

Day 1 : March 13th 2017

10.30 am -11.00 am - Registration

11.00 am -11.30 am - Inaugural session

11.30 am -11.45 am - Group photo

Keynote Forum

11.45 am - 12.15 pm - Prof. Wafik Noseir
*Environmental Engineering Consultant,
Egyptian Modern Center*

12.15 pm - 12.30 pm - **Coffee Break**

12.30 pm – 01.00 pm - Dr. John Ogoni Odiyo
*University of Venda, School of Environmental
Sciences*

Session Introduction

01.00 pm - 01.30 pm --- Oral Presentation by **Ismael Dagostin-Gomes**
Topic :- Sanitary and environmental engineering teaching and integrative learning projects: seeking solutions for regional situational problems.

01.30 pm - 02.00 pm --- Oral Presentation by **Zhuojun Li**
Topic :- Oxidation and adsorption of metaldehyde by nanoparticle catalysts and powdered activated carbon

02.00 pm – 03.00 pm --- **Lunch Break**

- 03.00 pm - 03.30 pm --- Oral Presentation by **Omer Gungor**
Topic :- Comparison of SWAT and HSPF Models Performance for Hydrological Components
- 03.30 pm - 04.00 pm --- Poster Presentation by **Zenaide Pais Topanotti**
Topic :- Environmental education for the preservation of State Biological Reservation of Aguai – SC, Brazil.
- 04.00 pm - 04.30 pm --- Oral Presentation by **Sylvia Agostini**
Topic :- Ecological restoration on fish nurseries: a new opportunity for sustainable management of fisheries resources and marine biodiversity
- 04.30 pm - 04.45 pm --- **Coffee Break**
- 04.45 pm – 05.00 pm --- **Feedback**

— **DAY 1 END** —

ICETEEPC 2017

Day 2 : March 14th 2017

Session Introduction

- | | |
|---------------------|---|
| 10.30 am - 11.00 am | --- Oral Presentation by <i>Eman Abdelfattah</i> Topic :- Evaluation of oxidative Stress in <i>Aiolopus thalassinus</i> (Orthoptera: Acrididae) collected from fertilizer industrial polluted areas |
| 11.00 am - 11.30 am | --- Poster Presentation by <i>Kuntz, Gustavo</i> Topic :- Environmental education and regional development: community preventive actions of Environmental and Sanitary Engineering. |
| 11.30 am - 11.45 am | --- Coffee Break |
| 11.45 am - 12.15 pm | --- Poster Presentation by <i>Vesna Lavtizar</i> Topic :- The interactive effect of salts and copper pyriithione on a brine shrimp survival |
| 12.15 pm - 12.45 pm | --- Poster Presentation by <i>Maihcon Matias</i> Topic :- Environmental sanitation: preventive actions against the pollution of the environment in Sao Ludgero – SC, Brazil. |
| 12.45 pm - 01.45 pm | --- Lunch Break |
| 01.45 pm – 02.15 pm | --- Oral Presentation by <i>Musasizi Josephat</i> Topic :- Impacts of Climate Change - Case Study Uganda |
| 02.15 pm – 02.45 pm | --- Oral Presentation by <i>Ssembogga Roy</i> Topic :- Ecology of climate change and distribution of Infectious Diseases in Uganda |

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- 02.45 pm – 03.15 pm --- Poster Presentation by **Zerdoum Saliha**
Topic :- Coffee Grounds Fertilizers and a Pesticide
- 03.15 pm – 03.30 pm --- **Coffee Break**
- 03.30 pm – 04.00 pm --- **Feedback**

--- **DAY 2 END** ---



ORGANIZING COMMITTEE MEMBERS



International Conference on Emerging Trends in Environmental Engineering and Pollution Control

13th – 15th March 2017, Beijing ,China



Dr Aboul Ella Hassanein

Faculty of Science, Pure Mathematics, and Department of Computer Science
Ain Shams University

Biography:

Aboul Ella Hassanien (Abo) received his B.Sc. with honors in 1986 and M.Sc degree in 1993, both from Ain Shams University, Faculty of Science, Pure Mathematics and Computer Science Department, Cairo, Egypt. On September 1998, he received his doctoral degree from the Department of Computer Science, Graduate School of Science & Engineering, Tokyo Institute of Technology, Japan.

Dr Aboul Ella Hassanein is the Founder and Head of the Egyptian Scientific Research Group (SRGE) and a Professor of Information Technology at the Faculty of Computer and Information, Cairo University. Professor Hassanien is ex-dean of the faculty of computers and information, Beni Suf University. Professor Hassanien has more than 500 scientific research papers published in prestigious international journals and over 30 books covering such diverse topics as data mining, medical images, intelligent systems, social networks and smart environment. Prof. Hassanien won several awards including the Best Researcher of the Youth Award of Astronomy and Geophysics of the National Research Institute, Academy of Scientific Research (Egypt, 1990). He was also granted a scientific excellence award in humanities from the University of Kuwait for the 2004 Award, and received the superiority of scientific - University Award (Cairo University, 2013). Also He honored in Egypt as the best researcher in Cairo University in 2013. He was also received the Islamic Educational, Scientific and Cultural Organization (ISESCO) prize on Technology (2014) and received the state Award (جائزة الدولة) for excellence in engineering sciences 2015.

International Conference on Emerging Trends in Environmental Engineering and Pollution Control

13th – 15th March 2017, Beijing ,China



Dr.R. Krishnaraj B.E., M.E (Gold Medalist), MBA(HRM),
PhD(MECH).(Inspire DST Fellow, India)
Scientific Director-Centre for Excellence and Incubation,
Associate Professor, Department of Mechanical Engineering
Institute of Technology, Ambo University.
Ambo, Ethiopia-19, East Africa.

Biography:

Gold medalist in engineering design in the Department of Mechanical Engineering, Anna University in the year 2010-2011 .Honored with Young environmentalist award by Gujarat pollution control board, India and journal of environmental research and development in the year 2011. Awarded Inspire fellowship from the Ministry of Science and technology, India. Honored with Bry Air international Awards for the Excellence in Heating, ventilation Air condition and refrigeration in Feb 2007.Honored with “Best NSS National Award” by Anna University Chennai,India during the year 2006 –2007. Presented more than 120 papers in International Conferences and published 75 papers in international Journals. Serving as chief editors and reviewers in many international journals.

Recent Publications with (Thomson Reuters Impact Factors)

1. Krishnaraj, R.,(2015) Foundry Air Pollution: Hazards, Measurements and Control. , CO2 Sequestration, Biofuels and Depollution, Environmental Chemistry for a Sustainable World 5, DOI 10.1007/978-3-319-11906-9, pg 335-357.
2. Krishnaraj, R., (2015) Control of pollution emitted by foundries. Environ Chem Lett DOI 10.1007/s10311-015-0500-z.

3. Krishnaraj, R., (2015) Contemporary and futuristic views of pollution control devices in foundries *Ecotoxicology and Environmental Safety* 120 .130–135 .

4. Krishnaraj, R and Devadassan S.R (2015) A STUDY ON CONTROLLING POLLUTION IN IRON FOUNDRIES LOCATED IN COIMBATORE DISTRICT OF INDIA. *Environmental Engineering and Management Journal* (Accepted Impact factor-1.28)

International Conference on Emerging Trends in Environmental Engineering and Pollution Control

13th – 15th March 2017, Beijing ,China



Dr. Dong Zhanfeng

Chinese Academy for Environmental Planning (CAEP), China.

Biography:

Prof. Dong Zhanfeng is currently working at the Chinese Academy for Environmental Planning (CAEP) directly under the Ministry of Environmental Protection (MEP), acted as the associate director of the Environmental Policy Institute(EPI). He is mainly engaged in water environmental plan and policy, technical and economic assessment of the water environmental resources policy, water environmental industry. He also serves as the senior environmental policy consultant experts for UNEP, UNDP, ADB, WWF and other international agencies and as the council or committee membership of more than 10 international and domestic academic groups, like Chinese Society on Green Finance, Chinese Society on Management Science . He has presided over about 60 international cooperation and domestic research projects in recent few years. International cooperation projects were mainly funded by UNEP, UNDP, ADB, WB and EF, etc. Domestic scientific research projects were mainly funded by the Ministry of Environmental Protection (MEP), Ministry of Science and Technology(MOST), Ministry of Finance(MOF), the National People's Congress(NPC), the National Natural Science Foundation(NNSF), etc. He has made several recommendations on environmental policy, environmental protection industry development to the State Council, MEP, National Development and Reform Commission(NDRC), National People's Congress (NPC), MOF, State Administration of Taxation(SAT) , local government departments, and many suggestions were adopted by the relevant ministries and commissions of China. He has published more than 100 papers in academic journals, 13 monographs □ 1translation books

International Conference on Emerging Trends in Environmental Engineering and Pollution Control

13th – 15th March 2017, Beijing ,China



Yongrok Choi

Distinguished Inha Fellow Professor (IFP)
Dept. of Intl. Trade and logistics, Inha University,
#253 Yonghyun-Dong Nam-Ku Inchon, KOREA (402-751)

Biography:

Yongrok Choi Distinguished Inha Fellow Professor (IFP) Education Graduated at Seoul City University Graduated at University of Cincinnati, USA (Ph. D. in Economics) Major: Sustainable Economy & Business, Global e-business, International logistics Public Carriers Organized and have been operating the Sustainable Asia Conference (SAC annual meetings) since Guest Editor in Chief for many SSCI level of journals such as Tech. For. & Soc. Change, Ecological Indicators, and Sustainability Professor (2009-10, Dept. Head) of International Trade Dept., Inha University, Inchon, Korea Appointed as a “Distinguished Inha Fellow Professor (IFP)” by Inha University Director, Graduate Program of Global e-governance, Inha University Registered as a distinguished researcher in the Marquis “Who’s Who in the World” President of Global e-Business Association (GeBA), President of Asia Business Forum (ABF) Counselor of Ministry of Information & Communication, Inchon City, and Incheon Customs Committee Chair of Citizen Coalition for Economic Justice Vice President & Editor in Chief of Korea Productivity Association, Intl. Cyber Trade Association, and Academy for Export Credit Insurance (3 fields in Professor Associations Nationwide) Guest Lecturer of Samsung Group and many other Korean corporations National Testing Committee Member of Business English Certificate National Testing Committee Member of Certified Transportation

Administrator Professor, Incheon City College Senior Researcher (Korea Telecom) Lecturer, U. of Cincinnati and Northern Kentucky University (Teaching Classes: Principles of Economics, Mathematical Economics, Probability & Statistics) Manager, Samsung Electronics Co.

