heterogeneity exists in the population. Evaluations of heterogeneity and environmental variations in modeling growth could provide valuable insights for managing ecosystem populations dynamics. To this end, we propose a biologically realistic model for quantifying multiple recapture data, including the hidden variables that can efficiently describe the correlation between two consecutive moults.

Keywords: Multiple Recaptures, Heterogeneity, Crustacean, Moults

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CONTROL OF FREEDOM: ITS CHALLENGES TO WELLNESS.

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Abstract:

Qualities of life in reality not only include physical worth but self-worth, freedom and dignity. This pertinent quality become constitutionally entrenched doctrine as it symbolizes primacy of freedom over tyrannical power. Safeguarding the freedom from being oppress thus contributes to our wellness as a whole. This paper attempted to discuss the issues and problem confronting freedom in governmental context because government controls over our life are great, from the day we were born till death. It is thus inevitable that encroachments of freedom are proliferating and expose to abuse. How these abuses are controlled will be highlighted to exhibit the extent of freedom practiced. The discussion will focus on freedom in Malaysian context as compared to UK and Australia. UK and Australia encouraged the spirit of freedom. Whilst in Malaysia the pattern is not always consistent, sometimes corroborating freedom and occasionally, not. This sign will reveal the level of wellness in the given society whether high or low.

Keywords: Freedom, Oppression, Abuse Of Power, Tyranny

*UNIVERSITY

DETERMINATION OF CREDIT RATING TENDENCIES OF TURKISH SME'S; A SURVEY ON EAST-MEDITERRENEAN REGION COMPANIES OF TURKEY

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Abstract:

Credit rating is widely known as a rating system to rate and classify country economies. But rating system can be used for personal and corporate ratings. Ratings for countries and also for companies are widely discussed in aspect of accuracy and extent. Many decision maker may benefit from those applications to decide faster and more accurately. But rating system and process may be considered expensive. So forth new efforts to base rating methodolgies on more accessible system becomes crucial. Financial statements may be considered as a basic instrument to rate companies. Main motivation of this idea is detailed explanation of asset, liability, capital, income and expense items in financial statement such as balance sheet and income statements. Also cash flows and changes in equities can be watched afterwards. In this manner awareness of the companies about credit rating is indefinite. In this study awareness and perspectives of Turkish SME's about credit rating is searched in scope of East-Mediterranean region. Results mainlu show that most of SME's agree on potential benefits of ratings and ratings based on financial statements.

Keywords: Credit Rating, Accounting, Financial Statement

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DEVELOPMENT OF A FINANCIAL STATEMENT BASED CREDIT RATING METHODOLOGY; A RESEARCH ON TURKISH SME'S IN SCOPE OF EAST MEDITERRENEAN REGION

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Abstract:

Credit rating methodology is mainly based on econometric and complex calculations. Because of this complex status many stakeholders in economic activity do not tend to rating activities. This phenomenon limits rating system with big enterprises. This is commonly caused of rating process is thought to be too expensive. In this manner cheaper and faster methodologies are required to be developed. Some researchers focus on financial statements as best known indicators for a company's assets, liabilities, capital, incomes and expenses. Many of details about those items are also explained in financial statements. So forth many potential investors, venture capitals, angel investor and other economical counterparts may benefit from financial statements to have an idea about a company. In this manner financial statements can also be used for credit rating. In this manner this study is performed to develop a financial statement based credit rating methodology for SMEs. In this study important factors in financial statements were researched on Turkish SMEs specific to Mediterranean region. A rating methodology was developed based on survey.

