



conferenceseries.com



conferenceseries.com
1304th Conference

3rd World Congress on

Climate Change and Global Warming

October 16-17, 2017 Dubai, UAE

Special Session (Day 1)



3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

*Stanley D Brunn*

University of Kentucky, USA

Visualizing climate change through the eyes of newspaper cartoonists: Five seconds to educate the reader of long term environmental problems

In an increasing global and interdependent world, the visual is assuming greater importance in public opinion and policy decisions than traditional words or text. This perspective is apparent in global audiences observing political conflicts, pandemic diseases, refugee migrations, natural and human-induced disasters, Google, the WWW and social media are playing key roles in informing leaders and citizens worldwide. Global environmental news reports and commentators regularly inform local, regional and global media audiences using photographs about major earthquakes, hurricanes, floods, disease outbreaks and anomalous weather events on all continents. Underlying many of the reports are ongoing and unexpected changes in weather and climate. Scientists, government policy groups, and NGOs are among those alerting local and global audiences about these changes and their impacts. Books, articles, conferences and legislation are products of these ongoing discussions and presentations. The geopolitics of the visual is an important dimension in understanding environmental change. Another professional group informing wide groups of informed citizens and leaders are newspaper cartoonists. Their task is to capture the essence of a problem or situation in a single frame or drawing that can be understood in less than five seconds. Their use of familiar images, few or no words are critical in capturing their message and informing viewers. I examined the content (subject matter, themes and images) of 607 international and national cartoons about climate change from 2010-2017 to illustrate both how they graphically depict under problems, assess the current state of the environment and look at resolving persistent problems. A skillful political and environmental cartoonist is able to assess a tangled and complex problem easily and assess how to move forward.

Biography

Stanley D Brunn has wide ranging research interests in human/environmental intersections including political, social, religion, language, urbanization, cyberspace, geographic futures, innovative cartography and creativity. He has published 20 books and written more than 100 articles and chapters over 50 years.

brunn@uky.edu**Notes:**



conferenceseries.com



conferenceseries.com
1304th Conference

3rd World Congress on

Climate Change and Global Warming

October 16-17, 2017 Dubai, UAE

Scientific Tracks & Abstracts **(Day 1)**



3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

Modeling the climate change impact of rice yield towards climate resilient future in Sri Lanka**Sarath Premalal Nissanka¹, A S Karunaratn², W M W Weerakoon³, B V R Punyawardena⁴, D Wallach⁵, Sonali McDermid⁶ and Alex Ruane⁶**¹University of Peradeniya, Sri Lanka²Sabaragamuwa University, Sri Lanka³Field Crops Research and Development Institute, Sri Lanka⁴Natural Resources Managements Centre, Sri Lanka⁵INRA, France⁶NASA GISS, USA

Statement of the Problem: The climate projections for Sri Lanka indicate a further warming trend and rainfall variability to become more pronounced in the future. Implications of climate change will be more severe on the rice farming since it requires more water and cultivating areas already exposed to upper limit of maximum temperature. Therefore, this study was initiated to quantitatively assess the impact of climate change on productivity of rice varieties by means of crop-climate modeling and to identify adaptation measures.

Methodology & Theoretical Orientation: A leading representative rice farming district (Kurunegala) was used. Yield performances of commonly growing rice cultivars (Bg-300, Bg-357, Bg-358, At-308) were assessed using systematically calibrated DSSAT version 4.5 model for baseline (1980-2010), downscaled 20 Global Climate Models (GCMs, CMIP5-RCP8.5) for mid-century (2040-2069) and for climate sensitivities (AgMIP-C3MP) across three locations of Rajangane, Nikawaratiya and Batalagoda in the district. Randomly selected 104 farmer survey data collected for the two growing seasons (major [October-February] and minor [April-September]) was used for the simulation.

Findings: Cultivation seasons of minor and major showed diverse yield performances with diverse sensitivities to climate. Overall, major cultivation season reported that comparatively lower reduction in rice yields compared to minor season for the actually observed climate over baseline period. According to 20 GCMs of CIMP5- RCP 8.5 climate predictions for the study sites showed the yield drop of up to 16% in major season and it was up to 30% during minor season. Out of three sites Rjangane reported the lowest reduction (10%) in major season compared to Nikaweratriya (19%) and Batalagoda (18%). In Contrast, Batalagoda showed the lowest drop (24%) relatively to Rajnagane (30%) and Nikaweratiya (33%) in minor season.

