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BOOK OF ABSTRACT



1.A Framework for Integrated Sustainability Assessment of Water Cycle Services

Dr. Herman Helness, PhD(C) Sigrid Damman, Dr. Willem P De Clercq,
Nico Elema

ABSTRACT:

A methodology and a framework for integrated sustainability assessment of water cycle services to be used for analysis of strategic options in integrated water management has been developed. The hypothesis was that a holistic assessment framework based on local data would enable decision-making and sustainable development on a local scale in integrated water management. The SUWAM assessment framework was developed using the water cycle services of a small town in Western Cape, South Africa, as case. The point of departure was the municipality's plan for sustainable development. The suitability of the SUWAM Framework was assessed by comparison with two other frameworks: TRUST, from the EU-project TRUST, and City Blueprint, developed in an EIP-water action group. The comparison demonstrated that a sustainability assessment framework must: (i) be tailored to the local conditions, and (ii) that the perspective of the user, often a decision maker, must be taken into account in the interpretation of results. The methodology used in the development of the SUWAM Framework fulfilled these two criteria and produced results that were recognised as relevant for the studied case by local stakeholders. The methodology is suited for comparison and further analysis of different mitigation and adaptation measures.

Keywords: Integrated Water Management, Sustainability Assessment, Water Cycle Services

Dr Herman Helness is a Senior Scientist at SINTEF Building and Infrastructure, Water and Environment. He received his M.Sc. degree in Chemical Engineering at the Norwegian University of Science and Technology (NTNU) in 1989, and has a PhD in enhanced biological phosphorus removal. He has been working with SINTEF since 1991, both in scientific positions and as Research Manager from 2007 to 2015. His scientific expertise covers treatment processes and solutions for drinking water, industrial water and wastewater, sustainability assessments and Integrated Water Management. He has published 23 papers in refereed journals and conferences. He has international experience from Sudan, Ghana, South Africa, and Macedonia. His reference list includes a number of large Norwegian and international projects including: Sustainable water management for resilience to climate change impact on society in South Africa – SUWAM (Principal investigator); Rain Water Harvesting for Resilience to Climate Change Impact on Water Availability in Ghana (QA-responsible); RECOVER (WP-leader for municipal wastewater and project leader in SINTEF); and the EU FP7 projects TECHNEAU and DESSIN (WP-leader and deputy WA leader).

Sigrid Damman is a Research Scientist at SINTEF Technology and Society, Applied Economics. She is a Cand. Polit. in Social Anthropology with many years' experience from research in institutional analysis, social sustainability, governance, networks and collaboration processes, lately with a focus on the water sector. Damman was project leader for the project Rainwater harvesting (RWH) for resilience to climate change impact on water availability in Ghana, where SINTEF developed and implemented decentralized water supply solutions that were adapted to local environmental, economic and social conditions and had a focus on holistic sustainability assessments. Damman was WP-leader in the SUWAM project, and responsible for the evaluating the effects on society of the mitigation and adaptation measures assessed in the project. She has



experience from several projects on innovation uptake and governance in the EU water sector, including assessment of ecosystem services, sustainability and stakeholder participation in the EU-project DESSIN.

Dr. Willem P De Clercq is a professor at Department of Soil Science, Stellenbosch University in South Africa. He is currently at the Stellenbosch University Water Institute, and has experience from: Hydrology and climate change; Monitoring tools for water quantity and quality management in the Berg and Breede River systems; Investigate alternative management options to enhance the use of saline water for the purpose of vineyard irrigation; Establishing the effects of saline irrigation water and managerial options on soil properties and plant performance; Water quality information systems for integrated water resource management: The Riviersonderend-Berg River system; and Investigating the role of dryland salinity in the quality of the water of the Berg River.

Nico Elema is the Programme Manager for the NEPAD Water Centres of Excellence initiative, located at the hub at the Stellenbosch University. As Programme Manager, he has various responsibilities, including liaison with stakeholders such as the African Ministers' Council on Water (AMCOW); the South African Development Community (SADC) Water Office; programme members in various countries such as Mozambique; Botswana; Zambia; South Africa and Malawi. He also has to foster and develop partnerships with organizations, which include the African Water Association (AfWA); Water and Sanitation for Africa (WSA); International Water Association (ISA) to name but a few. Previously he has 18 years' experience from public-service and private business which covered various industries such as knowledge and information management; Free-and Open Source Software; lecturer at University and also publishing. Currently he is working on a PhD at Stellenbosch University.

2.LCA Water Footprint AWARE Characterization Factor Based on Local Specific Conditions

Libor Ansorge PhD, Tereza Beránková PhD

ABSTRACT:

A Water Footprint based on Life Cycle Assessment (LCA) methodology is a modern approach to the assessment of impacts of water use on the environment. The Available Water REmaining (AWARE) method is the recommended characterization method by the WULCA Working group to perform a water consumption impact assessment in LCA. The published values of AWARE characterization factor were computed using the hydrological model at the country and main river basin levels only. These —average|| values can be imported into the LCA software and used for LCA studies. The scale of available AWARE data could be insufficient for studies at a local level due to heterogeneous conditions in various countries or large river basins. In our study, we use runoff data from the Europe region available in the Global Runoff Data Centre for computation of —regionalized|| AWARE values and compare them with AWARE values at the country and river basin levels. The analysis of computed values indicates that the variance of AWARE values can be very large in some countries and river basins.

Keywords: Water footprint – life cycle assessment – characterization factor – hydrological conditions

Libor Ansorge PhD is a researcher at T. G. Masaryk Water Research Institute in Prague, the Czech Republic. His current research explores an interaction between water use and the environment, mainly the future water needs and water footprint assessment. He is the lead researcher of various research projects carried out in the TGM WRI and participates on few other projects. Prior he became a researcher in 2011 he had worked at the Ministry of Agriculture on the implementation of EU Water Framework Directive at the national level and on preparation of Czech River Basin Management Plans.

Tereza Beránková PhD, is a researcher at T. G. Masaryk Water Research Institute, p. r. i. in Prague, the Czech Republic. Her primary expertise is in the areas of landscape ecology and water resource management with emphasis on the relationship between land use change and its impact on water quality and availability. She currently participates on the future water needs and water footprint assessment project carried out in the T.G.M. Water Research Institute and cooperates with the interdepartmental working group on water resources management and planning according to the EU Water Framework Directive. She also gives lessons and guide students at the Czech University of Life Sciences in Nature Conservation and Landscape Planning study programs.



3. Justifying Water Sensitive Development: Science Informing Policy and Practice

Marjorie R. van Roon

ABSTRACT:

This New Zealand research focuses on providing evidence that a specified residential land use layout plus ‘at source’ stormwater management results in higher aquatic ecosystem health. The evidence provides justification for changes in statutory plans, policies and practice rules that direct urban development. The surveyed sites are within river basins clustered by similar residential land use density. Each cluster includes one river basin with conventional urban form and drainage. Other comparative basins in the cluster typify a ‘water sensitive’ urban form and infrastructure. An index of biotic integrity (indicating river health) is determined for each waterway at annual intervals over years. Current plan requirements, policies and practice guidelines for urban development are critiqued in relation to survey results. The cumulative influence of defined residential river basin characteristics (drivers) are related to the holistic biotic indices. Combined drivers determine the cumulative aquatic health outcome. Research methods typically don’t target the effects of a single driver. Policy, plan and practice requirements need to guide urban design and construction to incorporate the elements of urban form that are together necessary for aquatic health. This will ensure an order of magnitude improvement in the functionality and recreational appeal of streams, wetlands, lakes and recipient harbours.

Keywords: Water sensitive urban design; biotic integrity; urban planning

Dr Marjorie van Roon, School of Architecture and Planning, University of Auckland is a New Zealand aquatic ecologist and environmental planner. Water has been a central element in Marjorie’s career, the focus of which has evolved from marine ecology to coastal planning then water quality research, integrated management of catchments and harbours, and latterly in water sensitive urban design. She has a holistic understanding of the interplay between land and water, and between human activities and water body responses. Marjorie emphasizes avoidance of effects on aquatic systems through design and management. Over the last 15 years Marjorie has been actively researching, publishing and teaching in the area of Strategic Planning for positive receiving water outcomes.



4. Analysis of Drinking Water Quality for Presence of Heavy Metals and Its Impacts on Health of Local Population in Sibi District

Assist. Prof. Uzma Imran Khokhar, Dr Taswar Ahmed Chandio

ABSTRACT:

This study aimed at finding out the presence of heavy metals in the drinking water sources of Sibi District, Pakistan. These metals are causing various diseases in the local population such as browning of the teeth, bone deformations, and malfunctioning of different organs of the human body. The researchers collected water samples from 8 sampling sites of Sibi district and the same were analyzed for fluoride, lead, arsenic and manganese. Modern instruments available in the advanced GSP laboratory were used for examining these samples. The results showed that the values of pH and TDS in water samples ranged from 7.2 to 8.31 and 650 to 9,800, fluoride was present from 2.0 to 12.5 mg/l, arsenic values were observed in the range of 0.0008 to 4.56 mg/l and lead was present from 0.0001 to 0.02 mg/l and manganese was present from 0.002 to 0.353 mg/l. These results show that the values of heavy metals are mostly higher than the values set by World Health Organization (WHO) except values of Manganese and Lead which were mostly within permissible limits. The reason for the presence of these heavy metals was observed to be the combination of rock alterations and exploitation of surface and underground minerals in the selected areas of Sibi district.

Keywords: Diseases, Heavy metals, water supply, pollution

Uzma Imran, working as Assistant Professor in U.S Pakistan centers for advanced studies in water. I teach the courses Air and noise pollution engineering and Occupational health and safety. Works on ecosystem management with specific focus on lake water.

Dr Taswar Ahmed Chandio is working as head analytical and geochemical branch, Geological Survey of Pakistan.



5. Sustainability and the social construction of technology: The case of RWH as Source of Water Supply in Greater Accra

PhD(C) Sigrid Damman, Dr Herman Helness, Dr. George Essegbey,
Dr. Barnabas Amisigo

ABSTRACT:

The paper discusses the sustainability of roof rainwater harvesting (RWH) in Greater Accra, Ghana. We take a holistic approach, but focus especially on the social dimension. The discussion is grounded in a research and development project including a holistic sustainability assessment of selected RWH designs based on LCA, cost-benefit analysis and a KAP survey, as well as training of local artisans, stakeholder dialogue and pilot implementation of 21 RWH systems.

The performance of the systems largely met the expectation. The households could expect long-term savings, and there were benefits in terms of convenience, hygiene and water sharing. On the other hand, high initial costs, limited awareness, and lack of capacity to implement supportive policies were impediments to wide-scale adoption.

The sustainability of the solutions is discussed in further detail. A social construction of technology (SCOT) perspective is applied to throw light on how the stakeholders constructed drivers, barriers, and indeed the technical solutions themselves. We find that the technology was at a stage of low stabilization, meaning-wise, and this clearly affected its sustainability in the local context. The findings suggest that more attention should be paid to social construction in sustainability research and transition efforts.

Keywords: Sustainability, holistic approach, social construction, rainwater harvesting

Cand.Polit. Sigrid Damman is Research Scientist at SINTEF Technology and Society, Department of Applied Economics, where she is a member of the group on social economics. She holds a Cand. Polit. in social anthropology and is in the process of completing a PhD in management and organization studies. She has more than 15 years of research experience, as university lecturer and in applied research. Management and organization, sociotechnical systems and institutional analysis are main research interests, and social sustainability is an increasing focus in her research. Damman has published 22 scientific papers in refereed journals and academic conferences. Her work spans across several sectors, including water, energy, forestry and health. Damman has broad international experience, and was the manager of the project "Rainwater harvesting (RWH) for resilience to climate change impact on water availability in Ghana". She also has experience from several projects on innovation uptake and governance in the EU water sector, including assessment of ecosystem services, sustainability and stakeholder participation in the ongoing FP7 DESSIN project.

Dr. Herman Helness is a Senior Scientist at SINTEF Building and Infrastructure, Water and Environment. He holds a M.Sc. degree in Chemical Engineering, and has a PhD in enhanced biological phosphorus removal. His scientific expertise covers treatment processes and solutions for drinking water, industrial water and wastewater, sustainability assessments and Integrated Water Management. He has published 23 papers in refereed journals and conferences. He has international experience from Sudan, Ghana, South Africa, and Macedonia. His reference list includes a number of large Norwegian and international projects including: Sustainable water management for resilience to climate change impact on society in South Africa – SUWAM



(Principal investigator); Rain Water Harvesting for Resilience to Climate Change Impact on Water Availability in Ghana (QA-responsible); RECOVER (WP-leader for municipal wastewater and project leader in SINTEF); and the EU FP7 projects TECHNEAU and DESSIN (WP-leader and deputy WA leader).

Dr. George Essegbey is the Executive Director of the Science and Technology Policy Research Institute (STEPRI) of the Council for Scientific and Industrial Research (CSIR), Ghana. He holds a PhD in Development Studies and an MSc in International Affairs. Dr. Essegbey has been the Director of STEPRI since 2007. He was employed in 1989 at the Institute and have over the years accumulated considerable experience in research especially pertaining to science, technology and innovation policy. In the areas of water and climate change, Dr. Essegbey and colleagues carried out a study in 2007 on –Assessment of Community Water and Sanitation in Ghana|| funded by the African Technology Policy Studies Network (ATPS). He was the Lead Expert for the Technology Needs Assessment (TNA) for Climate Change Adaptation in Ghana, completed in 2012. He participated on the STI Policy Advisory Committee of African Technology Policy Studies Network (ATPS) Nairobi, and he has been Member of the National Development Planning Commission (NDPC) of Ghana, Convener of the Commission’s Committee on STI/ ICT, and member of the NDPC Executive Committee. He is also participating in EU research forums as contact point for Ghana and the CSIR.

Dr. Barnabas Amisigo is a Senior Research Scientist at the Water Research Institute (WRI) of the Council for Scientific and Industrial Research (CSIR), Ghana. He holds a PhD in hydrology and an MSc in Water Resources Engineering. He has participated actively in the integrated Water Resources Planning and Management research projects at the CSIR – Water Research Institute (CSIR-WRI), Accra, Ghana since 1991. Currently he is lead research scientist on the hydrological and climate change impact on water resources modelling at the Institute. He also co-ordinates the rainwater harvesting research program and activities at the Institute, leading in the research on appropriate harvesting systems in various locations and circumstances. He was a member of a team of experts that prepared the Climate Change Adaptation options framework of Ghana from 2007 to 2009 and currently holds the water expert position in Ghana’s country committee on Technology Needs Assessment (TNA) for Climate Change Adaptation in the country.



6.Exploring the Link Between Farmers" Satisfaction and Opportunity Cost of Conversion to Eco-Friendly Farming System: the Case of Samsun and Adana Provinces of Turkey

Çağatay YILDIRIM, Hatice Türkten, Dr.Vedat Ceyhan, Dr. Ela Atis, Dr. Mehmet Hasdemir, Dr. H. Ece Salalı, Yarkin Akyüz, Dr. Figen Güngör

ABSTRACT:

For last decade, the importance of eco-friendly farming system have been increasing worldwide. However, the link between farmers' satisfaction and opportunity cost of conversion to eco-friendly farming system was unclear. Therefore, the aims of the study were to calculate the opportunity cost of conversion to eco-friendly farming system and to explore the link between opportunity cost of conversion to eco-friendly farming system and farmers' satisfaction in Samsun and Adana provinces of Turkey. The bulk of data were collected from randomly selected 168 farmers by using questionnaire. Opportunity cost of conversion was calculated by comparing the net revenue of eco- friendly farming system and conventional one. In order to set ceteris paribus condition between two farming system, similar conventional and eco-friendly farms were selected by using cluster analysis. Research result showed that the opportunity cost of conversion in Adana higher than that of Samsun. However, farmers' satisfaction was low level in Adana. It was clear based on research results that opportunity cost of the conversion was the main drivers of farmers' satisfaction from eco-friendly farming system. Redesigning the support policy for environmental protection may increase the succeed of environmental protection program.

Keywords: opportunity cost, environmental protection, eco-friendly farming system, farmers" satisfaction, Turkey

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7. The Effect of Applying Biological Control Measures in Greenhouse Cultivation on the Production Efficiency in Kas District of Antalya Province, Turkey

Hatice TÜRKTEN, Çağatay YILDIRIM, Dr. Vedat Ceyhan, Havva Soytopak

ABSTRACT:

Nowadays, in vegetable production, biological pest control practices are recommended to prevent human health and environmental damage even though there has been lacking of economic information. Therefore, the study examined the economic dimension of biological and chemical control measure and aimed to reveal the link between production efficiency and biological pest control practice. Research data were collected from randomly selected 51 farms implemented chemical pest control practice, and 52 farms implemented biological pest control practice by using questionnaire. Cluster analysis was performed to select similar farms from two different groups. Data envelopment analysis (DEA) was used to calculate the efficiency measures such as technical efficiency, allocative efficiency and economic efficiency. Research results showed that farms implemented in biological pest control in pepper production had better technical efficiency and economic efficiency scores comparing to tomato ones, while the reverse was the case for allocative scores. Farms focused only pepper production, implemented biological pest control had better technical efficiency scores compared to chemical ones. Research results also showed that biological pest control in tomato was excessive net profit, biological control costs and pesticide use in greenhouse, while the reverse was the case for pepper. Farmers would increase their technical efficiency if they improve their skills via participating the extension and training programs.

Key words: greenhouse cultivation, biological pest control, production efficiency, Antalya, DEA

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8. Economic Structure and Technical Efficiency of Turkish Beekeepers' Union and Honey Producers' Union

Prof.Dr. Vedat Ceyhan, PhD(c) Selime Canan, PhD(C) Çağatay YILDIRIM, PhD(C) Hatice TÜRK TEN

ABSTRACT:

The study aimed to explore the current economic situation and services efficiency level of problems of beekeepers' union and honey producers' union in Turkey. Research data were collected from 73 beekeepers' union and 58 honey producers' union by using well-structured questionnaire. In the research, classical economic analysis approach was used to reveal socio-economic structure of unions. When measuring the efficiency, we followed two stage procedure. In first stage, data envelopment analysis was used, while Tobit model was used to explore the inefficiency determinants in second stage. Research results showed that typical Turkish beekeeper's union obtained the ₺1,59 from each expenditure by ₺1. Economic condition of beekeeping unions was healthier than that of honey producers' union. 11% of the Turkish beekeepers and honey producers' unions were efficient, while the rest were inefficient. The most critical variables affected the efficiency level of unions were manager's profile and the number of union member. Service efficiency level would increase, if the number of union member increased and profile of managers were improved. The research suggested that the typical Turkish beekeepers' union would have 927 members to be efficient if they had no income sources without member fee. Keeping the basic record in the beekeepers' association and developing information management system would accelerate the efficiency improving in Turkey.

Keywords: beekeeping, beekeepers' union, honey producers' union, economic analysis, service efficiency

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9. The Impact of Environmental Degradation and Climate Change on Tribal Economy: A Study of Plateau Regions of Central India

Dr. Marcus Barla

ABSTRACT:

The tribal people generally, live in the forests and hills. There is symbiotic relationship between the tribals and forests. According to the census 2011, tribal population consisted 8.6 per cent in India. Environmental degradation has become a major issue of concern during recent years. It has affected the life, livelihood and economy of the tribal people and threatened their survival. The emission of green house gases and decline in forest coverage has resulted into the climate change and environmental degradation. It has caused discomfort for the tribal people, increased their cost of living, decline in crop production, social stress and conflict on sharing resources. It is believed that present state of environmental degradation and climate change is human induced. Through the development of industries, mines and commercial exploitation of the forests, the majority of the tribals live in a state of semi starvation throughout the year. Deforestation is causing the problem of food and livelihood insecurity, distress migration, displacement and social imbalance among the tribals. The incidence of drought has increased in Central Plateau Regions of India. The tribals are mainly dependent on natural resources and rain-fed agriculture. Therefore, they have been adversely affected due to climate change and environmental degradation. The objectives of the study are to find out the impacts of environmental degradation, assess its negative effects on the tribal economy, livelihood insecurity and recommend policy for their sustainable development.

Keywords: Environment, tribal, degradation, sustainable, development.

Dr. Marcus Barla, Associate Professor, teaches Economics to Under Graduate and Post Graduate students in St. Xavier's College, Ranchi University, Jharkhand, India, since 1993. His areas of interests are Agricultural Economics, Environmental Economics and Tribal Economics. He has presented papers in International, National and Local Level Seminars and Conferences.



10. The United Nations Convention on Biological Diversity (CBD), nature conservation and biodiversity protection: the Asian green imperialism

Dr. Yee Keong Choy

ABSTRACT:

The Convention on Biological Diversity (CBD), adopted at the Rio Earth Summit in 1992 was in response by the global community to halt the alarming and accelerating rates of environmental degradation and biodiversity depletion across the planet. The Convention, which is a legally binding treaty, has been ratified by 196 countries around the world. Since its ratification, leaders across the world have adopted a wide range of environmental policies and legal instruments to ensure that the global rich biological diversity is conserved and sustainably managed towards enhancing the aim of CBD.

Yet, despite these environmental initiatives, the global environment has increasingly been put under serious pressure by the rapid growth of economic activities and intensified exploitation of natural resources. The situation is particularly worrying in many parts of the Asian region including China, Southeast Asia, Africa and Latin America whose biodiversity planning and conservation often clashes with the pursuit of economic growth and increased human consumption, leading to inadequate, ineffective or biased policy enforcement.

This article aims to examine, through content analysis and statistical description, the state of biodiversity and the primary drivers for species to decline in numbers and to become extinct in the Yangtze region in China and various selected countries in the Asian region including Brazil, the Democratic Republic of Congo, Indonesia and Malaysia whose rainforests are some of the most biologically diverse in the world. The empirical study reveals that the root cause of the global environmental problems is basically due to the global leaders' strong tendency to prioritize economic growth or human consumption over sustainability concerns. This provides the vantage point for us to examine the role of environmental ethics in shaping human relationship to the environment and sustainable resource practices. It is concluded that any realistic solution to the global environmental problems necessarily involve our moral and ethical engagement with nature when optimizing its economic use.

Keywords: Convention on Biological Diversity, environmental policies, habitat modifications, looming global biodiversity crisis, environmental ethics

Dr. Yee Keong Choy received his Master of Economics from Chuo University, Tokyo, Japan, majoring in development economics and Doctor of Philosophy in Economics from Keio University, Tokyo, Japan, majoring in international economics, sustainable development and environmental studies. His research interests range across a wide variety of topic areas in sustainable development studies including environmental ethics, environmental valuation, climate change, urban poverty and social sustainability, solid waste management, and environmental case studies in the Asian Pacific region.

11. Toxicity of Some Insecticides on the Hymenopteran Parasitoid, *Bracon hebetor* (Hymenoptera: Braconidae)

Dr. Amany R. Ebeid, Dr. Huda H. Elbehery, Dr. N.A Farag,
Dr. Mohamed Gesraha

ABSTRACT:

The present study showed the acute toxicity and the effects of two widely used insecticides Profenofos, Cyfluthrin and the IGR (Runner) on the activity of the larval parasitoid, *Bracon hebetor* (Hymenoptera: Braconidae), a natural enemy of many insect pests. The direct application of the tested insecticides induced drastic effect on the adult male and/or female parasitoid, leading to 100% mortality within 24-48 hours post treatment for Cyfluthrin, 7 days post treatment for Runner treatment and 6 days post treatment for Profenofos. The indirect effect bioassays were conducted by applying five concentrations of each insecticide to the artificial diet of the host larvae (*Galleria mellonella*). The least toxic one to *B. hebetor* was Profenofos followed by Runner. While Cyfluthrin was the most toxic one which was dangerous on all life stages of *B. hebetor*, influencing the number of laid eggs by the parasitoid, percent of pupation and leading to failure of adult emergence.

Key words: Bracon hebetor, Profenofos, Cyfluthrin, Runner

Dr. Amany R. Ebeid is Associate Professor and member of Pests and Plant Protection Department, Insect Physiology Branch, National Research Centre, Dokki, Giza, Egypt. Ph.D. Ain Sahms University, Faculty of Science, 2008. Publications: more than 15 research paper. Supervision: 2 M.Sc. and 1 Ph.D. Thesis. Sharing in 3 internal research projects.

Dr. Huda H. Elbehery is Researcher and member of Pests and Plant Protection Department, Biological Control Branch, National Research Centre, Dokki, Giza, Egypt. Ph.D. Ain Shams University, Faculty of Science, 2013. Publications: more than 11 research paper. Sharing in 5 local research projects.

Dr. N.A Farag is emeritus Professor and member of Pests and Plant Protection Department, Biological Control Branch, National Research Centre, Dokki, Giza, Egypt. Ph.D. Ain Shams University, Faculty of Agriculture, 1995. Publications: more than 25 research paper. Supervision: 1 M.Sc. and 1 Ph.D. Thesis. Sharing in 4 local research projects.

Dr. Mohamed Gesraha is emeritus Professor and member of Pests and Plant Protection Department Biological Control Branch, National Research Centre, Dokki, Giza, Egypt. Ph.D. Cairo University, Faculty of Agriculture, 1993. Publication: more than 45 research paper. Share as editor: RASMY, A.H. and GESRAHA, M.A. (eds.). 2015. Legal investigations and insects: Breadth of forensic entomology. (In Arabic). Academic Bookshop, Cairo. 130pp. Supervision: 3 M.Sc. and 1 Ph.D. Thesis. Sharing in about 14 local and national research projects.



12. Are People Willing to Pay More for eco-labeled wild-caught seafood: an overview

Dr. Sergio Vitale, Dr. Cristina Giosuè, Dr. Federica Biondo,
Dr. Gioacchino Bono, Dr. Giovanni Buscaino, Dr. Mario Sprovieri,
Dr. Attanasio Massimo

ABSTRACT:

In the last two decades, eco-labeled seafood has been becoming an instrument of sustainability directed towards consumers, addressing a market-based incentive for better management of fisheries. In this context, several studies across the countries have been conducted about how much consumers are willing to pay for sustainable and for certifiably sustainable fish. In this direction, the aim of this study was to systematize the available information about the willingness-to-pay (WTP) more for eco-labeled wild seafood. Therefore, only papers published on ISI journals were searched on —Web of Knowledge|| and —SciVerse Scopus|| platforms, using the combinations of the following key words: seafood, ecolabel, willingness, WTP and premium. The results were organized considering the following variables: taxa, species' family, English name of the species, survey's country, data collection, brand and the WTP. A worldwide increasing interest on ecolabel seafood emerged clearly, empathizing the progressive affirmation of an eco-centrism vision, mainly in the developed countries.

Keywords: Eco-label, Willingness to pay, Seafood

Dr. Sergio Vitale is a researcher at the Italian National Research Council, Institute for Coastal Marine Environment. Experienced in defining strategies for sustainable exploitation of marine fisheries resources.

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Dr Attanasio Massimo Università degli Studi di Palermo, Dipartimento di Scienze Economiche, Aziendali e Statistiche

13. Comparative Estimation of Ecological Rent in Absheron and Sheki-Zagatala Economic Regions of Azerbaijan Republic

PhD Nasimi Ahmadov

ABSTRACT:

The article studies the peculiarities of development of the regions in Azerbaijan economy and analyzes some indicators characterizing the current state of economic development and usage of natural resources in Absheron and Sheki-Zagatala economic regions of the country. The ecological potential of the country and its economic regions has significant importance in increasing of the usage of natural resources and in ensuring the sustainable development. By taking into consideration this the essence of ecological rent is explained and for the first time its quantity is determined comparatively in Absheron and Sheki-Zagatala economic regions of Azerbaijan by using N.N. Klyuev method of determining the "ecological tax".

Keywords: ecological rent, sustainable development, oil and natural gas production, Azerbaijan economy, Absheron region, Sheki-Zagatala region, technological and physiological energy consumption, biological productivity, land areas, forests, arable

PhD Nasimi Ahmadov is senior research fellow at the Institute of Economy of Azerbaijan National Academy of Sciences at the department of —Problems of regional development and using natural resources|. He graduated from the Azerbaijan Cooperation University on speciality —International Economic Relations|, then he left the Graduate school at the Institute of Economy of ANAS. He has written over 30 scientific works. He participated as an expert at the project on —Preparation of an investment map of the Ganja-Gazakh and Guba-Khachmaz regions on the basis of a sustainable development plan| in 2009-2011, as a researcher in the implementation of the project on —Preparation of the Sustainable Development Program in the Sheki-Zagatala economic region for 2014-2020" in 2014. In 2012 he was awarded with the diploma due to the successful presentation in scientific and innovative ideas contest held within the framework "II Republican Fair of Innovative Ideas of Young Scientists" in Baku. On 14 October 2016 he made scientific speech on the theme —Technological development and efficiency in oil refining industry of Azerbaijan| in the I International Afro-Eurasia Studies Congress held in Alma-Ata city of Kazakhstan and was awarded with the certificate by the juries of the congress.



14. Evaluation of existing research concerning sustainability in the value chain of ornamental plants

Dr. Gabriela Bermejo Dominguez, Prof. Heiko Mibus-Schoppe,
Prof. Kai Sparke

ABSTRACT:

In recent years the concept of "Sustainable Development" has become increasingly relevant in society as well as for the economy. Like in other consumer spending areas, sustainability is getting an increasing role in the ornamental plant production, marketing and consumption. Research in the production area has been focused on achieving a better quality and longevity of ornamentals at point of sale and also on environmental aspects as part of sustainability. The maintenance of the quality and longevity of the plants until the point of sale have been the objectives of post-harvest handling and distribution. At consumer level studies show that the well-being and the indoor quality improvement are the main reasons for having ornamentals. However the concept of sustainability has not been investigated throughout the entire ornamental plant value chain. Economic and interdisciplinary factors play a role in this lack of studies. By analyzing the existing literature, the paper evaluates in which areas of the value chain the concept of sustainability have not been considered and identifies potential future steps to reach a more sustainable complete lifecycle of ornamentals.

Keywords: Sustainability, ornamental plants, horticulture, value chain

Dr. Gabriela Bermejo Dominguez is a Postdoctoral researcher at the Hochschule Geisenheim University, Germany. She holds a Ph.D. in Agroecology, a Master in Environmental Protection and has a background in Biology. She is part of an interdisciplinary Project team investigating sustainable production and use of ornamental plants (—ProKonZier||).

Prof. Heiko Mibus-Schoppe is Head of Section at the Department of Urban Horticulture & Ornamental Plant Research at the Hochschule Geisenheim University, Germany. Responsible for plant physiological and cultivation aspects in the project —ProKonZier||.

Prof. Kai Sparke is member of the working group of Management and Marketing and Professor of Horticultural Economics at the Hochschule Geisenheim University, Germany. Responsible for consumer understanding and business perspective in the project —ProKonZier||.

15. Agroecology in Cuba: improve and strengthen an urban farming system to guarantee food security.

Dr. Stefano Dell'Anna, Dr. Delizia Del Bello, Ledy Raúl Díaz González,
Prof. Leonardo Varvaro

ABSTRACT:

In the last decade the issue of urban farming has received the interest of the international scientific community. The experience developed in the town of Pinar del Rio (Cuba) in 2015 with the pilot project Granja Urbana is based on an agroecological approach through the adoption of methods and techniques that increase the resilience of local production system. The project was monitoring after its implementation on a different sectors of intervention: a) localized irrigation: implementing a system of drip irrigation able to minimize losses through evapotranspiration; b) soil fertility: making a careful analysis of soil fertility to ensure a minimum level of organic matter; c) control of plant diseases: introducing methods and techniques with the use of only natural substances; d) renewable energy: implementation of a photovoltaic system for the irrigation. Agroecology approach can be guarantee the resilience of the local farming system through the rational and sustainable use of natural resources, the valorization of local knowledge and the food security for the people living in urban and peri-urban areas.

The monitoring project demonstrating the resilience of the urban farming system based on agroecology.

Keywords: Agroecology, urban farming system, food security, renewable energy.

Stefano Dell'Anna is a PhD at Perugia University on "Sustainable rural development, land use and environment". He was involved from 2001 in a several programs and projects of applied research in Latin and Central America, Middle East, West Africa on the topics of rural development, agroecology, water management, food security and food sovereignty. Degree in Agricultural Sciences, has collaborated with NGO, University (Tuscia and Florence), research centers, in several training programs and projects on development & cooperation (Europe Aid, FP7, LLP). He worked also as a support team to social movements and peasant organizations in the context of the processes, dialogues and activities with UN agencies and several international government bodies (FAO, IFAD, CFS).

Dr. Delizia Del Bello is consultant on rural development, organic farming and quality agricultural and food products. Searcher and data analyst in Italy, Africa and Central America, since 2008.

Ledy Raúl Díaz González is a Full Professor – Asociación Cubana de Técnicos Agrícolas y Forestales (ACTAF) Dept: Department of Mathematics – ACTAF, University of Pinar del Río, Cuba.

Leonardo Varvaro is Full Professor at Department of Agriculture, Forestry, Nature and Energy, University of Tuscia, Viterbo, Italy.



16. “Lenghten Life” Operation: environmental education, citizenship and preservation of Rio Preto

Dr. Rogério de Mesquita Teles, Antônio da Paz Rocha

ABSTRACT:

This work is the result of a project named —Lenghten Life||, developed since 2010 in São Benedito do Rio Preto, Maranhão, Brazil, involving the Association of Children and Friends of São Benedito and the Association of Young People of Alto Rio Preto. It is a socio-environmental action which promotes the preservation and revitalization of Rio Preto and its main tributary, Rio Mocambo, important sources of water for the population. The operation occurs in three stages: 1) 7 groups of youths performed the river cleaning, quantifying collected garbage, the situation of the streams (tributaries) and environmental crimes. 2) teams sensitized river dwellers on the importance of preservation, pollution dangers and deforestation of the banks, and cataloged extinct species. 3) Plantation and cultivation of native species. The participants volunteered, the action was financed by residents’ donation. In the first year, 132 volunteers participated, collecting 16,442 kilos of garbage and identifying 42 streams (21 —dead||, 09 precarious and 12 good). In 2016, there were 131 participants, the removed garbage reduced to 5,400 kilos, 4 dead streams were revitalized, 5 improved and the others continued with good fluency. Deforestation and predatory fishing decreased. The Project showed efficiency in preserving Rio Preto through environmental education.

Keywords: Lenghten Life, environmental education, preservation and revitalization of rivers, São Benedito do Rio Preto – MA (Brazil)

Dr. Rogério de Mesquita Teles is Professor at the Academic Department of Chemistry in Campus São Luis - Monte Castelo, in the Federal Institute of Education, Science and Technology of Maranhão – IFMA (Brazil). He has developed researches in the areas of Education, Chemistry Teaching, Environmental Education and Chemistry of Natural Products. He was director of Technical Teaching Board in Campus Monte Castelo from 2011 to 2016.

Antônio da Paz Rocha works in the prefecture of São Benedito do Rio Preto, Maranhão, Brazil. He studies business administration and militates in the area of environment and citizenship

17. Determining Undergraduate Students' Environmental Attitude

Res. Assist. Nihan Yilmaz, Prof. Dr. Sibel Erkal

ABSTRACT:

It has long been known that environmental issues and environmental issues are responsible for environmental problems. Young people's environmental attitudes are particularly important because young people ultimately will be affected by and will need to provide solutions to environmental problems arising from present-day actions. This study aims to determine undergraduate students' environmental attitudes. When the related literature is examined, it is seen that there are limited number of studies aiming to determine the attitudes of the university student towards the environment in general. For this reason, this study; has been planned and carried out in order to determine the environmental attitude of the students. 224 students studying at Hacettepe University have participated in this research made in order to determine the attitude of the students. In the study, a questionnaire composed of "Environmental Attitude Scale" has been used as a data collection tool. The average score of the environmental attitude levels of the students who participated in the study has been reported as ($\approx 3,84$). In conclusion, it was determined that undergraduate students' environmental levels vary significantly by gender, family type status and level of income ($p < 0.01$).

Keywords: undergraduate students, environmental attitude, environmental behaviors, environmental thought

Res. Assist. Nihan Yılmaz is a Research Assistant of Family and Consumer Sciences at Hacettepe University Faculty of Economics and Administrative sciences. Yılmaz's research interests include burn-out, job satisfaction, Environment issues, housing and health, housekeeping.

Dr. Sibel Erkal is a Associate Professor of Family and Consumer Sciences at Hacettepe University Faculty of Economics and Administrative Sciences. She teaches in the undergraduate and graduate programs in the areas of Family and Consumer Sciences, Individual and Community Health, Housing and Health. Dr.Erkal's research interests include Hygiene in home and institutions, home accidents, housing and health, housekeeping. She has published in a variety of social science journals, including The Turkish journal of Pediatrics, Social Behavior and Personality an International Journal, Journal of Safety Research, Sağlık ve Toplum Dergisi, Sağlık Dergisi, Hacettepe Üniversitesi Sosyolojik Araştırmalar e-dergi, Sağlık İdaresi Dergisi, Eğitim ve Bilim Dergisi, Yeni Tıp Dergisi. She worked as a Visiting Associate Professor at Minnesota University (ABD), School of Public Health, Department of Environmental Health Sciences on 9th August- 19th December 2006.



18. An Investigation of University Student Attitudes Toward Environmental Sustainability

Assoc.Prof. Hande Sahin, Prof. Dr. Sibel Erkal

ABSTRACT:

Thesis statement: The adoption of pro-environmental behavior is critical to reduce negative environmental impacts and move toward a more sustainable future. The role of higher education in training professionals to protect the environment for the future is important. The aim of the study was to investigate university students' attitudes toward environmental sustainability.

Methodology: In this descriptive study, 212 students studying child development and social work at the Faculty of Health Sciences at Kirikkale University completed a questionnaire on demographic characteristics and the sustainable environmental attitude scale. Descriptive statistics (e.g., frequency and percentage distribution, arithmetic mean, standard deviation, etc.) and t-tests and an analysis of variance were employed to analyze the differences between groups.

Results: The mean for university students' attitudes toward environmental sustainability was $\pm SD = 3.28 \pm 0.26$. The results revealed that the students studying child development ($\pm SD = 3.31 \pm 0.23$) were more environmentally conscious than those studying social work ($\pm SD = 3.2 \pm 0.30$) and that knowledge and the level of awareness affected environmental consciousness.

Conclusions: It appears that the greatest challenges faced are the rapid changes in knowledge about environmental issues. These changes need to be included in the curricula of universities.

Keywords: Environment, Sustainable Environment, Environmental Sustainability, University Students

Hande SAHIN, PhD is an Assoc. Prof. in the Department of Social Work at the Kirikkale University in Turkey. Her research and teaching specialties include disabled and elderly, home accidents, quality of life of elderly, environmental problems. At the university of Kirikkale, she had been actively working on several research include; elderly and disabled problems, environmental problems, etc... Some of her published articles are; Comparison of Environmental Attitudes of University Students Determined Via the New Environmental Paradigm Scale According to the Students' Personal Characteristics, Behaviors of Students Towards Safety Measures to Prevent School Accidents.

Prof. Sibel Erkal Prof. in the Department of Family and Consumer Sciences at the Hacettepe University in Turkey. Her research and teaching specialties include home accidents, quality of life of elderly, environmental problems, sustainable development. Some of her published articles are; Comparison of Environmental Attitudes of University Students Determined Via the New Environmental Paradigm Scale According to the Students' Personal Characteristics, Behaviors of Students

19. The Role and Importance of Family in Environment Training For Pre-School Children

Assist. Prof. Dr. Seval Guven, Nihan Yılmaz

ABSTRACT:

Environmental problems we face recently are not a surprise. These problems are a result of years of unconsciousness. Changing negative, insensitive, unconscious human behaviours; obtaining wanted behaviours and showing empathy toward the environment are possible with just environmental education. If Environmental Education and Consciousness are not taught to the all community and necessary precautions are not taken, environmental problems in twenty first century which we are in will become more and more serious problem. Giving first education in family is very important because this education will become the base of person's life. Parents are the first teachers of their children. They are foremost responsible for their children's growth and education until they start school. Parents responsibilities and powers over their children's education could be utilized and extended during preschool education by the help or planned educational activities that require active involvement of parents. This education will help solving the environmental problems we experience and bringing up new generations who live within nature.

Key Words: environmental education, family and environment, pre-school period.

Seval Guven is a Assist. Prof. Dr. of Family and Consumer Science at Hacettepe University Faculty of Economics & Administrative Science. Guven's research interest include environment and family, disabled people and family, family and community.

Nihan Yılmaz is a Res. Assist. of Family and Consumer Science at Hacettepe University Faculty of Economics & Administrative Science. Yılmaz's research interest include burn-out, job satisfaction, environment issues.



20. Do Families Attitudes and Behaviors Support Sustainable Water Consumption

Assoc. Prof. Ayfer Aydiner Boylu, Assoc. Prof. Gulay Gunay

ABSTRACT:

For increasing the quality of life and sustainable improvement, the importance of reaching for drinkable, usable and clean water sources in the 21st century has increased and started to become a significant potential problem to be solved in the World. With today's busy lifestyles, people are often unaware of the amount of water they consume. With the acceleration of modern life, individuals often choose the solution that best suits their time and convenience, rather than optimizing for efficiency and environmental outcomes, since they do not find water-related activities important. Water, which is naturally regarded as an inexhaustible source, is gradually decreasing over time and disappearing day by day. Therefore this research has been planned to determine individuals' water consumption behavior at homes regarding the effective and efficient use of water sources. The sample comprised 654 individuals who resided in Safranbolu, Turkey. Data were collected through a demographic information form, Attitudes Toward Water Use (AtWC), Water Saving Behavior at the Home (WSBQ) and Sustainable Consumption Behavior Scale (SCBs). To determine the factors affecting water saving behavior at the home, correlation and hierarchical regression analyses were employed. Pearson correlation analyses revealed significant positive relationship between sustainable consumption behavior (SCBs) and saving behavior at the home (WSBQ) ($r=.43$; $p<0.01$), attitudes toward water use (AtWC) and saving behavior at the home (WSBQ) ($r=.24$; $p<0.01$). Hierarchical multiple regression analysis displayed that water saving behavior at home is influenced by sustainable consumption behavior and attitudes toward water conservation. The theoretical implication of this study helps to understand the basic concepts of water saving behavior.