Publications

Global e-Business Management: Theory & Practice, Bomyoung Books
Strategic Management of e-Business and Web Marketing, Bomyoung Books
Principles of Economics, Bomyoung Books
Understanding of International Logistics, Bomyoung Books
Global Business English, Bomyoung Books
Global e-Trade System Management, Hermes Press
Principles of e-Commerce and e-Business, Doonam Press
Principles of International Transportation and Logistics, Inha Univ. Press
2000 Electronic Commerce and Internet Trade, Doonam Press
Understanding of International Negotiation, Bupkyungsa Press
Principles of Economics, Jinyoungsa Press
Principles of Foreign Direct Investment, Parkyoungsa Press (2000, 1st revised)
Ch12. Productivity, Efficiency, and Economic Growth in the Asia-Pacific Region, Physica-verlag, Springer.

Award and Prizes

Honorable Award of Prime Minister of Korean Government for IT and e-Business Contribution
Best Researcher Award, given by the Ministry of Construction & Transportation
Best Research Fellowship Award given by Inha University (Top 1% Level)
Award for the Services, given by the Korea Trade Research Association
Best Researcher Award, given by the Korea Productivity Association
Taft Fellowship, given by the Univ. of Cincinnati

International Conference on Emerging Trends in Environmental Engineering and Pollution Control

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Dr.Zhou Ke

Male, born in 1954, Liaoning Province

Doctor of law, Professor, doctoral supervisor

Director, Institute of environmental resources, law school, Renmin University of China

Biography:

Dr.Zhou Ke Environmental resources law, civil law, economic law, corporate law, real estate law, etc. Vice president of the China Environmental and Resources Law Research Association Director of Teaching and Guiding Committee of China Environmental Resources Law Research Institute Director of Supreme People's Court Environmental Resources Judicial Trial Research Base 2014 annual Chinese law character Toward an improved legislative framework for China's land degradation control" 32 (2008) 11–24, (SSCI&SCI) 2008 United Nations. Published by Blackwell Publishing Ltd., 9600 Garsington Road, Oxford, OX4 2DQ, UK and 350 Main Street, Malden MA 02148, USA.) Discussion on Current Pollution Status and Legislation of Environmental Hormone in China, (EI) , (ICEE)2011, International Conference on Energy and Environment, Volume Discussion on Current Pollution Status and Legislation of Persistent Organic Pollutants in China, (EI) , (RSETE)2011, International Conference on Remote Sensing ,Environment and Transportation Engineering, Volume I "The term 'green economy' reflects a win-win concept", (SSCI&SCI) Viewpoints / Natural Resources Forum •• (2011,2), Natural Resources Forum © 2011 United Nations The Carbon Emission Quantification Of the Low Carbon Road Maintenance Technology Toward an improved legislative framework for China's land degradation control" 《Natural

Resources Forum » 32 (2008) 11–24, (SSCI&SCI) . 第一作者, 2008 United Nations. Published by Blackwell Publishing Ltd., 9600 Garsington Road, Oxford, OX4 2DQ, UK and 350 Main Street, Malden MA 02148, USA.) Discussion on Current Pollution Status and Legislation of Environmental Hormone in China, (EI) , (ICEE)2011, International Conference on Energy and Environment, Volume Discussion on Current Pollution Status and Legislation of Persistent Organic Pollutants in China, (EI) , (RSETE)2011, International Conference on Remote Sensing ,Environment and Transportation Engineering, Volume I “The term ‘green economy’ reflects a win–win concept”, (SSCI&SCI) Viewpoints / Natural Resources Forum (2011,2), Natural Resources Forum © 2011 United Nations The Carbon Emission Quantification Of the Low Carbon Road Maintenance Technology In China, (EI) , 2012 Asian Pacific Conference on Energy,Environment Sustainable Development.(APEESD),November 12-13,Kuala, Malaysia,Trans Tech Publications,Switzerland Policy and Legal Analysis of Development of China's Low Carbon Buildings, (EI) , 第一作者, Frontiers of Energy and Environmental Engineering,CRC Press/Balkema,2013,Taylor & Francis Group,London,UK “On the Legislation of Environmental Rights: Relationship Between Environmental Rights and Property Rights” , (EI) , 第一作者, William & Mary Brigham-Kanner Property Rights Conference Journal, Volume 1,September 2012, A Publication of the Property Rights Project of William & Mary Law Schoole College of William & Mary



KEYNOTE FORUM



International Conference on Emerging Trends in Environmental Engineering and Pollution Control

13th – 15th March 2017, Beijing ,China



Prof. John Ogony Odiyo

Hydrology and Water Resources at the University of Venda
Water Engineering from the University of the Witwatersrand in South Africa.

Comparing the Performance of Different Biosorbents for Sequestering Of Heavy Metals From Aqueous Solutions

Hheavy metals are ubiquitous in the environment but have been regarded as a nuisance which possesses a risk to man and other users of the environment. A study was carried out to assess the uptake of lead(II), Copper(II) and Chromium(IV) from aqueous solution using the leaves and stem of *Diceriocaryumeriocarpum* plant (DEP) and chitosan synthesized from land snail shells. Fourier transform infrared (FT-IR) spectrometer supplied by Perkin Elmer (Waltham, MA, USA) with sampling accessories was used for functional group analyses. Surface area and pore width were determined by the N₂ gas Brunauer-Emmett-Teller (BET) method of analysis using a Micromeritics Chemisorption ASAP 2020 supplied by Norcross, USA. The chemical composition of the samples were analysed using Rigaku, ZSX Primus II X-ray fluorescence spectrometer (Rigaku, USA). The surface morphologies of the samples were analysed using scanning electron microscopy (SEM) (TESCAN, VEGA 3 SBU, Brno, Czech). 8.4-8.7 mg of the biosorbents were heated between 30-900oC at a rate of 10oCmin⁻¹ using a TGA analyzer supplied by Perkin Elmer thermal analyser (Waltham, MA 02451, USA) for thermal degradation studies of the biosorbents. From the characterization studies, the three biosorbents have carbonyl and amino functional groups which have been regarded as good binding agents for heavy metals sequestering from aqueous solution. BET analyses of the

biosorbents showed that they are all microporous and such materials have been reported widely in literature as suitable for the uptake of metals. The synthesised chitosan was a better biosorbent for the removal of lead(II) ions from aqueous solution compared with leaves and stem of DEP. However, when considering the uptake over a wide range of metals, DEP leaves was a better biosorbent than the others. The kinetics of the biosorption process for all the biosorbents was best described by the pseudo second order kinetic equation. Although both the Langmuir and Freundlich adsorption models could perfectly describe the biosorption process due to positive correlation coefficients exceeding 0.8 in all cases, the Langmuir model better described the process for the adsorption of Pb²⁺ onto DEP leaves and the synthesised chitosan based on the linearised coefficients while the Freundlich model better described that of DEP stem. All the biosorbents studied have high potential for use in water and wastewater treatment.

Keywords: Biosorption, dicercaryumeriocarpum plant, heavy metals, synthesized chitosan.

Biography:

Prof John Ogony Odiyo is a Professor of Hydrology and Water Resources at the University of Venda. He has PhD in Water Engineering from the University of the Witwatersrand in South Africa. He has been providing strategic leadership as the Dean of the School of Environmental Sciences at the University of Venda for the last 4 years (since 2013). Before this he served for 3 years as Deputy Dean of the School of Environmental Sciences. He researches and conducts postgraduate supervision in the field of Water and Environmental Engineering, a field in which he has published extensively. His research transcends hydrology and water resources and thus additionally includes water/wastewater pollution and remediation, water systems analysis and water supply.

International Conference on Emerging Trends in Environmental Engineering and Pollution Control

13th – 15th March 2017, Beijing ,China



Prof. Wafik Noseir

Environmental Engineering Consultant,
Egyptian Modern Center

The Future; Renewable Energies

Around the world about 6.5 million premature deaths each year can be attributed to air pollution

- ◆ Energy production and use are by far the largest man-made sources of air pollutants
- ◆ Technologies to tackle air pollution are well known

Clean air is vital for good health. Yet despite growing recognition of this imperative, the problem of air pollution is far from solved in many countries, and the global health impacts risk intensifying in the decades to come. The scale of the public health crisis caused by air pollution and the importance of the energy sector to its resolution are the reasons why we are focusing on this critical topic for the first time.

The electricity requirements of the world including Egypt are increasing at alarming rate and the power demand has been running ahead of supply. It is also now widely recognized that the fossil fuels (i.e., coal, petroleum and natural gas) and other conventional resources, presently being used for generation of electrical energy, may not be either sufficient or suitable to keep pace with ever increasing demand of the electrical energy of the world. Also generation of electrical power by cold based steam power plant or nuclear power plants causes pollution, which is likely to be more acute in future due to large generating capacity on one side and greater awareness of the people in this respect.

The recent severe energy crisis has forced the world to develop new and alternative methods of power generation, which could not be adopted so far due to various reasons. The non-conventional methods of power generation may be such as solar cells, fuel cells, thermo-electric generator, thermion converter, solar power generation, wind power generation, geothermal energy generation, tidal power generation etc.

This paper/presentation elucidates about Different Energy sources, why we are going for non-conventional energy sources (RENEWABLE), Different non-conventional energy sources & comparison between them, with advantages & disadvantages, TOWARDS OUR BETTER EVOLUTION.

Biography:

Environmental Engineering Consultant □ has many publishes in the sustainable development especially with the environment, worked in the first Solar Energy Corporation at Egypt that was established by company "Honeywell" since 1983 , Petroleum sector Planning & follow up manager at 3 main companies at Egypt , and many international companies such as Arthur Anderson consultant firm and Coca-Cola as a projects & Environmental manager □ Project manager of the National project of Egypt on year 2000 called "Toshka", have participated in many International Conferences inside & outside Egypt especially the World Congress for the Environment that have represented Egypt as a free lancer 7 times lately was at Washington DC, California, Portland and Florida USA & France & Turkey & UK & Denmark, Dubai □ etc □ founder & owner of Egyptian Modern Center (EMC), which is an Environmental Engineering Consultation firm that is trying to find its way in a polluted environment Please see website: www.drwafik.com

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ABSTRACTS



International Conference on Emerging Trends in Environmental Engineering and Pollution Control

13th – 15th March 2017, Beijing ,China



Kuntz, Gustavo

Centro Universitário Barriga Verde – UNIBAVE

Dagostin-Gomes, Ismael

Centro Universitário Barriga Verde - UNIBAVE

Environmental Education and Regional Development : Community Preventive Actions of Environmental and Sanitary Engineering.

In the last decades, the problems involving the environment have become apparent, but deciding to overcome these issues are still in need. Thus, initiatives for environmental sensitization at a local and global scale have become necessary. Therefore, this work has the objective to report an environmental education proposal for the development of the region through community actions, which were promoted by the Environmental and Sanitary Engineering Course of the Centro Universitário Barriga Verde – UNIBAVE. The educative actions occurred through visits and lectures in schools and in companies of the region of Encostas da Serra Geral (South of the State of Santa Catarina, Brazil), area in which UNIBAVE is inserted. The group, formed by the course coordination team and interns, covers the topics of industrial and agricultural pollution, the reduction of the habitat, illegal hunting, residue generation, the consume of water and energy, among other issues. In the last semester of 2016, for instance, 20 visits of about 45 minutes each, in the cities of Orleans, Urussanga, Lauro Müller, Pedras Grandes, São Ludgero, Braço do Norte and Grão-Pará were made. The visits showed that the attending public had a lack of knowledge in some of the themes, indicating that the educative action will potentially result in prevention of those environmental problems, and as such contributing to the sustainability of the region.