Conclusion: According to C3MP results two rice cultivar (Bg 300 and Bg 357) reported diverse yield performances with diverse sensitivities to climate for Batalagoda.

Biography

Sarath Premalal Nissanka is a Professor in Crop Science at the Department of Crop Science, Faculty of Agriculture, University of Peradeniya. He has graduated with a PhD in Agronomy from the University of Guelph, Canada. He has his expertise on agronomy, crop physiology and climate change and its impacts on agriculture and forest ecosystems.

spnissanka@gmail.com

Notes:

3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

Atmospheric anomalies, mesoscale eddies and algal blooms in Arabian waters

Sergey A Piontkovski
Sultan Qaboos University, Oman

Shelf waters of Oman and other countries around the Gulf and the northwestern Arabian Sea are subjected to periodic algal blooms which led to huge economic losses because of their impact on fisheries, desalination plants and recreational activities. Remotely sensed and directly sampled seasonal algal blooms of the Gulf and the western Arabian Sea were analyzed with regard to seasonal and inter-annual changes of spatial-temporal characteristics of mesoscale (cyclonic and anticyclonic) eddies observed in both regions. Satellite derived (4 to 9-km spatial resolution MODIS Aqua and VIRS) daily Level-3 data for the sea surface heights, sea surface temperature and chlorophyll-a concentration were used to retrieve weekly time series of parameters and images of their spatial distribution covering 16 years (2000-2016). Data on phytoplankton taxonomy came from the sampling carried out on board research vessels (including ships of opportunity). In the Gulf of Oman and the northwestern Arabian Sea, the dinoflagellate algae *Noctiluca scintillans* dominated the biomass of phytoplankton during winter blooms. The location of chlorophyll-a maxima was associated with centers of cyclonic and peripheries of anticyclonic eddies which had the size of 100-200km. Both exhibited a bimodal seasonal pattern of their occurrence. In terms of eddy footprints at sea surface, positive and negative sea surface height anomalies matching the range of 10-20 cm were the most numerous. The frequency of eddy occurrence and algal blooms exhibited inter-annual variations. The relationship between atmospheric anomalies (in the form of El-Niño Southern Oscillation and Indian Ocean Dipole), eddies and algal blooms is discussed.

Biography

Sergey A Piontkovski is currently an Associate Professor, Department of Marine Science and Fisheries, Sultan Qaboos University. He is the author and co-author of 60 peer-reviewed research papers, 3 books, 8 book chapters and 50 conference presentations. His research interests have ranged from physical oceanography to marine ecology and mesoscale physical-biological interactions. His recent research studies have focused on climate-related variability of physical, chemical and biological characteristics of the Arabian Sea.

spiontkovski@gmail.com

Notes:

3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

Effects of multiple glaciogenic artificial cloud seeding in summer**Kikuro Tomine**

National Defense Academy, Japan

Numerical experiments of glaciogenic seeding method are conducted on a cloudy day with weak rain in summer. Released latent heat of freezing has been supposed to play a role to enhance rainfall amount in the method through stimulated convection in a cloud warmed by the released latent heat and the process is not included in the hygroscopic seeding method. Therefore, effects of the released latent heat are, also, investigated. A seeding area is settled about 72 km upwind of a catchment area of a dam. Four kinds of seeding methods are investigated. In the first case, cloud portion upper than the -8°C level is seeded to estimate seeding effects with AgI. The second is a case with 1 kg dry ice seeding in the seeding area. The third is a massively seeded case with 15 kg dry ice. And the fourth is a multiply seeded case with 15 times seeding of 1 kg dry ice at 5 minute intervals tracking the seeded cloud. Accumulated rainfall amount and increasing ratio at the catchment area for 90 minutes in the four seeded and the control cases (without seeding case). The increasing ratio in the multiply seeded case is the largest. Differences of vertical velocity and atmospheric temperature distributions between the multiply seeded and the control cases at 60 minutes after the seeding, 20 minutes before the cloud reaches over the catchment area are shown. An area of 0.55 g kg^{-1} snow mixing ratio, which is about 8 times larger than that in the control case, is formed over 139.3° . The snow is supported by the upward flow of 0.2 or 0.4 ms^{-1} . The upward flow is caused by warmed atmosphere by the released latent heat between 5 and 7 km levels.