Keywords: Households, attitudes toward water use, water saving behavior, sustainable consumption behavior

Ayfer Aydiner Boylu is Associate Professor of Family and Consumer Sciences, Hacettepe University, Turkey. Her research and teaching specialties include family quality of life, family crisis, economical activities of families, financial distress. At the University of Hacettepe, she had been actively working on several research projects includes; family quality of life, investigation of the factors influencing family functions style etc.. Some of her published articles; the impact of the economic crisis on lifestyles of families, an examination of factors affecting economic status and finances satisfaction of families, an assessment of economic costs and contributions of children to the family, investigating the effect of working wives on family expenditure, analyses of debt related behaviors of families, examination of socio-economic variables having effect on functions of single parent families.

Gulay Gunay is Associate Professor of Social Work, Karabuk University, Turkey. Her research and teaching specialties include elderly, retirement etc.. Some of her published articles; an examination of factors affecting economic status and finances satisfaction of families: a comparison of metropolitan and rural areas, status of individuals' planning to prepare for retirement in Turkey, domestic violence against women and its causes: an analysis from the perspective of university students, an investigation of the problems faced by elderly consumers during shopping, the effect of women's decision making styles on sustainable consumption behaviors, sustainable development from the family to the society, outdoor leisure activities in the family: marital satisfaction and problem solving skills in the family.



21. Curriculum and Community Enterprise for the Restoration of New York Harbor with New York City Public Schools

Dr. Lauren B. Birney

ABSTRACT:

Research consistently shows that children who have opportunities to actively investigate natural settings and engage in problem-based learning greatly benefit from the experiences. They gain skills, interests, knowledge, aspirations, and motivation to learn more. But how can we provide these rich opportunities in densely populated urban areas where resources and access to natural areas are limited? This project will develop and test a model of curriculum and community enterprise to address that issue within the nation's largest urban school system. Middle school students will study New York harbor and the extensive watershed that empties into it, and they will conduct field research in support of restoring native oyster habitats. The project builds on the existing Billion Oyster Project, and will be implemented by a broad partnership of institutions and community resources, including Pace University, the New York City Department of Education, the Columbia University Lamont-Doherty Earth Observatory, the New York Academy of Sciences, the New York Harbor Foundation, the New York Aquarium, and others. The project focuses on an important concept in the geological, environmental, and biological sciences that typically receives inadequate attention in schools: watersheds. This project builds on and extends the Billion Oyster Project of the New York Harbor School. The project model includes five interrelated components: A teacher education curriculum, a student learning curriculum, a digital platform for project resources, an aquarium exhibit, and an afterschool STEM mentoring program. It targets middle-school students in low-income neighborhoods with high populations of English language learners and students from groups underrepresented in STEM fields and education pathways. The project will directly involve over forty schools, eighty teachers, and 8,640 students over a period of three years. A quasi-experimental, mixed-methods research plan will be used to assess the individual and collective effectiveness of the five project components. Regression analyses will be used to identify effective program aspects and assess the individual effectiveness of participation in various combinations of the five program components. Social network mapping will be used to further assess the overall "curriculum plus community" model.

Keywords: Inquiry Learning, Environmental Restoration, Citizen Science, Educational Technology

Lauren B. Birney Ed. D, Assistant Professor; Pace University School of Education Dr. Lauren B. Birney Ed. D is an urban STEM educator with nearly 30 years of experience encompassing both high school and university tenures. She is an Assistant Professor in the School of Education at Pace University preparing both pre-service and in-service teachers in the areas of curriculum and instruction, classroom management, teaching methodologies and research techniques. Lauren earned a B.A. in Biology/Chemistry from the University of San Diego, an M.A. in Counseling & an Ed. D in Educational Leadership from the University of Southern California. Dr. Birney works collaboratively with partners and affiliates in creating STEM content, defining curriculum & assessment systems, and conducting program evaluation services for the K-12 STEM community.



22. Experimental and Theoretical Modelling of Waste Produced by the Marble Industry of Tepexi de Rodríguez

Jose Armando Garcia Galicia, Gema Morales Olán,
Martin Hilarion Cadena Tecayehuatl, Pedro Moreno Zarate

ABSTRACT:

Tepexi de Rodríguez is one of the municipalities with the highest rate of extreme poverty in Mexico. The agriculture and the marble extraction industry are the major sources of employment. This region has more than 15 processing factories of marble, where poor safety conditions of work, low salaries and pollution are common denominator. The marble residues deposit in the ground without control, deteriorate the vegetation, causes desertification and affect the health of the population. Actually, there aren't researches about the amount of waste generated by this industry in Tepexi. The objective of this work was analyze theoretically through statistical formulas the amount of waste generate in the marble transformation and compare to the real residues obtain in a field test. The results show that 87% of the raw material is discarded, generate more than 60,000 cubic meters of waste per year. With this results, can be proposed that the blocks will be standardize, optimizing the raw material by 25% or more, decreasing the amount of residues and advantage the development of industry with a sustainable approach.

Keywords: Waste reduction, pollution, sustainable development, marble industry.

Jose Armando Garcia Galicia, Industrial Engineering student from Instituto Tecnológico Superior de Tepexi de Rodríguez (Mexico).

Gema Morales Olán graduated in bio-pharmaceutical chemist from Universidad Veracruzana (Mexico) in 2009. She currently serves has a Ph.D student in the Research Group Food and Agroindustrial Biotechnology at Instituto Politécnico Nacional-CIBA (Mexico).

Martin Hilarion Cadena Tecayehuatl received the bachelor's degree in Industrial Engineering from the Instituto Tecnológico de Puebla (Mexico). Actually, he is an Academic Assistant Principal at the Instituto Tecnológico Superior de Tepexi.

Pedro Moreno Zarate received the bachelor's degree in Electrical engineering from the Instituto Tecnológico de Puebla (Mexico), and the master's degree and the Ph.D's from The National Institute of Astrophysics, Optics and Electronics (Mexico). Actually he is a full professor in the Instituto Tecnológico Superior de Tepexi.

23. Seasonal assessment of heavy metal pollution in street dust of Nicosia City in North Cyprus

Assoc. Prof. Dr. Rana Kidak

ABSTRACT:

Heavy metals concentration is increasingly becoming health concern in the world, particularly on street dust of urban cities with high density traffic. Road dust samples were analyzed for determination of concentrations of the environmentally sensitive elements As, Co, Cr, Cu, Ni, Pb, and Zn in fraction of dust smaller than 100 μm . The dust particles were collected during winter and summer seasons from highways, residential and industrial areas representing different activities across the Nicosia city. The dust samples were measured for their contamination levels and particles size distribution. The assessment of pollution was based on single pollution indices, integrated pollution indices and Pearson moment correlation in order to determine their possible source, spatial distribution and seasonal variations. Single Indices include Contamination Factor (Cf), Index of Geo-accumulation (Igeo) and the integrated indices include degree of contamination (Dc) and Pollution Load Index (PLI). The general pattern of occurrence of heavy metals follows the order of $\text{Cr} > \text{Zn} > \text{Cu} > \text{Ni} > \text{Pb} > \text{Co} > \text{As}$. The highest levels of Cr, Zn and Cu were found in the high traffic density area, and strong positive correlations were found between these metals, implying that automobile exhausts are the dominant source of these metals.

Keywords: Heavy metals, pollution indices, particles size distribution, seasonal variation.

Assoc. Prof. Dr. Rana Kidak is the Head of Department of Environmental Engineering at Cyprus International University in Nicosia, North Cyprus. Her main research area is Physical - Chemical Processes in Water / Wastewater Treatment mainly the application of Advanced Oxidation Processes for a safe environment. After Ph. D. in Bogazici University, she had worked in LGC (Chemical Engineering Laboratory), Toulouse, France, in a European Union FP6 research project about Waste sludge treatment (REMOVALS project (REduction Modification & VALorisation of Sludge)). Nowadays she interested in mainly but not limited to the refractory pollutants and their removal processes.



24. Comparative study of iron and steel industry transition in the countries of Central-East Europe and former Soviet Union

Prof. Volodymyr Shatokha

ABSTRACT:

Comparative analysis of the iron & steel industry's transition in the countries of Central-East Europe as well as in Kazakhstan, Russia and Ukraine during the quarter of century after collapse of Soviet Union has been performed. Influence of political and socio-economic aspects on the pathways and the results of reform was analysed focusing on restructuring, modernisation, production and consumption patterns, international trade etc. Energy efficiency and environmental performance indicators achieved in the countries concerned have been studied in the context of economic and environmental sustainability. Policies for greenhouse gases emissions abatement in the iron & steel industrial sector have been analysed towards addressing Nationally Determined Contributions to Paris Agreement and further transition to a low-carbon and sustainable economy in the countries covered by this study.

Keywords: Transition, sustainability, iron and steel industry

Prof. Volodymyr Shatokha is Professor and Vice-Rector at the National Metallurgical Academy of Ukraine. His current research deals mainly with the innovative methods to recycle the ferrous wastes as well as with modeling of the futures of iron and steel industry towards reaching the sustainability targets. He leads teaching of the module ||EU leadership in climate change mitigation|| under Erasmus+ Jean Monnet programme. Author of over 150 research papers, 8 books and 6 patents. Honorary Professor at the Inner-Mongolia University of Science and Technology, China. Member of the Advisory Board for the Iron and Steel Institute of Japan International Journal in 2008-2012. Visiting Professor at The University of Tokyo in 2012-2013. Laureate of the State Prize of Ukraine in Science and Technology (2010). Associated Partner with the European Sustainable Development Network.

25. Impervious Surface Mapping Using Robust Depth Minimum Vector Variance Regression

Prof. Dr. Dyah Erny Herwindiati, Janson Hendryli, Lely Hiryanto

ABSTRACT:

This paper proposes a reliable minimum vector variance regression algorithm for robust supervised impervious mapping. The mapping is done with a conventional two phase process; training and mapping process. The outcome of training process is the robust regression models useful for the knowledge base of mapping land cover. The robust regression model is built from the existing robust depth minimum vector variance subsample. The case of research is a metropolitan area consisting of megacities surrounding Jakarta, Jabodetabek. The urban population in the Jabodetabek area is very high. The urbanization is closely related to the percentage of impervious area and indicates the quality of the environment. The evaluation mapping provides that the robust depth minimum vector variance regression is an effective method for the impervious land cover mapping of megacities, Jabodetabek

Keywords: depth function, impervious, minimum vector variance, robust

Prof. Dr. Dyah Erny Herwindiati is Professor and Dean of Faculty of Information Technology, Tarumanagara University, Jakarta, Indonesia. She is interested in data mining, robust statistics, modelling, and remote sensing.

Janson Hendryli is a lecturer at Faculty of Information Technology, Tarumanagara University, Jakarta, Indonesia. He is working in machine learning and its applications in various topics, such as remote sensing and computer vision.

Lely Hiryanto is a lecturer at Faculty of Information Technology, Tarumanagara University, Jakarta, Indonesia. She works in a lot of topics in distributed applications and data analysis.



26. Sustainable Renewable Energy Deployment in Developing Countries - Comparison of Thailand and Vietnam Cases

Kazuki Hao

ABSTRACT:

Recently renewable energy is taking a critical role in the world energy landscape. It is usually because its potential to reduce carbon emission. However, it should be necessary to mention that the renewable energy itself cannot be sustainable without considering its deployment and the maintaining process.

On this context, this paper targets to prove that the policy framework strongly creates the renewable energy development much more sustainable. Firstly it briefly overviews the ongoing discussion on the sustainable renewable energy deployment and management in developed countries. Several developed countries such as Germany or Denmark move to renovate the concept of decentralised renewable energy so that it creates value in the local economy. However, this transition limits its area only to the developed world. The purpose of the paper is to expand this theory range to the developing countries, especially in South-east Asian developing nations. Then it shows the situations in two emerging economies, Vietnam and Thailand. It explains the cause of the difference in these two economies from the institutional context, such as policy and regulation. It finally implies that the renewable energy deployment and management can be sustainable in the developing countries depending on the policy framework.

Keywords: renewable energy, developing countries, community, institutions, policy

Mr. Kazuki Hao is a PhD student at the Graduate School of Advanced Integrated Studies in Human Survivability, Kyoto University, Japan. His research interests are the community development and renewable energy in developing countries in Asia. He conducted field studies mainly in Vietnam.

27. A composite indicator-based methodology to assess the sustainability of agriculture in small islands: The case of *Pistacia vera* L. cultivation in Aegina, Greece.

Dr. Georgios Bartzas, Prof. Konstantinos Komnitsas

ABSTRACT:

Sustainable agriculture can be a viable economic and social development strategy in small islands where groundwater resources are scarce, land use availability is limited and crop orchards are usually family-based. Previous methodologies for measuring agriculture sustainability have been mainly focused on survey qualitative indicators, and did not take into account regional quantitative indicators that are tangible, transparent and can be aggregated in a statistically sound and reliable manner. Therefore, based on the 3 pillars of sustainability that includes environmental, economic and social aspects, a composite indicator-based methodology that integrates regional data from life cycle analysis (LCA), groundwater vulnerability and on-farm surveys is presented using data envelope analysis (DEA). To demonstrate the effectiveness of the proposed methodology, *Pistacia vera* L. cultivation in Aegina, Greece is investigated as a case study. Results showed that pistachio orchards greater than 0.4 ha which adopted efficient agricultural waste management practices achieved the highest sustainability scores. The proposed methodology can be applied to other similar crops and areas in the Mediterranean region and could therefore help the main stakeholders such as farmers, agricultural associations, policy makers and local and regional authorities on improving agricultural sustainability along with enabling socio-economic growth.

Keywords: Sustainable agriculture, Small islands, Composite indicator-based methodology, life cycle analysis, data envelope analysis, Pistacia vera. L, Aegina

Dr. Georgios Bartzas is Mining and Metallurgical Engineer (2001), holding a PhD degree in the field of Metallurgy and an MBA degree in the field of Techno-Economic Systems. He has participated in more than 15 EU and national funded projects as Senior Researcher. He has co-authored more than 35 papers in peer-reviewed journals/conference proceedings and received the –Saraf Foundation award from the National Technical University of Athens for the Best PhD thesis (2007-2008). Dr. Bartzas is also Collaborating Teaching Staff at the Hellenic Open University since October 2016 (MSc course in Solid Waste Management). His current research interests include environmental risk assessment, Life Cycle Analysis, soil decontamination, waste management, geochemical and thermodynamic modelling, geo-statistics /GIS and environmental metallurgy.

Prof. Konstantinos Komnitsas, born 1961, holding a PhD degree in Hydrometallurgy (1988), is since 2003 the director of the Laboratory of Waste Management and Soil Decontamination as well as since 2011 of the Laboratory of Ceramics/Glass technology and since 2014 of the Laboratory of Ore Beneficiation. His expertise is in the fields of pyro-, hydro- and bio-hydrometallurgy, waste management and valorization, new materials, soil decontamination, environmental risk assessment and LCA studies. Prof Komnitsas has participated in more than 50 research projects (funded from EC and national sources, in more than 15 as co-ordinator). He has served twice as national representative for previous European Commission (EC) Framework Programs, frequently evaluates research proposals for the EC and national foundations of several countries and is a member of the editorial board of 3 journals. He has published more than 80 papers in peer reviewed journals.



28. Determination of Food Crops Contamination in Osun State, Nigeria Due to Radium-226, Thorium-232 and Potassium-40 Concentrations in the Environment.

Dr. Alexander Chinyere Nwankpa

ABSTRACT:

One of the three goals of the United Nations for sustainable food security is to ensure that all people have access to sufficient, nutritionally adequate, and safe food. The south-west area of Nigeria especially Osun State is home to some of the most important minerals, which include bitumen, gold, kaolin, salt limestone, tantalite, coal and phosphate. As a result of the mineral occurrence, some parts of Osun State have become associated with significant levels of natural radioactivity. The exploration and exploitation of these minerals are known to have enormous consequences on the environment. This work is to measure the baseline radioactivity levels in some major food crops in Osun State and hence predict the potential radiological health effects. The study area (Osun State) has a total land mass of about 12820 km², with a projected population of 5.1 million inhabitants. Osun State lies within latitudes 07°00' N and 08°25' N and longitudes 04°00' E and 05°11' E. Maize, Yam and cassava tubers that constitute the major food nutritive requirements were collected directly across farmlands in the State. The sampling locations were purposely chosen by considering the possibility of mineral resources, water resources, industry and farmlands. In order to have a total coverage of the study area, Osun State was divided into eight zones comprising the thirty local government areas in the State. Maize, yam and cassava were dried at room temperature until a constant weight was achieved. They were ground, homogenized and 250 g sealed in 1-liter Marinelli beaker and kept for 28 days in order to attain secular equilibrium before the gamma counting. The activity concentrations of Ra-226, Th-232, and K-40 were determined in the food samples using γ -ray spectrometry in the Centre for Energy Research and Development, Obafemi Awolowo University, Ile-Ife.

Keywords: Environment, Contamination, Minerals, Radioactivity, Committed Effective Dose.

Dr. Alexander Chinyere Nwankpa is a chief lecturer and the Head, department of Physics in Adeyemi Federal College of Education, Ondo, Nigeria. He was born in Okitipupa, Ondo State, Nigeria. He attended University of Nigeria, Nsukka and obtained his B.Sc. degree in Physics (Education). He obtained his M.Sc. degree in Nuclear Physics at the Obafemi Awolowo University, Ile-Ife. Moreso, he obtained his Ph.D degree in Medical Physics at the University of Nigeria, Nsukka. Being a senior research fellow and a Chief lecturer, Dr. A.C. Nwankpa has many publications, both national and international papers to his credit. He has traveled to many countries including Cape Town in South Africa and London in United Kingdom to attend international conferences. He has special interest on environmental management. Dr. A.C. Nwankpa belonged to some professional bodies such as the Nigeria Institute of Physics and Nigerian Medical Physics Association. He is married to Dr. (Mrs.) Ngozi Nneka Nwankpa, a Chief lecturer at the Federal Polytechnic, Ede, Nigeria. They are blessed with four children.

29. Sustainable Agricultural Development in Nigeria: A Way out of Hunger and Poverty.

Dr.(Mrs) Nneka Nwankpa

ABSTRACT:

This study examines the agricultural transformation vis-à-vis hunger and poverty eradication as a means of sustaining economic growth and development in Nigeria. About 80 percent of Nigerians live in rural areas and agricultural sector remains the main provider of livelihood for most rural dwellers and a major contributor to Nigeria growth rate besides oil and gas sector. Before the discovery of crude oil in commercial quantity in the country in 1968, agriculture dominated the economy and accounted for almost all its foreign reserves. The discovery of oil caused a paradigm shift from agriculture to petroleum, relegating the multi-functional nature of agriculture to the background. Despite the huge revenue and foreign reserves derived from the oil sector, hunger and poverty rates remain on the increase in Nigeria. Recent estimates put the number of undernourished Nigerians at over 53 million-representing about 30 percent of the country's total population while the poverty statistics shows that about 72 percent of Nigerians (118.2 million people) are poor. The importance of agricultural transformation on the nation's socio-economic development cannot be over-emphasized. Hunger and poverty rates will continue to rise as long as the abundance human and material resources located in Nigeria rural settings are not optimally harnessed. This paper therefore, emphasizes significant improvements and effective harnessing of agricultural sector for meaningful and adequate food production and other socio-economic developments through agricultural reforms. Specifically, the study limits itself to the important role of agricultural transformation in engendering sustainable development and significant levels of hunger and poverty reduction in South Western Nigeria.

Keywords: Hunger, Agricultural transformation, Food production, Poverty reduction, Sustenance.

Dr(Mrs) Nneka Nwankpa is a Chief lecturer and the Head, Department of Business Administration and Management, Federal Polytechnic, Ede, Osun State, Nigeria. She is a member of Nigerian Economic Society and Women in Technical Education, Nigeria. Dr(Mrs) Nneka Nwankpa acts as the external Assessor to the Federal Polytechnics in Offa, Ado-Ekiti and Ibadan, Nigeria. She has attended and delivered papers in several International Conferences in the University of Ghana, Accra, University of the Western Cape, Cape Town, South Africa and the University of London, London. She has published books in Microeconomic Theory and Managerial Economics. In her research work, she had investigated the Role of Women in Combating Food shortage and The Impact of Public Expenditure on Poverty Alleviation in Nigeria.



30. Guidelines towards sustainable agriculture in small Mediterranean islands

Prof. Konstantinos Komnitsas, Dr. Maria Doula

ABSTRACT:

The objective of the present paper is to provide guidelines towards sustainable agriculture in small islands, with emphasis on the cultivation of *Pistacia vera* L. in Aegina island, Greece. The guidelines refer among others to the characteristics of the island, pressures from other sectors such as tourism, current cultivation practices, land uses and take into account the risk for groundwater contamination. Special attention is paid on agricultural waste management at farm scale for the production of compost and biochar and their subsequent application to soils, in order to improve soil quality parameters (e.g. soil organic matter, soil aggregate stability, water holding capacity, cation exchange capacity), increase soil carbon sequestration and reduce the risk of groundwater contamination. Also, the role of the most important stakeholders towards sustainable agriculture is emphasized and discussed. The proposed approach will assist towards identification of pressures, environmental hotspots, potential lack of synergy between stakeholders and thus indicate mid- and long-term measures to mitigate impacts and contribute to sustainable agriculture.

Keywords: sustainability, agriculture, Pistacia vera L., compost, biochar

Prof. Konstantinos Komnitsas, born 1961, holding a PhD degree in Hydrometallurgy (1988), is since 2003 the director of the Laboratory of Waste Management and Soil Decontamination as well as since 2011 of the Laboratory of Ceramics/Glass technology and since 2014 of the Laboratory of Ore Beneficiation. His expertise is in the fields of pyro-, hydro- and bio-hydrometallurgy, waste management and valorization, new materials, soil decontamination, environmental risk assessment and LCA studies. Prof Komnitsas has participated in more than 50 research projects (funded from EC and national sources, in more than 15 as co-ordinator). He has served twice as national representative for previous European Commission (EC) Framework Programs, frequently evaluates research proposals for the EC and national foundations of several countries and is a member of the editorial board of 3 journals. He has published more than 80 papers in peer reviewed journals.

Dr. Maria Doula, is chemist, holding M.Sc and PhD degree on Chemical Technology in the field of Soil Pollution. She is an Associate Researcher, Head of the Laboratory of Non-Parasitic Diseases, Department of Phytopathology in the Benaki Phytopathological Institute, Athens, Greece. Dr. Doula has published 37 peer-reviewed papers in academic Journals, 45 announcements in international conferences and 7 book chapters on environmental quality, soil science, water quality and treatment, waste management and reuse in agricultural sector, composting, soil/water/plants analysis, sustainable agriculture, Mediterranean agricultural systems, desertification in Mediterranean and adaptation measures, EU soil-waste-water policy. She participated in many EU and national projects as coordinator or member of research teams, frequently evaluates research proposals for the EC and national foundations of several countries and is a member of the editorial board of 3 journals.

31. Certification of quality as a forerunner of environmental sustainability standards adoption in the olive oil production industry

PhD(C) Rocío Carrillo Labella, Prof. Manuel Parras Rosa, Prof. Fatiha Fort, Prof. Eva María Murgado Armenteros

ABSTRACT:

Agriculture is one of the sectors which is considered to have the greatest impact on the environment. That is particularly true in the area of olive oil production where the concept of sustainability is gaining a major importance not only for administrations and organisations but also for consumers and olive oil producers. This sector has previously focused on the quality management certified by different standards (ISO 9001, ISO 22000, BRC, and IFS); however, these days some interest in environmental responsibility is being shown. This interest goes beyond what is being enforced by the regulations and we can see this by the implementation of environmental standards such as the ISO 14001 within these companies. In this paper, through the analysis of the adoption processes of the ISO 14001 standard by both cooperatives and non-cooperative companies, we can determine their level of involvement in the environmental sustainability of olive oil production in the province of Jaén (Spain), where 20% of the world's production is located. To that effect, we have first studied how many of the 330 companies analysed have adopted the ISO 14001 standard and secondly, qualitative research has been carried out with in-depth interviews involving some of the previously mentioned companies. Results obtained reveal that previous experience of the certification processes ease the adoption of new environmental certifications in such a way that companies which have adopted the ISO 14001 or have stated their intention of doing so possess a high degree of adherence to the ISO 9001 standard. At the same time, they consider that the adoption of that standard makes them more competitive in foreign markets.

Keywords: environmental sustainability, ISO 14001, ISO 9001, competitiveness, foreign trade, olive oil

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Manuel Parras Rosa is Professor of marketing at the University of Jaén. Author of 17 books, 40 chapters of books, 80 articles in journals and 85 papers presented to congresses. Researcher in 63 projects and R & D + i research contracts of which in 22 he has been Researcher Responsible. National Prize of Agricultural, Fishery and Food Publications (1996). Jaen Essay Prize, 1998, granted by the General. UNICAJA Prize for Research on Economic Development and Agrarian Studies, in 2000. Arco Iris Prize for Cooperativism 2005.

Fatiha Fort is Professor in Montpellier SupAgro (France). Teaching food marketing, new product marketing, entrepreneurship and management in food sector.

Eva María Murgado Armenteros is Professor of marketing at the University of Jaén. Author of 6 books, 11 chapters of books, 15 articles in journals and 32 papers presented to congresses. Researcher in 16 projects and 32 R&D+I research contracts. Research Awards: UNICAJA Prize for Research on Economic Development and Agrarian Studies, in 2000. Arco Iris Prize for Cooperativism, in 2005. Priority researchs lines: Agri-food marketing, Agri-food cooperatives. Agro-food sustainability. Main Research activities: sustainable food consumption, territorial marketing linked with traditional local food and innovation adoption processes in SME's related to sustainable development.



32. An Innovative Bioremediation System to Reduce the Impact of Oil Mill Waste in Soil and Freshwater Compartments, Producing Natural Fertilizers

Dr. Silvia Casini, Prof. Giampiero Cai, Dr. Ilaria Caliani, Marco Romi, Luigi Parrotta, Chiara Pozzuoli, Tommaso Campani

ABSTRACT:

Olive oil extraction process produces large amounts of olive mill waste (OMW) that are re-used in agriculture by land spreading. Due low pH, high salinity, high organic load and high levels of polyphenols OMW can impact soil and freshwater compartments. The aim of this study was to enhance and reuse these by-products through innovative bioremediation techniques for the abatement of toxicity. Bioremediation process was based on bioaugmentation: fungi strains able to metabolize polyphenols were isolated from the two matrices, grown and added to OMW composted with chopped straw and olive leaves. Polyphenol concentrations and acidity were found to be strongly reduced at the end of the treatment. In order to assess the environmental safety, products obtained were subjected to a sophisticated process control using biotest in soil and freshwater organisms. An agronomic check was carried out on potted plants before using the final product as fertilizer in nurseries and in olive groves. This innovative technique can allow: a) a reduction of the impact of OMW in soil and freshwater compartment, contributing to their conservation; b) a reduction of the use of chemical fertilizers, supplying locally produced natural fertilizers; c) a reduction of olive oil production chain costs.

Keywords: Olive Mill waste, Bioremediation, Soil conservation, Polyphenols, Biotests, Natural fertilizers

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Tommaso Campani, Department of Physical, Earth and Environmental Sciences, University of Siena, Italy.

33. Towards sustainable use of pesticides: Cereal farmers' adoption of integrated pest management in Norway

Anne Strøm Prestvik

ABSTRACT:

To meet the needs of a growing population, food production must increase without adding to the negative consequences of current agricultural practices. Use of pesticides in agricultural production is generally seen as a necessity that should be minimized in order to avoid the risks on the environment and human health. Sustainable use of pesticides requires professional users to apply the general principles of integrated pest management. Policy makers want to know if farmers have adopted these principles and how they can motivate further adoption. This article uses data from a survey of Norwegian cereal farmers, asking farmers in detail about their pest management practices. Principal component analysis is used in order to group the many practices, find underlying pest management strategies and reveal the level of IPM adoption of the farmer. The analysis shows that some principles of IPM are widely adopted, while others are less commonly used in farmers' pest management strategies. Pest management strategies are also related to farmers' attitudes towards the environment and general farming goals. The results can help the development of policies that ensure a more sustainable food production.

Keywords: Sustainable food production, integrated pest management

Anne Strøm Prestvik finished her Master of Science in economics and resource management degree at the Norwegian University of Life Sciences and currently works in the Norwegian Institute of Bioeconomy research. She participates in a large research project funded by the Norwegian Research Council that aims to develop new and innovative technologies, methods and policies for integrated pest management and thereby contribute to a more sustainable food production. Her other research interests are sustainable in agricultural production, rural development and the circular economy.



34. Social Cost of Improper Land And Variety Selection in Paddy Production in Turkey

Dr. Orhan Gunduz, Dr. Vedat Ceyhan, Dr. Orhan Dengiz

ABSTRACT:

For last decades, efficient use of land as a natural resources has the priority at the agenda of policy makers. Allocating farm land to optimal crop and selecting proper crop variety is vital to reach not only economically, but also environmentally efficient farming. Therefore, the study examined the social cost of improper land and crop variety selection in paddy production in Samsun province of Turkey. Research data were collected from both field experiment and 45 paddy producers by using questionnaire. Classical economic analysis procedures and cost calculation methods were followed. Economic losses sourced from improper land allocation and wrong variety selection in paddy production was calculated by combining individual and social losses. Research results showed that average paddy producers conducted their activities in S2 class lost 1983 kg per hectare of paddy, which was valued \$595, due to improper land and variety selection. 64% of it was sourced from improper land selection, while that of improper paddy variety selection was 36%. However, average paddy producers conducted their activities in S3 class lost 3012 kg of paddy per hectare, which was valued \$900. Research results also showed that social cost of improper land and variety selection in Samsun was \$2,1 million. 62% of total social cost sourced from S2 class land, while that of S3 and S1 were 23% and 15%, respectively. 24% of the total social cost resulted from opportunity cost, while the rest attributed to improper land and variety selection in paddy production. Completing preparing activities the detail land use map and sharing with farmers in the research area may decrease the social cost of improper land and variety selection. Designing education program for farmers in order to make better variety and land selection and disseminate the information related variety and land selection via extension services may reduce the social cost of improper decision in the research area.

Keywords: Turkey, paddy production, economic losses, improper selection, social cost

Dr. Orhan Gunduz is a Associate Professor in Vocational School of Inonu University, Malatya, Turkey. He studies on farm management and agribusiness.

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Dr. Orhan Dengiz is a Professor in Department of Soil Science and Plant Nutrition of Ondokuz Mayıs University, Samsun, Turkey. He studies soil survey and mapping.



35. Land consolidation as a measure for facilitating multifunctional land allocation processes

Associate Professor Jesper S. Schou

ABSTRACT:

The paper presents preliminary results from a real-life project in which five economic services are pursued through multifunctional land consolidation: Farm economics; Biodiversity; Water; Recreational opportunities; and Development of rural communities. Focus is on describing the different economic services subject to the land consolidation; analyse the interactions between land plot reallocation, farm profitability, and public goods in a socio-economic context; Discuss how a multifunctional land consolidation process can contribute to a socio economic optimal reallocation of land plots. The analysis of the land consolidation process is based on the first results from three Danish case studies where land consolidation is used to facilitate multifunctional land re- allocation. The trade-offs between the multifunctional goals in the project areas are balanced by the central planner with inputs from research groups representing each of the economic services considered in the land reallocation process. One lesson learned is that, access to recreational activities such as hunting and horseback riding which is tied to the ownership of land may indeed represent significant value to the land owner. Thus, these non-pecuniary private economic effects should be part of the economic understanding of the processes together with the trade-off between farm economics and the provision of public goods.

Keywords: Land consolidation, Multifunctional, Social-economic

Associate Professor Jesper S. Schou is Head of Section, Department of Production, Markets and Policies, at the Institute of Food and Resource Economics at the University of Copenhagen. He's research interests comprise Agricultural Economics; Nature Management and Provision of Public Goods; Agricultural Policies and the Environment; And Policy analysis.



36. The potential of synergy – developing a tool to design ecosystems for sustainable soil management

Dr. Tsilla Boisselet

ABSTRACT:

Environmental and economical limitations prompt the search for areas of improvement to reduce the environmental footprint of agriculture, while increasing its resilience and maintaining productivity.

We propose a biomimicry approach, where cultivation and productivity are more dependent on intrinsic dynamics than on human/chemical inputs driven by fossil fuels. To specifically target synergetic dynamics and overcome difficulties linked to poor knowledge and hazardous trial-and-error processes, we are developing an informatics tool to design adapted, efficient plant partnerships or clusters.

The tool consists of a prediction model that suggests potential win-win plant or other symbiotic relationships, flexible enough to exploit information about local soil/climatic conditions. As the tool gains strength from generated data, it evolves into a simulation model for several-component ecosystem-like systems. In this way, the tool establishes a solid base to support and accelerate applicability of intercropping-type methods, providing realistic expectations about growth and harvest over time, including ecological criteria such as biodiversity. Thus, the tool provides a way out of the deforestation/agriculture dilemma, and opens up possible human soil use during remediation of polluted areas, with significant consequences in many different domains affected by human soil use, including environment, soil stability, health, and climate.

Keywords: sustainable soil management, ecosystem design, database, remediation, synergy, informatics tool

Dr. Tsilla Boisselet is currently researching on sustainable soil management, and starting a new project on soil resuscitation supported by the Scimpulse foundation. The aim is to ease the reliability and usability of sustainable, alternative methods, especially in the fields of agriculture and bioremediation. She studied Chemical Engineering and Biochemistry, has a combined PhD in Natural Sciences, carried out in Biology and Geology.

37. Barriers for liming of acid soils in light of the Pontryagin's maximum principle

M.Sc. Artur Lopatka

ABSTRACT:

Eutrophication of surface water bodies is one of the main pollution problems in EU. In some areas a big contribution to eutrophication process has rests of mineral fertilizers not utilized by agricultural crops. Low utilization of fertilizers can be associated with their leaching in rainy conditions during its application but is strengthened on low retention sandy soils. Unfortunately, sandy soils on post glacial areas of European lowlands have low acidity what makes situation worse because of lowering bioavailability especially phosphorus fertilizers for plants. Solution is regulation of soil pH by liming but it must be repeated and generate high additional cost. In Poland liming dramatically decreased after 2004 which can be partially explained by end of its subsidizing. However, it is not fully understood why use of fertilizers returned to levels before 1989 and liming remaining on the same low level. Some light on this farmer behavior can be shed by analyzing maximization of long term farmers profits by optimal control theory methods. Pontryagin's maximum principle was used to find condition of liming profitability for different expected farming time horizons. Understanding this problem can be a good starting point for new sustainable instruments within Common Agricultural Policy of EU.

Keywords: Eutrophication, optimal control theory, phosphorus fertilizers, sandy soils

M.Sc. Artur Lopatka since 2005 is a research scientist in Department of Soil Science, Erosion and Land Protection of Institute of Soil Science and Plant Cultivation in Pulawy, Poland. His areas of interest and research are applications of econometric, GIS, statistics, System Dynamic Modeling, agent based modeling, optimization and control theory methods in agriculture especially for agricultural production land suitability assessment; estimation of soil moisture and plant water stress based on satellite images; soil moisture and crop yield interactions modelling and agricultural policy impact assessment.



38. Validating the landscape design framework for urban high-density neighborhoods

Dr. Agnieszka Guizzo, Jane Chan Zi Ching, Prof. Tan Puay Yok

ABSTRACT:

In today's context of urban planning, countless frameworks are developed to guide designers and policy makers to plan and build ideally sustainable cities. It is often tedious and financially improbable to validate the frameworks. In this paper we introduce the various methods of validation our framework has undergone. Five methods are used: (1) design call - 3 landscape architecture studios develop design proposals of an actual site based on the framework. Feedback then were gathered from designers. (2) Delphi method- using the design schemes as targets, the research team is subjected to various rounds of evaluation to identify weak points (3) perception study of developed schemes by experts and residents (4) feedback from government agencies (5) the improved framework is shared with 100 practitioners through peer review session where practitioners from Singapore Institute of Landscape Architects and Architects attended. For framework to be usable, it has to undergo rigorous rounds of validation and revisions. Support from policy makers is necessary to implement it. This system of wide-spectrum validation attempts to bridge the chasm between academia and practice and it is worthy to share our findings with other countries. Integration of the framework into existing planning processes begins next phase.

Keywords: Neighbourhood landscapes, Singapore, high-density, ecosystem services, framework, validation

Dr. Agnieszka Guizzo, Received her PhD in Landscape Architecture and Urban Ecology from the University of Porto, Lisbon and Coimbra in July 2016. Her thesis was titled: “Contemplative Values of Urban Parks and Gardens: Applying Neuroscience to Landscape Architecture”. Currently a research fellow at the National University of Singapore, under a project titled “Biophilic Town: A Framework to Enhance the Environment of High Density Towns”. She is interested in the evidence-based design and the impact of the design of the public spaces on the mental health and well-being of people.

Jane Chan Zi Ching Obtained her Master in Architecture from National University of Singapore, and Specialist Diploma in Landscape Architecture from Building Construction Authority Academy of Singapore. Currently a research assistant in the same project. Having lived in public housing of Singapore for all her life, she has a heightened awareness of what constitutes neighbourhood landscape and is able to perceive through a researcher's lens as well as to capture the nuances of a typical resident. Her research interests spans from urban ecology and landscapes, community participation to environmental psychology and attitudes of people towards nature.

Prof. Tan Puay Yok Functional Performance of Urban Landscapes: Optimizing the performance of urban landscapes as a medium to deliver ecosystem services for enhancing the built environment through manipulation of landscape pattern, composition and design. Urban Greenery Solutions for the Built Environment: Development of urban solutions to integrate urban greenery with the built environment in compact cities. 2 Urban Ecology: Using the framework of a city as a socio-ecological system to understand the interactions and roles of multiple actors in determining landscape values.



39. Sustainability and cultural capital: an opportunity to improve the built environment

Prof. Emilia Conte

ABSTRACT:

The quest for sustainable development in the building sector has greatly improved the sustainability of buildings through energy efficiency and use of renewable resources. However, green buildings are not the only objects in the built environment, and environmental sustainability is not the only aspect to be pursued for sustainable development. The author claims that, to improve an overall real sustainability, we need to introduce the cultural capital, which is now disregarded, in the interpretation of the built environment so that physical and temporal scales can be reconnected and continuity of the process of development can be ensured. Starting from this premise, the paper is organised into three main sections: the first represents two key interpretations of the built environment; the second discusses the limits of such interpretations through the example of sustainable buildings; the third explains why the cultural capital can be considered an opportunity to improve sustainability of the built environment.

Keywords: Overall sustainability; Built environment; Cultural capital; Sustainable buildings.

Dr. Emilia Conte is an associate professor in the DICATECh Department of the 'Politecnico di Bari', Italy, where she teaches Technology of Architecture to students of Building Engineering courses. She conducts researches in the field of building technology, particularly focusing on the contribution of buildings to sustainability of the built environment. The approach to the research is holistic in order to recognise the essential features of sustainable processes for managing buildings and built environment beyond specific solutions. Methodologically, the research is always based on a thorough analysis of the context, considering the multiple aspects of reality and the different actors of the processes studied, thus respecting the complexity of phenomena related to buildings and built environment.



40. Ecomimesis and conservation stewardship: a practical design paradigm

Lillian Woo

ABSTRACT:

In the last fifty years empirical evidence has shown that climate change and environmental degradation are largely the results of increased world population, economic development, and changes in cultural and social norms. During this time period, there have been over 500 international agreements to stem the deterioration of the land, sea, and air. Despite all the evidence and treaties, however, climate change is getting worse with ever increasing air and water pollution, soil and ocean degradation, and ecosystem decline. Based on extensive research, this paper provides an analysis of the negative anthropogenic impact on the ecosystem and proposes a new design solution to mitigate and repair environmental degradation: ecomimesis. It is different from other design models because it incorporates all the major components of the ecosystem and designs built and un-built ecosystems to minimize adverse effects and help stabilize the environment. Using nature as its template, ecomimesis conserves, repairs, and improves existing ecosystems. This article uses homeostasis as an example of possible ecomimetic designs. It is described with emphasis on the damage inflicted by anthropogenic actions. Its primary focus is to propose ecomimetic solutions to repair and mitigate the damage in both the built and unbuilt ecosystems. While there is no single solution to the environmental challenge, ecomimesis represents a comprehensive design paradigm that will slow and correct environmental decline. Ecomimesis represents an innovative and broad change in the way we design and use our ecosystems in order to support an ever growing world population.

Keywords: Climate change, Ecomimesis, Ecosystems, Green Infrastructure, Homeostasis, Sustainable design

Lillian Woo is an economist with 30 years of experience in public policy and legislation in the U.S. She has had published five books and numerous articles. She co-authored Dictionary of Ecodesign, the first dictionary of its kind and during the last decade has made presentations about sustainability in the US, Europe, and Asia and had her articles included in proceedings and published articles.

41. Social-Cultural Sustainability of Typhoon Morakot Post-Disaster Reconstruction in Taiwan

Dr. Jenn-Chuan Chern

ABSTRACT:

Due to increasingly frequent natural disasters brought about by global warming and climate change, the scale of disasters caused by extreme climate has gone beyond that ever recorded, resulting in tremendous losses in social systems, economies, and human lives. Taiwan was ranked as the No. 1 country by the World Bank as high risk to natural disasters in 2005. Unfortunately, Typhoon Morakot, which struck Taiwan on August 8, 2009 with near 3,000 mm accumulated rainfall in 3 days, caused major traumas and serious landslides. There are 16 officially recognized indigenous tribes in Taiwan. As most of them live in the high mountain areas, they were seriously damaged following the unexpected impact. For those refugees suffered from this typhoon, three quarters of them who need the relocation and permanent settlements are indigenous people.

To face this great challenge, the government established the reconstruction council and the congress passed the special act and budget for 5 years' reconnection, the core spirit of the special act has clearly indicated that –the post-disaster reconstruction has to be based on humanity, take livelihood as the core, respect the versatile culture, assure the community participation, and consider both national land protection and environmental conservation.||

This paper will introduce how the reconstruction was performed by using the respectful, efficient, and innovative means to face the complex and unpredictable natural disasters and post-disaster social responses. Based on the experience, the suggestions will be provided.