Biography:

Gustavo Kuntz study Sanitary and Environmental Engineering Undergraduate Course at UNIBAVE University Center and is Accounting Technician by CEDUP Diomício Freitas. Currently, is intern of Environmental Management (Environmental Education) of UNIBAVE University Center. He has experience in Earthmoving, Wastewater Treatment and Watersheds.

International Conference on Emerging Trends in Environmental Engineering and Pollution Control

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Dagostin-Gomes, Ismael

Centro Universitário Barriga Verde - UNIBAVE

Sanitary and Environmental Engineering Teaching and Integrative Learning Projects: Seeking Solutions For Regional Situational Problems.

Seeking a more interactive educational strategy that promotes significant learning has been one of the present concerns of the higher education in Brazil. Because of that, the university Centro Universitário Barriga Verde (Orleans Campus, Brazil) proposed using integrative learning projects in the development of subjects in the curriculum of the graduation courses. This proposal is based on a situational problem (case study) which triggers a protagonist attitude in the college students when engaging them in the pursue of concrete solutions, covers the contents in a given context through the mediation of the professors and provide opportunities to experience professional performance. In Sanitary and Environmental Engineering teaching, which this work focus on, some of the issues worked on between the years 2015 and 2016 were: degraded areas by the coal mining; conservation unit without an educational proposal; and, the urban area without the territorial organization. For the situational problems covered in the program, the solutions offered were, respectively: a plan for the environmental recuperation and the ecosystem restauration, marking the diagnosis of the impact and proposing mitigating measures; environmental education project, showing the relation in the ecological balance between biotic elements and anthropogenic pressures; urban zone and planning, covering sanitation, areas for reservation and the civil construction permits. Moreover, it was noticed that the proposed teaching model based on the integrative learning projects involved the professors, students and the community in seeking solutions in creative and systemic ways for the regional environmental and sanitary issues, fostering a sustainable development of the surrounding area of the university Centro Universitário Barriga Verde.

Biography:

Ismael Dagostin Gomes study Doctorate Degree in Environmental Science and Technology at UNIVALI University, Master in Biology by UNISINOS University, Biologist by UNIASSELVI University Center, and Graduated in Agronomist Engineer by UFSC University. Currently is Coordinator of Sanitary and Environmental Engineering, Researcher and Professor at UNIBAVE University Center, and Teacher at SATC Technical School. He has experience in Natural Sciences, Environmental Sciences and Engineering, at different levels of education (Elementary School, High School, Technical Education, Undergraduate and Graduate), acting on the following subjects: Environmental Education, General Biology, Ecology, Zoology, Botany, Scientific and Technological Teaching and Engineering Teaching.

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Ömer Güngör,

Bülent Ecevit University

Kadir Özdemir

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Comparison of SWAT and HSPF Models Performance for Hydrological Components

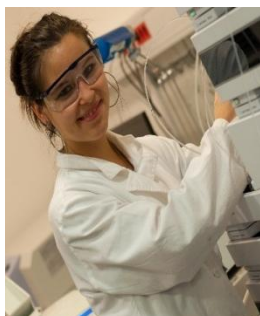
A water basin model is used to better understand the relationship between hydrological / water quality processes and land use activities in the watershed. Modeling studies play an important role in the effective management of water resources. In recent years there has been an increase in the number of studies on this area as the negative effects of climate change on water basins have increased. In this study hydrological performances of SWAT and HSPF models, which are frequently used hydrological models, are compared to show basin water budgets. In the literature, the number of studies comparing the performances of the two models are quite limited (Saleh and Du 2004; Singh, Knapp et al. 2005; Im, Brannan et al. 2007; Xie and Lian 2013; Gebremariam, Martin et al. 2014). In all of these studies, it is seen that the performance of HSPF model is better than SWAT in terms of hydrologic. However, it is also emphasized that the HSPF model requires a large number of inputs and therefore is less user-friendly than the SWAT model. No one model is best under all conditions and comparative studies of model performances in different hydrological conditions and basin scales are necessary.

Biography:

I am an Environmental Engineering and have been working as a research assistant at Bülent Ecevit University for 5 years. I am currently Ph.D. student in Department of Environmental Engineering. My research topics are watershed management, hydrological modelling, water quality and effect of the climate change on watershed.

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Vesna Lavtizar,

Laboratory of Maritime Environmental Management, Research center for Inland Seas, Kobe University, Japan

Daisuke Kimura,

Laboratory of Maritime Environmental Management, Research center for Inland Seas, Kobe University, Japan

Satoshi Asaoka,

Laboratory of Maritime Environmental Management, Research center for Inland Seas, Kobe University, Japan

Hideo Okamura,

Laboratory of Maritime Environmental Management, Research center for Inland Seas, Kobe University, Japan

The Interactive Effect of Salts and Copper Pyrithione on a Brine Shrimp Survival

Copper pyrithione (CuPT) is a very effective booster biocide used in antifouling paints to prevent adhesion of organisms on submerged surfaces (biofouling). We investigated its acute toxicity on a brine shrimp *Artemia salina*, a cosmopolitan crustacean with an important ecological role in marine ecosystems.

A range of CuPT concentrations was tested in dissolved organic matter (DOM) free artificial seawater (ASW) as well as filtered natural sea-water (NSW) with 2.4 mg/L DOM. Although the measured CuPT concentrations were comparable between the test media, a significant difference in toxicity was observed, with CuPT in NSW being 2.2-fold less toxic than in ASW. A chosen CuPT concentration (1.56 μ M nominal) was additionally tested in three modified NSW solutions, which had

electrical conductivity adjusted to 5 S/m (as in ASW). Each solution was prepared using appropriate salt to produce NSW amended with Na, Mg and Ca. While the toxicity in NSW, with very low salt content, remained low (5.6 % mortality), Na, Mg and Ca ions remarkably boosted the CuPT toxicity (90, 78, and 58% mortality, respectively). Our study revealed that not only DOM, but also salts present in water can pose a significant influence on a toxicity of compounds to the non-target aquatic species.

Biography:

Vesna Lavtizar is a JSPS invited researcher, currently focusing on ecological risks of antifouling biocides at Kobe University, Japan. She obtained a PhD at University of Nova Gorica, Slovenia, however part of her work she performed at two universities in Amsterdam, the Netherlands and at the University of Ljubljana, Slovenia. Her main topics of interest are newly emerged antifouling agents, single and mixture toxicity studies as well as environmental fate studies of antifoulants in water compartments.

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Zenaide Pais Topanotti,

Universidade do Extremo Sul Catarinense– UNESC.

Karen de Farias Meller,

Universidade do Extremo Sul Catarinense– UNESC.

Nicoli Naspolini,

Universidade do Extremo Sul Catarinense– UNESC.

Miriam da Conceição Martins.,

Universidade do Extremo Sul Catarinense– UNESC.

Environmental education for the preservation of State Biological Reservation of Aguai – SC, Brazil.

The State Biological Reservation of Aguai (Santa Catarina, Brazil) is of a great importance for the conservation of the Atlantic forest (FATMA,2016). Because of its rich vegetation, the fauna present is formed of a wealth variety of wild species. Based on the importance of this conservation unit, not just for the human supply but also for its ecological function, this project aims to develop environmental education actions in the surrounding schools located in Treviso and Siderópolis (cities) areas, with the objective of involving the local school community in actions that aim to integrate the State Biological Reservation of Aguai in the educational context. It seeks to contribute to the development of attitudes and actions compatible with the conservation of natural resources. For the implementation of the project, it was presented to the target communities, that is, the local government in each city in the presence of educators and students. A powerpoint was used initially to show the importance of a Conservation Unit and the animals that live in the Biological Reservation. In a second visit, it was developed an activity about the human interference on the landscape, which was worked through four

interferences. The educators made the following relation: image and the Biological Reservation, comprehending what happens in these places if there is human interference, seeking economical development without considering the biodiversity. Through the actions, the project has sensitized those involved, and they demonstrate an understanding on the need for balance and the environmental perception. It provides an opportunity to understand how an extension project can interfere in the reality of people, as well as becoming aware of the impact of the environmental education actions which result in the sensitization of the people about the environment.

Biography:

Zenaide Pais Topanotti study Master Degree in Education at UNESC University, is Specialist Degree in Environmental Management by UNESC University and Biologist by UNESC University. She has experience in Education - Elementary and High School (since 1997), with emphasis on: activities and science teaching, environmental education and sciences labs. She has more than 35 abstracts published.

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Zhuojun Li, PhD

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Luiza Campos,

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Suseeladevi Mayadevi,

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Vrushali Chaudhari,

University College London.

Jong Kyu Kim,

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Oxidation and Adsorption of Metaldehyde by Nanoparticle Catalysts and Powdered Activated Carbon

Metaldehyde, an organic pesticide widely used in the UK, has been detected in drinking water in the UK with a low concentration ($<1 \mu\text{g L}^{-1}$) which is still above the European and UK standard requirement. This paper investigates the efficiency of four materials viz. powdered activated carbon (PAC) and carbon-doped titanium dioxide nanocatalyst with different concentrations of carbon (C-1.5, C-40, and C-80) for metaldehyde removal from aqueous solution by adsorption and oxidation via photocatalysis. PAC was found to be the most effective material which showed almost over 90% removal. Adsorption data was well fitted to the Langmuir isotherm model, giving q_m value of 32.258 mg g^{-1} and KL value of 2.013 L mg^{-1} . The nanocatalysts were much less effective in oxidising metaldehyde than PAC with the same metaldehyde concentration and 0.2 g L^{-1} loading concentration

of materials under UV light; the maximum removal achieved by carbon-doped titanium dioxide nanocatalyst C-1.5 was around 15% for 7.5 ppm metaldehyde solution.

Biography:

In 2014, Miss Zhuojun Li obtained her first MSci degree in Geology, specialized in mineral physics; a year later, she graduated from University College London with MSc degree in Environmental Engineering and continued her research in water treatment as a PhD student. Her research focuses on degradation of metaldehyde by photocatalysis and adsorption using novel nanomaterials and activated carbon. Her project is in collaboration with National Chemical Laboratory, India, and she is currently holding the Netwon-Bhabha Fund from the British Council.

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Eman A. Abdelfattah

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Maria Agustyniak,

Department of Animal Physiology and Ecotoxicology, University of Silesia, Poland.