Biography

Kikuro Tomine is a Professor in National Defense Academy, Japan, studying aviation weather such as turbulence, thunder, fog, gust and artificial cloud seeding.

tomine@nda.ac.jp

Notes:

3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

An exploratory field survey of 12 lakes of Bangalore, Karnataka, India

Geetika Pant, Cotek Temitayo and Prashanthi Karyala
Indian Academy Centre for Research & PG Studies, India

Statement of the Problem: Bangalore city, Karnataka, India used to be known as “The City of Lakes”. The rapid urbanization and influx of people has made this city as “Silicon Valley of India”. This intense and rapid increase of urban sprawl has resulted in disappearance of wetlands and sharp decline in the number of water bodies. The amalgamation of physical, biological and anthropogenic activities have affected the physiochemical properties of the lakes in the city leading to drastic imbalance in the aquatic life and overall ecological quality. Therefore, there is a need for continuous assessment and monitoring of lake water qualities.

Methodology: The water samples from 12 different lakes in and around Bangalore city were collected and analyzed for various physiochemical parameters (pH, Conductivity, DO, COD, total hardness, alkalinity, phosphate, ammonium and sulfate) by following APHA (2005). The CFU and colony morphology were determined by standard microbiological techniques. Principal Component Analysis (PCA) was carried out on the scaled data for classification of lake samples based on their physiochemical parameters in R (Hierarchical cluster analysis).

Findings: The ranges of the physiochemical parameters of the 12 lake water samples were as follows: pH (7 to 10), conductivity (550 to 1830 mmho/cm), DO (0.4 to 2.0 mg/l), COD (30 to 94 mg/l), total hardness (228 to 791 mg/l), phenolphthalein alkalinity (absent in all the lake samples except for Ulsoor Lake), methyl orange alkalinity (100 to 425 mg/l). There were 4 lakes whose ammonium concentration was higher than 300 mg/l. Levels of phosphate were negligible in all the samples except 3 lakes at a range of 141 to 169 mg/l. PCA showed clustering of samples based on the physiochemical parameters into three groups with one exception (Ulsoor Lake).

Conclusion & Significance: The comparison of physiochemical parameters of 12 lakes with the standard values of WHO guidelines revealed that most of the parameters analyzed were greater than the acceptable limits. This poses a dangerous threat to both aquatic and human lives. The information provided through this study could aid in sustainable governance of lakes of Bangalore, a critical but severely threatened ecosystem.

Biography

Geetika Pant has more than 14 years of experience in teaching and research in various environmental issues and its impact on the society. Her research work areas are on various environmental models like microbial fuel cells, bio-conservation, biodegradation by microbial analysis and stress response mechanisms in plants.

geetika_biotech@indianacademy.edu.in

Notes:

3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

Toward a legal and policy framework for carbon capture and storage in Japan: Optimizing policy mix approach**Akihiro Nakamura, Yanagi Kenichiro and Komatsu Eiji**
Meiji University, Japan

The Carbon Capture and Storage (CCS) technology deployment has been widely considered as a crucial tool to contribute to reducing the large amount of the global carbon dioxide emissions created by the human society. In order to encourage large-scale deployment and/or commercial uses of CCS, it is essential to consider policy mix options and the best selections, especially for making greater cost efficiency and scaling up the further facilities for CCS deployment. The need for CCS is also varied depending on country and region. Despite the fact that there are many existing discussions about best selection of policy mix associated with selecting effective policy instruments in general, to date there has been little discussion on CCS specifically, due to the lack of experience in the field of industry. In this regard, this article specifically offers a potential analytical framework for policy mix approach to the future CCS deployment in Japan. Throughout this study, we have addressed a number of key instruments, which are considered and implemented in various countries, including the European Union, Canada, the UK, the US and Norway. This study also identified existing and potential policy instruments relevant to Japan, although commercialized CCS has not yet been enacted to date. Accessing relevant literature, we have proposed two major models for policy mix options, which are “Regulatory model for enterprises” and “Public works model for the relevant authorities”. Our project further takes responsibility to conduct analyses for best policy and legal developments for this country.