Keywords: Credit Rating, Financial Statement, Model, Turkish Sme's

**This study is supported by Mehmet Akif Ersoy University Scientific Research Projects Unit. Project Number : 0378 - NAP - 16*

UTILIZATION OF PULSED VACUUM IN FOOD DRYING

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Abstract:

Most foods contain high amount of water making them highly perishable and prone to many undesired changes during fresh storage. Challenges of food processing industry face with are to develop and improve techniques for food preservation. Drying, hot air drying in particular, is one of the most commonly used preservation technique over the world. Hot air drying requires food to be under high drying temperatures for hours of long drying times and causes thermal damages in food mainly in chemical, nutritional, sensoral and textural properties. Therefore, modifications and developments of drying techniques such that reducing drying temperature and drying time have been the major interests of both food industry and academia over the past decades. Utilization of pulsed vacuum in drying of foods is based on application of pressure in drying chamber ranging from atmospheric to vacuum in such way that critical moisture level of food assuring safety is reached. Driving force for moisture removal is pressure pulsation. Expected effect of pressure pulsation is to enlarge and interconnect capillar pores for effective moisture transfer from center to surface of food material and porous surface structure. Pulsed vacuum application during drying has some advantages namely improved food quality, reduced drying times, prevention of oxidative changes, browning and shrinkage, energy efficiency and ability to process heat sensitive foods.

The aim of the study is to summarize the basics of pulsed vacuum application during drying, mechanisms of moisture transfer and recent applicaitons of pulsed vacuum in food drying, fruit and vegetable processing in particular.

Keywords: Pulsed Vacuum, Drying, Mass Transfer, Drying Rate, Food.

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FOAMING AGENTS AND STABILIZERS IN FOAM MAT DRYING OF FOODS

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Abstract:

Hot air drying, by the nature of the process, requires high energy consumption and might cause some undesirable changes in food properties. Recent studies therefore focus on the energy efficiency and product quality. Foam mat drying is a process of foaming liquid or pureed foods by foaming agents and stabilizers and then drying by hot air. Drying time of foamed food is shorter due to large drying surface area and dried food has better chemical, textural and sensoral properties than the hot air dried counterparts. Efficiency of such process mainly relies on the properties and functions of foaming and stabilizing agents. Good foaming agent and stabilizer are expected to produce stable foam and to perform at low concentrations, in large pH range depending on food type and work efficiently in the presence of foam inhibitors (fat, alcohol and flavoring agents). Study aims to give brief information on the properties of both foam and foaming agents and stabilizers that are used in foam mat drying of food materials.

Keywords: Foam Mat Drying, Foaming Agent, Stabilizer, Foam Stability, Drying Rate.

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AN INVESTIGATION ON HOUSEHOLD TRANSPORTATION EXPENDITURES IN TURKEY

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Abstract:

The issues of global climate change and fuel price fluctuations have led many researchers to work on household transportation spending. Researchers have shown that travel and consumption expenditures are closely related to each other and believe that examining the total spending of households will reveal transportation patterns better, as the spending made are determined by permanent income. Therefore, people's consumption patterns and monetary expenditures for various forms of goods and services should be understood in order to identify and develop these relationships. For example, increased income contributes to the increase in overall transport spending and mutually transportation spending probably create an accessibility advantage, which in turn contributed to higher income. Wealthy individuals are concentrated in away from urban areas, while low income individuals are concentrated in urban areas due to better public transport access and lower costs. In empirical studies, it was found that urban form elements, especially higher housing density, are associated with lower personal vehicle use. The decrease in the use of personal vehicles in high density areas is explained by small parking spaces, narrow streets and heavy traffic. With this study, we aimed to create a profile that will provide information on transportation spending within total household spending and the transportation pattern of Turkey. For this purpose, we used data obtained from household budget surveys applied to 11,491 households by Turkish Statistical Institute (TSI) in Turkey between January 1 and December 31, 2015 and used Heckman type sample selection models to determine factors affecting the likelihood of transportation spending and the transportation expenditure levels among households. In this study, revealing how socio-demographic and economic factors of households are related to the monthly transportation spending decisions and spending levels will provide valuable information both for the stakeholders in the sector and in the formation of more effective government policies for transportation services in the country.

Keywords: Transportation Expenditure, Socio-Demographic, Economic Factors, Turkey.