Keywords: Indigenous, typhoon, disaster, reconstruction, socio-cultural sustainability

Dr. Jenn-Chuan Chern is Distinguished Professor of Civil Engineering at National Taiwan University. He is also the CEO of the Tang Prize Foundation. Dr. Chern received his Ph.D. in civil engineering from Northwestern University in 1984. His interests include concrete materials & mechanics research, infrastructural development and management, hazard mitigation and post-disaster reconstruction etc. Dr. Chern is the recipient of many awards, including the International Contribution Award from the JSCE, the ACECC Civil Engineering Achievement Award, and the Engineering Medal, the highest honor, from the Chinese Institute of Engineers (Taiwan). Dr. Chern has served several important roles in the cabinet, such as the Minister without Portfolio and the Minister of Public Construction Commission, the Executive Yuan. He has assumed the roles of the deputy CEO and the CEO for the Morakot Post-Disaster Reconstruction Council from 2009 to 2014. Dr. Chern is a fellow of ACI, academician of the Russia International Academy of Engineering and foreign academician of the Russia Academy of Engineering. In addition, Dr. Chern is the past Chair of the ACECC, SSMS, CIE, CICHE, and the founder and the first president of the Taiwan Concrete Institute (TCI).



42. Theoretical Framework for the Functional Mechanism of Sustainable Urban Governance

PhDc Parisa Toloue Hayat Azar

ABSTRACT:

An important factor in defining a framework is assessing exactly which elements are involved and how they can interact with each other. Throughout the academic literature, a lot of governance modes have been suggested, based on case study articles that have taken into consideration the governance of different cities based on their characteristics. However, there is a lack on convergence on the frameworks that each of these studies have used, which makes the comparison between the different studies arduous. Furthermore, these modal classifications cannot really demonstrate their ability in solving economic, social and environmental concerns that cities are trying to solve. This article aims to analyse the governing elements of each mode through the introduction of a unique framework for future urban governance studies and by studying the development of different modes of governance throughout the historical period involved.

Keywords: Governance, Activity Theory, Sustainable Development

PhD Student, Parisa, Toloue Hayat Azar , University of Huddersfield. Her research interest involves reduction of greenhouse gasses and creating environmentally sustainable buildings, communities and cities. These objectives can be achieved by social collaborations, as well as, building required efficient infrastructures. Therefore, this researcher in her work endeavors to shows the different connection links that needs to be addressed when solving problems related to sustainable development.

43. Sustainable architecture: the eco-efficiency earth construction

Prof Cesare Sposito, Dr. Francesca Scalisi

ABSTRACT:

The appropriate choice of building materials can contribute decisively to reduce the energy consumption of the building sector. The increasing worries for the environmental impact of construction materials is witnessed by a lot of studies. The mentioned worries has brought again the attention towards natural materials. The use of more sustainable construction materials and construction techniques represent a major contribution to the eco-efficiency of the construction industry and thus to a more sustainable development.

Within this frame the renewed interest for a natural material such as the rammed earth is included; the interest has been in continuous growth from the 80s till today.

The rammed earth's advantages regarding these requirements are evident: the resource is available in great amounts, the energy needed for extraction, transformation and production of the material is very low and it is a wholly recyclable material. Besides these benefits, the interest is due to its high thermal inertia and hard hygroscopic properties.

Keywords: earth construction, sustainability, architecture

Prof Cesare Sposito is Associate Professor at the Department of Architecture, Polytechnic School, University of Palermo. He has Ph.D in —Recovery and Fruition of Ancient Contexts" from University of Palermo. His main research interests are innovative materials for architecture, nanotechnology for architecture, low-energy architecture. He is a professor of Construction Laboratory at Polytechnic School, University of Palermo. He is responsible for research project: Natural and artificial innovative materials for architecture, Recovery of industrial sites. He is member of Research Project: Technologies for passive cooling of buildings in Mediterranean climate; Nanotechnologies for unfired clay bricks: tradition, innovation and sustainability; Recovery and conservation of architectural heritage: nanostructured materials and innovative technologies; Nanotechnologies and Cultural Heritage. His International scientific production includes various publications in journals and conferences proceedings; he has authored more than 40 books, papers and journal articles. He is a reviewer in several International Journals.

Dr. Francesca Scalisi, Ph.D in —Recovery and Fruition of Ancient Contexts", University of Palermo; Research Fellow at the University of Palermo, title of the Research: Testing of nanostructured materials in the archaeological sites of Agrigento, Morgantina and Villa Romana del Casale. Her main research interests are: Green materials; Natural and artificial innovative materials for architecture; Nanotechnologies for unfired clay bricks; Low-energy architecture; Nano-structured materials in new and existing Buildings to improved performance and saving of energy; Cultural Heritage. Principal Research Project are: Natural and artificial innovative materials for architecture; Nanotechnologies for unfired clay bricks: tradition, innovation and sustainability; Recovery and conservation of architectural heritage: nanostructured materials and innovative technologies; Nanotechnologies and Cultural Heritage. Her International scientific production includes various publications in journals and conferences proceedings; she has authored more than 40 papers and journal articles.



44. An Analysis to Role of Green Architecture in Achievement of Urban Green Growth in Iran

Dr. Mir Saeed Moosavi, Fatemeh Jafari, Laleh Davatgar Badie

ABSTRACT:

Among different factors influencing urban ecology, building activity is one of the most important human activities, and plays a determining role in the formation of the urban environment. But simultaneously, it is also a significant consumer of natural resources and an emitter of greenhouse gas (GHG) as well as other wastes and pollutants, resulting in irreversible impacts on the natural environment.

In the past decades, a tremendous effort has been put into research and development in order to improve building systems and technologies with a goal of reducing energy consumption and advancing energy efficiency approaching green standards. However, there is little to no published quantifiable evidence for assessment the energy consumption and efficiency with the framework of green building standards in Iran. In this paper the intention is discuss different challenges and horizons related to achievement of green building standards in Iran.

Keywords: building, green growth, urban environment

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45. Ex-ante assessment of urban development projects

Attila Buzási, Dr. Mária Szalmáné Csete

ABSTRACT:

Budapest, the capital of Hungary facing several climatic challenges in the next decades, therefore there is a need of sustainable development projects with strong emphasis on the projected impacts of climate change. The main aim of the paper is to evaluate an ex-ante assessment methodology to analyse existence or absence of sustainability principles in renewal projects. The selected works have a focus on the same challenge, namely building an intermodal passenger transport hub and renewing the surrounding area in the district IV. of Budapest. The renewal plans have been developed by students from different Hungarian universities during a three-day-workshop. However the main focus of the workshop was on tackling the transport-based challenges, most of the elaborated plans have strong emphasis on green and blue areas, communities, building and related sustainability issues. The jury of the competition included mainly transportation engineers, real estate developers and civil engineers, therefore there is a need of involving broader sustainability and climate-related aspects into the assessment process. The output of the paper shall reveal the differences between developer-oriented ranking and the climate-related one regarding the same urban renewal challenge.

Keywords: urban sustainability; climate change; urban planning; ex-ante

Mr. Attila Buzási is Assistant Lecturer at Department of Environmental Economics, Budapest University of Technology and Economics, Hungary. He conducts researches regarding urban sustainability, climate adaptation, smart cities and related concepts. His research focus is mainly on strategic-based challenges of urban areas in tackling negative impacts of climate change, such as elaborating sets of indicators in terms of local adaptation processes, moreover measuring effectiveness and sustainability of project goals. Attila Buzási has 13 publications; most of them have been released by international journals and conference proceedings, including 2 scientific articles indexed in Scopus and 1 paper indexed in Web of Science.

Mária Szalmáné Csete PhD is an Associate Professor at the Budapest University of Technology and Economics, Department of Environmental Economics. She has PhD in Environmental Management Sciences and MSc in Engineering Management at BME; MSc in Regional- and urban development at Sorbonne – Paris IV. Her research interests are in environmental policy and economics, regional and spatial planning, mitigation and adaptation strategies, urban sustainability. Mária Szalmáné Csete has 100 publications, 36 in national and international scientific journals (several indexed in Scopus or Web of Science), 13 book chapters, 1 book and several conference papers.



46. University and sustainable urban development. Indicators for analysis and evaluation

Dr. Gemma Durán-Romero, Dr. Nuria E. Laguna Molina

ABSTRACT:

University is an institution with a high potential to promote changes that lead to better social outcomes in terms of sustainability and social responsibility. Therefore, it is seems highly necessary to know what sustainability strategies Universities are following, to what extent they are assuming their role as agents of change and in what lines of work they should deepen in order to achieve the Sustainable Development Goals. The objective of this paper is to present the results of a research work that analyses and evaluates, from an interdisciplinary approach, the role of universities in sustainable development. More specifically, the paper carries out an evaluation of the strategies adopted by three Spanish universities: Universidad Autónoma de Madrid, Universidad Carlos III of Madrid and Universidad de Castilla-La Mancha. The final output of this work is a system of University Sustainability Assessment Indicators, which will allow, on the one hand, monitoring of university actions in sustainability and, on the other, formulate new initiatives that improve university sustainability performance.

Keywords: university, sustainability, third mission, sustainable development

Dr. Gemma Durán-Romero is currently Associate Professor of Economics at Universidad Autónoma de Madrid. She received her Ph.D. in Economics (1997) from the Universidad Autónoma de Madrid, Spain and Master of Arts in International Business and Economic Integration from Reading University (United Kingdom). Her specialization field is on Environmental Economics but she has also interests in the area of international economics or development. Her publications include several national and international articles and books about the Enterprise and Environment, Instruments for Environmental Management and others in collaboration, as the World Economic System or the World Economic Transformation. She also participates as a researcher collaborator and expert evaluator in national and international research projects.

Dr. Nuria E. Laguna is currently an Assistant Professor of Economics at Universidad Carlos III de Madrid and a Lecturer of International Economics at Universitat Oberta de Catalunya. She received her Ph.D. in Economics (2004) from the Universidad Autónoma de Madrid, Spain. Her current research projects focus on Economic Growth, Technology Innovation and Sustainability. Her areas of expertise also include International Macroeconomics, Economic Integration and International Trade. She has coauthored journal publications ("Science parks approaches to address sustainability: A qualitative case study of the science parks in Spain," International Journal of Social Ecology and Sustainable Development, 2017; —Dynamic technological specialization, aggregated convergence and growth||, International Economics and Economic Policy, 2015), books (—El comercio exterior de España. Teoría y Práctica||, Pirámide, 2012), conference papers (Globelics, ANPEC, Regional Helix Conference, ...) and several book chapters in the aforementioned topics. She also participates as a researcher collaborator in national and international research projects.

47. Analysis of bioclimatic measures on the energy performance of dwellings from a case study of troglodyte architecture

Dr. Patricia Huedo, Dr. María José Ruá, Rocío Granell

ABSTRACT:

In this study, the bioclimatic strategies of a cave house are examined to analyze the applicability of passive thermal conditioning strategies to modern dwellings, where high comfort conditions must be reached. Although there is some literature about cave dwellings, the references are scarce when considering the focus on one of their most important advantages, the energy performance. Passive measures such as thermal inertia or ventilation are described, together with some other sustainable measures such as the use of local materials, minimizing transport and closing the product life cycle through reuse and recycling.

The research has been carried out in two phases. Firstly, a study of the state of the art on troglodyte architecture has been done. Secondly, the monitoring of a real case, located in Belerda de Guadix (Southern Spain), has been carried out to evaluate its energy efficiency performance by using passive systems.

The results indicate that the hygrothermal comfort conditions are very favorable. Thus, the average inner temperature variation is under 7°C and the inner relative humidity ranges from 50% to 60%, thorough the year. The extreme temperatures reach 16.38°C in January and 22.53°C in August, with external temperatures of 3 °C and 36 °C, respectively.

Keywords: Bioclimatic architecture, cave dwelling, energy performance, passive conditioning

Dr. Patricia Huedo graduated in Architecture at Politechnic University of Catalunya in 1994. Master of advanced study in Technological Innovation Projects in Product and Process Engineering in 2010 from the Universitat Jaume I (Spain). PhD in 2014 from the Universitat Jaume I (Spain). She works as an Adjunct Professor at the Universitat Jaume I in Spain since 2003, in the Department of Mechanical Engineering and Construction and combines teaching with architectural work in her own office of architecture. She has designed and directed the construction of more than fifty buildings of residential use, besides other projects of different kind. She applies her experience working in the field of urban regeneration, refurbishment and sustainability in buildings in the research that she carries out at the University. She has published some articles in JCR journals and several communications in international conferences. Moreover, she collaborates as external reviewer in several research journals.

Dr. María José Ruá is Agricultural Engineer and Technical Architect. She is Professor in the Department of Mechanical Engineering and Construction at Jaume I University, Castellón de la Plana (Spain). Her research is centered on buildings and its influence on urban environments for sustainable development. She investigates on buildings in urban integrated regeneration, where economic, social and technical aspects are considered. Technical aspects such as energy performance or accessibility and refurbishment of existing buildings are analysed taking into consideration the social context and the citizen's needs, the cost effectiveness of the rehabilitation and the environmental impact of buildings in urban environments. She has published and reviewed some articles in JCR journals and several communications in international conferences.

Rocío Granell is Technical Architect and Master Degree in Energy Efficiency of Buildings. She collaborates researching with Professors Huedo and Ruá at the Department of Mechanical Engineering and Construction at Jaume I University, Castellón de la Plana (Spain). Her research is focus on energy performance of buildings.



48. Nature and Identity. Agro Pontino case study.

Dr. Maurizio Sibilla, Dr. Anna Barbati

ABSTRACT:

Ecological issues are becoming increasingly important in urban planning and management. An integrated approach is needed in order to enhance the natural elements of the landscape within the built environment. The present research project shows a methodological approach aimed at supporting a landscape regeneration process. The methodology is applied to the case study of Agro Pontino, more specifically in the Latina municipality where the urban sprawl is progressively dissolving both the ecological quality of the territory and its original agricultural matrix. The methodological approach of this research project is structured following the purposes enumerated below. 1) Identification of the structural elements of the landscape identity. 2) Assessment of the level of conservation of the landscape in the Latina municipality. 3) Stratification of the Latina municipality into homogeneous Environmental Territorial Units (UTA). 4) Assessment of the level of isolation of residual natural fragments in the agricultural matrix. The results show how the methodological approach adopted is useful to set targets and priorities to regenerate the landscape structural and identity features. In conclusion, this interdisciplinary study is a significant contribution to the integrated approach because it faces the neighborhood requalification in ecological key and supports the urban reforestation project.

Keywords: Integrated Project; Environmental Design; Hydrographic Network, Potential Heterogeneity, Index of Landscape Conservation

Dr. Maurizio Sibilla is research fellow at the Sapienza University of Rome in the department of Planning Design and Technology of Architecture. His work experience over the past years has focused on the construction of a bridge between technology and the design culture, where he has carried out relevant academic and professional activities. He carries out independent research activity, often intended as applied research focused on the implementation of Complex Programmes, related to environmental and energy issues of settlements. These include the project implemented within the programme —Neighbourhood contracts II||, —PLUS: Local Urban Development Programme||, and —Rewetland, LIFE+||. He participated in several international competitions both as a designer and as a consultant and has been awarded prizes and accolades. Recently, he has won the Marie Curie Individual Fellowships in collaboration with the Oxford Brookes University.

Dr. Anna Barbati is Associate Professor at the Department for Innovation in Biological, Agro-Food and Forest Systems of the University of Tuscia (Viterbo, Italy). She has developed her research experience in the field of forest and environmental planning, gaining a specific expertise in the following topics: - application of remote sensing and geographical information systems to forest planning; - analytical methods for assessing levels of fragmentation of forest habitats on a spatial basis; - green infrastructure mapping and planning in urban areas



49. Practice, Practitioners & Redirection for Sustainable Development

Petra Perolini

ABSTRACT:

Rapid growth and climate change will challenge some of the fundamental assumptions on which our cities have been built. Australian cities will have a huge task ahead of themselves: to accommodate significant climatic change while maintaining their liveability and functioning as an urban system. Governments are currently getting ready to transform our cities to make them ready for the future. Current attempts to only physically engage with this transformation process will not be adequate. What is needed is a project that can propose a new and different model of transforming and adapting our cities to prepare them for the changing climate and population growth. Metrofitting, a term used to describe the transformation many cities need to undertake to ensure long-term vitality could provide some urgent answers. This paper offers a critical perspective on the concepts of metrofitting and re-directive practice. It puts forward a contextually dynamic view of urban futures. Overall, the argument and ideas presented seek to reframe how we engage with city planning. Metrofitting requires a level of activism currently absent in design practice and culture.

Key Words: Design practice, metrofitting, retrofitting, adaptation, urban, redirection

Ms Petra Perolini is a lecturer, PhD candidate and researcher at Griffith University. Petra is also the convenor of LiveSpace, a not for profit design studio for socially and environmentally responsible design. LiveSpace projects provide opportunities for students to work on real projects within the broader community, where they are challenged beyond the limitations of a typical studio environment. Petra has a background in interior architecture and design, urban design and regional planning and design futures. In her teaching and research, Petra uses design thinking and design process as a tool for social transformation. Her research is examining the role of interior architecture and interior architecture education as a key player in the constructed environment and the powerful position it occupies but largely fails to understand. Her interests explore making essential links between understanding the complexity interior architecture ontologically occupies and a predominantly non-reflective practice approach. Her current research explores social exclusion in Australian urban housing.



50. Challenges for Sustainable Urban Development in a Young Civil Society Experiences from Iranian Urban Development

Dr. Mahdi Moghimi

ABSTRACT:

Democracy is a basic social necessity for sustainable development, however it is not a sufficient foundation without a socio-cultural global evolution accompanied by local approaches towards sustainability. Achieving sustainable urban development needs well-established civil democracy as well a clear public vision to livability of the urban environment. To be practically activated, this vision must be deep-rooted in cultural beliefs of the society, by reinforcing positively associated local traditions and/or through regular general education.

While democratically elected city councilors should principally consider common welfare of all citizens and the city, it is not the case from time to time. Sustainable urban management sometimes needs unpopular hard decisions to make and change of some destructive public behavior. However, an unfortunate and interesting fact is that democracy itself does not consistently lead to sustainable development, even in historically democratic countries. Regrettably, the role of populist propaganda cannot be disputed in any levels of elections from city councils to the national presidency. At the times of economic recession, the potential threat of success of populists increasingly rises and sometimes turns into actual reality. These are times when democracy shows its other side, which may result in downturn to scientific judgments and sustainable methods of urban/national management.

Furthermore, there is arguably no city in the world whose influential groups/individuals do not try to persuade decision-making processes and take advantages of their connections. Considering complications for free media and lack/weakness of professional NGOs, sustainability faces serious challenges in urban development. This paper will explore observations of general atmosphere of fast growing Iranian cities, focusing on challenges for urban sustainability.

Keywords: Sustainable Urban Development, Socio-cultural Evolution, Iranian Cities

Mahdi Moghimi (born 1971) is an architect and assistant professor at the Architecture Department, University of Zanjan, Iran. In addition to his architectural practice, he is actively engaged in professional councils as an academic representative and also occasionally writes for local journals and newspapers. One distinctive design of his works is gradually reshaping the streetscape of the main road in the heart of Zanjan historic urban fabric.



51. Connecting Economic Development and Climate to Urban Sustainability: a Case Study of Three Cities

Anastasia Milovidova

ABSTRACT:

This author analyzed how sustainability issues are prioritized in the cities with different economic and climatic conditions. The relation between environmental quality and economic development was first hypothesized in 1991 by Grossman and Krueger, while several other studies confirmed the connection between local climate and energy consumption, especially in building sector. Based on these previous research findings, this study sets forth the hypothesis that the nature and prioritization of urban sustainability issues varies depending on the level of economic development expressed in terms of per capita income and climate.

This research has started with a qualitative inquiry in urban sustainability issues in three case-study cities representing different level of economic development and climate, Moscow, Bangkok, and Tokyo, where the author conducted 30 semi-structured interviews with urban planning and sustainability experts, as well as government officials.

The results of analysis demonstrate that, indeed, the perception of sustainable development and experienced urban sustainability issues in the three cities differ; furthermore, it appears that economy and climate have a strong influence on urban sustainability performance.

The findings of the research have the potential to be applied in policy-making, especially in relation to urban planning, as well as in academic field.

Keywords: Urban sustainability, urban planning, comparative urbanism, case-study research, policy-making

Ms. Anastasia Milovidova is a Ph.D. candidate at Sophia University (Tokyo, Japan), where she conducts a research on sustainable urban development, specifically, policy-making tools for sustainable urban planning and management. Anastasia contributed to a number of research publications and projects related to urban planning, urban sustainability in developing and least developed countries, and climate adaptation strategies for cities through her work with international organizations, governmental offices, and NGOs. Additionally, Anastasia is an experienced corporate sustainability advisor, and published a monography on CSR strategies of Japanese companies.



52. City Prosperity Initiative Index: Using AHP Method to Recalculate the Weights of Dimensions and Sub-Dimensions in Reference to Tehran Metropolis

Dr. Parsa Arbab

ABSTRACT:

City Prosperity Initiative (CPI) Index as a comprehensive multidimensional index agreed globally, is a broad and flexible conceptual framework for measuring and monitoring the urbanization and urbanism as a consequence of this process. This initiative is a fundamental approach for defining an integrative and incremental vision and subsequently multi-sectorial and spatial analysis based direction for its fulfilment towards the sustainability path and sustainable urban development in different hierarchical levels and scales of global, national, regional, and local. The CPI is accompanied by a conceptual matrix, the Wheel of Urban Prosperity, in terms of six key components or dimensions associated with the city and urban settlement, including Productivity, Infrastructure Development, Quality of Life, Equity and Social Inclusion, Environmental Sustainability, and Urban Governance and Legislation. Each of these aspects includes 3 to 5 sub-dimensions defined and measured by a group of variables or indicators. Thus, the City Prosperity Initiative Index is essential basis to found and promote a new pattern or model of urbanization in the global scale which is adaptive to the contextual conditions and dynamics. Therefore, one of the most key issues in relation to the CPI Index is the weights of the dimensions and sub-dimensions in terms of the conceptualizations of a prosperous city based on the local priorities. Accordingly, this paper has been focused on the City Prosperity Initiative Index and subsequently recalculating the weights of its dimensions and sub-dimensions using Analytic Hierarchy Process (AHP) method according to the contextual situation of Tehran Metropolis in Iran.

Keywords: Sustainability, City Prosperity Initiative (CPI) Index, Urban Prosperity, Analytic Hierarchy Process (AHP) Method, Tehran Metropolis

Dr. Parsa Arbab is Assistant Professor at the University of Tehran, School of Urban Planning. He received his Master degree in Urban and Regional Planning with first rank in 2009 and completed his PhD in Urban Planning with first rank in 2015, from the University of Tehran. He has published over 30 scientific articles in Iranian journals and national and international conferences on urban planning issues. Furthermore, he has participated in more than 10 scientific research projects as director or co-worker. His main research interest is —Basics, Environment, People, and Place in Urban and Regional Development|| including four areas:

- 1- Basics: approaches, issues, and methods in urban and regional planning;
 - 2- Environment: sustainability, quality, and health in urban and regional development;
 - 3- People: urban and regional development, inefficient and informal settlements;
 - 4- Place: place-identity, sense of place, and place-making in urban and regional development;
- He is a member of Iran's National Elites Foundation (INEF) according to the scientific and research resume. He has been selected as Top Researcher Students in the PhD degree by the University of Tehran and the School of Urban Planning of the College of Fine Arts. He is currently a researcher and a lecturer of undergraduate and postgraduate courses of urban planning at the University of Tehran.

53. Guimarães: circular economy towards a sustainable city

Dr. Carlos Ribeiro, Dr. Joana Carvalho, Prof. Isabel Loureiro,
Eng. Dalila Sepúlveda, Eng Jorge Cristino, Prof. Cândida Vilarinho

ABSTRACT:

Guimarães, is a medium size city located in the North of Portugal. Since 2015 a program was launched challenging the city to establish a roadmap for the sustainable development of the Territory. One of the goals was to develop a concept for Circular Economy based in our own city context and vision. A set of projects were established from waste valorization. Also to projects focused on promoting social affairs issues were developed having impact on citizens' quality of life. This paper aims to present the concept under the framework of Guimarães Circular Economy program presenting social, economic and environmental impacts.

Keywords: Circular Economy, Sustainability, holistic approach.

Doctor Carlos Ribeiro has a PhD in Biomedical Sciences and a Post Doc in Molecular Neurobiology at University of Oporto (Portugal). He is graduated in Applied Biology and he has a masters in Molecular Genetics at University of Minho. Actually, he is the executive director and the R&D coordinator of Landscape Laboratory a research institute in the aim of sustainable development. The Landscape Laboratory also acts as environmental education center. He is author of several publications in international journals and several oral communications in international meetings.

Doctor Joana Carvalho she has PhD in Chemical and Biological Engineering and a Post Doc in microbiology and biomedicine, she is the coordinator of the R&D department of Centre for Waste Valorisation (CVR), monitoring therefore the technical performance of all innovation projects. Actually, she is monitoring several national and international activities in the aim of sustainable development, including new project applications. She is always closely involved with the following and dissemination tasks of all projects.

Prof. Isabel Loureiro, has a PhD in Industrial and Systems Engineering is a Human Engineering Professor at the University of Minho (Portugal), where she is member of the Human Engineering Research Group. She is a Member of the Industrial Engineering and Management R&D Line of the Algoritmi Research Centro and member of the Portuguese Society of Occupational Safety and Hygiene and private consulting in Human Engineering. Her research work focuses her main interests in Systemic occupational approach, being author of several publications in international journals, and book chapters in these domains. She is the Executive Coordinator of Guimarães Candidacy to the European Green Capital award.

Eng. Dalila Sepúlveda is a PhD student in Waste Management and Treatment at School of Engineering from University of Minho, she received her Master degree in Environmental Engineering Management and graduation in Environmental Engineering at Fernando Pessoa University, she also have a Post Graduate in Municipal Management. She is Head of Urban Services Department at Guimarães City Hall. She also is Environmental coordinate at Lab of Landscape and manage the indicators of air pollution and waste management team of Guimarães candidacy to the European Green Capital Award. She was winner at 2014 of Green Projects Awards Portugal, International Project with the High Sponsorship of the European Commission, the Portuguese Government and the CPLP, in the category of Original Work Writing Award. Her research work focuses on waste management and pay-as-you-throw systems, implementation of Agenda 21 Local; She is author of a book, called —O Sistema Pay-as-you-throw - estudo sobre a implementação no centro histórico de Guimarães e na zona envolvente|| in 2015 by Principia Editora e Sociedade Ponto Verde, and she is also invited speaker at several conferences and seminars.



Eng Jorge Cristino is the Aide of the Deputy Mayor at the city of Guimarães and he is also the president of the RD Landscape laboratory from Guimarães.

Professor Cândida Vilarinho is Assistant Professor of science materials and waste management. She has a PhD in Mechanical Engineering and her research is devoted to the development and implementation of innovative technical solutions in the area of residues recovery and on the field of energetic valorisation of biomass and plastic wastes. Currently she is the President of the Centre for Waste Valorisation (CVR) and responsible for the system of research, development and innovation of W2V SA (Waste to Value).

54. Towards an Inclusive city approach: the case of climate adaptation strategies in the city of Cartagena

Dr. Iván Vargas Chaves, Mauricio Luna-Galván,
Anna-María Franco-Gántiva

ABSTRACT:

The formulation of strategies and policies to adapt to climate change are becoming a norm in both developed and developing urban areas around the world. The city of Cartagena has recently identified its vulnerabilities to tackle climate change events, in order to formulate guidelines as the Plan 4C, to enforce its competitiveness and adaptation to climate change in a city that is emerging as an international touristic centre and a national economic hub. However, much has been documented about the social and environmental realities of the city which contrasts with its economic outlook and image. This article aims to analyse such reality by taking into account social, economic and ecological indicators based on documented data of the city. The analysis demonstrates that several urban zones require urgent sustainable intervention based on the context and by that, this article attempts to argue that the use of an integral and inclusive approach plays a critical role in this specific complex social, economic and environmental context if the strategies and plans of the city to adapt to climate change are to be met.

Keywords: Climate Change, resilience, Cartagena, Environmental Equity, adaptation strategies, Inclusive Cities, CBA

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Mauricio Luna-Galván is M.A. in Global Studies, University of Lund. B.A. in International Relations, Universidad de Bogotá Jorge Tadeo Lozano. Professor of International Relations and member of the research group on Global Justice (GIJUS) at Universidad Tecnológica de Bolívar (Cartagena de Indias, Colombia).

Anna-María Franco-Gántiva B.A. in Political Science, Universidad del Rosario. B.A. in Urban Studies, Universidad del Rosario. M.A. in Sustainability, Universidad Autónoma de Barcelona.



55. Supporting entrepreneurship opportunities for the urban poor in sustainable waste management

Ms. Shomi Kim, Dr. Seungyun Lee

ABSTRACT:

This paper presents a critique of entrepreneurial opportunities in the waste management value chain for the urban poor in support of sustainable waste management in developing world. It particularly seeks to explain the context of the social, environmental and economic contributions of waste picker cooperatives and small, medium and micro-enterprises (SMME) in waste recycling. The first section of the paper will introduce waste picker cooperatives that have become a vital group in generating income for urban poor households. Second, the paper will present various types of SMMEs and their business models in the waste management lifecycle – family-based micro-enterprises, recycling companies and appropriate technology enterprises. Third, the significance of policy and creating enabling condition for promoting entrepreneurship opportunities to achieve sustainable waste management, drawing on cases from Asian and Latin American cities will be discussed. Overall, the paper demonstrates how community-based social organizations and micro enterprises play a vital role in addressing challenges associated with the livelihood of the urban poor as well as the waste management services in informal settlements across urban communities in developing cities.

Keywords: sustainable waste management, waste picker cooperatives, recycling companies, and urban poor.

Ms. Shomi Kim is a Green Cities Analyst at Global Green Growth Institutes. As an applied researcher and practitioner, she is managing sustainable development projects in support of green urbanization and social entrepreneurship by providing consultation and training to governments and private sector players in developing countries. Her research interests include inclusive cities and social solidarity economy.

Dr. Seungyun Lee is an assistant professor of Marketing School of Business at Konkuk University, South Korea.

56. Modified cassava barks as an adsorbent of copper ions

Elio Conradi, Dr. Daniel Schwantes, Prof. Dr. Affonso Celso Gonçalves Jr.,
Andressa Giombelli Rosenberger

ABSTRACT:

This research aimed to develop high efficient adsorbents from cassava barks modified with H₂O₂, H₂SO₄ and NaOH for Cu(II) removal. The adsorbents were characterized by their chemical elementary composition, point of zero charge (pHPZC), infrared spectrum (FTIR), scanning electron microscopy (SEM), thermogravimetry (TG and DTG), surface area, pore volume and diameter (BET and BJH). Studies evaluating the relation between adsorbents masses (250 to 1250 mg) and pH range (3.60 to 7.00) were also conducted. The characterization demonstrates modifications in the chemical composition, change in pHPZC values (6.02 for M. in natura, 3.98 for M. H₂O₂, for M. H₂SO₄ 2.05 and 7.07 for M. NaOH) and new functional groups on modified adsorbent surface, such as carboxyl and phenolic groups. The obtained SEM demonstrates materials with heterogeneous structure and with distinct characteristics from biosorbent, demonstrating different aspects in each applied chemical treatment. The highest removal rates were obtained using 5 g of adsorbents per liter of contaminant solution. The adsorption process of Cu(II) was not influenced by evaluated pH ranges. The modification with NaOH provided the best adsorption rates. Results show that, cassava barks, after modified with simple chemical treatment, generate adsorbents with great potential for copper ions removal from water.

Keywords: Modified biosorbents, agroindustrial co-products, chemical modification, water treatment, modified biomass.

Elio Conradi Junior is currently an academic of the fourth year of the Agronomy course at the State University of Western Paraná (UNIOESTE), is a member of the Group of Studies in Soils and Environment (GESOMA) coordinated by Prof. Dr. Affonso Celso Gonçalves Jr., working on the Laboratory of Environmental Chemistry and Instrumental of the Campus of Marechal Cândido Rondon, in the accomplishment of soil chemical analysis, soil particle size analysis and foliar tissue analysis and investigates on toxic heavy metal remediation, pesticides dynamics in the environment and phytoremediation.

Dr. Daniel Schwantes is a research professor at the Pontifical Catholic University of Paraná and associated with the Group of Studies on Soils and Environment (GESOMA - UNIOESTE). Agronomic Engineer graduated from the State University of Western Paraná (UNIOESTE), master in agronomy by UNIOESTE, PhD in Agronomy by UNIOESTE and University of Lisbon (Portugal). It operates in the large area of Environmental Sustainability and Sustainable Plant Production Systems. It has several international and national publications related to the environmental area and to topics related to the Sustainable Production Systems line; He teaches disciplines in several postgraduate courses. It operates in the following lines of research: Sustainable agricultural production systems, Bioaccumulation of metals in environmental compartments and Pesticide dynamics in the environment.

Prof. Dr. Affonso Celso Gonçalves Jr. is currently a Research Professor in State University of Western Paraná (UNIOESTE) and a Research Productivity Scholar by CNPq in the Environmental Sciences. Have a postdoctoral study at the University of Santiago de Compostela (Spain) and a postdoctoral degree in Environmental Sciences at Goiânia Federal University (UFG). Affonso works as a lecturer and researcher at the Agrarian Sciences Center, teaching classes in the



Chemistry area. He is currently deputy coordinator of the MSc and PhD Program in Agronomy at UNIOESTE where he teaches and directs in the area of Environment and Sustainable Production Systems. He also works as a professor in the Master's Program in Agricultural Sciences of Maringá State University (UEM). He is executive editor, scientist and member of editorial board and consultant of several national and international scientific journals. He works in the area of Chemistry, with emphasis in Environmental Analytical Chemistry, Soils, Sustainability and Environment. At UNIOESTE he is also the coordinator of the Laboratory of Environmental and Instrumental Chemistry, working in the areas of Teaching, Research, Extension and Provision of Services in the area of analysis of environmental samples (soils, plants, water, effluents, etc.).

Andressa Giombelli Rosenberger is graduated in Technology in Environment by the State University of Maringá - UEM and graduated in Environmental Engineering by the Pontifical Catholic University of Paraná – PUCPR and Master in Environmental Sciences (Unioeste).

57. Remediation of Chilean Mining Acid Wastewaters using a Practical Adsorption Process

Prof. Fernando Valenzuela, Dr. Carlos Basualto, Dr. Gonzalo Montes, Geraldine Quintana, Viviana Ide

ABSTRACT:

In most mining countries, the management of acid wastewaters produced by hydrometallurgical processes and/or by the natural generation of acid mine drainages (AMD) is a challenge of increasing complexity. Mine waters have a troublesome impact on the quality of life of the population and cause great damages to the environment. Mine waters exhibit an important amount of chemical contaminants, at concentrations that normally surpass the maximum limits established by the Chilean discharge regulations. These contaminants affect the quality of the water streams and can pollute the receiving water bodies, which are very valuable for human communities and agriculture, especially in regions such as the Atacama Desert or The Andes mountains, where this vital resource is scarce. Therefore, it is absolutely necessary to optimize the use of all the available water resources. In this proposal, we communicate our promissory advances in using magnetic and low cost adsorbents to clean up samples of Chilean mining wastewaters. Magnetic properties of the adsorbents allow an efficient solid-liquid separation being also possible the regeneration of the compounds for new repetitive sorption cycles. The achieved experimental results and their analysis indicate that using the proposed treatments is possible to accomplish with the national environmental regulations.

Keywords: Mining, Wastewaters, Decontamination, Remediation, Treatment, Adsorption,

Fernando Valenzuela is Professor at Laboratory of Unit Operation and Hydrometallurgy, Faculty of Chemical and Pharmaceutical Sciences, Universidad de Chile. He lectures at the university, Unit Operations, Hydrometallurgy and Remediation of Mining, Metallurgical and Industrial Wastewaters. He is a chemist and has a Master's degree in Chemical Engineering from Kyushu University, Japan. Today is a member of the PhD in Chemistry staff meeting of his university and holds the position of Academic Director of his Faculty. He is author of around 90 ISI scientific publications, chapters of books and international patents on mining wastewaters processing and remediation, acting as Head of his Research Group. He has been involved in research on management and treatment of acid wastewaters originated in mining, metallurgical and industrial processes using simple and practical methodologies, including co-precipitation, ion-exchange, solvent extraction, liquid membranes, biosorption and adsorption methods.

Dr. Carlos Basualto, Laboratory of Unit Operation and Hydrometallurgy, Faculty of Chemical and Pharmaceutical Sciences, Universidad de Chile.

Dr. Gonzalo Montes, Minerals and Metals Characterization and Separation Research Group, Department of Mine Engineering, Faculty of Physical and Mathematics Sciences, Universidad de Chile.

Miss Geraldine Quintana, Undergraduate student, Laboratory of Unit Operation and Hydrometallurgy, Faculty of Chemical and Pharmaceutical Sciences, Universidad de Chile.

Miss Viviana Ide, Ph.D. student, Laboratory of Unit Operation and Hydrometallurgy, Faculty of Chemical and Pharmaceutical Sciences, Universidad de Chile.



58. Cadmium Removal from Water Using Modified Grape Stem

Juliano Zimmermann, Dr. Daniel Schwantes, Dr. Affonso Celso Gonçalves Jr.,
Dra. Amarilis Paula Alberti de Varennes e Mendonça

ABSTRACT:

The research's aim was to increase the adsorption capacity of Cd(II) by chemical modifications on grape stems. The stems were milled and sieved to result in natural adsorbent (E. in natura) which was used to develop the modified adsorbents (E. H₂O₂, E. H₂SO₄ and E. NaOH). Firstly, was performed the adsorbents characterization by the determination of its elementary constituents, pHPZC, FTIR, thermogravimetry (TG and DTG) and SEM. In a second step, adsorption tests were developed aiming to determinate the influence of the proportion of adsorbent/adsorbate, as well the pH influence for Cd(II) removal. The FTIR shows peaks in modified adsorbents, suggesting new functional groups acting in metal sorption, like carboxyl and phenolic groups. The results concluded that studied pH range did not have significance influence in adsorptive process, what demonstrate that developed adsorbents present efficient removal of Cd(II) in pH ranges from 3.60 to 7.00. The highest adsorption rates were obtained with 250 mg of adsorbent. Modified adsorbents presented increase in Cd(II) sorption rates, with 66% for E. NaOH, 33% for E. H₂O₂ and 8.3% for E. H₂SO₄. The use of grape stem as modified adsorbent is an attractive alternative, mainly because its wastes present great availability in many countries.

Keywords: Water remediation, toxic metal, adsorptive processes, modified biosorbents, chemical modifications.

Juliano Zimmermann is currently a student of the Agronomic Engineering course at the State University of Western Paraná (UNIOESTE), is a member of the Group of Studies on Soils and Environment (GESOMA) coordinated by Prof. Dr. Affonso Celso Gonçalves Jr, working with the Laboratory of Environmental and Instrumental Chemistry, in the accomplishment of soil chemical analyzes, soil particle size analysis and foliar tissue analysis. In this way, it began its participation in scientific researches related to the soil area, researches in phytoremediation of soils contaminated with heavy metals, research on biosorption of heavy metals in contaminated water resources, being always alert to themes such as sustainability and environment.

Dr. Daniel Schwantes is a research professor at the Pontifical Catholic University of Paraná (PUC-PR) and associated with the Group of Studies on Soils and Environment (GESOMA - UNIOESTE).

Dr. Affonso Celso Gonçalves Jr. is currently a Research Professor in State University of Western Paraná (UNIOESTE) and a Research Productivity Scholar by CNPq in the Environmental Sciences.

Dr^a. Amarilis Paula Alberti de Varennes e Mendonça is a Professor at the Technical University of Lisbon (UTL) in Portugal since 1993. She holds a PhD from the University of East Anglia in the UK. Has experience in the area of Agronomy, with emphasis on Soil Science and Plant Nutrition. The main lines of research are: Use of nitrogen and phosphorus from organic sources, from crop residues to waste from animal production or industry; Production of microbial consortia to increase phosphorus cycling in soils. Assessment and monitoring of soil quality, using biochemical and microbiological indicators, including important soil functions; Nitrogen cycling, from biological fixation from the atmosphere, fertilizer use efficiency, internal tree cycling; Iron deficiency in calcareous soils; Recovery of degraded soils. Since 2012 she is the Coordinator of the Center for Biosystems Engineering, the main research center in Portugal that supports the courses of Agronomic Engineering, Zootechnical Engineering, Food Engineering and Environmental Engineering. She is also Visiting Professor at the State University of Western Paraná, Brazil.



59. Visualizing Situated Productive Process in Southeast Asian Cities

Assist.Prof. Isshin Sasaki

ABSTRACT:

The aim of this paper is to understand better the dynamics of situated productive process by reconsidering the design method of the formation of externalities in urban cities in Southeast Asia. With the focus on a clue to a modification and management process of natural environment or wilderness into built environment in local society, some modifications may be characterized by or caused by the by-products of metabolisms and activities of inhabitants. The dynamics of situated productive process could be characterized by a reciprocal causal relationship between inhabitants and specific environments, which can probably exist not only in urban society and but also in biological society. The report concludes that as a result it will become increasingly important to focus and visualize a reciprocal causal relationship that supports sustainable development. In conclusion, while referring to example of such situated productive process in Southeast Asian cities, in updating land use planning, it would be valuable to reconsider the possibility of socially responsible way of life in sustainable urban cities.

Keywords: Architectural design, Urban design, Urban management, Design method.

Isshin Sasaki is Assistant Professor, Advanced Institute of Industrial Technology, Tokyo Metropolitan University. His research interest includes architectural design and urban design and management. Master of Engineering, Department of Architecture, Graduated School of Engineering, The University of Tokyo 2004. Withdrawal from the Doctoral Program with the Completion of Course Requirements, Department of Architecture Graduate School of Engineering the University of Tokyo, 2007.