Biography

Akihiro Nakamura is a Research Fellow at the Centre for Environmental Law, Meiji University, Japan and Adjunct Researcher at University of Tasmania in Australia. He has completed his PhD in Public Policy from the University of Tasmania. His research expertise is in the field of policy instrument analysis in relation to climate change policy.

akihiro_nccs16@meiji.ac.jp

Notes:

3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

The Black Sea SST fluctuations in association with temperature and precipitation of West and Northwest of IranIman Roustae¹ and Haraldur Ólafsson^{2,3}¹Yazd University, Iran²University of Iceland, Iceland³Icelandic Meteorological Office, Iceland

In recent years, global warming has come to the fore as one of the world's most serious environmental problems. The interaction of the ocean and atmosphere plays an important role in shaping the climate and its variations. Meanwhile, SST fluctuations have diverse effects on climate variability. The purpose of this study was to investigate and analyze the effects of Black Sea SST anomalies on the temperature and precipitation of west and northwest of Iran. For this purpose, the SST of Black Sea has been obtained from the NCEP/NCAR database. After extraction of Black Sea SST, daily temperature and precipitation data of 80 stations were retrieved for the west and northwest of the Iran from IRIMO during the period of 1960 to 2010. Then, by using Pearson correlation coefficient, the relationship between temperature and precipitation in the West and northwest of Iran with the positive and negative anomalies of the SST of Black Sea were calculated. The results of this study showed that the positive anomalies of the SST of Black Sea are more affected by the temperature of the west part of study region, so that the spatial variation of the temperature during the negative anomalies of Black Sea SST in this region was higher. However, the temperature in the northwest of the study region is more associated with negative anomalies. In the case of precipitation, the situation is different, so that precipitation in the study area is more associated with negative anomalies of SST of Black Sea, which is more affected the western provinces. At the time of positive anomalies, only the provinces of Ardabil, East and West Azerbaijan are weakly influenced.

Biography

Iman Roustae has completed his PhD from Tehran University, Iran. His PhD thesis is in Climate Change and Atmospheric Blocking. He is currently an Assistant Professor of Climatology at the Department of Geography, Yazd University. He has published more than 20 papers in reputed journals.

iroustae@yazd.ac.ir

Notes:

3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

Monitoring and analysis of formaldehyde concentration over Rawalpindi-Islamabad Pakistan using MAX-DOAS and satellite observation**Waqas Ahmed Khan**

The University of Lahore, Pakistan

Formaldehyde (HCHO) is an intermediate product in the oxidation paths of non-methane hydrocarbons produced through biogenic activities and anthropogenic sources. Formaldehyde is a flammable, colorless, strong-smelling chemical that is used to produce numerous domestic products and medical preservatives. Formaldehyde is also present naturally in the environment and produced in lesser amounts by most organisms as part of normal metabolic processes. Pakistan lacks the monitoring facilities on a larger scale to measure the atmospheric gasses on regular basis. The study presents the result of atmospheric Formaldehyde vertical column densities (VCDs) obtained from ground-based and satellite observations over Pakistan during the time period of 2014-2015. In order to explore the spatial distribution of Formaldehyde, various field campaigns were conducted by using Car MAX-DOAS instrument in which international scientists were also involved. Level 2 data product of satellite; Ozone Monitoring Instrument (OMI) retrieved by differential optical absorption spectroscopy (DOAS) technique was also compared with ground-based observations. Spatio-temporal distribution of Formaldehyde (HCHO) column densities over main cities and region of Pakistan are discussed. The results show that high Formaldehyde (HCHO) column densities 108 ppm exceeding permissible limit of WHO 83 ppm, were found over twin cities Rawalpindi-Islamabad of Pakistan. The highest VCDs were around 1.0×10^{16} to 8.5×10^{16} molecules/cm² higher than WHO guide lines, while in Pir-Sohawa valley where there is less population and vehicular emission; HCHO VCDs were found within WHO permissible limits. Similarly, areas with major industrial activity and high population densities showed high amount of HCHO concentrations.

Biography

Waqas Ahmed Khan is serving as a lecturer in University of Lahore, Pakistan in the department of Environmental sciences.