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BICYCLE TRANSPORTATION IN GUMUSHANE PROVINCE FOR SUSTAINABLE AND ENVIRONMENTALLY FRIENDLY URBAN TRANSPORTATION

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Abstract:

Due to global warming and adverse situations that cause it, many unwanted events are happening, mainly human loss of life and property. CO₂ is at the head of greenhouse gases, which make the biggest contribution to global warming and climate change. Despite the decline in greenhouse gas emissions in other sectors, it seems quite difficult to reduce emissions in the transport sector due to worldwide population and average income growth.

In Turkey the increasing urban population in recent years has led to increase the use of motor vehicles at the same time. The master plans and transportation planning of the urban are also carried out by local governments with an understanding centered on motor vehicles only. Therefore, for road users; it is quite difficult to reach by a bicycle or a walking from one to another points. Reduction of construction damages, which is one of the hugest damages to human beings, as using the resources efficiently and to be left unchanged in future generations it can be defined as "sustainability". It is very important for sustainable transportation that in transportation investments bicycle usage is seen as the most important solution to the urban transportation problems as it is a healthy, safe, economical, ecofriendly type of transportation and useful in terms of accessibility.

At this study, the assessment and a new road design of the urban will be made in terms of bicycle using taking into consideration the urban features of Gumushane and the structure of the transportation network. For this purpose, it will be possible to provide a better quality and sustainable urban life by integrating with other transportation modes of the urban transportation network and the bicycle transportation route and bicycle travels will be carried out safely and comfortably. With the new regulations to be made, the use of bicycles will be widespread and is expected to benefit indirectly, such as the increase of the social wealth and the more active people.

Keywords: Urban Transportation, Bicycle Transport, Sustainable Transportation Planning, Gumushane

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SUSTAINABLE EXPLOITATION OF CORN COB WASTES THROUGH ACIDOGENIC FERMENTATION

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Abstract:

Worldwide corn production is continuously increased in order to satisfy the growing demand for more food. However this leads to the production of a large amount of solid wastes that either left in the field or at best used as animal feed of low quality. It is estimated that the production of 1 kg of corn leads to almost equal amount of solid wastes. In the present study a more sustainable exploitation of corn wastes (especially corn cob) was studied. Firstly corn cob waste biomass was effectively pretreated using NaOH solution, in order to improve its structure for the following acidogenic fermentation. The effect of alkaline pretreatment on biomass structure (using scanning electron microscopy and porosimetry) and on biomass lignin content was also evaluated. The anaerobic acidogenic fermentation experiments of the pretreated corn cob waste biomass were carried out using an up-flow anaerobic sludge blanket reactor (UASB) culture, either as free cells or immobilized on corn cob and kissiris. In all cases the immobilized cells increased the organic acids yields during the acidogenic fermentation. The main organic acids produced were lactic, acetic and butyric acid. The organic acids could be subsequently used either as chemicals or as substrate for the production of ester-based biofuels, as a cost-effective and environmentally friendly alternative for second generation biofuels production.

Keywords: Corn Cob, Lignin, Alkaline Pretreatment, Lignocellulose, Organic Acid

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ANALYSIS OF PERSPECTIVES AND AWARENESS OF ACCOUNTING STUDENTS' TO CORPORATE GOVERNANCE

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Abstract:

In last decades some of the major problems of companies have been fraud and corruption. Fraud and corruption may be caused from personal and corporate reasons. In this manner prevention of fraud and corruption is considered vital for sustainability of companies. Many researchers suggested many solutions. Corporate governance – in other names good governance – to a large extent have been considered as most efficient solver for above mentioned problems. Many international non-governmental organizations (NGO's) and charities issued principles for good governance for companies. So forth accounting, as a discipline and science, contains important implications at generally accepted accounting principles (GAAP) of many countries. It can be said that main logic of accounting facilitates good governance applications. Aim of accounting education is not only teaching account basis, calculation and recording systematic but also adopting ethical values, a large vision for business world and cost-profit approach. In this study accounting students' were surveyed to analysis perspectives and awareness about corporate governance concept. Results were discussed.

Keywords: Corporate Governance

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GENDER EQUALITY AND SUSTAINABILITY

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Abstract:

One of the sustainable development bases is gender equality. Recent studies reveal that gender equality is one of the main indicators of sustainability, especially in economic, social and environmental areas. Evidence of this relationship includes the following:

From the environmental perspective and according to World Economic Forum, countries listed in the top ten in the Global Gender Gap Index also have good ratings in the Environmental Performance Index. In addition, a recent study of the Organization for Economic Co-operation and Development (OECD) about household behavior indicates that women are more concerned about buying environmentally friendly products. So, their concern makes them more active in green economics. However, statistical data show that in terms of green economics jobs, women do not participate at the same level as men. If given a chance, women would be capable of achieving success in green economics. This is one of the main obstacles decelerating environmental sustainability.

Based on the economic view, according to McKinsey & Company's "Women Matter," published in 2016, there is a positive relationship between the number of women in the labor force and growth in GDP. The overall world GDP would reach USD 28 trillion by 2025 if all potential working women would join the labor force. Although economists suggest that GDP is not the main indicator of economic development, it is still an important factor.

Related to the economic perspective, the goal of social sustainability is to close the gap between the poor and the rich as a means of providing well-being for people across society. To achieve this goal, a solution may be closing the income inequality gap between genders.

In conclusion, this study gives evidence from both developing and developed countries of the relationship between gender equality and sustainability.

Keywords: Keywords: Gender Equality, Economic Sustainability, Environmental Sustainability

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AN APPLICATION OF REGIONAL SUSTAINABLE ACCOUNT (RSA) MODEL IN EAST KALIMANTAN, INDONESIA

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Abstract:

East Kalimantan (Borneo) is one of the richest provinces in Indonesia. Endowed with abundant natural resources such as oil and gas, coal, and forest, economic growth in East Kalimantan during the 1990s and the 2000s was among the highest in Indonesia, with an average growth of more than 7% per year. Recently, however, East Kalimantan experienced contraction of -1.28 in its economic growth even though the province has high score in human development index and environmental composite index. This is an interesting sustainable development paradox and worth of further investigation. This study aims to address such a phenomenon using a more comprehensive sustainable assessment so called Regional Sustainable Account or RSA. The RSA is sustainable accounting technique incorporating three sustainable accounts i.e., economic account, social account and ecological account. The approach is a modification of LQ model used in regional assessment combined with Geographical Information System (GIS). The results of study show a classification of region according to their sustainability grade ranging from chronic unsustainable to good sustainable. The results of this study could be used as policy recommendation for policy makers in order to develop their regions in a more sustainable way based on comprehensive measure of economic, social and ecological accounts. The results of this study could also be used as lesson learned for other provinces in Indonesia as evaluation instrument for regional development.

Keywords: Sustainable Development, Economic Growth, Regional Sustainable Account, East Kalimantan

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TAX EVASION AS A CRIME: A SURVEY OF PERCEPTION IN BOSNIA AND HERZEGOVINA

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Abstract:

Tax evasion and the perception about it are broadly discussed issues nowadays and they have revived a lot of debates among ethics analysts or government representatives and business executives or proprietors.

This paper explores the perception of Bosnian and Herzegovinian (BH) citizens of the severity of tax evasion relative to other crimes and abuses. Perception of tax evasion may somewhat clarify the degree of rebelliousness with the tax laws. Using data from a self-administered survey, the results of mean and comparative analysis will be examined to show where the tax evasion is ranked in Bosnia and Herzegovina in the list of fifty listed crimes. There is a lack of research which deals with the topic of the perception of tax evasion by Bosnian and Herzegovinian citizens. Moreover, as suggested by Andreoni et al. (1998) there is a huge gap and thus a permanent need for international and cross country research on tax evasion; while the work in the context of transition countries is still less developed. This paper aims to reduce this gap by introducing some findings for businesses and tax policymakers.

The results of this study should be useful to business and government representatives in BH and elsewhere in the Balkans or wider.

Keywords: Tax Evasion, Tax Ethics, Crimes, Bosnia And Herzegovina

STATUS AND IMPORTANCE OF POPULATION ECOLOGY THEORY IN MANAGEMENT PERSPECTIVE

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Abstract:

Population ecology explains how environmental conditions and interactions shape organizations. Here, internal and external environmental factors have a dominant role. That is, internal and external strategic evaluations are important. The full analysis of internal and external elements is very important in terms of achieving the objectives and ensuring the continuity of the organizational life. Thus, the design and management of the future is easier for organization. The main purpose is to make organizations successful and sustainable (Şimşek and Çelik, 2017: 237; Çetin, 2008: 41). Studies in the ecology have contributed to the development of the population ecology approach and have helped them to develop. This study has been prepared to present the status and importance of Population Ecology theory (PET) in management perspective. Firstly, introduction information regarding with subject has been given in this study. Then “population ecology concept, assumptions for population theory and population ecology and sustainability” titles have been comprehensively explained. In conclusion and evaluation section, it has been aimed to review the population ecology theory under the adaptation theories.

Keywords: Post-Modern Management, Population Ecology Theory

TIME MANAGEMENT IN ORGANIZATIONS: TECHNOLOGICAL INSTRUMENTS SIZE

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Abstract:

The individual at every level has to use his time effectively and efficiently. This requires a variety of applications. Technological tools are also one of them (Çelik, Fettahlioğlu and Fettahlioğlu, 1998: 66). With the introduction of technological tools in our lives, these tools have sought ways to use time more effectively and economically. This work includes information on the definition of technological tools and how they can be used in certain areas. Moreover, with the globalization, the increasing influence of technological tools on human life has also manifested itself in time management. How can I use the global competitive time management more efficiently? He made the question even more important. However, in addition to the positive effect of technological tools on time management, the use of control words and excessive technological tools have also adversely affected time management. Time management managers and organizations have indispensable in terms of prescription. These words are remarkable in this sense (Adair and Adair, 1988: 38; Adair, 2014:1): "You will never find time for anything. If you want time you must make it" (Charles Buxton). "Never leave that till tomorrow which you can do today" (Benjamin Franklin). This work is on theoretical scale and it is prepared in three different titles. "Technological Tools" are listed first. Then "Time Management Concept and Scope" is explained. After that, "Time Management with Technological Tools" was emphasized. Finally, the results and suggestions are listed.

Keywords: Time Management, Time Management with Technological Tools

THE ENVIRONMENTAL IMPACTS OF SINGLE USE AND REUSABLE PACKAGING

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Abstract:

While environmental issues have become critical concerns all over the world, organizations are constantly under pressure to develop environmentally responsible and friendly operations. Commitment to the natural environment has become an important variable. Therefore, because traditional logistics cannot meet the requirements of modern society and has huge impact on the environment. Packaging has a significant impact on the logistical system and production cost. Therefore it is of vital importance that the packaging are as cost efficient and environmentally-friendly as possible. Packaging – both single-trip or reusable – plays an essential role protecting goods and preventing damage during transport and storage. It also provides the interface to communicate information to a customer with regard to product's features (promotional, factual or mandated by law, as well as providing product security). Packaging has many functions: flow function, market function, and environment function. The flow function involves protecting and identifying as well as facilitating handling of the product. The market function attempts to make the product more attractive while the environment function is concerned with reusing, recycling, and optimising the packaging material. The purpose of this paper is to present determinant factors that can influence the development of cost-efficient and environmentally friendly concept regarding packaging. Furthermore, the aim of this report is to help packaging decision makers to consider single-trip and reusable packaging options on an informed basis. This is achieved by identifying the key factors from an environmental life cycle perspective that influence the environmental performance of reusable packaging systems.

Keywords: single-trip and reusable packaging, cost efficiency, factors

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