OCCURRENCE OF ENTEROCOCCI IN EGYPTIAN SOFT CHEESE AND STUDYING THE EFFECT OF ETHANOL EXTRACT OF PROPOLIS (EEP) ON ITS VIABILITY IN LAB MADE DOMIATI CHEESE

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One hundered random samples of Domiati and kareish cheeses were collected from Qena Governorate (50 samples each) and examined for the occurrence of enterococci as well as studying the effect of ethanol extract of propolis (EEP) on its viability in lab made Domiati cheese. Entercocci were detected in 72% and 94% of the examined Domiati and kareish cheese samples with an average counts 4.2×10^4 and 7×10^6 cfu/gm, respectively. Domiati cheese was prepared in the lab to investigate the antimicrobial effect of ethanol extract of propolis (EEP) on the enterococci count as the. EEP was added in 3 concentrations, 150, 300 and 600 mg/L.

The initial count of enterococci in cheese samples was less than 5×10^3 cfu/g. At the end of the storage period (8th week), The count was 1.5×10^3, 1×10^3 and zero cfu/g in samples contained 150, 300, 600 mg/L EEP respectively, while, in control cheese samples the count increased to reach 5×10^4 cfu/g.

Meanwhile, in samples stored at refrigerator the enterococci count was, 2×10^2, 1×10^2 and ess than 10 in the 8th week of storage in sample contained 150, 300 and 600 mg/L EEP, respectively. At the end of this study it can concluded that propolis is a powerful antimicrobial agent and its powerful positive effect was more pronounced against Gram positive bacteria. In general EEP was proved to be a successful natural food preserver. The hygienic measures suggested to produce high quality milk products were discussed to avoid economic losses as well as public health hazards.

ECOLOGICAL STUDY ON CHARACTERIZATION OF LEACHATE AT IBB LANDFILL USING PHYSICOCHEMICAL AND BIOLOGICAL ANALYSIS

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Yemen is one of the developing countries suffering from water pollution. Landfill is one of the source of water pollution. A study of composition of landfill leachate was conducted at Ibb landfill, which is located at Al-Sahool area, north of Ibb City, Yemen. The leachate was sampled at five different landfill locations. The leachate samples were collected during dry season, due to the excessive generation of leachate during this season. The physico-chemical characteristic of leachate, such as pH, temperature, electrical conductivity (EC), total dissolved solids (TDS), dissolved oxygen (DO) were measured in-situ. Also, biological parameters such as Chemical Oxygen Demand (COD) and Biological Oxygen Demand (BOD_5), major anions and nitrogenous compound such as chloride (Cl), sulphate (SO_4), nitrites (NO_2), nitrates (NO_3), ammonia-N (NH_3-N), major cations (Na, Mg, Ca, K, Fe) and heavy metals (Pb, Zn, Ni, Cr, Cd, Cu) were analysed in the laboratory. The results showed that, the leachate from Ibb landfill is in methanogenic phase. The first leachate site at Al-Sahool area was characterized by the highest values of most physico-chemical parameters. However, the quantitative results of most studied parameters were generally decreased towards down stream sites (1-5). The BOD_5/COD value of 0.1 to 0.7 mg/l obtained for leachate suggested the partially stabilization.

The concentrations of heavy metals were found in relatively high levels (except Cu). Therefore, a leachate collection pond should be build to collect and treat the leachate to prevent further contamination as well as build more sanitary landfill facilities in Al-Sahool area to prevent further ecological contamination and keep public health more save.

EFFECT OF VITAMIN (C) AND VITAMIN (B1) ON POLLUTED- CHLORELLA VULGARIS CULTURES BY MANGANESE

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This study show the effect of vitamin C (ascorbic acid) and vitamin B_1 (thiamine) on growth parameters, total photosynthetic pigments ,total carbohydrates, total proteins, free amino acids and proline of polluted-*Chlorella vulgaris* Beijer cultured for 7 days.

The growth criteria (cell number and dry weight), total photosynthetic pigments, total carbohydrates, total protein, free amino acids and proline of pollutant-*Chlorella vulgaris* Beijer cultures were significantly increased, when the algal cultures subject to lower levels (1.5 and 3 ppm) of $MnCl_2$. There above, all these parameters were significantly decreased. However, the soluble carbohydrate, soluble protein contents and proline of polluted-*Chlorella vulgaris* Beijer cultures were significantly increased.

On the other hand, the growth criteria, total photosynthetic pigments, total protein contents, free amino acids and proline of polluted -*Chlorella vulgaris* Beijer cultures were significantly increased, when the algal cultures subject to various levels (1.5, 3 and 4.5 ppm) of $MnCl_2$ and treated with 200 ppm ascorbic acid or thiamine supplemented separately. However, the values all these parameters were significantly increased, but the different carbohydrate fractions (soluble, insoluble and total carbohydrates), soluble proteins of *Chlorella vulgaris* Beijer cultures were significantly decreased.

BIO CONTROL OF RHIZOCTONIA SOLANI CAUSING OF CUCUMBER DAMPING-OFF AND ROOT ROT DISEASE BY USING PSEUDOMONAS PUTIDA UNDER GREENHOUSE AND FIELD CONDITIONS

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This study was conducted to evaluate efficiency of Pseudomonas putida against Rhizoctonia solani causing of cucumber damping-off and root rot diseases under greenhouse and field conditions. The greenhouse results was revealed that all bacterial treatments was highly effective in emergence percent which was 89-93% compared to infected control (40%) with highly significant . The bacteria was caused reduction in disease incidence and severity from 20% and 30% respectively in infected control to 6% and 16% respectively in seed dressing with bacteria , the efficacy was reached to 85% compared with the efficacy of rhizolex-10 (50%).The field results was revealed that the treated seeds with bacterial suspension and for addition of bacteria was highly effective in reduction of disease incidence , severity and disease index which was 2%, 8% and 0.6% respectively compared with infected control which was 70%, 85% and 3% respectively with high significantly . The treatment with efficacy 97% compared with the rhizolex-10 (57%). The treated seeds with bacteria suspension and for addition of bacteria was caused highly effective to increase plant higher, number of leaves , dry weight of green system and fresh weight of root system which was 80 cm , 57 leave ,45 g and 6 g compared with the infected control 45 cm, 24 leave, 10g and 2g respectively as well as these treatment was caused increase in yield weight reached to 62.5% based on infected control and with increase about 14.5% based on rhizolex-10 .

MICROORGANISMS RESPONSIBLE OF DIABETIC FOOT INFECTION IN TAIZ CITY, YEMEN(•)

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Diabetic foot infections (DFI) are normally caused by microorganisms. They are usually inadequately managed due to misunderstanding of microbial prevalence and therapeutic approaches.

This study aimed to detect pathogenic microorganisms in diabetic foot infection (DFI) of some Yemeni patients in Taiz City, and to investigate the sensitivity of isolated microorganisms to different antibiotics. Eighty samples were collected from (DFI) patients admitted in AL-Thowra hospital, and Al-Gomhory Hospital in Taiz City through study period. The rates of patients who got diabetic foot infection were 61% males and 39% females. Their ages range between 32–85 years. The ratio of patients who got amputation was 26%. Gram positive bacteria were responsible of 67% of DFI cases followed by Gram negative bacteria in 28% and yeasts in 5% of cases. The most commonly isolated microorganisms from the diabetic foot ulcers were *Pseudomonas aeruginosa* (37.8%) and *Staphylococcus aure*us (18.9%), followed by *Escherichia coli* (11.1%), *Klebsiella pneumoniae* (11.1%) and *Candida albicans* (5.6%). Other isolates were recorded in low frequencies.

The antibiotics sensitivity results showed that Impenem, Meropenem and Cefepime were the most active antibacterial drugs against Gram-negative bacteria, while Vancomycin and Rifampin were the most effective drugs against Gram-positive bacteria. All *Candida albicans* isolates were sensitive to Amphotricine B, Fluconazole, and Clotrimazole.

(•) Poster

التلوث الكيمياء

ROLE OF THE 3-AMINOTHIAZOLO[3.2A]BENZIMADZOLE-2-CARBONITRILE IN THE PROTECTION OF HEPATIC AND RENAL TISSUES AGAINST NITROSOMORPHOLINE TOXICITY IN ADULT RATS

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Thiazolo[3.2a]benzimadzole derivatives have been indicated as being associated with a wide range of biological properties including antibacterial, antiviral and antitumor. Nitrites and morpholine are ubiquitous environmental contaminants which are found in drinking water and foods. Nitrosomorpholine (NMOR) can be formed endogenously from nitrite and morpholine. Oxidative damage may represent an important step in the toxicity of NMOR. This study was designed to evaluate the biological activity of 3-aminothiazolo [3.2a]benzimadzole-2-carbonitrile in the protection of hepatic and renal tissues against oxidative stress that is induced by administration of nitrite and morpholine as food additives in drinking water for 15 weeks. Forty adult male rats were categorized into four groups. The 1st worked as control, the other 3 groups were treated with sodium nitrite (1g/L) and morpholine (2 ml/L) in drinking water for 15 weeks. Then the 2nd was left as positive control, the 3rd group was co-treated with DMSO (0.2 ml/Kg) as solvent and the 4th group was co-treated with 3-aminothiazolo [3.2a] benzimadzole-2-carbonitrile (2 mg/Kg). Rats were sacrificed for collections of plasma, liver and kidneys tissues.

The results showed an increase in ALT and AST activities and creatinine level in the plasma of rats treated with nitrite plus morpholine. These changes were recovered in the rats co-treated with DMSO and 3-aminothiazolo [3.2a] benzimadzole-2-carbonitrile. NO, LPO, TP, O_2^- and DNA fragmentation were significantly increased in hepatic and renal tissues of positive control compared to the normal rats. These increases were reduced by DMSO and 3-aminothiazolo[3.2a]benzimadzole-2-carbonitrile co-treatment. Moreover, there are an alteration in the SOD, CAT, GST and G6PD activities and the levels of GSH, CP, vit E and C in the hepatic and renal tissues of rats. Histological observation of hepatic and renal tissues in rats treated with sodium nitrite plus morpholine showed cell necrosis, increase in the leukocyte infiltration and blood vessel congestion. In addition, immuno-staining for iNOS showed weak positive reaction in the endothelial cells and negative in hepatocytes. However, in kidney showed intense positive reaction in the renal tubules compared to control group. After the co-treatment of rats with DEMSO and 3-aminothiazolo [3.2a] benzimadzole-2-carbonitrile, relative improvement was observed in the morphological changes of both liver and kidney, positive reaction in hepatocytes

and an intense positive reaction in renal tubules could be observed. Conclusions: Nitrite plus morpholine administration to rats results in oxidative damage in hepatic and renal tissues. This damage may return to the increased production of ROS and changes in the levels of antioxidants. This oxidative damage was ameliorated by DMSO and 3-aminothiazolo [3.2a]benzimadzole-2-carbonitrile co-treatment.

ENVIRONMENTAL POLLUTION RESULTED FROM CEMENT INDUSTRY WITH FOCUSING ON THE ATBARA CEMENT FACTORIES (SUDAN)

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One of the most prominent topics to be discussed in the academic and formal levels are those topics related to the environment and its pollution especially when the danger of environmental pollution has become universal. This problem is not restrict to a certain country, or continent. What is also observed is the danger of the pollution resulted from industry, the thing which makes the scientists worry about the future of the world.

The environmental changes caused by man have started since the Industrial Revolution at the beginning of the 19th century. From this time on, the environment has become the central point of interest for all researchers and studies that have tried to increase public awareness of the dangers of environmental pollution.

This paper aims at discussing the problem of environmental pollution caused by industry with the focused on cement industry in the city of Atbara. The researches uses the analytic and descriptive method to explain this phenomenon. He also uses the historical method by presenting a number of studies of the same phenomenon as well as a number of basic concept and terminology.

TECHNOLOGICAL PROCEDURES TO REDUCE ENVIRONMENTAL POLLUTION IN OPERATIONS OF THE SURFACE TREATMENT OF METALLIC FURNITURE PRODUCTS

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Metal furniture industry is one of the metal industries scattered in Egypt due to the large demand for its products, The industry depends on many stages and processes of industrial production to reach different final product, The most important stages, surface treatment products, metal furniture products in order to protect from erosion and weathering of different , As well as to give the product the exterior of the right color and texture and the environmental compatibility of the use and requirements of marketing .