Waqas.ahmed@envs.uol.edu.pk

Notes:



conferenceseries.com



conferenceseries.com
1304th Conference

3rd World Congress on

Climate Change and Global Warming

October 16-17, 2017 Dubai, UAE

Scientific Tracks & Abstracts (Day 2)



3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

Synthesis and characterization of novel amine-based deep eutectic solvents for CO₂ capturing**Inas M AlNashef, Idowu Adeyemi and Mohammad R M Abu-Zahra**
Khalifa University of Science and Technology, UAE

In this study, we have reported a new experimental measurement of the density, viscosity, conductivity, pH, surface tension and thermal stability of three different deep eutectic solvents- DES, Choline chloride+Monoethanolamine and ChCl-MEA; Choline chloride+Diethanolamine, ChCl-DEA; and Choline chloride+Methyldiethanolamine, ChCl-MDEA, representing the primary, secondary and tertiary amines, respectively. The experimental data was obtained at temperature from 293.15-353.15 K and for three different choline chloride:amine molar ratios of 1:6, 1:8 and 1:10. Results revealed that amine-based DESs are more thermally stable as compared to stand-alone amine solvents. The density and viscosity showed a negative relationship with temperature in the linear regression model based on the least square approach. On the other hand, the conductivity increased linearly with increasing the temperature. The density, viscosity, stability and conductivity increased with decreasing molar ratio of the amine in the DESs. However, there was no clear trend in the pH with molar ratio. The prepared DESs showed very promising results in CO₂ capturing.

Biography

Inas M AlNashef has joined King Saud University, Riyadh, Saudi Arabia, after obtaining his PhD degree from the University of South Carolina and further promoted to Associate Professor. He was very active in research related to green engineering and sustainability and established collaboration with the University of Malaya, Malaysia, where he was a Co-Advisor. Later, he moved to Abu Dhabi, UAE where he is presently working as an Associate Professor in the Department of Chemical Engineering at Khalifa University of Science and Technology, Masdar Institute. He has also co-authored more than 80 peer-reviewed journal publications. In addition, he received 7 patents from US and EU patent offices. He is also a recipient of several prestigious awards including King Abdullah Award for best invention in 2013.

enashf@masdar.ac.ae

Notes:

3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

Systemic model for assessing the vulnerability of an aquifer associated with the effects of climate change**Edgar Ricardo Monroy Vargas¹ and Pouey Nora²**¹Pilot University of Colombia, Colombia²National University of Rosario, Argentina

Environmental management and land use planning are difficult issues for all government authorities. The author in his doctoral work called Systemic Model for Environmental Impact Assessment at River Basin Level, proposed a methodology to quantitatively assess the environmental impact at the level of a river basin. In the same work an indicator called EVI was proposed, which includes the result of the environmental impact value with other macroeconomic variables, with the support of the Fuzzy Logic. It is important to note that the estimated environmental impact at the Basin level is quantitative and the EVI is an important and innovative contribution to environmental assessment and management. This methodology can be extrapolated for the assessment of the vulnerability of aquifers such as Puerto Boyaca, Colombia, allowing a better decision making on its use and environmental management.

Biography

Edgar Ricardo Monroy Vargas has 20 years of professional experience. He has worked in the public and private sector and held positions at the management level such as: Secretary General of the Assembly of Deputies of Boyaca, Manager and he has worked in oil sector with the Multinational TECHINT and Consultant in the area of hydro-environmental for Regional Autonomous Corporations.

rimonva9@hotmail.com

Notes:

3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

Optimizing ownership scenarios for commercializing carbon capture and storage in Japan**Akihiro Nakamura, Yanagi Kenichiro and Komatsu Eiji**
Meiji University, Japan