60. Mapping the Current Condition of Solidarity Economy and Family Farming in the Northeast

Monica Dantas, Dr. Satoshi Ikeda

ABSTRACT:

This research surveys the current conditions of the solidarity economy (SE) and family farming in the Northeast of Brazil, examines sustainability of alternative local food systems, the role of food provision, the level of food security, and the possibility of community development. The full research intends to explore ways to contribute to the livelihood of the people involved in the study. The research method is Participatory Action Research (PAR) which is composed of four collective processes, mapping conditions, implementation of actions for change; analysis of the effects of actions and reflection. Thus, the main objective of this portion of the research is the mapping of the current condition of the SE and family farming. The methodology consists in a literature review and the analyses of interviews with actors in the Northeast state of Rio Grande do Norte (RN), the stakeholders were divided in three groups for pedagogical purpose, family farmers and people directly engaged with SE, community organizers and academics. This is a work in progress and include data from interviews with the group of people directly engaged with SE and family farming. The results appointed some conditions and possibilities of the SE, the importance of supporting institutions for the SE in this micro-region and will serve as basis for the continued research.

Keywords: Solidarity economy, Family farming, Participatory Action Research

Mrs. Monica Dantas, Concordia University, was born in Brazil, growing up in the Northeast of the country. Her background is in public administration, popular education and community mobilization. Mrs. Dantas is a PhD Candidate on the Interdisciplinary program at Concordia University in Montreal, currently researching the political socio-economic foot prints of global food systems, social and solidarity economy, community mobilization, sustainable agriculture, family farming, landless movements and emerging social alternative systems specially in the global south and Brazil. She is also engaged in community projects such as urban agriculture in public spaces, collective food preservation and a campaign to promote composting on Campus and beyond.

Dr. Satoshi Ikeda is Associate Professor at Concordia University. He studies the political sociology of global futures, sustainable agriculture, and Japan and East Asia using the method of Polanyi- Hopkins historical sociology informed by the world-system perspective. Development and international economics inform his study on the global structure of accumulation and governance. His study seeks alternatives to neoliberal globalization that are sustainable ecologically, socially, and economically. Dr. Ikeda is engaging in the Transition Project. This projects looks into the social economies as possible alternatives to the dysfunctional and unsustainable corporate economy.



61. Analysis of Indoor Luminous Environment and Power Generation by Roll Screen and Venetian Blind with PV Modules

Seongkwan Hong, In-Tae Kim, Dr. An-Seop Choi

ABSTRACT:

Venetian blinds and roll screens are mainly used as a shading device because of the possibility of automatic control and simplicity of use. Venetian blinds, in particular, can control the sunlight using slat rotation as well as up / down control. On the other hand, roll screens can control the direct sunlight inflow through up / down control. Such shading devices can also be used to generate electricity utilizing direct sunlight on them. This study aims to develop an optimal control method for generating electricity in terms of energy production while simultaneously blocking direct sunlight inflow in terms of occupant comfort using a shading device. In this study, we compare and analyze the change of the indoor luminous environment through appropriate control method for each shade device and power generation with attached PV modules.

Keywords: Photovoltaic, Luminous environment, Power Generation, Venetian blinds, Roll screens, Shading device,

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Mr. In-Tae Kim received an M.S. degree from the Dept. of Architectural Engineering, Sejong University, Korea, in 2012. He is now a Ph.D. candidate from Sejong University, Korea.

Dr. An-Seop Choi received an M.S. degree in the Dept. of Architectural Engineering from The Pennsylvania State University, USA, in 1993 and a Ph.D. in the Dept. of architectural engineering from The Pennsylvania State University, USA, in 1997. He is now a professor at Sejong University.



62. Optimization of organic matters enriched in N by inoculation with selected diazotrophic bacteria

Assoc/Prof. Newton Stamford

ABSTRACT:

Free-living diazotrophic bacteria can enrich organic biofertilizer in nutrients to application in sustainable agriculture. The objective of the study was to select diazotrophic bacteria isolated from different soils, evaluated by analyses of nitrogenase activity. The diazotrophic were submitted to gene rRNA 16S sequenced and the best isolates compared with strains used to produce the biofertilizer. The biofertilizers used earthworm compost and sugarcane mud cake mixed with PK rock biofertilizer in different proportions (3:2:1 and 2:3:1). The experiment conducted in a factorial 6x2x2, used six diazotrophic bacteria applied in two concentrations (100 and 200 mL) and organic matter in the selected proportions, with four replicates. Samples were collected in times 0; 10; 20; 30 and 40 days and analyzed: pH (H₂O), total C, total N, available P and K. The rRNA 16S gene sequence identified the selected diazotrophic as *Bacillus*, *Mesorhizobium*, *Paenibacillus* and *Beijerinckia*. The strains increased nutrients in the biofertilizers, especially the isolate NFB 4 and strain NFB 1003, in incubation time of 25 and 30 days. The more effective diazotrophic increased nutrients, especially N in biofertilizer produced in proportion 3:2, and promoted significant interaction for all analyzed parameters, except to total C. Available P and K increased when applied in both proportions. The selected diazotrophic bacteria produce biofertilizers that may be used as alternative substrate to replacement of soluble fertilizer.

Keywords: Biofertilizers; free-living diazotrophic; nutrient enrichment; organic matters; rock biofertilizers; sugarcane mud cake

Assoc/Prof. Newton Stamford is Agronomic Engineer at the University Federal Rural of Pernambuco (1966), MSc. in Agronomy (Soil Science) – University Federal Rural of Rio de Janeiro (1971) and PhD. In soils and Plant Nutrition - ESALQ/USP (1978). Pos Doctor at Sevilla – Spain (CIDA - Centro de Investigación y Desarrollo Agrario) 1994-1995. Associated Prof. At University Federal Rural of Pernambuco- Department of Agronomy. Experient in Agronomy Field with emphasis on Microbiology and Soil Fertility. Study Soil, Fertility and Organic matters, especially on: Rock Biofertilizers, Organic Matters enriched in N by free living diazotrophic bacteria and plant protection against diseases using the biopolymer chitosan, Biologic Nitrogen Fixation processes, Mycorrhizal fungi, tropical legumes and Rhizobium inoculation.

63. Socio-economic analysis of the mechanisms of deforestation and its effects on the environment in the region of Kisangani, DR-CONGO

Marcel Bwama Meyi, Prof. Gregoire MASHALA, Prof. Romeo Ciminello

ABSTRACT:

Reducing Emissions coming from deforestation and forest degradation is internationally recognized as an important mechanism for mitigating climate change. DR Congo is one of the target countries of this mechanism. The study we propose has two objectives: - the relationship between immediate and underlying causes and deforestation rates; - identification of the socio-economic characteristics of the actors (multinationals and rural households). The study also identifies the different types of timber harvested by determining their corresponding quantities and the impact of exploitation on biodiversity. Methodological approach: participatory surveys and empirical survey combined with geoforestry analysis using GPS throughout the different axes of the eastern province. Among the techniques used are: Focus group; interview; Case study and GPS coordinate collection. Present and future effects are also the subject of this study with reference to the methods applied in deforestation.

Keywords: Socioeconomic analysis; Deforestation; Environmental protection; Kisangani-DRC

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Prof. Gregoire MASHALA is Associate Professor at U.KA (Central Kasai); Specialization in development economics; Doctor of Economics at the Pontifical Gregorian University / Rome. Grade: Associate Professor. Educational institutions: University of Kasayi, Catholic University of Congo, Mbuji Mayi University, Kisangani University, Kananga University, Tshikapa University, Kananga Higher Institute of Education, Kananga Rural Development Institute. Author of several articles and books. Research field: Development economics. Poverty reduction and food security.

Prof. Romeo Ciminello (1952) teaches Ethics and Development in the Faculty of Economics and Development of the Catholic University of Congo DRC - Kinshasa (www.ucc.cd); he has taught since 1991 at several Italian universities: Cassino, (Business Banking) Salerno (Project Finance) Trieste (Corporate Finance, 1991-2005). He has taught at the Pontifical Gregorian University Faculty of Social Sciences (Economics of Development, 1994-2012). Degree in Political Science (1978); Specialization in Foreign Trade and International Marketing (1981); specializing in foreign exchange (1981); specialization in Business Banking (1985); certificate of civil Ombudsman (2011); Member of the UCC Board of Directors; supervisory manager at Banco di Roma - Unicredit (1976-2012); is President of the non-profit organization promoting ethics committee (www.certificazionetica.org) is Scientific Director at the Company 4metx Ltd. (www.4metx.it). He is the author of several publications including Ethics Finance and Markets (Tipar Ed.1999); The Christian meaning of work (Tipar Ed.2006); The Christian meaning of Corporate Social Responsibility (Tipar ed. 2008); author of the blog Diary of ethics (www.agenda-etica.blogspot.com); promoter of several conferences on topics of ethical-social-political-economic and author of several articles in the specialized press. Research fields: development, ethics, economics, finance.



64. Flood Disaster Prevention Training Programs as the Sustainable Development on Education in the Primary Schools in Tokushima Prefecture, Japan

Sanae Kawamata PhD(C), Prof. Mamoru Murata

ABSTRACT:

The intensity of flood disaster is being increased recently. In order to attain the sustainable development, flood management policy and education for flood disaster prevention play important roles. We developed flood disaster prevention training programs in primary schools situated on the Yoshino River in Tokushima Prefecture, Japan, where the flood often occurs in torrential downpours, typhoons, and heavy rains during Tsuyu (Japan's rainy season). These training programs were performed in the Period of Integrated study where pupils think in their own way about life through cross-synthetic and inquiry studies. In that way, they were able to foster qualities and abilities, to find their own tasks, to learn and think on their own, to make proactive decisions, and to solve problems in better ways. These programs consisted of science education to investigate how flood occurs, and social studies to investigate the ancient wisdom for the crisis and save the lives from flood, and presentation. Individual contents were modified according to the situation of different schools. After these programs, pupils achieved to be proactive, creative and cooperative in problem solving and inquiry activities. Therefore, we believe that these programs would develop the caliber and capability of stakeholders in sustainable development.

Keywords: Flood , Disaster prevention training programs, Sustainable development on education, Primary school, Period of Integrated study

Sanae Kawamata who is the graduate student of the doctoral course studies on the disaster prevention training programs with Professor Murata of Naruto University of Teacher Education while performing a teacher now in Kawashima primary school. I developed the disaster prevention training programs in the primary school. These programs were performed in the Period of Integrated study where pupils think in their own way about life through cross-synthetic and inquiry studies. And it consisted of science education to investigate how flood occurs, and social studies to investigate the ancient wisdom for the crisis and save the lives from flood, and presentation. I am convinced that these disaster prevention training programs enable personnel training to build sustainable society as well as the improvement of the disaster prevention power.

Prof. Mamoru Murata Department of Geosciences, Naruto University of Education, Japan.

65. Technical and social study to determine areas of regeneration for urban planning. Case study: Castellon de la Plana (Spain)

Dr. Maria José Ruá, Dr. Patricia Huedo, Dr. Raquel Agost,
Dr. Braulio-Gonzalo Marta, Prof. Civera Vicent, Mr. García-Bernal Daniel,
Ms. Babiloni Susana

ABSTRACT:

The 11th Sustainable Development Goals for 2030, about Sustainable Cities and Communities aims to —make cities inclusive, safe, resilient and sustainable||. Most European cities face consolidated urban environments where existing urban pattern and buildings require regeneration, rather than old city expansion models. Existing urban environments face many limitations, and it is necessary to reach a compromise solution among environmental, economic and social criteria to help the municipality, stakeholders and citizens in the decision-making process.

The objective of this study was to define and improve vulnerable urban environments in the city of Castellon de la Plana (east Spain), and to contribute to the current update of the Urban General Plan. This was a great opportunity to improve areas, where the worst building qualities, the lowest incomes and the most vulnerable population strata (immigrants, the elderly, etc.) are encountered. To do so, this work is structured around two main methodological pillars: urban and social analyses based on technical indicators and participatory processes.

This study comprised two main stages: The first part analyses the current state of the city and proposes a list of indicators to delimit the areas of urban regeneration. The technical and social information is represented using Geographic Information System (GIS). A second part is centred on the selected vulnerable areas, where a new more detailed list of technical indicators is proposed and social information is collected from participatory processes.

Keywords: GIS, Participatory Processes, Urban Regeneration, Vulnerable Areas, Indicators

Dr. Maria José Ruá is Dr. Agricultural Engineer and Technical Architect. She is Professor in the Department of Mechanical Engineering and Construction at Jaume I University, Castellón de la Plana (Spain). Her research is centered on buildings and its influence on urban environments for sustainable development. Her research focuses on buildings in urban integrated regeneration, where economic, social and technical aspects are considered. Technical aspects such as energy performance or accessibility and refurbishment of existing buildings are analysed taking into consideration the social context and the citizen's needs, the cost effectiveness of the rehabilitation and the environmental impact of buildings in urban environments. She has published and reviewed some articles in JCR journals and several communications in international conferences.

Dr. Patricia Huedo graduated in Architecture at Politechnic University of Catalunya in 1994. Master of advanced study in Technological Innovation Projects in Product and Process Engineering in 2010 from the Universitat Jaume I (Spain). PhD in 2014 from the Universitat Jaume I (Spain). She works as an Adjunct Professor at the Universitat Jaume I in Spain since 2003, in the Department of Mechanical Engineering and Construction and combines teaching with architectural work in her own office of architecture. She has designed and directed the construction of more than fifty



buildings of residential use, besides other projects of different kind. She applies her experience working in the field of urban regeneration, refurbishment and sustainability in buildings in the research that she carries out at the University. She has published some articles in JCR journals and several communications in international conferences. Moreover, she collaborates as external reviewer in several research journals.

Dr. Raquel Agost is Professor in the Department of Developmental, Educational and Social Psychology and Methodology at Jaume I University, Castellón de la Plana (Spain). She is member of the University Institute of Local Development (IIDL) and she coordinates the Master's Degree in Development Cooperation. Her research focus on the Community Psychology and Development Cooperation Group (PSYCHO), where she focusses on Community Psychology, social exclusion, employability, social services, third Sector, social support, development cooperation, emergency psycho-social intervention and gender studies. Now she research about SDG's, and her work deep in the SDG11: "Make cities inclusive, safe, resilient and sustainable.

Dr. Braulio-Gonzalo Marta is Technical Architect and Master Degree on Energy Efficiency. She is working as Adjunct Professor in the Department of Mechanical Engineering and Construction at Jaume I University, Castellón de la Plana (Spain), where she collaborates in research group tasks and where she has finished her Doctorate. Her research and teaching focuses on building energy efficiency assessment on the urban scale and how to manage this issue within urban regeneration. She has published and reviewed some articles in JCR journals and some communications in international conferences.

Prof. Civera Vicent is Technical Architect and Master Degree on Building Materials. He is working as Adjunct Professor in the Department of Mechanical Engineering and Construction at Jaume I University, Castellón de la Plana (Spain), where he collaborates in research group tasks.

Mr. García-Bernal Daniel is MsC in Architecture from UPC (Barcelona – Spain), Diploma in European Postgraduate Masters in Urbanism and design for cities and territories from TUDelft / UPC, Diploma in Sustainable Architecture from Escola Sert (Catalonian Architects Association - Barcelona) and PhD student in TECASOS research group in the Department of Mechanical Engineering and Construction at Jaume I University, Castellón de la Plana (Spain), where he is pursuing his PhD on urban regeneration, GIS indicators and participatory processes.

Ms. Babiloni Susana is Architect by the Polytechnic University of Valencia and Master in Marketing and Market Research by the Jaume I University of Castellón, Spain. He works as freelance in real estate valuation. She researches on service life of the real estate, the cost and the viability of real estate developments, taking into consideration the economic, technical and social aspects, as well as the evolution of real estate markets. In her research, she analyzes the economic cost of implementing measures of energy, accessibility and social improvement in buildings and cities, developing their viability. Besides, she collaborates with different professional groups and teach professionals in the field of real estate valuation.

66. Practices and Problems in the Operation and Administration of Private Elementary Institution in Valenzuela and its Implication to K12 Management

Dr. Miriam V. Sebastian, Winifredo A. Godinez Jr., Jennette G. Principe, Kristele C. ROÑO

ABSTRACT:

School's school plant, financial and faculty and student safety is the utmost priority for an elementary school administrator and is high on the list of public and private education concerns. The intent of this study was to identify the practices and problems in the operation and administration of private elementary institution in Valenzuela City and its implication to educational management. The study addressed the following research questions: (a) to what extent do current elementary school administrators receive training in the areas of school plant management, financial management and faculty and students management and its implication to educational management (b) to what extent do elementary school administrators receive training in the area of school plant management, financial management and faculty and students management and its implication to educational management; (c) what are the most prevalent topics when administrators receive training in the area of school plant management, financial management and faculty and students management and its implication to educational management; and (d) what future training, in the area of school plant management, financial management and faculty and students management and its implication to educational management handling student discipline, do elementary school administrators need? This descriptive, quantitative study included a survey, created by the researcher that was used to collect data from 99 elementary school administrators. The results indicate that the administrators did not receive comprehensive training in the area of school plant management, financial management and faculty and students management and its implication to educational management. In particular, training regarding school plant management, financial management and faculty and students management were found inadequate. Thirty-nine percent of the administrators indicated that their concerns did not address school plant management, financial management and faculty and students management. The results of this study provide school district leaders with the information on current gaps in the area of school plant management, financial management and faculty and student management.

Keywords: Management, financial, supervision, administrator, practices, problems

Miriam V. Sebastian, Master of Arts in Linguistics and Master of Arts in Education, Doctor of Education (Major in Curriculum and Instruction), Principal/Directress of Miriam's Academy of Valenzuela Inc.

Winifredo A. Godinez Jr., Miriam's Academy Tour Specialist, Social Studies Faculty Member, Private Schools' Association of the Philippines.

Jennette G. Principe is Branch Manager, Global Access Financial Services Miriam's Academy Finance Manager.



67. Improving of local food production and strengthening of manufacturers skills in the rural community of Koul, region of Tivaune, Senegal.

Dr. Matteo Itri, Dr. Delizia Del Bello, Dr. Samba Mbaye

ABSTRACT:

The main goal of the project is the improvement of food sovereignty and environmental sustainability in Senegal. The realization of the objectives is pursued through the creation of activities that support manufacturing and marketing of local production chains, and giving technical assistance and training to the communities of small producers. AUCS technicians developed a study of zoo-technical productions using information collected in 5 villages of the rural community of Koul. The village detected were chosen because of the number of present animals and breeders, because of the quality of their products (meat and milk). The study concerned the main pathologies affecting animals, prophylaxis, veterinary assistance, and the ways of working, stocking, and moving the productions. Lately, AUCS technicians developed a study of marketing concerned the productions of the previous study. The marketing study is about the way of selling of the products, their distribution in the local market and faeries, the costs of productions and the price of selling. Particularly attention was given to the individuation of potential consumers and to the needs of market, in order to improve the earning of producers. All the information were collected working with the local partner (UGPM), which acted as a cultural mediator between the technicians and the local populations during the interviews in the villages.

Keywords: Food sovereignty; combined farm; sustainability; breeding; agriculture; food safety, livestock value chain

Dr. Matteo Itri was involved since 2005 in project of international cooperation in the horn of Africa, in particular Eritrea and Etiopya, as a field veterinary in charge of sanitary control of cattle, implementation of animal productions and food safety. In 2007 he accomplished a post-graduate degree in veterinary international cooperation at the university of Padova. Since the post-graduate degree he started working with different ngo in south- America and the western Africa, especially in writing logical framework matrix and swot analysis for the preparation and evaluation of international cooperation project.

Delizia Del Bello is consultant on rural development, organic farming and quality agricultural and food products. Searcher and data analyst in Italy, Africa and Central America, since 2008.

Dr. Samba Mbaye is an historical member of UGPM, he works with the local farmers in order to improve and develop their products. Consultant in agro-economic projects, he promotes international cooperation to enhance rural producers conditions.

68. Water quality modelling for the *Chirostoma estor* culture assessment using fuzzy reasoning

Dr. José Juan Carbajal Hernández,
M in C. Midory Esmeralda Vigueras Velázquez,
Dr. Luis Pastor Sánchez Fernández

ABSTRACT:

White fish (*Chirostoma Estor*) is an endangered species that grows in the Pátzcuaro Lake, located in Michoacán, México. It represents one of the most important economic effect in the gastronomy of this highly touristic zone. Actually, efforts for conserving this specie has focused on culturing it in intensive cultured systems that can be built by particular producers in order to avoid over-exploitation. In this work, an artificial intelligence based model has been developed in order to interpret environmental conditions that affect water quality of production systems. Environmental parametres are classified by their negative ecological impact in the habitat, based on concentrations of measured pollutants and the combinations that can be harmful for the organism. A fuzzy inference system processes the different water conditions using a set of rules that determine a situation that is expressed as a Water Quality Index: excellent, good, regular and poor. Comparison with similar models used in literature shows a good performance of the proposed index with accurate assessments in real environments. This computational system emerges as a suitable and alternative tool to be used in the water management in white fish aquaculture, where unfavorable situations will be reduced, generating a better final product.

Keywords: White fish, artificial intelligence, fuzzy reasoning, water quality, aquaculture.

Dr. José Juan Carbajal Hernández is a Research Professor of Intelligence Systems at Center for Computing Research of National Polytechnic Institute, Mexico. Actually, he is member of the National Researchers System of CONACyT, México. His research interests are based on developing embedded systems for monitoring and assessing aquaculture systems using Artificial Intelligence Theory.

M in C. Midory Esmeralda Vigueras Velázquez is a Sc.D. student of the Center for Computing Research of National Polytechnic Institute, Mexico. His research are virtual instrumentation and pattern processing for environmental assessment.

Dr. Luis Pastor Sánchez Fernández is a Research Professor of Automation and Control at Center for Computing Research of National Polytechnic Institute, Mexico. Actually, his is member of the National Researchers System of CONACyT, México. His research interests are virtual instrumentation, digital signal processing, automation and control theory.



69. Identification of General and Specific Features of the Educational Initiatives for the Sustainable Development

Juan Carlos Murillo Castellanos

ABSTRACT:

In the last decades a diversity of endeavours had been promoted towards the Sustainable Development in higher education institutions. The educational initiatives had embraced environmental, social and economic aspects, however, determine which is the most prominent is quite complex and it has lead us to a methodology that prioritizes these initiatives. The content presented in this poster is the initial phase of this methodology and it's constituted by 3 stages, among them: literature review of some declarations and charters that had promoted the best practices towards the Sustainable Development, the second stage is the selection of an aleatory sample of 66 universities registered in the database of the program Sustainability, Tracking, Assessment and Reporting System, the aim on this stage has been to compare and asses the best practices of these institutions and afterwards, in the third stage the identification of a preliminary list of general and specific features that will be validated by specialists and will structure a model on Analytical Network Process (ANP). This model is a tool that will assist the prioritization methodology and will provide a quantifiable insight of the initiatives.

Keywords: Educational initiatives, Sustainable Development, Prioritization Methodology

Msc. Juan Carlos Murillo Castellanos is a PhD student in Local Development and International Cooperation in the Universidad Politécnica de Valencia (UPV), Spain. His professional experience has been in the legal and administrative ambit of the Universidad Nacional Autónoma de Honduras (UNAH), among its main activities it can be highlighted the coordination and assessment of tender processes, including legal, technical and economic aspects. Among its main interests it can be mentioned the consolidation of educational initiatives for the Sustainable Development in the UNAH and the improvement of the coordination and implementation processes in this field, considering that these projects can bring significant benefits to the university community and to the society.

70. Possibility of Fluoride Removal using Volcano Ash Soils and Bone Charcoal as Adsorbents

Dr. Tatsuhide Hamasaki

ABSTRACT:

In some regions of Southern Asia and Western Africa, it has been observed that groundwater used as a drinking water source contains more than 1.5 mg/L of fluoride, which is the standard value approved by the World Health Organization. Adsorption is one of the methods widely used for easy fluoride removal; therefore, adsorption and flow tests were conducted using volcano ash soils and bone charcoal as adsorbents. Bone charcoal has already been examined as a fluoride adsorbent; however, volcano ash soils have not been studied previously. The following results were obtained using adsorption tests: the fluoride adsorption coefficients of bone charcoal, Kanuma volcano ash soil, and Akadama volcano ash soil were 1,500, 700, and 490 mL/g, respectively. As the first step for use in a water purification plant, flow tests were conducted assuming a fixed bed adsorption tower. For a water flow rate of 2.0 m/day, 1.8 mg/L of fluoride was reduced to 0.2 and 1.0 mg/L using bone charcoal and Akadama soil, respectively. However, for the water flow rates of 3.0 or 4.0 m/day, 1.8 mg/L of fluoride was reduced to 0.2 and 1.7 mg/L using bone charcoal and Akadama soil, respectively. Therefore, it was observed that the adsorption of the Akadama soil is strongly affected by the water flow rate.

Keywords: Fluoride, Groundwater, Volcano Ash soil, Bone Charcoal, Adsorption

Dr. Tatsuhide Hamasaki is an associate professor of Faculty of Human Environment, Osaka Sangyo University, Japan, researches groundwater purification, sewage and industrial wastewater treatment and ambient fresh water quality.



71. Assessment of sustainable building by the participants of the local real estate market in Częstochowa

PhD Marcin Sitek

ABSTRACT:

The inspiration for the research problem discussed in this study was sustainable investments that consist in rational and responsible construction with respect to the environment, combining economic, environmental and social aspects. The aim of the study is to find the answer to the question of whether the local market in Poland notices the benefits of sustainable building. The study proposed the hypothesis that the development of building, especially sustainable building, is a necessary component of leading the economy towards the sustainable building. A questionnaire survey was conducted among the developers to examine the status of sustainable building in local real estate market. The respondents assessed sustainable building, construction costs and limitation of risks. Furthermore, the study also used the data published by the Central Statistical Office of Poland and the Europe 2020 strategy and used the examinations of McKinsey's survey. Analysis of the data derived from the survey revealed that the respondents perceived the sustainable building as a method to reduce costs while emphasizing lower energy consumption and the benefits of the attributes of green buildings. Furthermore, the respondents demonstrated no unequivocal evaluation of risk: answers are not consistent in terms of reduction of the risk involved in sustainable building.

Keywords: sustainable building, lead markets, Europe 2020 strategy.

Phd Marcin Sitek lives and works in Częstochowa in Poland. In 2003 he has started working in the Częstochowa University of Technology in Department of Management in cathedral of Economics, Investment and Real Estate, where he has been working till now. His field of interest refers to real estate market, especially investment, financing, innovations, sustainable development and risk on this market. Special attention Phd Sitek pays to mortgage credit and functioning of Mortgage Banks which was the incentive for writing his doctor's paper titled –The Part of mortgage banks in funding polish real estate market||

72. The Factors Determining the Creativity of the Human Capital in the Conditions of Sustainable Development

PhD Monika Sipa

ABSTRACT:

Sustainable development and innovativeness are challenges which contemporary enterprises and economies have to face. The increase in the innovativeness requires proper resources, in particular, creative and innovative human capital towards whom principles of responsibility are applied. Broadening the knowledge on the subject of creativity processes, creation and innovativeness will allow for the accomplishment of more productivity of human resources in the enterprise. Capital of knowledge and innovative capital will be more considerable.

The main goal of the compilation was, therefore, to identify the factors determining creativity and innovativeness of labour resources in Polish and Slovakian economic entities. An analysis was conducted which allowed for the indication of both similarities and differences occurring in this area within the examined countries. The conclusions were based on the author's own research which was carried out in the first quarter of 2017.

Keywords: creativity, human capital, innovativeness enterprises, sustainability development.

Monika Sipa PhD, is an assistant professor of management at Czestochowa University of Technology, Faculty of Management in Czestochowa, Poland. Her work focuses on problems of functioning and development of small and average enterprises on the market. The closest and the most interesting for her are the questions connected with innovativeness and competitiveness of small enterprises.



73. Economic and Demographic Effects of External Migration in Poland and Slovakia - Some Aspects

PhD Andrzej Skibiński, Prof. Andrzej Rączaszek

ABSTRACT:

The paper presents the external migration flows and their impacts on economic and social life in analyzed countries. The travel inside the EU is totally free after Poland and Slovakia joined the EU, and they fructified this opportunity. There are important economic consequences of these movements, because external migration is an ever-growing phenomenon that has important development implications for both sending and receiving countries. For a sending country migration and the resulting remittances lead to increased incomes and educational outcomes, and promote economic development. On the other hand, migration processes influence on changes in the age structure. This process is very important from the labour market point of view. Hence, the aim of this publication is to identify the post-accession effects of foreign migration, especially the consequences for the labour market in Poland and Slovakia. Applied quantitative and qualitative analyses were conducted based on survey results and data from Eurostat statistical databases. The survey was conducted since March – till April 2017 on a sample of N = 254 respondents, using the diagnostic survey method. The temporal scope of the analyses was largely determined by data accessibility.

Keywords: labour market, migration processes, aging population

Dr Andrzej Skibiński is currently assistant professor in Department of Economics, Investment and Real Estate at Faculty of Management, Czestochowa University of Technology, Poland. Andrzej Skibiński scientific interests are in the areas of demography, labour market, socio-economic policy and human resources management. He's the author of many publication in the field of economy, demographic changes and labour market. He's a member of scientific societies such as:
The Polish Economic Society
The Polish Society for Social Policy

Prof. Andrzej Rączaszek is professor at Univeristy of Economic in Katowice Poland. He's a head of the Department of Social and Economic Policy. He specializes in demography and social policy. He's the author of many publication in the field of demographic changes and social policy. He's a member of the Polish Academy of Sciences - Committee on Demography and Labour Science and Social Policy

74. Community Asset Mapping Programme as a Tool to Create Sustainable Small Businesses the Case of Koffiekraal, North West Province, South Africa

Prof. Melanie D Nicolau

ABSTRACT:

In 2012 a Community Asset Mapping Programme (CAMP) was presented in a traditional community (Koffiekraal, North West Province) in South Africa, the purpose of the programme was to empower communities towards reducing their own levels of poverty and inequality and to establish their own priorities for sustainable socio- economic change. Unlike similar tools, CAMP advocates that the success of roots-driven change depend on the inclusion of processes that allow community members to identify the various levels of power and trust within the community and to use this information to make a number of cognitive changes that forms the basis of sustainable change. This poster presents the various processes of CAMP undertaken within the community that helped them to focus on the human, social, cultural and environmental capital with the purpose of creating small business opportunities within their own communities. Lessons learnt by the community shared as successes and challenges, experienced in the ongoing initiatives to develop two small sustainable business ventures over the last five years are detailed. In conclusion, and explanation on how CAMP has been adapted to overcome challenges such as the role of funding, mentoring and skills transfer from external stakeholders is presented as the way forward.

Keywords: Asset Mapping, Community driven change

Prof Melanie D Nicolau is Professor in Geography and the Director of the School of Ecological and Human Sustainability, University of South Africa. Her research interests are on community driven sustainable socio-economic change in rural areas in Africa.



75. Beneficial Role of Biofertilization on Yield Related Characteristics of two Apple Cultivars and Soil Microorganisms under Orchard Conditions

Dr. Marijana Pešakovic, Dr. Jelena Tomic, Dr. Milan Lukic,
Dr. Žaklina Kara-klajic-Stajic, Dr. Svetlana M. Paunovic, Dr. Rade Miletic

ABSTRACT:

Intensive development of agriculture and increasing utilization of synthetic nitrogen fertilizers significantly contributes to a series of undesirable effects and results in excessive environmental pollution. Approximately half of all nitrogen applied to boost agricultural production escapes its intended use and is lost to the environment. Over the past years, fruit growing practice has been focused on a new concept, which relies primarily on the application of microbial inoculants i.e. biofertilizers. In line with the concept, we conducted comparative study of the effect of bio- and chemical fertilizer applications on yield-related characteristics of 'Granny Smith' and 'Čadel' apple cultivars and microbiological properties of the soil. The yield-related characteristics of the tested plants were evaluated for generative potential parameters i.e. flowering intensity, fruit set intensity, final fruit set intensity and yield (kg tree⁻¹; t ha⁻¹). The microbiological properties of soil were monitored by determining the total microbial count, numbers of soil fungi, actinomycetes, oligonitrophilic bacteria and *Azotobacter*. The analysis of the results points to the fact that the efficient apple nutrition management should ensure both enhanced and sustainable production. This approach seems to contain a certain potential as an appropriate technique in commercial apple production, which may improve yield-attributing characteristics and soil fertility.

Keywords: bacterial fertilizer, (Malus domestica Borkh), soil biological properties, generative potential

Dr, Marijana Pešaković, Fruit Research Institute, Čačak, Assistant Director. Research interests: Biofertilization, applications of PGPR strains in fruit growing and relationships between microorganisms and plants. Publications: More than 140 scientific papers, proceedings or book chapters in international or national journals/books. Projects over the past 6 years: Biofertilizers in integrated and organic strawberry production – project leader. Technical and technological models of intensive plantations of fruit trees and strengthening of human capacity aimed at improving fruit production in Serbia – member. The influence of variety and growing conditions on the content of bioactive components of berries and stone fruits, and obtaining valuable biological products with new and improved technologies – project leader. The application of microbiological preparations for the purpose of reducing the damage induced by late spring frosts in generative organs of fruit – project leader. Other activities: Member of the national and international editorial boards and scientific societies.

Dr, Jelena Tomić, Fruit Research Institute, Čačak. PhD degree in Biotechnical Science at University of Belgrade, Agricultural Faculty. Research associate at the Fruit Research Institute, Čačak, Department for Technology of Fruit Growing. Research activity on technology of fruit growing, berry fruit, mineral nutrition, biological productivity of the soil, quality of fruit, particularly content of bioactive compounds. Participated in research project of the Ministry of education, science and technological development of the Republic of Serbia: 'Influence of the variety and growing conditions on the content of bioactive components of berries and stone fruits and



obtaining biologically valuable products with new and improved technologies' and project of bilateral cooperation Republic of Slovenia and Republic of Serbia: 'Biofertilizers in integrated and organic soft fruit production'. Published more than 50 scientific papers in international journals and journals of national recognition.

Dr, Milan Lukić, Fruit Research Institute, Čačak. PhD degree in Biotechnical Science at University of Belgrade, Agricultural Faculty. Director at the Fruit Research Institute, Čačak. Research activities on fruit breeding and genetics, technology of growing pome and stone, genetic resources of fruit trees. Participated in national research projects as a project leader and on international projects:

'Technical and technological models of intensive plantations of fruit trees and strengthening of human capacity aimed at improving fruit production in Serbia', 'Agrophysical and agrochemical characteristics of soils in Western Serbia (Morava and Kolubara district) with the recommendation for their use for the cultivation of various fruit tree species', 'Clonal selection of autochthonous plum and sour cherry cultivars and examination of autochthonous apple cultivars of good storage properties', 'Demonstration of new fruit varieties' and 'New apple cultivars suitable for organic production'. Published more than 100 scientific papers in international journals.

Dr, Žaklina Karaklajić-Stajić, Fruit research Institute, Čačak. PhD degree in Biotechnical Science at University of Belgrade, Agricultural Faculty. Research associate at the Fruit Research Institute, Čačak, Department for Technology of Fruit Growing. Research activity on technology of fruit growing, berry fruit, fertilization. Participated in research project of the Ministry of education, science and technological development of the Republic of Serbia and Multi-beneficiary program in Wageningen University, Netherlands (Plant Variety Protection Course realized by CPVO), topic: 'DUS tests and plant variety protection according to the UPOV guidelines' and EUBerry project (FP7 project, 2011–2013): 'The sustainable improvement of European berry production, quality and nutritional value in changing environment: Strawberries, Currants, Blackberries, Blueberries and Raspberries' as well.

Dr, Svetlana M. Paunović, Fruit Research Institute, Čačak. PhD degree in Biotechnical Science at University of Belgrade, Agricultural Faculty. Research associate at the Fruit Research Institute, Čačak, Department for Technology of Fruit Growing. Research activity on technology of fruit growing, soil management systems, mineral nutrition, biological productivity of the soil, berry fruit, quality of fruit, particularly content of bioactive compounds. Participated in research project of the Ministry of education, science and technological development of the Republic of Serbia: 'Influence of the variety and growing conditions on the content of bioactive components of berries and stone fruits and obtaining biologically valuable products with new and improved technologies'. Publish more than 83 scientific papers in international journals and journals of national recognition.

Dr, Rade Miletić, Fruit Research Institute, Čačak. PhD degree in Pomology at University of Belgrade, Faculty of Agriculture. Since 2008: Principal Research Fellow (Department for Technology of Fruit Growing) at Fruit Research Institute, Čačak. Scientific work on modern systems of dense plantations, pruning, fertilization, irrigation, cultivation and management of soil and fruit thinning. Participated in research project of the Ministry of education, science and technological development of the Republic of Serbia: 'Alleviating and Overcoming Consequences of Draught on Plant Production' (project leader) and 'Influence of the variety and growing conditions on the content of bioactive components of berries and stone fruits and obtaining biologically valuable products with new and improved technologies' as well. Published more than 350 scientific papers in international journals and journals of national recognition.



76. The Relationship Between Exchange Rates and Inflation: The Case of Iran

Sanam Shojaeipour Monfared

ABSTRACT:

Iran is a country, which has experienced high, and chronic inflation period and fluctuating Exchange rates during past decades. After the revolution in Iran in 1979, followed by eight-year Iran-Iraq war and world oil crises, high inflation has been one of the Iran's most important problems. Especially during past years boycotts against trade caused instable Exchange rates and high inflation in Iran. These issues attract economists' interest toward this subject. Therefore, the aim of this study is to analyze the relationship between Exchange rate and inflation based on time series data, using Hendry General to Specific Modeling method and Vector Autoregression (VAR) model. To this end, we used annual data for the period 1976-2012 for Hendry method. We also used the quarterly data between 1997: 3 - 2011: 4 to estimate VAR model. Due to economic instability in recent years and lack of valid data we estimated model up to 2012. As a result of the Hendry model, it is obtained that there is a direct relationship between Exchange rate and inflation. An increase in foreign exchange rates makes the inflation goes up. By including the money supply variable to VAR model the effects of money supply and the exchange rate on inflation has been investigated as well. According to the results, both the money supply and the exchange rate affect the inflation in the positive direction. Contribution of the money supply on inflation is greater than the exchange rate.

Keywords: Exchange Rate, inflation, Hendry Method, Time Series, VAR model

Sanam Shojaeipour Monfared has studied master of international economics in Gazi University, Turkey .She is Iranian. So She is interested in Middle East and developing countries economies as well as oil dependant economies. She is also interested in International Economic and has some research experience on The Euro Debt Crisis and the future of the Euro Zone, Foreign Trade and Development as a course project. World Trade liberazation impact on developing countries development, The history and the structure of the Central Bank of Turkey.

77. Leading Markers of Risk Culture in Organization

Ing. PhD Iwona Gorzeń-Mitka

ABSTRACT:

Among the many assumptions about taking-risk widely embraced but rarely tested is the notion that large companies risk culture are less averse to risk than risk culture in the SMEs sector. Taking a multivariate markers of organizational culture, this study seeks to identify and to explain differences between theoretical and empirical aspects of risk culture. The concept of risk culture pertains to perceptions risks and promote risk-taking in organizations. I accept the assumption that organizational culture markers (indicated mainly based on research and opinion large companies) depends on the company size. Using questionnaire data from a variety of SMEs organizations, I find that there is considerable variance in theoretical and practical risk culture markers. I postulate that culture influences corporate risk-taking according organizational size. The primary purpose of this research is to contribute to the understanding of the risk culture markers in micro small and medium size enterprises. The research questions explore the differentiation between risk culture markers indicates in academic literature and markers indicates in empirical research. Theoretical considerations is supplemented by a results of the study in 269 Polish SMEs. Additional aim of this study is, at least partially, fill a gap on the organizational culture and risk management in SMEs.

Keywords: Risk culture, risk management, SMEs

Ing. Iwona Gorzeń-Mitka Ph.D. is Assistant Professor of Czestochowa University of Technology, Faculty of Management, Poland. Her research focuses on risk in decision-making process, enterprise risk management, business process planning, risk assessment methodology, risk in organizational culture. Her research has been published in the leading journals in management. She is author (co-author) of 3 book, 103 scientific papers. She has been a member of scientific committees of international journals and scientific international conferences (e.g. AOM, ISI). Among others member of Polish Economic Society, Polish Institute of Internal Control, The Global Association of Risk Professionals, Professional Risk Managers` International Association (PRMIA).



78. Assessment of Social Sustainability Using Social Society Index: A Clustering Application

Asst. Prof. Dr. Mahmure Övül Arioglu Akan, Dr. Ayşe Ayçim Selam

ABSTRACT:

With the massive economic development and vast environmental degradation over the last decade, —sustainability|| and —sustainable development|| have become one of the most significant concepts in governments' agenda. Sustainability has three pillars, namely environmental, economic and social, the latter gaining attention relatively later than the others.

However, some organizations evaluate the world countries for social sustainability using indexes such as OECD better life index, Global Development Index and Social Society Index (SSI).

SSI is used to rank world countries and evaluate their level of sustainability. SSI is a scoring system developed by Social Society Foundation to measure human wellbeing, environmental wellbeing and economic wellbeing every 2 years. In the evaluation process, SSI calculates scores using 21 indicators and publishes the actual situation on sustainability, progress over time and differences in development per region and per income class.

In this paper, human wellbeing indicators of SSI will be used to cluster world countries with k-means algorithm in order to assess social sustainability. Human wellbeing indicators are grouped into basic needs, personal development and health, and well balanced society, all of which are measured with 3 indicators. The clusters obtained will be compared with SSI rankings and the results will be provided.

Keywords: Social Sustainability, Social Society Index, Clustering, k-means algorithm,

Asst. Prof. Dr. Mahmure Övül Arioglu Akan works in the Industrial Engineering Department of Marmara University. She holds a BSc. degree in Environmental Engineering from Istanbul Technical University, and MSc. and PhD. Degrees in Industrial Engineering from Marmara University. Her main research areas include sustainable supplier selection and evaluation, sustainable supply chain management, corporate sustainability management, social sustainability, renewable energy policies, agent-based service and performance management, and multivariate statistical quality control.

Dr. Ayşe Ayçim Selam is a lecturer in the Industrial Engineering Department of Marmara University. She holds a BSc. degree in Mechanical Engineering, and a MSc. in Engineering Management from Istanbul Technical University, and a PhD. degree in Industrial Engineering from Marmara University. Her main research areas include sustainability, sustainable project management, renewable energy, sustainable energy, bee colony optimization and project scheduling.

79. Sustainable Fashion Education in changing world scenario

Asst.Prof. Vishaka Agarwal

ABSTRACT:

With the changing world scenario, information technology hitting all walks of life, the globalised phenomenon along with alarming environmental concerns have led the world to innovate ways and methods to address various concerns in a sustainable way. Fashion education also needs to undergo change in its pedagogy and develop newer knowledge source and materials which are eco-friendly, leaving less carbon footprints on the earth. The fashion Education curriculum needs to have more –Free Thinking|| orientation and interaction and information of technological advances of materials and processes which consume less energy and less waste post production.

Looking at current trends, the future would require Fashion Designers to have multidisciplinary knowledge of Design, Technology and managerial skills to evolve and compete in the Fashion Industry.

Questionnaire would be made to collect the perception from Fashion experts, professionals, Academia and students to assess the kind of knowledge they would like to be incorporated in the Fashion curriculum which has sustainable concepts incorporated in keeping tandem with the future trends.

Keywords: Fashion Curricula, Sustainable, Education

Ms .Vishaka Agarwal,Asst Prof. is working with National Institute of Fashion Technology, (Ministry of Textiles, Govt.Of India)Bhopal,India . She is currently pursuing Ph.D. in Design and has won the – Best Design Knitwear Collection –Award. She is the Centre Coordinator for Textile Design Department Co-ordinating the academic and administrative procedures and activities of the department. She has good expertise in areas like Design Process & Development , Traditional Textiles of India , Sustainable Design, Intellectual Property Rights,Visual Merchandising and Indian Craft product development. For achieving Higher Academic Pursuits she has Published and Presented Research Paper at National and International Journals/Conferences. The area covered are Sustainability, Intellectual Property rights,Visual Merchandising ,Indian Craft and Design. The effort is to continuously upgrade knowledge as per current trends to visualize future. She has also contributed to Curriculum development of NCERT.(Ministry of HRD,Govt.of India).



80. A Dissection on the Current Sustainability Concepts

Ms. Komal Dwivedi

ABSTRACT:

The paper deals with a cluster of perspectives upon the revolving concepts of the sustainability in economic, cultural and most importantly the environmental sphere. These concepts correlate economy with the environment and its general components that we are composed of or which facilitate our day to day living. The absurdity of the human actions has shifted the question mark from development to survival. The mankind needs a general yet specific and effective mechanism to maintain the round ball as a life supporting planet. The research has its major concern over the correlation of the spheres for the effective working of the model of sustainable development. The spheres are interdependent on each other for their existence. The analysis has been done on the basis of the Brundtland report. The research deals Formulation of different guidelines for different member nations with consideration of the European Union perspective. The research brings out the essence of the three essentials of sustainable development optimum utilization of resources, no wastage of resources and preservation of resources. There also have been perspectives on possible growth and development described in the research.

Keywords: Suggestion, Dissection, Analysis, Correlative conceptual work, Synthesis.

Ms. Komal Dwivedi is a first year student, in the reputed institution Indore institute of law, She has been a hardcore researcher in the field of law from the very beginning of her high school. She has a keen interest in dealing with all branches of law and has also been the youngest writer to publish her article in the institution.

81. Questioning sustainability. The resilience of local variety of rice in the Dayak community of Central Kalimantan, Indonesia

Dr. Semiarto Aji Purwanto, Mrs. Sutji Shito, S.Hum.

ABSTRACT:

Far from the enthusiasm of development programs run by the Indonesian government since 1967, the Dayak community in the interior of Kalimantan tropical forest was significantly abandoned from the changes. There were not much programs for the interior because the focus of development mostly was in Java island. Consequently, the Dayak lives their life as shifting cultivator that has been practiced for centuries. Our ethnographic research found that today they still maintain the knowledge and keeping the existence of local variety of rice. While in Java, these varieties have been replaced by a more-productive-and-resistant-to-pest varieties, the Dayak still maintain more than 60s varieties. From the biodiversity's perspective, it is a delightful news; while from the cultural perspective, the persistence of their custom regarding to the practice of traditional cultivation is fascinating as well.

The paper will explore the effect of how a neglected area, which was disregarded by development programs, sustains their culture and biodiversity. Using critical ethnographic analysis, we also would like to discuss the concept of sustainability whether it needed for the development programs, for the changes into a modern civilization, or for the sake of the local to survive.

Keywords: Sustainable development, local knowledge, rice, critical ethnography, Kalimantan, Indonesia

Dr. Semiarto Aji Purwanto is a lecturer and researcher in the field of anthropology in the University of Indonesia. Holds a Ph.D in anthropology from the University of Indonesia, his works are ranging from development studies, environmental/forestry studies, agriculture, health & family, arts & culture, to the use of information/technology. As a researcher and scientist, he has published some publications since 1994, to include some of his own research. In addition, he has served in many activities as facilitator in the process of advocacy or program planning for community based management and social impact assesment as well. He has several opportunities to work as associate researcher in the various universities in SIngapore, Philippines, Japan, Australia and New Zealand.

Mrs. Sutji Shito, S.Hum., is a researcher and graduate student in anthropology at the Graduate Program, University of Indonesia. As a profesional, she works in a research consultant firm. She involves in many field research and forest assesments in Kalimantan, Sumatra, Sulawesi, Papua, and other islands in Indonesia. Sustainable development, agriculture, forest assessment, natural resource management, and literature are her interests in research.



82. Future Dimensions in Fashion Education: New Materials and Avenues

Asst.Prof. Vishaka Agarwal

ABSTRACT:

Fashion is a fast changing phenomenon and looking at the current state of world, the future fashion would have very different dimension in terms of material used to give shape to fashion products –Apparels and Lifestyle Accessories. Also Fashion would find spaces in various unexplored avenues to make the consumer feel more comfortable. More Eco-friendly sustainable raw materials and methods of production would be adopted to put a check on fast depleting resource of Earth which would leave reduced amount of carbon footprints on the Earth's surface. Recycling, Reuse and Redesign of materials to form new fashionable products which are Eco-Adaptable would be designed. Materials generated out of waste would be developed.

Therefore, the Fashion fraternity and academicians have to look at things in wider perspective and Design institutions have to prepare –ECO-FASHION|| Curriculum looking at future fashion needs which requires the future fashion professionals to have multi-dimensional talent to meet the future fast changing requirement of "Environment and Life" co-existence on Earth.

Looking at this future perspective of future needs Professionals, Academicians,Technologist and students associated with Fashion design and technology would be interviewed to understand the changes in curriculum which needs to be made to meets the Future needs.

Keywords: Fashion, Materials, Avenues, Curriculum

Ms .Vishaka Agarwal,Asst Prof. is working with National Institute of Fashion Technology, (Ministry of Textiles, Govt.Of India)Bhopal,India . She has won the – Best Design Knitwear Collection –Award. She is the Centre Coordinator for Textile Design Department Co-ordinating the academic and administrative procedures and activities of the department. She has good expertise in areas like Design Process & Development , Traditional Textiles of India , Sustainable Design, Intellectual Property Rights,Visual Merchandising and Indian Craft product development. For achieving Higher Academic Pursuits she has Published and Presented Research Paper at National and International Journals/Conferences. The area covered are Sustainability, Intellectual Property rights,Visual Merchandising ,Indian Craft and Design. The effort is to continuously upgrade knowledge as per current trends to visualize future. She has also contributed to Curriculum development of NCERT.(Ministry of HRD,Govt.of India).

83. Empowering citizens for common concerns

Prof. Dr. Rafael Leal-Arcas

ABSTRACT:

The scientific community is by now almost in unanimous agreement that the greenhouse gas effect is real. The level of GHG emissions in the atmosphere has increased. There are clear policy actions to tackle climate change: mitigation, adaptation and geoengineering. As a result of the Paris Agreement on Climate Change, new avenues to tackle climate change more effectively have emerged. One interesting case in point is the fact that mayors, governors and CEOs are involved.

This shift to what we describe as a ‘bottom-up approach’ in the democratic (in the true sense of the term) implementation of climate change mitigation plans—a creation of the Paris Agreement, the locomotive of climate action—is one of the mega-trends of the 21st century. Since 80% of global economic activity takes place in cities and since 80% of GHG emissions comes from cities, this new mega-trend of climate action at the city-level is very promising. So why should cities take climate action? Because they are the main polluters and the main implementers of legislation, because today the majority of the world’s population lives in cities – and this trend to urban migration is on the rise – and because mayors of cities are pragmatic with global issues such as climate change, poverty or terrorism. Also because such issues are too big for nation-states and because cities arguably offer better governance on these matters. Furthermore, some of the greatest environmental and social challenges comes from cities: food, water, waste, infrastructure, transport. Moreover, mayors tend to come from the cities they govern and therefore have a much higher level of trust than politicians at the national level.

One very promising development in the twenty-first century is the empowerment of citizens on issues of common concern such as climate change, sustainable energy, and international trade. Citizens’ empowerment means that civil society can play an important role in the new challenges of trade diplomacy, such as the integration of non- economic aspects of trade in trade policy and in the inclusion of trade policies in the democratic debate. This approach makes the system of decision-making closer to the citizens and therefore less technocratic. Citizens’ empowerment could potentially help mitigate climate change, enhance sustainable energy, and develop a more democratic and transparent trade policy-making process. Moving forward, citizens need to contribute to finding more effective ways to obtain sustainable energy and mitigate climate change. Citizen participation is a promising way of providing better management of environmental issues.

Keywords: Sustainable development; citizens' empowerment; climate change mitigation; prosumers; smart cities;

Rafael Leal-Arcas is Professor of European and International Economic Law, a Jean Monnet Chair holder (awarded by the European Commission), and Director of Research at the Centre for Commercial Law Studies of Queen Mary University of London, where he teaches international economic law; Trade, climate change and energy law; climate change law and policy; international investment law; and EU external relations law. His research is funded by the EU Commission’s Horizon 2020 programs, most notably a grant of EUR14 million as part of a consortium of 21 institutions to work on renewable energy and smart grids. He has served in the Sustainable Energy for All



Secretariat (Washington, DC), the Energy Community Secretariat, the Energy Charter Secretariat, the World Trade Organization, and several EU institutions (EU Commission, EU Parliament, EU Council, EU Court of Justice). He is the author of more than 130 scholarly publications on international trade and WTO law, climate change law, energy governance, EU law, international investment law and the interaction among them in American and European law reviews such as the *Columbia Journal of European Law*, *Fordham International Law Journal*, *Chicago Journal of International Law*, *Legal Issues of Economic Integration*, *European Foreign Affairs Review*, and *Journal of World Energy Law and Business* (Oxford University Press).

84. More Fun with Less Stuff: Can We Improve Well-Being Through Less Environmentally Intensive Activities?

Amy Isham, Dr Birgitta Gatersleben, Prof. Tim Jackson

ABSTRACT:

Excessively desiring material goods is unsustainable and detrimental to human well-being. Therefore alternative ways of living well within ecological limits must be uncovered. Flow, an experience of total immersion in a challenging activity, has been associated with enhanced well-being. However, we are not aware of any examination of the environmental costs of more or less flow-conductive activities. Through an analysis of experience sampling forms and well-being surveys, we test the hypothesis that activities which allow for the experience of flow also tend to have a low environmental impact. We found that more intense flow experiences were related to greater well-being. Further, more flow-conductive activities did tend to have a lower environmental impact. We isolated a group of activities which encouraged the experience of flow in the absence of great environmental costs and proposed that these centred around four themes. Namely, romantic relationships, spirituality, creative hobbies, and granting time to other people. Accordingly, pursuing flow presents itself as a promising means of living well within environmental limits. Our specification of activity themes provides a starting point from which we can begin to understand the structures that need to be promoted in order to achieve a 'more fun with less stuff' ideal.

Keywords: Flow, well-being, environmental impact, leisure activities

Amy Isham is a PhD student at The Centre for the Understanding of Sustainable Prosperity, University of Surrey, UK. Her research investigates the relationship between materialistic values and reduced well-being, and aims to uncover ways in which we can improve our well-being whilst at the same time reducing consumption.

Dr Birgitta Gatersleben is Senior Lecture in Environmental Psychology at the University of Surrey and course director of the MSc in Environmental Psychology. Her work focuses on understanding and promoting sustainable lifestyles and on understanding the healing benefits of interaction with nature.

Tim Jackson is Professor of Sustainable Development at the University of Surrey and Director of the Centre for the Understanding of Sustainable Prosperity. From 2004 to 2011, he was Economics Commissioner on the UK Sustainable Development Commission, where his work culminated in the publication of his controversial book *Prosperity without Growth*. In 2016, Tim was awarded the Hillary Laureate for exceptional international leadership.



85. Overcoming the Attitude-Behavior Gap in Promoting Sustainable Behavior Among Consumers. An Intercultural Comparative Approach

Mark Gessat PhDc

ABSTRACT:

Purpose: The attitude-behavior gap, the gap between consumers' green attitudes, and their unsustainable consumption behavior patterns and have been puzzling environmental advocates for a long time. Most consumers have all necessary knowledge at hand, so the question is what else can environmental organizations do?

Methods: Through literature review, in-depth interviews and participant observation I have mingled among and observed promoters of the anti-factory-farming movement in Europe and Asia for many years.

Implications: The research results suggest that that the values and identities that advocates embrace and that are addressed in consumers, as well as the forces of the market together shape an intricate triangular relationship, the dynamics of which are crucial to understand if we want to solve the rhetorical question whether this is a demand or supply driven problem. Furthermore it shall be discussed how the politicization of identities around food choices is detrimental in two ways. Firstly, it promotes individual (rather than corporate and political) responsibility and disables the necessary politicization of the environmental externalities of food production and secondly it promotes a polarization over different consumption patterns which again takes place on individual levels and distracts from responsibilities in other sectors.

Keywords: attitude-behavior gap, identity politics, factory farming, corporate lobbying, green consumerism

Mark Gessat is a PhD candidate at the University of Tübingen, Germany. He specializes in social science and Chinese area studies. His current research focuses on the opportunities and constraints of a politicization of collective identities in the promotion of vegetarianism in Taiwan and the differences to similar advocacy in the Western world. His further research interests lies in systemic problems such as climate change as a problem of market failure and environmental externalities, as well as the obstacles to the internalization of such externalities in terms of corporate lobbying and corporate intervention in civil society and public discourse. Furthermore he is fascinated with the cultural dynamics between anthropocentric materialism and how it is being challenged by identity politics in social movements.

86. Modelling “The Expanding Circle” of cooperation towards a sustainable future

Steven R. Smith PhD(c)

ABSTRACT:

Can human cooperation expand to the global scale in time to avert catastrophic climate change? Prospects for a sustainable future depend on binding commitments that respect biophysical limits, which in turn depend on political support and global/intergenerational levels of moral concern. Numerous studies in the social sciences indicate that transcending parochial, group-level cooperation to the global scale requires some form of unifying "superordinate goal". This research explores what this transformative humanitarian goal might consist of, and what factors most influence the dynamics of human cooperation. Two quantitative models of cooperative social dynamics are developed and analysed: 1) Historical - analysing the global growth of social insurance provision and the abolition of slavery, including their key structural (macro) predictors; 2) Experimental - analysing the dynamics of cooperation and the consideration of future generations in a multiplayer social dilemma game. Longitudinal growth curve modelling (LGCM) of these models' data allows many variables to be simultaneously combined into a single group of path coefficients, represented as a network of relationships over time. Preliminary results in the historical model a) confirms the view that social complexity expands more rapidly than cooperation, b) The rate of acceleration of cooperation required to ensure sustainability within the available time greatly exceeds the historical trend.

Keywords: cooperation, dynamics, sustainability indicators, co-conn ratio, social movements, cultural evolution, future generations

Mr Steven R. Smith, University of Surrey, is a doctoral researcher at the Centre for Environment and Sustainability (CES). His interest is in the social psychology of sustainability and in understanding the factors influencing the dynamics of moral concern. Mr Smith has been an environmental researcher and educator for 25 years and holds an MSc in Environmental Technology from Imperial College, London and a B.Sc in Psychology.



87. The Effect of Greenwashing Information on Ad Evaluation

Assoc. Prof. Melinda Majláth

ABSTRACT:

Thesis statement: Greenwashing based on the intention of the companies to mislead customers and partners in order to show up themselves or their own products more environmental-friendly than they really are. The purpose of this paper is to examine how additional greenwashing information can change the evaluation of ads of H&M and The Body Shop for the consumers and whether the extent of change is influenced by the general skepticism toward ads or by the environmental concern of the respondents.

Methodology: This quantitative survey is based on online questionnaire, in which respondents evaluated the ads of H&M and The Body Shop before and after giving additional greenwashing info in connection with the companies. Besides that, the moderating effect of environmental concern and skepticism toward ads (in general) were examined.

Results: The first hypothesis tested the worsening evaluation of ads (both self- and objective referential items). Surprisingly, the lower ad skepticism didn't mean higher change in ad evaluation. It was explored that respondents showing higher environmental concern showed higher change in ad evaluation but only for H&M ad.

Conclusions and Implications: Results show that unfolded greenwashing actions influence the evaluation of ads negatively – not only for those who have high environmental concern.

Keywords: greenwashing, ad evaluation, ad skepticism, H&M, The Body Shop

Melinda Majláth - Ph.D in Management and Business Administration- is associate professor at Obuda University, Keleti Faculty of Business and Administration, Budapest, Hungary. Her main research focus is environmentally friendly marketing and green consumer behavior. During 2006- 2008 she worked for Hoffmann Research International (Budapest) as a quantitative researcher. She is the member of the Hungarian Economic Association.

88. Evaluation of Consumers Motivations of Sportswear Teams in the City of Bogota

Prof. Diego Fernando Sánchez Zambrano, Alejandra Ruiz,
Oscar Mayorga Torres, Fernando Prieto Bustamante

ABSTRACT:

The companies of sports clothes (multinationals), specially those who support football teams, make constant changes in their collections, adding new products. For that reason, it is important to know how consumers assimilate these changes in different periods. The last trends, show a increase in the interest of people to acquire new sports articles; for that reason, this research is seeking to identify the motivations of consumers to buy and wish sportswear, evaluates the environmental awareness of the consumer in their decision to purchase those products affected by the changes generated by the planned obsolescence and to determine the correlation between the attributes of the product and the decisions of purchase. In order to obtain this information, 400 surveys were taken. To analyze information, descriptive statistics was used. The instrument was a survey with question a Likert scale, of agreement to the stages of the process of decision of purchase of a consumer. The results of this research shows that the relation between the attributes of the product with regard to the decision of purchase is weak. In fact, data collected reveals how the new styles generate a desire of position and intention of purchase of the new products.

Keywords: Motivation, attributes, consumer behavior, sportswear, environmental awareness

Diego Sánchez Zambrano, industrial engineer graduated from the Sergio Arboleda University in 2004, graduated as a Master's Degree in Design, Management and Development of New Products in 2007 from the Polytechnic University of Valencia Spain. Professor Researcher at the Universidad Santo Tomas, leading research in product design and development, and consumer behavior. Areas of interest include: design process, product development, Design Methodologies, Consumer behavior.

MBA. Alejandra Ruiz. Universidad Manuela Beltrán Bogotá – Colombia. Industrial Engineer with experience in the productive sector and quality processes applied to different industries, Consulting and follow-up to the academic programs of the same area, research coordinator of the same academic program, on issues of quality, entrepreneurship, business creation and approach.

Oscar Mayorga Torres, Universidad de la Salle graduated Industrial Engineer from the University of the District University in 2000, graduated as an Engineering Specialist from the District University in 2004 and a Master's degree in Industrial Engineering from the Universidad Distrital in 2013. Researcher at the University Of the Salle. Areas of interest include: Knowledge management and innovation, industrial projects, design and production methodologies

Fernando Prieto Bustamante, Universidad Santo Tomas. Telecommunications Engineer, PhD candidate in Projects and Doctorate in Business Administration and Management from the Polytechnic University of Valencia (UPV), Spain. With a Master's Degree in Consultancy in Integration of Information Technologies in Organizations (UPV), Master's Degree in Corporate Networks and Integration of Systems (UPV) and Master's Degree in Design and Management of Technological Projects (UNIR). He has high technical competence in the management, formulation, structuring and evaluation of projects, specialized consultancy and consultancy in computer solutions, telecommunications, R & D & I and ICT. Extensive experience in project management, research project management, ICT consulting, service management and ITIL, business process management - BPM, business architecture and business information systems.



89. Cultural diversity understanding in the global classroom.

Rodolfo Delgado

ABSTRACT:

This paper will discuss the challenges, advantages, and learning experiences of teaching International students. Understanding diverse students' values in a global classroom play an important role to maximize their learning performance.

The students were informed that the class dynamic will be highly autonomous, based on students center activities, and cooperation was highly expected because the role of the instructor as a facilitator. Students were divided into groups, assigned several readings, homework, and a final writing paper to be submitted during the last day of classes.

International students from the Global 30 and exchange students took part in the Academic Writing I course during the spring of 2017. Students' performance observations, feedback, and answers to a survey were collected to improve future courses taking into consideration their values and understanding of the global classroom. International students with better intercultural competence, flexibility, and open-mindedness were able to maximize their learning process by incorporating their scientific objective perspectives. Cultural synergy skills were achieved among the team and contributed to demonstrate that understanding different perspectives, values, and priorities must be taken into consideration to manage and improve cultural diversity understanding in the global classroom.

Keywords: Cultural, Diversity, Students, Global, Classroom Autonomous, Synergies

Presently, **Rodolfo Delgado** is teaching at Tokai University as a Junior Associate Professor. His present research interests are teaching English for Specific Purposes, specialty topics related to business, intercultural communication, tourism, and the environment. He is also interested in cross-cultural communication, international education, education policy and critical thinking. He has been teaching full-time at Tokai University, and part-time at the University of Tsukuba and Kanto Gakuin University. He is presently finishing a Doctoral Program in Business Administration from Anaheim University, California, United States. He holds a Master of Business Administration (MBA) from Anaheim University; a Master in Environmental Sciences from the University of Tsukuba, Ibaraki Prefecture, Japan; a Certificate in Intercultural Studies from the University of British Columbia, Canada; and a Bachelor of Arts from University Latina of Costa Rica.

90. Patterns Of Social Development: A Case of Selected Districts in Kerala, India

Fathim Rashna Kallingal, Dr. Mohammed Firoz C.

ABSTRACT:

Kerala, a southern state in India has always stood out among other states due to its better performance in the social and human development aspects. The state ranked first in the Human Development Index (HDI) among other states in India and ranked 99th globally (UNDP 2011). Equity, an important pillar of sustainable development is considered to be the major achievement of the so-called 'Kerala-Model' of development, which had emerged due to these achievements. It is also generally perceived that social inclusion was the basis of the model. However, recent studies revealed that the 'Kerala- Model' of development was not inclusive in totality and disparities existed among regions and socio-economic groups. This paper attempts to quantify these perceptions by analyzing the pattern of social development in the state. Principal Component Analysis (PCA) is used as the multivariate analysis tool for extracting principal components from selected variables focusing on social development. Five components were extracted and interpreted, namely, components of social characteristics, employment, housing infrastructure, social infrastructure and road infrastructure respectively. Spatial analyses of the interpreted components were done to analyse the social development pattern of the study region. This spatial analysis revealed the presence of major variations in the domains of social characteristics, employment and housing infrastructure. However, lesser variations were found in the social infrastructure and road infrastructure development.

Keywords: Kerala model of development, Social development, Principal Component Analysis, Spatial analysis

Mrs. Fathim Rashna Kallingal graduated Architecture from Kerala University in 2004 and completed Master of Planning (Urban planning) in 2017 from National Institute of Technology Calicut, India. As an Architect, she had been working at various places including India and U.A.E. As an academician, she has been visiting several institutions in Kerala as Faculty of Design. Currently, she is working as an independent consultant in the field of Architecture and Planning with special focus on research and development. Her field of interests includes regional development and planning, city planning, human development, sustainable development and policy research.

Dr. Mohammed Firoz C. is an Architect and Urban planner by profession and serves as an Assistant Professor at the Department of Architecture and Planning, National Institute of Technology Calicut. He holds a PhD degree from Indian Institute of Technology Kharagpur, post-graduation in Urban and Regional Planning from Center for Environmental Planning and Technology (CEPT) University and B.Arch. degree from National Institute of Technology Calicut for which he was as a University rank holder. He has been involved in teaching, researching and consulting at NIT Calicut since July 2004. He was also engaged as a visiting faculty at the Architectural Association London (AA London) for the term May-June 2015. His field of interest includes Rural Urban interface studies, sustainable design and planning, regional development & planning etc.



91. Cultural Ecosystem Services of Rattan Garden in Tumbang Runen Village Central Kalimantan Indonesia

PhD(c) Afentina Afentina, Dr. Paul McShane, Dr. Jagjit Plahe,
Prof. Wendy Wright

ABSTRACT:

Ecosystem Services (ES) are services provided to local communities by natural resources. Cultural Ecosystem Services (CES) are the nonmaterial benefits that people obtain from ecosystems. ES, and particularly CES are often omitted from cost-benefit analyses associated with development plans in favour of a focus on maximizing economic benefits. Consequently, economic development can lead to the disappearance of cultural values such as local knowledge, and cultural identity. This research attempts to understand and analyze CES and benefits provided by rattan gardens for local communities in Tumbang Runen village in Indonesia. Information about CES was obtained through in-depth interviews with key informants, focus group discussions with farmers, and observations of daily activities of local people. This research revealed that residents of Tumbang Runen village attach strong cultural importance to their rattan gardens, including spiritual, heritage and local knowledge values. The spiritual aspects of CES include the use of some plant species in rituals and healing ceremonies. Local people consider rattan to be historically important, intimately linking people with their ancestors and their belief system. Rattan gardens and rattan cultivation also serve as cultural symbols, facilitating the maintenance of practices, beliefs, and knowledge across generations. The importance of rattan gardens to the local community should be communicated to policy makers and included in sustainable development strategies

Keywords: Cultural ecosystem services, rattan garden, local community, sustainable development

Afentina Afentina is a PhD student at Monash University, with focus of study on ecosystem services of traditional land use system and its relationship with ecosystem conservation and sustainable development in Indonesia.

Dr. Paul McShane is an adjunct Research Fellow with the School of Social Sciences within the Faculty of Arts. Previously, he was Chief Research Officer with the Monash Sustainability Institute (MSI). At MSI, Paul was responsible for extending the collective research capability of Monash University across all of its Faculties towards sustainable development outcomes mainly in South and South East Asia. With postgraduate qualifications in science and business Paul has held senior research and research management positions in Australia and in New Zealand. Further to this, he works extensively in Southeast Asia providing advice to governments, Universities, and communities on sustainable development of marine resources.

Jagjit Plahe's research interests include: political economy of development; trade and development; rights based approaches to development particularly the right to food and the right to health; global value chain analysis; global governance and the politics of international economic relations.

Wendy Wright is a biologist with a strong interest in conservation and biodiversity. She is particularly interested in conservation and ecosystem management within production environments; and in highly modified landscapes. She teaches and conducts research at the Gippsland Campus of Federation University Australia. Wendy is also coordinator of Higher Degrees by Research (Masters by Research and PhD) at the Gippsland campus. Wendy has strong connections with the Gippsland community and is co-convenor of the "Living with Bushfire" community conference.

92. Psycho-Social Consequences in Adolescents with Divorced Parents and Their Minimization

Esjurda Tallushi, Gjylse Biba, Temisa Isufi, Sadiona Abazaj

ABSTRACT:

In modern times, where individualism and urbanization prevail, families experience great challenges not only in their structure, but also in their function. Family as the safest shelter for children/adolescents loses its sense when it is experienced the divorce of parents. The psycho-social consequences of some of them are evident in the creation of new social relationships, attitudes and behavior towards others and each parent, but also in their opinions, self-esteem, self-confidence, especially when considered problematic relationships such as parent-parent, adolescent-parent, that causes stress, psycho-emotional instability, up to anxiety, depression. The main purpose of this study is to identify the psychological and social consequences of children with divorced parents, which also determine the important role of each parent and supporting institutions such as school, society, professionals such as social workers/psychologists in treating and minimizing them. This paper is a qualitative research based on live interviews with two-line open-ended questions: subjects who directly experience divorce as adolescent boys and girls, aged 14-16 in high school. There were also interviews with divorced couples to understand how adolescents are experiencing the divorce, seen from their parents' point of view. An important part is also the interviewing of subjects dealing with the treatment of minimizing its consequences, ie professionals working and staying close to these adolescents as teachers of a high school in Kavaja/Albania, social workers and psychologists of the school and the district court that is responsible for the assignment of parental custody, to understand the support that approaches adolescents. Selection of subjects was done through intentional sampling, were identified cases of families with divorced couples with adolescent children and who have legally completed this process at the First Instance District Court of Kavaja/Albania. The results of this study serve to make people aware of the concrete psycho-social consequences of adolescents experiencing parent divorce and how can be improved their future treatment by their parents, professionals in order to mitigate the negative effects of divorce in the family.

Keywords: divorce, adolescent, psycho-social consequences, treatment, parent, teacher, psychologist/social worker.

Esjurda Tallushi has successfully completed her studies in Ba. as a Social Worker and Master of Science in Social Policy. She has been working for eight years in Albanian penitentiary system for juveniles and adults in conflict with the law, always at the position of the social worker for vulnerable categories. In 2012, she was given the License to exercise the intermediary authority in resolving conflicts and reconciliation, a profession which she has been successfully performing during the last five years. She has also participated as a social worker in Albanian Courts, during the Determination of Parental Responsibility process. She is very fond of scientific researched and studies which have the psycho-emotional and social aspects of vulnerable groups in Albanian society as a target.

Temisa Isufi is an English Language Instructor. Her contribution in teaching consists in different Education Institutions in her country, Albania and abroad. She was Business English Language Lecturer at "Faculty of Economy", University of Tirana (4 years); English Language Lecturer at "Aleksander



Moisiu" University in Durrës (2 years); English Language Lecturer at "Agriculture University", Tirana (1 year); English Language Teacher at "Mehmet Akif" High School Tirana and English Language Instructor at "ILC" and "Meridian" Language Centers (7 years). From December 2016 until February 2017, she worked as a preschool teacher at "Kiello" International School in Helsinki, Finland. Due to her admirable professional performance, dedication and very positive attitude she would have at any teaching discipline and situation, on the 1st of March 2017 she was given the position of the head teacher, at "Kiello" International Kindergarten. Teaching for her is sacred, her life mission and she could do any sacrifices required for the advancement of her country's Education System.

Gjylse Biba has successfully completed her studies in "Languages, Literature and Intercultural Studies" at Faculty of Human Sciences, University of Firenze. She is very fond of Modern Languages and Literature, and is looking forward to proceed her studies in Master of Science, always focused on languages and literature.

Sadiona Abazaj is a part-time English Lecturer at the Faculty of Economy, University of Tirana, Albania. She has been teaching English since 2012 in various academic institutions including Turkish Colleges and "Aleksander Moisiu" University.

93. Essencism as an African Philosophy Towards the Salvation of the Environment For Sustainable Development

Dr. Samuel Asuquo Ekanem, Dr. Kidzu t. Oweh, Dr. Mrs Madalyn Aboh

ABSTRACT:

The present global environmental crisis is traceable to certain fundamental strands of Judeo-Christian thinking that actually encourage the over exploitation of nature for the sole benefit of man. This is anchored on the firm belief that nature as created is basically for the purpose of man- humans. This Judeo-Christian thinking of man's dominance of the earth is classically depicted or captured in Genesis Chapter 1, Verse 27-28 where the Bible says —God created man in his own image, in the image of God created He him, male and female created He them. And God blessed them, and God said unto them, be fruitful and multiply and replenish the earth, and subdue it: and have dominion over fish of the sea and over fowl of the air, and over every living thing that moveth upon the earth|. This biblical command and blessing constitute what emboldened the human race to see nature as an object of exploitation and exploration. This also, promote isolationism of humans- man as being distinct and different from nature. With this isolationist understanding and posture, man developed his twin cognitive activities of science and technology as portent instruments of exploitation and exploration to conquer nature. It is therefore the development of science and technology as both instrument of exploitation, exploration and weapon to conquer and subdue nature that has led to several dislocation of nature's delicate balance, which has brought what is generally refer to as environmental problems or crisis. In this paper therefore, effort will be made to show that it is the activities of man through the instrumentality of science and technology that has created the environmental hazards that the world is now faced with. It will also be argued the extremism necessitated by the Judeo-Christian thinking can be moderated through the educative process, which can be achieved through essencism as a philosophy. It is the position of the paper that the current environmental crisis can be curbed through a process that will make man to realize his essence on earth.

Keywords: Essencism, Africa, Paradigm, Salvation and Environment

Dr. Samuel Asuquo Ekanem is an associate professor of philosophy and presently the head of department of philosophy, federal university wukari. He holds a PhD in philosophy and specializes in philosophy of technology. He is widely published nationally and internationally and has over seventy (70) journal papers. Attended several international conferences around the world. He has also published several books. He is the originator of essencism as a philosophy of education. He is an expert in philosophy of development and has published works on environment, technology, ethics and education. He is also in the editorial board of many academic journals and is currently the Editor in Chief of Hikima Journal of Multidisciplinary Discourses, which is a publication of the Department of Philosophy, Federal University Wukari, Taraba State, Nigeria. He is a member of Nigerian philosophical association (NPA), American philosophical association (APA), international federation of philosophical societies (FISP), council for research in values and philosophy (CRVP), USA, international society of African philosophy (ISAP) Nigerian bar association (NBA) and philosophers of education association of Nigeria (PEAN).



Dr. Kidzu t. Oweh is a Senior Lecturer In The Department Of Philosophy, Federal University Wukari, Taraba state, nigeria. He is an expert in socio political philosophy. He is widely published both natioally and internationally. He holds a doctorate (PhD) degree in philosophy. He is a member of nigerian philosophical association (NPA) and american philosophical association (APA).

Dr. Mrs. Madalyn Aboh is a Senior Lecturer In Philosophy, Federal University Wukari, Taraba State, Nigeria. She is an expert in ehtics. She is widely published nationally and internationally. She holds a doctorate (PhD) degree in ethics.

94. Harmonious Complementarity in Leadership: A Necessary Tool For Environmental Sustainability

Dr. Ephraim Ahamefula Ikegbu, Dr. Maduka Enyimba

ABSTRACT:

This paper seeks to argue that harmonious complementarity in leadership remains a necessary tool that will navigate environmental consciousness and sustainable development in Nigeria. The choice of harmonious complementarity in leadership is pragmatically intended to utilize the facilities of local circumstance to address the confronting challenges of our existence. Harmonious complementarity in this context, implies the socio-cultural integration, co-operation and cross fertilization of natural and gifted ideas by the people within a defined political entity for the purpose of confronting a task that is before them. Under this ideal and leadership construction, the collective opinions of the people are sought and the consciousness of sustaining, protecting, preserving and/or promoting the environment becomes the collective task of the people; both the leader and the led. This is because environmental consciousness and positive awareness by the leadership would have risen to the climax that inappropriate laws and policies that were impairing sustainable development and negative activities of the human elements on the environment will be a relic of the past. This paper shall employ analytic and rational methods to drive home its argument.

Keywords: Harmonious Complementarity, Leadership, Sustainability, Environment

Dr. Ephraim Ahamefula Ikegbu is a Senior Lecturer at the Department of philosophy, University of Calabar. His Research interests are in the area of Philosophy or Law, Leadership Philosophy, Philosophy of Environment, Social and Political Philosophy and Gender Philosophy. He is widely published and has presented papers in conferences. He is also a legal practitioner.

Dr. Enyimba, Maduka is a Lecturer in the department of Philosophy, University of Calabar. He is widely published in Journals and conference proceedings, both nationally and internationally. His research interest spans through environmental philosophy, epistemology, philosophy of education and philosophy of culture.



95. Mainstreaming Gender in Karachi's Public Transport Policy

Neha Panjwani

ABSTRACT:

Conversations around gender inequality often focus on access to health, education, and workplace rights, but scarcely concern the sector of transportation. The latter is highly gender discriminated, especially in developing countries such as Pakistan, affecting the mobility of women and third genders, who face inequities in the provision of these public services. Such constraints to safe, efficient, and comfortable mobility create serious problems for certain genders reflecting their economic security: this by extension is both a cause and effect of social inequality, and failure of federal budget allocation in transport leading to profound gender disparities in cities. In the light of these challenges, this policy paper seeks to highlight the distinctive travel challenges faced by women and transgenders, in the urban city of Karachi, commuting via public transport that includes buses, trains, and rickshaws. It highlights existing shortcomings in, and recommends an urgent focus on, a more inclusive, need- based public transportation system. By drawing on the principles of gender mainstreaming interventions in public transportation in other countries and data from first-hand interviews with local conductors, bus drivers and passengers: some realistic recommendations, paying special attention to issues of inclusion, accessibility, and safety are included in the policy. The implications of this study are to enhance evidence-based policy-making in transportation with particular focus on urban planning.

Keywords: Sustainable transport, Gender equality, Inclusive development, Transportation policy, Evidence- based policy, Urban city planning

Neha Panjwani is an undergraduate student at Habib University, Pakistan. She is pursuing a liberal arts degree in Social Development and Policy with a concentration in Urban and Community studies. Her research interests include urban planning, gender equality and sustainable development.



96. Does Training Learners on Language Learning Strategies Have an Effect on Language Proficiency?

Dr. Nuray Okumuş Ceylan

ABSTRACT:

This study aims to find out whether training learners on language learning strategies has an effect on foreign language learning achievement or not. The population is Kocaeli University 2013- 2014 education year Foreign Languages School students. This study is an experimental study in which randomly chosen experimental and control classes take part, and only the experimental classes were trained on language learning strategies for the defined period of time and observed until the end of the first term on their use of the language learning strategies. At the end of the first term, language learning strategies and learner autonomy surveys were conducted again as post- tests. The significant difference between the overall averages of the first term grades of beginner/ elementary level control and experimental groups shows that training students on language learning strategies may lead to better foreign language achievement, particularly in lower levels.

Keywords: learner training; foreign language achievement

Nuray Okumuş Ceylan received her BA and PhD degree in English Teaching Department from Gazi U. and MA from Bilkent U. MATEFL program. She worked English prep schools of Karaelmas U. and Kocaeli U. She is currently working as an Associate Professor in English Language and Literature Department in Bulent Ecevit U.



97. How Leadership Development Across Time Contributes to the Uniqueness of the Vision

Sokol Loci PhDc

ABSTRACT:

The main focus of this paper is leadership development, specifically leader's vision and understanding the level of professional knowledge, skills, and abilities of their followers. This may provide elementary information about the development of social capital which it would be the basic point of unique vision developed in organization. Unique Vision concept comprehends the convergence of vision and setting goals. Based on some articles there is a difference between vision communication which is relatively abstract, far reaching, and timeless messages, and effective goal setting which it is specific, challenging and time-constrained objectives. This paper would provide insights about the framework that addresses when visions and goals achieve construal fit (integrating visions and goals) and explains why and how construal fit leads to increased sustainable organizational performance. Therefore, the research question of this paper would be: Is leadership development the motive of having unique vision that leads to sustainable organizational performance?

I will use secondary data. There are credible data sources I am planning to get through e-libraries, books, web-sites, and I will use also lectures from my education experience including PhD courses.

The main theoretical contribution of this paper is to elaborate and interconnect leadership development and the unique vision as the platform which enhance sustainable organizational performance.

Keywords: Leadership, Vision, Goals, Sustainable, Performance, Development

Sokol Loci was born in Peja city from western part of Kosovo. Sokol Loci has finished high school (—Bedri Pejani High School||) at his hometown. He registered faculty of management and public policy and he got bachelor degree from Rochester Institute of Technology, NYC. He graduated on Master in Business Administration in Ljubljana University/Faculty of Economics and now Sokol Loci is continuing PhD studies in Ljubljana University/Faculty of Economics. Expected graduation in PhD program (Major: Organization and Management) on September/2019.

98. Recommendations for the Optimal Facilitation of Sustainable Community Development Through Income-Generating Community Projects, the Case of the Holding Hands Income-Generating Community Project, North West Province, South Africa

Dr. Christi Niesing, Professor Stephan van der Merwe

ABSTRACT:

One of the main challenges hindering global sustainable development is poverty. The South African government implements strategies to eradicate poverty, one of them being the implementation of income-generating community projects. The advantages of such interventions include the development of skills in conjunction with financial benefits stimulated by economic activities in communities. The expectation exists that income-generating community projects should develop into sustainable businesses after the initial skill development and donor funding. Unfortunately these projects fail to develop into sustainable businesses and have a limited life span. However, they do facilitate sustainable community development in terms of skills development, development of entrepreneurs and economic development. The case study of the Holding Hands income-generating community project provided an opportunity to study the development, implementation and functioning of an income-generating community project to develop a framework for the development and implementation of future income-generating community projects. The methodology consisted of a qualitative approach to explore a case study in order to develop constructivist grounded theory. This paper presents the recommendations for the optimal facilitation of sustainable community development through income-generating community projects as identified in the Holding Hands case. These recommendations can guide the implementation of future interventions to facilitate sustainable community development.

Keywords: sustainable community development, income-generating community projects, poverty, bottom-up approach

Dr Christi Niesing started her career at the NWU in 2008 with the appointment as project manager of the Holding Hands income-generating community project. She received recognition for her contribution towards excellence in community engagement from various institutions. She is currently a lecturer at AUTHeR (Africa Unit for Transdisciplinary Research at the Faculty of Health Sciences), Faculty of Health Sciences NWU. Her research focus is the facilitation of sustainable community development through development interventions with a special interest in the development of instruments to measure and evaluate real impact of interventions over time. She received her PhD in Business administration at the NWU in February 2017. In her thesis, a conceptual framework for sustainable community development she utilized the case study of the Holding Hands income-generating community project to study the development, implementation and functioning of an income-generating community project to develop a framework for the development and implementation of future income-generating community projects.

Professor Stephan van der Merwe is a Full Professor of Entrepreneurship at the North-West University School of Business and Governance, North-West University, Potchefstroom campus, South Africa. He teaches Entrepreneurship, Strategic Management and Project Management at the MBA and



executive levels. Professor van der Merwe completed his doctorate at the North-West University where he studied the formal planning practices of small and medium-sized family businesses. Professor Van der Merwe also received a MSc degree in Agricultural Management from the Free State University and a MBA (cum laude) from the North-West University.

Professor Van der Merwe is a rated researcher by the National Research Foundation in South Africa and his research investigates the unique challenges facing family businesses, women entrepreneurship and corporate entrepreneurship. His current research interest focuses mainly on the wellness of family and non-family members in family businesses.

99. The Role of the Procurement Function in Realizing Sustainable Development Goals: an Empirical Study of an Emerging Economy"s Oil & Gas Sector.

Igho Ekiugbo, Dr Christos Papanagnou

ABSTRACT:

This research is motivated by the unsustainable nature of some oil and gas (O&G) firms' activities, especially in developing countries and the dearth of research works about sustainable procurement (SP) within these countries. The O&G sector is characterized by complexity known to generate several negative impacts on humans and the environment. Our literature review reveals how SP practices can help improve the environmental, social and economic performance of practising firms, thereby leading to sustainable development of their immediate communities and the society in general. The aim of this research is to explore SP practices within the Nigerian O&G sector and to investigate how these practices can help firms achieve sustainable development goals. A questionnaire was used to collect primary data, which was analysed using exploratory factor analysis to ascertain the level of relationship between the research variables, consisting of environmental, social and economic aspects of sustainability. The research findings did not only indicate that some sustainable development goals (SDGs) can be achieved through the adoption of SP practices, but it also shows that the adoption of SP practices can help improve the performance of O&G companies. The result further indicates that government policies and regulations constitute a key driving force for firms to adopt sustainable practices.

Keywords: Sustainable development, corporate sustainability, sustainable procurement, Oil & Gas, firm performance, Nigeria, developing countries.

Igho Ekiugbo is a 3rd year PhD student of Salford Business School, University of Salford, Manchester UK. His major area of interest is in sustainability practices and supply chain visibility and risks. He had his first degree in Business Management (Business Information Systems) from the University of Bolton, UK and a master degree in Procurement, Logistics and Supply Chain Management from the University of Salford, Manchester UK.

Dr. Christos Papanagnou is Lecturer in Logistics & Supply Chain Management, Salford Business School, Manchester UK. He is passionate about undertaking research and exploring innovative solutions for organisations. His current research interests (but not limited) are control and modelling of sustainable supply chains, supply chain dynamics exploration, logistics and supply chain integration through IoT, factories of the future, big data and cloud systems for supply chain management.



100. Conception of Managing Practices as Key Factor to Achieve Rural Development and Sustainability in Southern Brazil

Ph.D(c) Roberth Andres Villazon Montalvan, M.Sc. Luis Augusto Araujo, M.Sc. Alexandre Luís Giehl, Ph.D. Antonio Marcos Feliciano

ABSTRACT:

Achievement of rural development under the three pillars of sustainability is a strenuous process that will depend on a set of complex variables. Defining actions to contribute to socioeconomic development requires the diagnosis of current conditions, facilitating the decision-making process by policy makers. In addition, purpose of rural establishments' managers is to build up their future, then the greater their resilience to markets' oscillation and environmental constrains the greater possibilities to achieve sustainability. Consequently, identifying the adopted managing practices by family farmers holding most of rural area is preponderant. Considering that management practices influence and are influenced by strategies that depend on external and internal environment conditions, then, how to understand the wide variety of activities that make up the management practice and the creation of strategies, as well as their perception by farmers? This paper aims to respond to it in a survey conducted in southern Brazil. The study was guided by the principles of qualitative and quantitative research, with exploratory and descriptive nature. It was applied a questionnaire to 232 families and then responses were evaluated under a refined SWOT analysis. Managers recognize the external environment variables as threats and the internal environment ones as a strength.

Keywords: Emerging Countries, Economic Sustainability, Rural Development, Family Farming, Strategies, SWOT Analysis

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M.Sc. Luis Augusto Araujo holds a Master's Degree in Applied Economics from the University of São Paulo - USP, specialization in Rural Management from the University of Lavras - MG and an Agricultural Engineer from the Federal University of Santa Catarina - UFSC. He is involved in research and development projects of the Business and Market Management Program of the Agricultural Research and Rural Extension Company of Santa Catarina-Epagri. He has experience in Administration and Economics, working mainly in the following subjects: Brazilian economy, fundamentals of economics, rural administration, agricultural market and operational research.

M.Sc. Alexandre Luís Giehl holds a degree in Agronomy from the Federal University of Santa Catarina (1999) and a master's degree in Agroecosystems from the Federal University of Santa Catarina (2002). He is a Socioeconomics and Rural Development Analyst of the Center for Socioeconomics



and Agricultural Planning of EPAGRI (CEPA). He has experience in the area of Rural Development, working mainly in the following subjects: agroecology, family agriculture, sustainable rural development, decision-making processes, participation, sustainability, public policies and rural extension.

Ph.D. Antonio Marcos Feliciano holds a PhD and a Master's Degree in Engineering and Knowledge Management from the Federal University of Santa Catarina (UFSC). Graduated in Social Sciences (UFSC). Researcher in the area of Innovation, Organizational Knowledge Management, People Management, Organizational Behavior, Entrepreneurship, Organizational Change, Public Management. Professor of Post-Graduation at the University Center FACVEST. Collaborator of the Agricultural Research and Rural Extension Company of Santa Catarina (EPAGRI).



101. J.B. LONERGAN: Concepts of Economic Value and New Vision of Economic Development

Prof. Romeo Ciminello

ABSTRACT:

There are three levels of human development: social project, political project, economic project to reach "integral human development". Lonergan theory: value is in the man self-conscious and humanly auto-proportioned. Value is not economic, is human and assumes the economy develops not already and on its own autonomous laws, but thanks to practice application of the ideas of man and his intelligence. Productivity system: "point-to-point, point-to-line and point-to-surface": no limit to the creativity of human being. Without human cooperation no ideas of economic development "because he dominates economic mechanisms through his intelligence his self-appropriation: his consciousness of being the subject. Good of order leads to integral human development, since economics becomes a human science related to political economy to achieve better conditions of standards of living for the whole of humanity. The aim: creation of a renewed —School of development economics||, based on the good of order for the integral development of all countries, different from last century ideas, because development is integrative, transparent and complete, refusing economic liberalism, and defined the "new name for peace". Economy is a fact of life, is knowledge, so no more mere transfer of wealth: development comes from transfer of knowledge. Its vector characters: balanced, sustainable and durable. Let's leave GDP as measure of country development for U.P.I. (Unexploited Potential Index) in its human characters, animals and environment in which investment has to supply a planned social return.

Prof. Romeo Ciminello (1952) teaches Ethics and Development in the Faculty of Economics and Development of the Catholic University of Congo DRC - Kinshasa (www.ucc.cd); he has taught since 1991 at several Italian universities: Cassino, (Business Banking) Salerno (Project Finance) Trieste (Corporate Finance, 1991-2005). He has taught at the Pontifical Gregorian University Faculty of Social Sciences (Economics of Development, 1994-2012). Degree in Political Science (1978); Specialization in Foreign Trade and International Marketing (1981); specializing in foreign exchange (1981); specialization in Business Banking (1985); certificate of civil Ombudsman (2011); Member of the UCC Board of Directors; supervisory manager at Banco di Roma - Unicredit (1976-2012); is President of the non-profit organization promoting ethics committee (www.certificazionetica.org) is Scientific Director at the Company 4metx Ltd. (www.4metx.it). He is the author of several publications including Ethics Finance and Markets (Tipar Ed.1999); The Christian meaning of work (Tipar Ed.2006); The Christian meaning of Corporate Social Responsibility (Tipar ed. 2008); author of the blog Diary of ethics(www.agenda-etica.blogspot.com); promoter of several conferences on topics of ethical-social-political-economic and author of several articles in the specialized press. Research fields: development, ethics, economics, finance.



102. The Requirements of the International Solidarity for a Sustainable Development in Developing Countries

Prof. Alphonse NKONGOLO Mulami, Prof. ROMEO Ciminello,
Prof. Gregoire MASHALA

ABSTRACT:

The question is how to realize under what conditions international solidarity could be acceptable and could contribute to the truly sustainable development of the countries of the third world. What are the requirements (ethical, scientific, environmental ...) of a truly sustainable development? It will be straightforward to demonstrate that any international solidarity of a project (i.e. any multilateral or bilateral financing, etc.) that does not provide a chain of values in its execution, evidencing a clear theory of change, this international solidarity will be declared ineffective, and therefore rejected by Third World countries, since it does not guarantee in any way sustainable development, but is only capable of favoring all other evils (corruption, corruption, etc.).) that Dambisa Moya had to stigmatize in a book "Help fatale".

Keywords: International solidarity. Sustainable development. Developing countries

Prof. Alphonse NKONGOLO Mulami (1969) teaches : Academic experience:

-Economy of development, - Planning; - Society's management; - Techniques of research in social sciences at Public University of Mbujimayi;

-Teaches of The economy of the development of micro-economy, - Human resources', at The I.S.P. (Pedagogic Superior Institute).

Occupational experience: Diocesan Procurator (200-2002); Coordinator Of Development Caritas of Mbujimayi (2000-...); Board of Director President of ONG —Foundation BUDISANGI pour le Development Rural|| (FO.BU.DER) (= Foundation for the Union of rural development (2011-...); Studies completed:

-Doctor in Social Sciences, Option Economy of Development in planning at The Gregorian Pontifical University with specialization in Economics of rural Development.

Prof. Romeo Ciminello (1952) teaches Ethics and Development in the Faculty of Economics and Development of the Catholic University of Congo DRC - Kinshasa (www.ucc.cd); he has taught since 1991 at several Italian universities: Cassino, (Business Banking) Salerno (Project Finance) Trieste (Corporate Finance, 1991-2005).

Prof Gregoire MASHALA: Associate Professor at U.KA (Central Kasai); Specialization in development economics; Doctor of Economics at the Pontifical Gregorian University / Rome. Grade: Associate Professor. Educational institutions: University of Kasayi, Catholic University of Congo, Mbujimayi University, Kisangani University, Kananga University, Tshikapa University, Kananga Higher Institute of Education, Kananga Rural Development Institute. Author of several articles and books. Research field: Development economics. Poverty reduction and food security.



103. Materiality Analysis in Sustainability Reporting: a Method for Making it Work in Practice

Dr. Armando Calabrese, Dr. Roberta Costa, Prof. Nathan Levialdi Ghiron,
Dr. Tamara Menichini

ABSTRACT:

Sustainability reporting is the practice of measuring, disclosing, and being accountable to internal and external stakeholders for the company's ability to achieve sustainable development goals (SDGs) and manage impacts on society. According to the Global Reporting Initiative (GRI) G4 guidelines, the purpose of materiality analysis in sustainability reporting is to determine those economic, environmental and social issues that are the most significant to company and its stakeholders. A key challenge is to ensure completeness in covering all the aspects that are material from internal analysis, business strategy and stakeholder perspective. Thus, the views of different stakeholders need to be taken into account dealing with subjectivity of judgments. Current sustainability literature offers few studies aimed to support companies in materiality analysis through quantitative and practical approaches. Based on a critical review of these studies, the present paper provides suggestions for the development of a new and more effective method.

Keywords: Sustainability reporting, materiality analysis, stakeholder engagement, Global Reporting Initiative (GRI), decision support methods.

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Tamara Menichini is a postdoctoral researcher at the Department of Enterprise Engineering, University of Rome "Tor Vergata", Italy. She received his PhD in Economic and Management Engineering from the University of Rome "Tor Vergata". Recently, she has taken part in a H2020 research project for technology transfer optimization under new perspectives of business competitiveness and socio-economic value creation. In addition, she has taken part in a research project of the Italian National Research Council concerning organizational innovation and knowledge sharing through innovative techniques of employee engagement. She is co-author of different international publications. Her research interests regard: Corporate Sustainability, Corporate Social Responsibility, Sustainability Reporting, Stakeholder Engagement and Technology Transfer.

104. To be, or not to be, that is the Question. Is Sustainability Report Reliable?

Dr. Armando Calabrese, Dr. Roberta Costa, Prof. Nathan Levialdi Ghiron,
Dr. Tamara Menichini

ABSTRACT:

The reliability of sustainability report is important for accounting companies' performance to stakeholders. The issues covered in a sustainability report inform stakeholders of the company sustainability strategies and practices. However, the drawing up of the sustainability report involves the risk of misleading communications for green washing purposes. This topic is much discussed in the scientific literature but, to date, without or with insufficient support of quantitative analyses. This paper focuses on the corporate policies of CO₂ reduction, for investigating the existing relations between the reported environmental performance of companies and their CO₂ emissions. In order to test the possible subsistence of the green washing practices, the sustainability reports of a sample of 50 Italian companies are analysed. Particularly, the number of environmental indicators of the sustainability reports have been compared with the environmental performance (CO₂ emissions) of the companies for investigating if the accuracy and completeness of the sustainability reports are associated with actual sustainable corporate strategies and practices.

Keywords: sustainability report; greenwashing; CO₂ emissions; GRI

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105. Development of the Specific Industrial Classification for Measuring Sustainable Economic Developments

Joohyun Sung, Yeom SungChan

ABSTRACT:

Traditionally economy has been developed with the economic structure based on manufacturing industries utilizing fossil fuel resources. However, the economic paradigm is shifting toward economic growth while reducing the environmental pollution simultaneously. To do this, the core is the green economy and green industry which means fostering economic growth or development in an environmentally sustainable manner as the future dynamic force for growth. There is a lively discussion on this subject under the frame of sustainable developments internationally. However, the definition of green industry is various according to the researcher. In this perspective this work is started to establish more standard and consistent frame to measure green industry.

Through the literature research for green industry nationally and internationally I made inclusive definition for green industry and the draft which is a frame for measuring green industry is refined through listening from the opinion of specialists in each specific field continuously. I set the industrial classification for measuring green industry as five parts; preservation and management of environment, pollution abatement and improvement, resource efficiency, energy efficiency and clean energy. And this classification is consist of 5 one-digit, 15 two-digit, 36 three-digit and 108 four digit.

I expect this work will be a cornerstone in developing the frame to measure green industry to observe the overall size and status of green economy and producing regular statistics for green industry to help in suggesting and supporting the policy.

Keywords: Green Industry; Green Economy; Industrial classification; sustainable development

Joohyun Sung is working for the KOSTAT, Korea.

SungChan, Yeom is researcher in Green Techonology Center in Korea.



106. Demand sphere as a co-engine of Sustainable Development

Dr. Beata Cialowicz

ABSTRACT:

This work is coherent with currently active research path which emphasizes the active role of consumers in economic development and with the idea that economic evolution is an immensely complex process, especially with the fact that the demand side plays an important active role in making the development sustainable. In this process eco-innovations are important from an environmental and social perspective, concerning the achievement of long run sustainable growth patterns. In this sense, understanding the specific social and technological processes is very important in designing policies towards sustainable growth. Hence the main aim of this paper is to give theoretical account of the process of economic development based on eco-innovations and demonstrate that consumer sphere is a co-engine of sustainable development of the whole economy. In particular it will be proved that consumers with environmental-friendly preferences may shape technological trajectories to improve the diffusion of eco-innovations. The study is coherent with previous modelling of Schumpeterian innovative evolution in the formal apparatus of modern (dynamic) Arrow-Debreu theory of general equilibrium. Research results will take the form of mathematical theorems interpreted from an economic perspective and each argument will have a form based on formal deduction.

Keywords: innovations, Arrow-Debreu model, demand sphere,

Dr. Beata Cialowicz is an Assistant Professor in the Department of Mathematics, Cracow University of Economics. She obtained a PhD degree in Mathematical Economics from Cracow University of Economics. Her current research studies include formal modelling of process of diffusion of eco-innovations with active role of demand side. Dr. Cialowicz has published many journal articles. Her publications reflect her research interests in formal modelling of neo-Schumpeterian vision of innovative evolution in the apparatus of modern Arrow-Debreu theory of general equilibrium.



107. Sustainable Intensification vs. Farms' Economic Outcomes – the Case of Poland

Wioletta Wrzaszcz PhD

ABSTRACT:

The concept of agriculture intensification, in traditional terms, is understood as a process of increasing inputs of work units and/or industrial means of production in order to increase production per unit of agricultural land or animal. Having regard to the greater human pressure to natural environment, there is the need of sustainable intensification implementation. Sustainable intensification concerns agricultural productivity increase, simultaneously reducing agriculture negative impact on ecosystem.

Sustainable intensification can be understood in two different ways. The first one refers to inputs minimization, mainly industrial inputs, although such practices may result in reduction of economic outcomes. The second approach is based on the use of agrobiological processes in factor productivity improvement. In this case, of particular importance is the farmer's extensive knowledge, which translates to the quality of agri-environmental practices, as well as the use of environmentally friendly traditional and modern production technologies.

The purpose of the article is economic assessment of farms in Poland, diversified in the scope of sustainable intensification process. This process was evaluated on the basis of soil fertility data, namely balance of soil organic matter. Farm Accountancy Data Network was used (2004, 2015).

Keywords: sustainable intensification, soil fertility, soil organic matter balance, economic outcomes, farms' sustainability, Farm Accountancy Data Network, Poland

Wioletta Wrzaszcz, PhD. is a researcher at the Institute of Agricultural and Food Economics – National Research Institute, in the General Economics Department. In the years 2002-2005 she worked in the Ministry of Agriculture and Rural Development, in the Department of Rural Development. She is doing research into agricultural holdings sustainability. She is focused on key issues of the environmental, production and economic aspects of farms' management. Her key qualifications: a knowledge of the agri-environmental topics; measurement of farms sustainability; farms analysis, knowledge of the Farm Accountancy Data Network. She was involved in the realization of International 7 Framework Programme (2013-2016): –Farm-level Indicators for New Topics in Policy Evaluation (FLINT)]. She was the main research project manager (2010-2012): –Level of sustainability of the individual farms in Poland (on the basis of the FADN data). During 2012-2013, she was the member of experts' team, that was responsible for the evaluation of agriculture sustainability in Poland on the basis of the Central Statistical Office data. Dr Wioletta Wrzaszcz is the author of about 70 reviewed publication (articles, two books). She is the reviewer of scientific journals, e.g. USA Journal: –Economic World]].

108. Does selling farm produce improve the economic wellbeing of subsistence farmers? A case from Nepal.

Dr. Ramu Bishwakarma, Benita O'Colmain

ABSTRACT:

Subsistence farming is still a primary livelihood for rural households in developing countries. In Nepal, about 68 percent of the population is involved in rural agriculture, of which about 35 percent live below the international poverty line. Reorienting subsistence agriculture from self-consumption to trade could improve the economic wellbeing of rural households. This paper analyzes whether the ability to sell farm produce is positively associated with per capita consumption expenditures—a proxy for economic wellbeing—using data from the 2016 baseline survey of the Nepal Food for Peace Development Food Assistance Projects. Multivariate regressions were conducted to understand the association between raising a specific crop and the ability to sell farm produce. After identifying crops that were significantly associated with sales, we examined the relationship between the ability to sell and the specific crop raised to household per capita expenditures. Using structural equation modeling, we examined the direct effect of selling and indirect effect of crops raised to per capita expenditures. Results indicate that farmers who raise certain crops are likely to be able to sell their produce, and those who are able to sell have higher per capita expenditures, even after controlling for other household conditions.

Keywords: Agriculture, Cash Crops, , Poverty, Nepal

Dr. Ramu Bishwakarma is a senior research, monitoring and evaluation (M&E) specialist with ICF. He has more than 12 years of research, results measurements and monitoring and evaluation experience in different sectors such as agriculture and livelihoods, rural economic development, food security, poverty environment, social safeguards, and health and nutrition. He is also experienced in organizational capacity assessment of public and private institutions. He is skilled in both quantitative and qualitative research techniques and data analysis software such as STATA and Atlas.ti. A native of Nepal, Dr. Bishwakarma has a Ph.D. in Sociology/Demography from the University of Maryland, College Park and currently works as a Senior Research and Evaluation Specialist with ICF International at its Maryland, USA office.

Ms. Benita O'Colmain is a Senior Survey Methodologist with ICF. She has more than 30 years of experience in the design and implementation of evaluation and survey research studies. She has a strong statistical and methodological background with expertise in all phases of survey and evaluation research, from planning and design to data collection and analysis to peer-reviewed publication of research results. She is an expert in meta-analytic techniques used to synthesize evidence for program effectiveness. She currently serves as senior survey specialist for baseline studies of USAID Food for Peace development food assistance programs in Africa and South Asia.



109. Common goods and sustainable development

Dr. Konrad Prandecki

ABSTRACT:

Common good is a solution that has little meaning in the modern economy. Historical experience shows that, in the past, it has significantly contributed to the stability and development of many local communities. However, it can still be very useful.

The purpose of this article is to compare the benefits of the common good with the objectives of sustainable development.

The common good can be evaluated in two ways, as a product or process. The first of these ways is based on an analysis of the characteristics of the good, and the other one on the processes supporting its creation. Product approach is more common in economic theory, but a process analysis of the common good is more adequate to indicate its advantages in the context of sustainable development.

The results obtained indicate that the described solution can be successfully applied in the framework of the concept of sustainable development. In most cases, this is due to the integration of the social and economic needs of society. In some cases, environmental aspects can also cause a lot of benefits.

The article was written based on critical analysis of available literature.

Keywords: Commons, common pool resources, sustainable development

Dr. Konrad Prandecki is an Assistant Professor at The General Economics Department of The Institute of Agricultural and Food Economics – National Research Institute (IAFE-NRI), Warsaw, Poland. In the years 2002–2013 he worked at The Vistula University (formerly Academy of Finance) in Warsaw, Poland. He successively held the positions of Assistant, Assistant Professor and Dean of the Faculty (2008-2011). Dr. Prandecki has published over 80 scientific (reviewed) publications, including two books. He is also an the editor of journal: *Przyszłość. Świat-Europa-Polska* (Future. World-Europe-Poland) and a member of two scientific advisory board in: *Kwartalnik Naukowy Uczelni Vistula* (Vistula Scientific Quartely) and *Zeszyty Naukowe Uczelni Vistula* (Vistula University Working Papers). He is also a member of The Polish Association For The Club of Rome and The Future Studies Committee by The Presidium of Polish Academy of Sciences. His main scientific interests are economic aspects of sustainable development (especially in the field of agriculture and energy) and future studies.

110. Megaproject and Risk Management: A Case of Kuwait

Dr. Shaikha Al-Sanad

ABSTRACT:

Mega construction projects are extremely large-scale investment projects that typically cost more than one billion dollars, demanding resources that run into millions of man hours, with numerous stakeholders with an extraordinary amount of interlink. Latterly, the notion of mega project evolving significance in the Kuwait industry, due to the innovative strategies development plan for the country. Evidence from research shows that identical poor performance for megaprojects in worldwide country. This research endeavor aims to identify, prioritize and categorize assess risks perceived for the construction of a mega project in in Kuwait. A total of 54 perceived risk factors which categories into six groups have been identified and prioritized on the basis of criticality in the construction mega project. A structured questionnaire survey was employed as a key tool for assessing the respondents' perception of the level of impact and the probability of occurrence for each of the identified risk factors. A total of 700 questionnaires were distributed and 536 completed questionnaires were received. A significant difference is observed in the perception of stakeholder's professionals from the type of organization and their experience on the criticality of these factors. This study will assist the construction stockholders practitioners to develop plans to achieve their goals and improve the megaproject process on the basis of these outlined concepts.

Keywords: Mega construction projects, project management, risk identification, risk assessment, project life cycle, risk management

Dr. Shaikha Al-Sanad, is research scientist at the Kuwait Institute for Scientific Research (KISR). She obtained her PhD degree in civil engineering (Construction Management) in 2013 from the University of Manchester, UK. Her research interests are primarily focused on the implementation and promotion of sustainable practices throughout the sectors of construction and engineering. In addition to this, her research interests extend to the areas of construction project risk management and value engineering, the identification and mitigation of the risks of construction, building procurement, sustainable built environment, and sustainable assessment of building performance. Other research interests include application of project management in several areas of engineering, infrastructure, construction, manufacturing, and construction services. Her expertise includes statistical analysis, mainly parametric estimation theory in the statistical linear model; nonparametric method; measurement error (errors-in-variables) model; high-dimensional data analysis; nonparametric, semiparametric; empirical likelihood method; statistical computing; and numerical analysis. As well as methods of creating a sustainable built environment, risk management, and project delivery.



111. The role of small-sized towns in territorial cohesion. Case study: Jibou

PhD(c) Mihai Iosif Daroczi

ABSTRACT:

In geographic literature, small-sized towns are rarely studied. Nevertheless, these towns are very important in Romania and other developing countries.

So why are these towns important in developing countries? In Northern America and Western Europe the villages and small sized towns resembles a lot with big cities: they have electricity in 100% of houses, gas connection, hospitals, high-schools, internet, tv cable, theaters, cinemas, supermarkets and other facilities. In Romania the rural space is underdeveloped, so these small-sized towns are a bridge between the larger cities (with all the necessary facilities) and the rural space (most of them without schools, pharmacies, markets, internet, gas connection, etc.). So if we would study the small-sized towns in developed countries we would not find a lot of information, but these towns are very important in Romania due to their influence. Some of these towns have the only hospital or high-school from a distance of 50 kilometres in any direction.

I will try to show the town's influence regarding some important aspects such as: education, health, social services, etc. After I analyzed the residence of Jibou's Hospital patients, pupils from schools and the children from the local Foster Home, I was able to determine the town's influence in any direction regarding education, health, social services and other aspects.

Keywords: regional disparities, territorial cohesion, urban-Rural integrated Development

PhD(c) Mihai Iosif Daroczi is a graduate of Babes-Bolyai University, Faculty of Geography. Mihai wanted to know more about regional planning and development and then pursued a Master's Degree in that field at the same University. After that, he enrolled in a PhD programme in order to find the know-how in helping his community. Since he was born in a small sized town (10,000 inhabitants) in Transylvania, and these towns are poorly developed in Romania, he is currently pursuing his PhD and wants to know everything about helping the small communities.

112. The Economic Impacts of The Renewable Energy Development in Turkey

Dr. Bulent Oral, Dilara Oral

ABSTRACT:

Attaining sustainability in energy use is likely to create a cleaner environment, improved energy efficiency, generation widespread electricity with renewables, and result in greater investment in cleaner technology. Thus, in the many countries, the rapid market penetration of renewable energy in recent years suggests that a fundamental revolution will come in the next decades and that renewable energy may gradually become the main energy source. Turkey is a country with significant renewable energy potential. If the share of existing potential in total electricity energy production is examined, it can be seen that only hydroelectric power plants are used through water power. However, especially in recent years, the studies for the use of solar, wind and geothermal potential have begun to prominent in Turkey. So, it is expected in the next decade a much faster process than the past ten years. The developing technology to take advantage of this potential will undoubtedly contribute to the development of the country's workforce. Many countries have made a contribution to solution on employment with progress towards the development of renewable energy technologies. In this study, Turkey's renewable energy potential, existing and developing technologies is examined in terms of economic indicators and workforce. Thus, in the context of research and practice, contribution of the sustainability of the country's economy is presented.

Keywords: Renewable Energy, Turkey, Sustainable Economy, Employment

Dr. Bulent Oral received MS and PhD degrees from Marmara University, Institute of Pure and Applied Sciences, in Istanbul, Turkey, in 1997 and 2004 respectively. Presently Dr. Oral is an Associate Professor in Technology Faculty Electrical and Electronics Engineering Department at Marmara University. His special fields of interest include energy policy, electricity market and renewable energy systems.

Dilara Oral is a BSc student. She is from Environmental Engineering Department, Engineering Faculty, and Marmara University. She is interested in sustainable environmental applications.



113. A triple bottom line approach for measuring supply chains using Data Envelopment Analysis

PhD(c) Alessandro Cortes

ABSTRACT:

This paper deals with the issues faced by those who endeavor in measuring sustainability in supply chains (SC) by using a comprehensive approach. Elkington's Triple Bottom Line (TBL) divide sustainability in three aspects: environmental (E), economic and social (E2S). Firms publish their business (including SC) sustainability impacts through Corporate Social Responsibility reports (CSR). According to Global Reporting Initiative (GRI), a CSR framework, reported information should be sufficiently accurate/detailed towards performance, but reports are rather qualitative. Fast fashion (FF) is a recent phenomenon of production/promotion of cheap/readily disposable clothes. Data Envelopment Analysis (DEA) is the adequate tool to identify best practices regarding sustainability (multidimensional) and supply chains in FF. To allow comparability and tackle lack of quantitative data, TBL clusters (output) are proposed: for each Disclosure, a three layers scoring scale: absence (1), qualitative only (2), 2nd layer plus quantitative (4). This work's main contribution is the use of DEA as a powerful tool to measure sustainability in SC and the TBL clusters link all dimensions in an innovative way.

Keywords: Data Envelopment Analysis, Sustainability, Supply Chains, Triple Bottom Line, Fast Fashion

Alessandro Cortes is a PhD Management Student at University of Évora, Portugal – Center for Advanced Studies in Management and Economics (CEFAGE). His thesis is about supply chain sustainability measurement using a triple bottom line approach (economic, environmental, social), which incorporates a multidimensional efficiency analysis.

114. Solution for the Sustainability Issue in 5P Concept (Pro-Poor Public Private Partnership) Using Zakat Fund and Crowdfunding

Sri Rezeki, Gineng Sakti, Ginanjar Purnama Alam

ABSTRACT:

Almost 50 million people of Indonesia, mostly in remote rural areas are lack of electricity to light their houses or conduct other businesses. However, providing extended national grid and installment of new diesel generator are not the viable options commercially. This study aimed to analyze and propose the practical solution for the issues by employing Pro-Poor Public Private Partnership (5P) through the utilization of rural electrification pool of fund consisting of zakat fund and crowdfunding functioning as viability gap fund for sustaining the project. The practical insight also contributed to the theoretical development for 5P utilization to imply that viability gap fund should be established through the accumulation of various fund for 5P projects to be commercially viable.

Pro-Poor Public Private Partnership (5P) Concept has been used in several rural electrification projects in the developing countries. Indonesia has Cinta Mekar project which promoted 5P to replace Public-Private Partnership (PPP). Albeit its success, the 5P concept apparently has sustainability issue. The introduction of the zakat fund and crowdfunding may become the answer to scale up 5P projects.

Keywords: Rural electrification, 5P, Pool of Fund, Zakat Fund, Crowdfunding.

Ms. Sri Rezeki is a young lecturer in the Department of International Relations, Universitas Indonesia. She holds a master degree in International Energy from Sciences Po Paris where she actively joined Sciences Po Energy Association. She was one of the consultants for the Ministry of National Development Planning of Indonesia.

Mr. Ginanjar Purnama Alam is one of the experts on renewable energy deployment in Indonesia. He has worked for IBEKA for more than 4 years. Now he is a renewable energy consultant for several companies in Indonesia, such as Energy Raya, ASN and Airstromen.

Mr. Gineng Sakti is candidate of M.Phil in Development Studies at the University of Cambridge. Previously, he was a PPP specialist at Japan International Cooperation Agency (JICA) Technical Assistance Team assigned to the Coordinating Ministry for Economic Affairs Republic of Indonesia.



115. What are the Trends of Labour Force Participation of Women in Turkey?

Dr. Hacer Simay Karaalp-Orhan

ABSTRACT:

Labour force participation (LFP) by women is an important driving force of the economic growth and sustainable development. However, one of the salient characteristics of Turkish labour market is the distinctly lower female labour force participation rate (FLFPR). In 1955, the FLFPR was 72%, which decreased to 36.2% in February 2017. Further, it is very low as per the EU-28 (67.1%) and OECD (63%) standards. The reasons of low FLFPR in Turkey are multidimensional. On the one hand, it could relate, to some extent, to the deep-rooted traditional gender roles (socio- cultural), and on the other hand, to the economic barriers. The process of urbanization and agricultural shedding are the two driving forces contributing to this decreasing trend. Thus, FLFPR in Turkey need to be improved through sustaining investment on education and creating job opportunities for the women. Government regulations should aim at promoting formal employment for undereducated women and increasing the quality of jobs. Many women could be encouraged to work by offering affordable childcare. Sustaining investment on the education of girls and women would also improve FLFPR and access to higher education would increase the LFP of women in Turkey.

Keywords: female labour force participation rate, labour market, Turkey

Dr. Hacer Simay Karaalp-Orhan is graduated from Ege University in 2002, completed Master degrees in Pamukkale University in 2004 and Middle East Technical University in 2010. The PhD degree was completed in the field of economics in Adnan Menderes University in 2008. She is now working as an associate professor in Faculty of Economics and Administrative Sciences, Pamukkale University. Her field of interest is economic development, international trade and labour markets.

116. Developing a Unified Approach to Sustainable Consumption Behaviour: Opportunities for a New Environmental Paradigm

Dr. Alan Gilmer, Dr. Vivienne Byers

ABSTRACT:

Politicians and national policy makers seek to encourage individuals to engage in a wide range of pro-environmental practices to address both discrete environmental problems and major global challenges such as climate change. Theoretically, the field of behavioural management in environmental consumption which seeks to change holarchic open human systems, is much contested. This paper proposes to develop a synthesized conceptual framework embracing a unified approach that addresses the systematic, structural, and institutional perspectives on how consumption, through public policy initiatives, can be developed and changed to reflect a deeper ecological foundation. This approach considers the debate regarding policy and behavioural change; as policies needed to enact large-scale change can often be seen as politically charged. The paper, in exploring the literature regarding the values that influence sustainable consumption behaviour in society, seeks to define the interplay of societal paradigms with regard to their influence on an individual's motivations. The aim of this paper is to add to the debate on political governance in the context of enhancing sustainability in complex adaptive social systems, and guiding the development of sustainable consumption policy towards a new environmental paradigm.

Keywords: Environmental Policy, Consumption, Sustainability, Society, Politics, Behaviour

Dr. Alan Gilmer is a Principal Investigator/Project Director in Environmental Management (ESHI DIT). His research interests include the general area of biosphere–climate policy, sustainable development, environmental management and policy, bio-resource/land-use management, eco- innovation, and system modelling. This work has resulted in a series of papers and other outputs on sustainable policy analysis with obvious implications for ecosystem management, sustainability in business, environmental policy development and bio-resource management. Dr. Gilmer's research interests have also included sustainable policy theory and practice as it interfaces with water, land-use, energy, environmental modernity, and transport and logistics, having published on the sustainability of biofuels and renewable energies and in the area of corporate environmental responsibility. Dr. Gilmer leads a number of ESHI research teams dealing with land-use policy and has succeeded in securing nearly €1 million in research funding over the last few years. He continues to participate in national and international fora and has recently contributed to EU Strategic Coordination Groups within the DG Environment on the design of environmental policy.

Dr. Vivienne Byers is a senior lecturer and principal investigator in Health Policy (ESHI, DIT). Her research seeks to inform and shape health policy and serve as a critical interface in linking scientific, technical & research knowledge with action to improve population health & health services through interdisciplinary research. It addresses the interactions of key environmental and health issues that impact population well-being by undertaking user-focused, goal-oriented research. She has won a number of student scholarship awards and as a Principal Investigator attracted national funding in healthcare and sustainability policy research (Environmental Protection Agency (EPA) 2016, Fingal County Council 2017, Health Services Executive 2017). She is a member of the leadership team of the Environmental, Sustainability and Health Institute and chairs their policy group. She continues to seek national & international funding through established consortia (i.e. EU-COST Action).



117. Economic sustainability of the Australian grain supply chain post market deregulation

Stephanie Krezel PhDc

ABSTRACT:

From a grain supply chain once supported by a statutory market scheme, poised to stabilise market fluctuations and protect primary producer financial returns, the Australian grain market has now been significantly altered through the process of market deregulation. The deregulation of the Australian grain statutory market scheme created free market conditions in order to increase competition and industry growth; however removed much of the stabilisation mechanisms for primary producers and the greater grain supply chain. In opposition to the intent of the market deregulation, productivity growth within the primary production portion of the Australian grain supply chain has been notably diminished, since the deregulation of the statutory market scheme. Through understanding the impact of deregulation on the social systems, within the primary production environment of the Australian grain supply chain, it is evident that deregulation has had a significant effect on the capacity and desire of primary producers to innovate and the subsequent ability of the supply chain and grain industry to ensure economic sustainability.

Keywords: Economic sustainability, supply chain, deregulation, grain production, risk, decision making

Stephanie Krezel is a doctoral candidate at the Centre for Supply Chain and Logistics at Deakin University. Stephanie's background is in agricultural science, holding a Masters degree in Agricultural Science from the University of Melbourne. She also possess extensive industry experience in the Australian grain trade and a key primary producer association (Victorian Farmers Federation). Stephanie is currently working for the Victorian Government in the Department of Economic Development, Job, Resources and Transport in the agricultural sector.

118. An Investigation of Interconnection between Business Excellence Models and Corporate Sustainability Approach

Ing.; Ph.D. Pavel Adámek

ABSTRACT:

The paper provides a general approach to explore the suitability of business excellence models (BEMs) to include corporate sustainability (CS) and on examples of awarded organizations in national quality awards (NQAs) found the synergic approach in deploying issues of BEMs and sustainability. The aim of the paper is to provide an overview of the BEMs approach in the Czech Republic and found the relevance with the issues of corporate sustainability. As an example was involved the Czech organizations awarded in NQAs in the area of excellence and sustainability in 2016. Based on a reflection of the current situation, there is a clear lack of organizations' approach to principles or strategic management tools that are suitable for implementation to enhance organization excellence including corporate sustainability. Then, an analysis is deployed in order to identify common synergy between BEMs and issues of corporate sustainability. This study is based on information gathered through an extensive literature review using print media and research databases like Emerald, EBSCO, ProQuest and we also employed the available sustainable reporting for awarded companies. The study is expected to help in reviewing national business excellence strategies and overview of the collected samples of organizations may help other entities to effectively process reports to use of the synergy of the criteria of the BEMs and corporate sustainability within the relevant NQAs or to target on appropriate stakeholders.

Keywords: corporate sustainability, business excellence models, National Quality Awards, EFQM excellence model

Pavel Adámek is associate professor at Business Economics and Management Department at the Silesian University in Opava in School of Business Administration in Karvina. He is the author or co-author of 3 monographs, 2 textbooks and over 35 professional papers published in conference proceedings or domestic and foreign scientific journals. He participated as a head researcher in the project supporting Ph.D. from Moravian-Silesian Region and as a team member in number of projects funded by the Silesian University Grant System or EU funds. He constantly acts as a reviewer of scientific journals *Ekonomie and Management* (listed in Thomson Reuters' Social Sciences Citation Index), *Acta Academica Karviniensia* (listed in ErihPlus) and conferences organized by EBES, IBIMA. His educational and professional background is Ph.D. in Business Economics and M. Sc. in Economics and Management. Topics for lectures and scientific cooperation are associated with Business Economics, Corporate Social Responsibility, Entrepreneurship and Business Excellence Models.



119. Local Governance Policies and Advocacy and the High Impact on Waste Management Technology Transfer

Prof Dr Ir Vinesh Thiruchelvam

ABSTRACT:

Waste management has been a challenge for developing cities of 3rd world nations. An enduring national resolve is already in place in many Governments to ensure waste management infrastructure is place as population numbers rise for major cities. Developed nations have faced the obstacles and are ready from experiences learnt to venture un-chartered path of globalization, market liberalization and sustaining industry competitiveness. This is specific for the new group of developed nations the likes of Malaysia, India, Turkey and Taiwan. Having gained all the technological growth it would be prudent for these nations to now become technology exporters in the new era. An impact initiation to this can be set for the Waste Management sector. The application of this can be adopted by any developing nation moving on towards being an exporter of knowledge and technology transfer.

Keywords: Technology Transfer, Local Government Policy & Advocacy, Waste Management

Prof Dr Ir Vinesh Thiruchelvam is currently the Dean of the Faculty of Computing, Engineering & Technology at Asia Pacific University (APU). Prof Vinesh is involved in key education and engineering sectors such as being the Chairman of the Engineering Education Technical Division at the Institute of Engineers Malaysia, member of BPIC on quality of graduates at the Ministry of Human Resources, member of National Task Force for Big Data Movements with Malaysian Digital Economy Corporation, appointed to National Professor Council, Chair of the Centre of Analytics and member of the Centre for Forensics & Security research at Asia Pacific University. His core scholarly research areas are in sustainable engineering and data analytics with business intelligence.

120. A Multiple Attribute Decision Making System for Sustainable Resource Allocation And Prioritization using Genetic Algorithms and ISM-ANP

Omid Samadi Azami, Marjan Akbari

ABSTRACT:

The purpose of this research is to develop a system in order to sustainably prioritize economic goals while eliminating any human bias or subjectivity. Prioritization and resource allocation in any economic system is complex. This complexity increases when the goal is to achieve sustainability, since many interdependent factors will be involved. Previous research has offered several ways of implementing multiple attribute decision making methods. Application of all these methods has been heavily dependent on reliable input from experts in order to determine dependencies and weights of criteria. This makes the decision making mechanism prone to human subjectivity.

We developed an integrated system consisting of a Genetic Algorithm optimization mechanism on top of a hybrid system of Interpretive Structural Modeling (ISM) and Analytic Network Process (ANP). It is a two stage procedure. First we apply the hybrid ISM-ANP system using expert input and on the second step we run a genetic algorithm optimization on the input to refine the system and optimize the decision making output. We use historic performance data as a benchmarking tool. The result is a sustainable growth and prioritization system which minimizes human influence and error and on consecutive executions can improve its own results.

Keywords: resource allocation optimization, genetic algorithms, interpretive structural modeling, analytic network process, sustainable economic decision making

Omid Samadi Azami of Cyberset has a B.Sc in Computer Science with emphasis in Information Systems and has done post graduate studies in Information Technology with an emphasis in Artificial Intelligence and Decision Systems. He has done extensive research on Genetic Algorithms and other optimization techniques for process improvement, Fuzzy and self-learning networks and their uses for decision support systems. He has been interested in interdisciplinary approaches and application of artificial intelligence and optimization techniques in economics and business challenges. He was the president of Intelligent Systems Lab Tabriz University from 2001 to 2003. He is currently manager of the Research and Development department of Cyberset.

Marjan Akbari Tarkhorani of Refah Bank has a B.Sc. in Software Engineering and a M.Sc. in Information Technology with an emphasis in E-Commerce. She has extensive studies in multiple attribute decision making systems and their application to banking system requirements. Her Master of Science thesis was focused on the recognizing and ranking of bank customers using Interpretive Structural Modeling (ISM) and Analytic Network Process (ANP) using Refah Bank and its customer base as a case study.



121. Choosing the Consensus for Sustainable Economic Development

Prof. Dr. Sinan Sönmez

ABSTRACT:

The term consensus seems to be a good sales word and calls for a unifying principle for development and macroeconomic policy. But too much consensus has been formulated in a way that the term consensus —has become a fashionable and therefore less than reliable indicator of anything significant|. Nevertheless, the Washington consensus was the most influential in the 1990s. On the contrary, the Beijing consensus is considered as a challenge to the previous one and questioned whether it represents an appropriate solution and/or model for the Periphery. In fact, the Beijing Consensus is the term for the state-led capitalist development under a socialist regime in China. The Mumbai Consensus signifies the development experience of India which is characterized by the combination of the neoliberal reforms with government involvement in the economy. The Brazilian neo-developmentalism combines the neoliberal policy principles with the state intervention. It seems to be difficult to put all the experiences in a melting pot and construct a unique model for the emerging and developing countries. Nevertheless, the market driven reforms and the economic role of the state in the big emerging economies could offer an opportunity to find a common denominator for the development models or paradigms.

Keywords: Washington consensus, Beijing Consensus, Mumbai Consensus, development model, global value chain, high tech industry

Dr. Sinan Sönmez is Professor at Atilim University, Department of Economics and Department of Public Finance in Turkey. He was previously Head of PhD program in Political Economy and Head of Department of Economics in the same university and Department of Public Finance, Faculty of Political Sciences at Ankara University. He has accomplished his higher education and prepared the PhD thesis on Development Economics in France (Universite de Caen; Universite de Paris-X-Nanterre). He is the member of several international associations and the founder of the Turkish Alliance of Independent Social Scientists. His main areas of research interest and publications are development economics, global political economy, public economics and public finance.

122. Implementing the Sustainable Development in Belarus on the Regional Level

Dr. Iryna Sidarchuk, Dr. Aleksei Akhrymenka, Oksana Shmakova,
Alexei Grigoriev, Anton Parfenchyk, Olga Kulai

ABSTRACT:

In accordance with the new agenda adopted by the General Assembly of the UN, methodological and practical approaches to sustainable regional development were prepared in the Republic of Belarus. They were developed during 2015-2016 in the context of international technical help project –The Support of Regional and Local Development in Belarus|| financed by the European Union. The main goal is to promote consistent changes in the management of regional and local development based on the strategies for sustainable regional development. The mentioned approaches are a body of principles, methods, methodic, directions, which provide economic efficiency, social justice and ecological security on the republican, regional and local levels through consensus, coherence of interests and coordination of central and local governments, as well as population, business structures, civil society institutions. These approaches considered, there were developed six strategies for sustainable development in the regions of the Republic of Belarus. However, the absence of legal and institutional basis complicates the practical implementation of the mentioned findings. Additionally, the advantages of inclusive management and information technologies while providing public services are not accounted for fully. We suppose that during further planning of sustainable development specific attention should be paid to its key aspects, the specifics of the Belarusian legal system and the broad information campaign. It is relevant in Belarus to develop a set of measures to implement sustainable regional development strategies, which also include access to basic electronic public services to all the sections of the population. It is also important to note that European migration processes influence the Republic of Belarus, therefore for the purpose of promoting ordered, safe and legal mobility we should return to the question of developing multiple nationality institute.

Keywords: sustainable development, digital public services, digital divide, multiple nationality, local government, Republic of Belarus

Dr. Irina Sidorchuk is Deputy Director of State Administration Theory and Practice Research Institute, the Academy of Public Administration under the aegis of the President of the Republic of Belarus, Minsk, Belarus. Recently, she investigates on EU project –The Support of Regional and Local Development in Belarus||, participated in the Belarusian-Swedish Project –Studying the Problems of Red Tape Reduction in Primary-level Local Governments and the Quality of Territorial Public Self-government Bodies||, and UNDP Project –Strengthening Inclusive Local Governance in Belarus|| funded by the DANIDA.

Dr. Aleksei Akhrymenka is Deputy Director of Institute of Information Technologies, Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus. Recently, he participated in UNDP Projects –Strengthening Inclusive Local Governance in Belarus|| and –National Report on Human Development: Competitive Advantages of the Regions of the Republic of Belarus||. He analysed the practice of working with electronic appeals on the web-sites of state bodies and organizations.



Oksana Shmakova is Head of Sociopolitical Department at State Administration Research Center of the State Administration Theory and Practice Research Institute, the Academy of Public Administration under the aegis of the President of the Republic of Belarus, Minsk, Belarus. She investigates on EU project —The Support of Regional and Local Development in Belarus||.

Alexei Grigoriev is director of Legal and Human Resources Department of the State Supervisory Department for Telecommunications of the Republic of Belarus. After studying at the Belarusian State University he worked as a researcher, senior researcher and government official for International, State and Civil Law in the Belorussian Institute of State Building and Legislation, National Centre of Legislative Activity under the Auspices of the President of the Republic of Belarus, Belarus President Administration, Academy of Public Administration under the aegis of the President of the Republic of Belarus. He published more than 90 academic papers.

Anton Parfenchyk is Researcher at State Administration Research Center of the State Administration Theory and Practice Research Institute, the Academy of Public Administration under the aegis of the President of the Republic of Belarus, Minsk, Belarus. He has defended two Master's theses in Law and in Public Administration. He participated in UNDP Project —Strengthening Inclusive Local Governance in Belarus|| funded by the DANIDA. It is published 20 academic papers by him.

Olga Kulai is junior analyst at Center for Strategic and Foreign Policy Studies, Minsk, Belarus. Her main interests in international relations and foreign policy.



123. Implementation of European Environmental Policy in Ukraine: Problems and Prospects

Prof. Dr. Viktor Ladychenko, Dr. Liudmyla Golovko

ABSTRACT:

The purpose of our scholarly work is to explore actual problems of harmonization of environmental legislation of Ukraine with the requirements and principles of EU environmental policy and development of proposals for the improvement of Ukrainian legislation. Main features of harmonization of Ukrainian legislation in the sphere of environmental protection and prospects for improvement of legal liability of business entities which activity is highly hazardous for violation of environmental law were analyzed. As a result of the study draft law "On prevention and elimination of damage caused to the environment" was elaborated. The authors also developed State concept of realization of human rights to qualitative and safe drinking water, basic concept of which was reflected in the article.

Keywords: Environmental policy, environmental safety, drinking water quality, adaptation of Ukrainian environmental legislation to EU standards.

Dr. Viktor Ladychenko is Professor and head of the Department of International Law and Comparative Law of the National University of Life and Environmental Sciences of Ukraine, Kyiv, Ukraine. Coordinator of 575523-EPP-1-2016-1-UAEPJMO-MODULE –EU Environmental Policy and Law||, Head of the research theme –Legal regulation of quality and safety of drinking water|| which was funded by the Ministry of Education and Science of Ukraine, Head of the research theme –Informational and legal support of the environmental component of national security|| funded by the Ministry of Education and Science of Ukraine.

PhD. Liudmyla Golovko is Associate professor of the Department of International Law and Comparative Law of the National University of Life and Environmental Sciences of Ukraine, Kyiv, Ukraine. Module leader of 575523-EPP-1-2016-1-UAEPJMO-MODULE –EU Environmental Policy and Law||, performer of the research theme –Legal regulation of quality and safety of drinking water|| which was funded by the Ministry of Education and Science of Ukraine, performer of the research theme –Informational and legal support of the environmental component of national security|| funded by the Ministry of Education and Science of Ukraine.



124. Making Development More Sustainable? The EU Cohesion Policy and Economic Progress of Rural Regions in Poland

Dr. Michał Dudek, Dr. hab. Agnieszka Wrzochalska

ABSTRACT:

Currently one of the most widely discussed issues is the economic disparities. In order to alleviate developmental differences, a public aid is often allocated to the peripheral or less developed rural regions. The latter type of areas has long been of particular interest to the European Union (EU) and its cohesion policy. The aim of the paper was to analyse the changes in the level of socio-economic development of Polish regions in the context of cohesion policy introduction. It follows from the research that EU cohesion policy instruments contributed to the socio-economic development of regions in Poland. In the analysed time span a significant support from the EU funds was allocated to the rural regions. However, this financial aid only partly affected the reduction of socio-economic disparities in the country. The research was based on data from public statistics aggregated at the subregional level (NUTS-3) and the literature of the subject. For the purposes of this study, the method of statistical analysis was used.

Keywords: rural regions, socio-economic development, EU, Cohesion Policy

Dr. Michał Dudek is an assistant professor at the Institute of Agricultural and Food Economics-National Research Institute in Warsaw, Poland. He works there at the Social and Regional Policy Department. The main subject of his interest is conditions of development of rural areas and structural changes in agriculture.

Dr. hab. Agnieszka Wrzochalska is professor at the Institute of Agricultural and Food Economics-National Research Institute in Warsaw, Poland. She works there at the Social and Regional Policy Department. The main subject of her interest is social capital in rural areas and women in agriculture.

125. Finding Path for Developing Welfare State in a Indonesia

Dr. Budi Setiyono

ABSTRACT:

People in third world countries, traditionally still relied on the extended family since the governments fail to provide a comprehensive social security that supposedly serves as a leg up to those in need. Triggerred by economic crisis in the 1998, for the last decades, Indonesian government, has initiated some welfare schemes to protect the people from catastrophe. However, the policies have been generally incremental and fragmented. As a consequence, distinctions between state-sector and non-state-sector employees, as well as between formal and informal workers still remain. Despite the Indonesian Constitution (UUD 1945) clearly mentions that the establishment of the state of Indonesia was to promote the general people welfare, the government has not been able to construct a holistic policy to fulfill the objective. Statistical data showed that the government so far only able to protect the minority of the population, i.e the formal workers, while the rest are still abandoned to live without adequate protection. My paper will examine the general policies of Indonesian government in providing social welfare, identify the strenght and weakness of the policies, and provide some lessons learned.

Keywords: welfare state, developing countries, social welfare, social security, social protection

Budi Setiyono is an associate professor at the Department of Government and Political Science Diponegoro University Semarang Indonesia. During the last decade, he works as a consultant for a number of national and international agencies in the area of public policy, public management, democratization and governance reform. Currently he is serving as a vice rector for communication and business at his institution.



126. Sustainable Microfinance and Global Performance: Proposal for a Decision-Making Support Tool

Dr. Siham Hamdani, Dr. Abdelmajid IBENRISSOUL

ABSTRACT:

Outreach and financial sustainability are –the two basic drivers|| of the microfinance industry. These two missions seem contradictory and their complementarity is the main challenge of microfinance institutions (MFIs) around the world. A challenge that is still current and in the center of debates between two opposing theoretical visions; the social welfare approach and the institutionalist approach, which Morduch refers to as the –schism of microfinance||. In other words, MFIs are exposed to trade-offs between their two objectives, with the risk of prioritizing sustainability, which may be at the cost of outreach; their reason for being. Whence, the central question of this research: Is a balance between outreach and sustainability possible? The objective of this paper is to study, both theoretically and empirically, MFIs' performances in terms of outreach and sustainability, as well as the trade-offs that may exist between them, with the aim of finding answers to this issue of balance between social and commercial missions, still unresolved. Thus, the ultimate contribution of this research is the –Global Performance Indicator||; a decision-making support tool that measures MFIs' performances with regard to outreach and sustainability, as well as the interaction of these two variables, and consequently orients the decision-makers towards the actions to be taken in order to balance social and commercial objectives. To answer the research problem, we studied the case of two large nationwide microcredit associations in Morocco (AMCs) serving those excluded from the traditional banking system, and two small AMCs targeting mainly very low-income populations. This study supports the hypothesis concerning the positive links and complementarity between outreach and sustainability, while relying on governance as a strategic and decisive stake in the effectiveness of an institution.

Keywords: microfinance, sustainability, outreach, global performance

Dr. Siham HAMDANI is a full professor joining ENCG Casablanca - Hassan II University Casablanca in 2017. She holds a PhD Degree from Cadi Ayyad University Marrakech-Morocco (2016). The research focus was on sustainable microfinance and global performance of microfinance institutions (MFIs). Dr. Hamdani's recent research focuses on developing a decision-making support tool measuring the global performance of MFIs.

Dr. Abdelmajid IBENRISSOUL is a full professor at ENCG Casablanca-Hassan II University and in charge of the Systems and Organizations Engineering research unit (ISO). His knowledge of the Moroccan company is an asset that allows ISO to be connected to the socio-professional world. He conducts research for international organizations as well.

127. Globalization Versus Localization-Economic Development Perspectives

Dr. Kristina Jovanova

ABSTRACT:

Economic globalization leads to extreme development imbalances and represents a cause for the growing inequality between the centre and the periphery on the global economic map. It is in collision with the social protection system, a public good that can be provided for by political process only. The capital is untying the national boundaries and starts serving its own purposes, entailing transformation of the territorial (national) state into a market corporate state. By opening the financial channels for credit indebtedness, the speculative capital is enthroned on the top of the capitalist order and takes dominant role in the new era of global mega capitalism, with a purpose of cleaning the road to its full domination, preparing the world for the new Kondratieff technological cycle. Information, knowledge and technological innovations are driving forces to the global-local networking and the future of the economic development is the sustainable cooperation and synergies between central and local governments and between global and local businesses with an aim of redirecting the economic systems from unsustainable to self-functional. The contemporary determinants to the economic sustainability are based on the creation and use of knowledge in the economic processes.

Keywords: economic globalization, megacapitalism, economic localization, technology, innovations, Knowledge Based Economy

Kristina Jovanova was born in November, 1975. After graduation at the Faculty of Economy, University Ss. Cyril and Methodius, Skopje, she started working in a private audit company BDO Macedonia in the position of Audit Assistant. By April 2002, she worked as a Finance manager and Administrator in the Italian (Bergamo) NGO CESVI Cooperation and Development, after which she undertook the post of Economic and Environment Assistant at the OSCE Mission to Skopje. In 2007 she obtained her Master of Science grade in International Economy at the Economic Institute in Skopje. In 2010 she started working as a Senior Programme Assistant, responsible for providing input and advice to the overall programme implementation of the Democratic Governance portfolio with particular focus on activities related to institutions' functionality, coordination, strategic planning and capacity building for sustainable development at both central and local levels of government. In 2016, she successfully defended her PhD dissertation with the title Globalization versus localization – economic development perspectives of the Republic of Macedonia. She speaks fluent English and Spanish languages in addition to the local languages. She is a co-author of the several publications on local economic development and citizen's participation in decision making at local level.



128. Sustainability of the Brazilian Economy Using the System Public Funds Transfers in Siconv

Luiz Lustosa Vieira, Ph.D, Ilka Massue Sabino Kawashita

ABSTRACT:

Decree No. 6,170/2007 regulated agreements, transfer agreements and terms of decentralized execution signed by federal public administration's organs and entities with organs or, public or private nonprofit entities for the implementation of programs, projects and activities involving the transfer of resources and decentralization of credits arising from the Union's Fiscal and Social Security Budget; and created the Agreements and Transfer Agreements Management System - SICONV, open to the public, through the Portal of Agreements. SICONV initiated a new era in public management; as it renewed the relationship between Federal Government and its organs; and public and private entities signing agreements, transfer agreements and terms of partnership celebrated with Union's resources. This initiative automated transfers' processes, since all procedures are now performed and recorded in this system. SICONV covers all operations of the voluntary transfers life cycle, from the provision of resources to accountability, and it is seamlessly integrated with the main structuring systems of the Federal Government. Thus, SICONV established itself in the Public Administration as a major transformation system that enabled and consolidated changes in many patterns and concepts - currently already established - of how voluntary transfers were executed.

Keywords: Information Technology, Government Information Systems, Public Management, Public Administration, Knowledge Management

Luiz Lustosa Vieira, Ph.D. in Information Systems from the University of Toulouse, France, Post Ph.D. in Government Information Systems from the University of Grenoble, France and graduated in Public Administration Institute at Methodist Bennett Rio de Janeiro; professor at the University of Brasilia, Brazil; planning analyst at the Ministry of Planning in Brazil; research field: Governance, Information Technology, Strategic Planning and Government

Ilka Massue Sabino Kawashita, Master in Computer Science from University of Montreal, Canada and graduated in Mechanical Engineering at University of Brasilia, Brazil; a project manager practitioner, PMP certified since 2006, with more than 20 years of experience in project management, systems analysis, and software development with focus on object-oriented software development methodologies and adoption of best practices such as PMBOK and COBIT; planning analyst at the Ministry of Planning in Brazil; research field: Information Technology Strategic Planning and Government, Governance

129. Review of Existing Approaches to Manage Sustainability and Moving Towards a Sustainability Management System Framework

Waqas Nawaz PhD(c), Prof. Muammer Koc

ABSTRACT:

Sustainable development is the world's most ambitious goal at present and organizations have made many efforts in the last two decades to achieve this objective through appropriate management of sustainability. There are numerous studies which argue that the integration of environment, economics and social systems can be adequate to address the sustainability challenges of present era however, a holistic method for the management of sustainability is still lacking. Some researchers have argued that since the shift towards sustainable development must not be trivial rather fundamental, we should focus on the sustainability issues as an independent matter, which cannot entirely be addressed by the integration of existing systems. In an effort to propose holistic sustainability management system we will discuss and combine the literature on the integration of existing management systems, ISO standardized guidelines for developing management systems (particularly sustainability management system), and the literature on sustainability assessment methods.

The multi-dimensional focus of our proposed sustainability management system framework (SMSF) is one of the key strengths of this work. Economic, quality, environmental, health and safety, and social challenges can all be managed through the application of this standalone framework.

Keywords: Sustainability management system, integration of management systems, ISO guidelines for development of sustainability management system, sustainability assessment.

Mr. Waqas Nawaz is a Ph.D. student in the sustainability program of Hamad bin Khalifa University, Qatar. He holds a Master degree in Chemical Engineering from Texas A&M University and has four years of work experience in oil & gas, engineering, and service sector. Mr. Nawaz aims to develop novel methods and technologies to achieve optimal efficiencies of existing processes. For this purpose, he is presently working on the development and validation of a holistic sustainability management system framework for organizations. In parallel, he is working to establish a link between process safety and sustainable development since both share common pillars of organizations (i.e., economics, environment, society).

Prof. Muammer Koc has been the founding Professor and Coordinator of the Sustainable Development Division of HBKU / QF. Prior to that he held scientist, director, professor, chair and dean/director positions at universities in the US and Turkey. He has a PhD degree on Industrial and Systems Engineering from the Ohio State University (1999) and Executive MBA degree from the University of Sheffield, UK (2014). His research and teaching interests are on sustainability, knowledge-based economy, human and social capital development, organizational and social efficiency, near-zero waste policies and technologies; renewable energy policies and technologies; design innovation and entrepreneurship; design and manufacturing. He has 150+ publications in various international journals and conferences. In addition to his teaching and research activities, he provides service as a consultant to industry, government and educational institutes for strategic transformation, business optimization, restructuring, reengineering purposes.



130. Sustainable Development Between Myth and Reality: European Perspectives

Dr. Natalija Nikolovska, Dr. Kristina Jovanova

ABSTRACT:

In reaction to the consequences of the global capitalism development in the years after 1990s, the challenges of sustainable development became one of the top subjects among scientists. In the UN resolution: –Transformation of our World: 2030 Sustainable Development Agenda|| the responsibility of the global community and the necessity of each nation state to participate and contribute to resolving the key cumulated problems of the economic, social and environmental development is emphasized. The analysis will elaborate related controversies, dilemmas and identified crisis of the sustainable development concept, demonstrated through demystification of the neoclassical paradigms and extreme neoliberal monism, being unsustainable as such. The global scene is witnessing processes that are leading towards changes in the development paradigm. They are reflected in the shift from the domination of the unipolar neoliberal model to polycentric structures of the capitalist order, giving room to competitiveness of different models of capitalism. The need for the European Union to act proactively and affirm the EU model of social-market capitalism will be underlined. It incorporates a vast spectrum of different sustainable development concept dimensions, but nevertheless, needs redefining for better positioning within the new global order.

Keywords: Sustainable development, neoliberalism, global economy, European Union, social-market capitalism

Natalija Nikolovska, PhD holds a position of a full time professor in economic sciences at the Faculty of Economy, University Ss. Cyril and Methodius, Skopje. She was born in 1951 in Ukraine and obtained her doctoral degree in 1992 on the topic –Problems of regional development theory and policy of Yugoslavia||. She has narrowly specialized in regional economics, exchange rates policy, local economic development, international financial and trade institutions. Professor Nikolovska possesses a profound educational, teaching and research experience in the areas of the EU and EU integration processes and policies, economic situation and economic policies in the Western Balkan countries. She has worked as an expert with different domestic and international organization and held lectures in renowned European educational institutions. Among her extensive list of published books and papers, the following would be selected:

- "The Mega Capitalism and the Contradictory Perspectives of the European Union –, 20th EBES Conference, Vienna, 28-30 September 2016;
- –Contemporary economic crisis in the EU from the perspective of the conflict between the nominal and the real convergence||, coauthor, Proceedings from the EBES-2012 Istanbul Conference, May 2012, Istanbul, Turkey;
- –Globalization and breakdown of transition economies||, Skopje, 2002;
- –Macedonia on Globalization||, editor, GSP, New York, 2005.

Kristina Jovanova, PhD, Senior Programme Assistant at the OSCE Mission to Skopje was born in 1975. After graduation at the Faculty of Economy, University Ss. Cyril and Methodius, Skopje, she started working in a private audit company BDO Macedonia in the position of Audit Assistant. In 2016, she successfully defended her PhD dissertation with the title –Globalization versus localization – economic development perspectives of the Republic of Macedonia.

131. Good Governance And Human Development Case Of Africa

Hatun KORKMAZ

ABSTRACT:

Today, the developing countries of the world widely face challenges of economic growth, political, social and human development. One of the ways to achieve economic, political and human development is good governance. Without an improvement in good governance, the objectives of human development cannot be achieved. The good governance has become a key issue over preceding two decades and it is very important component for good economic growth and human development. If countries want better growth and human development then good reforms of good governance is needed.

This paper argues that good governance impacts positively human development. To test the hypothesis Worldbank good governance indicators and United Nations Human Development indicators are used. In the paper, human development index is used as a dependent variable and good governance index is used as an independent variable. These indicators are analyzed with panel data analysis method in the framework of identified African countries. In study stability of series are made with the method of Levin, Lin and Chu (2002) and Im, Pesaran and Shin (2003) panel unit root. And the existence of cointegration relations between the series are tested with Pedroni (2004) panel cointegration test. Causality relationships between the series was examined by panel causality test developed by Dumitrescu and Hurlin (2012).

Keywords: Human development, good governance, Africa, Governance, Development

Hatun KORKMAZ is Lecturer at the Erciyes University, Economy and Administrative Sciences Faculty, Political Science and Public Administration Department. Doctorate student in same department. Writing thesis on Good Governance and Human Development topic. Interested in public administration, political science, development, human development, governance, good governance.



132. Career entrants' expectations on Workplace Values

Dr PhD Julianna Náday

ABSTRACT:

Today it is a key issue to define the term value both in a holistic and a corporate approach. After graduation from higher education institutions young people set up a value system concerning workplaces they have to enter to start a career. In the present research we focus on the process how career entrants develop their values spontaneously and how these values are formed in a conscious way. We do not consider value as an abstract term but rather how it gets reality in practice, everyday activities and behaviors. The present study will concentrate on expected values at workplaces and not on experienced ones. Value systems are the result of a series of dichotomy decisions where we must oppose various aspects and ideas. We will examine what values young graduates expect from the companies prior to their employment. To get authentic results and a proper base for analysis the method of research is based on structured interviews with young people just before starting a profession. In the future the results will be beneficial for researchers as well as for companies that can review their existing values according to expected ones revealed at the research.

Keywords: career entrants, value expectations, research, interview

Dr PhD Julianna Náday, Széchenyi István University is Associate Professor at Széchenyi István University, Faculty of Social Sciences, Department of International Relations and Communication, in Győr, Hungary. She got PhD title at Pécs University in 2008. Her main research field includes international communication and negotiations, corporate culture and economic press. At the university she teaches subjects related to her research field and consults students on their thesis work and other scientific works. The department is involved in international projects researching into the relations of small and medium size enterprises between Hungary and neighboring countries. She regularly takes part in conferences as a presenter and publishes her research results in international and domestic journals and conference proceedings. She keeps contact with other universities in Hungary and other countries to have a deep scientific cooperation.



133. Performance Assessment and Personality Evaluation When Starting a Career

Dr PhD Anna Garai

ABSTRACT:

For the young generation about to start a career it is vital to get a joint or independent assessment on performance and personality. Compared to previous generations the young people's attitudes towards assessment and evaluation processes are completely different. Older generations have got the experience of the firm and unflexible assessment systems at education and workplaces. They were ready to accept these decisions, although not only the performance but also the performer was evaluated. The process of value judgement is the most contraversial and problematic human function, as the ability to distinguish between right and wrong is a basic criterium of human existence, and a clear warning in each period in the history of culture: do not judge. Is it possible to make an assessment without any evaluation? We must assume that young career entrants are aware of this dichotomy. They see the importance of distinguishing between good and bad performance but they find it possible only by excluding judgement on personality. Our aim is to examine career entrants' attitude in the frame of a survey study.

Keywords: performance evaluation, evaluation of personality, value judgement analysis, survey, career entrants

Dr PhD Anna Garai, Széchenyi István University is Associate Professor at Széchenyi István University, Faculty of Social Sciences, at the Department of International Relations and Communication. Graduated from Szeged University as a teacher of history and German studies in 1982. She got PhD title at Pécs University in 2006. Her research include linguistic and sociolinguistic aspects of corporate communication and economic press language. At the university she teaches subjects like Intercultural communication, Management communication and International negotiations. She consults the university students on their thesis work and scientific essays. She keeps contact with other universities in Hungary and other countries to have a deep scientific cooperation. She regularly attends scientific conferences as a presenter and publish her findings in journals and conference proceedings.



134. Macroeconomic Impact of Financial Markets: Systemic Risk and Economic Growth

PhD(c) Oleg Ivanets

ABSTRACT:

What is the impact of financial system on overall economy? Traditional economic view is that it is significantly positive as financial system development stimulates economic growth. However, global financial crisis in 2008 triggered number of studies that challenged this view. This paper contributes to this new literature in 3 major ways. First, this is the 1st paper to offer an analytical framework to analyze together financial system development, systemic risk and economic growth. Second, applying this analytical framework to data from 9 developed markets (US, Canada, UK, Germany, France, Italy, Japan, Korea and Australia) for the period of 1995-2016 revealed that the impact of financial system on the overall economy for the period was highly negative. Also, multiple fundamental issues within the financial system that currently do not have proper attention of market participants and regulators were identified. These issues include among others banking system structural misbalance, stock market bubble due to stock buybacks and non-productive sovereign debt increase. Finally, the new analytical framework pointed out to numerous gaps in existing literature and offers vast amount of important research questions for future research.

Keywords: Systemic risk; economic growth; financial system; financial crises

Oleg Ivanets is from Ukraine and is currently a PhD student in Economics at the University of Hawaii at Manoa. Prior to PhD Oleg has worked for 7 years in financial markets as investment analyst/manager and macroeconomist/strategist. His research interests combine his practical experience with academic knowledge and lie in the fields of macroeconomic impact of financial markets, systemic risk, financial crises and economic growth.



135. Biosphere Reserve as Learning Sites for Biocultural Education; Case of Mount Hakusan Biosphere Reserve in Japan

Dr. Aida MAMMADOVA

ABSTRACT:

Biosphere Reserves (BRs) are highly recognized areas under UNESCO's MAB Programme for their conservation, learning and sustainable development initiatives. Even though Mount Hakusan BR (MHBR) in Japan was designated in 1980, its transition zone was recognized in 2016, and area still lacks any implementations or functions as BR. We suggested that introducing the place-based learning will be one of the most important logistic functions of MHBR, and it will provide the site-specific knowledge and experience for bio-cultural education. We conducted five educational fieldworks at MHBR sites, with the objectives to assess the site-specific elements that links biological and cultural diversity of the region. Each field provided thematic understanding of ecosystems of the MHBR, such as forest, hydrology, wildlife, culture, livelihood as well as conservation initiative and tourism. Participant were 21 academic students. As the outcome of the course, several natural and cultural resources were assessed by the students as valuable —treasures|| of the region. However, we found that local residences were not aware about the values of those regional resources, and about the role of MHBR as designated area. In future, we plan to evaluate the awareness change of local people before and after implementation of the educational fieldworks together with the youth, at BR sites.

Dr. Aida MAMMADOVA is an Assistant Professor for Global Affairs, International Student Center, Kanazawa University, Japan. Her research is focused on the environmental education and sustainable development in rural and urban areas.



136. "Evaluation of the Opportunities for Sustainability Education Through Content-Based Learning in Online German classes in Ecuador".

Dr. Kathrin Schneider, Xavier Unda

ABSTRACT:

This paper proposes to reflect on online German class as vehicle for sustainability education and evaluates the (up to now unused) opportunities language classes offer. In the last decades, modern methodology for foreign language acquisition like the communicative approach has become increasingly popular to develop linguistic abilities, focusing on content-based instruction. Standardizing documents like the CEFR (Common European Framework of Reference, 2001) are mainly based on this methodology and define fundamental competences (reading, listening, writing, speaking) and sub-competences e.g. reading a newspaper article, writing a personal letter, hold a formal conversation etc. The contents on the contrary are not defined, which allows language class to have a variety of topics that can be chosen by the teacher/tutor. The selection process of the material is, however, key to the success of the project. Foreign language learning can thus be a vehicle to education of specific topics, and hence suitable for sustainability education. The exemplified units are from a lower level (A2) and a middle level (B2). The proposed concept can be a blueprint for other language classes that decide to include sustainability education.

Keywords: sustainability education, CEFR, content-based language learning, competences, German as foreign language

Dr. Kathrin Schneider is Professor at Catholic Pontifical University of Ecuador in Quito. She studied German and French literature in Treves (Germany) and Nantes (France) where she realized a two year master's study in Literature, Languages and Communication (Specialty: Linguistic Identities, National Representations and Cultural Transfers) obtaining an excellence scholarship from University of Nantes in her second year. Subsequently, she received a scholarship from University of Nantes to pursue doctoral studies in German Languages and Literature, combined with some hours of teaching in the German department. After finishing her Ph.D., she moved to Ecuador where she gives currently classes of modern foreign languages. Her research topics are foreign language acquisition, methodology, intercultural teaching, e-learning and assessment.

Xavier Unda MBA M.A. is Professor of National Polytechnic School in Ecuador. He obtained his bachelor's degrees as a Commercial Engineer and as a Certified Public Accountant (CPA) from the Catholic Pontifical University of Ecuador. Xavier realized his Master's degree In Business Administration (MBA) at the University of Mississippi with a Fulbright scholarship. The University of Mississippi as a generous institution also made him a John N. Palmer Assistantship recipient. Based on his scholastic records at the University of Mississippi, Xavier was invited to be a Gamma Beta Phi Honors Society member. When finalizing the MBA program, Xavier was given a scholarship to study an additional course in Germany with an alliance university in Germany, the Hochschule für Wirtschaft und Umwelt in Nürtingen –Geislingen. This offer included an MBA internship which was held at the RAMPF Giessharze GmbH & Co in Grafenberg –Germany. Later on at his return to his country Xavier worked for 2 years at Banco Pichincha, the biggest bank in Ecuador, he left to pursue a master's degree in economics from The University of Sydney. Since he came back to Ecuador, he teaches at the Faculty of Administration in National Polytechnic School.

137. Intelligent and Cognitive Technologies in Education of International Economic Relations Students and Human Resource Development: Methodology in Language Teaching and Distance Learning

Prof. Nayden Nenkov, Dr. Yuriy Dyachenko, Prof. Mariana Petrova, Assoc/Prof. Galyna Bondarenko, Prof. Valeriia Pustovit

ABSTRACT:

This study is aimed at ensuring quality education and promoting lifelong learning opportunities we need for empowering learning. This paper attempts to consider the possibility and unite the conditions for intelligent and cognitive technologies application to human resource development and education of students. There is proposed Actor-Network Theory as a theoretical framework for managing actors of educational process as human and non-human agent interactions. As a core of interactions we use Facebook social infrastructure which is a tool to build the global community. We consider artificial technologies and distance learning in education, cognitive technologies for human resource development, especially for internally displaced persons in Ukraine. As a hub for this technologies we use chatbot based on natural language processing wit.ai technologies. Intelligent and cognitive technologies provide the opportunities to incorporate cognitive characteristics of each student with a view to address individual approach for students. We developed the curriculum –International economic relations|| based on relevant stakeholders' requests with regard to intelligent and cognitive technologies. In future it can yield the most suitable solution for knowledge transfer from one agent to another in order to ensure inclusive and equitable quality education.

Keywords: Intelligent and Cognitive Technologies, Human Resource Development, International Economic Relations, Methodology in Language Teaching

Prof. Nayden Nenkov is a Professor in Computer system and Technologies, Faculty of Mathematics and Computer Science, Konstantin Preslavsky University of Shumen (Bulgaria). His scientific interests include, Applied Artificial Intelligence, Expert Systems, Data mining, Cloud computing and Distance Learning. He is head of scientific project –Models and applications of deep machine learning In Intelligent systems||, Konstantin Preslavsky University of Shumen (Bulgaria). He has published more than 80 papers in international conference proceedings and some indexing in Web of Sciences and Scopus. He is an editorial board member of international conferences such as MATTECH (Bulgaria).

Dr. Yuriy Dyachenko is a Head of Department of International Economic Relations, Volodymyr Dahl East Ukrainian National University (Ukraine). His scientific interests include Intelligent and Cognitive Technologies, Human Research Development, Distance Learning. He is an expert of research project „Models and algorithms for extracting knowledge from big data simulating neural networks and optimal training procedures–, University of Shumen (Bulgaria). He was an expert on modern technology training of project on EC Programme TEMPUS/Tacis CD-JEP-23125-2002 "Training of European Studies" (2002-2005) and project manager of the EU project 144641-TEMPUS-2008-FI-JPCR «International Network for the modernization of education in the field of tourism and the development of academic mobility (INTOUR)» (2009-2012). He has published four papers in Scopus peer-reviewed journals and more than 20 papers in international conference proceedings. He is an editorial board member of international conferences such as



MATTECH and international scientific journals such as Journal of Economic Reforms (Index Copernicus).

Prof. Mariana Petrova is a Director of Education Technologies Center, St. Cyril and St. Methodius University of Veliko Turnovo (Bulgaria), Professor of Department of Management, ISMA University (Latvia). His scientific interests include Intelligent Technologies, Information System and Technologies, e-Learning, Distance Education. He has published more than 140 publications. He is a head of project FSD-31-813 ||Web-based platform for periodic electronic editions|| (2016- 18) and project coordinator of project FSD-31-811 –Investigate the feasibility of creating a virtual educational cluster|| (2016-17). He was a head of project 09-590-13 –Integrated electronic services for the citizens and the business|| (2013-15) and project coordinator of Project 1491-10

–Entrepreneurship in the social sphere||. He is Member of the Scientific Organizing and Programme Committees such as –International Conference Information Technologies and Management|| and Member of the Editorial Boards such as –New Knowledge Journal of Science||.

Assoc/Prof. Galyna Bondarenko is a Head of Department of Ukrainian Philology and Journalism, Volodymyr Dahl East Ukrainian National University (Ukraine). Her scientific interests include computer aspects of theory of language teaching, sociolinguistic aspects of language, psycholinguistic factors of formation of personality by language tools.

Prof. Valeriia Pustovit is a Professor of Department of Ukrainian Philology and Journalism, Volodymyr Dahl East Ukrainian National University (Ukraine). Her scientific interests include Ukrainian writers' memoirs researches, foundations of methodology of teaching of Ukrainian literature at the university

138. Inclusiveness, Design and Technological Innovation for the Sustainability of Manufacturing Landscapes

Prof. Serena Viola

ABSTRACT:

During the 20th century, several uncontrolled processes compromise the dynamics and trends of technological transitions that for centuries, had been characterizing the built environment and the manufacturing processes. In the agenda drawn by the Sustainable Transition Network, referring to manufacturing landscapes, the transition is a long process, deeply rooted to cultural and settlement specificities, to the skills of the workforce, to the opening of new markets, to the community needs. In a circular perspective for development, returning congruence to productive cycles, by linking them to the settlements vocations and communities' skills, is the design commitment. Taking into account the systemic vision for the built and performance approach, a design strategy is experienced during three years, for the Vesuvius foodscape. It consists of three main phases: *outlining the relationships between places and manufacturing, in terms of processes, products and wastes, *mapping the technological transition processes occurring at the architectural and urban scales, *defining compatibility ranges for shortening the loops and promoting inclusive technological innovations. The project outlines a regeneration strategy informed to the following visions: 1. The productive landscape is a common good, a complex system resulting from the encounter between resources and technological thinking. 2. Strengthening the community skills is an indispensable condition for promoting regeneration. 3. The third sector, social, economic and cultural reality of a private nature but tended to produce public or collective goods and services can be a privileged actor of sustainability.

Keywords: Manufactures, landscape, design, innovation, technology, reuse, reduce

Prof. Serena Viola is Researcher of Architectural technology (ICAR 12) since 2006, DiARC, Università di Napoli Federico II. In 1999, Serena Viola received a four years research grant from the Faculty of Architecture Siracusa, University of Catania, —Tender for the recovery of Ortigia built heritage|. Between 1997 and 2000, She coordinated a multidisciplinary research group for the realization of a new building yard technology for Italian historical centres (Ministero dell'Università e della Ricerca Scientifica e Tecnologica, Rif. 179205-1341/472). Due to her interests on active protection for built environment, She obtained by the Canadian Ministry of Foreign Affairs, three research grants within: the Canadian Faculty Research Award FRP in 2004 and in 2006, the Canadian Faculty Enrichment Award in 2008. In 2010, her research contribution was selected to participate in the initiatives promoted by the Italian Ministry for Public Administration and Innovation in Shanghai World Expo, Italy of Innovators. Her proposal was recognized as evidence of the technological excellence of our country. Member of ICOMOS Italia. She is author of papers on national and international journals, conference papers and books dealing with new challenges for ancient cities, innovative technologies, maintenance requirements, design scenarios.



139. The sustainability of Cultural Diversity in the Workplace – Changes in the Intercultural Mindset

Dr. Anikó Tompos, Professor Lívia Ablonczy-Mihályka

ABSTRACT:

The last two decades saw the emergence of culturally diverse workplaces in Hungary. Researchers agree that multiple identity workgroups in themselves do not automatically bring positive benefits; however, provided some conditions are met, cultural heterogeneity is an asset and contributes to the sustainability and competitive advantage of firms. Effective work across cultural differences necessitates an increase in cross- cultural intelligence and competence and parallel to this, a decrease in ethnocentrism. The purpose of the paper is to present and discuss the findings of a large-scale questionnaire survey, which aimed to map out how Hungarian companies and enterprises manage cultural diversity and also to measure business actors' cultural sensitivity. In particular, it looks at differences between generations in terms of their intercultural mindset, i.e. their thinking, emotions and attitudes towards diversity.

Keywords: cultural diversity, intercultural mindset, sustainability

Dr. Anikó Tompos is associate professor at the Department of International Communication, Széchenyi István University, Győr, Hungary. Her research interests include inter- and intracultural organizational communication and the analysis of professional discourse.

Professor Lívia Ablonczy-Mihályka is full professor, faculty vice dean and head of the Department of International Communication, Széchenyi István University, Győr, Hungary. Her research interests include international studies, organizational cultures and the analysis of communication in business settings.

140. Community Based Tourism Management at Pinge Village, Tabanan Regency, Bali

Dra. Anak Agung Ayu Ngurah Harmini, I Gde Agus Jaya Sadguna

ABSTRACT:

The demand of something different has driven tourism destination to make new attractions to accommodate various needs of tourists. The idea of presenting authentic local attraction has given local people something to expect from tourism. Thus the idea of community based tourism emerges. This research was conducted at Pinge Village in Tabanan Regency; focusing on the management of the Pinge Village governing body, which consists of the local people themselves. The purpose of this research is to identify and illustrate the role of the governing body for the benefit of the local people. The data collection is done by observation, interview, and literature review. The analysis technique used is descriptive qualitative research. The result is that the governing body is responsible for managing the village's attraction, activities, and facilities, namely trekking, performing arts, farming activities, cooking class, and home stay. These attractions, activities and facilities are either owned personally by the villagers or owned by the village. The aim of the governing body is to make the people and village prosperous.

Keywords: Community Based Tourism, management, Pinge Village, governing body, alternative tourism

Dra. Anak Agung Ayu Ngurah Harmini, M.Par, Politeknik Negeri Bali, earned her bachelor's degree in English Literature and her master's degree in tourism. She is currently teaching at Politeknik Negeri Bali in the Tourism Department. She has an interest in tourism especially eco-which came from her experience as a lecturer and also researcher. She is fascinated about the wonders that nature can provide and how it can attract tourist to come and enjoy it. She has always encouraged her students to discover what nature can provide for tourism and how to manage it sustainably for future generations. She enjoys exchanging ideas and discoveries with fellow researchers to mutually enrich the knowledge in tourism.

I Gde Agus Jaya Sadguna, SST.Par., M.Par, Politeknik Negeri Bali, went to study Hotel Administration and achieved his master's degree in tourism studies. Culture has been a main interest for him and how tourism has a great effect to it. Knowing that tourism can cause both positive and negative impacts, it is the positive impact that he wants to deliver to the local community. Culture needs to be strengthened as it is the identity of the locals. He is currently a lecturer at Politeknik Negeri Bali and always encourages his students to be proud of their identity and it is an asset for them when working in the tourism industry.



141. Scientific Substantiation of the Development-Evolution of New Man Founded on High-Quality Interaction Energy Created by Using Harmony, Ethical Canons and Holistic Principles

Prof. Dr. Nickolay Suvorov, Prof. Dr. Suvorova Iryna

ABSTRACT:

The study's focus is on cognising the methods of formation of New Man, a new reasoning, a new worldview, and an ERA of PEACE and LOVE by in-depth research into the content of ethical-moral rules, regulations, principles, and canons based on the Great Cosmic Laws of Development, and the Harmony Laws of the CREATOR and GOD. This is the strategy of holistic sustained development of Man and Humanity in the Epoch of Aquarius. The authors' research is built around the following axioms: - Energy is the unique essence of All Being; - EVERYTHING is reduced to energy – the energy of inner and external interaction.

Keywords: holistic principles, energy of inner and external interaction, harmony, spirituality, ethics

Prof. Dr. Nickolay Suvorov is a military intellectual. He acquired good scientific and materialistic education, viz. graduated from the Suvorov Military School with honours and a military academy summa cum laude for service in the Strategic Missile Forces. For a long time, he educated and trained highly-qualified young officers for service in the Missile Forces. Teaching, education and science were the essence of his life.

Dr; Prof. Suvorova Iryna is Leading Scientific Researcher of the Department for Nonconventional Energy Technologies of The A.N. Podgorny Institute for Mechanical Engineering Problems (IPMach) of The National Academy of Sciences of Ukraine (NAS of Ukraine). Project leader in creation of multi-function hydrocavitation systems of energy transformation for producing the new qualitative composite liquid fuel oils (CLFO) with high power and ecological indices and their effective incinerating. Authority figure in the field of mathematical and computer modeling.



142. Social Investment for facing Migration Crisis

Dr. Kristobal Miguel Meléndez Aguilar

ABSTRACT:

The new immigration policy of the United States could intensify deportations of undocumented migrants with an economic, social and political effect in Mexico. This problem could generate economic, political and social instability in some Mexican states then it is relevant to study how to diminish this effect. Social investment could reduce the impact of this situation and could reduce the reasons for those Mexicans that want to migrate. Social investment focuses on considering the migrant as an asset that could be incorporated into the labor market with government programs that stimulate intensive labor public investment, reduced violence, training and increased wages. By using multiple linear regressions and descriptive statistics, it is shown that the levels of education, economic growth, poverty, labor purchasing power, violence and unemployment have an effect on Mexican migration levels. In this way, it is shown that it is possible to reverse this problem with positive impacts on the Mexican economy.

Keywords: Migration, Social Investment, Intensive labor investment, Local income, Sustainable economic growth

Dr. Kristobal Miguel Meléndez Aguilar is a Researcher of Improvement Quality of Democracy International (Mecademi). He researches about Democracy, Migration, Poverty, Inequality, Gender Gap, Human Development, Rule of Law and Accountability. He usually compares countries or states mixing quantitative with qualitative methods.



143. Towards Sustainable Production: The Case of the Manufacturing Industry in Colombia and Mexico

Assistant Professor Patricia Jisette Rodríguez Sánchez,
Associate Professor, Mariana Hernández González

ABSTRACT:

The United Nations agenda for sustainable development highlights the need to create resilient infrastructures for a sustainable industry that fosters innovation while increasing resource utilization at all levels of the supply chain, from production to the final consumer.

The present research aims to expose the strategies that the manufacturing industry undertook towards sustainable development in Colombia and Mexico between 2010 and 2016, for which it is used the documentary research methodology with a qualitative approach, supported by the specialized academic review.

As a result of this work, there is a concentration of government-business-research centers efforts in three directions: the development of new products, the use of new sources of energy such as renewables and the construction of a green market around one true sustainable production.

Keywords: Green industry, sustainable industry, sustainable development, manufacturing industry, renewable energy.

Assistant Professor Patricia Jisette Rodríguez Sánchez, Master in Economics, Universidad Autónoma Metropolitana, Mexico. Industrial Engineer of the Universidad Tecnológica de Pereira. Assistant Professor at the Universidad Militar Nueva Granada, Faculty of Distance Studies, Business Administration Program. Member of the research group PROPIO.

Associate Professor, Mariana Hernández González, in the Systems Department of the Universidad Autónoma Metropolitana (UAM), Azcapotzalco, Mexico. Master in Economics and Industrial Engineering of the UAM. Associate Professor in the Renewable Energy Engineering program of the Open and Distance University of Mexico.

144. Critical Remarks about Environmentalism Implication by Iranian SMEs

Dr. Saeed Behjati

ABSTRACT:

The need of environmental sustainability, level up variety of environmental protection agenda and enhance global expectation despite of the countries levels of industrial development. This review paper, highlights the confronting situation and prime criteria required in implementing corporate environmentalism geared into national environmental sustainability. Postpositive inductive inquiry about environmental sustainability orientation of Iranian SMEs manufactures was conducted. Triangulated data source was obtained while interviews were from top executives of three purposefully selected SME's of different industrial sectors. The emerging themes can consider as the informant pattern of thinking regarding the environmental sustainability matter in current situation; which are made up of existent unique crisis, undermined competitiveness, techniques and technical hinders, energy backwardness, government policies indices. Interpretation of finding revealed some critical factors that can be consider for substantial transformation towards corporate environmentalism.

Keywords: Corporate Environmental Sustainability, Iranian Small and Medium Size Enterprise, Managerial Pattern of Thinking, Critical Factors

Dr. Saeed Behjati is an assistant professor at the Islamic Azad University - Roudehen Branch - Iran. His research interests include a wide range of areas in management science such as decision making and strategic innovation within a managerial context. In his teaching and research activities, he collaborates closely with industrial partners in order to bring together management theory and practice.



145. Resilient Regions from Sustainable Development Perspective

Mariann Szabó, Mária Szalmáné Csete PhD, Tamás Pálvölgyi PhD

ABSTRACT:

Regional economies in today's world of transitions experience different kinds of shocks: economic downturn, industry shocks which influence the path and pattern of regional economic growth, the quality of life of the inhabitants as well as the state of built and natural environment. Originated from ecological and psychological sciences the term 'resilience' describes the capability to adapt and renew under unfavorable conditions while regional resilience is determined how the region or system responds to shock or disturbance and under these circumstances able to ensure its continuous development. Continuous development criterion links regional resilience to sustainable development (improve the lives of people round the World) promoted by the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals. Developing criteria for resilient regions for promoting sustainable development could contribute to more complex comprehension of regions in spatial development. The research, although put emphasis on economic viability regions are handled as complex systems of various institutional aspects, natural and man-made resources and society, which state, flexibility influences the adaptive capacity of regions to high extent.

Keywords: Resilient Regions, Sustainable Development, Spatial Development, Sustainable Development Goals, Adaptive Capacity

Mariann Szabó (PhD student in Economics, Budapest University of Technology and Economics at the Doctoral School of Economics and Management) is assistant lecturer at Budapest University of Technology and Economics, Department of Environmental Economics. After graduation at the at Budapest University of Technology and Economics, Faculty of Economic and Social Sciences as Master in Regional and Environmental Economics she has started PhD studies, her research focus is Regional Economics, Territorial Economic Development, Local Sustainability Programs and endogenous growth as well as growth theories. She also interested in social innovations and regional planning.

Mária Szalmáné Csete PhD is an Associate Professor at the Budapest University of Technology and Economics, Department of Environmental Economics. She has PhD in Environmental Management Sciences and MSc in Engineering Management at BME; MSc in Regional- and urban development at Sorbonne – Paris IV. Her research interests are in environmental policy and economics, regional and spatial planning, mitigation and adaptation strategies, urban sustainability. Mária Szalmáné Csete has over 100 publications, 41 in national and international scientific journals (several indexed in Scopus or Web of Science), 15 book chapters, 1 book and several conference papers.

Tamás Pálvölgyi PhD (Associate Professor) is the head of Department of Environmental Economics at Budapest University of Technology and Economics (BME). In parallel his university job he also serves as a head of National Adaptation Center in Geological and Geophysical Institute of Hungary. He obtained an M.Sc. degree in Meteorology at ELTE University in Budapest, followed by a Ph.D. in Earth Sciences at the Hungarian Academy of Sciences. He has 25 year research experience in environmental, climate change and sustainability sciences and 15 years of experience in environmental strategy development, programming and planning.



146. Legal Protection and Insurance by Administration as a Part of Universal Right in Albania

Phd candidate Arjan Gjini

ABSTRACT:

The public administration has a primary role in a healthy governance. Human rights are the basic principles and without them people cannot live in dignity. These rights constitute the base of liberty, justice and peace. By respecting them the individual and society progress is made possible. The development of human rights and corresponding guarantees have deep roots of effort to gain freedom and equality all over the world. The basis of human rights, such as the respect to human life and dignity, is to be found in the main part of the philosophies. They are stated in the Universal Declaration of Human Rights and in other documents such as –International Convention of Human Rights|| which also define what governments should and should not do in order to respect the rights of their citizens. Albania is now in a phase of integrating into the euro-atlantic structures and its administration is facing various changes. The legal framework is releasing its first effects in the efficient consolidation and protection of the legal security of its citizens.

Keywords: Human rights; convention; law; rehabilitation institutions; solidarity.

MsC, **Phd candidate Arjan Gjini**, Albanian University of Tirana, Graduated from the Faculty of Justice, University of Tirana! Magister of the civil right, Tetovo State University, Macedonia. Scholarship from the Ministry of Education and Sports. Student in third year of doctoral studies in administrative sciences. From the year 2001 part time pedagogue in Business Right at "Eqrem Çabej" University, Gjirokastra. Chanchelor, Court of Appeal, Gjirokastra .Lectures in Civil law, Civil procedure, Right of Obligations, Right of Intelctual Property, European and International Right. Lectures in Euro- Atlantic Governing, "Eqrem Çabej", University. Trained in USA by USAID, in strengthening of public institution and the civil society and participant referee in open lecture at FSU, on the Albanian Tradition Code. Trained in Spain for Management of Public Institutions by EC. Participant in different scientific symposiums. Master English, Italian and partial knowledge in Greek and Macedonian.



147. The sharing Economy at the Crossroads. A Conflict Between Social Values and Market Mechanisms

Dr. Romina Gurashi

ABSTRACT:

In the last few years the phenomenon of the Sharing Economy rapidly gained momentum. The reasons for this success are multiple but the most important is the tendency to faster exchanges and economic relationships both on the real and the financial market. This awareness made it essential to start the study from the crisis of the hyper-capitalism and of the concept of ownership which is being replaced with that of a more fluid sharing. In this way, we will analyze the words, the concepts and the values at the basis of the sharing economy which influence the effects this new way of acting and living has on the economies and on the socialization processes of the countries involved. In this perspective, we will also try to consider if and to what extent the sharing economy can have a positive impact on sustainable development.

Keywords: Hyper-capitalism, sharing economy, sustainable development, globalization, access, socialization



148. Sustainable Touristic Development in Coastal Cities in Egypt

Assist. Prof. Houssameldeen Bahgat Elrefei

ABSTRACT:

Egypt has an extensive coasts on the Mediterranean and red sea. Due to the moderate climate in Egypt all over the year, all coastal cities have large potentials for touristic activities which considered one of the main drivers in economic growth. The study focuses on developing economic growth through enhancing planning, urban development and government's policy.

Across the last forty years there was no clear urban development plan for coastal cities in Egypt. Still, a more professional posture is required to enhance the design of the built environment by increasing the complexity and functional requirements of Sustainable urban planning. It should be capable of a more responsible, sensitive and scientifically sound approach to address the environmental impact, human factors, and other design demands. This paper aims to explore Egypt's policy in developing coastal cities and how could Egypt sets a new regulations and policies to enhance and benefit from Egypt's touristic potentials as a driver in economical growth.

Keywords: sustainable urban development - touristic activities -real estate developers-local planning authorities- market decisions.

Dr. Houssameldeen Bahgat is an assistant professor at Alshrouk academy, the higher institute of engineering, department of architecture. He graduated from Ain Shams university, Egypt, and got his PHD from the same university. Dr. Bahgat had been participated in multidisciplinary international conferences. His interest in studying theories of architecture and its impact on comprehensive design.



149. Sustainability, Bioclimatic and Renewable Energy: A New Approach in Architectural Teaching Pedagogy

Assist. Prof. Houssameldeen Bahgat Elrefei

ABSTRACT:

Technological, global, and economic advances have directly influenced the design of the built environment by increasing the complexity and functional requirements of buildings. Still, a more professional posture is required. It should be capable of a more responsible, sensitive and scientifically sound approach to address the environmental impact, human factors, and other design demands. Sustainable building design, which is based on bioclimatic architecture, needs such concepts at its basis. The purpose of this paper is to provide a framework for teaching sustainability, bioclimatic, and renewable energy as new approaches in architectural teaching pedagogy.

Keywords: sustainability; bioclimatic; renewable energy; teaching pedagogy.

Dr. Houssameldeen Bahgat is an assistant professor at Alshrouk academy, the high institute of engineering, department of architecture. Dr. Bahgat had been participated in multidisciplinary international conferences. He specialized in studying theories of architecture and its impact on comprehensive design.



150. Environment, Nationalism and Sustainability: Racial minorities of Ganges Delta.

Phd(c) Puranjay K. Vedi

ABSTRACT:

Ganges Delta region of South Asia fosters a harmonious construct of deceptively similar primordial identity markers shared by the people of India and Bangladesh. The unique cultural syncretism is a product of common history shared by the two. 1947 partition of India led to territorial demarcation broadly on religious lines and created West-Pakistan (Present day Pakistan) and East-Pakistan (Present day Bangladesh). In 1971 people of East Pakistan re-affirmed their allegiance to Bengali culture, language and intelligentsia and became independent nation. However Environmental calamities such as high tides, storm surges, rise in sea level altogether hampered Bangladesh's growth. Bangladeshi migrants in search of better prospects, and taking advantage of deceptively similar identity markers and porous borders, entered India. This led to Assam Movement of 1971 voicing apprehension of Assamese that gradual alteration of demographic complexion of State of Assam and rise in Bangladeshi settlers might sever Assam region from rest of India. Considering climate change induced migration, population growth and Nationalism in South Asia this paper seeks to devise sustainable government policies which transcend precincts of national territories and appreciate need of present generation without jeopardizing interest of future generation.

Keywords: Climate change, National Identity, Illegal Migration, sustainable government policy

Puranjay K. Vedi is Ph.D Research student in Faculty of Law, University of Delhi, New Delhi, India. His subject areas of interests are religion, nationalism, secular state policies and Environment induced human displacement. His PhD research is on —State Intervention in religious affairs|. His previous research publication was on —Climate Change refugees|.



151. The Possibilities of Sustainable Development Evaluation in the European Union Area

doc. Ing. Emília Huttmanová, PhD

ABSTRACT:

The concept of sustainable development is considered as a multidimensional. In general, we can conclude, that sustainable development brings together economic, environmental and social dimensions. Process of these different dimensions evaluation is very complicated, as well as results interpretation and creating of the conclusions formulation useful in the management of sustainability. The main aim of this paper is to present the possibilities of sustainable development evaluation in the conditions of the European Area countries.

Keywords: Sustainable development, sustainability, management of sustainability, Human development index, EU countries

doc. Ing. Emília Huttmanová, PhD., works as assoc. professor at the Department of Environmental Management, Faculty of Management, University of Prešov in Prešov (Slovak Republic). Her scientific and pedagogical activities are primarily focused on the issues of environmental economics, sustainable development, management of sustainability as well as to problems of national economy. As a assoc. prof. she leads these courses: Economy of Environment, Sustainable Development, National Economy and Economic Policy. She has been a co-researcher of successfully completed research projects and currently participates in few scientific and research grants. Currently she is Vice-dean for Education and Communication of Faculty of Management University of Prešov in Prešov.

152. The Role of Export and Terms of Trade for an Economy With Resource Dependence, Case of Algeria

Dr. Mohammed Toutou, Dr. Taher Jalit, Dr. Ahmed Boudeghdegh

ABSTRACT:

The paper analyses the impact of foreign trade to GDP growth in Algeria on the basis of cointegration analysis. The aim of the paper is to assess causal relations between exports, oil prices, terms of trade and economic growth. The literature discusses different options: a positive unidirectional relation from exports growth and terms of trade improvement to economic growth (export-led growth), opposite relation from economic growth to export growth and bidirectional causal relations between indicators, negative effects of exports are also discussing. In this paper we firstly provide a statistical overview of the dynamics of foreign trade over the last decade and calculate terms of trade index. Secondly, we conduct an econometric analysis of the interdependence of indicators: GDP growth, exports, terms of trade and the price of oil in terms of vector error correction model (VECM). We consider two model specifications for quarterly and annual data, perform —Granger causality|| test for the time series data. We found positive short-term and long-term dependence of economic growth on export and oil prices and long-term dependence on the terms of trade, bidirectional relations was not identified. The results confirm the high dependence of the economy on the external sector and export-led growth hypothesis. Thus, exports and foreign trade should be considered as a source of economic growth for the country, the external sector is important to consider when building the economic growth forecast and modeling of economic policy.

Keywords: Economic growth; Algeria, VECM, Foreign trade.

Dr. Mohammed Toutou is a Doctor of applied economics and statistics of faculty of Economics, University of Algiers 3, Algeria. Editorial Board Member of the Journal of Contemporary Asian Studies. Research Interests: •Integration, Trade Liberalisation and External shocks. •Computable General Equilibrium Models. •Energy and Environment. •Sustainable development.

Dr. Taher Jalit is a Doctor of applied economics of faculty of Economics, University of Jijel, Algeria.

Dr. Ahmed Boudeghdegh is a Doctor of applied economics of faculty of Economics, University of Jijel, Algeria.



153. The Jurisprudence of Direction for Use in Product Liability: Issues in Perspectives

Gbade Akinrinmade,

ABSTRACT:

A product no matter how safely made, has the potential danger of injuring human life. It is therefore mandatory to call the attention of users to potential dangers or defects inherent in such products or how best such product may be used. The absence of warning or directions for use may also render an otherwise acceptably safe product unsafe. This therefore makes it imperative that products be accompanied with adequate warning instruction or instruction for use. Bearing in mind that the essence of warning is to call the attention of consumers to defects associated with the use of a product, whilst that of instruction for use is to ensure safety on how best the product can be put to use; it is unfortunate that such warnings or instructions for use fail to achieve the desired purpose. The reason being that such warnings or instructions are either couched in a language that most of the users are not literate about or its wordings are not legible / wrongly placed on the product's package. These shortcomings has led to product injury/accident and at times loss of lives as a result of such shortcomings. It is in the light of the above that this paper ex-ray the role of warning in product liability; and also justify the need why warnings and instructions connected with the usage of products should be couched in the language understood and spoken by the majority of people where such product is been offered for sale in order to ensure the safety of human lives. The fact is incontrovertible that defective or unsafe product has grave consequences on sustainability of the society.

Keywords: Use Direction Product Liability, Sustainability

Mr. Gbade Akinrinmade is a senior lecturer in the Department of Jurisprudence and International Law Olabisi Onabanjo University Ogun State Nigeria. He is interested in the following area of the law: Jurisprudence, Product Liability and Human Rights. He is a member of the Nigerian Bar Association and also the Nigerian Law Teachers Association.

154. Developing a Conceptual Model to Sustain Handloom Silk Industry at Saulkuchi, Assam, India

Jayant Jain, Alok Ratan

ABSTRACT:

Silk industry in Assam, India is centered at Saulkuchi, Kamrup district. Silk is the protein fiber produced by silkworm for spinning the cocoon. Assam produces three indigenous varieties of silk - Muga, Pat and Eri. The objective of our study is to prescribe a conceptual model using the concepts of distributed economics and sustainability to preserve the unique culture of the area which is diminishing due to lack of the product's demand. The contextual inquiry was carried out for various stakeholders of Assam silk industry at Saulkuchi - cocoon cultivator, weaver and shopkeeper with an objective to understand the channel of material from raw material to the final product, to understand how they use different tools to perform their tasks and to understand their networking among various stakeholders involved in silk handloom sector. Their responses were analyzed and the stakeholder's goals, needs and frustrations were identified using AEIOU and empathy mapping. The major frustration of the stakeholders was the decrease in the demand for their products due to the growth of power loom and not able to reach the elite target population. The prescriptions for a village tourism and an e-commerce platform for selling silk handloom fabrics to targeted buyers was built on the concepts of distributed economics and three pillars of sustainability - environment, economic and social.

Keywords: Silk, Assam, Distributed Economics, Sustainability, Tourism, E-commerce, Small-scale production units

Mr. Jayant Jain is pursuing Bachelor's of Design with minor in Computer Science and Engineering from Indian Institute of Technology (IIT) Guwhati, Guwahati, Assam, India. His major field of interest lies in design research, user experience design and design management. His previous publications include: C. Monga, J. Jain, S. Kumar, and S. Athalve, —Context rich digital games for better learnability in IT project management context,|| CSEDU 2017 Proceedings, vol. 1, pp. 573- 581, April 2017. Publisher: CSEDU 2017 9th International conference on Computer Supported Education - Proceedings (Porto, Portugal: ScitePress, 2017).

Mr. Alok Ratan is pursuing Bachelor's of Design from Indian Institute of Technology (IIT) Guwhati, Guwahati, Assam, India. His major field of interest lies in user experience design and interaction design.



155. Depollution of Rivers and Lakes.

Andréa da Silva Santos, Dr. Claudia Bittencout

ABSTRACT:

Pollution is Brazil's biggest environmental problem in the world, and population growth requires more exploitation of natural resources above the ecosystem's natural resilience.

The decontamination of a river or lake involves the elimination of pipes that discharge effluents harmful to the environmental balance of the area, oxygenation of the water by aeration or agitation and later dredging to the removal of the sludge containing pollutants seated in the bottom of this body of water. The rivers have natural recovery due to the flow of their waters.

In water recovery in Brazil, not all sewage passes through treatment, the pipes use an absolute separator system, where the rainwater collected by the sewers runs in one pipe and the sewer in another.

In the terrestrial ecosystem, disasters and the loss of essential services have serious consequences for mankind, we conclude that we must approach the principles of ecological sustainability, social equity and economic efficiency, to clean up a water body and work with incentive, bringing quality of life, Health and environmental education, to all areas, ending clandestine connections, applying a treatment system or installing a Sewage Treatment Plant (ETE) to treat the city's effluents.

Keywords: Water body. Pollution. Lakes. Rivers

Mrs. Andréa Santos graduated in Eng. Sanitary and Environmental, by FMU- Brazil. Graduated Technical in Occupational Safety by the institution SENAC-SP.

Dr. Claudia Bittencout IPEN-USP, Esp. Eng. Environmental Pollution Control, postgraduate in Sewage Treatment by the TUHH of Hamburg, Eng. Chemistry.

156. Light Steel Framing And Structural Concrete Walls: Sustainable Perspectives for Affordable Housing.

Eng. João Gurgulino, Raphael Saraiva, Dr. Maruska Tatiana

ABSTRACT:

The emerging countries' society has demanded an increase on investments for affordable housing to long forgotten communities with low income – along, customarily, with the mind-set of sustainable development. In the past years, Brazil, for instance, has had an expansion on government programs that subsidize low-cost housing and, thus, studies on this area become more needed. In this paper, the sustainable aspects of two construction methods (Light Steel Framing and Structural Concrete Walls) are reviewed. The theories involving both methods and their practical approach are compared to their economical, ecological and social standards – aiming to identify the more sustainable one. Local aspects such as the supplying of materials, the work force expertise and the possible social obsolesce projections are fairly granted for both techniques. Hence, it was possible to track one construction site of the extension of approximately 1600 houses on Structure Concrete Walls and another one of a single house on Light Steel Frame, which is then extrapolated to an extent of several houses for comparison. Furthermore, based on the sustainable standards (economical, ecological and social), the Light Steel Frame mechanism has demonstrated to be superior in all standards when applied to the geographic conditions.

Keywords: Light Steel Frame, Structural Concrete Walls, Sustainability

Eng. João Gurgulino graduated in Civil Engineering at UniCEUB – Centro Universitário de Brasília, Brazil. Runs a company that specialize on Affordable Housing Projects in Brasília, Brazil.

Raphael Saraiva is student of Civil Engineer at UniCEUB – Centro Universitário de Brasília, Brazil. Participant of the Sustainability at Civil Constructions Research Group and interested at sustainable development.

Dr. Maruska Tatiana have a bachelor's at Engenharia Civil from Universidade Federal da Paraíba (1999), master's at Civil Engineering from Universidade de Brasília (2002) and doctorate at Civil Engineering from Universidade de Brasília (2007). Professor of Civil Engineer Department at UniCEUB – Centro Educacional de Brasília – with emphasis in Sustainability. Headed the project Extendable Engineering at UniCEUB. Head of the Sustainability in Civil Constructions Research Group.



157. Conceptualization and Analysis to Define the Position of the Peruvian Agriculture Sector Regarding Climate Change: A Theoretical Discussion Towards the “Smart-Climate Agriculture” Approach.

Senior Researcher Mariela Silva, Dra. Marta Tostes,

ABSTRACT:

Peru, named as one of the most biodiverse countries in the world, has shown, if not all, many impacts of climate change. This has threatened the existence of many species, the quality of productive land, and has considerably increased the Greenhouse Effect (GHE) emissions, affecting not only agricultural productivity but also and mostly, the quality of crops. Besides, this has led to social and cultural changes referring rural-urban migration and the remaining levels of poverty in most vulnerable populations. Thus, given that the Agricultural Sector was considered one of the main contributors to GHE emissions, responsible at 2015 for almost 17%, it was necessary to establish a clear approach of sustainability from an agricultural view.

In this sense, the Ministry of Agriculture and Irrigation (MINAGRI), head of agricultural sector, in recognition of the importance to consolidate a position as a guideline to sectorial policies and actions regarding climate change, launched, after several debates and discussions, the concept of –Sustainable Agriculture Adapted to Climate Change||, an integrated approach mixing the –smart climate agriculture||, agroecology and sustainable agriculture.

This paper aims to develop the theoretical process to achieve the current main position of the National Agricultural Sector towards climate change.

Keywords: Agriculture, climate change, smart-climate agriculture, sustainable agriculture, adaptation, mitigation, productivity.

Mariela Silva ExceDesa's Senior Researcher, with a major degree in Social Management at Pontificia Universidad Católica del Perú (PUCP), and a specialization in Rural Development by the Energy and Resources Institute (TERI-New Delhi). She has collaborate in specialized projects related to the Agriculture Sector, namely the Action Plan for Adaptation and Mitigation of Climate Change, and the Catastrophic Agricultural Program. She has been rewarded as Best Young Researcher in the 12th Regional Assembly of Rural Agricultural Cooperatives held in New Delhi in 2016. Currently, she is a Senior Researcher at ExceDesa Consultant Group and an independent consultant in strategic planning process for social programs and projects.

Dra. Marta Tostes, Main professor at Pontificia Universidad Católica del Perú (PUCP) in the Management Science Academic Department of, Marta Tostes, is Doctor from Sevilla University, Master and a graduated Economist from Rio de Janeiro Federal University, and specialized in innovation, project management and sustainable development. She is author and coauthor of many academic articles and books, has been and is professor of many universities in Perú, Rio de Janeiro and Sevilla, and is currently CEO of ExceDesa consultant group, where she has a wide experience in strategic management, developments projects and public policies.

158. The Plan of Action of the Agriculture and Irrigation Sector against Climate Change: an Opportunity to Articulate Efforts

Dra. Marta Tostes, Senior Investigator Claudia Motta,
Senior Investigator Alfredo Villavicencio

ABSTRACT:

The participation of the Peruvian greenhouse gasses emissions in the agriculture sector in the total emissions grew from 13% in 2005 to 15% in 2010 and 2012 (MINAM, 2016). However, do the global increase in Peruvian GHG emissions and the raising participation of the agriculture and livestock sector from 2005 to 2012 result from a lack of action around climate change? There are more than 25 strategies, plans and programs that exhibit actions about mitigation, adaptation and disasters risk management on the agriculture and irrigation sector. This investigation aims to demonstrate that these policies were made with a soft integration among them. For these matters, a density, weight and intermediation analysis through Gephi's software, which constructs nets based on the proposed measures on all those documents for adaptation, mitigation and disasters risk management, will be made. Preliminary results show that the most articulated document for adaptation is the National Strategy against Climate Change, for mitigation the iNDC, the coffee's and oil palm's NAMAs and the Plan of Action for Adaptation and Mitigation against Climate Change, for disasters risk management the Budget Program 068, and in general the Ministry of Agriculture's Multiannual Sectorial Strategic Plan.

Keywords: Agriculture, irrigation, climate change, articulation, mitigation, adaptation, disasters risk management

Dra. Marta Tostes, Main professor at Pontificia Universidad Católica del Perú (PUCP) in the Management Science Academic Department, Marta Tostes, is doctor from Sevilla University, master and a graduated Economist from Rio de Janeiro Federal University, and specialized in innovation, project management and sustainable development. She is author and coauthor of many academic articles and books, has been teach of many universities in Peru, like La Molina Agrarian University, and other countries, like Rio de Janeiro and Sevilla. Furthermore, she is CEO of ExceDesa consultant group, where she has a wide experience in coordination of strategic management process in different organizations, developments projects and public policies.

Main investigator at ExceDesa, **Claudia Motta**, is Social Manager from Management Faculty of Pontificia Universidad Católica del Perú (PUCP), specialized in stakeholders' management, development projects and sustainable development. She is coauthor of several academic articles, including the use of methodology based on networks approach to study cases about strengthening social capital for Community Forest Management. In ExceDesa consultant group, she has experience in coordination of strategic management process in different organizations, including prospective, developments projects and public policies evaluation.

ExceDesa's Senior Investigator, **Alfredo Villavicencio**, is a graduated Economist from Pontificia Universidad Católica del Perú (PUCP), specialized in environmental economics and recently admitted to Columbia's Masters of International Affairs with a concentration in Political and Economic Development. He has been part of the elaboration groups of several Peruvian environmental policies, such as the National Strategy on Green Growth, the Plan of Action of the



Agriculture and Irrigation Sector against Climate Change, and the Financial Plan of the National Service of Natural Protected Areas. Currently, he works as a financial specialist on biodiversity conservation on the Peruvian Society of Environmental Law, and is senior investigator at the consultant group Excelencia y Desarrollo SAC.

159. Divorce and its consequences on teenagers.

MSc.Klotilda Muca

ABSTRACT:

In the framework of implementation of the legislative reform, Republic of Albania has adopted and implemented a complete and contemporary national legislation in compliance with the international conventions that is summarized in the Law No. 7895 of 27 January 1995—On the Penal Code of the Republic of Albania, amended by Laws No. 8279 of 15.01.1998; No. 8733, of 24.01.2001; No. 9275, of 16.09.2004. Other laws cover different aspects of drug control. The importance of drug prevention in Albania has been reflected by the endorsement of National Strategy Against Drugs 2004–2010 approved by the Decision of the Council of the Ministers No. 292 of 7 May 2004. The strategy was comprehensive and covered both the drug demand reduction and drug supply reduction. The strategy recognized the serious nature of the drug problem at national and international level and admitted that the success might be achieved only by coordinating the efforts of all acting parts, namely the government, civil society and international partners. That first National Drug Strategy was implemented over the period 2004–2010. The number of drug seizures and arrests increased, however, drug related crimes remained a serious problem in the year 2014. The fight against drugs remains one of the main priorities of the Albanian Law Enforcement Agencies. In 2014 drug related crimes remained a serious problem for Albania. The country continued to be both a country of origin (for cannabis and its derivatives) and a transit route (for hard drugs). In 2014, however, the number of drug seizures and arrests increased dramatically. In the vicinity of the Southern village of Lazarat, Cannabis had been cultivated at a large scale until the summer of 2014, when massive and successful police operations were conducted to eliminate these activities. A common platform for the execution of proactive investigations has been developed in the framework of implementation of the cooperation agreement between the Prosecutor General, the Ministry of Interior and the State Intelligence Service (SHISH). However, the SHISH and its head, appointed during the term of the previous government, have been widely criticized by the recent government for their lack of cooperation with the police.

Keywords: Drug policy, Drug related crime, Criminal Justice, Prison, Legislative Reform, Penal Code, Penal sanctions, principles of lawfulness, penal-prosecuted, illegal drugs

Klotilda Muca is an English Language Lecturer. She has been teaching Business English at "Faculty of Economy", University of Tirana; Legal English at "Faculty of Justice" and English Language Lecturer at "Aleksander Moisiu" University in Durres. Klotilda is very fond of "Using English for Specific Purposes", discipline which in 2011, encouraged her to start her studies in Justice. In 2016 she successfully completed her Bachelor studies in Justice and is currently attending Master of Science in the same discipline.



160. Designing „smart“ cities by cultivating a culture of „smart“ citizens – a case study of Jacksonville, FL by a young engineer.

Adah Shair, HDR. Inc.

ABSTRACT:

Are our cities well-equipped to sustain the growing demands of urbanization? Is designing ‘smart’ cities the solution or is cultivating a culture of ‘smart’ citizens essential as well? A case study of Jacksonville, Florida is considered. The case study was conducted in three steps: first, using easily accessible resources like the Esri ArcGIS, resilience factor of the city was visualized and mapped by considering three parameters namely urbanization, water infrastructure and landscape development. Next, the city policies in place were analyzed to determine if they are adequate to tackle the forthcoming challenges that the resilience mapping suggests. Lastly, ways by which city citizens can lobby to bridge the gap between the needs of the city for a sustainable future and the policies and solutions in place were researched and are presented in the study. People are the cities and this case study showcases how each one of us can educate ourselves about the challenges our cities face and be involved in urban decision making to build more resilient cities.

Keywords: Smart cities, Sustainable urban development, Young Professionals, Active citizens

Adah Shair graduated with a bachelor’s degree in Civil Engineering from the University of North Florida and currently works as a bridge engineer for HDR Inc. She is deeply rooted in the cause for advocating for and designing better cities – ones that are sustainable and efficient. Watching cities turn into concrete and traffic jungles is a concern Adah takes personally and believes as upholding citizens of Earth, it falls upon all of us to strive to protect the environment that nourishes us and sustains our lives; it is not just the responsibility of the government and the city planners. Adah’s independent study of her city, Jacksonville, is testimony to the fact that people can be actively involved in advocating for better city planning, regardless of their profession or background.

161. Sustainability in Closed Underground Mines by use of Mine Water for Renewable Energy Storage.

Mr. Javier Menéndez, Prof. Jorge Loredó

ABSTRACT

By 2020 it is intended that the country produces 20% of its energy from renewable sources, therefore replacing the energy based on fossil fuels.

When mines finish their activity, mine water can be used as an important resource, converting mining exploitations into storage and production facilities of renewable energy and generating new economic activities in the mining regions. Pumped storage hydroelectricity (PSH) from mine water in the closed mines has proved to be an effective solution for this purpose.

The network of tunnels in closed-down mines has been suggested as a possible lower storage for the development of an underground pumped-storage power plant (UPSP). This infrastructure can hold approximately 200,000 m³ at depths that range between 300- 600 m. The installed electrical power could reach 30MW per facility.

Also, the significant reduction of the adverse impacts on the environment and local residents would be an advantage compared to other conventional hydro power projects. PSH facilities are the most technologically advanced, widely available resources to provide balancing and integration of variable renewable technologies, such as wind and solar.

Keywords: Environmental sustainability, closed mines, mine water, pumped-storage.

Mr. Javier Menéndez is a Mining Engineer with 15 years of experience in research and development of mining exploitation and renewable energy generation systems. Author of communications in international conferences in the field of the mining sector.

Prof. Jorge Loredó is Professor in Mining Exploration Department of the Oviedo University (Spain). Author of communications in international conferences/papers in JCR journals. Visiting Professor in the University of California at Berkeley in 1988.



162. Predictive Analytics for sustainable environmental management

Dr. Nitin Singh, Dr Baharul Islam

ABSTRACT

The forest adjoining areas are prone to human-animal conflict. In such areas, there is an urgent need to develop methods to prevent animal intrusion in human habitat while, at the same time, ensuring that wild animals are not harmed. We have applied data sciences

to track animal (in this case, panther) movement in forests and its intrusion in villages adjoining the forest environment. The Indian panther (*Panthera pardus fusca*) is a panther subspecies distributed across the Indian subcontinent. We find that analytics on pug-mark data can be effectively applied to simulate movement of the animal and thus undertake preventive measures.

Keywords: Predictive, analytics, environmental management, stochastics modeling, simulation, public systems

Dr. Nitin Singh is on the board of Intellution LLP a s vice president for business analytics. He also holds a faculty position at IIM Kashipur, a premier business school in India . He has worked for KPMG and Hexaware Technologies in the past.

Dr. Baharul Islam is a faculty member at IIM Kashipur (India).

163. Significance of Urban Green and Blue Spaces: Identifying and Valuing Provisioning Ecosystem Services in Dhaka City.

Ms Naeema Jihan Zinia, Dr. Paul McShane

ABSTRACT

Ecosystems in urban areas include natural/semi-natural green and blue spaces. They play crucial roles in regulating ecological functions, supporting primary production, creating food provision and non-material benefits. Apart from aesthetics, other benefits are often overlooked as prices are not attached to them. Dhaka has an annual population growth rate of 3.5%. Continuous urban expansion is degrading ecosystem services (ES) that are affecting the residents' well-beings. This study is one of the first attempts towards identifying and valuing ES human beings obtain from ecosystems in Dhaka city. ES were evaluated from field level observation, household survey, in-depth interview with experts and local citizens and literature review methods. Data analysis approaches include ES analysis and market price based valuation.

Cultivated lands, parks, rooftop gardens, roadside trees, open spaces, playgrounds, ponds, lakes, canals, rivers and wetlands comprised ecosystems studied. The main provisioning services generated were crops, fruits, vegetables, fish, water, fodder, fuel wood, timber and medicinal plants. Rooftop gardens yearly produce 3,477 USD worth fruits and vegetables and may play an important role in reducing urban heat island impacts expected to increase with climate change. This study will motivate citizens and policy makers for sustainable urban ecosystem management in Dhaka and similar cities.

Keywords: Urban Ecosystem, Green and blue spaces, Provisioning services, Valuation, Dhaka.

Ms Naeema Jihan Zinia is currently performing doctoral research on —Green adaptation for ecosystem services management in Dhaka: A socio-economic evaluation|| at Monash University, Australia. Her research is of interdisciplinary kind which revolves around the People-Planet-Profit concept. She intends to assess urban ecosystem services including economic valuation in order to identify economically feasible and socially acceptable green strategies for managing ecosystem services in Dhaka. Prior to starting her doctoral research, she worked as a researcher at the Center for Environmental and Geographic Information Services (CEGIS) in Dhaka and before that she used to teach Economics at undergraduate levels. She holds bachelor and master of social sciences degrees in Economics from the University of Dhaka and MSc degree in Urban Environmental Management with specialization in Environmental Systems Analysis from Wageningen University, the Netherlands. Her research interest includes natural resource management, environmental valuation, vulnerability assessment, cost benefit analysis, scenario analysis; GIS and remote sensing, green adaptation, ecosystem services, land use and land cover change and climate change.

Dr Paul McShane brings extensive international experience in science and business administration in linking research and policy responsive to sustainable natural resource management. He currently leads and manages interdisciplinary research and development projects in Australia and in Asia (Indonesia, Vietnam, South Asia). He brings particular capability in marine and coastal resource management, and seafood supply chain management. Dr McShane is internationally recognized for his expertise on the fisheries biology and early life history of abalone. Dr McShane is an Adjunct Research Fellow at School of Social Sciences, Faculty of Arts, Monash University. Previously he was the Chief Research Officer at Monash Sustainable Institute, Monash University.



164. Decision Support System Based on Artificial Intelligence, GIS and Remote Sensing for Sustainable Public and Judicial Management

Georgios N. Kouziokas, Konstantinos Perakis

ABSTRACT

The reformation of public and judicial management has become an important challenge nowadays with the development of the Information and Communication Technologies and also with the rapid development of the geospatial and remote sensing technologies. This paper presents a decision support system that was developed based on Artificial Intelligence, Geographic Information Systems and Remote Sensing for implementing Sustainable decision-making strategies. Several indicators were defined in order to build a decision-making system that will help the authorities to apply the adequate public management strategies. Geographic Information Systems were used in order to process and visualize spatial data that are important in public decision making, such as environmental data, infrastructure data and crime data. Remote sensing was used regarding the manipulation of satellite images that would facilitate public decision making. Artificial intelligence was used to build neural network models important in the decision making. The developed system provides a more holistic view of the factors that affect public and judicial management and aims at improving the framework of public decision making and spatial planning and also at supporting the application of the most adequate public management policies.

Keywords: Artificial intelligence; Decision Support System; Environmental information; Geographic information systems; Public management; Remote sensing; Sustainable development.

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165. Sustainable Supply Chain Management of Small And Medium Enterprises: Perspectives on Financial Performance

Mamorena Lucia Matsoso, Prof Richard Chivaka

ABSTRACT

Sustainability in supply chain management (SCM) has received a lot of attention in large corporations over the years although little has been done in small and medium enterprises (SMEs). It is argued that of the three dimensions of triple bottom line (TBL) namely economic, social and environment, economic is the most difficult to achieve leading to the death of many businesses prematurely. Therefore the objective of the study was to evaluate the performance measurement practices of SMEs leading to a sustainable supply chain management (SSCM). This is a conceptual paper that evaluated the sustainability of SMEs in SCM from the economic dimension of TBL. The data was collected from the review of literature on SSCM particular in manufacturing SMEs. Major findings indicate that the emergent economic performance measures have not been well addressed particularly in SMEs. They measure their performance on ad hoc basis without any formal systems in place. SMEs should place more emphasis on non-financial measures (Lead indicators) which when effectively implemented result in higher financial return (Lag indicators).

Keywords: Sustainability, sustainable supply chain management, Supply chain management, small and medium enterprises, manufacturing, performance measures

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166. Is the Renewable Energy Sector Financially Attractive? Financial Bubbles in the WilderHill Indices

MSc Iskra Sokolovska, Dr. Aleksandar Kešeljević

ABSTRACT

Renewable energy will have an ever more important role in the green energy transition. The latter needs private sector involvement in terms of finance. However, the sector has been inherently volatile which makes it less attractive for investors. We aim to test one reason for this proposition on the WilderHill clean energy indices by testing for financial bubbles. Namely, renewable energy has been on the market for a while which might mean that the previous hindering factors might not be at play today, or at least not to such a strong extent. The results provide evidence for a bubble in only one of the indices. Specifically, we identify two bubble episodes prior to the crisis in the WilderHill New Energy Global Innovation Index only. There is not enough statistical evidence to identify a bubble in the WilderHill Progressive Energy Index or the WilderHill Eco Index. This might indicate better prospects for the sector as a whole as it implies that its riskiness, at least when observed in terms of bubbles has decreased.

Keywords: Financial bubbles, clean energy, green transition

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