Evaluation of Oxidative Stress in *Aiolopus Thalassinus* (Orthoptera: Acrididae) Collected from Fertilizer Industrial Polluted Areas

Contamination of the environment is one of the serious problems in the world, it influences biodiversity, and the structure and functioning of ecosystems. Many pollutants enter the environment and exert various kinds of stress on living organisms and ecosystems. Risk assessment of these pollutants to organisms and ecosystems is challenging because of diversities in chemical nature and mode of toxicity of the pollutants as well as variation in sensitivities of the organisms exposed to the pollutants. Even at relatively low concentrations of pollutants, deleterious effects on organisms may be produced, which are difficult to be predicted, because measurable effects are expressed only after prolonged exposure. Abu-zabal company for fertilizers and chemical industries (Ismalia Agricultural Road) produced a large amount of Powdered and granulated Single Super Phosphate (17% P₂O₅), Granulated Triple Super Phosphate, Sulfuric acid (48% P₂O₅), Phosphoric acid (48-50% P₂O₅); these amount represented as 585,000, 87,000, 300,000, and 41,000 tones/ year respectively. Also this company exhausted of dust and raw materials such as 100,000 tones/ year of sulfur and 628,000 tones/ year of phosphate Ores (24-30% P₂O₅) respectively (Report of PMU, 2012). Therefore, it considered as a main source of environmental pollution in this area, so, it should be predict the impact

of environmental pollution. When the effect of environmental pollution on the antioxidant defence is elucidated, the exceeding of the resiliency of this system, and consequently, oxidative stress could be approved only basing on the elevations of the rate of oxidative manifestations. The expression of specific lesions known to arise specifically at oxidative stress, e.g. lipid peroxides (membrane damage), single strand breaks in DNA, protein carbonyls were found in many insect species exposed to contaminants (Winston, 1991). Protection against ROS or RNS-mediated environmental pollutants can generally occur with the aid of antioxidant enzymes system. Both antioxidant enzymes activities superoxide dismutase (SOD), catalase (CAT), ascorbate peroxidase (APOx), polyphenol oxidase (PPO). Oxidative damaged molecules, and antioxidant enzymes assay were determined colorimetric. The results showed that increase activities of antioxidant enzymes and increased level of damaged macromolecules were an evidence for environmental pollution in this area ($P < 0.05$).

Keywords: Environmental pollution; Oxidative stress; Protein carbonyls, Lipid peroxides; Antioxidant enzymes; Grasshoppers; *Aiolopus thalassinus*; a Biomarkers.

Biography:

Eman Alaaeldin Abdelfattah Abdelghaphar, I am a teacher assistant of Entomology, Faculty of Science, Cairo University, Egypt. I graduated from Chemistry / Entomology program (Honors), Faculty of Science, Cairo University on 5/2011. I awarded M.Sc. degree in Entomology (Insect Biochemistry and Molecular Science Division) from Faculty of Science, Cairo University on 9/2015. I am teaching many practical courses for Entomology program students such as Insect Biochemistry, Insect Physiology, Insect Taxonomy, Environmental Science and Toxicology, Insect Molecular Science, and Insect Immunology and pathology from 9/2012 till now. I have a membership in various activities in Faculty of Science, Cairo University Units such as Chemical safety and security team, Disability Challengers Unit, Environmental Service Center, Quality Assurance Unit, and Community Services and Environmental Development Unit from 2012 till now. I awarded Prof. Ehab Ismail prize for Scientific Innovation on 2016. I attended many workshops in various topics such as chemical safety and security, principles of ISO 17025 and 9001, strategic management, change management, and Environmetrics. I had an oral presentation in Toxicogenomics and Drug Monitoring Conference, Spain on 8/2015. I am co-author in 3 original papers. I have an acceptance for a webinar (COPs online briefing) entitled environmental sound management of chemicals and wastes which will be hosted by BRS secretariat (TA Branch) on 3/2017.

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Dr. Sylvia Agostini

Scientific Head , STELLA MARE platform, University of Corsica France

Ecological Restoration on Fish Nurseries: A New Opportunity For Sustainable Management of Fisheries Resources and Marine Biodiversity

Causes of biodiversity loss are multiple and mainly due to human activities, but habitat degradation, overexploitation of natural resources, climate change, invasive species and pollution are recognized as the most important. According to the most recent assessments of the Census of Marine Life (Coll and al., 2010, PlosOne) the decrease of marine biodiversity is dramatic, particularly in the Mediterranean Sea. In order to curb this problem, the European Union through the French Environment Ministry launched in 2010 an important program to reduce biodiversity loss: LIFE+ Nature & Biodiversity. This program has helped the University of Corsica (in collaboration with the innovative company ECOCEAN, the University of Perpignan and the French National Scientific Research Center "CNRS") to develop a specific program to the marine environment (SUBLIMO project). SUBLIMO is interested in the Biodiversity Survey of Fish Post-Larvae in the Western Mediterranean Sea of French coastal areas (Gulf of Lion, Provence-Alpes-Côte d'Azur and Corsica Island) and proposes a new approach to analyze, to monitor and to reduce the loss of marine biodiversity. Using concrete actions with fishermen and environmental managers for the fish population maintenance from fish early stages, SUBLIMO seeks to restore fish population and biodiversity by interventions at the level of the coastal nurseries. The actions performed and results obtained within the SUBLIMO project will be presented and discussed in the meeting. This innovative concept involves a network of researches working in different areas such as ecology, biology, fisheries, aquaculture, hydrodynamic modeling.

Biography:

Dr. Sylvia Agostini is a researcher in ecology at the "Science for Environment" Laboratory of the University of Corsica (French) since 2005, and President of the Scientific Council of the Corsican fishermen since 2007. She has been in charge the creation of the first platform on the marine ecological engineering in Corsica Island in 2009:

STELLA MARE (Sustainable TEchnologies for LittoraL Aquaculture and MARine REsearch). Certified in 2011 by the French National Research Center (CNRS), she becomes the scientific head of the STELLA MARE structure.

Expertise: Environmental science, Marine Biodiversity & Resources, Ecological restoration.

ACCEPTED ABSTRACTS



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Environmental Sanitation: Preventive Actions Against the Pollution of the Environment In São Ludgero – SC, Brazil.

The importance of sanitation and its association to human health recedes to the most ancient civilizations, and through the years, sanitation developed according to the evolution of various cultures. However, the lack of proliferation of sanitation knowledge took us back to retrocession. Eventhough every human being has the right to sustain a health life in harmony with nature, many do not have access to safe housing and basic services. At the moment, in Brazil, more than 40% of the brazilian houses are not connected to a sewer collection system, resulting in the reduction of the environmental quality and in diseases for the population. Thus, the present work has the objective to present an environmental sanitation project developed in city of São Ludgero, south of Estate of Santa Catarina (Brazil), with the support of the local Government of São Ludgero (PMSL) in partnership with the Agriculture and Cattle Breeding Research Company and the Santa Catarina Rural Extension (EPAGRI), and also the Local Autonomous Service of Water and Sewer (SAMAE). The Project entitled “São Ludgero 100% sanitized sewage” has the aim to reach the complete treatment of the sewage sanitation in the urban and rural perimeter until the end of 2016. Presently, São Ludgero has 98% of its urban area with basic sanitation, and the other 2% are irregular constructions that had the benefit denied. However, there is in progress in the city, a State Government project that aims to regulate the

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clandestine areas. Concomitantly, in the rural real state, have been installed free of charge kits of individual patent concrete cesspit, which were developed exclusively for the local reality with the intention to treat the dejects in an environmentally adequate way. These actions are being implemented since the year 2015 and the rural area already counts with approximately 70% of coverage. If the objective is achieved, São Ludgero will be the first brazilian city to have a 100% treated sanitized sewage which will position itself as reference to other cities in the country, disseminating therefore the idea that working on the environmental sanitation is a necessity. Father on benefiting the health of the population in general, the project integrates also a real preoccupation with the environment and its future generations.

Biography:

MaihconMatiasstudy Sanitary and Environmental Engineering Undergraduate Course at UNIBAVE University Center. Currently, is intern of Environmental Foundation of City of Orleans (FAMOR) and partner of Consciência Engineering (CONSCIENCIA). He has experience in Earthmoving Management, Environmental Licensing and Sanitation.

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ARENA: Alliance for Research of North Africa, Tsukuba University, Sahara Solar Breeder foundation

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Sahara Solar Breeder Project: Plan Directed Towards Global Clean Energy Superhighway

Global energy consumption is projected to increase, even in the face of substantial declines in fossil energy intensity, at least 2-fold by mid-century relative to the present because of population and economic growth. Currently the world's growing thirst for oil amounts to almost 1000 barrels a second. The ever increasing world energy demand cannot be satisfied much longer with fossil fuels. Achieving solutions to energy problem that we face today requires long-term potential actions for sustainable development. In this regard, renewable energy (RE) resources appear to be crucial and the one of the most efficient and effective solutions for sustainable development. That is why a shift to a more sustainable mix by means of the use of RE sources, an increase of the energy efficiency, energy sobriety and greenhouse gas mitigation measures is needed. The development of technological innovation in the energy fields is central to the success of the energy paradigm shift worldwide. Among RE resources, solar energy is by far the largest untapped resource and major primary energy exploitable resource. Algeria has the highest average solar radiation per square meter of any country in the world and is an interesting case study in that it had quite a slow start in this field but is now forging ahead with RE –at least at the utilities level, boosted by government policy. Progress at residential level is not as fast, though. This has to be rectified for the country to meet the targets set in its National Development Plan. A broad range of intensive and promising research and development is being conducted, under the Sahara Solar Breeder (SSB) project concept, in order to produce technological options that can allow energy security, climate stabilization and economic development from solar energy. In view of the intermittency of insolation, SSB project provides an especially attractive approach in which solar energy must be dispatched on demand to the end user using High

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Critical Temperature Supra Conductor (HTcSC) cables. The magnitude of such implied infrastructure transition suggests the need for massive investments in innovative energy research. Anticipated patterns of future energy use and consequent environmental impacts are comprehensively discussed in this article. Also, potential solutions to current problems are identified along with the adoption of the SSB project plan and activities. The relations between RE and sustainable development are described with practical cases of SSB energy policy and its portfolio directed towards continental and global clean energy supply with existing solar grade Silicon production from Sahara sand and diatoms technologies making photovoltaic (PV) a significant contributor within a portfolio of energy sources in the coming 10 to 50 years. An illustrative example of some developed SSB key innovative technologies is presented and more should be challenged together, Algerian and Japanese SSB research teams, to seek the paradigm shift in global energy production and transport system. In both cases, the research is emanating from the University of Sciences and Technology of Oran (USTO-MB) in line with Saida University.

Keywords: Silicon; Sahara sand; Diatoms, Photovoltaic; Superconducting global electric grids, Sustainable development.

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Dr.Ashok Kumar Ghosh

Mahavir Cancer Sansthan and Research Institute

Nature and nurture in arsenic induced toxicity of Bihar, India

Bihar's arsenic catastrophe was first reported in 2002. Ever since, our research team is working on effects of arsenic contamination in the state. Based on more than 200 surveys, over 40 thousand drinking water sources from 1,030 villages have been tested and around 30% of the samples were found to have arsenic greater than the WHO limit of 10µg/l. Arsenic contamination in the food chain through use of contaminated irrigation water has also been detected in affected areas. Present research is related to different impacts of geogenic arsenic contaminations on the human environment, have come across a high degree of correlation between high arsenic content in drinking water of persons reporting with various stages of cancers.

However, it is also noted that though patients with visible symptoms of arsenic-induced toxicity have been detected, these have been found to be much less apparent compared to populations exposed to comparable arsenic levels in West Bengal and Bangladesh, in spite of having similar socio-demographic conditions. The role of locally consumed nutrients with high anti-oxidants in intervening in the rate of arsenic assimilation by the human body, and identification of the body's defence systems in fighting the adverse impacts of arsenicosis has been studied. This pragmatic approach will lead to sustained mitigation of health effects of mass arsenic-poisoning in resource-deficient developing areas.

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The Impact Of Environmental Deterioration On Macroinvertebrate Communities In The Chanchaga River, North Central Nigeria: A Multimetric Approach

A preliminary study on the deteriorating impact of anthropogenic activities was undertaken to determine the integrity of the Chanchaga River, North Central, Nigeria using multimetric analysis of macroinvertebrate responses to water quality. Our multimetric approach included four sampling stations along the river for 29 metrics representing 13 categories including: the abundance of Diptera, Decapoda, Mollusca, Odonata, Coleoptera plus Hemiptera, % Chironomidae plus Oligochaeta, % Coleoptera plus Hemiptera, % Decapoda, % Ephemeroptera, Plecoptera and Trichoptera %EPT, EPT Richness, Hemiptera plus Diptera Richness, Margalef and Shannon Index. Macroinvertebrates were sampled seasonally between July 2013 and June 2015. Assessment of water quality impacts on macroinvertebrates was based on the discriminatory ability of metrics between station 1 and the other three stations downstream (reference and impaired stations), and on their correlation with the physico-chemical variables of river water. Four ecological category/river health conditions were outlined : very poor (E/F), poor (D), fair (C) and good (B) while Chanchagamultimetric index (MMI_{Chanchaga}) score range for the corresponding river health condition were; 5-20, 21-36, 37-51 and 52-65 respectively. From this it was inferred that stations 2 and 3 were fair indicative of ecological category C with

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MMIchanchaga value of 45 and 41 respectively while station 4 was poor indicative of D ecological category with a value of 35 MMichanchaga. Seasonal variation of the ecological integrity of the river revealed that station 2 was relatively less perturbed in the dry season. CCA correlating the 13 component metrics in the MMichanchaga with water environmental variables showed that no significant correlation existed while the Bray-curtis similarity test revealed that stations 2 and 3 were more associated in the MMichanchaga than any other station combination. Against this backdrop, the study revealed that the River is relatively perturbed by various degrees of pollution processes going on in the water course.

Keywords

Biomonitoring, %EPT (Ephemeroptera, Plecoptera and Trichoptera), Multimetric index, MMichanchaga, Environmental deterioration, North Central Nigeria.

International Conference on Emerging Trends in Environmental Engineering and Pollution Control

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Awetahegn Niguse Beyene

Impact of Climate Change on Production of Sesame in Western zone of Tigray

Sesame is one of the most important cash crops which is mostly grown in the western and north western zone of Tigray region. The impact of climate change on sesame yield were not addressed yet particularly in the study area. Therefore, this study was aimed at assessing the impact of climate change on production of Sesame in the Western lowlands of Tigray, with the specific objective of climate characterization and modeling the impact of climate change on production of sesame. Climate of the study area was analyzed using Instat and Mann-Kendall software's. Using the observed climate data (1980 to 2009), historical sesame yield was obtained and climate outputs from HadGEM2-ES, ACCESS1-0 and GFDL-ESM2M models were projected for the near (2010-2039), mid (2040-2069) and end (2070-2099) term periods to evaluate future impacts of climate change. The annual rainfall in the study area revealed a decreasing trend with an inter-annual variability of 16.7%. Of all the historical climate data (30 years), 70% of the onset date was on first week of June, while the cessation date was on September 15. The Markov chain first order model indicates that the probability of 7 and 12 days dry spell on May (80%) and September (90%) were very high. The mean minimum temperature ranges between 10.20C and 12.6 0C, while, the mean maximum temperature varies between 23.2 0C and 26.70C. In the end term RCP 4.5 all models revealed that the increase in minimum temperature will be below 10C. Moreover, GFDL-ESM2M predicted rainfall to increase by 8.2% in the near term RCP4.5. Similarly, the GCM ACCESS1-0 revealed rainfall to increase by 5.2% in end term RCP8.5. In all periods (near, mid and end term) normal sowing date was better than early and late sowing dates in terms of yield. In late sowing date, yield was simulated to reduce from -5.88% to -23.31% in the end term RCP8.5 by GFDL-ESM2M and HadGEM2-EM climatemodels respectively. However, in the normal sowing date the yield was increased up to 33.1% by GFDL-ESM2M model in the midterm RCP4.5. Generally, higher yields were found in the normal sowing date. The response of sesame cultivars to the future climate changes should be studied under different management options. The impact should also be studied by different crop and climate models so as to capture the possible variability of sesame yield. Sensitivity to carbon dioxide, temperature, rainfall and other different management activities should be undertaken.

Key words: Characterization, RCP, Mann-Kendall, GFDL-ESM2M, ACCESS1-0 & HadGEM2-ES

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David Ewusi-Mensah

Hohai University

Analysis of High Salt Concentration in Industrial Discharge: The Use of Microbial Desalination Cells as a Pre-Treatment Method.

Water supply nowadays increasingly relies on alternative water sources (thus, treated wastewater, seawater, and rainwater) in addition to surface and groundwater, mainly due to water shortage, vast wastewater discharge, and increasing stringent wastewater discharge standards, therefore the rising need for industrial wastewater treatment in various parts of the world. High salted water contains high concentrations of pollutants if discharging directly into water bodies will lead to pollution and environmental damage though it has not been given much attention in the trend of pollutants in wastewater. High salts concentrations cause plasmolysis which has inhibitory effects to the conventional biological and compromises its performance and efficiency notwithstanding its impact on the aquatic life. Therefore their removal (pre-treatment) is essential in the industrial wastewater treatment process. Existing technologies though are efficient, have high operation cost and energy consumption.

Microbial Desalination Cells (MDC) have proven in the last few years to be a useful tool in; seawater desalination, brackish water desalination, water softening, hydrogen and chemical production and groundwater remediation. Researchers prove that MDC is primarily appropriate for desalinating water with high salt content at a low energy requirement. And so far the technology has been successful and promising for further work in desalination and energy production in small scale but has not been applied in the treatment of industrial wastewater and also in a continuous flow mode of operation. This study, therefore, seeks to; (i) Assess MDC in terms of factors, directly and indirectly, affecting its process to improve its efficiency; (ii) To apply the knowledge from the study in (i) to enhance this technology as a pre-treatment method to reduce high salt concentrations in industrial discharge as well as COD in a continuous flow conditions; (iii) Enlighten the relevance of Pre-treatment methods before treatment wastewater treatment Plant (WWTP) and propose a flow of wastewater treatment.

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Biography

Mr David Ewusi-Mensah was born in 1991 in the capital city of Ghana. I am 25 years of age and currently a graduate research student in Hohai University, Nanjing-China reading Environmental Engineering. And I am specialising in Pre-treatment of Industrial Discharge. Am a young environmental scientist with a thorough knowledge and understanding of the physical, chemical and biological aspects of the environment which considers areas such natural resources management, climate change, pollution control and mitigation, evaluating alternative energy system, waste management, biodiversity and global change, human population and androgenic effects. My educational and working experience in diverse fields of Environmental disciplines have equipped my ability to research and solve environmental problems. It is my ambition to develop and advance my understanding, technical knowledge and practical skills to enable my success in the environmental industry as well as other relevant disciplines. With the aim of employing this knowledge to enhance working activities so as to improve environmental quality, minimise operation cost and improve productivity. The raising appreciation of the need for environmental protection has generated a high demand for good quality environmental experts and engineers as well.

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Dr. Hassimi Abu Hasan

Department of Chemical & Process Engineering, Faculty of Engineering & Built Environment, UniversitiKebangsaan Malaysia

Potential of Biological Drinking Water Treatment for Safe Drinking Water Production in Malaysia

The problem of ammonia ($\text{NH}_4^+\text{-N}$) and manganese (Mn^{2+}) in Malaysian drinking water treatment plant (DWTP) has caused a water shortage to human populations at the area due to the periodical shutdown of treatment. Study on simultaneous removal of $\text{NH}_4^+\text{-N}$ and Mn^{2+} was conducted using a biological aerated filter (BAF) system as an additional treatment in the conventional DWTP. The BAF performance was tested with three factors of organic loading rate (OLR), aeration rate (AR) and hydraulic retention time (HRT). The effect of OLR in the range of 0.2-1.0 kg COD/ m^3 .day on simultaneous $\text{NH}_4^+\text{-N}$ and Mn^{2+} removal had resulted 84-97% COD, 48-97% $\text{NH}_4^+\text{-N}$ and 37-95% Mn^{2+} removals. The BAF operations under aerobic conditions with different AR ranging from 0.1-2.0 L/min had resulted COD, $\text{NH}_4^+\text{-N}$ and Mn^{2+} removals of 91-97, 81-99 and 73-99%, respectively. The study of HRT influence on simultaneous removal had resulted 6 h HRT as the best option for the removals. Real time monitoring in batch mode showed that there were relationships between controlled parameters of DO, ORP and pH with the simultaneous $\text{NH}_4^+\text{-N}$ dan Mn^{2+} removal in which the controlled parameters formed bending points when complete simultaneous removal was achieved.

Biography:

Dr. Hassimi Abu Hasan is a Senior Lecturer at the Department of Chemical and Process Engineering, Faculty of Engineering and Built Environment (FKAB), UniversitiKebangsaan Malaysia (UKM). He had converted his Master of Science (MSc) to Doctor of Philosophy (PhD) on 2010 and completed on 2012. Currently, he is a Coordinator of Master of Environmental Engineering, UKM. He has been awarded UKM Excellent Service Award 2016 and FKAB Excellent Researcher Award for the year 2014. He was a co-winner of Malaysian Toray Science Foundation (MTSF) 2015 under category of Science & Technology Award. He teaches Bioreactor II, Pollution Control and Cleaner Production, and Computer Aided Biochemical and Chemical Engineering Design. His research interest includes water and wastewater treatment technology covering biofiltration, phytoremediation and environmental microbiology.

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Dr. Joe Magner

Can Intensively-Managed nutrient-Rich Cropland Runoff be Sustainably Sequestered?

Nutrient pollution is a problem across the globe. Excess nitrogen (N) and phosphorus (P) are impacting lakes, rivers, and oceans with algal blooms, hypoxia, and fish kills. As such, there are many opportunities for intervening to protect receiving ecosystems from excess nutrients. I review historic practices and explore new options for trapping and treating intensively-managed cropland runoff (IMCR). With a wealth of wastewater treatment experience in removing N and P, innovation is spilling over into the IMCR world.

Because point sources of pollution today are better regulated, the major source of nutrient pollution in most developed nations is nonpoint source pollution from intensive row-crop agriculture. Agricultural producers can use technology to increase productivity and decrease nutrient runoff to streams and lakes using trap and treat Bio-systems engineering technology. In-field cover crops and mycorrhizae can be employed to increase nutrient use efficiency. At field-edge and beyond, riparian buffers (surface and subsurface), wetlands (natural and constructed), and varying forms of engineered bioreactors can be utilized for nutrient consumption and sequestration. To mitigate IMCR nutrient pollution, landscape treatment train options are being developed in the Midwestern Corn belt, USA. Treatment train technology is possible and needed for ecosystem health; however, the key issue boils down to balancing who pays the cost for best management practices and who reaps the benefits.

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Dr. RanaPratap Singh

Phytoremediation Potential of Some Aquatic Macrophytes for the Removal of the Inorganic Pollutants from Municipal Water Sources

A study was made to monitor water quality in terms of pH, EC, nitrate, DO, BOD and certain heavy metals in different season at different pumping stations of river Gomti from where water is pulled, treated and supplied to different households in the residential colonies of Lucknow city. It was observed that in municipal water supply most of the metals recorded was above the permissible limits prescribed by BIS (2003) for Drinking water specifications. At source and at the user end the metal contamination was in order to Fe>Pb>Cu>Cr>Cd. However, the concentration of these metals at the user end were correspondingly higher than the background levels. The Correlation matrix between Physico-chemical parameters and heavy metals in the drinking water of the residential sites of Lucknow showed significant positive correlation among each other which signify that they may remained un removed during the treatment process of the municipal treatment plant.

A consortia of Pistiastratiotes, Hydrilaverticellata and Typhalatifolia (three aquatic macrophytes inhabiting in the river) were optimized for removal of heavy metals from water under water circulation effects and the contaminated biomass of the plants used for the removal of inorganic pollutants were subjected to the production of biogas and vermicompost.

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Water Supply To Poor Urban Communities- the Cost and Techniques

Although sustainable water supply and sanitation services is a basic requirement for development, scarcity of safe and clean water in many poor urban parts of Ghana is the norm implying that access to improved water sources remains a major concern. Providing access to safe sustainable water to combat poor health is an integral part of the strategy to alleviate poverty in Ghana and other developing countries. Water is a basic right for every citizen of the country. The rich or poor, the sick or healthy; all need equal access to clean water for good health. With reference to three poor urban poor communities in Ghana, this study analyzes the factors influencing poor urban households' choice of domestic water sources in Ghana. The study also assesses the water consumption rate, the cost of water supply in the various study areas. Finally, the study examines the relationship between water distance and consumption, water consumption and cost, water distance and cost.

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The households depend on treated surface water from the following sources; Water Health Ghana (standpipe), Boreholes, Hand dug wells, Ghana Water Company Limited standpipe, Vendors/ water tankers, community managed systems (standpipe) and Ghana Water Company Limited House connection. The analyses was built on primary data collected from 135 households from three communities interviewed examining a range of factors such as household monthly income, household location, size of household and quantity of water used by the household. Both qualitative and quantitative form of interview was implemented during the survey. The major statistical tools used to analyze the collected data were SPSS software and Microsoft excel. The people's perception about the existing water facilities (i.e. quality, serviceability, reliability, accessibility) was also analyzed.

The survey showed that 95% of the populations were aware of their basic rights to water. The researched showed the price of a bucket, gallon (1m³ of water) of water is too much for the people in the poor community. Also Communities that paid less for water consumed more water than communities that paid more. Most people preferred having water connected directly to their homes to avoid walking over a long distance for water. People were reluctant to long distance in order to get water thus households closer to the source of water consumed more water than households further from the source of water. Households which had water closets and showers consumed more water than households who didn't own such facilities. The households preferred house connections due to its quality and convenience as their first source of drinking water, followed by Boreholes, Water Health Ghana (standpipe), community managed systems (standpipe), Ghana Water Company Limited standpipe, and finally hand dug wells. The people resort to water vendors for water as their last option due to the high cost of water.

Keywords: water, water quality, cost of water, hygiene, poor urban,

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FathmathShadiya

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Exploring Effectiveness of Windrow Composting in the Maldives

Being a small island nation, Maldives faces enormous challenges in solid waste management due to land scarcity, geographic isolation, small economy of scale and lack of financial and human resources. Change in consumer lifestyle and increase in population are the main drivers behind solid waste generation in the Maldives. About 70% of waste generated in the islands are organic wastes. Recently, many islands in the Maldives have started to adopt Windrow composting as a method to recycle organic waste produced in the islands. Windrow composting is a promising approach in the Maldives as this method has the capacity to recycle large quantities of organic waste generated in the islands. Hence the main aim of the study is to explore effectiveness of Windrow composting in the Maldives by taking the very first island which was able to successfully implement Windrow composting as an exploratory case study. The data for the study was collected for a seven day period, during which time, total organic waste brought and utilized to make windrow compost was weighed every day. Results showed 79 % of organic waste brought to the waste management center was used to make compost, while 20% of organic waste are thrown away or burnt. On a monthly basis, the waste management centre was able to sell 3000 kg of compost made from Windrow composting to local farmers and resorts. The exploratory study showed Windrow composting is a low cost effective method to recycle organic waste generated in the islands. The study also showed there is a growing demand for local compost by farmers and private resort owners in the maldives.

Keywords: Solid waste management, Windrow composting, organic waste, compost.

Biography

After graduating with Masters from University of Queensland, Australia, Ms. Shadiya has been working as a Lecturer at Maldives National University. She has a Postgraduate Diploma in Research Studies and an additional Masters degree in Social Research. She is actively involved in various research projects undertaken by faculty of Science of Maldives National University.

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Gebri Adinda

Islamic University of Indonesia

Deterministic and Probabilistic Seismic Hazard Analysis in Province of Dki Jakarta (Case Study: Earthquakes' Data in Province of Daerah KhususIbukota Jakarta on January 1945 – December 2015)

Seismic hazard analysis for Province of DKI Jakarta was conducted using Deterministic Seismic Hazard Analysis (DSHA) and Probabilistic Seismic Hazard Analysis (PSHA) method. The study used secondary data derived from the United States Geological Survey (USGS) at the time of observation on January 1945-December 2015. DSHA method was obtained the calculation of peak ground motion acceleration from Jakarta to return period of 50 years and 100 years. Furthermore, the method of PSHA was found the probability of exceeding the acceleration of ground motion in DKI Jakarta. The results show that DKI Jakarta is indicate as high category Marcelli scale which is more than 0.2 gals based on 44 points review in each district that has been taken. However, certain level of exceeding probability for any 44 points review is very small.

Keywords: Seismic Hazard; DKI Jakarta; DSHA; PSHA

Biography

I am student on Statistics major in Faculty of Mathematics and Natural Science in Islamic University of Indonesia. I am really interest in statistics field and want to be a Data Scientist that helps any major using statistical method. I have any international and national in Statistics field and using some methods in Statistics, such as Data mining with Association Rule with Apriori, Clustering with SOMs (Self Organizing Maps) and Statistical inference by using regression. I want to develop my skill by using many methodologies in statistics. In this paper I used Deterministic and Probabilistic Seismic Hazard Analysis. In this field, I used statistical method to help civil engineering to build the probability about exceeding of magnitude of earthquakes that will helps earthquakes resistant building in their fields..

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HansaJeswani

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Water Filtration using Downflow Pervious Concrete Filter

Effective water treatment system are universally required as a basis for improving the overall health and productivity of population. The goal of water treatment process is to remove existing contaminants such as turbidity, hardness and pathogens in the water. The use of sand filter or anthracite filters for removal of turbidity and pathogens. It has limitations associated with it, paving the way for new alternatives for slow and rapid gravity filter. Rapid sand filters have high capital and operation costs. It also requires skilled personnel for operation and maintenance. Frequent cleaning (backwashing) is required every 24 to 72 hours. There are other issues related to filter troubles such as air binding, negative head and formation of mud balls. The sand used is required to be changed every 4 to 5 years that is an additional cost. These problems can be tackled with introduction of pervious concrete for filtration purposes.

In this study the usage of pervious concrete for filtration purpose is highlighted. It is well known that pervious concrete is traditionally used in parking areas, areas with light traffic, residential streets, pedestrian walkways, and however not much research has been done on its effectiveness to be used for filtration process. Thus, the analysis of using pervious concrete for improving the quality of water is performed by varying water cement ratio and thickness of concrete used in filter in terms of effectiveness in removing contaminants. The removal of contaminants is measured using reduction in turbidity, reduction in total solids and reduction in most probable number (MPN).

Keywords. Pervious Concrete, Gravity Filtration, Turbidity, Total Solids, Most Probable Number

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“Biogas Production from Napier Grass using Animal Manure as Co-Substrate through Lab Scale Study”

The study is based on production of Biomethane by using Napier Grass along with cosubstrate as a cow dung. Hydrolysis study was carried out which provides a relatively inexpensive method to make the anaerobic digestibility and potential biogas production with co-substrates. The Napier grass grown can be of various species, and it can involve numerous stages of cuts (Normally seven/year). The lignocellulosic content in Napier species increases with maturity of the grass. The first cut gives more Biomethane potential than the later cut since water-soluble carbohydrates are higher in former case resulting in higher methane potential. The parameters like pH, Moisture Content, Total Solids, Volatile & fixed solids, Chemical Composition, TSS, TDS were measured. An economical bioreactor having 35 Lit working volume was designed for evaluating the biogas potential of above substrates and was operated at ambient temperature range 20 to 32^o C. The outcomes revealed that there was a continuous reduction in pH level, i.e. up to 4.6 during initial fifteen days since beginning of slurry feeding. The Napier grass test unit showed 88.38 % VS removal during the studies and the chemical composition for the Yeshwant specie of Napier grass showed lignin, cellulose, Hemicellulose & ash content as 32.2 %, 35.9%, 40.1% & 3.2 % respectively.

Keywords: Biogas Production; Napier Grass; Animal Manure; Bio-methane; Co-Substrate; Hydrolysis; Anaerobic Digestion; lignocellulose.

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Product Life Cycle Approach to Green Management

Energy and environmental concerns are intricately linked to the supply chains of various goods. Increased public awareness of such issues is reflected in the contemporary business environment as well as government legislation. Green Supply Chain is a new trend of industrial development. Because of the legislation of RoHS and WEEE announced by European Union, many industries have to incorporate environmental issues into supply chain management. This requires to apply systematic techniques to quantify the environmental impacts of supply chains, and to identify opportunities for making improvements. This attributes to the Green Management of a product.

While global warming has been an urgent issue, education of how to achieve green environment from its basic methodology and concepts becomes essential. Since to produce a green product is not only to control and manage the whole supply chain under required green levels; but also to properly treat the used materials. How to cope with such complicate and correlated issues such that the “3R” of Reduce, Recycle and Reuse required for green engineering can be ensured has required the industries to utilize more analytical and measurable approach. This research aims to provide a complete production methodology by incorporating engineering and management solution techniques so that within a life cycle of a product, environmental and economic issues can be practiced and ensured.

Keywords: Supply Chain and Demand Chain Management; Assessment & Resolution; Life-Cycle Approach

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Comparative Analysis of Sustainability Measurement Methods used for the Evaluation of Processes, Products or Services

Sustainability is a well explained and understood paradigm presented by a model consisting of three main pillars of society namely economic, environmental and social aspects. It could also be said that sustainability is the development of human well-being, acknowledging the fact of one diverse but ultimately finite planet. It is becoming more and more complex as well as challenging for decision makers, how to satisfy human demands without compromising on the natural limits to attain sustainability. The pre-requisites include effective management of human demands as well as natural capital, however without crossing its renewability limits. In order to attain this mission, trustworthy measurement tools are required to compare the supply of natural income with the human demand. These measurement tools help decision making bodies to track progress, set goals and devise policies to attain sustainability (Keiner, 2006).

Four different sustainability measurement methodologies namely Carbon Footprint (Wright et. al. 2011), Sustainability Process Index (SPI) (Narodoslawsky and Krotscheck 1995), Emergy Accounting (EA) (H. T. Odum, 1996) and Material Input Per service Unit (MIPS) (Schmidt-Bleek, 1993) are used to address three different objectives by evaluation of an industrial process. These goals include, authentication of the normative background of these methodologies, finding out main environmental aspects stressed out by the measure and investigation if results obtained by each methodology truly imitate its normative background.

The motivation of this study is to figure out similarities and differences among given methodologies and help decision making authorities to choose suitable methodology for specific evaluation process. In this study, sustainable production of a biopolymer polyhydroxyalkanoate (PHA) from slaughtering residue as starting material has been evaluated using given methodologies.

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Biography:

The Author is working as Assistant Professor in the Center of Excellence in Environmental Studies (CEES), King Abdulaziz University, Jeddah. He is an Ecological Assessment expert with a background in chemical engineering and environmental sciences. He has more than 8 years of international experience and cross sector exposure. He has been involved in international projects, where he was responsible for process design, development and economic evaluation. He has around 30 journal and peer reviewed conference papers. He is passionate about sustainability and dedicated to sustainable development that can positively contribute to economic, social and environmental impacts of the society.

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Dr.R.Krishnaraj

Scientific Director-Centre for Excellence and Incubation, Institute of Technology, Ambo University,Ethiopia,East Africa.

Contemporary and Futuristic Views of Pollution Control Devices in Foundries.

Foundry practices are used in contemporary world to produce large volume of components and products. Foundry practices involve the melting of metals and pouring the molten metal into the cavities called molds. On solidification, the metals which assume the shape of molds are removed as castings. Foundries that employ these practices were growing in large number till the middle part of the twentieth century in the world. After the middle part of the twentieth century, the world community begun to realize that, foundries were emitting pollutants which were affecting the health of humans. In order to overcome this situation, several countries in the world promulgated laws stipulating the maximum level of pollutants that can emit by foundries. These laws affected the functioning and growth of foundries. In order to sustain amidst these constraints, foundries begun to install energy efficient melting technologies and pollution control devices (PCDs). In this back ground, this paper reports to assess the contemporary scenario and project the future needs for sustaining the foundries. During the conduct of this literature review, it was discernable that, research papers have reported three categories of researches. In the first category of research papers, the researches reporting the achievement of cleaner production technologies in foundries using PCDs have appeared. In the second category of research papers, the application of cleaner production technology in foundries located in different countries has been examined. In the third category of research papers, the application of efficient melting technologies and PCDs in different clusters of foundries located in different parts of world has been explored. Subsequently implementation technics of Environmental Management System in cleaner production technics in foundries has been described the analysis of the information and knowledge drawn from these three categories of papers has revealed that, researches exploring the sustenance of foundries situated in different parts of world are required to be carried out intensively in future. The outcome of these researchers will be useful to apply the cleaner production

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technologies that would be suitable for implementation in different foundry clusters to suit the different conditions prevailing with regard to the adoption of efficient melting technologies and PCDs.

Keywords:—Cleaner production technology; Foundry; Literature survey; Pollution control devices; Wet scrubber

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Water Quality in Rwanda: A Review on Shortcomings and Policy Options.

The rise in energy and food, climate change, population growth and urbanization are reported to cause water quality pollution and degradation. The most impacted are developing countries with less adaptation and management capabilities compared to the cost. Rwanda, a small Sub-Saharan country, has great sources of water that could sufficiently feed its demands. However, as revealed by this study, water quality in Rwanda is likely to be damaged by population growth, agriculture, urbanization, industrialization and climate change, unless if appropriate mitigation and adaptation policies are regarded. Therefore, this to be halt and/or reduced, there is need of early government and other stakeholder's intervention through working together to adapt to future changes which consequently will affect water quality, human health and sustainable development.

Key words:-- Pollution, Rwanda, Water quality

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Determination of Crown Canopy Classes Map Using Aerial Photographs of 1955 – 1995 and GIS (A case study:Shazand county county – Sarsakhti oak forest reserve – Markaziprovinceprovince)

A massive area of Iranian forests is covered by irano-turanian forests. Exploitation of the Irano-turanian forests along past years caused these worthwhile forests convert to a sensitive and delicate ecosystem. Considering soil and water preservation which is the most important role of these forests, these are announced as protective forests on behalf of the government. Crown canopy is the best factor which shows us their quantitative and qualitative condition (to study, changes assessment and monitoring). Using aerial photograph method needs lower cost and is faster than field investigation, so it is used frequently. This study was carried out in Shazand County– Sarsakhti oak forest reserve. The objective of this study was determination of crown canopy classes map based on orthophoto of the aerial photographs of 1955 – 1995 and GIS.

Key words:Orthphoto, GIS, Forest reserve, oak, crown canopy classes

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Aijuka Nicholas

Makerere University Kampala Uganda, College of Engineering Design Art And Technology, School Of Engineering.

The Deficiency Of Solid Waste Management InKawempe Vicinity

Solid waste management is a very severe deficiency in kawempe division inKampala capital city. Most of the parishes in kawempe division have an unauthorized class of landfills for solid waste disposal. Quite often these landfills are known as garbage pits. These open garbage pits have consequently increased the risks to human health of the people around them because of the exposure of rotting materials, hazardous objects and germs from human excreta such as urine poured in those pits. This has greatly been attributed to by poor policy implementation and weak law enforcers of the existing public health policies to address the deficiency.

The division plan for solid waste management has for over time been under-performing due to failure of incorporating the environmental management into the comprehensive development plan of the division, inadequate revenues and adamancy of the general public to be participatory in the campaign for proper solid waste management. Kawempe has an expanded spatial scale with rapid growing economy and population. Informal sector with incoherent activities has increased solid waste without appropriate management. Limited technological alternatives to recycle and on site treatment are all critically deficient.

Therefore for proper solid waste management to be achieved, there is a need to have increased budget for solid waste management as it is in other policy avenues, public participation and strict laws on those that don't adhere to guidelines. This research has been conducted in kawempe division to scrutinize and analyze solid waste management procedures, public health policies that have been put in place with in the division and its parishes, actions and recommendations made on this that include; Upgrading existing service stations, implementation of strict public health laws, Procurement of materials vital in the collection of garbage with trucks that have GPS tracking systems operationalization of an engineered sanitary landfill in Mpererwe managed by private contractor, increased number of litter bins distributed all over the area to ease the process of solid waste collection.

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For the objectives' attainment of this report, features of the waste, rate at which waste is generated, methodology of waste collection, disposal points and roles played by various stakeholders at all management levels were expeditiously researched about and analyzed.

Biography.

Aijuka Nicholas is a third year student pursuing Bachelors of Science in Civil Engineering at Makerereuniversity in the department of civil and environmental. I have participated in the 22nd Africa Oil week in cape town south Africa under the young professional, an event organised by global pacific and partners. I have served in various capacities at my university including speaker of my college and a guild representative councilor for my hall of residence. I have been an advocate for research in such public health related spheres by helping students that I have served to get sponsorship for the findings in research to be published in journals. I am currently working tirelessly on the solid waste management in the kampala capital city and looking for sponsors to help me get to publishers and publish my work for public consumption.

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Dr. P. Malliga

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Biological Treatment of Tannery Industries Wastewater

Industrial wastewater reuse is becoming nearly a duty due to water scarcity and pollution caused in and around industries. Tanning process discharges a large amount of solid waste sludge and heavy metals containing effluent. Mostly mechanical, physic-chemical and chemical treatments have been adopted to treat the wastewater. Considering the large amounts of chemicals applied and low biodegradability by physical methods, tannery effluent treatment is a complex technological problem. As green chemistry for wastewater removal has become a research trend, the recent development shows possibility of high rate treatment of tannery effluent in an alternate and effective way using microorganisms (bacterial/cyanobacterial). These microorganisms are capable to convert toxic substances into non- toxic ones. The present research results revealed that cyanobacteria and bacteria have been selected for effective bioremediation of organic or recalcitrant pollutants from tannery wastewater achieving enhanced rate of degradation and ensuring better survival and colonization in the polluted areas. Hence, the present investigation is to treat tannery effluent with cyanobacteria and bacteria and convert to organic manure and the end products can be applied for plant growth.

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Mary K. Butler-Dunphe

Architectural Environmental Engineering for tomorrow, “Build to flow with Nature not to resist it”

Disaster Prevention Constituent & Building Code Reformist

Building code reform is the key. To continue the cookie cutter mentality of “Buildup, board up, tear down, rebuild,” existence we live daily. Looking at the world as one landscape of construction development, we can confirm that the environment & people are affected by “Inadequate Building Codes.” With the min. of 50,000 killed per yr, 150,000 are displaced per yr, 1 TN (USD) in damages per yr, 500 Billion CY of waste per yr, and 39 to 40% of all Emissions in the world (not reflect emission from recovery and cleanup) change is needed. In order to implement code reform we need to retool our construction materials industries to meet the demands of these new designs and code standards, like mandatory hemp concrete that will start the air purification process. Hemp can also be planted on toxic land to clean the soil for future generations being a natural purifier of land, water and air. Furthermore, we need to bring the landscaping, yard, garden into the structure to reduce water evaporation, toxicants, clean our gray water, and reduce climate change. In truth a structure needs to become self-sustaining in & of itself to reduce disaster, pollution, and stop climate change.

Biography:

No formal education self taught, 20+ yr in construction, attended Spokane Community College studies in Arch. Engineering and Business law. As well as ongoing private studies in natural disasters, and history that pertain to building code, contract law, natural law, business law and ethics. All the above mentioned studies are needed to continue a now 46 yr commitment to better our world through building code reform and the recognition of natural law and the right to stewardship over the right of a corporation’s right to prosper.

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Musasizi Josephat

BSc Petroleum Production And Geoscience

Impacts of Climate Change- Case Study Uganda

Climate change and the threat of related extreme conditions like flood and droughts, have major implications for development particularly in poor countries like Uganda which is already experiencing the negative effects of climate change and the situation is expected to worsen, as impending calamities which will affect agriculture, infrastructure and health if everything continues to be the way they are and nothing is done at all to minimize possible causes of climate change especially manmade. This has started affecting the country's development efforts and causing shifts in the spread of diseases like typhoid, dysentery, malaria among others.

The country is highly vulnerable to climate change and variability thus, its economy and the wellbeing of its people are tightly bound to climate. Human induced climate change today has the potential to halt or reverse the country's development trajectory. It is the poor and vulnerable people in remote and hard to reach areas who feel these impacts the hardest, though climate change has a serious implications for the nation's economy previously, with for example, a shift in the viability of coffee growing areas potentially wiping out US \$265.8 million or 40% of export revenue.

Global warming is likely to reduce agricultural production and increase food insecurity within various parts of the country. Of recent in Uganda, deforestation, combustion of fossil fuels, and production of agricultural commodities such as rice and livestock have caused atmospheric concentrations of carbon dioxide and other greenhouse gases to rise significantly. The increased volumes of carbon dioxide and other greenhouse gases released by the burning of fossil fuels, land clearing, agriculture, and other human activities, are believed to be the primary sources of the global warming that has occurred over the past 50 years. While many view the effects of global warming to be more substantial and more rapidly occurring than others do, the scientific consensus on climatic changes related to global warming, is that already, Districts like Bushenyi, Mbarara, Isingiro, Ibanda, Kasese, Karamoja region have borne the effects of climate with clear changes in precipitation (rainfall), water availability, length of seasons, incidents of extreme weather patterns, floods,

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desertification distribution and prevalence of pests and diseases. Areas like Kabale District that used to have cold weather are now warming up which has increased incidences of malaria than previously years.

In Uganda, persistent heavy rains have caused landslides and flooding, therefore creation of community-based approaches through disaster risk reduction initiatives such as early warning systems, strengthening disaster laws, avoiding deforestation for charcoal production and bush burning, the impacts of climate change can be reduced.



The adverse impacts of climate change have not spared Uganda particularly in last decade as evidenced by numerous episodes of erratic rainfall patterns, prolonged droughts, flooding, recurrence of mudslides, thunderstorms, increased incidence of pests and diseases, famine and declining agriculture productivity.

Carbon dioxide emissions in Uganda stems from the burning of fossil fuels, emissions from the combustion of miscellaneous waste materials made from fossil fuels and the manufacturing industries such as; cement processing plants among others



Carbon dioxide and dust particulates from Hima cement factory in western Uganda

CONCLUSION

Climate change is a global concern to be addressed collectively by international community due to the fact that disasters such as heavy storms, severe droughts among others do not respect geographical boundaries. The world is likely to face more extreme weather events therefore, there is a need for all international development agencies, for example Intergovernmental Panel on Climate Change, government ministries from all countries to work together to save the environment for the future generation as well as calling the relevant bodies to be better prepared to manage the impacts of climate change.

International Conference on Emerging Trends in Environmental Engineering and Pollution Control

13th – 15th March 2017, Beijing ,China

Ssembogga Roy

Bachelor's Degree, Medicine And Surgery, Makerere University School of Health Sciences

Ecology of Climate Change and Distribution of Infectious Diseases in Uganda

Given current unpredictable changes in weather patterns coupled with global climatic change in Uganda numerous, and in some cases conflicting, predictions have been developed regarding the frequency, severity, and duration of epidemics that may emerge. With respect to the biogeographical focus, the central question is whether pathogens and parasites that are currently restricted to tropics and lower latitudes where the world's greatest biodiversity lies move toward poles (mostly north) and upward in altitude. Perhaps the more controversial topic today is the corollary to this question—how much will future ranges of diseases that do move be constrained by socioeconomic conditions, including our capacity to control.

Underlying most predictions for climate change effects on parasite and pathogen distribution are the physiological factors that regulate survivorship, reproduction, and transmission, and their interaction with extrinsic environmental changes associated with climate: precipitation, humidity, air and water temperature, principally. Under moderate greenhouse gas emission scenarios, GCM models project during the next century approximately 2–4°C average warming and greater precipitation at higher latitudes, with decreased precipitation at lower latitudes, and increases in heavy precipitation events in many parts of Uganda.

Changes in seasonality, especially intensity of rainfall, have been shown to be important in several diseases, particularly cholera dynamics. More frequent heavy rainfall events are predicted to occur in some areas, although the confidence levels and scaling of these future precipitation models may still be insufficient to support geographically specific predictions.

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Whereas vector-borne diseases, and to a lesser extent diarrheal diseases, have been the principal focus of discussion, directly transmitted diseases, such as influenza and cold viruses, are likely to change as well. Recent laboratory work on the persistence and transmission efficiency of influenza has shown the virus to be constrained markedly by absolute humidity. More recent epidemiological analysis support this finding and suggest that the marked seasonality and generally predictable geographical trajectory of seasonal influenza likely reflect, at least in part, climate variables.

Analyses of biological processes in relation to climate-relevant geophysical parameters establish the potential for climate change effects. However, they are insufficient to explain the highly complex dynamics of infectious disease transmission and establishment, including biological, climatological and socioeconomic considerations. At small and intermediate scales, distance is still a very important determinant of disease movement. For example, Triatomine vector dispersal of Chagas disease in Argentina at a scale of meters to a few kilometers or movement of African trypanosomiasis at a scale of tens to hundreds of kilometers via animal migrations are clearly constrained by distance. Of course, if pathogens establish in a new zone and the process is allowed to continue incrementally year after year, diseases can and have moved across countries in a decade without the aid of “modern transportation.” However, at continental and intercontinental scales, movement of many diseases in a warming world is unlikely to have a linear relationship to distance because of the numerous means of long distance transport operating today.

Biography:

I am a Medical Student and I have never regretted joining this profession. I had this since my child and practicing medicine is going to be my biggest achievement in life.

Current Guild President Makerere University

Makerere University is one of the Oldest and most Prestigious institutions in Africa. The opportunity that the Students of Makerere gave me to serve them as Guild President I will always Cherish and Will never forget in my life. I have achieved several objectives as I laid them in my manifesto and with the support of all Makerere University students, Administration and Government, we indeed achieved a lot.

Chairman Guild Electoral Commission Makerere University January 2015 – April 2015

Former Chairman Nkurumah Hall, one of the greatest hall of residence in Makerere University.

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Mrs Saliha Zerdoum

International Expert Khenchela, Algeria

Coffee Grounds Fertilizers and a Pesticide

Relying on my initiative as a Manager of a practical experiment which was realized about the production of compost in 2013 in Khenchela, Algeria to determine the different ways of composting by exploiting organic wastes on the soil. The objective of this work is supplying local authorities with information which will be used to launch successfully factories of domestic composting or for the selective collection of biodegradable wastes in their localities or regions .

This work is supported by a scientific research with the institution of Agronomy in Batna ,Algeria in order to precise the quality and technical standards of use in agriculture . So, it wasn't about a pure scientific research and expertise techniques, but it is a local practical result which opens doors for different types of possible treatment for administrators. Looking for management of wastes that is adequate in the way of sustainable development.

Results and Analysis :

The experiment is realized on the soil and it gives the following results Nitrogen 2.28 Phosphorus 0,6 Potassium 0,6 Rap-port C/N 24 correct To engage the process of decomposition and incorporation in soil. Herb is about 15 and fertilizer is 15 to 30 Ph 6.2 220 kg of organic substance in 3 meters (142lbs organic matter per cubic yard)

Conclusion :

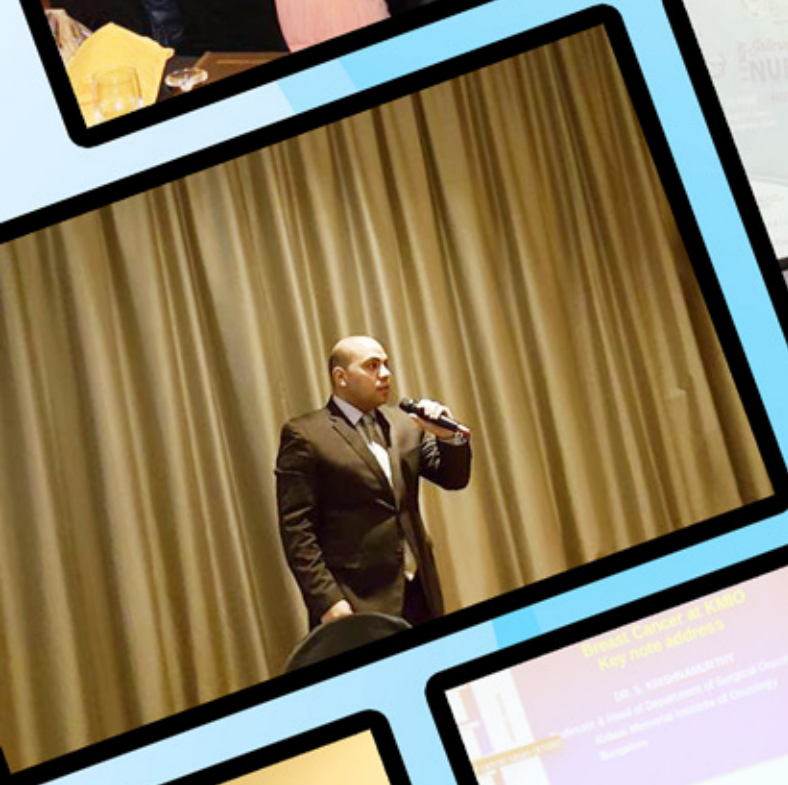
The importance of "mac de café" is in its high content of Potassium and magnesium which are assimilated immediately. Also, it contains phosphorus and Copper which are of half assimilation. On the other hand, it is very poor of Calcium, Zinc, magnesium and iron to compensate for the lack of these

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elements. It contains some of Nitrogen but it is not assimilated immediately. Nitrogen is spread gradually when degrading. As a note, only 0.09 per cent is available directly. The rest is "related". It represents at last very important



Past Conference Gallery



Past Conference Gallery