This article is a part of our Japanese Government funded research project, which is to develop a comprehensive policy and legal framework for commercializing Carbon Capture and Storage (CCS) in Japan. The Paris Agreement of 4 November 2016 for the first time brought all nations together to share the responsibility of combatting climate change and adapting to its effects. There has been wide discussion about CCS considered as one of the significant approaches to greatly reduce CO₂ from the global atmosphere. The Japanese government submitted Intended Nationally Determined Contributions (INDCs) to the United Nations Framework Convention on Climate Change (UNFCCC) in 2015. Japan decided on the GHG reduction target of 26% by 2030 below 2013 level. The government also targets an 80% reduction of GHG emissions by 2050 and has acknowledged CCS can potentially contribute to reducing 7.1 billion tons of CO₂ by 2050, resulting in approximately 21% of potential contribution to reducing CO₂. Thus, the future CCS deployment associated with an appropriate legislative framework will allow potential benefits and meet Japan's climate policy goals. In this regard, this article offers a strategic framework for optimizing different ownership systems for the future CCS deployment in Japan. Throughout this study, it proposes three different scenarios in terms of developing CCS deployment in Japan, they are: Private ownership, private associated with government/public ownership and government/public ownership for CCS. The degree of cost and risk sharing will be differentiated, depending on the development stage and scenarios. Accessing relevant literature, we have proposed three potential scenarios for addressing the best legal framework for the future CCS operation in Japan.

Biography

Akihiro Nakamura is a Research Fellow at the Centre for Environmental Law, Meiji University, Japan and Adjunct Researcher at University of Tasmania, Australia. He has graduated with a PhD in Public Policy from the University of Tasmania and has also built considerable experience in these fields both in Australia and Japan. His research expertise is in the field of policy instrument analysis in relation to climate change policy.

akihiro_nccs16@meiji.ac.jp

Notes:



conferenceseries.com



conferenceseries.com
1304th Conference

3rd World Congress on

Climate Change and Global Warming

October 16-17, 2017 Dubai, UAE

Young Researchers Forum (Day 2)



3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

Tobacco, a platform for efficient biofuel production: Pre-treatment to bioethanol production from lignocellulosic biomass of tobacco**Cotek Temitayo, Kokila S, Mahuya De Ghosh, Prashanthi Karyala and Inla Sravani**
Indian Academy Centre for Research & PG Studies, India

Statement of the Problem: The escalating industrial and domestic demands on non-renewable energy resources have led to the rapid depletion of fossil fuels. This has resulted in the emergence of bioethanol derived from fermentation of food crops such as maize and corn which has increased the prices of food commodities. Second generation bioethanol based on raw materials rich in complex carbohydrates such as cellulose reduces the competition with the food industry. Tobacco is grown in large fields all over the world and generates multiple harvests per year, thus producing large amounts of inexpensive green biomass. The process to obtain second generation bioethanol involves four basic steps: pretreatment, enzymatic hydrolysis, sugar fermentation and ethanol recovery.

Methodology & Theoretical Orientation: The dried tobacco leaves and stalk were pretreated with water, buffer (0.1 M Citrate buffer) and dilute acids (H_2SO_4 , HCl and HNO_3 at 1%, 4% and 6%) at different temperatures (60°C, autoclave-121°C and 130 °C) and microwave treatment (700 W, 2 min). The percentage of cellulose in the pre and post treated biomass was estimated by the method of Updegraff. The pretreated biomass was subjected to enzymatic hydrolysis using cellulose from *Trichoderma reesei* (~700 U/g of substrate) and β -glucosidase (60 U/g of substrate). The total yield of glucose and ethanol produced for each pretreated biomass was assayed by standard procedures.

Findings: A considerable loss of biomass was observed after pretreatment with dilute acids compared to pretreatment with steam in water or citrate buffer. The highest glucose and ethanol yield was obtained in the pre-treated stalk with steam at 121°C in citrate buffer.

Conclusion & Significance: Results from the presented experimental work indicate that leaves and stalk of tobacco have a vast potential for the production of sugars that eventually can be used for producing bio-ethanol. Despite declining cigarette sales worldwide, the use of tobacco to produce bio-ethanol can be an alternative approach to save tobacco farmers. As tobacco is not a food source it will not drive up food prices.