The research problem : -Industry resulting in a lot of harmful pollutants to the environment such as Gas emissions and effluents and solid waste which cause pollution in the industrial plant and the surrounding environment. - Lack of adequate information on environmental pollutants resulting from the industry by the industrial establishments or professional academic .- And the lack of integration between industry and research centers to reduce these pollutants. - Lack of sufficient procedures in industrial enterprises to reduce environmental pollution. Resulting from the surface treatment of metal furniture products. And then research aims to. The procedures proposed within the limits of technology, surface treatment of metal furniture products to reduce these harmful pollutants to the environment within industrial establishments specialized in this area . Through descriptive and analytical approach in dealing with both .

Processing of metal surfaces of furniture products and environmental pollutants resulting.

Finished surfaces of metal furniture products and environmental pollutants resulting. Health effects and environmental pollutants, processing and finishing.

- Technological procedures proposed to reduce the environmental pollution in the processing and finishing.

The researcher reached a set of results and recommendations including:

Organic solvents, the most important types of pollution resulting from surface treatment of metal furniture products, especially in the electrostatic processing and paint and the most impact on human health and the air.

Chemicals and metals such as cadmium and Chrome, cyanide, barium, copper, lead and zinc, it is most important pollutants resulting from the electric coating deposition especially when present in the wastewater polluting.

Liquid pollutants resulting from surface treatment of metal furniture products from more complex types of pollution because they penetrate the layers of the ground and on to the agriculture and living organisms and require a long time to decompose into simple compounds.

DECOLORIZATION OF DRIMARENE BLUE X-BLN BY FREE AND IMMOBILIZED HORSERADISH PEROXIDASE

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The decolorization of Drimarene Blue X-BLN (Reactive Blue 198) by horseradish peroxidase catalyzed reaction was extensively investigated. Horseradish peroxidase (HRP) was extracted from horseradish roots; (*Amoracia rusticana*) and its efficiency was evaluated in both free and immobilized form. HRP showed its ability to degrade the dye in alkaline solution. Studies were further carried out to evaluate the reaction parameters such as aqueous phase pH, H_2O_2, and dye concentrations during enzyme-dye degradation reaction. Experimental data revealed that the dye concentration, aqueous phase pH, and H_2O_2 dose play a significant role on the overall enzyme reaction catalyzed by free HRP, and found to be 5×10^{-3} M, 8.18 and 50 mg/L, respectively. Acrylamide gel immobilized HRP showed an effective performance compared to free HRP, with ability to be reusable up to five replicates. Kinetic parameters K_m, K_{cat}, K_{cat}/K_m and $K_{m\ app}$, $K_{cat\ app}$, $K_{cat.app}/K_{m.app}$ for dye catalyzed by free and immobilized HRP have been determined. (K_m and $K_{m.\ app}$ of 19.507 μ M, 2.656 μ M), (K_{cat} and $K_{cat.\ app}$ of 1.157 min^{-1}, 7.254×10^3 min^{-1}), and (K_{cat}/K_m and $K_{cat.app}/K_{m.\ app}$ of 59.293 μ M^{-1} min^{-1} , 2.731×10^3 μ M^{-1} min^{-1}) for free and immobilized HRP catalyzed Drimarene Blue X-BLN dye, respectively.

MICROORGANISMS ASSOCIATED WITH BURN WOUND INFECTION IN SANA'A, YEMEN(•)

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Burn wound infection is a major complication in burn patients after initial period of shock. More than 70% mortality in burn patients is attributed to infection. This study was conducted from July 2008 to February 2009 at Teiba Center for Burns Surgery in Al-Jumhory Hospital located in Sana'a city, Yemen. A total of 200 burn wound swab were collected. Fifty eight percentage (58%) of patients were males and 42% were females. The most common age group was≤10 years group (42%), (84.5%) had second-degree burns, (13%) had third-degree burns, (1.5%) had fourth-degree burns and the remainder had first-degree burns, (69.5%) were due to flame, (24.5%) were due to scalds, (4.5%) cases were due to electrical burns and three cases were due to chemical burns. Out of 167 positive cultures, single Gram positive bacteria were the most dominant (44.3%), followed by Gram negative bacteria (28.7%) and mixed Gram positive and Gram negative bacteria (20.4%). *Staphylococcus aureus* was the most common organism, isolated 100(47.8%), followed by *Pseudomonas aeruginosa* (23%), *Candida albicans* (5.3%), *Escherichia coli* (5.3%), *Serratia plymuthica* (3.8%), *Proteus mirabilis* (2.9%), *Salmonella* species (2.4%), *Staphylococcus epidermidis* (2.4%), *Acinetobacter* species (1.9%), *Streptococcus faecalis* (1.4%), *Bacillus* species (0.96%), *Citrobacter freundii* (0.96%), *Klebsiella* species (0.96), and *Streptococcus pyogenes* (0.96%).

(•) Poster

QUANTITATIVE STUDY ON TRAFFIC AIR POLLUTION: A CASE STUDY

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Aden is the commercial capital and second important city in Yemen with estimated population of 708, 810 in 2010. In this article, the author made a quantitative analysis of traffic emission and its effects on the urban environment at Caltex Roundabout, which is the major roundabout in Aden connecting north and south parts of the city, the estimated daily traffic on this road is 37228. aaSIDRA 2.0 software developed in Australia was used to estimate the fuel consumption as well as vehicles emission such as CO_2 , HC, CO and NO_x from year 2010 to 2010. Traffic pollution is becoming a main source of urban pollution in many cities in the world. There is an emergent need for traffic pollution control strategies. Studies on transport and emission control often take a technological focus. Improvement in vehicle technology can help in reducing emissions considerably. The other objective in most urban areas is to reduce transport demand by planning, regulatory and fiscal measures.

DETECTION OF AIR POLLUTION SOURCES IN URBAN AREAS USING GAUSSIAN PLUME MODEL

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Gaussian Plume Model (GPM) predicts downwind concentrations of pollutant from a known source either in rural or urban areas. When the emission source is unknown, most of the parameters in the Gaussian equation remain unknown and little information is available to locate the emission source. The present study describes a simple technique for estimating the pollution source location when the concentration data are measured at some receptors within the sampling area. The technique is based on the assumption that the GPM completely describes the dispersion of pollutants in atmospheric air.

THE ANNUAL CONCENTRATIONS OF MERCURY (Hg) IN WATER, SEDIMENT AND AQUATIC PLANTS OF THE EUPHRATES RIVER, IRAQ

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The mercury (Hg) concentrations in water, sediments and four aquatic plants were spectrometically measured in the middle region of Euphrates river from Oct. 2009 to spet. 2010.

Measurements of some physico-chemical parameters (e.g. temperature, pH, EC, TDS, TSS, DO and BOD_5) were included. The results revealed that Hg concentrations were restricted between (0.042-0.52) µg/l to (019-0.63) µg/g for dissolved & particulate phases respectively. Mean while, the concentrations in sediments ranged between (0.33-0.43) to (0.43-0.57) µg/g in exchangeable and residual phases respectively. The concentrations of the accumulated Hg in aquatic plants ranged (0.019-0.039) µg/g in *Ceratophyllum demersum*, (0.005–0.016) µg/g in *Myriophyllum verticillatum*, (0.021–0.029) µg/g in *Phragmitus australis* and (0.005–0.016) µg/g in *Typha domigensis*. The results showed the ability of the aquatic plants of Euphrates river to accumulate heavy metals (Mercury) in their tissues more than water and sediment.. Consequently, Mercury concentrations in the food chain path way could cause health problems on public health by transfer through aquatic organisms to human. It was suggested that the studied plants could be considered as bioindicators for heavy metals that flow to the river from natural and anthropogenic sources.

APPLICATION OF SOME SUGGESTED METHODS TO CONTROL AND MINIMIZE ENVIRONMENTAL POLLUTION AND HEALTH HAZARDOUS IN THE WOOD FURNITURE FACTORIES IN EGYPT

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There are many Wood furniture Factories in Egypt dealing with many substances and methods of work that cause both Environmental Pollution and Health Hazardous. This paper presents some disadvantages of substances and methods of work. Some previous studies are mentered about methods of controling and minimizing environmental pollution and substances waste generation studies as a part of Environmental Pollution prevent and avoiding Health Hazardous which will be ablicable to apply in the Wood Furniture Factories in Egypt as a part of improving the Egyptian Environment.

CHEMICAL AND PATHOLOGICAL EVALUATION OF JATROPHA CURCAS SEED MEAL TOXICITY WITH OR WITHOUT HEAT AND CHEMICAL TREATMENT

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This study aimed at identifying the suitable detoxification method used to reduce the anti nutritional factors in Egyptian strain of the *Jastropha curcas (J.curcas)* seed meal. For this purpose, moist heat, 0.07% $NaHCO_3$, 4% NaOH and 4% NaOH plus methanol extraction was used. Nutritive values of whole seed were 27% protein, 30% oil, 5% ash, 4% fiber and 28% carbohydrate. Anti nutritional factors were determined in the whole seed to be 11 mg/100 g phytic acid, 19 mg/g trypsin inhibitors, 1.5 mg/100g total phenols and 3.5 g/100 g total saponins and were also determined in the treated *J.curcas* meals. Diet was treated with 4% NaOH plus moist heat giving the best reduced percentage of anti nutritional factors especially phytic acid, trypsin inhibitors and total phenols. Albino rats were used as an animal model to investigate the nutritional, biochemical and pathological alterations of the untreated and treated *J.curcas* meal. Wide nutritional, biochemical, cellular effects were developed in rats fed on untreated diet. Insignificant alterations were obtained in other tested groups fed on variable treated diets, especially with moist heat and 4% NaOH. This will confirm the efficiency of this detoxification method to decrease the deleterious effects induced by toxins present in untreated meals.

EVALUATION OF SOME HEAVY METALS IN *OREOCHROMIS NILOTICUS* FROM THE NILE IN EGYPT AND ITS POTENTIAL HAZARDS

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Exposure to heavy metals is an important environmental problem. Most of these metals are toxic to humans, animals and plants. Anthropogenic activities are the major sources of heavy metals redistribution. Man, being at the top of the food chain, is at great risk of suffering from health hazards associated with toxic metals because of bioaccumulation. The aim of this study was the evaluation of some heavy metals contents cadmium (Cd), lead (Pb), chromium (Cr) and aluminum (Al), in muscle of fresh water fish *Oreochromis niloticus* from ten Governorates allover Egypt (Dakahlia, Gharbia, Monufia, Beheira, Qalyubia, Cairo, Helwan, Minya, Assiut and Sohag) between 2009 and 2010. Fifty samples were collected, digested and analyzed using ZEEnit 700P Atomic Absorption Spectrophotometer with Graphite Furness Unite (AASG). Analyzed metals were found in all samples and a wide variation between individual samples was observed. Fish samples from Gharbia Governorate was found to contain the highest concentration of Cd (0.31±0.05 µg/g d wt) and the lowest concentration of Cr (0.12±0.06 µg/g d wt). However, the highest Pb and Cr levels were observed in fish samples collected from Minya Governorate at concentrations of 1.05±0.7 µg/g dwt and 0.57±0.39 µg/g d wt, respectively. Fish samples collected from Cairo and Monufia Governorates represented the highest concentration of Al; 0.61±0.16 and 0.6±0.25 µg/g d wt, respectively. There was no correlation between Cd, Pb and Cr concentrations and the fish size (weight and length). Moreover, there was a positive correlation between Al concentration and the fish length as the correlation coefficient was significantly ($P<0.05$) positive. The concentrations of the analyzed metals (Pb, Cd and Cr) in fish samples were several times higher than their concentration in water and the bioaccumulation Factor (BAF) ranged from 8.22- 122.6. The order of the analyzed metals according to their BAF is Cr>Cd>Pb. Finally, the estimated weekly intake of Cd, Pb and Cr for a 70 kg person consuming fish in Egypt (7.94,

15.84 and 9.8 μg) is well below the Provisional permissible tolerable weekly intake (PTWI) recommended by FAO/WHO, respectively. Although, heavy metal levels in Egypt exceeded the maximum permissible limits recommended by Egypt and WHO in some fish samples, the consumption of Nile *O.niloticus* from Egypt is safe on human health.

CAN SAFE ALTERNATIVE COMPOUNDS USED AS A PROMISING TOOL FOR SUPPRESSING THRIPS TABACI (LIND.) INHABITING ONION SEED PLANTATIONS?

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Population fluctuations of *Thrips tabaci* (Lind.) inhabiting onion seed plantations was determined in Assiut Governorate (375 km) southern Cairo, Upper Egypt, during two successive growing seasons of 2009 and 2010. The highest populations of the pest were recorded during April, while, the lowest populations were recorded during mid March and mid May in both seasons. The ability of four insecticide safe alternative compounds included natural compound, plant extract, plant and mineral oils in addition to a chemical compound, in reducing *T.tabaci* infestation on onion seed heads in the field, was determined. The initial kill, the residual effect and the general reduction percentages were calculated. The initial kill of all of the tested compounds recorded more than 90%. The residual effect of the tested compounds arranged in descending order as follows: Sunshal 20% EC (Carbosulfan), 91.48%>Radiant 12% SC (Spinotoram), 89.75%>Achook 0.15% (Azadirachtin), 87.22%>NAT 1 oil (Jojoba seed oil), 86.88%>Kemsol (Mineral oil), 75.50%. The natural product compound "Radiant 12% SC" and the plant extract "Achook 0.15%", recorded more than 95% general reduction in the pest numbers, as well as, the chemical compound "Sunshal 20% EC". The plant and mineral oils NAT 1 and Kemsol recorded 93.11% and 84.40% general reduction, respectively. So, it is of importance to point out herein to the ability of the tested safe alternative compounds to be used as a promising tool for suppressing *Thrips tabaci* (Lind.) inhabiting onion seed plantations.

ENVIRONMENTALLY RELEVANT SUPRAMOLECULAR METAL COORDINATION POLYMERS DERIVED FROM 5-(3-PYRIDYL)-1,3,4-OXADIAZOLE-2-THIOL AND IMIDAZOLE

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A number of supramolecular coordination polymers of cobalt(II), nickel(II), copper(II), cadmium(II) and lead(II), 5-(3-pyridyl)-1,3,4-oxadiazole-2-thiol (POZT) and imidazole (IMZ) has been prepared and characterized. The compounds have been characterized based on elemental analysis, FT-IR and electronic spectral studies and thermal analysis. Thermogravimetry (TG), derivative thermogravimetry (DTG) and differential thermal analysis (DTA) have been used to study the thermal decomposition steps and to calculate the thermodynamic parameters of the metal coordination polymers. The kinetic parameters have been calculated from the Coats-Redfern and Horowitz-Metzger equations. The antimicrobial activity of the synthesized compounds was tested against six fungal and five bacterial strains. The majority of compounds were effective against the tested microbs. The bacteria and fungi strains are common contaminants of the environment in Egypt e.g. some of which are frequently reported from contaminated soil, water and food, or involved in human and animal diseases.

SUSTAINABILITY IN CEMEX EGYPT(•)

Hossam M. Tharwat

CEMEX- Assiut

Sustainability is the long-term maintenance of responsibility, which has environmental, economic, and social dimensions, and encompasses the concept of stewardship, the responsible management of resource use.

In ecology, sustainability describes how biological systems remain diverse and productive over time, a necessary precondition for human well-being.

In CEMEX, we realized the value of sustainability concepts and its importance in our day to day life, since cement industry is one of the major natural recourses consumers among all industries.

Accordingly CEMEX corporate has defined our main sustainability module which consists of 3 main elements:

A- ENHANCE OUR VALUE CREATION.
B- MANAGE OUR FOOTPRINT.
C- ENGAGE OUR STAKEHOLDERS.

Those 3 elements have been translated into 7 main actions that each and every CEMEX operations has to adopt in its strategic action plans:

1-Lead in Sustainable Construction.
2- Low Income Housing & Infrastructure.
3- Enhance our Carbon Strategy.
4-Excellence in Environmental & Biodiversity Management.
5-High Priority to Health & Safety.
6-Strengthen local communities.
7- Partnership with Key Stakeholders.

In CEMEX Egypt we believe that engaging our local community to CEMEX foundation would help the local society for better living standards, that's why our focus strategy is concentrating more on education, unforeseen risk reduction, employment & affordable housing for low income society.

Also we focus on the environmental issues, we care to reduce our dust emission through many investments helping for cleaner

(•) Poster

environment to our nearby communities & preserving recourses of future generation.

IDENTIFICATION OF SOME FOOD PACKAGING MIGRANTS BY USING OF GAS CHROMATOGRAPHY-MASS SPECTROMETRY HEADSPACE (GC-MS)(•)

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The world's total food production has more than doubled over the past fifty years due to improved methods in animal husbandry, the use of advanced seed varieties and crop protection products that boost crop yields and quality. Mass production of packaged food has been enabled by technological innovations in food production, processing and logistics with packaging playing a key role. This study was performed to indenting the types of migrants from food packaging materials. A total of 95 packaged food samples were collected from the local markets and categorized according to the type of food into 9 groups including: frozen raw meat, frozen raw chicken, frozen vegetables, frozen fast food, frozen fruits, frozen sea food, cheese, chips, noodles, chocolates, candies and ice creams. The plastic packages were analyzed by the gas chromatography mass spectrometry headspace method to detect the residual contents in the packaging material. Substances detected in samples were classified into big major groups according to effective migrating organo group: alanine, acetic acid, cyanide, urea, amine, amide, benzene, nitrite and non- specified compounds group including substances that could not be classified in the other groups. Migration level of alanine, cyanide and urea was highest in cheese products (65.95±0.6384), (68.63±1.343), (63.67±0.6252) respectively. Benzene highest migration level was in chips (59.96±1.844), while acetic acid, amine and amide derivatives highest level was in candies (57.80±0.6383), (59.49±0.8633), (63.17±0.6704) respectively. Finally, the migration level of nitrite group reached the highest value in chocolates (59.78±8.537). Most of these migrants were additives and plasticizers added to plastics to modify their properties, they could be carcinogenic to health and have a toxic effects. Therefore, it's important to carry out periodical monitoring the foods and their

(•) Poster

packaging materials to make sure that they follow the national legislations and safeguards regulations to avoid any harmful effects to the human health. There is demand to create awareness and establish routine monitoring of migrants from food packaging materials to reduce risk and consequently human health effects.

AMELIORATIVE EFFECT OF ASCORBIC ACID AGAINST THE REPRODUCTIVE TOXICITY AND OXIDATIVE STRESSES INDUCED BY METHOXYCHLOR IN ALBINO MALE RATS

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Methoxychlor (MC), an environmental contaminant, which is widely used as a pesticide in many countries, has been shown to induce reproductive abnormalities in male rats. The precise nature and mechanism of action of methoxychlor on the male reproductive system is not clear. In the present study, we have sought to investigate the induction of oxidative stress in the testis of adult rat after exposure to MC. Methoxychlor at a dose of 200 mg/kg body weight was administered orally to seven male rats for 30 day/ twice weekly. Co- administration of ascorbic acid (Vitamin C) was given to another seven of male rats, in drinking water 1gm/l, for the same period. Another two groups of male rats seven each were administered Vitamin C and corn oil, respectively. The body weight of the animals administered with MC showed a significant decrease than control. The weights of the testis, seminal vesicles and ventral prostate decreased significantly in MC-exposed groups. The activities of total antioxidant were decreased significantly while the levels of lipid peroxidation significantly increased in the testicular fractions of the animals treated with MC than control. Serum levels of testosterone hormone and prostatic acid phosphatase were significantly decreased in MC-treated animals. A significant decrease in the mean number of sertoli cells and the different germ cell types as well as the mean number and nuclear volume of Leydig cells in all stages of the semeniferous tubules was recorded in MC- treated animals. Administration of vitamin C restored these parameters. In conclusion, the adverse effect of methoxychlor on male reproduction

could be due to the induction of oxidative stress in testis of adult male rats; the effects could be reversed by the administration of vitamin C.

SANITARY CONDITION OF RAW GOAT'S MILK IN QENA GOVERNORATE

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Twenty-five random samples of raw goat's milk were collected from different places in Qena City (Upper Egypt). Samples were examined chemically and microbiologically. The obtained results revealed that the total solids of the examined goat's milk samples had a mean value of 13.33±2.09 and ranged from 7.8 to 17.9%, fat percentage of the examined goat's milk samples varied from 2.8 to 5.8% with a mean value of 4.14±0.8. The protein percentage of the examined samples had a maximum of 23% and a minimum of 5.9% with a mean value of 3.91±0.87. Determination of lactose percentage of 2.7% a minimum 6.2% the maximum with a mean value 4.24±0.14, while the ash content of the goat's milk samples was a 0.7% as a minimum and 1.2% as a maximum with a mean value o.87±0.14. The titrable acidity of the examined samples fluctuated between 0.09 to 0.28% with a mean value of 0.174 ±0.05.

The microbiological analysis of the examined goat's milk samples showed that the aerobic plate count were observed in all of the examined goat's milk samples (100%) ranged from 1.54×10^3 to 3.2×10^7 cfu/ml with an average numbers 3.35×10^6.The technique of most probable numbers (MPN) pointed out that 68% of the goat's milk were contaminated with coliforms ranged from <10 to $>10^3$ with an average 364.17 cfu/ml. The faecal coliforms counts reveled that 48% of the samples were contaminated with faecal coliforms with an average numbers 144.72 cfu/ml and ranged from < 10 to $>10^3$. *E.coli* counts reveled that 40% of the examined samples were contaminated with *E.coli* with an average numbers 137.49 cfu/ml. The entercocci counts reveled that 68% of the examined samples were contaminated with *enterococci* with an average numbers of 6.3×105 cfu/ml. The *Staphylococci* were observed in 96% of the examined goat's milk samples and these organisms which had a maximum of 1.99×107 cfu/ml and a minimum of 2.0×10^3 cfu/ml with an average of 1.2×10^6 cfu/ml. On the other hand, total yeasts and moulds were detected in 84%, and these organisms had a maximum of 5.17×10^4 cfu/ml and a minimum of 1.0×10 cfu/ml with an average count of 4.2×10^3 cfu/ml. The data suggested that the poor hygiene resulting from improper

production, handling and keeping practices may pose to potential health risk of consuming such milk under the present production conditions. The sanitary and public health importance of these organisms as well as preventive measures to improve the quality of milk and safeguard the consumers from infection were discussed.

التلوث الفيزيائي

PHYSICOCHEMICAL STUDIES OF CADMIUM AND CERIUM COMPLEXES WITH TAR AND SIMULTANEOUS DETERMINATION OF THE METAL IONS IN MIXTURES BY DERIVATIVE SPECTROPHOTOMETRY

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The spectral absorption and acid-base characteristics of 4-(2̀–thiazolyazo) resorcinol (TAR) in ethanol-water medium containing 50% (v/v) ethanol have been studied. The ionization constants values of TAR and the stability constants of its Cd(II) and Ce(III) binary complexes have been determined by potentiometry. The complexation equilibria existing in solution are demonstrated and characterized by potentiometry and spectrophotometry. Two equilibria are established in solution at pH 2.7-11.7, based on the acid dissociation of the none-ionized form of the reagent. The composition and molar absorptivity of TAR with Cd(II) and Ce(III) have been determined spectrophotometrically. 4-(2̀–thiazolyazo) resorcinol (TAR) is proposed as a spectrophotometric reagent for simultaneous determination of cadmium and cerium in some synthetic mixtures and in water hyacinth. The zero-crossing technique is found suitable for the direct measurements of the first derivative for simultaneous determination of cadmium and cerium value at 524 and 536 nm respectively. This procedure is applied for simultaneous determination of cadmium and cerium in their mixture and determination of cadmium in water hyacinth (Eichhornia crassipes) using derivative spectra at the specified wavelength.

A STUDY OF THE SOUND ABSORPTION RANGE THROUGH MULTILAYERED, THREE DIMENSIONAL COMPOSITE FABRICS

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No doubt, we are living in the era of modern technology. Whatever it executes of accomplishments in the individual's life, but it is still a double sided arm. Modern technology also causes plenty of harmful effect for the man due to the environmental pollution, noise, radiation and an increase in the temperature of the weather.

We cannot deny that all types of environmental pollution increase the individual's psychological stress, in addition to the pressure caused by the difficulty of his daily life. So, it is our duty to protect human from these effects or at least reduce the noise, by using the isolating fabrics.

So this research deals with the range of absorption of three-dimensional, multilayered fabrics to sound waves with different frequencies, by producing 36 samples of this kind of fabrics, using cotton and polyester as raw materials (fibers) blend together in various ratios. And also the production of fabrics of different densities of wefts per measuring unit (i.e.) (18, 20, 22) weft/cm.

Fabrics with three different heights of pile between the two layers (i.e. heights of 0.5, 1, 1.5 cm). In addition, the space between the two layers was injected by rating material are produced. After that, a test was performed to measure sound absorption on these fabrics before and after injection process, at 18 different frequencies (125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000 and 6300) hertz.

Finally, test results were tabulated, then were statistically analyzed, and finally relation drawings were made.

التغيرات المناخية

AN ECONOMIC STUDY FOR THE CLIMATE CHANGE IMPACTE ON SELF -SUFF- ICIENCY OF CEREALS CROPS IN EGYPT

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This research aims to estemeate the impacte of climate changes on self – sufficiency of main cereals crops in Egypt, the research depends on results expected to 2030 year by using three senarions.

The results showed that the national consumption from wheat and maize crops are increase than national production and the imports was covered by 122 th.tons from wheat and 132 th.tons from maize. While the production from rice crop imerease the consumption from it through the periods (1990-200).

The climate changes by high degree 4 showed that the productivity per feddan for cereals crops are decreased. and the economical value decreased by 1513 m.p. of wheat, 2814 m.p. of maize, 911 m.p. of rice, 239 m.p. of Sorghum and 15 m.p. of parle the loses amount in total production represent 28% from wheat gap and 26% from maize gap in 2010 year.

The water consumption of cereals crops are increasing in Egypt by 1.9 M.m^3 in year, this amount able to cultivate about 516 the feddan from cereal crops able to prduce about 2 m.tons from these, and the national economical value estimate by 2.7 M.p.

The result showed that cereal self- sufficiency affected by climate changes we predict that self-sufficiency percent will decrease from 80%, 96%, 122% for wheat, rice and maize crops to 64%, 84%, 91% in spect of the effort and investment for reclamation and technology.

APPLICABILITY OF HOME ZONE CONCEPT WITHIN THE EGYPTIAN CONTEXT: IDEAS FOR ENHANCING THE EGYPTIAN URBAN QUALITY OF LIFE(•)

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The Home Zone concept, was pioneered in the 1970s in the Netherlands, since then many countries–especially European countries- have successfully transferred the core concepts and created their own safe areas. Home Zones are an attempt to strike a balance between vehicular traffic and everyone else who uses the street, the pedestrians, cyclists, business people and residents.

Home Zones are perceived by some as a way of "reclaiming" local streets from a traditional domination by cars. Others see it more modestly as a way of trying to restore the safety and peace in neighbourhoods that are becoming overwhelmed with speeding traffic, a problem that our cities in Egypt are extremely suffering from, especially that children can not find a safe venue to play live their childhood properly in. Home Zones work through the physical alteration of streets and roads in an area. These alterations force motorists to drive with greater care and at lower speeds. Many countries support this with legislation allowing the Home Zones to enforce a reduced speed limit. The benches, flower beds, play areas, lamp posts, fences and trees used to alter the streets and roads not only offering many additional community benefits to the Home Zones but are considered to enhance the beauty of an area and increase the housing prices as well.

On the other hand, some accuses the home zones' schemes of delaying delayed the response rates of the emergency services to the streets within the Zone, moreover, others have complained that the road humps and chicanes be removed as they are causing huge tailbacks through the streets, while in America residents have been campaigning to have the road alterations removed as they can no longer park near their houses.

This paper defines, then analyzes the pros and cons of home zones, discusses the applicability of such a concept within the Egyptian context, and assessing how efficiently can we make use of the core of this concept to enhance the urban quality of life in Egypt, and whether these concepts

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(•) Poster

can solve or even partially solve some of the problems that the Egyptian cities suffer from, and what are the alterations needed for these concepts to achieve the best influence. This paper is an episode in a series of research papers that targets the enhancement of the Egyptian urban quality of life.

INVESTIGATING THE EFFECT OF CLIMATIC DATA TYPE ON THE ASSESSMENT OF BUILDINGS ENERGY PERFORMANCE IN EGYPT(•)

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In the last few years many advanced computer packages, characterised by a considerable integration between thermal and visual aspects, were developed to support designers and to study building energy performance, innovative materials and daylight control strategies and systems. These packages, as a function of their complexity and final use, require different types of outdoor data, ranging from monthly (MTD) or seasonal typical days (STD) to more complex typical meteorological years (TMY).

The aim of the paper work is to investigate the influence of the stochastic component of meteorological data in evaluating residential building energy performance in Egypt climate. The study is performed by an advanced computer package, Autodesk® Ecotect® Analysis sustainable design analysis software which can process different type's of climatic data for the same place. Different typologies, systems and space managements are investigated. Ecotect has since grown to become a leading application for the analysis of building performance, offering a diverse suite of tools for assessing aspects of a design such as solar exposure, thermal performance, acoustics, lighting, shading, and much more.

(•) Poster

البيئة والإعلام

THE ATTITUDES OF THE COMMUNICATION CONTACTORS TO WORDS THE ENVIRONMENTAL MEDIA. AN APPLIED STUDY SAMPLE OF THE INFORMATION PROFESSIONALS IN NAHER ELNEEL STATE

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The environmental mass media is considered as a new specialization in the information field. It has started to develop in the beginning of the 70th last century the term is deemed to be composed of two concepts :
Media and environment the media is a genuine and logical interpretation of the news and the facts besides providing people with it in away which helps to establish a general appropriate opinion within the context of the incidents, while the environment is the surrounding in which the human. being lives in terms of land, water and air and the impact of the assets which affect his life. Accordingly, the environmental media is the process of establishing and spreading the scientific facts which are related to the environment through the mass media in order to create a considerable level of environmental awareness which leads to a constant development.

In spite the clarity of the goals of the environmental media it hasn't bee favored with a reasonable acceptance and approach on the part of the information professionals for a number of reasons. The most important ones be confined to the following:

1-The information professional attitudes towards the environment issues require more change persuasion and understanding.
2-Basically, the environment cause is not considered as an information beat un less it is related to an environmental catastrophe or a serious damage that resulted from pollution.
3-Specialty in environmental sciences in the Arab and African zone is relatively new if it compared with the other specialties.
4-Sometimes the environmental issues would stir up the official decision make or the private sector whose interests may contradict with the environment media issues. This would undoubtedly lead to the obstruction of the facts for the sake of the mass media tool benefit .
5-The environmental media specialization does not exist in the information colleges and department of the Arab and African Universities.

All the above mentioned reasons have in making the environment media concept not deeply rotted for the communication contactors in the various media institutions particularly in Sudan. This situation makes it more appropriate to introduce this scientific study right now, and by doing so the following could be accomplished.

1-Dealing with the scientific concept of the environmental media.
2- Specifying the general objective of the environmental media.
3-The attitudes of the communication contractors in Sudan towards the environmental media concepts and its implementation.

The results of this study would hopefully provide some indications for the environmental media planners to contribute to the determination of the conceptual and the philosophical level of the communication contactors towards the environmental issue. Thus, the scientific research windows would be opened for new studies which would take part in establishing well. Founded positive concept towards the environment issues on the part of the communication contactors in Sudan .

THE ROLE OF RADIO AND TELEVISION IN SPREADING ENVIRONMENTAL AWARENESS IN THE ARAB COUNTRIES "SUDAN IS AN EXAMPLE"

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Environment is the place in which humans, animals and plants lives, and Earth is the living environment, and it is the home of humans and animals in which they live and build their small environment where they have various relationships. Man also takes advantage of all that exist around him like the air he breathes, the food he eats, the minerals he extracts and the energy he uses for his comfort and well-being. The environment has embraced man since his creation and it was possible to continue in this attitude but man, through rapid urbanization and industrialization, has caused profound changes in the structure of his environment. Man is alone responsible for the disaster that befell the environment and that became a threat of his future and his health.

The survival of human beings on this earth depends on the protection of the environment. It is a religious duty on both the individual and the community. And this duty starts with the awareness of the problems of the environment and the search for the proper solutions.

Increasing attention in various forms is now given to the environment through the media in the form of written articles and presenting programs in both the radio and TV to increase public awareness. This is because the environment is the place where man practices all his natural, social and cultural activities.

CONTROLS AND STANDARDS TO ACHIEVE COMPATIBILITY BETWEEN THE ENVIRONMENT AND OUTDOOR ADVERTISING

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The surrounding environment has become the main concern for the modern man habits. Attention beginning in scientific area for emergence of a new approach to study the humanities. Environment is components influenced by the air, water, soil and energy resources. Environment has a role in the formation of an individual's personality depending on the culture and experience and affecting the activity of the individuals. With the rapid evolution of technology in the world is environment facing danger. Education an eye on the beauty of the transformation of the world to enjoy and become quantity not quality as urban construction and storm at the expense of greenery and the information revolution and advertising competitiveness.

As the designer is dealing with nature (the place and time) it simulates what turned him from the creation of God, and hopes he can solve problems and provide new ideas compatible with the environment, and the design process is conditional on the factors of civilization, which are common in the environment surrounding the designer as the design, the phenomenon of individual undergoes a psychological but it is purely cultural reality rooted in the fundamental social soil in which they live designer. And appropriate advertising design for the environment means the product of this process, a means of advertising that may constitute one of the problems of environmental pollution environmental may be a means of advertising a success in itself performed its function of attracting attention and to convince the idea and push the consumer to buy at the same time the failure is visible which is damaging the environment, and environmental design refers to the design activities, which take into account the surrounding environmental conditions.

Interact with the environment in terms of location and operating system in addition to several factors like heat, lighting and humidity affect them functionally. Other natural factors such as social inherent in the viewer and psychiatric conditions in addition to behaviors that differ from the members of a particular environment to other individuals and the community is an environment subject to the elements carry with it special character and distinctiveness can be seen as an aspect in

particular, reflects on the nature of this capital city or in the image of the college. Not only the concept of the environment surrounding the announcement on the natural environment but also social and cultural environment Each of them complements the other must to announce that in line with the nature and type of item and the nature of group-oriented society and the advertising message.

التشريعات البيئية

ENVIRONMENTAL POLICY AND THE FIGHT AGAINST POVERTY IN ALGERIA BETWEEN INTERNATIONAL PRESSURE AND DOMESTIC LEGISLATION

Burgda Waheida

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The issue of poverty is a real challenge in the world after the Cold War, characterized by changing the concept of security of the military dimension to the human dimension based on freedom from all forms of poverty and want, need and fear, and with the emergence of threats to a new security such as, for example but not limited to greenhouse gas emissions and their impact on climate change and the environment in a world of scarce resources for a growing demographic pressure, loud calls for the need to take the issue of poverty and the environment very seriously as an international obligation through international treaties, or as a commitment by national legislation and local policies. This study takes the problem of the true nature of the relationship between poverty and the environment and the extent of this relationship is a reflection on the policy-making on environment and mechanisms to fight poverty in Algeria.

الكوارث الطبيعية

LES LIMITES DE L'APPROCHE TECHNIQUE DANS LA GESTION DES RISQUES NATURELS ET L'AMENAGEMENT DES ZONES FORTE MENT MENACEES DANS LES BORDURES MERIDIONALE DU RIF CENTRAL (Maroc)

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Le Rif central méridional se caractérise par une forte dynamique, qui résulte des dégâts agissant sur les ressources environnementales, les potentialités socio-économiques et les infrastructures.

La préservation de l'équilibre nécessaire dans ce contexte se traduit par des interventions et des programmes de développement sectoriels (Agriculture, Eaux et forets, Equipement…). Pourtant la dégradation du milieu environnemental est croissante et l'augmentation des intensités des risques naturels se voit aggravée aujourd'hui plus qu'avant.

Pour répondre à cette contradiction entre les efforts entrepris et les résultas obtenus, l'étude aborde les défaillances et les points faibles dans la réalisation et l'exécution des projets d'aménagement dans cette zone. Pour aboutir l'étude se focalise sur des procédés de gestion des risques naturels dans les zones fortement menacées à partir des procédés d'aménagement réalisés pour le traitement des aspects de dégradation des milieux naturels, en particulier les glissements de terrains.

التنوع البيولوجى

SEDIMENTOLOGICAL AND GEOCHEMICAL INVESTIGATIONS OF MANGROVE ENVIRONMENTS AND SURROUNDING AREAS, RED SEA COAST, EGYPT

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The textural and geochemical aspects of the sediments of subtropical mangrove ecosystem and surrounding areas have been studied and discussed. Forty sediment samples were collected from different areas of mangrove environment and surrounding area along the Egyptian Red Sea coast. The sediments are characterized by the abundance of sand with minor amounts of mud and gravel. The mean size of the sediments ranges from medium grained to fine grained at the study areas. The sediments are poorly sorted, symmetrical to nearly symmetrical skewed, and mesokurtic to leptokurtic in nature. Cluster analysis showed that distribution of gravel, sand and mud fractions is related to bottom facies and type of sediment source. Generally, sand fraction is the main category among the three constituents. Carbonate content recorded small values in the study areas. The CaCo3 content of the sediments ranges from 4.7% at Hamata area to 64.9% at Erier area. Terrigenous and biogenic components is the factor controlling of the carbonate content of studies sediments. The organic carbon content is ranges from 1.10 at Hamata area to 3.1% at Sharm el-Qibli and Erier areas, which is controlled by particle size of the sediments. Phosphorus content in the different studied localities is related to the sources of phosphorus to the area. Phosphorus might be derived from terrestrial source to the sea through wadis draining the excavated Upper Cretaceous phosphate rocks. Also, the abundance of phosphorus content may be attributed to phosphatization of calcareous skeletons. Our observations provide knowledge, there is no different in environmental texture and geochemistry of the sediments of

subtropical mangrove ecosystem and surrounding areas of the Egyptian Red Sea coast.

DIVERSITY AND DISTRIBUTION OF ACACIA SPP. IN THREE REGIONS IN THE KINGDOM OF SAUDI ARABIA

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The study areas were selected after field visits to Al Madinah, Aseer and Al Baha. The selection was done on the basis of the natural distribution and density of *Acacia* spp. Maps of the study areas were prepared according to their coordinates. Meteorological data were collected from stations within the study areas. The data showed that both Aseer and Al Baha were in the semiarid zone and Al Madinah in the arid zone according to Emberger (1971) curve. Measurements of trees were carried out inside 0.1 ha sample plots. Diameter distribution curves were drawn for all locations. There were great differences between species in relation to diameter distribution. The study showed the scarcity of large diameters and also in some cases medium and small trees which necessitated urgent intervention by transplanting and protection during regeneration periods to attain sustainability. *Acacia ehrenbergiana* and *A. tortilis* were the species common in the three regions studied. Nevertheless, *A. origena, A. etbaica, A. asak and A. gerrardii* were restricted to Al Baha and Aseer probably due to differences in climate (semi-arid) as compared to Al madinah (Arid). Soil samples from under the canopies of *Acacia* spp. were analyzed. Soil texture had significant effect on species diversity and distribution.

THE DEAD SEA ECOSYSTEM AS INFLUENCED BY RED SEA –DEAD SEA CONDUIT PROJECT(•)

Mohammed Wedyan and Ahmed El-oqlaha

The Dead Sea is severely disturbed ecosystem, Its water level has been decreasing by 1 meter per a year. Since the peace treaty between Jordan and Israel was established 1994, a proposed for the construction of water carrier between Red Sea and the Dead Sea (peace conduit).To understand the factors that affect the microbes in the Dead Sea, and to predict the possible effects of the planned conveyance of Red Sea water to the Dead Sea, we performed simulation experiments in the outdoor as well as in the laboratory. The laboratory simulations showed that development of the Dunaliella was possible only when Dead Sea water was diluted with minimally 10% (by volume) of Red Sea water. Addition of phosphate was essential for the algae to grow, and growth rates and yields increased with increasing phosphate concentration and decreasing salinity. Field simulations in the showed that development of algae was rapidly followed by development of dense blooms of red halophilic Archaea. Although it should be realized that the closed system formed by the shallow ponds differs from the conditions in the lake, the results suggest that a microbial bloom, once formed, can remain present in the Dead Sea for months to years. These observations are important when attempting to predict how the biological properties of the lake may change in the future, and they have important implications for the planning of the Red Sea-Dead Sea conduit.

(•) Poster

إعادة تدوير المخلفات

ANAEROBIC CO-DIGESTION OF MUNICIPAL FOOD WASTE AND KITCHEN WASTEWATER FOR BIO-HYDROGEN PRODUCTION

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Three identical mesophillic pilot scale anaerobic baffled reactors (ABRs) were used for hydrogen production from co-digestion of municipal food waste (MFW) and kitchen wastewater (KW). The reactors (ABR1, ABR2 and ABR3) were operated at different sludge residence times (SRTs) of 5.6, 4 and 3.6 d respectively. Hydraulic retention time (HRT) and organic loading rate (OLR) was kept constant at 2.9 d and 20 gCOD/l.d for all reactors. The results obtained revealed that, H_2 yield increased from 1.62 to 2.23 molH_2/gCOD removed when SRT increased from 3.6 (ABR3) to 4.0 d (ABR2). Further increase in H_2 yield of 2.74 molH_2/gCOD was occurred at SRT of 5.6 d in ABR1. Likely H_2 production was increased from 6.3 to 9.4 l/d when SRT increased from 3.6 to 5.6 d. Moreover, hydrogen fermentation facilitated carbohydrate, lipids, proteins and volatile solids removal with efficiencies ranging from 72 to 87%, 37.6 to 74.3%, 62 to 76.4% and 82.8 to 84.8%, respectively.

CONTINUOUS BIO-HYDROGEN PRODUCTION FROM PRETREATED RICE STRAW WASTE VIA MESOPHILLIC UP-FLOW ANAEROBIC STAGED REACTOR

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The effect of HRT on H_2 yield (HY) and H_2 production (HP) in a continuous mesophillic up-flow anaerobic staged reactor (UASR) fed with pretreated rice straw was investigated. The reactor was operated at different HRTs of 30; 28; 24; 8 and 4 h. The OLR was kept constant at 30 gCOD/l.d. The maximum HP of 3.6 l H_2/d and the HY of 160 mmol H_2/d were both achieved at an HRT of 30 h. Both HP and HY were substantially dropped at HRT lower than 30 h. The biogas produced consists of H_2 (58%) and CO_2 (33%). H_2 has been produced continuously and stably for over 5 months in the reactor. This might be attributed to the high biomass concentration retained in the reactor (30 gVS/l) and short sludge residence time (SRT) of 1.9 d. The $COD_{conversion}$ was concomitant with increase the HY. At HRT of 30 h, the highest amount of COD was removed (34.7 g/l) and the biggest yield of H_2 was obtained 161 mmolH_2/d. The results showed a good correlation between HY and $VS_{degradation}$ (R^2= 0.967). As expected increasing the degradation of VS; the HY would be increased i.e. in the case of $VS_{degradation}$ of 1.4 g/l the HY was 300 ml/$gVS_{degraded}$ at an HRT 4.0 h. While, at 4.7 g/VS was degraded; the HY was 663 ml/$gVS_{degraded}$ at an HRT of 24 h, whereas at 5.2 $VS_{degraded}$; the HY amounted to 962 mlH_2/$gVS_{degraded}$ at HRT of 30 h. Likely; carbohydrate removal efficiency dropped as HRT decreased from 30 to 4 h, with values ranging between 75.6 and 40% respectively. These results suggest that the optimum HRT for H_2 production from rice straw waste via UASR is 30 h.

EFFECT OF C/N RATIO ON THE IN-VESSEL COMPOSTING UNDER AIR PRESSURE OF ORGANIC FRACTION OF MUNICIPAL SOLID WASTE IN MOROCCO

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The goal of this research was to investigate the effect of C/N ratio on the in-vessel composting, under air pressure, of organic fraction of municipal solid waste in Morocco. Firstly, in-vessel bioreactor has been designed and used to evaluate the appropriate initial pressure (0.2 bar, 0.4 bar, 0.6 bar, 0.8 bar and 1 bar) for the composting process. Secondly, fivebioreactors were run with C/N ratios of 26 (control; no C supplement), 32.2, 38.4, 44.6 and 50.8. Each experiment was replicated three times. Paper and paperboard were used as the C supplement. Parameters monitored included internal air pressure, C/N ratio, temperature, volatile solids reduction and maturity of the obtained composts. The relative microbial activity was observed in-directly using volatile solids removal and the relative heat generation data. Experimental results showed that organic waste could be composted within 10 days and the operating initial parameters that converted the most volatile solids and carbons in the feedstock were as follows: 0.6 for the initial air pressure and 26 for the C/N ratio. Maturity tests, in the optimal conditions, show that the final compost has the characteristics of stable compost and can be used as a soil conditioner. In addition, compost obtained from experiment that consider C/N ratio of 32.2 shows good maturity levels and may also be used for agricultural applications.

EFFECT OF INITIAL MOISTURE CONTENT ON THE IN-VESSEL COMPOSTING UNDER AIR PRESSURE OF ORGANIC FRACTION OF MUNICIPAL SOLID WASTE IN MOROCCO

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This study aims to evaluate the effect of initial moisture content (MC) on the in-vessel composting under air pressure of organic fraction of municipal solid waste in Morocco in terms of the temperature in the feedstock, the quantity of produced gases, the rate of organic matter conversion, and the quality of final composts. For this purpose, in-vessel bioreactor has been designed and used to evaluate, in the first hand, the appropriate initial pressure (0.2 bar, 0.4 bar, 0.6 bar, 0.8 bar and 1 bar) and the appropriate initial MC for the composting process in the second hand. Moreover, five experiments were carried out using an organic waste with initial MC of 55%, 65%, 70%, 75% and 85%, respectively. The initial air pressure and the initial MC of the mixture showed a significant effect on aerobic composting process. The experimental results demonstrated that for composting organic waste, relatively high MCs are better at achieving higher temperatures and retaining them for longer times. The results of this study suggest that an initial MC of around 75%, under 0.6bar, can be considered as being suitable for the efficient composting of organic fraction of municipal solid waste.

ECONOMIC DIMENSIONS OF RECYCLING OPERATIONS: AN ECONOMIC AND ANALYTIC READING

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Since the middle of the twentieth century the world has become alert to environmental problems. This was reflected in the great number of regional and global conferences that discuss the problem of environmental pollution with the three dimensions: the soil/water/air. The outcome of these conferences appears in the form of recommendations and mechanisms to reduce the environmental pollution. One of these recommendations is to adopt a mechanism to recycle wastes as a mechanism with two dimensions: the first is the reduction of environmental pollution, and the second is purely economic and related to the optimum use of economic resources. The study has indicated the experiences of advanced industrial strategy to process waste recycling which has started to limit as much as possible the amount of waste that arises from sources on the one hand and benefits from the other. Reducing the amount of waste will have an impact and economic benefits, but it requires advanced technology in production methods, and if the cost of this technology is high, this will gradually impact on reducing costs during the production period of this technology, as well as the reduction of the indirect costs resulting from the reduction of waste transport, treatment disposal and recycling.

From the introduction above, this study will address the following points:
1-Definitions of waste recycling.
2-Sources of waste and its ability to rotate.
3-The concept of waste reduction.
4-Plans, programs and mechanisms to reduce waste.
5-The economic dimensions of the concepts of waste recycling (4 R).
6-Positive and negative effects of waste recycling.
7-Summary and conclusions and recommendations

INDUSTRIAL LIQUID WASTE MANAGEMENT IN MARINGAN INDUSTRIAL AREA: CASE STUDY

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Industrial waste management is the most important problem facing the developing countries. Unpublished reports showed that, the liquid waste disposal methods are currently in use in most of Sudan industrial areas, may endanger both the environment and human health .

To evaluate the efficiency of the liquid waste disposal in Maringan Industrial area, Gezira state .

A field survey was conducted during 2003-2004. The factories managers, and public health officers assigned to work in the industrial area were interviewed. Samples of liquid wastes were collected from factories and from the end point for disposal. The parameters investigated were: temperature, hydrogen ion concentration, total suspended solids, total dissolved solids, biochemical oxygen demand, chemical oxygen demand, in addition to oil and grease .

The analyses revealed that TSS, TDS and Oil and grease were the most widely spreading pollutants and the source was the soap factory. Readings reflects high concentrations of pollutants: 22316 mg / litre TSS, 48464 mg / litre TDS and 2608 mg / litre Oil and grease. Most of the calculated load of the BOD and COD is attributed to the wastes discharged from sweets factory: 926 mg / litre and 1308 mg / litre respectively .

The values of the measured parameters exceeded the accepted levels for the industrial pollution control and methods in use were not suitable. The study revealed low level of awareness beside ineffective roles and regulations.
A treatment plant for the whole area was propose for control .

STUDY OF THE ECONOMIC RETURN TO THE RECYCLING OF AGRICULTURAL WASTE IN THE ARAB WORLD

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The agricultural sector in the Arab world Suffers of many of the problems resulting from agricultural wastes of various kinds resulting from agricultural production activities, as disposed of by burning leads to reduced soil fertility and environmental pollution and health damage to humans and animals in the environment, has led the expansion of cultivated areas of Crops of different and increasing the numbers of animals to increase agricultural waste in large quantities, which is pushing researchers and officials to look for safe ways to dispose of or re-used to obtain useful products such as used in the production of organic fertilizer (compost) or the production of energy biogas or concentrated feed to diet for the animals.

Therefore, this research aims to identify the classification of different types of agricultural wastes and estimate quantities and losses, and how to use this wastage in the production of organic manure biogas and estimate the costs of this exploitation, as well as identify the economic returns of such products and safe disposal to protect the environment from pollution. The serial time trend study of the quantities of agricultural wastes of various kinds, the study continues to increase many of these residues increase statistically significant.

A study of the economic importance of recycling this waste study found that the use of plant residues in the manufacture of organic fertilizer (compost) to achieve net economic return was estimated at 28.22 billion pounds per year * (U.S. $=5.48 Egyptianpoundsin2008). When using this waste biogas plant in the industry, given the quantity of kerosene is estimated about 2.13 billion liters per year.

When used in the manufacture of concentrated feed achieved an estimated return of 15.18 billion pounds a year.

A study of the economic importance of recycling animal waste study found that the use of the available quantities of animal waste in the manufacture of manure to achieve return on an estimated 66

million pounds per day, while the use of biogas in the industry given the amount of kerosene is estimated at about 28.83 million liter/day .

التجمعات السكانية

THE MANAGEMENT OF HIGH-RISE STEEL STRUCTURES

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Construction materials have a great effect when designing new buildings. The design thinking has evolved greatly with the development of the discovery of new materials and new construction methods. New materials have played a major role in changing the way of thinking and designing the external form and the internal spaces.

With the beginning of high rise buildings era, construction materials had a major role in the design process. As high rise buildings developed greatly since the late 19th century, where construction materials, especially steel played a major role in the design process internally and externally.

The development of the steel uses, the design thinking management was affected when applied to high rise buildings in order to build a distinct building that reflects the advancement of the country.

Scientific and technological advancement helped in the design thinking process to increase the building floors and add a touch of creativity to the building's form in order to create an iconic landmark in the country. There are many examples of high rise buildings, especially (Burj Khalifa, Dubai, UAE).

This paper aims to study different methods in the steel applications management to develop high rise buildings. Setting is principles and standards to encourage such projects in Egypt.

FABRICATION OF CONCRETE PAVING UNITS FROM RECYCLED CONCRETE AGGREGATE

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There is no construction site is free from construction and demolished concrete waste. Currently this waste is delivered away from the construction site which has negative environmental and economical impacts. This paper presents laboratory experimental trails to use the concrete waste for the production of concrete interlock paving blocks which could be directly used at the same construction site and maintain the total project cost and save the surrounding environment. An extensive experimental program was designed to evaluate the efficiency of concrete paving blocks made from recycled concrete aggregate. The concrete waste was randomly collected from various construction sites and crushed then used as full replacement of natural coarse aggregate. Cement content, paving block thickness, replacement ration of recycled fine aggregate, and paving block shape (Cuboid, I, Hexagonal) are the main variables studied within the experimental program. Series of tests were carried out to determine the properties of the blocks prepared with the recycled aggregate. Compressive strength, water absorption, and surface abrasion tests were conducted according to the Egyptian and European specifications then the test results were compared with the acceptance limitations. The test results showed the feasibility of using the recycled concrete aggregate derived from different sources for the production of concrete paving blocks and the hexagonal paving unit is the most suitable shape in pedestrian and moderate trafficked areas.

THE IMPACT OF FRONT BARRIER'S HEIGHTS ON THE INTENSITY OF NATURAL LIGHTING IN RESIDENTIAL BUILDINGS ACCORDING TO LOCAL BUILDING CODES IN EGYPT

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The natural lighting represents an important factor for the life of man. It fulfills the needs of man and thus raising the efficiency of performance and production, while at the mean time reducing the electrical consumption and reducing environmental pollution. According to the frameworks of local building codes there are a lot of minimum standard requirements for building heights, projections, areas of rooms and area of courts, in addition to the ratio of area of fenestrations for each space. The search intends to reach to a geometrical relationship between the area of window and elevation angle constraint facing them through the application on a model of housing according to the determinants of the law regulating the construction work in Egypt (Act 119 of 2008) ,to achieve the universal norm of natural lighting allowed in these spaces were for the use of experimental method through the use of the computer model has the flexibility to change as well as to identify variables that less can be done to raise the efficiency of lighting in this space according to the height of the obstruction in front of the window opening on the roads, came in a number of results is that ratio of the window area from floor area of space should increase with increasing obstruction height facing the window up to 10% of floor area with 56 degree angle of elevation.

EFFECT OF ARCHITECTURAL FORM FOR FENESTRATIONS ON NATURAL LIGHTING DISTRIBUTION IN RESIDENTIAL SPACES

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The sun rays and its reflectivity is considered one of the most important natural renewable energy beside its usefulness for the human well being since it protects him from the threat of illness and diseases. It fulfills the needs of man and thus raises his capacities and capabilities. The frameworks of building codes determine the health requirements for good natural lighting and ventilation and not deprive the residential spaces from natural lighting to achieve the visual and psychological comfort, while at the mean time reducing the electrical consumption and environmental pollution. The search intends to examine the effect of architectural form for fenestrations and projection elements on natural lighting distribution in residential spaces according to the acceptable international standard for quantity and quality of daylighting that must be available in such spaces. To achieve this aim, the search has followed a comparative analytical study of illumination using computer simulation, and at the mean time to cope with the international norms of natural lighting for the space under study. The findings of such study can be summarized, that the dimensions ratio of square window is better in terms of light quantity and quality, and horizontal strip window in terms of light quantity and vertical window in terms of the quality of light. The form elements of external facades have effect on the intensity of light inside the room according to the type of the projection element and its relationship of window position for such space. The vertical shading device is the best one in reduce the intensity of light within the space.

THE TREND TOWARDS THE PHENOMENON OF REVENGE AND ITS RELATIONSHIP TO VARIABLES SUCH PLACE OF RESIDENCE AND LEVEL OF EDUCATION

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This study aims to identify trends in a sample of the province of Assiut to the phenomenon of revenge, and the relationship of these trends variables type (male / female), place of residence (rural - urban), level of education (low - medium high). The study sample consisted of 387 members of Assiut citizen, 165 f male (52.4%) and 150 females (47.6%). The study samples was divided according to the place of residence into 168(53%) countryside and 147(47%) urban. The instrument scale study is the trend towards the phenomenon of taking revenge (Saha Omran).

The possible use of analysis of variance and statistical significance of the differences between the averages using the value of "t" t value, and the results showed that there is influence of each variable separately from the variables: gender, place of residence and level of education, the trend towards the phenomenon of revenge, and that males are more than females in favor of the phenomenon of revenge, and more rural than urban, and that the lower level of education of the individual whenever more supportive of the phenomenon of taking revenge. The results of the study indicated the effect of interaction between the level of education on one hand, and no effect of interaction between the variables of place of residence and educational level on the other hand. While there was no effect of interaction between the variables of gender, place of residence, and there is no effect of the interaction between the variables three (type, place of residence, level of education).

THE DESIGN APPLICATION OF THOUGHT AND PLANNING NEW CITIES TO MANAGE THE ENERGY CONSERVATION

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Energy became an important element affect the various areas of daily life, and with the increased demand and shortage of energy sources should be considered how to preserve energy and reduce pollution resulting from increased use, particularly in ways that non-environmental use saving time and money of the main objectives in the development of thought, design and planning for new cities in order to keep the energies, and through the development of methods and systems design and planning with the application of the Environmental Leadership (LEED).

In hopes of providing a new city-friendly environment by many countries of the world to keep up with the future requirements of the times. And with the expansion of the Arab Republic of Egypt planning of many new cities, it does not exist but there are no studies design and planning for conservation management capabilities through the rationalization of consumption and conservation. And unlike that seen in most neighboring countries (such as the UAE-and others), which is seeking with the beginnings of the twentieth century to the establishment of new cities fit the requirements of the environmental area.

Paper aims to study the application of design thinking and planning for conservation management of the potential new cities.

THE ROLE OF VALUE ENGINEERING TO REDUCE COSTS IN THE MANAGEMENT OF GOVERNMENT HOUSING PROJECTS

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Housing sector is one of the economic sectors that consists of the national economy and acquire either as relevant on the one hand it meets the basic needs of one person or for his contribution in promoting economic development in the country. Where the impact housing projects in the national economy on several levels (budget-government advertising-Taxes-Credit-Loans-Investments-Provision of employment opportunities). Be deemed to the national project for housing of the most important projects currently available to overcome the problem of housing and by providing adequate housing for young people with limited income, which is one of the main topics contained in the government's program in the end of 20 century, was the goal of this program provide 500 thousand housing units during a period of six years and to solve the housing problem in Egypt and one of the biggest problems facing the Egyptian citizen who dreams to have a suitable apartment, and cost that the level of income. The housing sector deducted from the state budget allocations and a large sum annually, and although it does not accept low-income people to buy these units to increase their prices. The increase in prices of building materials for construction and the lack of regulations governing the prices and the use of finishing material with a high cost causes the problem that the cost of housing the government Economic greater than the potential of low-income, and to the non-application studies, value engineering to compress the costs of the components of construction and finishing in the process design models of housing government, must be re-examined to minimize this cost to encourage low-income people in obtaining housing projects and units of government and not to resort to informal settlements.

المياه ومصادرها

DRINKING WATER QUALITY IN GAZA STRIP: AVAILABILITY AND EVALUATION

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Gaza suffers from complicated problems of water and environment, Groundwater is the main source of drinking water. The Chemical and microbiological quality of drinking water was evaluated. The average concentration of chloride, Nitrate, Total Dissolved solids (TDS) was higher than WHO standard for most areas in Gaza strip. The Chloride concentration increased 160% during the years from 2000 to 2010 and ranges from 300 to more than 800 mg/l. while the increase of Nitrate concentration was more than 30% during the entire period. Most people who live in Gaza depend on desalination and home filters for drinking, and the quality of small scale desalinated water was evaluated. The essential parameters such as Calcium (1.7 mg/l) and magnesium (0.3mg/l) do not meet the minimum levels of WHO limits: 10 and 12 mg/l, respectively, which is very important for human health.

CHARACTERISTICS OF RAINFALL AND WATER BALANCE IN GAZA STRIP – PALESTINE

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Rainfall is the main natural source of water in Gaza Strip, and its the only renewable source of fresh water and natural replenishment of the Gaza Strip aquifer, and upon which people depend mainly to get all their needs for domestic agriculture and drinking.

The research studies of rainfall data in the strip for the period (1982-2010) in order to derive some statistical properties of the system and determine the rainfall pattern of change through the use of some statistical climate patterns.

A number of statistical indicators has been used to identify the nature of the fluctuations in rainfall and to determine the trend line of the rain .

On the other hand, the research focuses on the study of water and determine the amount of renewable water per year, Based on the fact that the rainfall is the only source of the water in Gaza Strip.

The Gaza aquifer depends on precipitation however for recharge and records show a clear decline in rain in the past few years .

The groundwater table has dropped several meters over the last three decades as a result of exploitation of the aquifer with minimum recharge.

WATER POLLUTION CRISIS IN PALESTINE

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Water has been and remains the backbone of life and the basis upon which civilizations depend, and is a main pillar of economic and social development because of its direct effects on related activities and in particular in the areas of drinking, industry, and agriculture. The importance of water appears in all aspects of life on Earth. The presence of water, cleanliness and maintaining a balance of environmental is required by the continuity of life. So, water pollution is most serious problems and environmental crises that threaten human life in the form of food and drink and in many aspects of life.

As is known, water resources in Palestine is a major determinant of economic and social development, especially in the presence of the occupation and the depletion of water resources over the years of occupation and control of water resources in the region without regard to the needs of the residents of these areas. That is why the water security occupies an important status in the priorities of the conflict.

This paper discusses the crisis of water pollution in Palestine (West Bank in particular), which address the sources of water, causes of pollution, the effects of occupation on the Palestinian water control and its role in pollution, in addition to statistics on water consumption with a comparison between per capita consumption of the Palestinian people and the individual occupier which shows a big difference. Also, the paper discusses the proposed solutions of water crisis in Palestine by clarifying the role that must be followed by the Palestinian National Authority in the management of this crisis, whether it be through national projects completed or that are still under construction and future water-related, as well as the strategy to be followed in this stage through the implementation of water access entitlements agreed upon and the development of legal and

administrative framework for the water sector in Palestine, which would allow better management of water sources.

STUDY OF PHYSICAL AND CHEMICAL CHARACTERISTICS OF WASTEWATER TREATED BY TYPHA LATIFOLIA

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This study discusses the physical and chemical properties of the naturally treated water (using Phytoremediation) and assesses its suitability, this kind of treatment using the phragmites to remove pollutants from wastewater. This experiment was carried out in two lysimeters especially designed to control the water level in it. *Typha latifolia* was planted in it . The charactheristics of the treated wastewater were compared with the Italian standard (DM 185/2003) to assess its suitability for agriculture use. The results showed that the Ec value for the treated water was 778 (µs/ cm) was slightly high but nevertheless it can be used for irrigation purposes. The pH value was almost identical, 8.4 which is within the range of the international standard, the TSS of the outlet water was 180 mg/l and this also within the permissible value. For the chemical analysis which were carried out on the outlet water, it was noticed that there was a reduction in the total nitrogen(TN), nitrate, total phosphors(TP) and orthophosphate (P−PPO4. −3),. 4.5mg/l, 0,43 mg/l, 3.00 mg/l, 0.78 mg/l respectively. The COD and BOD values were reduced to 54.3mg/l and 21mg/l respectively. The heavy metals test also showed a reduction in Cd, Zn, Cu, Cr, 0.34mg/l, 0.0016 mg/l, 0.018mg/l, 0.003mg/l respectively. This system of the natural treatment showed a great effectiveness in improving the quality of the wastewater. The study recommends the use of this method for treating wastewater to be reused for agricultural purposes because of its positive environmental impact and its ability to remove odor and turbidity of wastewater.

THE USE OF BIO-FILTER AS A THIRD STAGE OF SEWAGE TREATMENT

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This research was conducted in order to found method for wastewater treatment to reused before discharge it to the environment by filters through the use of natural eco-friendly, such as: ciliated protozoa, Typha and reed Phragmits. The results found that after the contact with the candidate that the water which fell outside number (From 46 × 103 to zero cells/100 ml and phosphate decreased (from 1.1 to 0.9 mg/L) and nitrate (From 5.5 to 4.8 mg/L) after (24 hours), the percentage of bio-requirement for oxygen (BOD) from 236 mg/l to 90 mg / liter and total suspended solids (TSS) from 125.6 mg/L to 20 mg/L. Thus, the final components of the wastewater after biological treatment make it within the parameters of global and valid for several uses such as irrigation, as well as the products of organic waste used as fertilizer in the fight against desertification and the possibility of entry in the manufacture of sugar cane pulp.

TRACKING THE IMPACT OF SALINE WATER IN THE FIRST AQUIFER

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Groundwater contamination with sea water in the area of Zawya was adopted by this study by the chemical method to determine the pollution. Two vertical sections were identified in the sea to using their water for domestic agricultural purposes. The eastern stretches of about 12 kilometers off the coast of the sea and contains 9 wells depths ranging from 40 to 105 meters below the surface. The western section extends about 10 kilometers off the coast of the sea and contains 10 wells of depths 26 to 99 meters. To illustrate the horizontal distribution of some data relating to research have been identified Salah El-din section and Albornawi section and each section contains ten wells.

Samples of groundwater from wells and samples of sea water where taken for chemical analyzes. Total dissolved salts and ions of positive and negative were obtained. Some properties related to hydrological aquifer such as determining the level of groundwater, groundwater movement, and the geological structure of the area studied was identified. The results obtained found that pollution in the first section extends approximately 5 kilometers from the sea and in the second section extends approximately 6 kilometers. Compared with the previous results to a study by the General Authority for Water in the period from (1995 - 2002), we find that the rate of pollution in the first section increased in some wells and decreased in others hover ever, in the second section increased at different rates.

ADAPTING LOW COST WASTEWATER TREATMENT TECHNOLOGIES FOR SMALL COMMUNITIES IN THE MIDDLE EAST COUNTRIES(•)

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Palestine and the neighboring Middle East countries like Oman suffer from severe shortage of water. The problem of water scarcity had governed the life of the people in the two countries since long time. Recent developments only serve to exacerbate the water problem in the region. Population growth, the rise in living standards, and accelerated urbanization threaten the water supply sector in general and agriculture in particular and lead to both a sharps increase in water consumption and rapid pollution of water resources.

According to forecasts, the demand for public water supply in the future will rise. The domestic and industrial consumption will decrease the volume of fresh water available for agriculture, a situation that calls for the development of new water resources. One such resource, reclaimed wastewater, is in highly recommended for irrigation of agricultural crop since it increases the available of fresh water and prevents pollution. This study was conducted to investigate wastewater treatment in Middle East countries taking Palestine and Oman as case study, and to examine the feasibility of using low cost aerobic and anaerobic treatment technologies for small communities.

This study demonstrates in depth the performance of four wastewater treatment plants, two located in Palestine and two located in Oman. The wastewater treatment technologies applied in the small communities of the West Bank are Upflow Anaerobic Sludge Blanket (UASB)-wetland system, and septic tank-biofilters system, where the technology used in Oman is Aerobic system.

The field and laboratory works of this study include; frequent sampling, and testing of wastewater samples from different points in the treatment plants. The results of analysis for each treatment plant were compared together to recommend the most suitable small scale wastewater technology for small communities in the Middle East countries like Palestine and Oman.

(•) Poster

The results of the long-term monitoring period for these technologies' operation revealed that the removal efficiency for different constitutes are excellent and meet with the Palestinian and Omani standards. It seems that the activated sludge technology used in Oman is more efficient in the reduction of pollutants than of aerobic treatment used in small communities of Palestine.

ASSESSMENT OF TOLERANCE TO NaCl SALINITY OF TWO SOLANACEAE GENOTYPES GROWN IN HOT SUMMER SEASONS, BASED ON YIELD AND Na^+ EXCLUSION MECHANISM

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Salinity is one of the most important abiotic stresses that challenge plant growth and the yield. A pot experiment was carried out to assess the behavior of cv. Falconez F1 (eggplant) and cv. Indalo F1 (tomato) genotypes grown in the presence (50 and 100 mM) or absence of salt. The results showed that foliage Na^+ content increased with salt in both tested genotypes, but cv. Falconez F1 showed an ability to control Na^+ accumulation in shoots. The NaCl tolerance in cv. Falconez F1was associated with a better K^+ supply and lower Na^+ transport, resulting in higher K^+/Na^+ ratio and selectivity. The salinity tolerance index (SI) based on the yield was much comparable with K^+/Na^+ ratio and selectivity for classification of salinity tolerance in tested genotypes. Taken together, our findings indicate that cv. Falconez F1 shows an overall K^+/Na^+ ratio and selectivity that may contribute to its higher salt tolerance. It would be possible from these results to graft cv. Indalo F1 onto cv. Falconez F1 for salinity tolerance improving.

HYDROCHEMISTRY AND DESALINATION OF SALINE GROUNDWATER IN WADI EL-ASSIUTI, UPPER EGYPT

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The present study is to evaluate the hydrochemical data of groundwater in the different aquifers of Wadi El-Assiuti (Quaternary Deposit and Paleogene Carbonate). The study area is located in the eastern side of the River Nile faced Assiut town. This area mainly depends on the groundwater in drinking and irrigation, which suffers from high salinity water supplies. The aim of the present work is a trial to overcome the high salinity water resources problem in Wadi El-Assiuti area which suffers from this problem through synthesis, characterization and evaluation of modified membrane. Cellulose acetate (CA) and Polyamide (PA) were selected as polymer substrates and modified by blending with polyethylene glycol (PEG), and grafting with acrylic acid (AAc) by dry casting method using two different initiation techniques (radiation and chemically initiated processes). The synthesis of reverse osmosis membranes, their characterization and application in desalination processes were studied. The present work is also mainly devoted to study the possible application of synthetic reverse osmosis membrane in desalination of brackish and saline groundwater in the study area, which is considered as an example of a remote area for development. This area mainly depends on the groundwater in drinking and irrigation, which suffers from high salinity water supplies.

ACCUMULATION AND DISTRIBUTION OF MINERALS AND HEAVY METALS IN COTTON PLANTS GROWN ON SOIL AMENDED WITH URBAN SEWAGE SLUDGE

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Sewage sludge collected from El-Salhya sewage station at Qena city in Egypt was applied in a pot experiment to investigate the uptake and distribution of certain mineral nutrients and some heavy metals in different organs of *Gossypium barbadence* plants. The sludge was mixed with sand at three levels: 10%, 20% and 30% and the sand was used (without sludge) as control. Results revealed that amendment the sandy soil with sewage sludge resulted in increasing the essential nutrients in the experimental plant parts especially N and P. The distribution of Na and K was in another way, and mostly Na accumulated in roots while more K transported into shoots of the plants. Results indicated also that Na/K ratio was higher in plant roots than in shoots. Mg and Ca distributed in shoots and roots with significant change from the roots toward the shoots, and also between both organs in plants grown on sludge and their analogous in control plants. Results of heavy metals analysis in this study indicated that heavy metal accumulation was more in roots than shoots under sewage sludge amendment. Data indicated that Fe and Pb accumulated in roots of plants more than shoots. In contrast to these metals, Ni was transported up to the shoots, while low amounts were detected in roots. The accumulation of heavy metals in cotton plants grown on sandy soil amended with sewage sludge was generally arranged in the following preference: Fe > Zn> Pb > Ni which reflected the concentrations of these metals in sludge. Correlation analysis between the contents of heavy metals in both organs of cotton plants and that in the sand-sludge mixture showed different relationships.

INNOVATIVE PILOT SCALE AH-DHS SYSTEM FOR DOMESTIC WASTEWATER TREATMENT FOR REUSE IN IRRIGATION PURPOSES

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Pilot scale (0.9 m^3) up-flow anaerobic hybrid (AH) reactor in combination with down-flow hanging sponge (DHS) system (1.3 m^3) for treatment of domestic wastewater was investigated. The combined system was operated at an HRT of 6.0 h for AH and 3.2 h for DHS system. The results obtained revealed that the total process achieved a substantial reduction of COD_{total} resulting in an average effluent concentration of only 39 mg/l. Moreover; 90% of ammonia was eliminated in the DHS system. Nitrate and nitrite data revealed that 49% of the ammonia removal was occurred through nitrification process. As expected, the removal of total coliforms (TC), fecal coliforms (FC) and fecal streptococci (FS) was relatively low in the AH reactor. The major part of TC; FC and FS was removed in the DHS system resulting, an average count of 1.7×0^5 for TC, 7.1×10^4 for FC and 7.5×10^4/100ml for FS in the treated effluent. Likewise, the results obtained showed that the combined system was very effective in removing protozoological such as sarcodins (e.g. *Entamoeba* cysts ; Flagellates (e.g. *Giardia* cysts) and ciliates (such as *Balantidium* cysts). On the other hand, coccidia (e.g. *Cryptosporidium* oocysts) were detected in the effluent of UASB reactor (36.4%), and DHS system (27.3%). Only 10% of intestinal nematode and cestode ova were recorded in the effluent of AH reactor, and were completely removed in the DHS system. These studies strongly demonstrate that the combined system consisting of AH-DHS system have a capacity for efficient removal of parasite eggs and thus provide a reliable, low

cost technology for treating effluent compliant with health related objectives for the treatment of domestic wastewater intended for agricultural reuse.

EVALUATION of THE NATURAL VEGETATION RESOURCES AT KSHEITI OASIS WEST OF IRAQ AND ITS RELATIONSHIPS WITH AGRICULTURAL UTILIZATION

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To identify the nature differences which happened to natural vegetation by agricultural utilization action at ksheiti oasis west of Iraq. The natural vegetation was descriptied at agricultural utilized soil series 132CCE. Since the present species were diagnosed and ecological system was analyzed by measuring the plant community properties.

The results of relatively distribution for natural vegetation were showed that Perennial species formed 42% in comparison with Annuals species which reached 58%. *Alhagi maurorum* formed the higher percent followed by *Lagonychium farctum,* and *Atriplex tataricum, Achillea fragrantissima, Artemisia herbaalba, Artemisia scoparia, Salsola rosmamus* and *Cornulaca monacantha* as percents 17.2, 8.7, 6.5, 2.4, 2.0, 2.0, 1.6 and 1.6% respectively for the perennial species. While the Annuals species showed the supermacy for *Malva parviflorum* followed by *Lolium rigidum, Avena barbata, Lophochloa phleoides, Plantago ovata, Aegibps crassa, Hrdeum marinum, Silene oliverian, Fagonia bruguieri, Bromus tectorum* and as percents 12.2, 12.0, 10.5, 10.0, 4.9, 2.4, 1.8, 1.8, 1.2, 0.6 and 0.6% respectively.

The agricultural utilization and the type of agricultural system were influenced on the species percentages and its existence in this environment. when we was comparded this results with Guest (1966) study, It was appeared the disappearance of many plant species from this region of Iraq, which means we needs to consolidation and checking for exist species in this important part of country with time and attempt to saving which is remain from it and returning which was lost in the future.

EFFECT OF CAR CRANK CASE OIL APPLICATION ON SOME SOIL PROPERTIES AND WHEAT GROWTH AND YIELD

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This study was conducted to test the effect of car crank case oil which was added at levels 0.5 ,1.0 and 2% (based on dry weight) compared to the control treatment, to three soils of loam, clay and sand loam textures on some soil chemical and biological properties, after three months of incubation at 30±5 ˚C and its effects on growth and yield of wheat crop. The study also investigates this effect on some soil physical and chemical properties after harvesting. The results showed an improvement in the studied soil properties after incubation period , which were positively reflected on the growth and yield of wheat plants. Also the used levels of car crank case oil showed no instant evidence of soil contamination with lead or toxicity of wheat grains. The clay textured soil showed the superiority compared to others in improving the soil chemical and physical properties and the growth of grown plants and its yield which indicated the possibility of getting rid of the car crank case oil which is considered as dangerous environment pollutant depending on the level of application, soil type and soil salinity with possible time of addition .

LINGUISTIC HEGEMONY AND ITS NEGATIVE IMPACT ON DEVELOPMENT: A STUDY OF THE LINGUISTIC

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The main objective of this study is to discuss the problem of linguistic hegemony and its negative impact on the future of the Arabic language and its relation to the formulation of scientific and intellectual identity and the ability of the Arab citizen on innovation and creativity and its implications on the development process.

The study reviews hegemony of language on the Arabic language of the basis in the dominance of foreign languages, whether in education or patterns of communication different, as well as the dominance of dialects at the expense of classical Arabic, is also under study for some of the issues related language such as the inevitability of change, linguistic, and practice Arabic language between bilateral and multilateral , and then address the study of the effects of the negative consequences of this dominance of language, both at present or in the long run, dealing with the study as well as the most important ways to combat the negative effects of the problem of dominance of language on the Arabic language by addressing the issue of localization requirement a development and the most important obstacles that prevent the activation of the efforts of localization The most important ways to overcome these constraints at the individual level and institutional level and national level, is under study as well as the importance of the role of political decision in pushing towards combating the negative effects of the problem of linguistic hegemony.

نظم المعلومات الصحية

COMMUNITY PARTICIPATION AND THEIR CONCEPTS ABOUT DECENTRALIZATION OF HEALTH PROGRAMS, IN SHENDI LOCALITY-RIVER NILE STATE, SUDAN, SEPTEMBER 2007-APRIL 2010

Suleman Elkamil Ahmed Hamid(•)

This observational cross-sectional study was carried out in Shendi locality-River Nile State, Sudan in September 2007-April 2010.

A sample of 653 individuals of different classes from the community, health managers, and health workers in facilities of primary health care (PHC) in the locality were selected to asses the community participation and to know their concepts about decentralization of health programs. The sample was selected using stratified sampling, then random simple sampling was used for each class. Structured questionnaires, & focus groups discussion, were used for collection of the data.

(27.3%) of the community participated in health programs. In addition, there is statistical significant association between community participation in health programs and the age of the users of the health facilities. (23.3%) of the community participation is in the planning. Most of the community leaders define decentralization as delegation & distribution of responsibilities. (33.3%) of the health managers define decentralization in health system as delegation of authority.

The current study shows that there is partial community participation in health programs. Health managers have to encourage this participation to be holistic and establish health programs on scientific way according to the community needs.

(•) Poster

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COMMUNITY DEVELOPMENT THROUGH TRANSFORMATIONAL TRAINING FOR YOUNG PEOPLE

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Chairman of the Women's Development at the University of Assiut
* Project Manager at Assiut University Women's Society for Development

(Report)

Society women's of Assiut University for Development provide services to all segments of society (disabled/children/youth/girls/women) and the development of urban and rural communities at the level of Assiut Governorate, through the implementation of development projects and services that meet the real needs of different groups of society in cooperation with the financing of interior and external, governmental and non-governmental organizations.

We praise Allah that much and make us successful and enabled us to implement the training project for young graduates transfer centers Dirout/Qusiya/ Manfalout/Abnoub in collaboration with the Social Fund for Development and funding from the European Union during the period of July 2009 to July 2011.

DEVELOPMENT OF TOURISM IN THE SOCOTRA ARCHIPELAGO BETWEEN THE POTENTIAL OF NATURAL AND ENVIRONMENTAL IMPACT AN EMPIRICAL STUDY IN THE GEOGRAPHY OF TOURISM

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Tourism has become industry head in many countries of the world and is usually an essential goal of adopting the concept of sustainable development to reach high rates of income in the light of social, economic and environmental impacts through the following environmental policies to preserve the natural heritage and cultural and biodiversity conservation for present and future generations. Good planning and good governance of its resources available for the Socotra archipelago that qualify it to become a attractive destination and influential in the map of Yemen tourism. The purpose of this study is to find a mechanism to achieve the required balance between the potential of nature and use sustainable tourism to the environment in Socotra by identifying the site Socotra archipelago and identify the most important forms of tourism. Climate suitability of Archipelago is convenience of rights and activities of the tourist. The analyze the role of diversity vital to the environment of the archipelago in tourism development, and finally propose a mechanism to evaluate the returns expected environment from the operation of tourism projects and determine their impact on the components of the natural environment, and propose a set of roles to reduce or avoid these effects that expected. To achieve the objectives of the study it was combine two approaches thematic, regional and method of analysis spatial. Spatial analysis and the methodology of the case study, in addition to the use of a number of quantitative methods. A variety of study tools between the field visit and personal interview and analysis of maps and visualization space.

AN ECONOMIC STUDY FOR EFFECTUATE OF BIO-FUEL PRODUCTION ON THE SUPPLY AND DEMAND OF CEREALS CROPS

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This research aims to estimate the effect of Bio-Fuel production (ethanol) from cereal crops on balance of the supply and demand of it in the world .

The results showed that the total production from ethanol increased from 8.1 to 47.8 Melyar tons in the world during the period (1997-2010) and 90% ratio from the production concentrated in 6 counties ; Brazil , USA, china , France , India , Russia , and the maize crop that using in the Ethanol Production increased from 13.5% to 36% and also the wheat crop increased from 3.6 % to 8% in the world for the same period .

The world consumption from cereals crops and the amount of using maize in ethanol production affect adversely on the world store of cereals crops The total maize production and the total ethanol consumption are affect adversely on the ethanol production in the world and the amount of using maize in ethanol production in USA and china are affect on the total ethanol consumption in the world. The forecasting results showed that the world store of cereals decreasing in 2015 year to 165 million tons and to 110 million tons in 2020 year , while the world consumption from cereals increasing to 2505 , and 2758 million tons in the same years. This means that the rate of cereals store to cereals consumption in the world decrease from 13.5% to 6.6% and to 4% in the 2010 , 2015 and 2020 years .And the results of study forecasted that the world ethanol production and ethanol consumption are increasing to 53.5 and 59.3 melyar tons in 2015 year and increase to 68.5 and 78.4 melyar tons in 2020 year , the rate of production to consumption of ethanol in the world decrease from 106% to 89% and to 87% in 2010 , 2015 and 2020 years .

The result showed that the cereals supply is decreasing because the cereals demand and Bio-Fuel production are increasing in the world , and this lead to high risk in the food security in the world and

specially in the poor countries that depends on food imports specially cereals crops.

ENVIRONMENTAL PROBLEMS: ISLAMIC VIEW(•)

ميمون الطاهري

أستاذ محاضر بالكلية المتعددة التخصصات – الناظور – المملكة المغربية

The environmental problems such as pollution and exploitation become one of the major interests of researchers, in addition to the governments and international communities. This particular interest is dated at the beginning of seventieth in the previous decade. During this period, many journalists and scientists point out in their writings to "environmental crisis", a specific term which refers to the problems that confront the earth planet. As consequence, the international communities held a summit in 1972 in the Sweden capital, Stockholm. In this summit, a final report was delivered which contained the basic procedures of protection that the national government should take at the national and international level.

However, it is remarkably noted that the environmental problems last a whole decade before being perceived as a global issue, which concern the entire world. Therefore, a common view is constantly formed about this particular issue, designed to protect the environment and its properties. The international communities admit that the earth planet is recently in a disaster. A fact that induces a great number of researchers and philosophers to warn the public about the disaster that the environment is doomed to. In this case, Michel Serres, a french philosopher, warn the people about a planned "genocide operation" committed by human-being against the nature.

Facing these accusations to the western developed countries and their negative impact on the environment, the people wonder about the stand of others cultures and civilizations, a part from western ones, about this phenomenon which faces the earth planet. As consequently, many writings have been raised to highlight the stand of others religions concerning the environmental problems, and establish the major procedures to face this ultimate disaster, to which the world is doomed to.

Therefore, we try, in our recent research, to shed light on the stand of different religions, especially Islamic religion in facing the environmental problems. First of all, we mention the great efforts that the entire world exhorts to face the environmental crisis, and we wonder whether there is a religious view about the environmental issue. And if it exists, we try to shed light on the major references that tackle such issue. Then, we mention largely the Islamic stand about such phenomenon. Also, we wonder whether religion can provide an alternative resolution to solve the earth planet from a real disaster. In brief, our research contains two folds:

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In first party, I mention briefly the features that characterize the environmental crisis and the efforts exhorted to confront such crisis.
In second party, we clarify the Islamic view and how it perceives the environment. At the end, we discuss in depth the environmental crisis.