Biography

Cotek Temitayo has completed his Bachelor's degree in Microbiology, Genetics and Biochemistry. He has done research projects on few topics such as isolation and enumeration of endophytic fungus from medicinal plants, antibiotic resistance of pathogenic bacteria (*Staphylococcus aureus*) and population genetics study on diabetes mellitus.

cotek407@gmail.com

Notes:

3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

Bio-surfactant production by naphthalene degrading bacteria from oil contaminated soil samples**Shah Jiten J and Sangeetha Menon**

Indian Academy Centre for Research & PG Studies, India

Introduction & Aim: The major environmental pollution of soil and water is due to hydrocarbon contamination resulting by the petrochemical industrial activities. Polycyclic aromatic hydrocarbons (PAHs) such as naphthalene are hazardous class of organic compounds produced as a result of pyrolysis of fossil fuels or other organic matter. Soil microorganisms have the ability to utilize hydrocarbons as a carbon source. The present study was aimed at isolating bio-surfactant producing bacterial strains capable of degrading naphthalene.

Methodology: Fifteen (15) oil contaminated soil samples collected from four wheeler garages and petrol stations of North Bangalore, Karnataka, India were enriched in Bushnell Haas (BH) medium with naphthalene as a sole carbon source for 7 days followed by spread plate on BH Agar (BHA) medium. Naphthalene degrading colonies obtained on BHA were purified and maintained in nutrient agar slants. The isolates were characterized up to genera by morphological and biochemical characters. Bio-surfactant production was tested in the isolates by various screening methods such as drop collapse method, emulsification activity, etc. Most efficient isolates were identified up to species by molecular characterization and analyzed for bio-surfactant production using cheap carbon sources.

Results: Fifteen naphthalene degraders were isolated from oil contaminated soil samples and were identified as members of genera *Bacillus*, *Staphylococcus*, *Enterobacter*, *Stenotrophomonas* and *Klebsiella*. Two most efficient bio-surfactant producers were identified as *Staphylococcus arlettae* and *Stenotrophomonas maltophilia*. Considerable amount of bio-surfactant production was observed by these isolates in BH medium supplemented with cheap carbon sources.

Conclusion: Naphthalene degrading isolates capable of bio-surfactant production could pave a way for effective bioremediation of oil contaminated soil and water environments.

Biography

Shah Jiten J is currently working as a Research Fellow at Indian Academy Centre for Research & PG Studies in India after completing his Masters in Microbiology. His research interest lies in the field of environmental microbiology, biotechnology, cancer biology, genetics and molecular biology.

jitenshah1193@gmail.com

Notes:

3rd World Congress on

CLIMATE CHANGE AND GLOBAL WARMING

October 16-17, 2017 Dubai, UAE

Prevalence and characterization of methicillin-resistant *Staphylococcus aureus* isolates from normal working places**Sayantan Chatterjee and Sangeeta Menon**

Indian Academy Centre for Research & PG Studies, India

Statement of the Problem: Substantial amounts of pharmaceuticals are used in human and veterinary medicine. The inherent biological activity of these non-regulated pollutants turns their occurrence in the aquatic systems into an environmental concern and leads to the selection of antibiotic resistant bacteria in the environment. Therefore, emergence of antibiotic resistant bacteria, such as Methicillin Resistant *Staphylococcus aureus* (MRSA), has become major hurdle in treatment of various deadly diseases.

Methodology & Theoretical Orientation: The present study was aimed at determining the prevalence of MRSA in restroom and classroom door handles of the college. 12 locations were selected in the college campus and 21 samples from both the restrooms and classroom handles were collected using sterile cotton swabs dipped in buffered peptone water and transported to the lab. Isolation of *S. aureus* was carried out in mannitol salt agar and the isolates were identified by Gram staining and biochemical tests. Antibiotic susceptibility of these isolates was done by disk diffusion method. Genomic DNA was isolated and purified and is being studied further for *coa* and *spa* genes.

Findings: Four MRSA isolates were obtained and identified. Coagulase tests were found to be negative and their antibiotic sensitivity revealed that the isolates were resistant to ampicillin, amoxycillin, cefoxitin and cefixime. Further sequencing work is being carried out.

Conclusions: In this study, we have the presence of MRSA in different areas of a normal working place. The presence of MRSA in the study emphasizes the need to formulate hygiene measures to prevent possible spread of MRSA and the other transmissible pathogens to students and faculties in the college.

Biography

Sayantan Chatterjee is currently studying in Indian Academy Centre for Research & PG Studies in India. He has completed his Bachelor's degree of Science in Microbiology, Genetics and Biochemistry. His research interest lies in environmental microbiology, health, cancer biology, plant biotechnology, molecular biology and immunology.

sciadc14@gmail.com

Notes: