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Introduction

The 4th ICSD 2016 is organized by the European Center of Sustainable Development, at the Roma Eventi- Fontana di Trevi, Piazza della Pilotta, 4 Rome, Italy from:

Friday 16 to Saturday 17 September, 2016.

4th ICSD2016 will be an excellent opportunity to present your projects and discuss the latest results in the field of Sustainability Science. The general aim of the conference is to promote international collaboration in Sustainability Science and related disciplines.

The Conference theme is *Creating a unified foundation for the Sustainable Development: research, practice and education*. This theme emphasizes the strong foundation that is provided by using research to inform our everyday practices, policies, and research approaches. The 2016 Conference will once again provide a forum for the sharing of ideas, presentation of research findings, and discussion of professional issues relevant to Sustainability Science.

On behalf of the Scientific Program Committee, I have great pleasure in presenting this important event of the Scientific Community.

The Conference topics are distributed in the range of the following streams within the ICSD2016 program:

- 1. Economic Sustainability:**
- 2. Environmental Sustainability:**
- 3. Socio-Cultural Sustainability:**

All abstracts were reviewed by members of the ICSD2016 Steering Committee for rating of abstract quality and presentation content.

Selected papers are also published at the European Journal of Sustainable Development.

Further details in accordance with the instructions of the ICSD2016 are provided on the [Call for Papers](#) page at: www.ecsdev.org

I would like to thank you for your scientific contribution to the Second International Conference on Sustainable Development and look forward to having the opportunity to showcase and disseminate your research.

Special thanks also to the organizing committee, and all the people that worked hard, to bring in light this considerable event

Yours sincerely

[Professor Gian Paolo Caselli](#)

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Conference Program

1. Guimarães: How to Preserve the legacy creating a sustainable future?

Prof. Isabel Loureiro, Filipe Fontes, Prof. Paulo Ramísio

ABSTRACT:

Nowadays, cities development is focused on planning Urban areas towards a sustainable goal. Models are being developed based on the analysis of four main areas: land-use and transport; eco- districts and buildings; waste recycling and Energy, and mobility. Regarding Guimarães, which is a medium size city located in the North of Portugal, the challenge "of sustainability and greener city..." lies on the transformation of a city based on a polycentric model, a unique model conceptualized for a singular territory where a balance between economy, culture, social aspects and environment achieving Welfare and Urban comfort, is required. This paper aims to present the concept as well as the strategy defined by the Municipality that supports the vision of Guimarães be a REFERENCE of good urban practices using the strengths of the territory on behalf of the community.

Keywords: Sustainability, territory, polycentric model, strategy, community

Isabel Loureiro, 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.

Filipe Fontes, is the Director of the Urban Department of Guimarães City Hall where He is the technical leader of the urban planning department. He is an architect graduated by Oporto school of architecture (Oporto University) with an additional training in urbanism, housing and construction. He is also responsible for the Green Areas Indicator Area of Guimarães Candidacy to European Green Capital Award.

Paulo Ramísio is the Pro-Rector for Infrastructures and Sustainability of the University of Minho, UMinho Manager for Carbon and Energy and, member of the Board of Directors of the UMinho Agency for Energy and Environmental. He is the Director of the Landscape Laboratory of Guimarães, President of the Portuguese Association for Environmental and Sanitary Engineering and President of the Portuguese Governing Member in the International Water Association. He also is a member of the Executive Committee of Guimarães Candidacy to European Green Capital Award.

2. Significance Of Cultural Heritage Preservation In Sustainable Cultural Tourism: Muradiye Complex In BURSA, TURKEY

Assoc. Prof. Dr. Selen DURAK, Saliha TUPAL YEKE, Assoc. Prof. Dr. Tulin VURAL ARSLAN

ABSTRACT:

Cultural tourism has become one of the important sectors of tourism in recent years with the growing awareness on cultural heritage. As being aware of the tourism potential of cultural heritage sites, policy makers pay special attention to preservation of these sites. However, the increasing number of visitors depending on the promotion of culture and history began to endanger the sustainability of heritage sites. In order to ensure the balance between preservation and utilization, researchers investigated the ways for welcoming large number of visitors without risking the sustainability.

Bursa, as one of the recent UNESCO World heritage sites in Turkey, has a growing potential in terms of cultural tourism with its peculiar Ottoman urban pattern including building complexes called kulliyes. This situation caused an increase in the number of visitors. Muradiye Kulliyesi is one of the attracting places in Bursa in terms of its symbolic and historic characteristics including a mosque, a madrasa, a bath and the tombs of earlier Ottoman Sultans. This paper aims to describe the practices in terms of preservation for ensuring the sustainability of the complex.

Keywords: Sustainability, Cultural Tourism, Heritage, Preservation, Bursa, Turkey.

Assoc. Prof. Dr. Selen DURAK is graduated from Middle East Technical University as a bachelor of architect in 1996, completed Master of Architecture in Uludag University Architecture Department in 2003 and PhD in Middle East Technical University in 2010. She is now working as an associate professor in Uludag University Faculty of Architecture. Her field of interest is universal and inclusive design, children's environments, history of architecture and cultural heritage.

Saliha TUPAL YEKE is graduated from Istanbul Technical University in 2004, completed master degree in Istanbul Technical University Department of Restoration in 2007. She continued working in historical sites and buildings in Istanbul and Bursa. She started her doctorate in Uludag University Faculty of Architecture Department of History of Architecture. Her field of interest is architectural design, cultural heritage and preservation.

Assoc. Prof. Dr. Tulin VURAL ARSLAN is graduated from Middle East Technical University as a bachelor of architect in 1996, completed Master of Architecture in Middle East Technical University in 1999 and PhD in Istanbul Technical University Faculty of Architecture in 2005. She is now working as an associate professor in Uludag University Faculty of Architecture. Her field of interest is architectural design, design of shopping centers and the development and transformation of commercial districts in historic city centers.

3. Past and recent trend in tourist arrivals in Leh district (Ladakh - Indian Trans-Himalaya). Influences on the local sustainable development paths.

Dr. Vladimiro Pellicciardi

ABSTRACT:

Initiated in 1974, tourism in Leh district is now (2015) 41 years old. During this period, approximately 1,558,000 tourists have visited Leh district (Ladakh, Indian Trans-Himalaya) of which 702,000 are foreigners and 907,000 are Indians.

Tourism sector has rapidly become one of the most important aspects of Ladakh economy. Moreover, it also poses several problems, the most serious probably being the issue of sustainable development (e.g. impacts in act inside Ladakh society, economy, fragile ecosystem, traditional values and cultural heritage).

This study investigated statistical data on tourism traffic volume in Leh District (Ladakh, Indian Trans-Himalaya) to highlight new patterns and trends in the tourist arrivals (International and National) during the period 2002-2015 and the potential impacts on local eco-system and socio-cultural heritages.

At the same time scaling up tourism, contribute to the economic and social wellbeing of the people of this region.

Conclusion: "Tourism System in Leh district" is "complex and non-linear", therefore "non-resilient", because it depends from several factors and different issues not under local control, that can occur at unpredictable time and determine the "growth" or the "fall" of the system.

Analysis of the recent data on tourist arrivals confirm this thesis.

Keywords: Tourism, Ladakh, Leh district, Sustainable development

Dr. Eng. Vladimiro Pellicciardi got his Ph.D. in "Sustainable development and International Cooperation" at CIRPS (Interuniversity Research Centre on Sustainable Development, La Sapienza University, Rome, Italy). His research interests include topics of human-environment interaction and sustainable development studies in Asia with a regional focus on the Indian and Nepalese Himalaya. In 1993, he was in Cambodia as UNV Engineer for the UN peacekeeping mission (United Nations Transitional Authority in Cambodia (UNTAC)). He was a senior consultant (Renewable Energy Suitable Technologies Consulting Engineer, UNITUSCIA, Viterbo, Italy) for "Promotion of olive production and consumption in Nepal" international cooperation project (2005-2008).

4. Designing Autonomous Communities in Suburbs of Japan

PhDc. Ikuyo Kikusawa, Prof. Kayoko Kondo

ABSTRACT:

In Japan, suburbs have faced the issues of depopulation, ageing and abandoned houses contrary to excess concentration of population in mega cities. Before losing their ability of providing city functions, suburban cities need to rebuild autonomy. In Japanese suburbs, however, the loss of unique character of the locality caused by uniform outlooks such as chain stores has further prompted social decrease in population. Such a city design is often drawn up through a conventional decision making process, in which retired male dwellers are the key figures.

This paper argues that social capital creates strong local autonomy or self governance. Amongst a comparison analysis of existing models to measure local sustainability, normative indicators are often explained as environment, society and economy. Such classification may limit the evaluation of social capital. Thus, this study explores the incorporation of the Apron Diagram developed by Arne Ness. By placing "local autonomy" as a common platform, people with different wills can be tied and collectively generate local dynamism and attractiveness.

This theoretical approach is based on the questionnaire and interview surveys conducted in Itoshima City, Fukuoka. The surveys learned a gap between people's intention to and the level of actual participation in town development.

Keywords: Suburb, autonomy, community development, social capital, apron diagram

Ms. Ikuyo Kikusawa is a doctoral student of Graduate School of Design, Kyushu University, Japan. She earned the master's degree in the School for Resource and Environmental Studies in Canada where she conducted a field research on tree line dynamics in the International Polar Year Project. After graduation, she began working as policy researcher at an international environmental policy research institute. She was in charge of operating a small grants program co-organized by UNEP for supporting grass-roots environmental projects in the Asia-Pacific region. She was after appointed chief researcher to direct city-to-city cooperation for low carbon development where her research interests focus on governance and use of local resources.

Prof. Kayoko Kondo, Professor at the School of Design, Kyushu University.

5. Conflict between coastal tourism development and sustainability: case of Mostaganem, Western Algeria

Dr. Nasr-Eddine TAIBI

ABSTRACT:

Dependency on oil and gas incomes has urged Algeria to support tourism development as a means of creating other sources of wealth. However, this is not done without environmental damages. Indeed, the insufficient number of host accommodations at the coastal areas has led to chaotic construction projects. Mostaganem is an example. It attracts recently 11 million tourists yearly, although it lacks in host accommodation. To overcome this issue, new tourist infrastructures close to the shoreline and among the coastal dunes have been programmed regardless of the Littoral law that protects the coastal strip (300 m). Moreover, the wastewater issue is neither discussed nor solved, in spite of a lack of wastewater treatment plants in this area. This work is based on data collected from the Algerian Government, the local Department of Tourism and the administrative maps of the touristic extension zones. Shore urbanisation endangers the sustainability of the beaches as a socioeconomic resource. Seaside tourism could be developed without any beach urbanization by constructing in the nearby coastal rural municipalities. Tourists would enjoy the beach during the day and would return to their accommodation in the rural municipality. This would benefit economically both the local population and the environment.

Keywords: Coastal tourism; Construction; Littoral law; Sustainability; Socioeconomic; Mostaganem; Algeria.

Dr. Nasr-Eddine TAIBI is an associate professor at the Marine Sciences and Aquaculture Department, University of Mostaganem, Algeria. He is head of a research project on valuation and management of marine and littoral resources. His research areas include: anthropic impacts on the coastal zone, coastline monitoring, coastal erosion and sustainable seaside tourism.

6. Strengthening socio-cultural heritage sustainability in tourism: experiences from tertiary education in Bhutan

Dr. Rona Chandran, Dr. Channa Gunawardena

ABSTRACT:

Bhutan is a landlocked Himalayan Kingdom that has pursued a unique, sustainable, approach to development termed Gross National Happiness (GNH).

Despite impressive efforts Bhutan's tourism faces challenges. There is limited participation by local communities in the tourism value chain. Handicrafts and produce are imported. Authentic culture and heritage are not adequately reflected in Bhutan's tourism offering resulting in few repeat tourists.

This paper presents the practical application of a framework to enhance socio-cultural heritage sustainability in two major tourism and hospitality education programs in Bhutan. The framework combines Bloom's taxonomy of Cognitive Development with the five principles and four steps to successful cultural heritage tourism of the National Trust for Historic Preservation and mainstreaming principles for successful adoption of sustainability.

The framework educates graduates on the importance of socio-cultural heritage sustainability for enhancing tourism, whilst preserving Bhutan's traditions. They develop skills and knowledge to practically integrate socio-cultural heritage sustainability in day-day tourism activities.

The paper demonstrates that socio-cultural heritage sustainability, when appropriately contextualised, has the potential to be mainstreamed across education programmes. An important factor is ensuring education programs provide a practical and customised approach for implementing sustainability measures, linked to the daily life context of students.

Keywords: Socio-cultural, heritage, sustainability, education for sustainable development, sustainable tourism

Dr. Rona Chandran, Taylor's University (Malaysia) is a Senior Lecturer and Coordinator of Teaching, Learning, Research and Innovation at the Centre for Languages, Taylor's University. Rona has over 17 years of experience in social sciences covering education and anthropology. She has substantial experience across the education cycle including policy, planning, research, programme management, curriculum development, training of trainers and instruction. She has undertaken consultancy and research focussing on ethnic identity and cultural heritage sustainability in Asia. This includes substantial work on Education for Sustainable Development (ESD) focusing on environmental and socio-cultural sustainability and means of embedding these in the classroom. Rona's contributions to major policy documents include the 2016-2030 SCP Malaysia Blueprint, Input Paper for the 11th Malaysia Plan, Education for SCP in Malaysia Strategy paper, Malaysia country status report for ESD, Guidelines for cultural heritage sustainability in Bhutan's hotel classification system and Sustainable tourism product development for Bhutan. Her work has resulted in publications with international organizations such as the EU, ASEAN Secretariat, UNESCO, IGES and UN University. She holds a Diploma in Education, a Bachelor of Education and a PhD in Anthropology from the University of Malaya.

Dr Channa Gunawardena Dr Channa Gunawardena is currently Team Leader of the EU Switch Asia Policy Support programme for the Government of the Philippines which focuses on sustainable

consumption and production, which is being implemented by GFA Consulting Group. He also serves as a consultant to the Economic Planning Unit (EPU), Prime Minister's Department Malaysia and the Association of Southeast Asian Nations (ASEAN) Secretariat in Jakarta. In a career spanning 18 years, Channa has worked as a consultant and project manager to governments, industry and civil society in the areas of sustainable development, development management, monitoring and evaluation (M&E) and ICT for development (ICT4D). This includes integrating sustainable development modules in secondary and tertiary education. He has served in over 40 international projects across Europe and Asia. These include programs supported by the European Union (EU), UNDP, the Asian Development Bank, USAID and DFID. Channa holds Bachelor's and Master's Degrees from the renowned Lancaster University Management School of UK and a PhD in the Management and Evaluation of Development Projects.

7. The centrality of food security to the realization of the Sustainable Development Goals: A case study of a peri-urban township in South Africa

Prof. Betty C. Mubangizi, Prof. John Cantius Mubangizi

ABSTRACT:

The physical survival of man has at all times been dependent on food. Hence the right to food is inseparably connected with the right to life. Accordingly, there is no shortage of literature on the importance of food security. There is also no shortage of literature on the relationship between food security and development. That is why the Sustainable Development Goals (SDGs) include a number of objectives related to agriculture and food. SDG 2 focuses explicitly on food whereas several other goals relate to challenges in the food system. The paper begins with a discussion on the right to food and the critical importance of food security to sustainable development. Using Folweni, a peri-urban township outside Durban in South Africa as a case study, the paper then seeks to demonstrate the importance of institutional arrangements, partnership dynamics as well as intergovernmental relationships in the planning and implementation of food security interventions and programmes. It is argued that without such collaborative arrangements the interventions cannot succeed not only at a local level but also at the national, regional and global level - with concomitant implications for sustainable development and the achievement of the SDGs.

Keywords: Right to food, food security, sustainable development, partnerships.

Professor Betty C. Mubangizi – is interim Dean of the School of Built Environment and Development Studies at the University of KwaZulu-Natal in Durban, South Africa. She holds a Masters in Agricultural Development from the University of London and a Doctor of Public Administration and Development Management from the University of KwaZulu-Natal. She has published widely in local and international Journals as well as presented at local and international conferences. Prof Betty C Mubangizi teaches on post graduate programmes in the discipline of Public Governance and supervises Masters and PhD students. An ardent believer in social justice, Professor Mubangizi writes opinion pieces in local media and was recently part of research network on poverty managed by the Comparative Research Programme on Poverty (CROP). Prof BC Mubangizi is an NRF-rated researcher.

Professor John Cantius Mubangizi, University of KwaZulu-Natal, South Africa: is the Deputy Vice-Chancellor and Head of the College of Law and Management Studies at the University of KwaZulu-Natal. His qualifications include a Bachelor of Laws (LLB), a Masters in Public Law (LLM) and a Doctorate in Law (LLD). They also include a Diploma in Education, a Diploma in Legal Practice and several other professional certificates. He is the author of a book entitled *The Protection of Human Rights in South Africa: A Legal and Practical Guide* (Juta & Company: 2004 & 2013) and he has published more than fifty peer-reviewed articles in accredited South African and international journals. He has also written several chapters in academic books and presented numerous papers at conferences across the globe. He is an NRF-rated researcher. He is also a member of the Academy of Science of South Africa (ASSAf) and serves as Advisor and Member of the ASSAf Council. He is the Chair of the Higher Education Quality Committee (HEQC) and a member of the Council on Higher Education (CHE) of South Africa.

8. Integrating civil participation into Sustainable Development practice

Dr. Christelle Cazabat

ABSTRACT:

The Human Development approach introduced in 1990 by the United Nations Development Programme promoted health, education, freedom and civil participation alongside the more traditional pursuit of income. Twenty-five years later, as income inequalities grow larger in every part of the world, human development is more relevant than ever. Civil participation in particular has become a central element of sustainable development policies and should be considered in view of the new Sustainable Development Goals.

An increasing number of development projects have involved beneficiaries in their elaboration, implementation and evaluation since the beginning of the new millennium. Civil participation is being recognized as an asset towards sustainable development for several reasons including improved efficiency, fairness and resilience. A review of reports from development practitioners and best practices in the field of civil participation towards sustainable development highlighted the importance of engaging individuals and communities to secure equitable and durable progress. Yet, in a number of cases, results are not up to the expectations and persisting obstacles hinder the potential of such initiatives.

With the aim of reaching the Sustainable Development Goals by 2030, development practitioners will have to learn from these previous experiences and integrate civil participation into their programmes more efficiently.

Keywords: Civil society, civil participation, human development, development policies, Sustainable Development Goals

Dr. Christelle Cazabat is a Research Analyst in the Human Development Report Office at the United Nations Development Programme in New York. She holds a PhD in Social Sciences from the University of the Sorbonne in Paris and studies the impact of civil society in development policies. She worked for the French Embassies in Cameroon and in the Dominican Republic and for the World Health Organization in Egypt and in Switzerland.

9. International Migration and Sustainable Development and Social Integration.

Dr. Talamo Giuseppina

ABSTRACT:

The aim of this paper is to examine international migration studies following an interdisciplinary approach. The starting point is an examination of the increasing international migratory flows, that represents one of the most visible manifestations of the globalization process. Limiting migration to the movement of people, goods, capital or services may not capture very accurate measurements of the impact of migration both on host societies and on countries of origin. Also, climate change consequences will have detrimental effect on migration. Although the recent global crisis has added new concerns in relation to migrant situation particularly in the countries more affected by the recession, analyses of the impact of globalization indicate that migration provides a driving force for sustainable development. Using recent data, the main characteristics of migration flows in Italy and in Oecd area will be presented. Analyses show that there is a positive correlation between migration and sustainable development, which has often been underestimated or misunderstood. Limiting migration to the movement of people, goods, capital or services may not capture very accurate measurements of the impact of migration both on host societies and on countries of origin. Also, climate change consequences will have detrimental effect on migration.

Key Words: Migration, Sustainable Development, Integration, Economic Growth

Dr. Talamo Giuseppina, Researcher in Economics, Faculty of Law and Economics, University of Enna "Kore", Italy. International Migration and Sustainable Development and Social Integration.

10. Social justice in Development Studies literature

Dr. Ingy Mohamed Abdelhameed

ABSTRACT:

This paper critically analyses the importance of social justice in development studies. In doing so, it raises some questions about the attention that has been given to social justice in development literature since late Forties, especially, How did this affect development policies on both national and international levels? And How all above mentioned were affected by the great international events in more than sixties years? It uses historical conceptual analysis to explore the main changes that social justice as a concept has gone through in development studies and the impact of ideological and political changes on it.

Keywords: Development- Social justice- Political Science-Human Development

Mrs. Ingy Abdelhameed is a senior researcher in the national centre for criminological and sociological studies. Worked from 2009 to 2013 as a senior Researcher for civil society and civic engagement, UNDP, Egypt. PHD student at Faculty of economics and political science, Cairo University. Thesis topic "social Justice in development literature". Participated at many regional and international conferences last one was in March 2015 on "Social Justice in The Arab World" Arab council of social science in Lebanon. Had many articles in Different Regional Journals last one is " the potential role of informal civil society in Egypt from theoretical perspective, John Gerhard Center ,February.2015,Egypt.

11. Right to Development in the Context of Sustainable Development Goals: Sustainability and Equality

Dr. Majid Reza Momeni, Dr. Pouria Askary

ABSTRACT:

Right to development as a principle enshrined in the various UN documents, particularly in the UN Millennium Declaration, is the manifestation of a drastic change in the discourse of development and its conceptual understanding and the fact that it can no longer be conceived in a quantitative manner with emphasis on a singular unit of measurement such as economic criteria. The concept of development has been rather considered as a right embodied in the human rights discourse which would involve the socio-economic, political and environmental aspects of human activities in a qualitative and holistic way. Like all human rights, the right to development belongs to everyone, individually and collectively, with no discrimination and with their participation. That is why the expansion of MDGs into SDGs may be assumed as a historic event in the UN which emphasizes on the issue of sustainability in different fields of economy, culture, politics and environment for the materialization of the development goals. In this regard, the issue of sustainability and its realization would also require to include the right to equality and solidarity apart from the right to development under a general framework of human rights with a new perspective and understanding of equality under international law. The present research work is an attempt to address the main question as to what is the relationship between sustainability and equality and its impact on the materialization of development goals? The hypothesis stresses on the fact that there is a serious gap between the concept of sustainability and equality and there must be compatibility between the two concepts in order to achieve the goals. The authors come to the conclusion by stating that we need a new conceptualization of the relationship between sustainability and equality with a fresh interpretation of the principle of equality enshrined in the UN Charter to reach development in different fields of economy, politics, culture and environment as a right for all in the context of SDGs. This research is conducted through analytical-descriptive method using primary as well as secondary data including documents, interviews, internet sites, books and journals.

Keywords: Development, Human Rights, Sustainability, Equality, UN, SDGs

Dr. Majid Reza Momeni is Assistant Professor, Department of International Relations, Allameh Tabataba'i University, Iran.

Dr. Pouria Askary Assistant Professor, Department of International Law, Allameh Tabataba'i University, Iran.

12. Sustainable Development: Towards a new paradigm for India

Raghav Srivastava, Namrata Ramachandran

ABSTRACT:

Thesis Statement: The current model of development in India needs to be re-evaluated, and the effects of social fragmentation and breakdown of traditional social structures and livelihoods properly accounted for in impact assessments.

Methodology: This paper attempts to study the various cost-benefit relationships for minority stakeholders using the proposed Nyamjang Chhu hydroelectric power plant in Tawang District of Arunachal Pradesh (North-east India) as a point of reference. The ongoing litigation in this regard before the National Green Tribunal is the chief source of data (viz. Court orders and pleadings filed by the parties). Additionally, judgments of the higher judiciary, scholarly articles and statutes will be referred to, to (i) evaluate the legality of state actions, (ii) examine the ability of existing institutions to self-correct and (iii) provide a context for the various events in the course of this dispute.

Results: (1) The economic allure of hydroelectric projects in the hilly regions of India very rarely results in a proper assessment of their ecological and social externalities. The authors note that there is a pressing need to re-evaluate the current Indian model of sustainable development and social impact assessment, going forward. The current parameters are inadequate.

(2) The current model of development in India is not sustainable, given the social dissociation and disintegration that frequently occurs between traditional communities and their environment. Although social impact assessment has been included as an inalienable part of the environmental impact assessment required to be conducted under Indian law, it seems that the same is unable to meet the ends it seeks to achieve.

Implications: The framework of social impact assessment has not changed since the introduction of the concept in India. This paper aims to recommend a better legal framework for assessing the externalities of development as experienced by minority stakeholders – the current framework is found to be woefully inadequate.

Keywords: Sustainable development, Social impact assessment, Cultural dissociation, Hydroelectric power project, India, Strong sustainability

Raghav Srivastava A lawyer by profession, works with the Centre for Environmental Law at WWF India, in the field of environmental law and policy. He has a keen interest in mountains, and frequents Himalayan trails as often as work allows him to.

Namrata Ramachandran A lawyer by profession, is a candidate for Master in Public Policy at the Lee Kuan Yew School of Public Policy, Singapore. She has a keen interest in development policy, and has prior experience in consumer policy work in India.

13. Religions and Global Sustainability. A research study in Catalonia (Spain)

Dr. Sílvia Albareda Tiana, Prof. Montserrat Gas-Aixendri

ABSTRACT:

There is very little scientific literature that considers the relationship between religions and an integral concept of Sustainable Development (SD), including its three dimensions (social, economic and environmental), as proposed in the UN Sustainable Development Goals. It was necessary to conduct a study of this kind in Catalonia, with the aim of making visible and show with concrete data, the contribution of religions to the integral sustainability.

This paper presents an empirical research in which we intend to make visible the actions performed by religious organizations in Catalonia, that have been contributing to the SD. The study of the contribution of religious organizations to the SD has been made by a mixed method with two techniques for data collection: firstly, has counted the presence of indicators linked to the priority areas of SD, from the analysis of the content of the websites of religious organizations (quantitative analysis). Moreover, semi-structured in-depth interviews were conducted representatives of religious organizations (qualitative analysis).

The study of the contribution of religions to the SD opens new doors to interfaith dialogue because it is based on elements that are common between different beliefs. This dialogue is a path that can effectively contribute to peace.

Keywords: Sustainable development; Religions; Interfaith dialogue; empirical study; Catalonia.

Dr. Sílvia Albareda Tiana is Professor of Experimentally Science at the Faculty of Education of Universitat Internacional de Catalunya (UIC), Barcelona, Spain. Director of the Sustainability of the UIC and Head of the Research Group SIRSU (Sustainability and University Social Responsibility). Her research is focused on analyzing how Education for Sustainability Development is being implemented in the European University System in Bologna Process, helping to clarify the concept of integral Sustainability, design teaching and learning strategies for the implementation of Sustainability in the universities and evaluate the results of this implementation. She is the author of more than fifteen articles and one book on sustainability. She is interest of the contribution of the religions to the sustainability.

Montserrat Gas-Aixendriis Associate Professor of Law, Universitat Internacional de Catalunya, Barcelona, Spain. She is a Doctor in utroqueiure (European Law Doctorate by Universidad Complutense de Madrid, and Canon Law Doctorate by Università della Santa Croce, Rome). Visiting professor at the Pontifical University of the Holy Cross and Research Fellow at Georgetown University in 2014. She has also lectured at the University of Illinois (USA), Universidad de Los Andes and Universidad Católica de Valparaíso (Chile). Author of more than forty articles and three books. Editor of three books. Her research is characterized by a predominant interest in Law and religion and religious studies. She is the leader of the research project Sustainability and Religions) and the Observatory about Sustainability and Religions in Catalonia: <http://www.sustainabilityandreligions.org>

14. Sustainable Development in the Light of the Teachings of the Encyclical Laudato Si

Dr. Reginald Alva

ABSTRACT:

Sustainable Development in the Light of the Teachings of the Encyclical Laudato Si
Pope Francis' encyclical Laudato Si is a part of the Church's Magisterium. However, it contains deep insights, which encourage sustainable development of the planet. It includes everyone and everything, as all are inter-related. The contemporary world does not lack scientific studies on the problems of the earth. However, scientific studies are not sufficient to find concrete solutions to the problems, which humanity is facing. Even though, the encyclical does not claim to be a scientific document, it raises our attention to look into the problems and resolve to deal with them holistically. In this paper, we shall examine the suggestions in the encyclical Laudato Si, which call upon the whole humanity to come together to work towards sustainable development of our planet. We shall compare the scientific concept of sustainable development with Pope Francis' understanding of the same term. Our sources for study will be the encyclical, other documents of the Church on similar subject and opinions of experts in this field.

Keywords: Laudato Si, Sustainable development, Holistic approach

Dr. Reginald Alva is a SVD Catholic priest working at Nanzan University, Japan. He holds a licentiate in Biblical theology and he took his doctorate in Spirituality at Angelicum, Rome. His publications include, *Spiritual Renewal in Japan* (2015), *Narratives of Suffering* (2014), *The Spirituality of the Catholic Charismatic Renewal Movement* (2014) & *Mary and the Catholic Charismatic Renewal Movement* (2012).

15. Straight from their own mouths: Cameroonian women speak about pathways to financial independence.

Dr. Victoria Time

ABSTRACT:

The purpose of this study is to discuss sustainable measures to counter poverty among Cameroonian women. Using the Southwest Province as a case study this paper utilizes multiple methodologies including one-on-one interviews, focus group interviews, observations, as well as archival data in order to understand factors that contribute to women's marginalized stances in their society, and to gauge from participants how they think poverty can be curbed. The multi-dimensional approach enabled the researcher to not only rely on existing literature, but to add actual first hand voices to the dialogue.

Results reveal that the causes of poverty among women are varied, but that primarily family choices, and how viable the family is determines if males or females will receive further education—a vital component for upward mobility. As well, time poverty, restricted property rights, antiquated farm equipment, among other factors perpetuate women's poverty.

Of particular relevance to the study are policy initiatives proposed by the researcher but guided by study participants. Among them are: repealing of laws that restrict women's rights to property, outlawing practices that disadvantage girls such as early marriages, funding agencies that promote women's rights and updating farming tools.

Keywords: women, poverty, Cameroon, sustainable programs

Dr. Victoria Time is a professor of Criminal Justice at Old Dominion University, Norfolk Virginia, U.S.A. Her research interests include, contemporary legal issues, the plight of women, and comparative justice, among others. She has authored and co-authored dozens of peer-reviewed journal articles, a book, and two more due to be published soon. She has presented papers at conferences globally.

16. Expressing our Uniqueness to Create a Sustainable Way of Life

Dr. Elena DDV Dragotto

ABSTRACT:

In a society where points of reference and specific roles are also lacking in human relations, where self-expression is often confused with unattainable, false, alien and frustrating stereotypes, developing a personal growth process, that leads to recognize our Uniqueness, allows to build more intimate and satisfying relationships with ourselves and with others.

The result is the development of a society in which everyone perceives their own value, regardless of fashions and external models, and everyone is aware of their role and responsibilities, contributing with their Uniqueness to the development of their complexity and richness.

The approach of the Voice Dialogue Counseling, created in the 70s by psychologists and psychotherapists Hal and Sidra Stone, has proved to be very effective in helping people to discover and develop their own Uniqueness.

With a great respect for everybody's human experience, the Voice Dialogue Counseling facilitates people to expand themselves, embracing more and more all their richness and complexity, without any judgment.

Support the human Uniqueness means safeguarding a capital and making it available for the development of Humanity and the Planet.

Keywords: Human Development, counseling, human Uniqueness development, Voice Dialogue

Dr. Elena DDV Dragotto is the founder and the director of the HeskatHer Institute - Paths for evolving life. She is director and professor of the three-year Voice Dialogue School of Counseling created by the Institute. Elena graduated in Psychology from the University of Rome 'La Sapienza' and she is a counselor supervisor. She is a founding member of Voice Dialogue Italia - the Association that disseminates the Voice Dialogue Method. For more than twenty years, she has been involved in the work of the Psychology of Selves and Voice Dialogue, and for fifteen years as counselor and trainer. She taught the Psychology of Selves and Voice Dialogue at University of Siena, Faculty of Letters and Philosophy of Arezzo, in the Master in "RELATIONSHIP COUNSELING AND TRAINING", from 2001 to 2011 and in the Advanced Course "COMMUNICATION AND INTERPERSONAL RELATIONSHIPS" from 2002 to 2010. The Psychology of Selves, the Voice Dialogue and the empowerment of women have been the subjects of several conferences where she was rapporteur. She works in Italy and Spain.

17. Creating a Unified Foundation for Generative Sustainable Development. Research, Practice and Education: the Perspective of a Development Economist and Practitioner

Arianna Briganti

ABSTRACT:

This narrative unveils my own understanding of how to foster a unified foundation for generative sustainable development. I invite the reader to consider my insights into my practice as a development economist and practitioner who worked and lived in Afghanistan, Ethiopia, Georgia and currently is living in the Balkan region tackling sustainable development from the perspective of those at the receiving end of aid. By asking the beneficiaries from development interventions what sustainable development is, this journey also aims to communicate how my research is educational for my practical work in developing countries. My research is based on a methodology called Living Educational Theory (LT) that strengthens my ability to contribute to the establishment of the human capabilities of the people I work with in developing countries.

Ultimately drawing from the evidence of both my work and research in practice I wish to clarify my own meaning of 'sustainable development' and how this translates into a more holistic and value-based explanation of 'generative development'. The rise of generative development in relation to sustainable development is emerging from the synergy between LT and Development in practice, which result in a force that may drive human development and be conducive to a fairer world.

Keywords: Sustainable Development, Human Development, Living Educational theory, Generativity, Human Capabilities

Arianna Briganti is a development economist, practitioner and researcher specialized in the holistic growth and management of emerging economies. Her foci are generative sustainable development and living educational theory research. Development manager for initiatives implemented by both Governmental and non-Governmental organizations mainly in Afghanistan, Horn of Africa Countries and Eastern Europe, Arianna has worked extensively with the Italian Ministry of Foreign Affairs (Development Cooperation Unit) and with the German International Cooperation (GIZ) in supporting Governments' structural reforms in areas related to socio-economic growth and institutional development. She co-founded the not-for-profit organization Nove Onuls and is currently working for the Swedish foundation 'Cultural Heritage without Borders' in Albania. Arianna is PhD candidate at the University of Lancaster/Cumbria and is peer-reviewer of the Educational Journal of Living Theories.

18. Living Theory Research Group – a model of sustainable learning for the ‘flourishing of humanity’

Sonia Hutchison, Arianna Briganti

ABSTRACT:

Traditionally developed and developing world non-profits do not share their learning across the sectors. However, as technology provides an improving platform to share learning more easily, we explore how learning can start to be shared to improve practice in both fields. As practitioners we are currently researching our own practice respectively, one author as a development economist currently in Albania and the other author as a leader of not for profit in the UK.

This paper explores the strengths and weaknesses of using new technologies, critiquing the Living Theory Research group we both attend against Rheingold's (2010) Social Media literacies. The five literacies of 'attention, participation, collaboration, network Awareness and critical Consumption' p.16 are considered in relation to the research group. The findings are presented from us as participants and highlight that the research group transcends the Skype group as we live our learning through our practice and develops our resilience and self-care as we both seek to sustain ourselves and our work.

Keywords: Non profits, Living Theory, Action Research, Skype, sustainability

Sonia Hutchison BSc is an expert in unpaid caring and non-profits having worked in the sector supporting carers and care-givers for over a decade. Chief Executive of a local UK carers' charity which has tripled in size under her leadership over the last 6 years and Development Executive of a small national UK charity supporting young carers with ambition and tenacity to succeed. Sonia has been recognised for her tireless work to improve the lives of carers and their families. Sonia is now researching how she has come to be a success in her career after starting of life in foster care where statistical predictions for life chances have remained stubbornly low to achieving both personally and for carers and their families. Sonia has taken her research around the world presenting in the USA, Canada, South Africa and the UK.

Arianna Briganti is a development economist specialised in the growth and management of emerging economies. Her focus is sustainable socio-economic development; institutional development; international development from local to global level; poverty reduction strategies; private sector development -SME/industrial cluster growth- job creation; horizontal inequalities; gender imbalances.

Development professional in Project management for initiatives in both Governmental and non-Governmental organisations mainly in Afghanistan, Horn of Africa Countries and Europe, Arianna has worked with the Italian Ministry of Foreign Affairs (Development Cooperation Unit) and with the German International Cooperation (GIZ) in supporting Governments' structural reforms in areas related to economic growth, institutional development and capacity building.

19. Empirical Research of the Knowledge Degree of Social Economy Enterprises in Stable Micro-Communities

Prof. Dan POPESCU, Dr. Cristina STATE

ABSTRACT:

The social economy, as the correct solution to solving the problems of a community, tends to take shape in Romania too. Our research question that we intend to answer relates to the definition of social economy concept, followed naturally by another one, in connection with the knowledge degree of the social economy sector.

Work methodology that we use consists in an exploratory research, based on a semi-structured questionnaire, directly administered, in a micro-stable community that we observe since 2002. Interpretation of responses received from participants in the study was performed by using the IBM SPSS 20 application. The variables obtained were analyzed both from the point of view of descriptive statistics and also, by the correlations that have been established between them. The results from testing hypotheses, confirms our assumptions, according to that, the subjects participating in the study had, at the time of performing the survey, very little information regarding to the social economy. Extensive research is ongoing, following that in the next period we will be able to present, new additional information able to complete the overview on the field of study.

Keywords: empirical research, improving management, communities, social enterprise, sustainable development

Prof. Dan POPESCU is Professor at the Bucharest University of Economic Studies. Research interests: Business Communication, Negotiation, Human Resources Management. Skills: very dynamic; sociable; conscientious; punctual; team spirit; high sense of humor.

Dr. Cristina STATE Assistant Professor, PhD. Bucharest University of Economic Studies, PiataRomananr. 6, Sector 1, Bucharest, Research interests: Business Communication, Project Management, Human Resources Management. Skills: friendly; sociable; conscientious; punctual; team spirit.

20. Requirements for the sustainable development of economic activities in tropical forest communities

Elena Mechik, Prof. Dr. Michael von Hauff

ABSTRACT:

Tropical forests are storing carbon in their biomass, supporting biodiversity, acting as sources for timber and Non Timber Forest Products, and are the habitat for forest communities. Despite their importance and national and international efforts to protect them, deforestation of tropical forests continues.

In this paper we propose a concept of how sustainable development concept can be applied to the reality of tropical forest community. We answer the question of how sustainable development of economic activities for forest communities' inhabitants can be achieved including improvement of their living standard and conservation of tropical forests.

We formalized qualitative causal relations and concluded that sustainable development in forest communities cannot be achieved without external support and in particular without 1. legal rights for forest management, 2. targeted investments and initial capital for the organization of economic activities with social responsibility, and 3. organizational, technical, and methodical support.

Keywords: sustainable development; tropical forest communities; small scale forest enterprises; social responsibility; Non Timber Forest Products

Elena Mechik is a doctoral candidate from the University of Hamburg researching on the role of socio-economic interactions in tropical forest conservation. She has spent 5 months living in the São Carlos do Jamari forest community, Brazil, establishing an enterprise for storage and processing of Brazil Nuts. Additionally, Elena conducted field research of economic activities in tropical forest communities of India and Thailand. While researching on the possibilities for sustainable forest management and poverty alleviation in forest communities she developed a concept of Small Scale Forest Enterprises with Social Responsibility. She holds a BA degree in International Business from Touro College, Berlin and MEng degree in Industrial Engineering from Technical University of Berlin.

Professor Dr. Michael von Hauff is a professor of Economics with a specialization on Sustainable Development at the University of Kaiserslautern since 1991. He had several teaching e.g. at the Universities of Konstanz and Heidelberg. In 1995 he was a visiting professor at the University of Delhi / India. In 2004, he held guest lectures at the Technical University of Singapore. Since 2006 he is a visiting professor at the Yangon Institute of Economics Myanmar.

21. Foundation for Sustainable Development Models in Indigenous Communities: Alternative Model in A Maya Community

Dr. Isabel Dulfano

ABSTRACT:

This paper examines a model for sustainable development in Maya village that incorporates tourism, codification of measures for safeguarding and disseminating Mayan ancestral intangible cultural heritage, language revitalization of the Native tongue, and preservation of ethnobotanical biodiversity and knowledge. The broad scope, lack of structural cohesion, limited resources available, and complexity of this model suggest it should fail; however empirical ethnographic data based on praxis and engaged research makes a compelling argument to the contrary.

Research on effective enduring development models for sustainable economic, cultural, environmental, and social growth in Native reservations in the US has established foundational criteria for success. The model in this Mayan village retains some of the proven aspects outlined in the research literature, while adapting and offering an alternative model based on the conditions and environment in Indigenous Yucatan communities. I will evaluate both the elements of success and others where there is a need for reevaluation and modification.

Keywords: Safeguarding Intangible Culture (ICH), Alternative Indigenous development model

Dr. Isabel Dulfano is an Associate Professor at the University of Utah. Her research highlights Indigenous Feminist autoethnography and narratives, alternative development models, and analysis of global resistance counter-hegemonic, anti-globalization discourse.

22. Harkaleh Watershed Ecological Capability Assessment for Agriculture Land With an Emphasis on the Sustainable Development.

Dr. Katayoon Varshosaz, Dr. Elham Mubarak Hassan

ABSTRACT:

According to this study, ecological capability evaluation of land to develop agricultural and range management land uses were done based on spatial multi criteria evaluation and overlay methods in Harkale in Lali city, southwestern Iran, 2014. Ecological capability evaluation of land is one of the basic problems in environmental science. Following determination of the basin boundary on watershed topographic map (1:25000) and, analog maps were digitized in GIS environment. Next, data analysis were valued based on data collection analytical hierarchy process (AHP) method that it is one of the most typical of MCDM methods. Using AHP method, hierarchy structure of criteria was given in three level including objective, main criteria and sub criteria and weight matrixes were completed based on expert's opinion. Then, the matrixes were analyzed in Expert choice software to give of weight criteria. In next stage, weighting results of criteria were generalized to respective layers in GIS environment. Finally, 16 data layers of ecological resources were overlaid and the final map of ecological capability of the study area was given and classified in six classes including very suitable, suitable, moderately suitable, less suitable, much less suitable and non developed parts. Also, using Makhdoom method, environmental units map was produced according to evaluation levels and overlaying of ecological data layers. Then, the final map of ecological capability of Harkale watershed for developing agriculture and range management land uses was given based on SQL method. The results showed that in AHP method, suitable development of agriculture and range management land uses are allocate 1005 and 1242 ha of the study area (3855 ha) while in Makhdoom method these area contained 713 and 1568 ha, respectively. Totally, Harkale watershed has moderate ecological capability for developing agriculture and range management land uses.

Keywords: Ecological capability evaluation, Multi criteria evaluation, Analytical hierarchy Process (AHP), Makhdoom model, GIS

Dr. Katayoon Varshosaz is Assistant Professor at the Department of Environment, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran.

Dr. Elham Mubarak Hassan, Department of Environment, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran.

23. Conserving Water: Traditions of Sacred Groves in India.

Dr. Mala Agarwal

ABSTRACT:

Purpose: To find out ways of conserving water & biodiversity in the desert of Rajasthan, India.

Method: Data has been collected primarily from the state of Rajasthan, India, based on Library research, interviews and field surveys.

Implications/ Results:

1. Traditions of sacred groves can be an important source of sustaining water resources & biodiversity.

2. Such groves need protection of Law.

Sacred groves, a wide spread phenomenon in cultures across the world, are often associated with religion and culture and are instrumental in preserving biodiversity and nature without being questioned. Scattered all over India e.g. scrub forests in the Thar Desert of Rajasthan maintained by the Bishnois, Hariyali in Uttarakhand, Shinpin in Himachal Pradesh and associated with religion they are often sacrosanct.

The sacred groves are self sustained ecosystem and conserve the endemic, endangered & threatened species, medicinal plants and wide variety of cultivars. Water and soil conservation is the most well documented ecological service provided by the sacred groves, that helps prevent flash floods and ensures supply of water in lean season in the desert of Rajasthan.

Encountering threats like fragmentation, urbanization, and overexploitation now they need governmental support to exist e.g. Introduction of the 'Protected Area Category Community Reserves' under the Wild Life (Protection) Amendment Act, 2002.

Keywords: Water conservation, eco-system, bio diversity, sacred groves .

Associate Professor, Mala Agarwal, BBD PG College, Chimanpura, Jaipur, affiliated with the University of Rajasthan, Jaipur, India. She completed her Ph. D, in 2000 on, In vitro Regulation of Secondary Metabolites in Certain Medicinal Plants and PG Diploma in Environmental Studies. She is life member of , 1. Indian Science Congress, and 2. Indian Botanical Society. She has been awarded: 1. The Young Scientist Award (ISCA, 2000). And, 2. Fellow, Indian Botanical Society, 2010).

24. Stories from the English riverbank: How riparian communities interpret, articulate and action water resource sustainability

Dr. Mary Gearey

ABSTRACT:

To effectively communicate sustainable policies and strategies at a societal level we first need to understand how water users themselves comprehend the challenges that management practitioners face. Understanding the different lifeworld perspectives of citizens who live and work alongside their water resources allows policy makers and practitioners to target messages which accord with individual's own experiences. Nexus governance thinking recognises the integral role of water in cementing sustainable economic development and societal continuity, yet fails to capture the granularity of individual perceptions and responses with regards to water resources management.

Through empirical fieldwork with residents in three UK waterside communities, interrogating a range of management issues, the research has begun to build a picture of where 'water' sits within individual lifeworlds. Cataloguing these local knowledges, responses and actions provides data to determine what types and what temporality of changes to water resources people will accept in support of sustainability.

These insights reveal modes of community resilience which correspond with the key sustainability messages around changing water conditions and demonstrate the myriad ways water users have interpreted and responded to these articulations.

Keywords: Nexus governance, water resources management, sustainability, community resilience

Dr Mary Gearey is the University of Brighton's Daphne Jackson Research Fellow, based in the School of Environment and Technology. A social scientist by training, she undertakes empirical qualitative fieldwork to explore the corresponding relationships between practices of community resilience and water resources policy, planning and management in the context of sustainable futures. Her work is inter-disciplinary, orientated around emerging modes of governance within natural resources management informed by her background in International Development. She has lived and worked across Africa working alongside community and environmental groups to develop grounded working practices in sustainable water futures. Her current work focuses on the following areas:

Community responses to changing water environments.

Social-ecological systems resilience.

Socio-political dimensions of integrated water resource management.

25. The Assessment of the Efficiency of Classical and Cooperative Training in Promoting the Participation of Employees of R .P.C in the field of H.S.E

Dr. Katayoon Varshosaz, Dr. Elham Mubarak Hassan

ABSTRACT:

This study aims to evaluate the performance and efficacy of co-operative and classical learning. The study investigates changes in knowledge, attitude, practice and skill of factory workers of RAZI Petrochemical in the field of HSE in 2015. The statistical population in this study is all personnel of RAZI Petrochemical Company. A sample size of 80 persons were selected for evaluation of assumptions. The sample size was divided into two groups of test and control (40 in test group and 40 in control group) both accidentally for. A questionnaire consisting of four parts, knowledge, attitudes, skills and practice was used to collect data in this survey. The reliability of each part was 0.86, 0.72, 0.89 and 0.68 respectively. The questionnaires were distributed among test and control groups before training. Then the test and control groups were individually exposed to cooperative and classical training. After a week and then after a month dependent variables were evaluated in test and control groups. The results showed that training in either classic or cooperative method, increases knowledge and attitudes of employees. Knowledge and attitudes before training was similar in both groups ($P > 0.05$). After training, the level of knowledge in cooperative method, in a week and a month after training was significantly higher than the classical method ($P < 0.05$). While in cooperative training group the increasing trend of attitude of personnel was maintained, in classical training group attitude of personnel, a week and a month after training did not change significantly ($P > 0.05$). The results of evaluation of skill and performance of employees in classical training group a week and a month after training to before training did not change significantly ($P > 0.05$). But The results of evaluation of skill and performance of employees in cooperative training group a week and a month after training to before training changed significantly ($P < 0.05$). It seems that classical training method has no effect on increasing the performance and skill of employees while cooperative method had significant effect ($P < 0.05$). Finally, to improve and upgrade within the HSE, a review of the existing guidelines and using experiences of peers and leading international companies and high-quality uninterrupted training in this field is recommended.

Keywords: Classical Training, Cooperative Training, BASNEF Method, Hygiene, Safety and the Environment, RAZI Petrochemical

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Dr. Katayoon Varshosaz is Assistant Professor at the Department of Environment, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran.

26. UNESCO's Global Education Monitoring (GEM) Report 2016: Education for people and planet

Dr. Priyadarshani Joshi

ABSTRACT:

The 2016 GEM Report shows that the ways education evolves, including the cross-sectoral links that it makes, will determine in large extent our capacity to achieve a more sustainable future.

Longer description: The 2016 GEM Report examines the multiple and interconnected links between education and key areas of the new 2030 Agenda for Sustainable Development. It builds compelling arguments, alluding to the latest evidence from around the world, showing that how and what we are taught do not only influence our knowledge, skills, attitudes and worldviews but also our choices for investment and research, and our respect for each other. It shows that we must transform education with people and planet in mind.

Already one year into our fifteen year timeframe for achieving Sustainable Development, we see this as an important opportunity to show that we will only be able to tackle the most persistent challenges to our planet and to mankind if we form collaborations between education and other sectors that speak to our shared vision for 2030.

Keywords: education, skills, cities, equity, gender equality, prosperity, knowledge

Dr. Priyadarshani Joshi is from Nepal and joined the GEM Report, formerly the EFA Global Monitoring Report, in June 2014. At the Report, her work has focused on envisioning and articulating education's roles in the sustainable development agenda.

She has a PhD in Education Policy from the University of Pennsylvania, United States, and her research interests are in education governance and education finance. Her academic work focuses on the consequences of private sector growth for the public sector, parental choice, and systemwide equity and quality in developing countries. Her previous professional backgrounds include research positions at the IMF, and consultancies at UNICEF and the World Bank. Priya holds an undergraduate degree in Economics and Chemistry from Amherst College, and a Master's in Public Administration (Economic Policy) from Princeton University.

27. The Development of Science Process Skills and Academic Achievement in Chemistry of MatthayomSueksa Five Students at Ramkhamhaeng University Demonstration School Using the Peer-Assisted Technique

Maneeras Sa-ngiemjit

ABSTRACT:

In this research investigation, the researcher compares (1) the academic achievement in organic chemistry of selected MatthayomSueksa Five students instructed by means of the peer-assisted technique. The researcher also describes and analyzes (2) the fostering of science process skills of these students utilizing the peer-assisted technique.

Using the simple random sampling method, the researcher selected a sample population constituting a single MatthayomSueksa Five (Science-Math) classroom at the Ramkhamhaeng University Demonstration School (DSRU) of such students enrolled in the second semester of the academic year 2015. The research instruments consisted of an academic achievement test on organic chemistry couched at the validity level of 0.82 and a test used for measuring science process skills couched at the validity level of 0.75.

Using techniques of descriptive statistics, the researcher analyzed the data collected in terms of mean and standard deviation. A t-test technique was also employed by the researcher.

Findings are as follows:

- (1) The students taught using the peer-assisted technique exhibited a higher level of academic achievement in organic chemistry after the study was completed than prior to the commencement of the study at the statistically significant level of .05.
- (2) After the completion of the study, these students showed improvement in science process skills at the statistically significant level of .05.

Keywords: Science Process Skills, students, peer-assisted technique, academic achievement

Maneeras Sa-ngiemjit is Teacher at the Ramkhamhaeng University Demonstration School (DSRU) of Bangkok, Thailand. I congratulated Apply Chemistry of Master degree. I interest on education because I have been teaching of chemistry for six years, I want to develop of myself because I will developed of my student. Topic of academic including: 1. Presentation of Microbial hydroxylation and reduction of dibenzalacetone By *Curvularialunata* and *Cunninghamellaechnulata* the Congress on Science and Technology of Thailand 32th. 2. Presentation of Microbial Transformation of 1,5-Bis (4-methoxy-phenyl) -1,4-pentadiene-3-one. The conference of Excellence for Innovation in Chemistry 6th. 3. Presentation of Biotransformation of dibenzalacetone By *Aspergillusniger* NRRL 599 in the conference on Science and Technology of Thailand 34th.

28. Social Learning Tools for Environmentally Sustainable Consumption Behavior in Primary Schools

Dr. Meenakshi Sharma, Dr. Leela Rani

ABSTRACT:

UN's Millennium Development Goals declared in 2010 stated sustainable consumption's importance in ensuring environmental sustainability. Given the roles education, children and social learning process are expected to play in sustainability, this study aims to identify tools for active & passive social learning (SL) perceived by teachers (involved in delivering environmental education) as appropriate & effective for primary school children (chiefly focusing on environmentally sustainable consumption behavior (ESCB)). Study's largely exploratory nature with a limited sample from Bhiwadi (India), was aimed at setting framework rather than generalization of results. Apart from interviewing fifty respondents from government and private schools with a semi-structured questionnaire (16 SL tools across 16 ESCBs), SL tools were also identified from text books. Data on was put through qualitative and quantitative analysis. Results showed that patterns in teachers' preferences for SL tools were similar across school types but preferences only partly matched with recommendations from text books and/or research literature. Teachers' qualitative statements for opportunities, constraints and opinions add to study's strength. Findings hold useful implications for sustainability educators who aim to prod and inspire young minds for a sustainable environment. Insights would guide educationists to evolve effective SL tools for classroom experience.

Keywords: Environmentally sustainable consumption Behavior, Social Learning, Active Learning Tools, Passive Learning Tools, Primary school, Urban.

Meenakshi Sharma, is a Ph.D research scholar in the Department of management, BITS, Pilani. She is pursuing her doctoral degree in sustainable consumption behavior and working on intervention design for enhancing sustainable consumption behavior among primary school children in India. She has completed her MBA from Rajasthan technical university. Her research interest lies in areas related to consumption behavior, intervention design etc.

Dr. Leela Rani is an Assistant Professor in the Department of Management, BITS, Pilani. She has done her doctoral thesis in retailing. She has been actively participating in the work related to sustainability. She is successfully running several courses related to Marketing, Retailing, and Management information Technology etc. She has several national and international publications to her credit in related areas.

29. Developing Children with Special Needs Through Love, Understanding and Rationality.

Dr. Nipa Smitasiri

ABSTRACT:

Children with Special Needs refers to a specific group of children and youngsters who require additional assistance due to their physical, mental and/or intellectual disabilities and limited physical development. And Special Educational Need: SEN is one of their usual requirements. Additional assistance is to be given to those with impaired visibility, impaired audibility, Short Attention Disorder and multiple disabilities.

Special Needs refers to additional support and assistance specifically given to this group of youth by surrounding people such as their family members, their teachers and classmates at school. So they can perform their daily tasks and pursue their studies like everyone else.

To state an example, Ramkhamhaeng University students with impaired audibility have shown improvement in their studies after participating in science-based activities: creating scientific picture frames. Engaged in social activities, they have more social interaction and communication with their classmates and teachers. They have become more supportive for one another. And due of the moral and academic support they mutually get, they perform better in class. Some even got an academic honour.

Offering additional assistance to these youngsters is important and the family and society shall be fully aware. For the parents, choosing a right school for them is one of the priorities. The school should provide proper education and care with the suitable teaching and learning approaches in order to encourage their development and progress. Teachers also play an important role in assisting and resolving problems. They should understand each individual's nature so that they can adjust their teaching methods and techniques to motivate the student to learn. Teachers should also be sensitive and attentive to students' requirements and limitations. Students should be encouraged to do what they are good at so they can be proud and think positively about themselves. This will encourage them to live happily in the society, not feeling they are a burden to other people.

Keywords: Children with Special Needs, Developing Children with Special Needs

Mrs. Nipa Smitasiri is a teacher in the demonstration school of Ramkhamhaeng University. The demonstration school of Ramkhamhaeng University is a part of Faculty of Education, Ramkhamhaeng University, Bangkok Thailand. She graduated Master of Guidance Psychology at Ramkhamhaeng University. She taught in Bachelor of Science Program in Psychology, Ramkhamhaeng University too. She is interested about Disabled Students especially hearing impaired students and co-researcher with Asst. Prof. Dr. Wanida Chatwirakom. The research is about Disabled Students that improve hearing impaired students' learning behavior by scientific activities. The research findings are in general, the students engaged in these scientific activities displayed a good level of performance and overall their learning behaviors exhibited were satisfactory.

30. On the Need of Ethical Foundations for Global Education

Dr. Pawel Bernat, Prof. Helena Ciazela

ABSTRACT:

The concept of global education is based on the recognition of the interdependence of the world as a network, and on realizing the fact that the current direction of the development of civilization leads to disaster (environmental, humanitarian, etc.). On the other hand, there is a belief that there is still a chance to change this state of affairs by means of education. The purpose of education is recognized as not only the transfer of knowledge, but also as a means to generate a shift in attitudes.

In the studies on global education published so far the authors, while trying to base it axiologically, referred to human rights, the principles of sustainability and justice without analyzing the values this educational project hinges on or examining the dynamics transpiring among these values.

In order to strengthen the impact of the global education project, it is necessary, we believe, to provide a coherent description of the values promoted in the process of education and upbringing, as well as their deep philosophical justification. Drawing upon the ideas of Picht, Peccei, Jonas and others, ethicists should work on building up a deeply embedded philosophical argument for the development and implementation of global education programs.

Keywords: Ethics, Global education, New humanism, Sustainability, Sustainable development

Dr. Pawel Bernat teaches ethics and vocational ethics for special needs teachers and social workers at the Maria Grzegorzewska University in Warsaw, Poland. He holds a PhD in ethics of technology from the Intentional Academy of Philosophy in Liechtenstein. Dr. Bernat carried out his postdoctoral research at the Technical University of Eindhoven, the Netherlands on ethical aspects of future energy systems. The main research topics he is interested in focus around ethics, philosophy of technology, and sustainable development. His academic work is a result of his strong conviction that applied ethical studies nowadays should be of a deep multidisciplinary nature, where ethicists work hand in hand with specialists like engineers. Currently he is particularly interested in axiology of power generation and heat production systems.

Professor Helena Ciazela is a Deputy Rector for Education Quality at the Maria Grzegorzewska University in Warsaw, Poland, as well as the Head of the Philosophy or Morality and Global Ethics Chair at that institution. She is a philosopher working on ethics of global responsibility and axiological basis of sustainable development. In her research she argues for constructing an ethical system that would be an integration of freedom and responsibility. She is a proponent of the thesis that the global problems integrate the theoretical reflection with practical issues which relate to different areas of knowledge and different areas of practical activities. Hence, such an ethics, by nature, must be multi- and inter-disciplinary to adequately define, describe, and solve global issues. In her academic work, Prof. Ciazela draws on and promotes the ideas of Aurelio Peccei, Georg Picht, and Hans Jonas.

31. Intelligibility Redefinition and Students' Confidence in English Speaking in Thai ELT

Supatranut Singhanuwananon

ABSTRACT:

One of the key aspects of speech is intelligible pronunciation (Derwing and Munro, 2009). As the use of English among non-native English speakers (NNSs) in international communication has grown rapidly, the British Received Pronunciation (RP) and the General American (GA) pronunciation models are doubted by non-native English teachers. The need of changes in pronunciation pedagogy and the definition of intelligibility in English as an International Language (EIL) which focuses on some, but not all of the elements of English pronunciation (Jenkins, 2002) are worth revisited, especially in the Thai context in which the focuses are strictly on the RP or GA principle, and this is defined as intelligible. The research questions examine the possibility of EIL model in English pronunciation pedagogy. The questions do not only seek possible changes, but also the effects on students' confidence in using "imperfect English". The research is designed to measure intelligibility based on EIL. The reason behind the focus of Thai technical students is that they are a group of students who are limitedly exposed to the language in their regular classes; inevitably have to use English speaking skills in their professions after graduation and entering the workforce. The findings show that, under the EIL model, unintelligible students defined by the Native Speaker model (NS) are not all or really unintelligible. The examination of the use of EIL model in pronunciation teaching and the effect of them on students of English should be proved to be useful and practical in ELT development in Thailand. This could be applied at an international level as well.

Keywords: English as an International Language, Intelligibility, pronunciation, English speaking confidence, Education in English as a foreign language.

Supatranut Singhanuwananon is a lecturer of English, King Mongkut's University of Technology North Bangkok, Thailand. Also, a master's degree in English Language Studies student, Thammasat University, Thailand. She has a bachelor's degree in English. Graduated with first class honors. Her research interests involve various fields in Applied Linguistics, such as teaching methods, pronunciation, English speaking skills and critical language awareness. Her current research is on intelligibility, pronunciation and confidence in English speaking.

32. A Suggestion of Quiz Model for Testing Knowledge of Interior Design Students

Research Assistant Tuğba Levent

ABSTRACT:

Interior design education is a program that involves teaching theoretic and practical applications. In this framework, it is tried to express reflections of the doctrines to practice by teaching concept theoretically in different ways. To realize this teaching and specify which way we prefer, it is necessary to qualify students' both theoretic and practical knowledge. Through qualifying this knowledge level, new programs about the education can be developed. And after this development it can be created more effective teaching occasion. The aim of this study is a new test model suggestion as a definition new method of creating new education program. This study is realized by examining the design education programs in Turkey. With this study, it is tried to suggest a quiz model of students', are studies in interior design in Turkey, theoretic and practical knowledge.

Keywords: vTheoretic Knowledge, Practise, Interior Design Education, Quiz.

Research Assistant Tuğba Levent is working in the Anadolu University Faculty of Architecture and Design in Interior Design Department. She is graduated from Kocaeli University Interior design department (2008). She studied "Textile Products As A Design Element In Interior Design And Its Selection Criterias" in Master Program at Anadolu University. She has been in doctorate program at Anadolu University (2015). After the doctorate program she is going to study at Kahramanmaraş Sütçü İmam University. Undergraduate Architecture programme from in Mimar Sinan University Faculty of Architecture(1983-1988), her master (1991) from MSU Institute of Science & Technology Architectural Design Program and PhD (1997) degrees from ITU Institute of Science & Technology Architectural Design Program. Currently works as Professor in Anadolu University Department of Architecture and is the head of the department of Architecture , master and PhD programmes of architecture and architectural education (1996-Present). She has lots of books, articles in ISI journal list; AHCI, SCI conferences, workshops , research projects and lectures. Her researches based on Virtual Design Studio and Knowledge Modelling for Conceptual Architectural Design Process: Historical and Crosscultural Design Principles and Methods. She managed several urban, restoration and architectural design projects including university campuses and in the different cities of Turkey which is built. She has an award for "Science and Technology" in Anadolu University, in 2000.

33. Using Scientific Activities to improve the Learning Behavior of Disabled Students in Ramkhamhaeng University

Assist.Prof.Dr. Wanida Chatwirakom

ABSTRACT:

This is an experimental research project aiming to study and develop the use of scientific activities as teaching and learning tools to improve hearing impaired students' learning behavior.

The research population consisted of handicapped students with inaudibility. The sample population was a group of 14 hearing-impaired students who enrolled at Ramkhamhaeng University's Hua Mak Campus in Bangkok, Thailand. These were students who willingly participated in making scientific picture frames.

The data and details were gathered through the use of a checklist to evaluate scientific skills involving scientific picture frames. Then the participating students were interviewed and a thorough observation was made on their learning behaviors when they were engaged in the aforementioned scientific activities.

The data collected was then analyzed using a computer software program to present descriptive statistics and arithmetic mean.

The findings are as follows:

1. In general, the students engaged in these scientific activities displayed a good level of performance. Seven of them excellently carried out their tasks while there was only one student whose performance was below the standard.

2. Overall, their learning behaviors exhibited were satisfactory. Four students displayed distinctive learning behaviors and three of them displayed unsatisfactory learning behaviors.

Keywords: Scientific Activities, Improve the Learning Behavior of Disabled Students

Dr. Wanida Chatwirakom is Asst. Prof. Dr. in Faculty of Education, Ramkhamhaeng University, Bangkok Thailand. I graduated Doctor of Education Major subject Science – Education. I interested about Disabled Students especially hearing impaired students. My research talked about Disabled Students for improve hearing impaired students' learning behavior by scientific activities. I used to study Employing Computer – Assisted Instruction for Enhancing the Science Process Skills of Hearing – Impaired Students at Setsatian School Under the Royal Patronage of His Royal Highness Crown Prince Maha Vajiralongkorn, so I think Disabled Students could improve themselves. If we give the chance for them we can help their and their family a lot.

34. A Pedagogy for Building Cosmopolitan Competencies in Environmental Sustainability Professionals

Dr. Michael Mortimer, Dr. Bruce Hull

ABSTRACT:

There is increasing agreement in the literature that environmental sustainability professionals need skills and capacities to think and act globally. But means to acquire these capacities are limited by time and budget constraints of professionals and by the pedagogy and faculty of higher education institutions. The purpose of this paper is to advance the understanding and pedagogy of this important domain of educating sustainability professionals. We will advance understanding by presenting a synthesis of the literature to argue for specific, practical, learning outcomes from global/cosmopolitan sustainability experience/travel programs. We will advance pedagogy by describing and evaluating the evolution of post-graduate global learning experiences we provided to over 200 sustainability professionals from business, government, and civil society. Our motivation is to help fellow educators improve these sorts of learning experiences and to help sustainability professionals understand and evaluate learning opportunities available to them.

Our method includes case studies of professional study trips taken to rapidly developing regions of China, India, Indonesia, Brazil, Turkey, Morocco. We interviewed students, faculty, and partners. We assess student work. And we report on the evolving refinement of our pedagogy.

Keywords: Sustainability, cosmopolitan, Anthropocene, global, post-graduate, professional development

Dr. Michael Mortimer, Center for Leadership in Global Sustainability, Virginia Tech, Arlington Virginia USA.

Dr. Bruce Hull (Virginia Tech, USA) writes and teaches about leadership for sustainable development in the Anthropocene and how to influence change in the cross sector space where government, business, and civil society intersect. He has authored and edited numerous publications, including two books, *Infinite Nature* and *Restoring Nature*. He is a Senior Fellow at the Center for Leadership in Global Sustainability based in Arlington, which provides graduate education, executive, and professional development opportunities for sustainability professionals working at the intersection of business, government, and civil society. He is President of the Board of Climate Solutions University, whose mission is to help communities adapt to climate change, work across jurisdictional boundaries, and protect vulnerable citizens and the natural resources on which they depend. He also serves on the advisory council for the Global Change Center, whose mission is to address the challenges of global change by providing a framework that encourages, facilitates, and rewards interdisciplinary research, education, and outreach across the intellectual landscape.

35. Motivation forms regarding the pro-social behaviour of the teenagers at school

Esjurda TALLUSHI, Gjylse BIBA, Temisa ISUFI

ABSTRACT:

Teenagers are considered a vulnerable group, not only due to the characteristics of their age, but also due to the high risk of their involvement in asocial behavior, as a result of many social problems, duality of values, confusion regarding decision-making at an early age, the absence of positive models to follow, not only at school, in the community, but also within their family.

In the Albanian reality particularly, the building of self-esteem is not the only influencing element, in the formation of the concept on oneself, and the concept of personality, but also the frustration of a society, that has gone through a long period of transition, the aftermath of a dictatorship. On these grounds, the motivation forms of positive behavior have been influenced by the family authority, rule obedience as an escape from punishment, and not as a result of awareness, reward, and proper methods of teaching in schools.

The aim of this work is to explore the motivation forms of the pro-social behavior, for the purpose of avoiding asocial behavior of teenagers in schools, via the effective communication, positive models, constructive teaching methods, proper parenting styles, socializing processes, removal of attention from asocial behavior and the providing of proper models to follow.

The method used in this work will be the mixed research (qualitative and quantitative). Part of this study will be teenagers aged 15-17 years old (boys and girls) of a high school in the city of Kavaja (Albania) through filling out half structured questionnaires. We have interviewed also professional teachers, parents, social workers and psychologists, in order to provide a clear panorama of this context, by analyzing with existing cases and well determined intervention that bring forth a strengthening of positive behaviors and avoidance of asocial behaviors in teenagers.

The findings of this study are closely related with the importance of any form of motivation in schools, in the teacher-teenager relationship, cooperation between their peers, the parent-teenager relationship in the implementation of the resulting positive attitude, through teaching a system of values and anti-values, the psycho-social motivating intervention during the teaching process that will be widely analyzed and that open many paths for further studies.

Key words: teenager, pro-social behavior, motivation, teacher, psycho-educational intervention, communication, parent, socialization.

36. Evaluation of Environmental Worldview from the Perspectives of Undergraduate Students in N. Cyprus

Dr. Buket Asilsoy, Selin Laleci, Sinem Yıldırım, Dr. Kozan Uzunoğlu, Kozan Uzunoğlu, Assoc. Prof. Dr. Özge Özden Fuller

ABSTRACT:

In recent years, environmental issues has been considerable debate within the scientific community. In this context, environmental worldview is a significant focus area. In light of recent studies it is understood that there are disparate variables influencing environmental worldview. Additionally it can be suggested that environmental worldview is a variable of environmental behaviour itself. As it is a significant aspect among young generation to adopt environmentally responsive lifestyle, within this study it is aimed to understand the impact of environmental knowledge and several demographic variables such as gender nationality and household income on environmental worldview. In this research the influence of environmental worldview on environmental behaviour is examined within the university students in Nicosia. A total number of 120 undergraduate students were chosen for the research. In the first section, several subjects were asked about their environmental knowledge and awareness. In the second section, with the help of Dunlop and Van Liere's New Environmental Paradigm (NEP) scale, environmental attitudes of participants were measured, in order to understand the level of their existing worldview.

Keywords: Environmental Worldview, NEP Scale, Survey, Undergraduate Students, Nicosia, Cyprus

Dr. Buket Asilsoy is Assistant Professor at Department of Landscape Architecture, Faculty of Architecture, Near East University, having research fields as sustainable urban planning, urban landscape planning and urban ecology

Selin Laleci is Assistant at Department of Landscape Architecture, Faculty of Architecture, Near East University, having research fields as edible gardens in urban areas, ecological landscape design.

Sinem Yıldırım is Assistant at Department of Landscape Architecture, Faculty of Architecture, Near East University, having research fields as rural landscapes, rural planning and sustainable landscape design.

Dr. Kozan Uzunoğlu is Faculty Coordinator at Faculty of Architecture, Near East University, having research fields as sustainable planning, climate respond buildings.

Assoc. Prof. Dr. Özge Özden Fuller is Chairperson of Department of Landscape Architecture, Faculty of Architecture, Near East University, having research fields as ecology and nature conservation.

37. Contribution of NGOs in Promotion of Pro-sustainability Behavior at Teacher Education Institutions in Central Vietnam

PhDc. Thi Kinh Kieu, Dr. Jane Singer

ABSTRACT:

1. Thesis statement: Non-governmental organizations (NGOs) can help universities in developing countries compensate for limited finances and capacity by offering students courses and training in Education for Sustainable Development (ESD). This paper describes the challenges and potential for more effective collaboration between universities and NGOs in ESD implementation by presenting a case study of a university in central Vietnam

2. Methodology: focus group discussions (among students, university lecturers and NGO representatives) and semi-structured interviews of university lecturers and NGO staff with analysis by key phrases and paragraphs emerged from the data

3. Results: NGOs have significantly contributed to enhance students' ESD competencies through experiential learning courses. Although both NGOs and university lecturers identified benefits of University-NGO partnerships (UNGOPs) (e.g. project development and utilization of human resources and facilities from both sectors) there remain gaps in mutual understanding, interests and influence that hamper effectiveness. The authors suggest means of institutionalizing and improving UNGOPs

4. Conclusions and Implications: NGOs can play an important role in promoting students' ESD competencies, but collaboration requires more active participation by university members and continuing dialogue between stakeholders to maximize mutual benefits

Keywords: NGOs, Danang University of Education, Education for Sustainable Development and Partnerships

Ms. Thi Kinh Kieu is a doctoral candidate at the Graduate School of Global Environmental Studies, Kyoto University, Japan. Her research focuses on education for sustainable development in higher education.

38. Factors influencing career choice: the Romanian business and administration students' experience

Dr. Laura Elena Marinas, Ramona Stefania Igret,
Assoc. Prof. Dr. Cristian Marinas , Eugen Prioteasa

ABSTRACT:

The paper aims to identify and rank the factors influencing Romanian business and administration students' career choice. The main assumptions refer to: (a) good university education is critical factors influencing career choice; (b) business and administration students career choices are influenced by extrinsic factors; (c) students' early exposure to profession contribute to successful careers. Findings are based on data collected from 496 undergraduate and master programs students enrolled in business and administration university education programs at Bucharest University of Economic Studies during 2014/2015 academic year. The survey is based on a questionnaire with 17 questions. Cross-tabulation, frequency analysis and descriptive statistics were used for processing data collected. Results indicate that extrinsic and interpersonal factors are significantly influencing career choice of business and administration students. The findings are relevant for the university management: successful integration of graduates is becoming part of the quality assurance for any university. Accurate knowledge about perceptions and factors influencing students' career choice is needed to university staff so that to design and implement tools to support students to make the "right" career choice and to contribute to sustainable insertion of its graduates to the labor market.

Keywords: careers, students, university education, extrinsic factors, intrinsic factors, interpersonal factors, Romania

Laura Elena Marinas is associate professor at Bucharest University of Economic Studies and researcher at Research Center in International Business and Economics. Her teaching activities are focusing on EU economics and had developed significant research on university education economics and governance in Europe and students transition from school to active life

Ramona Stefania Igret is university lecturer at Bucharest University of Economic Studies. Most of her teaching and research activity is focusing on career management.

Cristian Marinas is associate professor at Bucharest University of Economic Studies. Most of his teaching and research activity is focusing on human resource management and career management.

Eugen Prioteasa is a PhD student at Bucharest University of Economic Studies. His research focus is on university management.

39. A generation caught between two eras. The drastic shift from communism to capitalism in Albania

Elvira Bruçi

ABSTRACT:

The year 1945 marks the beginning of the darkest era in the history of the Albanian people. At a time where Europe had just come out of the Second World War, in a state of huge destruction and grief, with little attention towards the smaller states, communism was established in Albania, followed by unprecedented violence, unconstitutional trials, deportations, persecutions, overall paranoia and a nationalist hysteria. Enver Hoxha became the undisputable political and social leader of the country, implementing a doctrine of aggression, national isolation and espionage. The economy switched from private to state collective, so the people were expropriated. The elite of the society, which was a threat to the new regime, were mostly persecuted, after being put through ridiculous trials, or even without being trialed, many were jailed, executed or tortured to death.

The long period of Enver Hoxha's governing, (1945-1985), was marked by a massive manipulation of people's minds and fates. People lived in terror and under a continuous pressure of espionage from the state security. The regime built a doctrine of "biography", according to which people were judged by origins and the fates of many were settled or cursed by a rebellious father, brother, or even distant relative. It would take the death of a dictator (Hoxha), and a massive popular rebellion, protests and the rise of the students in demonstrations, for the trigger of the first state negotiations. The 1990s mark a turning point in history. The demonstrations of the students (known as the students of December), forced the successor of Hoxha, Ramiz Alia to sit in negotiations, as communism had slowly started to fade, and this marked the aftermath of one of the cruelest dictatorships in Europe. People's lives would change forever, and new challenges were on the way, but most importantly, the wind of democracy had finally started to blow.

The aim of this work is to bring to light once again, the struggle of the Albanian people through the dictatorship and also those following the fall of it. The remarkable influence of this era and the beginning of democracy, the huge gap between the ideologies and the attempts of the people to adapt to the new regime.

Key words: communism, terror, espionage, isolation, persecution, capitalism. (Elvira Bruçi)

40. The Role of International Mobile Remittances in Promoting Financial Inclusion and Development

Dr. Alois Nyanhete

ABSTRACT:

The purpose of this paper is to examine the contribution that international mobile remittances make in promoting financial inclusion and development. We use the case of the EcoCash Diaspora service that is offered by Econet Wireless Zimbabwe for the study. EcoCash Diaspora is a mobile money transfer service that enables users to send remittances directly to the EcoCash mobile phone wallet of recipients in Zimbabwe.

We argue that international mobile remittances are a spectacular innovation in that they are able to reach people banking institutions had faced challenges with reaching, particularly those in rural areas. Given that there are significantly more people who own mobile phones in comparison to those who hold formal bank accounts, providing financial services through mobile networks could provide financial access to several unbanked households. In addition to this, international mobile remittances also promote human development by enhancing the financial capabilities of the recipients.

Our study demonstrates the important role mobile technology is playing in improving lives of people at the bottom of the pyramid and we encourage greater use of mobile technology in delivering services to this population.

Keywords: Remittances, Mobile Banking, Financial inclusion, Human Development.

Mr. Alois Nyanhete is a doctoral research student at The Open University in the United Kingdom. He is part of the Development Policy and Practice unit which is the university's centre for teaching and research in international development. Alois has working experience from the insurance, banking and microfinance disciplines. He holds an Advanced Master's degree in Microfinance from Université libre de Bruxelles in Belgium. Alois' research interests include financial inclusion, digital financial services, remittances and migration. His doctoral research deals with the role of digital financial services in improving the lives of people at the bottom of the pyramid.

41. Intellectual Property, Innovation and Development: A Third World's Perspective

Dr. Olasupo (Supo) Owoeye

ABSTRACT:

The United Nations Sustainable Development Goals were adopted in September 2015 as a post 2015 development agenda. Goal 9 of the SDGs is to 'build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation'. Much has been written on the connection between intellectual property and development. With respect to developing countries, arguments have been canvassed both for and against intellectual property in the pursuit of their development goals. The adoption of the TRIPS Agreement in 1994 heralded a new era of global intellectual property governance aimed at a substantial harmonisation of intellectual property protection standards across the globe. This continues to raise continuing concerns in relation to the extent to which IP could foster development and industrialisation in developing countries and whether the global IP regime is designed in a way that sufficiently protects the interest of the developing and least developed nations. The development rhetoric is assuming an increasing significance in Africa given the continent's varying development challenges. This calls for some reflection on the interface between IP protection and the pursuit of sustainable human and economic development. The paper seeks to examine the link between IP and innovation and how it relates to sustainable development in the African context. The paper will consider options that African nations may explore in the implementation of IP laws that are development oriented.

Keywords: Intellectual Property, Innovation, Sustainable Development

Dr. Olasupo (Supo) Owoeye holds a Bachelor of Laws (Hons) degree from the University of Ibadan, Nigeria and a PhD in Law from the University of Tasmania. He is admitted to the legal profession in Nigeria, New Zealand and Australia. Prior to joining the University of South Australia, Supo taught at both undergraduate and postgraduate levels at the University of Tasmania and the RMIT International University, Vietnam. Supo was one of the 7 recipients of the prestigious Humboldt Research Fellowship award from Australia in the March 2015 round of the Humboldt awards and his Humboldt Fellowship was held at the University of Augsburg, Germany. His research areas include International intellectual Property Law, WTO Law and Regionalism, International Trade Law and Corporate Social Responsibility and the Law.

42. Gender Equality as evolution, revolution, democracy, justice and social equality

Dr. Xhuljeta Krasta

ABSTRACT:

This paper is an observation about the gender inequality around the world since its problematic is accepted to be universal. I will make the difference between 'Feminism' and 'gender equality' since they are usually misunderstood; and explain also why these terms are seen as a "post materialist" issue or "quality of life". Throughout the paper I will discuss that gender inequality is a human decision of history, taken by the needs of different epochs; and any decision - by the effects it produces, affirms how fair, transparent, inclusive and democratic it has been.

The right to gender equality is above all a demand of the democratic process. In particular, the democratic process has led to the escalating demand for social welfare as well as popular participation and additional social equality. Namely, the issue of gender inequality, reflected through constant changes of human history, is a matter of social exclusion, which is a clear-cut indicator of social inequality, the very gauge of the process of a healthy democracy and of a sustainable development of the society.

Keywords: democracy, gender, justice, participation, development, society.

43. Oral Health Status and Oral Impact on Daily Performance in Elderly in Northeastern Region Thailand

Dr. Kemika Sombateyotha, Assoc.Prof. Udomsak Mahaweerawath

ABSTRACT :

The quality of life index as OIDP is very importance value for people teeth loss or oral health problem in specific socio-cultural community when generalized to assessment.

The objective was to investigate for dental health status and their oral impact on daily performance (OIDP) in the elderly. A cross-sectional descriptive study were composed of seven provinces were randomized selected in Northeastern region of Thailand, comprised of 2,939. All elderly subjects were dental health examined and interviewed by using standardized questionnaire included dental health behavior, psychological health and OIDP.

The results showed that the OIDP scoring 5 level, first 3 of 5 level ranking is the most severity level magnitude as eating food (52.2%), speaking (51.9%), embarrassed by teeth appearance (51.9%), which affected performances. The statistical analysis showed that subjects perceived their irritation in oral cavity [adjusted odds ratio (AOR)=2.11; 95%CI=1.62-4.31], xerostomia [AOR=1.89; 95%CI=1.02-3.13], restricted their sugar consumption [AOR=2.38; 95%CI=1.22-3.80], low frequency of cleaning teeth [AOR=1.96; 95%CI=1.09-3.03], visited a dentist during the past three years or more [AOR=2.89; 95%CI=1.20-4.15].

In conclusions, the high prevalence of oral hygienic problem with OIDP also still high magnitude level. Thus community oral health education programs and dental skill training need to be improved and fulfilled.

Keywords: oral impact on daily performance (OIDP), elderly, oral health

Dr. Kemika Sombateyotha is a professor at Faculty of Public Health at Maharakham University, Maharakham, THAILAND. She received her B.Sc. degree in Nursing from Srimaharakham Nursing College and M.Sc. degree in Public Health from Mahidol University, THAILAND. She received Doctorate degree in Public health from faculty of Public health, Maharakham University in 2016. Her research interests focus on health promotion, elderly health and sustainable healthcare.

Assoc.Prof. Udomsak Mahaweerawath is a professor at Faculty of Public Health at Maharakham University, Maharakham, THAILAND. He received his B.Sc. degree in Biology from Khonkaen University Thailand and Master of Public Health degree in Public Health from The state University of Philippines. His research interests focus on health promotion, elderly health, biotechnology, Nutrition and food safety and sustainable cultural healthcare.

44. Using Cultural Capital for Urban Management , Khon Kaen Municipality, Thailand

Kanta Vilachai,

ABSTRACT:

Creative economy development is an invaluable way to develop Thailand economy, moreover, the cultural capital development is also the important tool to develop creative economy. This qualitative research aimed to evaluate the cultural capital application in the members of KhonKaen municipal council and others for the urban management. The data were collected by using the participatory observation and in-depth interview.

The results show that 1) "Isan wooden buddha statues", a cultural capital in Isan region, have been used as "tool" of urban management which encouraged by members of KhonKaen municipal council and 2) KhonKaen municipality applied "Isan wooden buddha statues" as a "tool" and "issue" in KhonKaen urban management affairs.

In conclusion, this provides an opportunity for promote people participation to conduct a new kind of related to creative the sustainable urban developmentor put the cultural content as a part of the social bonds strategies.

Keywords: Urban Management/ Cultural Capital Management/ Sustainable Development

Miss KantaVilachai is a lecturer inCollege of Politics and Governance atMahasarakham University, Mahasarakham, THAILAND. She received her B.S. degree in Political Science and M.S.degree in Urban and Regional Planning from Chulalongkorn University. Moreover, she also received M.S. degree in Public Policy in 2012 from Mahasarakham University. Her research interests focus on Urban Planning, Urban Management, Cultural Capital, Local Governance, People Participation and Sustainable Development.

45. Energy poverty in Southern and Eastern Europe: peculiar regional issues

Dr. Alexandru Maxim, Dr. Costică Mihai,
Dr. Constantin-Marius Apostoae, Dr. Andrei Maxim

ABSTRACT:

Conceptual and methodological divergence in defining the issue of energy poverty (i.e. the inability of households to afford adequate access to energy services) has made it difficult to assess the problem at a European level using a standardized approach. Moreover, existing research raises concerns with regard to socioeconomic and environmental differences between European states that may have a significant impact on this phenomenon. The current paper builds upon a set of newly proposed econometric methods for the trans-national measurement of energy poverty and for the study of its determining factors. The research shows that Southern and Eastern European countries present peculiar socioeconomic traits that distort the impact of predicting variables, such as the tenure status of households. The results imply that a cautious approach is needed when attempting to measure and predict energy poverty at a trans-national level based on macroeconomic indicators. Regionally specific policy measures and indicators may be needed in order to assess the problem efficiently.

energy poverty; regional context; Compound Energy Poverty Indicator; tenure status

Dr. Alexandru Maxim is a Researcher at the CERNESIM Environmental Research Center, Alexandru Ioan Cuza University of Iași, Romania. He is the director of a research grant entitled “The energy security of the European Union in the new political, technological and commercial context (UAIC Grant for Young Researchers competition GI-2015-15). He has been involved in the management and implementation of 5 projects focused on ecosystem services, energy and environmental policies and economic development (Horizon 2020, COST etc.). He also has several years of practical experience in the strategic assessment of the energy sector (working for GE Energy Europe). Dr. Maxim has a PhD in Marketing (Summa cum Laude rating) during which he analysed household consumers’ preferences regarding renewable energy. His current research interests include: sustainable development, public goods, EU socioeconomic and environmental policies and energy markets.

Costică Mihai, PhD in Economics, Associate Professor at the Department of Economics and International Relations of the Alexandru Ioan Cuza University of Iași (Romania). The main domains of teaching and research are Development Economics, International Financial Management and Environmental Economics. He is also involved in research activities at the Integrated Center for Studies in Environmental Science for the Northeast Region (CERNESIM) in the Laboratory of Environmental Economics Analysis. He manages two internationally funded projects in the areas of environmental education and ecosystem services and has been involved in several research projects related to environmental studies and sustainable development.

Dr. Constantin-Marius Apostoae is a Researcher (in the field of environmental economics) at the newly established CERNESIM Environmental Research Center. He is director of the research project entitled “Identifying and assessing the effects of electoral cycles on the implementation of the environmental policy in Romania”, work financially supported through the UAIC Grant for Young Researchers competition (GI-2015-24). He is also actively involved in various teams within several structural and research projects (in Horizon 2020, Erasmus+, Erasmus Mundus etc.). His main

research interests are: environmental economics, sustainable development, environmental policy, environmentally smart cities, political parties, electoral cycles. Moreover, he is Associate Teaching Assistant at the Faculty of Economics and Business Administration. As a young researcher, he published over 35 scientific articles/papers in important international databases and high-rated peer-reviewed journals; he also holds a PhD in Finance with the Excellent rating.

Dr. Andrei Maxim is an Associate Professor at the Faculty of Economics and Business Administration of the Alexandru Ioan Cuza University of Iași, Romania. He teaches Marketing Research, Digital Marketing and Distribution. Over the past few years he was a member of two national research projects, one aimed at studying relationship marketing strategies and the other focused on the influence of human capital on economic development. He also took part in three human resources development projects that targeted entrepreneurs and high school marketing teachers. His doctoral research, as well as several of his published papers, is focused on investigating the impact of transactional and relational marketing approaches on the economic performance of the Romanian companies. Dr. Maxim's research interests also include e-commerce, entrepreneurship and human capital development.

46. Technological implementation in the Brazilian family farming context in order to minimize CO₂ and CH₄ emissions, a feasibility analysis.

Dr. Roberth Andres Villazon Montalvan,
Prof. Cátia Regina Silva de Carvalho Pinto, Reney Dorow

ABSTRACT:

In Biguaçu County, State of Santa Catarina, traditional family farming represents most of the county's activity. These family farmers carry out a particular land use on which agriculture, forest and energy production are related. These farmers perform fallow agriculture in secondary subtropical forests (Atlantic Forest biome) where, energy production is made in the form of charcoal. As charcoal production is realized in traditional handcrafted kilns, gravimetric yield is meager and greenhouse gases emissions are high. In order to improve this scenario it has been experimentally installed in late 2014 a volatile recovery system (SRV). The SRV installation respond to three main characteristics: to be easily reproducible by others farmers, to have a low initial investment and to be locally adapted. The SRV allows the condensation of the gas fraction during production, obtaining pyrolygneous acid (PA). Calculations indicate a PA production potential of about three thousand-liter year. Initial investment is reachable by local farmers and the investment recovery will take five years. The implementation results in a 30% increase in profits, a minimization of 1/8 of total emissions and 15% improve in gravimetric yield. With this basis, the SRV implementation can be considered as a feasible green infrastructure at regional scale.

Keywords: Emerging Countries, SME, Technological innovations, Feasibility analysis, CO₂ and CH₄ emissions, Family Farming.

M.Sc. Roberth Andres Villazon Montalvan is a research associate at Universidade Federal de Santa Catarina, Environmental Engineering Department. Mr. VillazonMontalvan is graduated in International Relations by Universidad NUR (2007) and graduated in Industrial Engineering by Universidad Privada de Santa Cruz de la Sierra (2010). He is in possessof a master's in Gestione e valorizzazione dellerisorseagroforestali by UniversitàPolitecnicadelle Marche (2009) and Agroecosystems by Universidade Federal de Santa Catarina (2013). Actually he is preparing his Ph.D thesis in Environmental Engineering. He has experience in the area of bio-energy, air pollution, environmental economics, environmental engineering, competitiveness of forest products, forest resources and forest engineering assessment.

Cátia Regina Silva de Carvalho Pinto, Ph.D. professor at Universidade Federal de Santa Catarina, environmental engineering departent is graduated at CienciasBiologicas from Universidade Federal de Santa Catarina (1990), She is in posses of a master's at Sanitary Engineering from Universidade Federal de Santa Catarina (2000) and Ph.D. at EngenhariaAmbiental from UniversidadeFederal de Santa Catarina (2005). Her experience is in Sanitary Engineering.

M.Sc. ReneyDorow is a Senior Agribussisnes Officer at Centro de Socioeconomia e PlanejamentoAgrícola EPAGRI/CEPA in Florianópolis Brazil. Mr. Dorowpossess abachelor's degree in Agronomy from Universidade Federal de Santa Catarina (1994) a Master's in Agribusiness from UFRGS. He has experience in Agronomy, focusing on Rural Extension, acting on the following subjects: environment impacts, productions systems, regional development and cooperatives.

47. Managing air quality in Suva, Fiji

Cynthia Isley, Prof. Peter F. Nelson, Prof. Mark P Taylor

ABSTRACT:

The population of Fiji, like other Pacific Island Countries, is becoming increasingly urban. Increased vehicular traffic and industry, added to widespread burning of wastes, contribute to fine aerosol particle air pollution (PM_{2.5}); particularly aerosol black carbon. As well as potential improvement of health and amenity on a local scale, better management of air quality has implications for global atmospheric warming.

Suva, the capital of Fiji, is the largest city in the South Pacific. Survey results indicate that more than half of Suva residents burn household and garden wastes. Industrial fuels are largely unregulated. Domestic diesel contains up to 500ppm sulfur and more than half of the vehicles on Suva's roads emit visible smoke. The air quality issues in Suva are typical of those in growing cities across the South Pacific; hence management procedures developed for Suva will be applicable to other Pacific Island Countries.

Focusing on Suva, this paper explores and quantifies the potential reduction of fine particulate and carbon emissions to air; from management techniques such as changing the sulfur content in domestic and industrial fuels, regulating the burning of wastes and changes to the transport fleet. Difficulties in the implementation of these management techniques are also discussed.

Keywords: Sustainable urbanism, Environmental legislation, Air quality, Emissions

Mrs Cynthia Isley is a PhD Candidate at Macquarie University, Australia. Cynthia is studying the air quality in Suva Fiji and particularly identifying the sources of fine particle aerosol. Cynthia has a background in contaminated site investigation and air dispersion modelling and is Chair of her local chapter of the Clean Air Society of Australian and New Zealand.

Prof. Peter F. Nelson is pro-vice chancellor of research at Macquarie University. Professor Nelson has had more than 30 years experience in research on the assessment and control of air pollution.

Prof. Mark P Taylor is a Professor of Environmental Science at Macquarie University. His research program investigates environmental pollution and risks to human health from aerosols, dusts, sediments, soil and water.

48. Application of GPC inventory to measure direct and indirect GHG emissions of rural communities using primary data

Dr. Susan Byrne, Dr. Bernadette O'Regan

ABSTRACT:

The GPC Protocol provides guidance and support to local governments on measuring and publicly reporting community GHG emissions in a consistent and reliable way. The first step to managing and subsequently reducing emissions is to measure and report. In order to measure the carbon footprint of a city or community, both government and community emissions need to be taken into account.

The Ballynagran Energy Plus+ Community covers 3750 ha of rural and semi-natural areas. Community emissions were calculated for Basic+ and include Scope 1, 2 and 3. Primary data, collected through questionnaires in the Ballynagran Energy Plus+ Community in Co. Wicklow, Ireland was integrated with detailed activity data and localized emission factors to calculate community emissions. The presence of a landfill within the community required all waste emissions to be calculated and included. Reported emissions reflect releases of CH₄, CO₂ and N₂O that occur as a result of activities and consumption patterns of the community.

The completed inventory, along with integrated data from the questionnaires will serve the decision making needs of the community whilst taking into account local and national regulations and legislation. Meaningful documentation of emissions, and subsequent changes, allow for future trend analysis and comparisons between communities.

Keywords: Community greenhouse gas emissions, accounting, primary data, localized emission factors

Dr. Susan Byrne, graduated from the University of Limerick with a BSc. (Hons) Environmental Science in 2011 and completed her Ph.D. in Environmental Sustainability 2016. Her research activity includes the field of sustainable development with particular interest in rural communities and local energy efficiency and generation. Research to date has focused on Material Flow Analysis, Scenario Analysis, Policy Analysis, and Survey Development for primary data collection. She possesses a keen interest in influencing efficiency of energy and resources through policy development and community involvement. Her research aims to develop methods to assist community groups to maximise their sustainability through the development of policy, interventions and decision support tools.

Dr. Bernadette O'Regan, Ph.D. in Environmental Science is a Senior Lecturer in the Department of Chemical & Environmental Sciences at the University of Limerick, Ireland. She is the project leader for: Sustainable Settlements Research, Waste Management in Healthcare, Material Flow Management and Resource Efficiency and Metabolism and Material Flow Management Project for EU. Research expertise includes system dynamics modelling, LCA, sustainability modelling/metrics and environmental/sustainability indicator development. Her research addresses how environmental challenges affect people and the physical environment and identifies optimal ways of measuring and monitoring this interaction, while maximizing her impact on policy makers by providing evidence to support decision making. Her research aims to develop methods for analyzing environmental data, modelling and the development of decision support tools.

49. Management of Green Open Space (RTH) in Kendari to Reduce Air Pollution

Dr. Lies Indriyani

ABSTRACT:

The existence of green open space (RTH) is very important in any urban area so that the government issued a policy to regulate the presence of green space. Based on Law No. 26 Year 2007 on Spatial Planning, which then poured in Local Regulation in Kendari No. 10 of 2011 on the Management of green open space, requiring urban green open space of at least 30% of the area of the city, while the proportion of green open space public at least 20% and private green open space 10% of the area of the city. Along with a number of city dwellers is increasing, natural resources and environment in the city more and more utilized. This resulted in forest resources more widely utilized and the rate of decline RTH getting faster and the increased activity of urban communities that use fossil fuels leads to high air pollution. This study aims to (1) evaluate the suitability of tree species making up RTH, and (2) make referrals election suitability of tree species that have a growing and effective in controlling air pollution. This study uses survey and identification to determine the constituent tree species. Rate suitability of tree species based site and literature. The results showed that the tree species in Kendari city RTH Region consists of 51 species, 33 species of which in accordance with the requirements of silvicultural, management and aesthetics, while there are 18 species of trees that were considered suitable place to grow and be effective in controlling air pollution.

Keywords: green open spaces, the selection of tree species, air pollution

50. Oil Spills Along The Indian Coasts: A Challenge To Human And Environmental Security

Prof. Amita Agarwal

ABSTRACT:

Purpose: To find out impact of oil spills on human security.

Methods: Library research.

Implications/ Results: Need of strict rules and effective implementation.

In the first decade of 21st century India faced 27 cases of oil spills along its coasts.

Though it is natural for a country that has a large coastline (app. 5700 kms. mainland and app. 7500 kms. including the two groups of islands), it is difficult to manage such spills, effectively and immediately.

Management of prolonged and adverse impact of oil spills on human security (e.g. loss of life, economic loss and loss of food) aquatic environment and sensitive ecosystems (mangroves, coral breeding and nursery grounds of marine animals) becomes a big challenge for India which has a continental shelf of 0.31 million kms on the Western coast line and 1430 kms on the Eastern coast and approximately 6740 kms of mangroves (about 7 % of world's mangrove area).

Divided into several parts the proposed paper makes an attempt to look into:

1. What are oil spills?
2. Impact of oil spills on human and environmental security.
3. Indian law regarding oil spills?
4. How to check such incidents if future?

Keywords: Oil spills, Coastal region, Human and Environmental Security, India.

Professor Amita Agarwal, S.K. Govt. College, Sikar is interested in research on, Indian Ocean, Human Rights and Peace and Conflict resolution. She has participated in many international conferences (Canada, Mauritius, Norway, Sweden, Singapore, Hong Kong, and Shanghai) Greenland, and written extensively on the subjects of interest. Her research includes:

- Senior fellowship of the ICSSR (July 2012-July 2014).
- Nominated by the UGC for UGC - TECH 2012, to develop Curriculum for post graduate studies at Mahatma Gandhi Institute, Moka, Mauritius.
- Lee Hysan visiting Fellowship (May-June 2006), Chinese University of Hong Kong, Hong Kong.
- Post- doctoral fellowship of the UGC 2002-05.
- Academic exchange program between S.K. Govt. College, Sikar, India and University of Gothenburg, Sweden.
- She is working on editorial board of:
 1. International Journal of Peace Education, Rutledge, (ISSN 1740-0201) Taylor and Francis Group, UK,
 2. Cogent Education, a sister publication of Taylor and Francis,
 3. US-CHINA Education Review (ISSN1518-6613), David Publishing House, Illinois, USA,
 4. Syllabus, Rhodes Island College, USA. (ISSN 2163-3177), as a reviewer,
 5. Journal of Sociology and Anthropology", Horizon Research Publishing, USA (From 2013/05/25 to 2016/05/24),and
 6. editorial/advisory board of journal "Insights" published by the Rabindranath Tagore Institute, Mauritius ISBN 978-99949-0-177-7.

51. Coral Reefs within Australian Coasts: Impact of Climate Change and Environmental Threats

Dr. Anfal Dawood

ABSTRACT:

The natural WHSs have prominent global value, where they help to preserve and conserve the value of future and current generations. Thus, IUCN, which represents the body of the Committee of World Heritage seeks to manage the risks that threaten these sites and may be destroyed their values. However, there are a large number of disasters that threaten the cultural heritage around the world. These disasters are obtained from human-made or natural hazards. Several disasters have been occurring within different areas and caused severe damage to the intangible and tangible features of WHSs. Within this paper, the key climatic and environmental risks that face the WHSs have been discussed. This problem has been addressed by showing the volume of damages caused by climatic and environmental risks. Further, three ways have been suggested to manage these risks and to preserve the WHSs from their impact. Finally, a summary and solutions for this problem have been given

Keywords: WHSs, IUCN, Natural hazards, Human-made hazards, extractive activities, wildfires

Dr. Anfal Dawood is Assistant Prof. at the University of Baghdad, College of Arts, department of Geography 2011.

- From 29/10/1995- 01/10/2012

Researcher and supervisor of geographical materials at the Ministry of Education, Dept. of school curricula2006-2010

- Teaching the Second, third and fourth undergraduate Student.

- Teaching subjects of environmental problems, natural recourses and the Arab homeland.

- Super adviser for the Pre- graduated Student researches.

Super adviser for the MSC Student researches. Published Researches and Articles:

- Legislated Laws issued for water Environment Protection 2002.

- Negative Effects of Air Pollution 2003.

- Follow up the pollution in Dyala Rivers via Using Remote Sensing 2004. Geographical distribution for waste materials in Baghdad and its impacts 2010.

- The increase of level of pollution at Tigre's sediments in Baghdad 2011.

- The increase of salt concentration in the underground water at Yousifiya area 2011.

- Geomorphological and environmental evidence to enter the Tigris aging in Baghdad 2013.

- Historical Geography of Baghdad 2014.

- Coral Reefs within Australian Coasts :Impact of Global change and Environmental Threats 2016.

52. Emissions of Greenhouse Gases from Diesel Consumption in Agricultural Production over Turkey

Beran ADAY, Can ERTEKIN, Fatih EVRENDILEK

ABSTRACT:

Agricultural sector is both a producer and consumer of energy. It consumes energy in the forms of human labour, diesel, electricity, seeds, fertilizer, pesticides etc. By using these energies efficiently, we can achieve higher amount of production, minimize labour intensive processes and provide sustainable production. High use of energy inputs results in adverse environmental impacts like increase in global warming potential, pollution of water, soil and air.

In this study, thirty different agricultural products such as cereals, fruits and vegetables were evaluated according to the consumption of diesel fuel during production. It is consumed for soil preparation, fertilization, sowing, spraying, harvesting and transportation. These diesel fuel consumption were found from different literatures, and minimum and maximum values were recorded. The diesel fuel consumption can be expressed as fossil CO₂ emissions with equivalent of 2.76 kg per liter. So, we calculated total CO₂eq emission amount from these 30 products over Turkey and made a map showing the CO₂ production because of diesel consumption during agricultural production.

According to the results, the GHG emission production were between 0.48 and 3.75 Tg CO₂eq for wheat, 17.15 and 42.20 Gg CO₂eq for chickpea, 0.14 and 0.15 Tg CO₂eq for tomatoes, etc. In order to reduce this amount of GHG production, some new technologies in agricultural production have to be used so diesel fuel consumption can be decreased.

Keywords: GHG emission, Agriculture, sustainable production, emission, efficiency, environmental impact

Beran ADAY Akdeniz University, Faculty of Agriculture, Dept. Of Farm Machinery and Technologies Engineering, Antalya, TURKEY.

Prof. Can ERTEKIN Akdeniz University, Faculty of Agriculture, Dept. Of Farm Machinery and Technologies Engineering, Antalya, TURKEY.

Fatih EVRENDILEK Abant Izzet Baysal University, Faculty of Engineering, Dept. Of Environmental Engineering, Bolu, TURKEY.

53. Environmental sustainability of Iron and steel industry: towards reaching the climate goals

Prof. Volodymyr Shatokha

ABSTRACT:

Drastic modernization of greenhouse gas emitting industrial sectors is indispensable condition for transition to a low-carbon economy. Iron and steel industry is responsible for 6.7 % of all global anthropogenic CO₂ emissions. Futures of iron and steel industry based on various scenarios for market penetration of best available and breakthrough technologies have been modeled and analyzed against the climate change mitigation targets established by the International Energy Agency. Plausible modernization pathways for achieving the levels of carbon dioxide emissions consistent with the targets up to 2030-2040 have been revealed. Reaching of the targets established for 2050 aiming at keeping global warming within 2°C will require development and deployment of radically innovative iron- and steelmaking technologies as well as carbon capture and storage/utilization technologies, enhanced material efficiency, greater share of recycling in steel production etc. Delayed mitigation increases the risk that reaching of the climate goals will depend upon the fact whether some technologies being currently on the early phase of laboratory research will be available for large scale industrial deployment after 2030.

Keywords: climate change, mitigation, iron and steel industry, sustainable development scenarios

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. Member of the National Team of Higher Education Reform Experts for Ukraine.

54. Looking Beyond the Climate Change Convention to attain Global Sustainability Targets.

Kalpana S. Murari

ABSTRACT:

Sustainable Development (SD) is evolving into a major discourse of International law. Very few nations have incorporated the principle within their domestic legislations that is ultimately crucial to managing our planet's resources. It is time SD is taken up legally as an aspect of the regulatory domain and implemented globally and nationally. Arctic is one region that can eventually save the planet if monitored and regulated effectively under a SD regime, considering the role of extractive industries in the region, in meeting the energy needs of the world. The legal framework for the region is yet to take to fructify in a manner that can protect the region efficiently and effectively. It is the aim of the paper to regulate the extractive industries working around the Arctic region through both international and domestic regimes of the Arctic nations by enhancing the monitoring and verification regime of emissions reductions and substantial implementation of mitigation programs. The paper attempts in promoting a theory that by embarking upon a legal regime that is similar to the one which calls for Nuclear deterrence incorporated under UNCLOS (Law of the Sea) and the legal framework for the Arctic, we can endeavor to curb global emissions and thus effectively curb global warming. The theory that principles of sustainable development law have to be strengthened and a global monitoring system that inspects the processes involving exploitation of global commons in sensitive regions cannot be disputed. Co-operation and compliance of stringent SD laws incorporated within all legal regimes involving natural resource management within nations has to be emphasized and enforced through a global and universal regulatory body and legal regime outside of UNFCCC.

Keywords: Sustainable Development, Verification of emissions reduction, The 'effects doctrine', Global Sustainability, Extractive Industries and Climate Change.

Kalpana S. Murari. After about 20 years of practice as a lawyer in the Courts of India working in areas of Corporate, Personal and Transactional Laws, Mrs.Murari decided to take up higher studies in the field of Environmental and Natural Resources Management and completed her LLM at the Northwestern School of Law at the Lewis and Clark College, Portland, Oregon in the year 2010. Since then she has been writing and presenting scholarly papers at various international conferences. She has also authored a book covering aspects of Climate Change, SD and Corporate Social Responsibility, self-publishing the same as a Digital E-Book in the name and style of "The CSR Way to Add Value and Increase Your Profits."

55. Evaluating Sustainable Land Revitalization Programs and Policies in the United States

Prof. Kelly Tzoumis, Colin Driehorst

ABSTRACT:

Approximately four decades ago with the passage of the Comprehensive, Environmental, Response, Compensation, Liability Act (commonly known as Superfund), the United States began the serious work of remediating abandoned contaminated and/or blighted sites from its industrial past across its 50 states. Using a comparative case study approach, the effectiveness of the sustainable land revitalization and brownfields programs are evaluated. The conceptual framework includes the theories of bureaucratic behavior as well as the theories of public policy formation in terms of rhetoric, symbols, and issue definitions to explain policy challenges encountered with implementation. The sample includes cases from the Centers for Disease Control, the Environmental Protection Agency, and the states. Concepts such as legal frameworks, organizational dynamics, and environmental approaches are considered in determining the strengths and weakness of the programs being implemented. Implications and outcomes are identified with suggestions for steps moving forward for the remediation and renewal of these lands.

Keywords: Land, environment, public policy, revitalization

Dr. Kelly Tzoumis, Professor, DePaul University in Chicago, IL USA, began her career in working at the National Laboratories with the US Department of Energy on nuclear waste remediation. She served as a congressional fellow for Senator Paul Simon on Capitol Hill, and was a Fulbright Distinguished Chair of Environmental Studies at the Politecnico di Torino. She was the co-editor of the journal by Cambridge Press titled *Environmental Practice*. Her research/teaching areas include land revitalization and urban brown field redevelopment, policy analysis, National Parks, the US Great Lakes, wetlands, and international environmental treaties.

Colin Driehorst is an undergraduate student of public policy at DePaul University in Chicago, IL USA. He will be attending graduate school in the fields of urban planning, public policy and administration. He plans to be an urban planner specializing in economic development. In the past, he held an internship with the city of Chicago as an intern in the press and communications office, and hopes to continue working in local government.

56. Distributive Goals in Climate Justice

Prof. Makoto Usami

ABSTRACT:

Since the 1990s, a growing number of political philosophers and environmental thinkers have discussed climate justice, namely a group of moral questions surrounding climate change and policy. A point of debate concerns how we should distribute the rights to emit greenhouse gases (GHGs) across the world to keep world climate sustainable. Some authors maintain that everyone holds the right to emit equal per capita GHGs regardless of which society she lives in. Others argue that those living in the developing world have the right to development. Although it seems that the equality-per-capita view correlates with egalitarianism that is one of primary views on domestic distributive justice and a form of the development-right view with prioritarianism, there have been few efforts to examine these views by using philosophical observations on domestic redistribution. To fill this gap in the literature, this paper scrutinizes the equality-per-capita view, utilizing challenges against egalitarianism. Next, the development-right view is closely examined, with special reference to some limitations of prioritarianism. Then, I develop the basic needs view, which is consistent with sufficientarianism. The paper concludes by noting that findings on domestic distributive justice are helpful in exploring global distributive justice in the context of climate policy.

Keywords: sustainable climate, distributive justice, equality per capita, right to development, basic needs

Prof. Makoto Usami is Professor of Philosophy and Public Policy at Kyoto University. After receiving his BA (highest honor), MA (highest honor), and LL.D. from Nagoya University in Japan, he was affiliated with Harvard University as a visiting scholar (1997-1999). He was elected Vice President of Public Policy Studies Association, Japan (2010-2012) and currently serves as a council member in PPSAJ and the Japan Association of Legal Philosophy, an executive council member in Japan Law and Economics Association, and an editorial board member of some international journals such as *Journal of Environmental Studies*. His areas of specialty include legal and political philosophy, and he has published on global justice, intergenerational justice, and governance for sustainability in recent years. He is the author of three books and more than fifty journal articles and book chapters including "Deliberation, Expertise and Sustainability," in Kazuhiro Ueta and Yukio Adachi (eds.), *Transition Management for Sustainable Development*, United Nations University Press, 2014.

57. Local Actions to Foster Climate Change Adaptation through Sago Palm Development initiatives: Examining the Case of South Sulawesi, Indonesia

PhDc. Marlisa Ayu Trisia , PhDc. Andi PatiwareMetaragakusuma,
Prof. Katsuya Osozawa, Prof. Hu Bai

ABSTRACT:

Indonesia has great potential food supply from its local resources, namely sago palm. It could be an alternative crop because the production is not significantly influenced by climate. This paper interrogates local actions in South Sulawesi Province to promote sago palm. A descriptive analysis, in-depth interview and observation were used for this study. The findings show that sago palm still plays an important role in providing income and food for local community although a drastic change happened due to the expansion of other profitable crops during late 1990s-2000s. Sago production has also decreased significantly by 86.9% from 2006 to 2013. Several local actions have been done to revive sago palm, however, those actions failed due to heavily independent action without support from local government. Now, small initiatives with local government are executed. Local government is endorsing sago palm into Regional Medium-Term Development Plan (RPJMD) 2016-2020 as an alternative crop to adapt to climate change. They are also designing local regulation (PERDA) regarding the protection of sago palm. Noteworthy strong commitment from government and engaging stakeholders with rural communities are a key foundation for co-existence of sago palm for a more comprehensive view on sustainable development.

Keywords: climate change adaptation, local action, policy, sago palm, sustainable development

Marlisa Ayu Trisia is a Ph.D. student at Ehime University, Japan. Her research interests include agriculture, climate change adaptation, food security, sustainability and policy.

Andi PatiwareMetaragakusuma is a Ph.D. Student at Ehime University, Japan. Her research interests include sago palm, household economic and sustainability.

Katsuya Osozawa is a professor at Faculty of Agriculture, Ehime University, Japan. He graduated from Kyoto University in 1990. In 2011, He received "Sultan Hasanuddin Award" from Hasanuddin University, Indonesia for his generous contribution to improve cooperation between Indonesia and Japan.

Hu Bai is a professor at Faculty of Agriculture, Ehime University, Japan. He graduated from Ehime University in 1992. His research interests include principles of resource and environmental economics, food security, sustainable farming and agricultural structure in Asia.

58. Renewable Energy Development and Utilization in Indonesia within the Framework of Energy Policy

Muhammad Misykat Hiksas, Agung Cahyadi

ABSTRACT:

Indonesian economic structure transformation from agriculture to industry and increasing economic activities in various sectors has the consequence in increasing of energy consumption rapidly. However, Indonesia primary energy mix still is relying on non-renewable energy sources up to 94% in 2013. Because of the environmental issues and unsustain fossil fuels resources, renewable energy sources play a critical role toward Indonesia's sustainability development.

The aim of this study is to determine the present potential and sufficiencies of the renewable energy in Indonesia. This study also analyze renewable energy policy its implementation in Indonesia. Even Indonesia has big potential in renewable energy, renewable energy sources ratio in Indonesia's primary energy mix is not at desire level.

On the other hand, Indonesia has to face with some energy related challenges such as rising of greenhouse gases emission as a result of rapidly using of fossil fuels and low development in energy infrastructure at remote area. Within this context, as a foreign dependent country on fossil fuels energy, Indonesia should reform its energy policy from unsustain fossil fuels to renewable sources, which are more clean, abundant and potentially more cheaper

Keywords: Renewable Energy, Energy Policy, Indonesia

Mr. Muhammad Misykat Hiksas is an electrical engineering student at Universitas Indonesia. His research interest focused on renewable energy, energy policy, and solar photovoltaic.

Mr. Agung Cahyadi is a Student of metallurgy and materials engineering, Universitas Indonesia.

59. The reliability of fingerprint technology in user authentication, its application in business and impact on environmental sustainability

Assiya G. Utzhanova

ABSTRACT:

This paper explores to what extent fingerprint technology is reliable for user authentication and its impact on environmental sustainability. Assessing the reliability of automated biometrics is important because of its application in business for security and user authentication purposes. It increases environmental awareness. Usage of fingerprint technology provides business opportunities that substitute traditional systems of ticket, magnetic card identification. It leads to sustainable development by reducing production of plastic, paper consumption and energy consumption.

Statistical analysis of fingerprint technology in framework of binomial, normal and Poisson distributions strengthens the reliability of fingerprint system. Source of the minutiae points used to analyze fingerprint characteristics is image of personal fingerprint. Statistical tests show that the accuracy may be improved. If the number of minutiae points increases, the probability of mismatch: type 1, type 2 errors decreases.

Real-time experiments tested efficiency of system and provided data for hypothesis tests that challenged uniqueness of fingerprints. Social and ethical issues related to fingerprint recognition system were analyzed by conducting survey. Insecure storage of fingerprint image implies risk to the privacy of stakeholders, thus the system is not completely reliable. Improving such imperfections will generate more trust by stakeholders, leading to greater sustainable environmental development.

Keywords: Fingerprint technology, environmental sustainability, statistical analysis

Ms. Assiya G. Utzhanova is a student at International School of Economics (LSE), Kazakh-British Technical University, International Baccalaureate alumni, class of 2015 of Nazarbayev Intellectual IB School of Astana, class of 2009 of Oakridge Elementary School in Washington DC. During school years Assiya organized charity events, was editor in chief of school magazine, founded NISA Press and was leading Student Council. She has organized recycling projects and contributed to increasing environmental awareness in her community. Assiya participated in international conferences in Hong Kong, United Kingdom, Sweden. During the European Mathematic Forum in 2013 Assiya's project was found exceptional by judges and further published in Germany. Assiya is the author of book "Chess and Maths". She has participated in writing Constitution of the University, and published an article in academic journal of Almaty as well as participating in workshop by British Council in partnership with Research Center Newton Al-Farabi on academic collaboration module. Currently Assiya is the President of Student Scientists' Society at KBTU, and top 100 volunteer in EXPO 2017 on 'Future Energy'.

60. GIS-based Valuation of Ecosystem Services in Mountain Regions: A Case Study of the Chepelare Municipality in Bulgaria

Dr. Ekaterina Ivanova, Dr. Boian Koulov, Dr. Bilyana Borisova,
Dr. Assen Assenov, Dr. Kiril Vassilev

ABSTRACT:

Thesis statement: In the last decade the Ecosystem Services' concept has a growing impact on sustainable landscape management in mountain regions, especially in area of territorial policies integration. The concept imports a new dimension in the economic valuation of the available resources and, thus, creates an added perspective of the natural capital of a given territory.

Methodology: This study applies a GIS-based approach in an attempt to evaluate selected ecosystem services on which the standard of living of local population in Rhodope Mountains depends. The valuation procedure employs a system of methods, including benefit transfer, market price, and contingent valuation, on local survey and regional statistical data for the following key ecosystem services: timber production, forest/agricultural products, and tourism and recreation. The investigation interprets the CORINE Land Cover (2012) classes as spatial units for the purposes of identification, analysis and valuation of ecosystem services.

Results: The Total Economic Value of the ecosystem services in the Chepelare Municipality was estimated to approximately 32.9 million leva (16.4 million euro), 69.7% of which accounts for tourism and recreation services, 18.2% for livestock production, 6.4% for timber production and 5.7% for forest products/crop growing production.

Conclusions and Implications: The suggested GIS-based approach for valuation of ecosystem services is intended to inform the sustainable management of the Chepelare Municipality.

Keywords: ecosystem services valuation, sustainable management, GIS, mountains

Dr. Ekaterina Ivanova is currently Assistant Professor in Department of Aerospace Information at Space Research and Technology Institute, Bulgarian Academy of Science, Sofia, where she works in the research areas of modeling and processing satellite data, environment monitoring and data base algorithms. Ekaterina received B.E., M.E., and PhD in Earth Science (Geomorphology and Paleogeography) degrees from Sofia University "St. Kliment Ohridski", Faculty of Geology and Geography in 2004, 2006 and 2011 respectively. Ekaterina's scientific work has been dedicated to natural hazards and ecological modeling. Her main areas of research interest are environmental modeling, natural hazards, geomorphology, ecosystems, GIS and Remote sensing techniques.

Dr. Boian Koulov is an Associated Professor at the National Institute of Geophysics, Geodesy, and Geography at the Bulgarian Academy of Sciences. He is teaching at Sofia University "St. Kl. Ohridski" and is Program Leader at the "Alma Mater" University Complex for the Humanities at Sofia University. The US National Science Foundation, the John D. and Catherine T. MacArthur Foundation, the US National Research Council, and the Bulgarian National Science Fund have sponsored his research on environmental management and regional development issues.

- Dr. Bilyana Borisova** is an Associate Professor at the Department of Landscape Ecology and Environmental Protection of the Faculty of Geology and Geography at Sofia University "St.KlimentOhridski", Sofia, Bulgaria. She works in the fields of landscape ecology and landscape planning, environmental assessments and environmental policy integration for sustainable regional development.
- Dr. Assen Assenov** is currently an Associated Professor at the Landscape Ecology and Environmental Protection Department to the Faculty of Geology and Geography of Sofia University "St. KlimentOhridski", where he lectures on General Biogeography, Biogeography of Bulgaria, Protected Areas in Bulgaria, Environment and Natural Resources for the Bachelor level and on Habitat diversity and methods of valuation of ecosystems / landscapes goods and services for the masters level. He lectures more than 30 years at the Faculty of Geology and Geography of Sofia University "St. KlimentOhridski". His research interests are related to biogeography, protected natural sites, sustainable development, biodiversity, phytocoenology and ecosystem / landscape goods and services.
- Dr. Kiril Vassilev** is a Senior Assistant at the Division of Flora and Vegetation, Department of Plant and Fungal Diversity and Resources of the Institute of Biodiversity and Ecosystem Research at the Bulgarian Academy of Sciences.

61. Geospatial Based Information System Development in Public Administration for Sustainable Development and Planning in Urban Environment

PhDc. Georgios N. Kouziokas,

ABSTRACT:

It is generally agreed that the governmental authorities should actively encourage the development of an efficient framework of information and communication technology initiatives so as to advance and promote sustainable development and planning strategies. This paper presents a prototype Information System for public administration which was designed to facilitate public management and decision making for sustainable development and planning. The system was developed by using several programming languages and programming tools and also a Database Management System (DBMS) for storing and managing urban data of many kinds. Furthermore, geographic information systems were incorporated into the system in order to make possible to the authorities to deal with issues of spatial nature such as spatial planning. The developed system provides a technology based management of geospatial information, environmental and crime data of urban environment aiming at improving public decision making and also at contributing to a more efficient sustainable development and planning.

Keywords: Geographic information systems; environmental information; management information system; public administration; sustainable development and planning; urban data.

Georgios Kouziokas is a Doctoral Candidate in the University of Thessaly, School of Engineering, Department of Planning and Regional Development, Volos, Greece. He holds a Master degree in Information Systems, a Master degree in Spatial Analysis and Environmental Management and a Master degree in Modern Learning Environments and Production of Instructive Material. His main research interests are public administration, management information systems, artificial intelligence, environmental informatics, geographical information systems and crime data management and prediction. He has developed several information systems and he has published several articles in international journals and conferences.

62. Improving sustainability of Programmes in Strategic Environmental Assessment procedures: the QUALitative Structural Approach for Ranking (QUASAR) the environmental effects

Dr. Gaia Galassi, Dr. François Levarlet

ABSTRACT:

Environmental sustainability is grounded on sustainable tools of planning and programming. In turns, environmental sustainability of plans and programs is ensured by Strategic Environmental Assessment. The Strategic Environmental Assessment differs from the Environmental Impact Assessment in that a quantitative environmental assessment of plans or programs is often not possible. A qualitative approach for the assessment of environmental effects and for the ranking of different possible choices and scenarios of sustainability, the QUALitative Structural Approach for Ranking (QUASAR), is presented as follows, for the first time. This approach is based on the parameterization of the characteristics of each potential interaction between the plan or program and its natural environment. QUASAR makes it possible to quantify the effects on a previously determined scale of values, making the assessment of the sustainable development paths reproducible and not depending on the evaluator. We described the application of the QUASAR approach to a real case study, the Cross Border cooperation Program Italy - Albania - Montenegro 2014-2020, showing it is functioning for an objective and repeatable assessment of effects as well for the comparison of different scenarios of development, based here on different allocation of financial resources.

Keywords: Sustainable development, strategic environmental assessment, methodology for the assessment of environmental effects; environmental legislation

Dr. Gaia Galassi (t33 srl) is an environmental scientist with experience in environmental assessment and evaluation. From 2004, she had carried out evaluation of Plans and Programmes at local and transboundary levels. Her work as environmental technician for a public administration (Marche Region) has improved her skill on legal and administrative issues. She collaborates with the University "Carlo Bo" of Urbino for the assessment of future scenarios of climate change. Since 2013 she works at t33 as consultant for the integration of environmental issues in the implementation of programmes and policies.

Dr. François Levarlet (t33 srl) is an environmental economist and an expert on EU regional policy. François is responsible for Environment at t33. He started working in the French Environment Agency (IFEN), in charge of the indicator of sustainable development. For nearly 15 years he has carried out evaluation, studies and provided technical assistance to EU programs in Italy and elsewhere in Europe, combining economic and environmental tools of analysis (SEA, Cost-benefits, scenario, ...). Through the United Nations and the EuropeAid he has served as a consultant to environmental planning in the Maghreb and sub-Saharan Africa as well.

63. Innovative Technology for Sustainable New Materials

Dr. Valentina Beghetto, Ph.D. Lodovico Agostinis,
Renzo Taffarello, Dr. Riccardo Samiolo

ABSTRACT:

The project is concerned with the development of a new class of molecules used as activating agents for “cross-linking” (ACL) and their application for the preparation of innovative materials.

Crossing, an Academic Spin off and innovative Start Up, is developing the know-how for the industrial production and use of new families of organic compounds such as ACLs.

The great potential of this class of molecules is embedded in their multiple applications.

Today poor availability and high costs of cross-linking agents, drastically limits the use of similar compounds, except for pharmaceutical and biomedical engineering applications.

The aim of the project is to decrease, or totally avoid, the use of environmental and health harmful substance in various industrial sector. In particular, the idea of Crossing arises from an intuition which transposes a pharmaceutical protocol to large scale manufacturing industry, for the production of leather, active packaging, innovative fabrics, dyes, antibacterial cellulose, etc..

Keywords: Cross-Linking, Innovative, Sustainable, Industry, packaging, cellulose.

Dr. Valentina Beghetto is Senior Researcher at the University Ca' Foscari of Venice, Molecular Sciences and Nanosystems Department. She teaches various courses among which “The leather industry: a chemistry insight”. Founder of the Spin Off Crossing in October 2014.

Dr. Lodovico Agostinis is PhD student at University Ca' Foscari of Venice, Molecular Sciences and Nanosystems Department. He collaborates with Crossing S.r.l. on research based on the development of new cross-linking agents and their use for the production of innovative new materials in industrial applications.

Renzo Taffarello, graduated in electronic engineering at University of Padova, he completed the master “International MBA” at the Clemson University. He has been working for years as business consultant in Italy and in China. He is now the coordinator of a 12 people team of service companies and since 1998 he works as managing partner for TEA SRL, a firm for managerial consulting for corporate development. He is responsible for international strategies and development for MAS SRL, as well as co-founder of Crossing.

Dr Riccardo Samiolo, graduated in business economy at University Ca' Foscari of Venice, after having acquired a great experience as a businessman, he was CFO for 10 years in Italian subsidiaries of important industrial multinational corporation, where he has actively participated in acquisition and rearrangement processes. Since 2005 he works in Came, Treviso, firstly as director of Administration Finance and Control, then as director for strategy and special project, now as CFO. He's co-founder of the Spin Off Crossing.

64. Design and simulation of a sustainable photovoltaic electric plug-in boat

Dr. Angel Sánchez, Philipp Steinlechner, Dr. Ángeles Cancela,
Dr. Andrés Suárez

ABSTRACT:

The increase of energy prices and environmental catastrophes lead to a development of alternative and renewable energy systems. In this case transport. A high efficient electric engine with a variety of the source replaces the so far used internal combustion engine (ICE). A battery system with a renewable energy provider, like photovoltaic panels, affects promising results. In the last few years the implementation of renewable energy sources, for example photovoltaic and wind energy in Hybrid Renewable Energy Systems (HRES) is becoming more popular. Those systems are very depending on seasonal impacts and that is the main disadvantage. The vehicles, which may be suitable, drive either on land or on water. On water the weight only plays an important role for small sail ships. But the energy consumption increases during the navigation with sail. For those types of systems, which mix many power sources, mathematical simulation has become an object of study for electric battery vehicles and all kind of hybrid configurations and even specific software has been developed. However, there is almost no information about battery electric ship simulations and even less about renewable energy sources applied in these kinds of vehicles. In this paper, a conceptual zero emission electric sailboat is created and simulated. Renewable solar energy and energy storage with batteries, in this case the charging energy is provided by the grid, is implemented. Subsequently independent modular models for each energy system will be development in Matlab®/Simulink® and embedded. All of these simulations are managed by a logic controller implemented in Matlab® as well.

The principal aim of this work is the creation of an energy independent sailing boat with an electric engine. It contains a simulation and validation of a sailing boat with an integrated renewable energy system to create an emission and pollution free ship. Therefore, the renewable energy technology, in this case photovoltaic panels, supplies the electrical energy for the engine, the electrical installation and the charging of the batteries. The target of this project is to create a sailboat for a river or a lake to work autonomously and ecologically. The main part is the simulation of the electrical installation with Matlab® and Simulink® to test the system under varying conditions.

Keywords: Simulation, Plug-In Hybrid boat, Renewable Energy

Angel Sánchez is Full Professor of the Chemical Engineering Department at the University of Vigo, teaching Chemical Engineering at the Industrial Engineering Faculty. Ph.D. on Chemical Engineering (University of Santiago de Compostela, 1986). Her principal research areas Renewable Energies Integration, Hybrid/Hydrogen-Batteries Vehicle Simulation, and Biofuels.

Philipp Steinlechner is an Erasmus Student, Dept: Chemical Engineering Department, University of Vigo, Spain.

Dr. Ángeles Cancela is an Associate Professor, Dept: Chemical Engineering Department, University of Vigo, Spain.

Dr. Andrés Suárez is an Assistant Professor, Navy University Center of Marín, Spain.

65. A probabilistic topic model on energy and transportation sustainability perceptions within Spanish university students

Dr. Jesus Rodriguez-Pomeda, Cecilia BAYAS ALDAZ,
 Dr. Leyla Angélica SANDOVAL HAMÓN,
 Dr. Flor SÁNCHEZ FERNÁNDEZ, Dr. Fernando CASANI

ABSTRACT:

Universities gather different social groups with diverse perceptions about sustainability issues. Higher Education institutions are interesting organizations to observe emergent social trends related to environment.

The behavior (inside and outside the university) of those university stakeholders is related to their perceptions about universities' policies and procedures on sustainability.

We focus our research on the students' perceptions on sustainability because of the actual and future role of students within the society.

With 25 interviews (about 55,000 words), we elaborate a probabilistic topic model about the perceptions of a sample of Spanish university students on energy and transportation sustainability referred to their daily activities in the campuses. Students deal with questions about renewable energy, energy efficiency, recycled materials, or bicycle use. The method allows to obtain the main topics underlying the expressed students' perceptions. Corpus' analysis also shows some gaps between students' perceptions and behaviors. Conclusions are relevant not only to know more on students' perceptions about sustainability, but to recommend policies to universities and other organizations.

Keywords: Education, Students, Perceptions, Energy sustainability, Transport sustainability, Probabilistic topic models.

Dr. Rodriguez-Pomeda is the Head of the Department of Business Organization at the Universidad Autónoma de Madrid. He is an Associate Professor with research interests in Higher Education Management and Leadership, Business Models, Probabilistic Topic Models. He has served as a consultant for the Organization for Economic Co-operation and Development (OECD). His work has appeared in Journal of Cleaner Production, Higher Education Research & Development, Business Ethics- A European Review, Soccer & Society, Eurasian Journal of Educational Research, Revista de Ciencias Sociales, Universia Business Review, The Energy Journal, International Journal of Technology Management, International Journal of Entrepreneurship and Innovation Management, International Journal of Innovation Management. He is a Member of the Research Institute on Higher Education and Science (INAECU), a joint research institute of the Autonomous University of Madrid and the Carlos III University of Madrid (www.inaecu.com).

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66. Production of Arbuscular Mycorrhizal Fungi Inoculum with Sago Waste Application for Endangered Species of Kalapi (*Kalappia celebica* Kosterm)

M.Si. Asrianti Arif, Dr. Aminuddin Mane Kandari, Dr. Faisal Danu Tuheteru, Masnun

ABSTRACT:

Southeast Sulawesi have many local and endemic plant that is important to be develop. One of them is kalapi (*Kalappia celebica* Kosterm) that has high quality of timber. However, kalapi experienced rare and decreasing of population. Irregular flowering period and limited seed are some of reasons. Therefore, vegetative propagation is alternative to improve the seedling availability. Introduction of biological agents such as arbuscular mycorrhizal fungi (AMF) is also strategy to improve the quality of seedlings that led to plant survival into marginally environmental conditions. Furthermore, AMF inoculums as biology fertilizer should be provided to support the growth of kalapi in field. This study aimed to determine the effect of the application of sago waste for production of AMF spores which isolated into kalapi rhizosphere. Soil sampling was taken in Kolaka regency, production of inoculum carried out in screen house, and observations of AMF colonization and number of spores carried out in the Laboratory of Forestry, Faculty of Forestry and Environmental Science, Halu Oleo University. This study was designed using completely randomized design (CRD) with waste of sago treatment, namely without sago waste, 10g sago waste / pot, 20g sago waste / pot, and 30g sago waste / pot. Results of study showed that there were trend where AMF spore production and AMF colonization decrease with increasing of sago waste dose application. The best treatment is 10 g sago waste application with 128 spores / 50 g media and the percentage of AMF colonization is 31.367%. AMF inoculums with sago residue is beneficial combination and could be used as biology fertilizer for endangered plant developing.

Keywords: Arbuscular mycorrhiza fungi, sago waste, Kalappia celebica Kosterm

Asrianti Arif, SP., M.Si. is lecturer and Head of Forestry Laboratory, Halu Oleo University, Kendari, Southeast Sulawesi, Indonesia. Focus on silviculture of local and endemic trees species research.

Dr. Aminuddin Mane Kandari is a senior lecturer and vice of dean on Faculty of Forestry and Environmental Science, Halu Oleo University, Kendari, Southeast Sulawesi, Indonesia. Focus on research of climate effect on plant.

Dr. Faisal Danu Tuheteru is a lecturer on Faculty of Forestry and Environmental Science, Halu Oleo University, Kendari, Southeast Sulawesi, Indonesia. Focus on silviculture of local and endemic trees species research.

Masnun is a student on Faculty of Forestry and Environmental Science, Halu Oleo University, Kendari, Southeast Sulawesi, Indonesia.

67. Research of the Biotope Diversity for the Purposes of Economic Valuation of Ecosystem Services in Chepelare Municipality (The Rhodopes Region of Bulgaria)

Dr. Assen Assenov, Dr. Kiril Vassilev, Dr. Boian Koulov,
Dr. Ekaterina Ivanova, Dr. Bilyana Borisova

ABSTRACT:

This statement: The application of the philosophy or the management model for sustainable development has two main shortcomings – the condition of the global environment gets worse and the social inequalities deepen. Regardless of the integrity of UN Sustainable Development Goals 2030, the manifestation of the effect of the false demarcation between ecology and development continues. The integrated philosophy for sustainability and development is enriched with new terms, such as natural capital and ecosystem goods and services, while their assessment and evaluation is crucial for the achievement of sustainable development.

Aim and Methodology: The habitat, biotope and landscape diversity interpreted in GIS environment through evaluation of ecosystem goods and services in Chepelare Municipality is the main aim of the research, illustrated with maps of the biotopes, habitat types and landscapes.

Results: The obtained data through a GIS-based approach for evaluation and assessment of the ecosystem services is of high importance for the well-being of the municipality's population. The results about the economic value of two main ecosystem services – wild fruits and herbs and genetic resources are comparable with results from other similar studies.

Conclusions: An attempt is made for harmonization of information from different scales for examination – land cover classes with habitat types, biotopes and landscapes aiming at the precise evaluation of the interpreted ecosystem goods and services.

Keywords: biodiversity, biotope, habitat type, ecosystem service mapping, environmental management

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- Dr. Boian Koulov** is an Associated Professor at the National Institute of Geophysics, Geodesy, and Geography at the Bulgarian Academy of Sciences.
- Dr. Ekaterina Ivanova** is currently Assistant Professor in Department of Aerospace Information at Space Research and Technology Institute, Bulgarian Academy of Science, Sofia.
- Dr. Bilyana Borisova** is an Associate Professor at the Department of Landscape Ecology and Environmental Protection of the Faculty of Geology and Geography at Sofia University “St. Kliment Ohridski”, Sofia, Bulgaria.

68. The contradiction between taxa of conservation significance and invasive species – a case study of sustainable development in Mala Planina

Dr. Assen Assenov, Dr. Kiril Vassilev, Ph.Dc. Borislav Grigorov

ABSTRACT:

Thesis statement: The research identifies, investigates and analyses taxa of conservation significance in Mala Planina and the negative influence of invasive species in the area as a major threat to biodiversity. The study follows UN's Sustainable Development Goal 15. Methodology: Cameral research, including exploration of the Red Data Book of the Republic of Bulgaria has been done. Remote methods are represented. ArcGIS maps examining the localities of the species are provided. Several terrain expeditions add value to the study.

Results: The territory is home to 21 floristic, 4 fungal species and 30 faunistic species included in the Red Data Book. Some of them cannot be found anywhere else in the country. This impressive richness is in contradiction with the fact that 24 invasive species are a part of the flora and some of them are included in the List of "Worst invasive alien species threatening biodiversity in Europe".

Conclusions and Implications: Although some invasive species are dispersed through the area, there are many species of conservation importance that also thrive there. The study can be used as a base for further investigation, as well as an example for other studies, concerning sustainable development.

Keywords: Sustainable development, conservation, invasive species, GIS, Mala Planina

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PhD student Borislav Grigorov is in the Department of Landscape Ecology and Environmental Protection Faculty of Geology and Geography Sofia University "St. Kliment Ohridski".

69. Investigating the Effect of Salinity Stress of Different Salts on the Okra and Artichoke Plants in the Invitro and Greenhouse Environment

Prof. Dr. Naser Boroomand

ABSTRACT:

Salinity of Soils in the world in general and in Iran in particular is continuously expanding due to the uncontrolled agricultural activities. Salinity stress varies depending on stress strength, plant resistance, type of the plant tissue and growth stage. In order to study the effect of salinity, two independent experiments invitro environment (Invitro) and greenhouse in a factorial design with completely randomized design where the first factor involved the type of salt (NaCl, KCl, CaCl₂ and MgCl₂) and the second factor was salinity levels with three replications were carried out. Result showed a significant effect in terms of the type of salt and salinity levels on germination in the Okra and Artichoke plants in the in vitro condition. The results showed that the highest percentage of germination in the okra and artichoke plants was recorded for the control condition (71.6% and 86.6 %, respectively) and the lowest germination was observed for the 12 dsm level (22.5% and 55 %, respectively). Compared to the control condition, germination in okra and artichoke decreased by 68% and 36 %, respectively. By reducing the amount of potential and increasing in salinity, germination, length and weight of stem and dry roots are reduced. Comparisons between different salts have shown that CaCl₂ has the greatest impact on the germination in okra, and KCl has the greatest impact on artichoke plant. The results showed that in the greenhouse condition increasing salinity in Okra in all the four salts of NaCl, KCl, CaCl₂ and MgCl₂ increased proline concentration in the shoot by 74, 63, 77 and 74 percentage respectively compared to the control group. The highest concentrations of sodium, potassium, calcium and magnesium was in NaCl, KCl, CaCl₂ and MgCl₂ in 8 dsm⁻¹. Also the highest shoot dryweight (3.65 g in pot) was in CaCl₂ at 2 dsm⁻¹ and the least (1.19 g in pot) was in NaCl at 8 dsm⁻¹. In the Artichoke plant, increasing salinity level, increased proline concentration in the shoot which showed an increase of 90, 89, 86 and 89 in NaCl, KCl, CaCl₂ and MgCl₂, respectively compared to the control group. Overall, the results showed that in the four chlorid salts in ceasing salinity level decreased the measured characteristics in both the In-Vitro and Greenhouse condition in Okra and artichoke the potential reasons of which are can be to toxicity of Ions and antagonistic effects among the elements or decrease in osmotic potential.

Keywords: Artichoke, Okra, germination, saline stress, Macro elements

Prof. Dr. Naser Boroomand is an assistant professor at University of Jiroft and Shahid Bahonar University of Kerman where he teaches Masters' courses and supervises thesis in the Soil Science Department.

70. Mathematical Modelling of *Chlorella* sp., *Neochloris conjuncta* and *Botryococcus braunii* in the Raceways of Using Different Drying Methods”

Dr. Sevil KARAASLAN, Onder UYSAL, F. Ozge UYSAL,
Prof. Dr. Kamil EKİNCİ and B. Salih KUMBUL

ABSTRACT:

Drying is one of the most important process in the cultivation of microalgae. Performance of drying depend on appropriate drying methods. This study has two main purposes. First, to determine the effect of different drying methods on the *Chlorella* sp., *Neochloris conjuncta* and *Botryococcus braunii* strains in Isparta province. Second, to identify the most suitable model for drying methods.

Chlorella sp., *Neochloris conjuncta* and *Botryococcus braunii* cultures were grown in basal medium with raceways in the greenhouse condition in Isparta province. During experiment, temperature, moisture, wind speed, irradiance, temperature of algal biomass, wet and dry mass, were measured. The application was carried out in three replications. Drying application continued for approximately 3 days.

Microalgae were dried at solar tunnel dryer, outdoor, and greenhouses conditions. The effects of outdoor drying; solar tunnel drying; greenhouses drying on drying time, drying ratio and color changing of microalgae have been investigated. The drying data were applied to ten different mathematical models, namely, Newton, Page, Henderson and Pabis, Logarithmic, Midilli and Kucuk, Wang and Singh, Two Term, Two Term Exponential, Weibull and Logistic Equation Models. The performances of these models were compared according to the coefficient of determination (R^2), standard error of estimate (SEE) and residual sum of squares (RSS), between the observed and predicted moisture ratios. Results showed that the Weibull equation gave the best prediction to the drying kinetics evidenced by coefficient of determination, R^2 ranging from 0.9959 – 0.9992 for all drying methods. In addition to, solar tunnel drying method has been determined be suitable to drying of microalgae.

Keywords: Chlorella sp., Neochloris conjuncta, Botryococcus braunii, drying, mathematical modelling, microalgae

Dr. Sevil KARAASLAN has a bachelor degree from Agricultural Machinery at Cukurova University in 1997, Turkey. Msc and PhD degree from the department of from Agricultural Machinery at the Cukurova University in Turkey. She is working on: Drying, Mathematical modeling, Post-harvest processing, Product processing techniques.

Onder UYSAL completed undergraduate education in 2007. About two years later, he began to work as Research Assistant in 2009 in Suleyman Demirel University. He has been still working in the same university and also his PhD training continues. He is working on: Microalgae production, Design of photobioreactors, Waste water management, Design of Aquaponic systems, Agricultural lighting, Bio-fertilizer, Agriculture machinery, Biomass, Bioprocess, Alternative energies.

- F. Ozge UYSAL** completed undergraduate education, in 2009. About a year ago, was a Research Assistant in Suleyman Demirel University. He founded his company in the same university in Technopolis. He is working on: Irrigation methods, Design of irrigation automation systems, Agricultural projects, Waste water management, Bio-fertilizer, Agriculture structures, Biomass, Hydraulic, Microalgae production, Pomiculture, Soil moisture sensor.
- Prof. Dr. Kamil EKINCI** had a bachelor degree from Agricultural Machinery at Cukurova University in 1991, Turkey. Msc and PhD degree from the department of Food Agricultural and Biological Engineering at the Ohio State University in USA. He is working on: Animal Manure Management, Process Management in Composting Operation, Biogas Production and Integrated Usage in Energy Systems, Modeling and Simulation of Biological Systems, Briquetting and Pelleting of Agricultural Residues and Wastes, Monitoring Gases in Animal Housing Environment, Energy Analysis in Agriculture.
- Barbaros Salih KUMBUL** had bachelor degree from Agricultural Machinery at Suleyman Demirel University Turkey. He had a Msc degree from Suleyman Demirel University Natural Science Institute Agricultural Machinery and Technologies Engineering. He is working on: Animal Manure Management, Process Management in Composting Operation.

71. Application of Resource Efficient and Cleaner Production (RECP) Approach in the Accommodation Sector of the Balkan Region

Dr. Mariana Assenova, Dr. Zdravko Georgiev, Dr. Branco Dunjic

ABSTRACT:

The aim of the paper is to present the results of the application of the UNIDO RECP methodological approach in the accommodation sector of countries from the Balkan region – Croatia, Serbia, Montenegro and Albania. It is based on the experience from 2015 in 20 hotels (5 in each country), undergone detailed in-plant assessments. The methodology lays down on the understanding that RECP is a continuous application of an integrated preventive environmental strategy applied to processes, products and services to increase overall efficiency, and reduce risks to humans and the environment. Based on the obtained data for the material, water and energy flows, the paper provides a summary and analyses of the most often proposed and implemented measures. A set of absolute and relative key performance indicators (KPIs) for resources use (energy and water consumption) and pollution generated (air emissions and waste water) is used and the expected change due to the implementation of the accepted options is estimated. The performance of the accommodation facilities is compared to the international benchmarks available.

The results of the study come to show the great potential of the continuously growing accommodation sector for more sustainable production and outline the focal points of intervention needed.

Keywords: resource efficiency, cleaner production, performance indicators, accommodation sector

Dr. Mariana Assenova is an Assoc. Prof. at Sofia University “St. Kl. Ohridski”. She is currently the Chair of the Tourism Department at the Faculty of Geology and Geography and a former deputy minister in charge of tourism. She is also the Head of the Management Board of the Social and Environmental Responsibility Center. Her main research and international experience areas include sustainable tourism development, policy and planning at enterprises and destination level.

Dr. Zdravko Georgiev is the Executive Director of SOFENA Sofia Energy Agency and also acts as the RECP expert at the Social and Environmental Responsibility Center. His main research and expertise areas include resource efficient technologies, small-scale applications of renewable energy sources, environmental impact assessment and evaluation of sustainability. He has been involved in many European projects at regional, local and enterprises level in energy efficiency and RECP.

Dr. Branco Dunjic is the Director of the National Cleaner Production Centre of Serbia, established at the Faculty of Technology and Metallurgy with the support of UNIDO. His main research and expertise areas cover resource efficient and cleaner production, chemical leasing and sustainable development. He has been involved in many successful projects with national and international enterprises in the specified fields and is providing consultancy to UNIDO, UNEP, the World Bank and other international organizations.

72. Rearing insects as a protein source for feed: is it an effective and sustainable option?

Dr. Pier Paolo Danieli

ABSTRACT:

The increasing demand for protein sources to be used in livestock feeding (e.g., poultry, farmed fishes) is boosting the research on effective and sustainable options for the feed market worldwide. Plant proteins may be suitable options but they cannot satisfactory support the growth of the most specialized species, such as predatory fishes. For these reasons, the European Union has opened to the so-called processed animal proteins (PAPs) but major concerns exist as far as their safe use. Insects are an alternative and promising protein source that, only recently, has attracted the attention of stakeholders (e.g., researcher, regulatory agencies, enterprises). Differently from conventional PAPs, insects are evolutionarily distant enough from farmed animals to prevent insect-related pathogens passing to livestock and thus to humans. From a sustainability viewpoint, some insects can be raised on poor substrates (e.g., plant refusal) and by this way they can help in valorizing human market wastes meanwhile diverting them from landfill disposal. Producing proteins by insects, may allow for to spare water and land some recent studies suggest that insects may accumulate proteins with fewer greenhouse gasses (GHG) emissions than conventional animal feeds, but also than animal food products. On the other hand, some unexplored issues of rearing insects as protein sources need to be carefully assessed.

Keywords: Insects, Alternative protein source, Sustainability, Feed, Food.

Dr. Pier Paolo Danieli graduated in 1997 in Biological Sciences – bio-ecological specialization – at the University of Tuscia. Several contracts for research collaboration were awarded to him from 2001 to 2008 within some National research programs carried out by the Animal Production Department of the University of Tuscia (Viterbo – Italy). From 2005 he is a Ph. D. in “Applied Biochemistry and Chemistry”. From 2009 onward, he is working as an Academic Researcher in Animal Feeding and Nutrition at the Dept. of Agricultural and Forestry Sciences – University of Tuscia. He is a co-author of several scientific and technical works published through national and international paper. From 2010, he is member of the Italian Association for Animal Science Production (ASPA) and in 2013 he co-founded the Italian Association for Sustainability Science (IASS).

73. Economic sustainability of agricultural holdings in Poland in the context of their environmental impact

Dr. Wioletta Wrzaszcz, Prof. Józef Stanisław Zegar

ABSTRACT:

Sustainability of agriculture and agricultural farms is the subject of increasing interests of society and researchers. The main problem of this issue is appropriate methodology of measuring agriculture sustainability, due to its complexity. Different proposals are presented and discussed, and still, there is no generally accepted measures of agriculture sustainability. This problem also concerns agricultural holdings` economic and environment sustainability examination. The particular dilemma is to define modes of agricultural techniques and technologies, that make it possible to combine economic and environmental objectives of agricultural holdings.

The purpose of the article is economic sustainability evaluation of agricultural holdings in Poland taking into consideration their potential environmental impact.

There were analyzed a few groups of farms with potentially different environment impact, namely: a) ecological – organized according with EU legal rules; b) specialized in animal production; c) not-specialized, with mixed plant and animal production. Economic sustainability was calculated on the basis of productive and economic indicators, considering subsidies connected with Common Agricultural Policy. The analysis was based on Farm Accountancy Data Network 2004 and 2013.

Keywords: farms` sustainability, economic sustainability, agriculture environmental impact, Farm Accountancy Data Network, Poland

Dr. Wioletta Wrzaszcz 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 has involved in the realization of International 7 Framework Programme (from 2013): "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 50 reviewed publication (articles, two books). She is the reviewer of scientific journals, e.g. USA Journal: "Economic World".

Professor Józef Zegar is Head of General Economic Department at The Institute of Agricultural and Food Economics - National Research Institute (IAFE-NRI), Poland. He is co-author of the socially sustainable agriculture concept. His recent works are concerned with theoretical aspects of sustainability and criteria of sustainability assessment. He has excessive knowledge of the farm data sources and as a Member of The Committee on Planning Central Statistical Office Activities provides recommendation of agriculture data collection system improvement. Scientific experience:

- managing research teams,
 - Deputy Director of IAFE-NRI for scientific research (1981-1986),
 - Director of Agricultural Accountancy Department (1981-1986),
 - preparation of macroeconomic analyses and reports in the performance of governmental functions (1986-1996),
 - participation in e.g.: Prognosis Committee of Polish Academy of Sciences, Governmental Commission for Eco-development,
 - multiple stay in Austria in IIASA - International Institute for Applied Systems Analysis, Director of the research projects financed with the funds the Ministry of Science and Higher Education:
 - “Income of farmers population: methods of measurement, level and relations”.
 - “The impact of the Common Agricultural Policy on the level and diversity of agricultural family income in Poland”.
- “Level of sustainability of the individual farms in Poland (on the basis of the FADN data)”.

74. Sustainable Development of Seaport Cities through Circular Economy: A Comparative Study with Implications to Suez Canal Corridor Project

Dr. Ahmed Mohamed Ezzat

ABSTRACT:

As seaport cities have large potential for commercial, tourist and industrial activities, they are considered one of the main driving forces of economic growth. At the same time, the localization of these activities in seaport cities can be a source of new economic, social and ecological damage for the whole seaport city system. Accordingly, the development of the seaport city system tends to become less sustainable despite the growing trend to focus on sustainable development through ensuring sustainable consumption and production patterns.

The study focuses on adopting the circular economy model in seaports cities as a mean to enhance sustainable development. The study used the analytical method showing the theoretical preview of circular economy, the potential opportunities of adopting circular economy and the comparative method to show the best practices of circular economy in seaport cities. Then the results were used to evaluate the Suez Canal Corridor Project. Both theoretical and empirical best practices stressed the rule of adopting a circular economy model in supporting seaport cities sustainable development. The conclusion for the Suez Canal Corridor Project was that some of the dimensions of the circular economy model are missing including the legislative, institutional and cultural issues. Those can be considered as challenges to the contribution of the project to bring sustainable development.

Keywords: Port sustainable Development, Development of seaport cities, Greening the economy, the circular economy model and the Suez Canal Corridor Project.

Dr. Ahmed Mohamed Ezzat is an Assistant Professor of Economics and Head of logistics of Logistics of Foreign Trade Department at the College of International Transport & Logistics - Cairo branch, Arab Academy for Science, Technology and Maritime Transport, Egypt. He received his doctorate in International Economics from Cairo University. His research interests include Development, econometrics, International Trade, Poverty and Transport Economics.

75. Government Policy as a Driver for Energy Saving in Egypt

Dr. Hussameldeen Bahgat

ABSTRACT:

This study focuses on the Government policy and deals with the Egyptian urban problem which started early in the middle of the twenties century. For more than five decades, the government has adopted several urban development plans. Those plans have followed the west and developed countries experiences. There, however, were not in line with the local conditions and priorities. In addition, institutions of the government have dealt with the urban development global trends such as the need of sustainability for the next generations. This, unfortunately, was done in a shallow way and without enough studies to determine the actual local needs and priorities. Moreover, new barriers that can hinder the urban development process have appeared recently. Since Egypt is facing water shortage and fossil fuel crisis, rethinking the current strategies and policies, that are already ineffective, to solve the old common urban problems is a necessity. This study discusses the need to develop new national strategies and policies that depend on new approaches to sustainable urban development planning, to improve performance capacities and capabilities continuously. The improvement should be technological as well as organizational and social.

Keywords: Government policy- sustainability- national strategies.

Hussameldeen Bahgat born in Cairo, Egypt. Studied architecture at Ain Shams university ,Faculty of Engineering ,got his bachelor , MSc .and PhD. from the same university. He is now an assistant Professor at The higher Institute of Engineering Alshorouk Academy .He participated in many international conferences specialized in Theories of architecture.

76. Good Governance as a Tool of Sustainable Development

Dr. Ilija Stojanovic, Dr. Jovo Ateljevic, Dr. Stevan Stević

ABSTRACT:

Growing concern about environmental degradation, disappointment with development efforts to reduce poverty and inequality at global scale together with economic and socio-political instability shifted the focus from the model of economic growth to the new model of sustainable development. Despite the new orientation of development economics, the question remains how to achieve sustainable development goals. In order to avoid failure of the neoliberal agenda, the revised version of Washington Consensus with focus on good governance has taken leading role of development policy.

The aim of this research is to test the links between very fuzzy concept of good governance and heterogenous dimensions of sustainable development. Our research is aimed to analyze the effects of good governance on particular indicators of sustainable development at the level of different categories of countries.

This study reveals that statistical significance, direction and intensity of the effects of good governance's dimensions vary in relation to the selected indicator of sustainable development and affiliation to particular category of countries. These results suggest that there is no "one size fits all" model of good governance suitable for achieving sustainable development goals putting into question the principles of post-Washington consensus as a key response for modern developmental challenges.

Keywords: sustainable development, good governance

Ilija Stojanovic, Ph.D., freelance researcher. His research activities and interests include, but not limited to sustainable development, good governance, public management and influence of public sector on the economy. During his professional career, he took many responsible job positions related to international cooperation. In this regard, he took part in many projects funded by international donors, especially by European Union. Mr. Stojanovic's knowledge and expertise in the field of European integration and project cycle management has been very important for his engagement within the process of European integration of Bosnia and Herzegovina. He also took part in preparation of several strategic documents important for overall socio-economic development of Bosnia and Herzegovina, including strategy paper in the field of public administration reform. His practical experience combined with academic background gave him completely different perspective on the reform process necessary to improve socio-economic situation of transition countries.

Jovo Ateljevic, Ph.D., Faculty of Economics at the University of Banja Luka (Bosnia and Herzegovina). His research activities and interests include, but not limited to the local/regional economic development, the institutional framework in function of the entrepreneurship's development especially in terms of small and medium enterprises, behavioral theories with an emphasis on entrepreneurship and tourism. As a cross-cutting issue, different socio-political contexts, including countries in transition represents his major research interest. He obtained his Ph.D. title at the Victoria Management School of the Victoria University in Wellington (New Zealand). In addition to the current engagement at the Faculty of Economics at the University of Banja Luka, he was very respective lecturer at different world universities including Stirling University (UK), Victoria University of Wellington (NZ), and Massey University (NZ).

Stevan Stević, Ph.D., Faculty of Economics Brcko at the University of East Sarajevo(Bosnia and Herzegovina)

He published several scientific papers in the field of statistics and quantitative methods and their application in the economic studies. As a contributor and editor, he took part in the implementation of the project aimed to classification of enterprises of the Republic of Srpska according to financial and market efficiency. He also published two books and co-authored four textbooks for students of the Faculty of Economics in Brcko. Moreover, he was a reviewer of several books and collections of tasks in the field of statistics, information technology and financial mathematics. He was a mentor for doctoral dissertations and master's theses, member of the Commission for the preparation of doctoral dissertations and master's theses.

77. New Financial Spaces Drawn by Institutional Regulatory Barriers. What are the Effects on Territorial Sustainable Development?

Prof. Isabella Varraso, Dr. Oriana Cesari

ABSTRACT:

Financial flows affect sustainability. Financial regulation has a central role in sustainable development of regions. Recent crisis of 2008 has shown how financial space equilibrium is entangled with economic stability of territories so that changes in financial space can transform local and global financial conditions. Considering the need to develop sustainable relations between financial space and real economy, the aim of this article is to examine, from a geographical perspective, how international institutions may create or reduce, through regulatory mechanism, barriers to the effects of uncontrolled financial flows. Reproducing spaces involved and drawing results using cartography, poles and barriers are considered. As result, a space is outlined where is possible to study future diffusion patterns and consider if the barrier system observed reveals to be absorbing in the sense that financial contagion prevention is achieved with a significant reduction of risk, or if it is not absorbing so that risk shifts to lower levels of geographical scale reaching for the intersections between financial space and everyday economic life territories involved.

Keywords: Financial space, Financial flows, Financial Geography, International Institutions, Regulatory barriers

Prof. Isabella Varraso is Full Professor and Chair of Economic Political Geography at Economy Department of Università di Foggia, where she was Head of the Faculty of Economy from 2008 to 2012. From 2013 she is a Member of the National Committee of the Italian Geographer Association (A.Ge.I.). She has acted as a consultant, with Università di Bari to Assessorato ai Trasporti Regione Puglia (1985), with Università di Foggia to Comunità Montana del Gargano (2003). Now she teaches Financial Geography, Marketing Analysis for the Territory and Geography of Turism at the Economy Department of the Università di Foggia. She has taken part in national research groups. She used quali-quantitative analysis in the field of Economic Geography, in particular spatial analysis and cartography as main tools for studying region shaping and developing processes of territories. She has also been concerned with Geography of Agriculture and cultivation systems with a special focus on Italy and Puglia. She is involved in studying changes in Geography epistemology and spatial organization with regard to both symbolic and functional aspects of local and global reshaping of territories.

Dr. Oriana Cesari is graduate in Economics and PhD in Economy and Technologies for Sustainable Development for the Chair of Economic Political Geography at Economy Department of Università Foggia, where in 2006 she discussed PhD thesis titled "Nodes, networks and spatial flows in territory analysis. Cities, diffusion processes and sustainability". She is employed in an Italian bank (2006-present), where she is concerned with family and small business financing. Before (2002-2003) she pursued an internship in audit at KPMG. Her last publication, titled "Periphery and financial centers. Has the world crisis a local origin?" (2014) is the result of a research conducted on financial crisis with respect to credit risk transfers through different levels of geographical scale, focusing on first step of diffusion process, using also cartography method for analysis. During last six months she studied changes in banking stability rules and international standards as the application of Basel III, the development of the European Single Supervisory Mechanism and consequent updates in the Italian banking regulatory framework.

78. The Hong Kong Jockey Club: Driving Sustainability and Riding High Together – A Case Study

Yihong Yao , Dr. Ariel Dongya Li

ABSTRACT:

In recent years, sustainability has become a popular topic for both business and society. There is little dispute that companies and organizations have increasingly paid attention to social and environmental issues, and thus sustainability has come under the spotlight. However, the Hong Kong Jockey Club (“HKJC” or “the Club”), the largest single taxpayer and non-government charitable donor in Hong Kong, has been paying attention to environmental and social issues for decades although its “sustainability efforts” were not given a label for most of that period. The global trend of climate change in the past fifteen years drove the Club’s sustainability efforts towards a more systematic approach. The year of 2009 was a milestone of the HKJC’s sustainability endeavors as in this year the HKJC officially considered sustainability an essential part of its vision, raising sustainability to the strategic level within the Club. The first sustainability report of the HKJC was released in 2011, making the HKJC’s dialogue with the community, also within the Club, transparent. In 2014, the Club introduced its Supplier Sustainability Guidelines, aiming to increase the sustainability standards of the Club’s business partners, and in turn, of all local businesses.

This case was prepared mainly according to information obtained from an interview in January 2016 with Shirlee Algire, Executive Manager, Sustainability, of The Hong Kong Jockey Club. It depicts how the HKJC achieved sustainability through its endeavors in the environmental, social, and governance (ESG) areas, thus contributing to the community and enabling a better future for its stakeholders and for society as a whole. It also discusses the evolution of the HKJC’s sustainability governance structure and strategy, the progress of the HKJC’s sustainability practices from 2009 to 2016, and challenges. This case is one of the first studies that explores the HKJC’s approach to sustainability in terms of strategy and endeavors, achievements, and innovation, thus making a significant contribution to the literature and practice of sustainability.

Keywords: Hong Kong Jockey Club, sustainability governance, sustainability practice, sustainability innovation, carbon footprint, supplier sustainability, stakeholder engagement, case study

Mr Yihong Yao is centre manager of Centennial College Case Research Centre. He was centre manager of HKU Asia Case Research Centre, program manager of Institute for China Business, and researcher of School of Business, The University of Hong Kong (HKU). He developed numerous business case studies on companies and organizations of different sizes and natures, including listed companies, NGOs and social enterprises. His cases appear in the case repository of Harvard Business Publishing (USA) and of The Case Centre (UK).

Dr Ariel Dongya Li is an assistant professor in strategy and general management at Centennial College. After earning an MBA from The University of Hong Kong (HKU), she worked with Asia Case Research Centre of the HKU School of Business and developed numerous business case studies that have been used in business curricula worldwide. She then earned a PhD in Business Strategy at HKU. Her cases appear in the case repository of Harvard Business Publishing (USA) and of The Case Centre (UK).

79. Relationships Between the Attributes Virtual Business and Factors of Sustainable Value Creation in Enterprises in Poland

Prof. Bogusława Ziółkowska

ABSTRACT:

The aim of the research was to find answers to the following question:

It is the implementation of modern IT solutions supports the potential for sustainable development of enterprises?

The article presents the results of research carried out in enterprises in Poland. The study involved 346 enterprises, including 143 micro, 104 small, 51 medium and 48 large. Among the surveyed enterprises predominated service companies (more than 2/3 of the total number of participants in the study). Other company, representing 29.1% of the study population, have confirmed membership in the manufacturing sector.

After the answers provided by the respondents were analyzed and compared to the virtualization levels in accordance with the Descriptive Model of Business Virtualization Levels designed by the author, it was concluded that virtualization is a significant tool to achieve an increase of values in all assessed fields, from the quality of relations with customer, through developing and maintaining good relations with suppliers and/or customers as far as resource configuration is concerned, to acquisition of knowledge and qualifications and sustainable development of enterprises.

Keywords: enterprise value , business management, sustainable development

Prof. Bogusława Ziółkowska defended her PhD in the field of management at the Faculty of Management at Economic University in Katowice in Poland; her thesis title was "Modernity of capital goods vs. the competitive position of the enterprise". She is Director of the Department Economics, Investment and Real Estate of the Faculty of Management at University of Technology in Częstochowa in Poland. She is an author of tens of scientific publications, including monography titled "Management of processes of value creation in the enterprise, Perspective of virtualization". Her scientific research are focusing on the problems of enterprise's value in science of management, virtual organizations and effectiveness of using informatics instruments and systems at organization's management.

80. Sustainability research progress and prospects

Iskra Sokolovska, Dr. Aleksandar Kešeljević

ABSTRACT

Sustainability is typically presented through the triple bottom line (economy, society and the environment). We conducted a literature review of the existing literature on 2 environmental nexuses: the environment and the economy and the environment and society. The literature review reveals that research has so far been typically one-way with pollution resulting as the dependent variable. There are pathways at least in theory to research two-way effects as well.

In addition to providing some new research directions for these nexuses we argue that the triple bottom-line model with sustainability itself portrayed as a narrow intersection should be rethought. Environmental finance should feature as a more prominent part of the economic part or should exist as a stand-alone element. Namely, research in environmental (private) finance is not as abundant, although it is crucial for a sustainable financial reform and financing the transition to a green economy. We therefore argue that the triple bottom line (with an intersection) should be rethought and expanded.

Keywords: sustainable development, triple bottom line, nexus, environmental finance

MSc Iskra Sokolovska is a teaching assistant and PhD candidate at the Faculty of Economics of the University of Ljubljana in Slovenia. Her research interests include environmental taxation, energy economics and sustainable finance.

Dr. Aleksandar Kešeljević is an Associate Professor at the Faculty of Economics at the University of Ljubljana. His research interests include environmental taxation, political economy and subjective well-being

81. Quality in museums as a way to increase sustainability

Izabela Luiza Pop, Dr. Anca Borza

ABSTRACT:

Due to the high accent put on sustainable development of communities and on the role played by cultural organisations in this development process, this research starts from the hypothesis that quality may represent a path through which museums can achieve a higher level of sustainability. This hypothesis was tested through semi-structured interviews with experts from museums. The qualitative research showed that museums sustainability has to be measured through quantitative but also through some quality-related indicators. Despite the fact that all experts pointed out a connection between sustainability measurement and quality, they argued that very few Romanian museums are carrying out such studies. Often, museums see quality measurement as something expensive, and thus unaffordable. Based on these facts, the second part of the paper seeks to highlight that quality is a much simpler tool than it is considered and museums can use this tool for improving their sustainability. Thus, the concept of museum quality is clarified by presenting the factors influencing it and some practical models which can be used by museums for measuring quality. By combining empirical and theoretical research, this paper may be of interest for other scholars studying museums sustainability and quality, but also for people working in museums.

Keywords: museum quality; sustainability; development; improvement; SERVQUAL; HISTOQUAL

Izabela Luiza Pop is a PhD Student in the Department of Management at Faculty of Economics and Business Administration, Babeş-Bolyai University (Cluj-Napoca), where she performs a research on museums management and sustainability. She is also an economist at County Museum of Art «Baia Mare Artistic Centre» and a teaching assistant in the Department of Economics and Physics at Technical University of Cluj-Napoca. As a teaching assistant she holds seminars on management, strategic management, investment management, production management and enterprise economy. Her research interests include topics such as: social entrepreneurship and museums, sustainable development, museum management, organizational diagnosis, competitive analysis and management strategies. Izabela Pop is author and co-author of thirteen papers presented at international conferences or published in international journals, including: *Sustainability*, *Review of Economic Studies and Research* Virgil Madgearu, *Economia. Seria Management and Advances in Business Related Scientific Research Journal*.

Dr. Anca Borza is professor of management at the Faculty of Economics and Business Administration, at the Management Department. She received her PhD from Babeş-Bolyai University in 1994. During 2004-2007 she was Vice rector of Babeş-Bolyai University. She teaches courses in Strategic Management, Small Business Management, Entrepreneurship and Business strategies. She is coordinating professor for doctoral students. Among the most relevant publications one can find: *Les models de selection des partenaires dans les cadre d'une alliance internationale. Perspective de France et d'Europe Central*, *International Management Journal*, HEC Montreal, Canada, Vol. 7, no. 2, 2003 (five authors)
Partner selection in emerging and developed market contexts: resource based and organizational learning perspectives, *Academy of Management Journal*, USA, vol. 43, no. 3, 2000 (five authors). She is member in several research programs and is project manager for a research program entitled: *Methodological research regarding the perception of social entrepreneurship in Romania. The development of a management framework for sustaining the social entrepreneurship*.

82. Modelling Economic Growth Based on Economic Freedom and Social Progress

Prof. Dr. Laura Asandului, Dr. Andreea Oana Iacobuță,
PhDc. Cristina Cautisanu

ABSTRACT:

Economic growth is one of the most widely studied issues in the specialised literature. Economic growth highlights those changes that occur in enhancing macroeconomic results that are not expressed independently, but in close connection with its determinants. This article aims at modelling the economic growth of the member states of the European Union in relation to the economic freedom index and the index of economic progress.

We consider the following objectives: the study of the intensity of relationships between GDP per capita and index of economic freedom on one hand, and social progress index on the other; modelling growth relative index of economic freedom and social progress index for the EU Member States Union. To investigate these topics, we have used descriptive analysis, analysis of variance, correlation analysis, and multiple regression analysis.

We have developed a multiple regression model to study the influence that the index of economic freedom and of the social progress index have on the growth rate of GDP per capita in countries which have the status of member the European Union. Through variance analysis, we have concluded that there are significant differences among the average GDP per capita in the European countries according the membership of the European Union.

Keywords: modelling economic growth, economic freedom, social progress, european countries

Dr. Laura Asandului is Professor at "Alexandru Ioan Cuza" University, Faculty of Economics and Business Administration, Department of Accounting, Applied Computing Science and Statistics. The research interests include econometric modelling of economic and social phenomena. She has published as author or co-author 7 books, and more than 40 scientific papers.

Dr. Andreea-Oana Iacobuță is Associate Professor at "Alexandru Ioan Cuza" University of Iasi, Romania, Faculty of Economics and Business Administration, Department of Economics and International Relations. Her research is focused on institutional economics, sustainable development and public sector economics. She has participated in eight international and national research projects. She has published as author or co-author 3 books, more than 50 scientific papers and she has participated to 65 national and international conferences.

Cristina Cautisanu is PhD student at "Alexandru Ioan Cuza" University. Her research interests include econometric modelling of economic growth and economic and social determinants of economic growth.

83. Can Romania offer a sustainable environment for the FDI inflows?

Prof. Laura Diaconu (Maxim)

ABSTRACT:

It is well known that the foreign direct investments (FDI) represent a key factor for the economic growth of the developing states. Despite Romania's efforts of creating a favourable environment for the foreign investors, the global economic and financial crisis has considerably diminished its attractiveness for the multinational companies. Considering these aspects, the purposes of the present paper are to identify the factors that currently attract the foreign investors in Romania and to analyse if they can be valued on long term. In order to reach these goals, several research methods were used. First of all, to identify the determinants of the FDI, we have conducted in-depth interviews on managers and experts from 12 multinational companies that are present in Romania. Secondly, in order to see if these factors that might represent long term advantages, we have analysed the secondary data offered by various statistical yearbooks, reports and by different empirical investigations. The relevance of this study results from the fact that the conclusions may offer valuable information for the Romanian policy makers to create a favourable environment for the FDI inflows, on long term.

Keywords: FDI's determinants, Romania, human capital, low production costs, long term favorable environment

Laura Diaconu (Maxim) is an Associate Professor, PhD. at Faculty of Economics and Business Administration, "Alexandru Ioan Cuza" University of Iasi, Romania. She has an experience of over 10 years in research and teaching, both in Romania and in other countries, such as Spain, France, Portugal, Belgium, UK or Croatia. Her major interest's fields are: Economic development, Foreign direct investments, Human capital and International business strategies. During time, she has obtained 3 research grants as director and she was member in other two national research projects. She is member in the Editorial Review Board of four international journals and member in the Scientific Committee of more than 15 International Conferences. Until now, she has published two books as sole author and she is co-author of three other books. She has published over 86 articles in international journals/volumes and has participated in more than 50 international conferences in Romania and abroad.

84. Human capital - a pillar of sustainable development. Empirical evidences from the EU states

Prof. Cristian C. Popescu, Prof. Laura Diaconu (Maxim)

ABSTRACT:

The idea according to which human capital is the main engine of growth has a large support in the specialized literature. In this context, the analysts have argued that sustainable growth and development of a country relies not on a large number of people but on a large amount of human capital. The explanation is simple: a healthier and better educated society involves more productive people, who are able to efficiently evaluate the opportunities and to take the right decisions, a higher social cohesion and more "green skills" that raise the environmental awareness. Considering all these aspects, the main objective of this paper is to identify the way in which human capital, through its qualitative dimensions, influences the sustainable development in the EU states. In order to reach this purpose, we have collected, tabulated and analysed the secondary data offered by various statistical yearbooks, reports and by different empirical investigations. The conclusions of this study may offer valuable information for the EU policy makers regarding the importance of investing in human capital in order to ensure a sustainable development.

Keywords: Human capital, education, EU states, economic growth, sustainable development

Cristian C. Popescu is an Associate Professor, PhD. at Faculty of Economics and Business Administration, "Alexandru Ioan Cuza" University of Iasi, Romania. His major interest's fields are: Human capital, Micro and Macroeconomics, Economic development and International economics. During time, he was involved in several research grants, as director or member in the research team. He is member in the Editorial Review Board and in the Scientific Committee of more than 20 international journal/conference proceedings. He has published, as sole author or co-author, seven books, at national academic publishing houses. He is also the author of numerous scientific articles published in prestigious international journals (indexed in ISI Thompson or other International Databases).

Laura Diaconu (Maxim) is an Associate Professor, PhD. at Faculty of Economics and Business Administration, "Alexandru Ioan Cuza" University of Iasi, Romania. She has an experience of over 10 years in research and teaching, both in Romania and in other countries, such as Spain, France, Portugal, Belgium, UK or Croatia. Her major interest's fields are: Economic development, Foreign direct investments, Human capital and International business strategies. During time, she has obtained 3 research grants as director and she was member in other two national research projects. She is member in the Editorial Review Board of four international journals and member in the Scientific Committee of more than 15 International Conferences. Until now, she has published two books as sole author and she is co-author of three other books. She has published over 86 articles in international journals/volumes and has participated in more than 50 international conferences in Romania and abroad.

85. The impact of Social network media on brand equity in SMEs

Dr. Mohammad Reza Nemat Gorgani

ABSTRACT:

Given the virtual world's controlling role in everyday life, no one can ignore its crucial impacts on the physical world. In this term social network media play a considerable role in peoples' daily lives and business by information sharing and the impressions of friends' comments on own view. Dealing with change, continuing to develop in the dynamic marketplace furthermore, access to information on a level never experienced before are possible benefits to small and medium-sized enterprises; Social media influences their strategies because of the wealth of information that customers yield while interacting on platforms; In this story Facebook with 1.55 billion monthly active users is the prominent social network among businessmen, consumers and clients. This paper aims to analysis the impact of electronic word of mouth marketing (EWOM) in social network on brand equity of "Kia gallery" contemporary jewelry design company in Iran. Thus, 350 clients, was defined as study population and their behavior in Facebook was investigated. The result of the research described in this article illustrate that the EWOM has a positive effect on brand awareness and brand image in addition they influence the consumer attitude which has impact on customer purchase intention and value of the brand.

Keywords: social network; word of mouth marketing; consumer behavior; brand equity in SMEs

Dr. Mohammad Reza Nemat Gorgani was graduated in Master of Business Administration from international campus of University of Tehran, working as a Brand Manager in a Distributing and marketing company.

Research Activities:

- 2012-2013 thesis project to investigate on "the impact of electronic commerce on sustainable development of Iran based on the Europe 2020 strategy"; in this research proposed e-business as an indicator of sustainable development model.
- 2013-2014 investigated on "the Impact of electronic commerce on climate change, energy and sustainable transport of Iran".

The result of this study was accepted on 20th Annual International Sustainable Development Research Conference 2014 for presenting

- 2014 studied on "the Electronic Commerce as a Sustainable Business"

The result of this study was published on European Journal of Sustainable Development (2014), 3, 3, 141-148

- 2016 searched on "the potential of Social network media in Sustainable marketing policy and the role of Electronic Word of Mouth (EWOM)"

The outcome of this paper was published on 22nd Annual International Sustainable Development Research Conference 2016 as a poster presentation.

86. From divergence to convergence: Reevaluating Greece growth potential. An econometric approach”

Dr. Sophia Kassapi

ABSTRACT:

Econometric evidence from Public Investments in goods such as schooling illustrate a controversy. Especially when compared to similar studies in other parts of the world. Until two decades ago, results proved that investing in public schooling was highly imprinted onto the country’s economic growth rate. More recent data prove otherwise and challenge this hypothesis for the part that concerns the statutory provision. At the same time, the large enough available talent pool is itself a strength which can attract investment opportunities by receiving a proper, smart and robust pricing.

Finally, we cast doubt on the notion that a strict financial adjustment program can induce sustainable development and boost economic growth. We introduce the idea that the Greek potential has to be reevaluated and discuss about calibrating the channels of knowledge transmission to the needs of the market and the trends for the future.

Keywords: Public investments, Economic Growth, Sustainability, Convergence.

87. The Current Trends of Globalization in Georgia

Prof. Tea Khorguashvili, Dr. Natia Khorguashvili

ABSTRACT:

The work is devoted to a very important and topical issue at present – integration of Georgia in the conditions of globalization and the role of foreign investment in the economic development of the country.

The development of the processes of globalization and the international movement of capital produced the largest volume of foreign investments, especially in developing countries. Like all events, foreign investments has advantages and disadvantages, which are shown in this paper. Also there is analyzed globalization and the index of economic freedom of Georgia and the implementation scales of foreign investments on the example of 2015.

Today the issue of globalization has been entered more in our lives which in itself means to search for the joint ways to solve the problems which are raised in front of the countries of the world. Modern globalization has embraced all spheres of the existence of the society. For globalization it is characteristic exchange of national and international relations which caused the integration of the countries of the world under the overall economic, political and social systems. The long-term result of globalization is the formation of the global economy, which is based on the relations without barriers between the national economies. The role of economic relations of the country grows in the process of globalization.

Taking into account the globalization processes for the country's economic development is particularly important for those states such as Georgia. Georgia is obliged to take into account the general regularities of the globalization of the world and to engage in the processes of the international integration.

Keywords: economic relations, globalization, economic development, business environment, Investment activities

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- 2006-2010 Deputy Head of Regional treasury of Shida Kartli.

IMPLEMENTED PROJECTS: •Project Coordinator Nikozi's School of Art – COBERM Fund,

- Project Coordinator Nikozi's 5 th International animation Festival
- Coordinator in Shida Kartli Creation of an integrated budget finance system for self-governing entities
- 3 monographs and more than 30 scientific works.

Economic **Doctor Natia Khorguashvili**- Associate Professor, European Teaching University, Georgia.

- 2013-present – Head of Settlement Department of Treasury Service of Ministry of Finance of Georgia
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- 2006-2010 Associate Professor of Tbilisi State University
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- Participant of TCOP workshop: Practical Issues in Relation to Accounting and Reporting in the Public Sector, more than 20 scientific works.

88. Food Security and Economic Growth in South Asia: An Empirical Analysis

Naila Tasneem

Abstract

South Asia comprises of one of the most populous countries in the world that immensely depend on agriculture for economic development yet the region faces grave food insecurity. Despite abundant natural resources, demographic dividend and vast human and physical assets it falls far behind its potential in terms of economic growth. Through panel data study of five South Asian countries (Bangladesh, Pakistan, India, Sri Lanka and Nepal) we look at the impact of food security on economic growth as well as social development. Food security has become an alarming concern in South Asia as it has one of the highest incidences of food insecurity in the world characterized by under nutrition, food inflation and other poor social and health indicators.

Our main model discusses the impact of food security (measured by crop production, food production, undernourishment, secondary education, domestic food price index, per capita food variability) on economic growth. Our results indicate that food insecurity has a negative impact on economic and social development in these countries. Countries in the South Asian region should try to build a collaborative framework to deal with this issue.

Keywords: Economic growth, Food Security, South Asia

Ms. Naila Tasneem is an Economist and a Freelance Writer based in Lahore. She gives policy analysis on issues on sustainable economic development in various regional and national newspapers in Pakistan. These include Pakistan Today, The Balochistan Point and Balochistan Voices. She was chosen as a WLTIE scholar in 2009 for a USAID fellowship from the South Asian region.

89. Building Quality Institutions for Acquiring Sustainable Economic Development in the EU Emerging Countries – Realities and Perspectives

Dr. Oana-Ramona Socoliuc, Prof. Ion Pohoată, Dr. Delia-Elena Diaconășu

Abstract:

Economic sustainability is one of the top priorities for the European Union, as a global actor, but given its internal heterogeneity in terms of economic, social, political, institutional or cultural dimensions of its member states, such topic is becoming a major challenge that requires a concerted effort, in order to be acquired. For the particular case of emerging countries from the EU, which have experienced the soviet regime in the past, the lower effectiveness of their native institutional framework illustrates an obstacle in achieving a healthy long run development. The purpose of this paper is to assess the capacity of emerging EU countries, with particular focus on Romania, to internalize the transfer of the best European practices, as well as to create and develop, locally, good institutions in order to benefit from sustainability's effects. Using a mix of qualitative and quantitative methods, like cluster analysis, Granger causality and Cointegration analysis, we emphasize that inside the group there are differences in terms of institutional effectiveness. As results point out, there is a strong nexus between institution's quality and the openness toward economic sustainability, but the countries have also good perspectives to improve their quality in order to acquire further sustainable development.

Keywords: Sustainable development, formal institutions, informal institutions, effectiveness, growth.

Oana-Ramona Socoliuc is Assistant Professor PhD. at the Faculty of Economics and Business Administration of the Alexandru Ioan Cuza University of Iasi where teaches disciplines like Microeconomics, Macroeconomics and Economic Doctrines. She is member of International Society of New Institutional Economics and her fields of interest are illustrated by institutional economics, economic dynamics, European integration studies, economics of transition.

Ion Pohoată is Full Professor PhD. and the head of Department of Economics and International Relations of the Faculty of Economics and Business Administration, Alexandru Ioan Cuza University of Iasi and has over 30 years in teaching and research in the field of Economics and more than 20 years in teaching and research in European studies issues. He teaches "Strategies and European Policies of Sustainable Development" at Centre of European Studies. In his field of interest are found subjects like: spatial economics, new economic geography, integration and globalization, economics of transition, crisis and economic dynamics.

Delia-Elena Diaconășu is Scientific Researcher PhD. at the Faculty of Economics and Business Administration, Alexandru Ioan Cuza University of Iasi and teaches Microeconomics, Macroeconomics, Currency and Credit Policies, and European Financial Monetary Integration. Her area of interest includes the following EU topics: financial integration, volatility spillovers, investor behavior, monetary policies.

90. Telecommunication Infrastructure and Growth in Developing Countries

Dr. Derya Yılmaz, Işın Çetin,

Abstract:

Infrastructure has a vital importance in growth accounting. But the effect of the telecommunication infrastructure are greater than the effects of other types of infrastructure. As telecommunications enhanced in the country, the information could spillover easily- this is highly important in the context of developing countries as they face with asymmetric information. The telecommunication infrastructure is a prerequisite for foreign direct investment which is very important for developing countries also. Furthermore, with the advancement in telecommunications transaction costs would reduce which improves the effectiveness of the markets. In this respect, we test the effect of telecommunications on growth in developing countries. Different from previous studies, we work with updated dataset and we also test the effect of internet. It is important to note that, as telecommunication infrastructure lead to a high income, high income could also lead to a more telecommunication infrastructure. Here we determine the endogeneity problem in our model and we use panel cointegration method to overcome this problem. We get 94 developing countries in the years between 1990 and 2014. We found that there is a positive and significance relationship between telecommunications infrastructure and economic growth.

Keywords: Infrastructure, telecommunication, economic growth, panel cointegration, production function

Dr. Derya Yılmaz is a Research Assistant in Economics Departments at Uludag University, Bursa, Turkey. She is working on the field of international economics and economic growth. She accomplished her Phd. in December 2014. The name of the Doctorate Thesis is "Monetary Unions and Financial Crisis Management: A Case of EMU". In her thesis, she studied the effectiveness of financial crisis management in Euro Area countries. She has special interest in monetary unions, economic growth and financial crisis as well. She has several papers, book chapters and presentations about these themes.

Işın Çetin is a Research Assistant of Econometrics Department at Uludag University in Bursa/Turkey, undergraduate is from same university and doctorate education goes on at the same department also. M Doctore education is about qualitative econometrics and her thesis is about Social Security System and Individual Pension System in Turkey. In her thesis, the results are obtained using Censored Regression techniques. She has been working for seven years as a research assistant. She is especially interested in qualitative econometrics, like spatial econometrics and also she has lots of articles about qualitative econometrics and quantitative econometrics application (panel regression estimation, macroeconomic models, forecasting techniques, etc.).

91. Effect of Selected Bacteria as Bioremediation on the Degradation of Fats Oils and Greases in Wastewater from Cafeteria Grease Traps

Dr. Prachumporn Lauprasert, Jenjira Paengjan

ABSTRACT:

Fats, oils and greases (FOG) are used in the food preparation and cooking. However, FOG are pouring an accumulative load on drainage systems as they can cause blockages. They also can pollute public sewer systems and can deplete oxygen levels in waterways causing aquatic life may be killed. The objective of this research was to evaluate the efficacy of selected bacteria; *Pseudomonas aeruginosa*, *Bacillus subtilis* and *Staphylococcus epidermidis* on FOG degradation and wastewater treatment in cafeteria grease traps. The experiment data collected after bacterial cultivation in the wastewater for 5 days.

The results show that the most thickness reduction of the fat layer was found in *P. aeruginosa* to be 48.98 percent significantly ($p < 0.001$), following by *B. subtilis* and *S. epidermidis* to be 32.65 and 26.53 percent, respectively. In addition, these bacteria removed BOD₅ to be 40-65 percent. The most BOD₅ treatment efficiency was found in *B. subtilis* to be 62.66 percent removal, following by *S. epidermidis* and *P. aeruginosa* to be 52.31 and 42.05 percent, respectively.

In conclusions, microorganisms are nature's ultimate wastewater degradation and cleaning up the environment. This bioremediation method minimize site disturbance compared with chemical method.

Keywords: Bioremediation, degradation of FOG in Wastewater, reduced the thickness of the fat layer

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92. The ability of Thai Herbal Household Plant Crude Extracts (*Alpinia galangal*) in Growth Inhibition of Mold *Aspergillus Flavus* and Destruction of AflatoxinB1

Dr. Pinyapach Dungkokkruad, Jatupol Jutirak, Nutsuda Wongkamsom, Pattam Kongsee, Montol Saichi, Atchariya Meesa-ad

ABSTRACT:

AflatoxinB1 (AFB1) produced from mold *Aspergillus flavus* (*A. flavus*) in foods causing in liver cancer. This study aims to inhibit the growth of *A. flavus* and destroy AFB1 by using the crude extracts in water of Thai herbal household plants such as ginger, galangal, garlic and elephant garlic. Quantity of Free AFB1 was analyzed by HPLC-FL.

The results indicated that crude extract of galangal could inhibits the growth of mold at 30.8%, followed by elephant garlic and garlic were at 4.3 and 1.8 %, respectively, while ginger could not inhibit the growth of mold at all conditions. In addition, the concentration at 1:10 w/v with all pH range, especially at regular pH condition of 4.6 was the highest inhibition ability at 73.4%. In addition, galangal crude extract at 1:10 w/v showed the ability to decrease AFB1 at all pH conditions. However, at pH 4.6, the toxin was destroyed within 24 and 72 hrs at 64.4 and 81.9%, respectively.

From the results, the crude extracts of galangal could inhibit the growth of *A. flavus* and destroy the mold toxin as AFB1. Therefore, the application of herbal household plant as food ingredients to prevent the poison from AFB1 is interesting.

Keywords: Aspergillus flavus, Aflatoxin B1, Toxin destruction, herbal household plants, ginger, galangal, garlic, elephant garlic, food poison

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Mr. Jatupol Jutirak, Miss Nutsuda Wongkamsom, Miss Pattam Kongsee, Mr. Montol Saichi and Miss Atchariya Meesa-ad are a student in Faculty of Public Health at Mahasarakham University, THAILAND. They received their B.Sc. degree in Nutrition and food Safety Management program from Mahasarakham University. His research interests focus on food safety.

93. Benzene and 1, 3 Butadiene Concentration and its Potential Health Impact in Chiang Mai, THAILAND

Dr. Wisit Thongkum, Dr. Jindawan Wibuloutai, Sawan Thitisutthi,

ABSTRACT:

Air pollution is contamination of the outdoor or indoor environment by any physical, biological or chemical agent that modifies the natural characteristics of the atmosphere. Air pollution can cause long-term and short-term health effects. An emerging air pollution issue in Thailand is the air toxics problem resulting from transportation and industrial activities. Cancer risk of benzene at Chiang Mai City Hall was within 3.00×10^{-6} – 1.20×10^{-6} and Yupparaj Wittayalai School was within 9.30×10^{-6} – 1.20×10^{-5} respectively. The excess lifetime cancer risk of the population was calculated as the product of the benzene level and the unit risk for benzene. The results indicated that the population was estimated to receive an excess lifetime cancer risk greater than 1.0×10^{-5} , which is proposed as the permissible maximum value for individual excess lifetime cancer risk by the Japan Environmental Agency (JEA). As for 1, 3-butadiene, cancer risk at Chiang Mai City Hall was within 3.00×10^{-6} – 1.20×10^{-6} and at Yupparaj Wittayalai School were 9.30×10^{-6} – 1.20×10^{-6} , respectively. The results indicated that the population was estimated to receive an excess lifetime cancer risk less than 1×10^{-5} at two stations, which is proposed as the permissible maximum value by Japan Ministry of the Environment.

Keywords: health impact, benzene, 1, 3-butadiene, cancer risk

Dr. Wisit Thongkum is Lecturer of Environmental Health Programme, Mahasarakham University, Mahasarakham Province, THAILAND. Research Group where investigates on Soil and Air pollution, Health impact assessment and Environmental monitoring. The major for lecture are Air pollution, Environmental Quality Surveillance and Building and Industrial Sanitation.

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Mr. Sawan Thitisutthi is Lecturer of Environmental Health Programme, Mahasarakham University, Mahasarakham Province, THAILAND. Research Group where investigates on Waste water treatment and management. The major for lecture are Environmental laboratory and Environmental Law.

94. Sustainable Development: The Nexus of Environmental Sustainability, Values, and Ethics

Dr. Choy Yee Keong

ABSTRACT:

Exactly 29 years have passed since the publication of the Brundtland Report in 1987 which calls on the international community to promote a new era of growth that is socially and environmentally sustainable. Despite this, nonetheless, the state of our Planet especially in the Asian developing region has hardly improved. Arguably, the integration of environmental sustainability into development discourse is increasingly becoming the biggest single challenge confronting the region today.

In addressing this challenge, the paper argues that it is necessary to re-conceptualize sustainable development based on values which lie at the core of sustainability decision-making, and which govern our relationship with the natural world. It further argues that the Brundtland definition of sustainable development lacks the infusion of values into its conceptual framework. Put otherwise, it is primarily motivated by an anthropocentric ethic, focusing on development that meets the needs of the present and future generations than promoting environmental sustainability.

The paper seeks to redesign the disciplines of sustainable development by establishing a new social-ecological order based on value pluralism and environmental ethics. It concludes that sustainable development, if it is to be a useful concept, must embrace the ethical dimension of sustainability rather than merely targeting its classical aim of meeting “the needs of the present without compromising the ability of future generations to meet their own needs”.

Focus: This paper seeks to re-define the Brundtland version of sustainable development, and to establish a new socio-ecological order based on values and ethics

Key words: Brundtland Report, value pluralism, environmental ethics, environmental sustainability, new social-ecological order

Dr. Choy Yee Keong 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. He teaches sustainable development and environment ethics at the Graduate School of Economics, Kyoto University. 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. Some of his recent publications include: (i) Ecosystem Health, Human Existence, and Bio-capacity Deficit: the Ethical Relationship. *International Journal of Sustainable Development and Planning* (forthcoming) (ii) Economic Growth, Sustainable Development and Ecological Conservation in the Asian Developing Countries: the Way Forward”. In: Indraneil Das and Andrew Alek Tuen (eds.), *Naturalists, Explorers and Field Scientists in South-East Asia and Australasia*. Springer, Cham Heidelberg, New York, Dordrecht, London, pp.239-283 (2016); (iii) From Stockholm to Rio+20: The ASEAN Environmental Paradox, *Environmental Sustainability and Environmental Ethics*. *The International Journal of Environmental Sustainability*, 12 (1):1-25 (2015); Land Ethic from the Borneo Tropical Rainforests in Sarawak, Malaysia: an Empirical and Conceptual Analysis. *Environmental Ethics*, 36(4): 421-441 (2014)

95. The Legal Basis of Public Participation in the International Environmental Governance as a Requirement for Sustainable Development

Olga Pavlova

ABSTRACT:

The paper focuses on the global environmental governance and features of public participation as an integral element of sustainable development. Recently, sustainable development and environmental governance have become interrelated elements of social development. The requirements to strengthen the role of civil society, especially representatives of the public, under the new or reformed system of international environmental governance are important issue of the article. The civil society should play a major role in five key areas: collection and dissemination; policy development consultation; implementation of environmental policy; monitoring and evaluation; promotion of environmental justice. The author defines the features of powers' separation between the actors in international environmental governance, enlightens the question of the public environmental management and its role in environmental decision-making. Thus, determination of the usefulness of the international environmental governance model for the national systems of law is up to date. The research of the peculiarities of the realization of public participation in the international environmental governance is consider to be of the highest relevance, and the development of public environmental management as a distinct element of environmental governance is the issue for the further investigations.

Keywords: public, public environmental governance, international environmental governance, public participation

96. Sustainability Reporting Guidelines – Safety Issues for Energy Companies

Dr. Natalia Andreassen

ABSTRACT:

There is a growing interest towards sustainability reporting phenomenon and its practices. Worldwide this interest is especially urgent in hazardous industries where serious accidents happen having great negative economic, social and ecological impact. The Gulf of Mexico oil spill brought discussions of regulation and safety concerns in oil companies highlighting the complexity and risks of operations in oil industry. Oil and gas companies are called to be transparent and accountable to the public in their corporate social responsibility and disclose information regarding oil operations safety, including spill prevention and response plans. Emerged sustainability reporting standards suggest a way for presenting sustainability performance information for stakeholders. Research literature focuses on industrial challenges and criticizes the emerged sustainability reporting initiatives for providing guidance of too generic character. The article focuses on the question of how oil operations safety issues are represented by sustainability reporting guidelines. The study provides an overview of the current global sustainability reporting guidelines and analyzes how they recommend focusing on safety issues and response plans. It is discussed whether sustainability reporting frameworks are useful platform for providing information about the oil companies' safety.

Keywords: Sustainable Development, sustainability reporting, sustainability reporting guidelines, spill prevention plans

Dr. Natalia Andreassen is a researcher at High North Center at Nord University Business School. She is conducting research in the field of sustainability accounting, sustainable development of energy industry and issues of emergence emergency preparedness system in the High North.

97. Treatment of Acid Mine Drainage Using Organic Waste as a Substrate in Sulphate Reducing Bioreactor

Dr. Ram Prasad Choudhary

Abstract:

Acid Mine Drainage (AMD) is a wide spread environmental problem that causes adverse effects to the quality of ground water and surface water through acidification, high concentration of the iron, sulphate, and elevated levels of soluble toxic metals. Remote abandoned mines around the world also discharge acidic, metal laden waters, which can persist for a very long time largely because of financial constraints. Conventional treatment methods for such sites with no production prove to be too expensive to be economically attractive.

Numerous techniques are available for acid mine drainage treatment. Many are established methods, while others are still in experimental stage. Often, only a combination of various treatment processes can provide the effluent quality. Active control technologies are often expensive and require regular attention resulting in increased overall costs due to operation and maintenance expenses. Over the past decade there has been a growing interest in the use of the passive treatment systems to treat acid mine drainage (AMD). One of the passive treatment methods is to use sulphate reducing bioreactors. The present paper presents the experimental study carried out in the laboratory using various local available organic waste material (cow manure, buffalo manure, goat manure, babool woodchips, babool sawdust, mango woodchips, mango sawdust, sugarcane waste, fodder -pearl millet, fodder proso millet) in jar bioreactor to examine their performance for the treatment of acid mine drainage with different retention period ranging from 1, 3, 5, 7 and 10 days. The Manures shows efficient removal of metals and other pollutants. It was concluded that manures as single substrate may be a cost effective passive treatment methods for removing metals from AMD in bioreactors.

Key words: acid mine drainage, treatment, sulphate reducing bioreactor, substrate

98. Sustainable Passive Approach to Treat Acid Mine Drainage

A.S. Sheoran

Abstract

Mining practices, present and past, cause environmental problems that can damage ecosystems and human health. One of the most serious problems facing the mining industry around the world is the oxidation of sulphide mineral waste that ultimately results in the release of metal-rich acidic waters, acid mine drainage (AMD). Acid drainage at mine sites usually develops when naturally occurring iron-sulphide minerals are exposed to air during the mining process. In the presence of air and water, the sulphides decompose to release sulphuric acid and soluble metals. Apart from its corrosive impact on equipment and infrastructure, acid drainage damages aquatic ecosystems and degrades water quality. Preventing the formation or the migration of AMD from its source is generally considered to be the preferable option, although this is not feasible in many locations, and in such cases, it is necessary to collect, treat, and discharge mine water. Active treatment technologies are often expensive and require regular attention resulting in increased overall costs due to operation and maintenance expenses. At abandoned mine sites this technology is not feasible. A better alternative approach to chemical treatment is the use of sustainable passive treatment systems, which can be a long-term solution to the problems. These treatment systems utilize the chemical, biological and physical removal processes that often occur naturally in the environment to modify the influent characteristics; therefore, no artificial additives are required and at the same time there is no resultant for disposal. Besides all this, its ability to operate at remote locations with limited operational requirements makes it the only feasible choice for abandoned mine sites. The present paper presents the various aspects of the sustainable passive treatment of AMD.

Key words: Acid Mine Drainage, Treatment, Sustainable Passive Treatment system. aDepartment of Dr.

99. Assessment of pumps performance in water supply systems – Data collected from multiple case studies

Pedro Cardoso, Ricardo Rato, Marco Estrela, António Santos

Abstract:

This paper reports the evaluation of pump's efficiencies and its optimization potential, in three water supply systems. The study surveyed 65 pumps groups, between 5 to 350 kW of absorbed power, with flow rates from 25 to 1500 m³/h. The performance of the 24 pumping stations, was assessed by testing each pump group in different operational conditions. It was quantified for each pump group the specific consumption (kWh/m³) and cost (€/m³) as well as the difference between the optimum efficiency point, for the specific net head of each installation, and their actual operating point.

Were compiled the identified energy inefficiencies and proposed corrective measures for each pump group, in order to improve their efficiency. Most problems identified are oversized groups, valve problems and inadequate operational working points. On average the surveyed pump's efficiencies were 10 percentage points below their reference values. In order to reduce this gap was proposed several improvement measures such as the refurbishment of the pumps, impeller adjustments, variable speed drive installation and the extension of the working periods with lower frequency regimes, where high efficiencies were identified. The implementation of these improvement measures has an energy saving the potential of 331 MWh/year, which means 27000 €/year.

Key Words: Water Supply Systems, Energy-Water Nexus, Energy efficiency, Sustainability, Pump Efficiency.

Pedro Cardoso, MSc. in Bioenergy and Environmental Engineer (New University of Lisbon, Faculty of Science and Technology). More than 10 years of experience in sustainability and energy field. Project Manager in the Sustainable Innovation Centre of ISQ where he coordinates, develops technical work and promotes R&D projects and has the responsibility to transfer the knowledge gained into new added value services for the consultancy departments of ISQ. He is also a member of the R&D Unit in Life Cycle Analysis of Welded Industrial Components and Products (0712), a Research Unit hosted by ISQ and funded by the FCT- Fundação para a Ciência e Tecnologia. He will start this year a PhD on Sustainable Energy Systems, MIT-Portugal programme, IST, University of Lisbon. Main work experience: LCA's, energy and environment audits, energy management programs, energy efficiency studies, eco-design studies, carbon and water footprints, pollution dispersion models, environmental impact studies.

Ricardo Rato, Researcher - MSc in Energy Systems (Mechanical Engineer), IST, Portugal and Post-Graduate in Project Management, INDEG-ISCTE, Portugal. He is been working in the energy efficiency, performing and coordinating energy audits in energy-intensive industries and buildings, developing proposals to Energy Performance Contracts (ESCO Projects) and Measurement and Verification plans of energy savings, performing inspection/commissioning activities of energy systems. He has combined his work in field with participations in R&D projects (European and National) in the energy efficiency, being currently Head of ISQ's Energy R&D. He is also a trainer in several energy related topics. He is a Certified Measurement & Verification Professional (CMVP), by Association of Energy Engineers (AEE), Certified Project Management Associate, level D by International Project Management Association (IPMA), Certified Professional to perform Energy

Audits and Energy Saving plans in Portuguese Industry by “Direcção Geral de Energia e Geologia, Certified Trainer by IEFEP (Portuguese institute for the employment and qualification).

Marco Estrela, Researcher- MSc Chemical Engineering, MBA, PhD candidate in Sustainable Energy Systems, MIT-Portugal program, IST, Portugal. Senior researcher with over 19 years’ experience on R&D projects in the environmental field, Project Management and Project Financial Controlling. Marco has coordinated 3 European research projects. His current duties include management of research projects.

António Santos, MSc. in Energy and Environmental Engineering in FCUL (University of Lisbon, Faculty of Sciences) completed in December of 2014. Starting this year his PhD at MIT Portugal program on Sustainable Energy Systems in FCUL, he is also junior researcher in the Sustainable Innovation Centre of ISQ, developing technical work and promotes R&D projects and has the responsibility to transfer the knowledge gained into new added value services for the consultancy departments of ISQ. Before that he was research fellow in Buildings Department in the National Laboratory of Civil Engineering (LNEC), collaborated in the AdaPT AC: T project . As researcher, he has been working in energy efficiency and renewable energies, seeking projects to develop sustainable and innovative solutions in energy field.

100. Price Setters and Price Takers in the EU Electricity Market, a Comparative Analysis of Household Consumer Prices

Dr. Aranit Shkurti, Macit Koc

Abstract:

The article is concerned with the analysis of the electric power prices at the European spot exchanges, taking in consideration 27 Countries of the Union (excluding UK). The time series data are considering the half yearly average of the countries, as reported by the Eurostat database. The article examines the way spot prices are influenced by power exchanges, based on the overall installed power of more healthier economies. In recent years a growing capacity from renewable sources is pouring in the system, anyway the implementation of renewable energies do not guarantee constant supply to the network as they depend on weather conditions and therefore must still have recourse to conventional generation types - such as gas and coal - which generally have higher operating costs than renewable. An increasing number of Member States have adjusted mechanisms to promote investment in power plants or provided incentives to keep them standing. These public measures may be justified in certain situations but according to recent guidelines, the European Commission has established that the adjustment mechanisms can be in contrast with the legislation on state aid. The identification of these discrepancies is studied in this article through the key characteristics of the price differential for the EU spot markets. The inflation generated from the price adjustments within the EU members can be considered an important indicator of market inefficiency.

Key words: public subsidies, photovoltaic energy, electricity market, electricity market.

Dr. Aranit Shkurti is a Lecturer of Econometrics at the Canadian Institute of Technology. He had a PhD from the Sapienza University of Rome in Energy Policy and scenario modeling. Master degree in Statistics from the same Sapienza University of Rome. He is author of several papers in the Energy Economics field.

Macit Koc is a University Industry Linkage Advisor at Mekelle University, Ethiopia.

101. Sustainability and built environment: the role of higher education in architecture and building engineering

Prof. Emilia Conte

ABSTRACT:

The sustainability paradigm implies a cultural shift in order to really change the world and society. Education, and specifically higher education, plays the crucial role of preparing students to be not only responsible citizens but also actors and promoters of processes and actions for a sustainable development. This is important in general and even more significant in architecture and engineering fields, as those students will be the designers of the built environment of tomorrow.

This paper draws inspiration from the author's practical experience for more than 10 years in teaching university courses in building technology and sustainable design for undergraduate and graduate students in civil and building engineering, tutoring their stages at professional studios, and supervising their theses. Moving from these premises, the author reports on and discusses some theoretical and practical outcomes concerning the: interpretation of built environment, design process, knowledge related to sustainability, use of a holistic approach in teaching sustainability, and collaboration among professionals. Finally, conclusions sketch potentials of new professionalisms for the sustainable future of built environment.

Keywords: Sustainability education; Built environment; Building engineering; Design process.

Prof. Emilia Conte is Associate Professor in the Department DICATECh of the Politecnico di Bari, Italy, where she teaches Technology of Architecture to students of Building Engineering courses. She carries out researches in the field of building technology, particularly with reference to the contribution of buildings and built environment toward sustainable development. Her research focuses on sustainable buildings, using a holistic approach and recognizing the essential features of sustainable processes beyond specific solutions for managing buildings and the built environment.

102. Sustainable remediation of State Houses in New Zealand

Prof. Geoff Austin

ABSTRACT:

The New Zealand Government has a large stock of State Houses generally built more than 40 years ago. In general they were well built and are still structurally sound but by modern standards poorly insulated and in the winter cold and damp to for the occupants. In addition there is evidence that these conditions may be contributing a disproportionately large number of respiratory hospitalizations particularly for children.

Rather than destroy and rebuild these houses an attractive alternative is the sustainable remediation of the houses by improving insulation and air tightness as well as the installation of passive and active solar heating systems. Various combinations of solar hot water and solar voltaic systems have been modeled and a prototype hot water storage system with solar voltaic water pumping has been tested in a test bed consisting of a pair of unoccupied State Houses. The use of two similar houses has the virtue of being able unambiguously identify the effects of the modifications made to one of them. In this way it is hoped that these houses can be brought up to acceptable standards with minimal new materials.

Keywords: Sustainable building, solar heating, public housing

Professor Geoff Austin is Professor of Geophysics at the University of Auckland. His research interests include atmospheric physics, meteorology, remote sensing and sustainable energy. His work is based at a field station near Auckland that has well instrumented two matching greenhouses and two unoccupied state houses for sustainable energy trials.

103. The Investigation of Ecological Sustainability Concept On Housing

Arch. Meryem Geçimli, Prof. Dr. RUSEN YAMACLI

ABSTRACT:

Today it is accepted that the process of house production and usage as a great responsibility. In various regions of the world we can see the housing that is one of the fundamental solution of ecological problems. In the solution of environmental challenges house is the key which can be fit present living conditions and this is increasingly located in international discourses and local politics. In this regard UK is a pioneer in applying advanced exemplary. In addition to build houses in research centers for the purpose of measuring ecological effects, UK come forward in building houses for use. Turkey also has attempts in this topic. In this paper it is examined that ecological house examples in the light of nature-house relationship which can be fit present living conditions in UK and Turkey cases.

Keywords: technology use, ecological housing, nature-house relationship, renewable energies

Res. Assist. Meryem Geçimli is student of proficiency of arts in Interior Architecture Department, Fine Arts Institute, Anadolu University, Turkey. Her undergraduate is Interior Architecture and Environmental Design Programme, Selcuk University and she has a Master Degree of Interior Architecture of Anadolu University. She is a member of IFSAK (İstanbul Photography and Cinema Amateurs Club) and interested in taking photography. She has two awards by Central Anatolian Exporters Union Office for two furniture design. One for Office Furniture (Platinum awarded) the other for Home Furniture (Honourable Mention).

RUSEN YAMACLI, Architect, Prof. Dr. Anadolu University, Faculty of Architecture, Eskisehir, Turkey Undergraduate Architecture programme from in Mimar Sinan University Faculty of Architecture(1983-1988), her master (1991) from MSU Institute of Science & Technology Architectural Design Program and PhD (1997) degrees from ITU Institute of Science & Technology Architectural Design Program. Currently works as Professor in Anadolu University Department of Architecture and is the head of the department of Architecture, master and PhD programmes of architecture and architectural education (1996-Present). She has lots of books, articles in ISI journal list; AHCI, SCI conferences, workshops, research projects and lectures. Her researches based on Virtual Design Studio and Knowledge Modelling for Conceptual Architectural Design Process:Historical and Crosscultural Design Principles and Methods.She is managed several urban, restoration and architectural design projects including university campuses and in the different cities of Turkey which is built. She has an award for "Science and Technology" in Anadolu University, in 2000.

104. Urban Green Space Desirability Assessment, Environmental Justice: An Approach in cities Planning Towards Making Cities Sustainable

Dr. Neda Orak, Kamran Zandvakili, Dr. Sina Attar Roshan,
Fariba Babaei Abkenar

ABSTRACT:

Cities planning have been lead to constructions whit no attention on hygienic necessities specially in dense areas. Creating new landuses is necessity to response the urban needs and residents and resulted in green spaces decrease. It caused environmental pollutions. Attention to environmental problems has increased in urban development progresses. Sustainable, healthy and green cities formations are derived from environmental concepts. Parks have strategic importance to life conditions improvement. In addition to existence, desirability is considerable. This research has been done with the aim of Ahwaz green space desirability assessment which is 3rd IRAN extensive city. Desirability Indices have been selected as economic, social, safety and environmental from people and experts point of view. Assessment criteria are: proximity to rivers, residential, educational centers, facilities and equipments, cultural centers, compatibility to landuses, access to communication nets, high population density and percapita green spaces. Research statistical societies are 384 citizenry and 30 experts. Different indices were weighted by Expert Choice software in AHP model. Regions classification done in 5categories by data layers overlying in GIS as: very good to inappropriate. Social utility to green spaces improvement with 0.300 score in priority according to experts. Safety is preferred in accordance to citizenry and T model (0.603). All 4 areas except no.3 have deficiency. Center toward west has the best conditions to develop. These results can help planners significantly to understand, prioritize and solve cities problems.

Keywords: AHP model, Ahwaz, GIS, Green space locating, place desirability

Dr. Neda Orak . Professor Islamic Azad University, Ahwaz, IRAN, Department of Environmental Science, College of the agriculture and natural resources, Ahwaz Branch, Main experiences are on Environmental science. It includes Environmental Impact Assessment, Landuse Planning, Risk Assessment, Life cycle Assessment. Water pollution and water modelling are my interests Beside them. Many researches and so papers on tourism specially ecotourism had been done too. More than 100 papers of my papers have been published in journals and national and international conferences.

Kamran Zandvakili Khouzesan water and Power Authority, Ahwaz, IRAN,

Dr. Sina Attar Roshan, Assistant Professor, Department of Environmental Science, College of the agriculture and natural resources, Ahwaz Branch, Islamic Azad University, Ahwaz, IRAN.

105. Can Typification Problem In Mass Housing Developments In Turkey be Solved By An Architectural Competition?

Assoc. Prof. Dr. Tulin VURAL ARSLAN, Gizem Durmus,
Ece Hırka, Hatice Ceren Duman

ABSTRACT:

Along with rapid industrialization and urbanization since the second half of the 20th century in Turkey, Turkish cities had faced social, economical and spatial change. In this transformation, many of them invaded by squatter settlements and illegal housing areas and this cause fact cause unsustainable growth of Turkish cities. In order to solve this problem, Housing Development Administration of Turkey (TOKI) has begun to produce mass housing areas in different parts of Turkey which aimed to provide more liveable environments to their inhabitants. The outcome of this good intention does not fulfil this scope. TOKI's typified planning concepts, which are far beyond taking into consideration of cultural, climatic and topographic differences of urban environments, has brought about typification problems in urban, neighbourhood and housing unit scales. As a response to this problem, TOKI organize an architectural competition called 7 Region, 7 Climate. The aim of this study is to discuss and evaluate whether this architectural competition be a panacea for the typification problem in the housing environments which are produced by TOKI.

Keywords: Sustainability, Quality of life, Mass Housing Developments, typification, Turkey

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Gizem Durmus is graduated from Suleyman Demirel University as a bachelor of architect. She is now post-graduate student in Uludag University.

Ece Hırka is graduated from Uludag University as a bachelor of architect. She is now post-graduate student in Uludag University.

Hatice Ceren Duman was born in Diyarbakır in 1987 and graduated from Architecture Faculty of Dokuz Eylül University in 2011. She is now a post-graduate student and working as a research asisstant in Uludağ University in Bursa. In 2011 she worked as a supervising engineer in Diyarbakır. Between the years of 2012- 2013 ,she had an experience in two architecture offices. Now Ms. Duman working as a Research Assistant in Uludag University Architectural Faculty .

106. Space Quality Evaluation of Outdoor Open Spaces In Bursa Historical Bazaar And Khans District

PhDc. Seyhan Sen, Assoc. Prof. Dr. Tulin VURAL ARSLAN

ABSTRACT:

The evolution of urban life, resulting from the developments in technology, economics and social life, along side with rapid urbanisation has shaped functions and structures of urban outdoor spaces. Together with this change, the expectation of quality has also changed which necessitates the new definitions and parameters about the concept of quality of life. Because the concept of quality consists of various components, the promotion of these definitions and parameters requires taking the specific qualifications of the particular space into consideration. In this study, quality of life and space in Bursa Historical Bazaar and Khans District is evaluated in regard to parameters which are identified in the content of study. These parameters are developed both by the examination of related literature about the space quality and also surveys about the users' expectations from the site. In order to identify the users' expectations from the site, a survey was conducted of 400 people in 4 well-known Khans in the district. The questionnaire items were factor analyzed to explore the principal components of outdoor space quality from the viewpoint of users.

Keywords: Sustainability, Space Quality, Historic Commercial District, courtyard, Bursa, Turkey

Seyhan Sen is graduated from Anatolian University as a bachelor of architect in 2009, completed Master of Architecture in Uludag University in 2014. She is continuing her Ph.d. in Uludag University Faculty of Architecture. Also she is working in Mudanya Municipality in Bursa

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107. The engagement of the Social-Cultural Capital in the development of Sustainable Urban Structure under Risk Conditions.

Prof. Carolina Arriagada-Sickinger, Dr. Irina Tumini, Prof. Angela Poletti, Dr. Sergio Baeriswyl

ABSTRACT:

-The importance of the human capital in the sustainable development of the urban network has relieved the cultural and social development as fundamental features of local Community. Empirical studies have demonstrated that the social capital, under risk conditions, evolves toward new form of organization to face the emergency. In addition, cultural capital is understood as the local community knowledge to bouncing back crisis. This suggests that social-cultural capital developed during post-disaster reconstruction, should be reinforced in order to generate a sustainable urban development along the time.

-The work propose an empirical approach of the problem, identifying social-cultural indicators. Interviews and surveys has been carried out to the relevant local stakeholders during the emergency and reconstruction phases. The evolutionary resilience from Walker and Salt (2006), has been defined as conceptual framework. They propose that, as result of a destructive event, the urban structure can change into adaptive cycle related to the spatial conditions and temporal interactions. The model has been applied to the case study of Dichato, a coast Chilean locality prone to tsunami and earthquake.

-As a conclusion, this work presents a discussion about the necessity to improve and strength local social-cultural capital to achieve the sustainable urban development.

Keywords: Socio-Cultural Sustainability, Risk, Social capital, Cultural capital, Urban Sustainability

Carolina Arriagada-Sickinger, Master Degree in Urban design, University of Chile, researcher of S2R group and professor of Planning and Urban Design department of University of Bio-Bio (UBB), Chile. She graduated in University of Bio Bio, Concepción, Chile. With more than ten years of experience on teaching, her research lines focus mainly on Urban Resilience, Vulnerability and Segregation. In collaboration with S2R at UBB, she is developing a new research line on Urban Resilience and Sustainability.

Ph.D Irina Tumini is post-doc researcher of S2R group and professor of Planning and Urban Design department of University of Bio-Bio (UBB), Chile. She graduated in Civil Engineering and Architecture at Polytechnic University of Ancona, Italy and she made her PhD in Architecture at the Polytechnic University of Madrid. With more than ten years of experience on research and teaching, her research lines focus mainly on Urban Sustainability, Urban Renovation and more specifically on Microclimate simulation at local scale. In collaboration with S2R at UBB, she is developing a new research line on Urban Resilience to Climate Change and Natural Disaster.

Angela Poletti is associate professor of Project Appraisal at Department of Architecture and Urban Study (DASTU) - Polytechnic of Milan (PoliMi) - Italy. She graduated from the same Polytechnic in Civil

Engineering, and since then she has performed academic research. She has more than 25 years of experience in environmental assessment of infrastructural works, plans and programs, coordinator of European, national and regional research groups. Her primary research has focused on developing the role of valuation to encourage sustainability of territorial transformations and conventional high impact functions. The experiences have touched (in terms of methodology and application) GIS and ICT components. They are concerned not only in the sense of hardware and software, but of data structures, applications, and human component. The disciplinary interest spans both environmental economics and projects feasibility.

Sergio Baeriswyl is Architect of the Pontifical Catholic University of Valparaiso, Doctor in urbanism of Karlsruhe Institute of Technology in Germany. He is currently academic and researcher of the Planning and Urban Design Department of the Bio Bio University. He was urbanist advisor of the Municipality of Concepción, Coordinator of the Urban Reconstruction Plan of the Bio Bio region, currently coordinator of the Observatory's Metropolitan Great Concepción. Author of numerous articles in the area of urban growth, quality of life and resilience. He Received the National Planning Award 2014

108. Adaptive Reuse As A Strategy Toward Urban Resilience

Deniz Ozge Aytac, Assoc. Prof. Dr. Tulin VURAL ARSLAN,
Assoc. Prof. Dr. Selen DURAK

ABSTRACT:

The significance of urban development has been realized again while acute shocks and chronic stresses (earthquake or unemployment) affect cities in a negative way. Therefore, urban resilience becomes more important for economic, environmental, and social sustainability of the built environment.

There is a wide range of approaches to resilience literature such as ecological, engineering, adaptive systems. Unlike others, adaptive resilience establishes co-evolutionary interaction between actors (existing building) and the system (external effects) that leads to a continual process on their adjustment. In relation to built environment, it is under a constant change. As the advent of new technology has changed buildings' use, some has faced obsolescence in physical, economic, functional, technological, social, legal, and political ways. The importance of time-based design over form-based design thinking has emerged since buildings are considered as incomplete objects. However, through adaptive reuse method, existing obsolete buildings could gain a new function and contribute to urban resilience and sustainability.

The purpose of this study is to provide assessment criteria for existing buildings' adaptive reuse potential in the context of resilient cities. Thus, research utilizes Martin's resilience cycle (2012) and Schmidt III et. al' s building layers and time concept (2010) for resilient adaptive reuse strategies.

Keywords: Adaptive Reuse, Resilient Cities, Adaptive Resilience, Building Layers, Time-Based Design

Deniz Ozge Aytac is graduated from Suleyman Demirel University in Turkey. She has completed her master of architecture degree in Manitoba University in Canada. She is working as a research assistant in Amasya University. At the same time, She is now a PhD. Student in the Department of Architecture, Uludag University in Bursa.

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109. Public vs. Private: The Evaluation of Different Space Types in Terms of Publicness Dimension

Assist.Prof.Dr. Elif KUTAY KARACOR

ABSTRACT:

Most of researchers from various disciplines assert conflicting definitions about public spaces. In this context, when some researchers express the decline of public spaces, others claim that the contemporary public spaces are quite inclusiveness and revival. However, the common features expected from all public spaces are: provide opportunities for social life, include various activities, convenient to use by access and linkage, and has unique identity with image. It is accepted that all these features contribute to publicness of public spaces which increase the sustainable development of the city.

Aim of this study is to determine publicness of different urban spaces types and making comparison among them. Thereby, publicness dimension of urban spaces which have public or private ownership will be revealed and a new contribution to public space arguments will be made.

Duzce city center was chosen as a research area since its rapidly development and transformation process after the 1999 earthquakes. As a research method, different public space types were illustrated and these illustrations were interpreted by site observations. Consequently, publicness and public use were found as not directly related with their public or private ownership, so political and commercial forces behind urban spaces that influenced on public life were debated.

Keywords: public space, publicness, privatization, social sustainability

Assist.Prof.Dr. Elif KUTAY KARACOR is faculty member in Landscape Architecture Department from Duzce University, Turkey. She hold bachelors degree (2003), masters degree (2006) in Landscape Architecture from Abant Izzet Baysal University, and doctoral degree (2012) in Landscape Architecture from Duzce University. Additionally, hold second master degree (2015) in City and Regional Planning from Istanbul Technical University after the PhD. Also worked as a research assistant of City and Regional Planning at Mimar Sinan Fine Arts University while conducting PhD. She has been Landscape Architecture Department Mississippi State University -USA (2011-2012) as visitor staff with scholarship. Mainly research topics are urban life quality, public space and social sustainability. The researcher published some articles and papers in journals and conference proceedings on these topics. In addition to own academic involvements, participated in some urban design guide projects in relation with local governments and Mimar Sinan Fine Arts University.

110. *Albergo diffuso* – Regenerating buildings for a niche market in the Maltese Islands

Joseph FALZON

ABSTRACT:

Background: The objective of the Maltese Government is to utilise historic buildings and explore their adaptive reuse to accommodate the tourism and leisure industry. New forms of accommodation are encouraged, providing new experiences to travellers, investors and local communities across the Maltese Islands.

Purpose: The aim of this paper is to examine legislation and policies governing such objectives and examine how stakeholders in the tourism and leisure industry are affected by policy makers, both in policy making and in decision making process.

Methods: Mixed methods, bottom up, sequential, research design was adopted. Questionnaires to mayors preceded semi-structured interviews with stakeholders and informed the interview guide. This paper presents findings from the semi-structured interviews with stakeholders comprising of architects, investors, community representatives and authorities.

Findings: Participants discussed the impact of policies and generated a number of facilitators and barriers for utilising disused historical buildings for new types of tourism accommodation in Malta, thus ensuring environmental sustainability. The *Albergo diffuso* concept was explored as a niche market in the industry.

Implications: Original contribution to research examining the environmental, social and cultural impacts of utilising disused historical buildings.

Conclusion: Research outlines possible recommendations for improvements in policy implementation.

Keywords: historic buildings, adaptive reuse, albergo diffuso, policies

Joseph FALZON, Architect in private practice, consultant in planning policies and structural engineering for design and build construction projects. Currently Ph.D. researcher at University of Bolton. Former member of Parliament of the House of Representatives of Malta (2003- 2013) and government representative on the Malta Environment and Planning Authority board of directors. Chaired Maltese parliamentary delegations to House of Commons and the Bundestag. Former member of the Parliamentary Assembly of the Council of Europe (CoE) Strasbourg during which he was elected chairman of the Sub-Committee on Sustainable Development and subsequently chairman of the Sub-Committee on Culture, Diversity & Heritage within the CoE. Contributions to CoE include reports on "Preserving the Environment in the Mediterranean" and "The activities of the Organisation for Economic Co-operation and Development" (OECD). Represented the Parliamentary Assembly on the Europa Nostra Annual Congress, The European Museum Forum, 'Culture Watch' and The Best in Heritage awards and chaired 'Conference on Water' for the World Water forum which was concluded by HRH Prince Albert of Monaco. Academic contributions include governance, sustainable use of heritage resources and tourism. Other contributions include Building Information Modelling for the construction industry. Main interests are focused on issues of sustainable development and heritage.

111. Sustainability Lessons from Kanazawa City, Japan

Dr. Aida MAMMADOVA

ABSTRACT:

Previously we conducted fieldwork activities for bio-cultural diversities and sustainable development of Kanazawa City, Japan. This time, our fieldworks were aimed to learn about sustainable lifestyle, environmental and economical sectors of the City. The objectives were

1. to acquire integrative knowledge and skills, through the fieldworks
2. collaborate with local communities, and address the environmental, economic and social issues
3. Create local recommendations.

Participants were 6 students from United Nations University and 3 students from Kanazawa University. They visited the renewable energy sectors from urban waste power plants, water management plants, forestry, fishery, organic agriculture and educational sectors of the City.

Fieldworks showed the strong interconnection between each sectors, and their sustainable cooperation was clearly observed. Public education was strongly emphasized in each sector. However, several questions were raised after the fieldworks; 1. If such kind of sustainable city model can be implemented for developing countries

2. What will be the main obstacles to achieve sustainability there
3. How can conservation and responsible utilization of natural resources, be balanced in sustainable manner.

In future we plan to create the educational fieldwork models for each sustainable sectors which are practiced in Kanazawa City and implement them as an experimental model in the developing countries.

Keywords: Sustainability, Educational Fieldworks, Environment, Conservation

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

112. Global city: the occupational layer

Prof. Isabel Loureiro, Prof. Pedro Arezes, Prof. Néilson Costa

ABSTRACT:

Nowadays discussion on global cities concept is being addressed on European level. Several layers were already identified as a part of this concept such as: cultural, user-friendly and amenity, assessable, sharing, energy, smart, green or city factory. Authors strong believe that the occupational layer is missing, as citizens that are leaving on cities can also work on those cities. Cities must also be seen as working systems, with the same needs and requirements in terms of safety and well- being that are considered for other systems. In this paper Authors address the evidences that support the importance of this additional layer. Different sources were used in order to obtain the data related to working systems and their relation to the global cities concept. Furthermore, challenges that cities are facing must be understood as additional source of motivation and innovation towards a global city.

Keywords: Global city, layers, occupational, holistic approach

Isabel Loureiro, 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.

Pedro Arezes is a Full Professor on Human Factors Engineering at the School of Engineering of the University of Minho, Portugal. He is also a visiting scholar at MIT and Harvard University, in USA. He coordinates the Human Engineering research group at the UMinho, and his research interests are in the domain of Safety, Human Factors Engineering and Ergonomics. Pedro Arezes is also the current National Director of the MIT Portugal Program, a government strategic partnership between Portuguese Universities, the Massachusetts Institute of Technology and partners from industry and government. He was the supervisor of more than 70 MSc. theses in several universities and of 11 completed PhD theses. He was also the host supervisor of some post-doc projects with colleagues coming from different countries, such as Brazil, Poland, and Turkey. Pedro Arezes is the (co-)author of more than 50 papers published in international peer-reviewed journals, author/editor of more than 40 books published internationally, as well as the (co-)author of more than 250 papers published in international conference proceedings with peer- review.

Néilson Costa, PhD, is a Human Engineering Professor at the University of Minho (Portugal), where he is member of the Human Engineering Research Group. He supervised more than 10 MSc. dissertations and/or PhD theses. He authored several papers in international peer- reviewed journals and more than 30 papers in international conference proceedings. He has been collaborating with 3 international peer- reviewed scientific journals in the domain of Ergonomics and Occupational Safety, as a reviewer. He is also member of the Organizing Committee of the International Symposium on Occupational Safety and Hygiene (SHO) since 2008.

113. Coproducing sustainable urban water and sanitation services in Ethiopia

Prof. Luisa Moretto, Dr. Marco Ranzato, Dr. Catalina Dobre,
Jean- François Pinet

ABSTRACT:

Research on coproduction, understood as the possible synergies between government actions and citizens' interaction, has rarely focused on urban services conceived and organised through conventional networks. As a consequence, both socio-spatial implications and environmental sustainability consequences of public-community synergies in urban services remain almost unexplored. The objective of this article is to provide a deeper understanding of coproduction in urban water and sanitation services by empirically exploring accessibility and sustainability in service coproduction, in urban Ethiopia.

This paper uses a threefold conceptual framework actor/flow/area from political ecology that assumes anthropic and environmental dimensions in understanding production and management of natural resources and services. Based on authors' personal research in Ethiopia, the article analysis production and distribution of water and sanitation services in three different urban contexts (a slum, a condominium area, and a small town) through varied research methods (interviews, mapping, participatory workshops).

Results ultimately reveal that the different urban areas analysed present specific service coproduction geographies in terms of actors involved, and resources/flows mobilised, in the attempt to balance accessibility and environmental sustainability.

They also open new research paths on the need to integrate new sustainable environmental categories (such as the area and flow dimensions, included in the actor/flow/area framework) for unveiling valuable insights on the coproduction of conventional networked services.

Keywords: Sustainable Development, Ethiopia, Coproduction, Urban water and sanitation services

Luisa Moretto is Associate Professor at the Faculty of Architecture of the Université Libre de Bruxelles (ULB), where she is also director of the research centre HABITER. She has a background in architecture and holds a Ph.D. in Analysis and Governance of Sustainable Development by the University of Venice. She has also professional experience with international organizations in the field of decentralized governance (Oslo Governance Centre-UNDP), sustainable urban rehabilitation processes (Inter-American Development Bank), and policy recommendations for sustainable urban development - HABITAT III process (Cities Alliance). She is one of the former coordinators of N-AERUS (Network-Association of European Researchers on Urbanization in the South).

Marco Ranzato is architect and holds a Ph.D. in Environmental Engineering. He has worked and collaborated with different academic contexts as the Delft University of Technology, the Tongji University and the Université Libre de Bruxelles. His research interests are ecology in urban design and, since recently, co-design processes and co-production of services.

Ph-D Student, Catalina Dobre, Université Libre de Bruxelles. With a background in Architecture, Catalina started a doctoral research project in January 2013 on the topic of water management. Her ongoing thesis investigates the role of assessment tools in assisting the transition of urban water systems towards a sustainable water cycle. She is actively involved in the organization of design workshops

focusing on the implementation of sustainable water management practices in urban areas. In 2015, Catalina received the Green Talent Award offered by the German Federal Ministry of Education and Research for her interdisciplinary research on sustainability.

Ph.D. Student, Jean- François Pinet Université Libre de Bruxelles is an architect and, since October 2015, a doctoral researcher investigating contemporary rural architecture and urbanism in western Africa. His ongoing thesis focuses on the transformations of Dendi architecture (Northern Benin) since the pre-colonial era. Since 2012, he is actively involved in the ERC project “Crossroads of Empires, archaeology, material culture and socio-political relationships in west Africa”, led by Anne Haour (Sainsbury Research Unit, UEA). His research interests are contemporary vernacular architecture, residential architecture, cartography and on-field methods of research.

114. A Study of Maintaining and Improving the WASH Services Provided by Local and International Agencies in Selected Refugee Camps in Kurdistan Region, IRAQ

Sarko Sabir Ahmed

ABSTRACT:

Kurdistan Region of Iraq hosts a massive number of refugees and internal displaced people, while the technical and economic capacity of the local government and other WASH service providers are limited, this makes the provision of water, sanitation and hygiene services challenging. Over 2 million people remain without sufficient WASH services, and also the environment of refugee camps surrounding remain under the risks of pollution. The aim of this research is benchmarking the current WASH services in the selected refugee camps. Next, identifying the major difficulties within WASH service provision and determining to what extent the services are accessible for people with disabilities. Based on observed study to improve the services and make the service provision more adequate to meet the needs of refugees have been suggested. Interviews with officials and stakeholders were conducted in each agency in order to collect data and information regarding their objectives and implementation policies. Questionnaire survey was conducted and two questionnaires were administered, among the local population inside the selected camps, and among people with disabilities inside the camps, to determine to what extent the services are sufficient, acceptable and accessible. It has been found in the study that public health and environment both are at risk due to prevailing situation in the Camps. Refugee or local people should be part of every developmental project as a participation at different phases of the project. Disable people needs badly ignored in WASH projects. Pre-assessment study should be conducted to measure exact need of the refugee population the camp construction, to build up the facilities inside the camp.

Keywords: Water, Sanitation, Hygiene, Environment, Waste Management, Groundwater

Sarko Sabir Ahmed is a senior student majoring in Natural Resources Engineering and Management department from University of Kurdistan Hewler. Due to current instability in the Middle East, Kurdistan region hosts a massive number of refugees. There is humanitarian crisis in the refugee camps which made him to select a topic to use his knowledge for serving their problems. Not only that but also protecting the environment and conserving the resources in a sustainable way.

115. Municipal Waste Map: a Case Study of Guimarães, Portugal

Dalila Sepúlveda, Prof. Cândida Vilarinho,
Prof. Isabel Loureiro, Dr. Joana Carvalho

ABSTRACT:

Guimarães is located in the north of Portugal, is a middle size town, which historic centre is UNESCO World Heritage. The city was also European Cultural Capital by 2012 and in 2013 was European City of Sports. Currently, is running for European Green Capital 2020, which Waste Production and Management (WPM) is one of that strategy. Taking into account the policy WPM and the city goals, a Municipality Strategic Waste Plan (2016-2025) (SWP), will be done. Guimarães is considered to be a “diffuse territory”, as it encompasses land use and economic activity development, leading to different scenarios. It is also important to notice that 1/3 of the Guimarães population is located on the urban area. Under these context, the WPM across the Municipality, will be directly affected by specific features of the urban population, and the correlation between several other variables, shall be considered in a holistic approach is required comprising waste production characterization, land use, citizens socio demographic aspects and human resources. This project aims at presenting a first approach to the definition of the SWP, in the form of an integrated Roadmap of waste production, in a multi-disciplinary approach between the land use and the socio-demographic characteristics.

Keywords: Waste management Plan, holistic approach, Municipal waste

Eng.a 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 - estudosobre a implementação no centrohistórico 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.

Prof. 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).

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.

Dr. Joana Carvalho has a 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.

116. Ecological Quality Improvement of Urban Landscapes with Emphasis on Sustainable Development Principles, Case Study: River of Darabad Valley, Tehran, Iran

Dr. Ali Reza Sadeghi, Dr. Ferial Ahmadi, Dr. Ali Reza Eskandarinejad

ABSTRACT:

Sustainable development is known as a process that pave the way for achieving pleasant ecological quality in urban landscape. In fact, it seems that sustainable development principles and evaluation of the natural context should be the fundamental part in the process of improvement of the quality of urban landscape. The present research has been conducted in order to preserve and manage Tehran's River of Darabad Valley landscape as a living, dynamic ecosystem; moreover, to improve the ecological quality of the riverbed through the implementation of sustainable development principles.

Process recommendations to improve the ecological quality of the River of Darabad Valley through sustainable development are based on descriptive analysis of library research and case study, as well as observation and interview procedures with survey studies. Recommendations have been based on the study and analysis of multiple primary factors, including environmental, cultural, physical, and social features. Subsequent suggestions for designing a sustainable landscape have been provided, and have been focused on repair and protection of the landscape, and ecological and aesthetic principles. Emphasis has been placed on protection and improvement of the natural landscape and the diverse bionetwork of the region, the removal of inappropriate applications and bio-environmental pollutants, and the planning of a suitable habitat for migratory birds. suggestions are in accordance with the natural limits of the river; serving to both protect the natural landscape of the river, and provide visitors with outdoor recreational experiences and areas, as well as welfare facilities.

Keywords: Ecological Quality, Urban Landscapes, Sustainable Development Principles, River of Darabad Valley, Tehran

Dr. Ali Reza Sadeghi is Assistant Professor of Urban Design and Member of Academic board of Art and Architecture Faculty, Shiraz University, Iran. His research interests are environmental and socio-cultural sustainability.

Dr. Ferial Ahmadi is Adjunct Professor of Landscape Architecture, Art University of Shiraz, Iran. Her research interests are Ecological assessment and environmental sustainability.

Ali Reza Eskandarinejad is PhD Candidate of Civil Engineering, Shiraz University, Iran. His research interest is environmental sustainability.

117. Urban Sustainable Regeneration of Samarra City

Dr. Rashed H. Yaseen

ABSTRACT:

There are three distinguished decades of the urban characteristics of Samarra City:

The first one is the (Abbasid decade) (836-892 ad), as the Islamic Capital of the Abbasid Caliphate, with a hard geometric pattern of planning, on a site along the Tigris River, of about 4.1km length to 3-4.5km width.

After the engineering crises of the city infrastructure, due to which it had been abandoned as the capital for the Abbasid caliphate, all its citizens moved back to original capital, Baghdad, except the neighborhood of the Imam Ali al-Hadi and Hasan al-Askari, regenerating a small, circular, organic pattern city, growing up to the (Othman decade), lasting to the beginning of the 20th century.

The third one is the (Modern decade), during the 2nd half of 20th century to date, formulating rectangular shape of 2km width, penetrating the archeological area, perpendicular to the river, because of the archeological restrictions along the river.

Thus, the research problem became:

- The prevention of the city urban redevelopment along the river beach; prohibited any use of this beach as an urban sustainable factor.
- The variation of the current city urban density according to the distance from the river, because the master plan expanded to 8km faraway the river, with no infrastructure, so that there is no life at the ends.

The research aims to redirect the urban regeneration along the river, by the revival of the archeological geometric plans, as an urban sustainable regeneration

Urban, Regeneration, development, sustainability, archeology, master plan.

Dr. Rashed H. Yaseen is an Associated Professor and the Faculty Dean of Engineering College, University of Samarra. He had a PhD of Architectural Engineering, MSc. In Urban planning, both from University of Baghdad. He had over 33 years' experience as an Academic Instructor, qualified Design Architect, Urban Designer and Planner with extensive service in the Middle East with projects in Iraq and United Arab Emirates.

His academic experience concludes ten years in supervising graduate and postgraduate programs of architecture and urban design courses, instructing Architectural design, urban planning and urban design, in many universities in Iraq and UAE.

He worked also as the Manager of the Physical Planning Corporate of Salah Eddeen Governorate for six years.

In the private sector, he worked as the Director and architectural designer for his own Engineering Consultant Bureau, designing many projects in housing, administrative buildings, residential investments.

118. Assessment of Human Development Status and Personal Ecological Footprints of Residents of Ile-Ife, Nigeria

Dr. Olalekan Elijah OJEDOKUN, Nicholas Olaniyi ELUGOKE

ABSTRACT:

This study assessed the human development status (level of education, health and standard of living) – HDI, and personal ecological footprints (indicated by food consumption pattern, frequency of travel, energy consumption, strength of home installations and environmental friendliness of purchased life supporting materials) – PEFP of residents of Ile-Ife, Osun State, Nigeria and determined the relationship that existed between these two variables. These were with the view to providing a baseline information that could guide further studies on how to reconcile human development with ecological sustainability of Nigerians, especially those of the educational advantaged Southwestern Nigeria.

The study employed the survey research design to collect data on HDS and PEFP of the respondents to the study and analysed data collected using the arithmetic mean, Geographic Information System packages and correlation statistics.

The results showed that the residents' HDI of 0.68 was higher than the United Nations developmental categorization of 0.5; their personal ecological footprint was not statistically significant (2.45 ± 0.18 , $p > 0.05$); and the relationship between the Human Development Status and Personal Ecological Footprints of residents was not statistically significant ($r = 0.31$, $p > 0.05$). It concluded that further studies will be needed to confirm this study in educationally advantaged Southwestern Nigeria.

Assessment; Human Development Status; Personal Ecological Footprints; Residents; Ile-Ife; Nigeria

Dr. Olalekan Elijah OJEDOKUN is a Senior Lecturer of Social and Sustainable Development Studies at the Institute of Education, Obafemi Awolowo University, Ile-Ife, Nigeria. He holds the Master of Science in Education Sustainability of the London South Bank University, M. Sc. Environmental Control and Management of the Obafemi Awolowo University, and Ph. D in Social Studies of the University of Ibadan, Nigeria. He has published 25 journal articles and attended many international conferences. He is the current Director of the Institute of Education, Obafemi Awolowo University, Ile-Ife, Nigeria. He is happily married and his childbearing pattern is sustainable – two boys, two girls, well-spaced! Dr. Ojedokun initiated this study, provided the background, designed the instrument and wrote the report.

Nicholas Olaniyi Elugoke is a graduate of Demography and Social Statistics and currently a Master of Science in Environmental Control and Management student at the Obafemi Awolowo University, Ile-Ife, Nigeria. He coordinated the collection of data for this study and ran statistical analysis using the GIS and SPSS packages.

119. Simulation of a hybrid urban transportation scooter

Dr. Ángeles Cancela, René Lastra Cid , Dr. Ángel Sánchez,
Dr. Víctor Alfonsín

ABSTRACT:

This paper describes a vehicle simulation, originally designed for a hybrid (battery and fuel cell) short urban distances, which can be used to estimate the hybrid vehicle battery, fuel cell and/or hybrid system (both systems working together) range. The simulation model is a function of many mechanical and physical variables that depends not only on the vehicle but also on the ground. It includes the simulation of each of the elements that make up the ecological scooter, so much the driving system whose main element is an electric motor, as the energy storage system whose main element is an acid lead battery fed by a hydrogen fuel cell. An analysis of energy efficiency and operation of the vehicle is made. This Project is framed in a context that seeks an environmentally friendly alternative to current motorcycles in order to reduce polluting emissions, more precisely greenhouse gases, encouraged by the Kyoto Protocol.

From simulation environment, some all these tasks can be performed. The application of this numerical model is to help to conceptual design and unit sizing of a real life-service battery, fuel cell-hydrogen and hybrid vehicle, and permits to predict the vehicle range and hydrogen and energy consumption. Results of simulations both driving cycles and real routes test are presented.

Some aspects as CO₂ emission saving, hydrogen consumptions and many other have been considered.

Keywords: Simulation, Plug-In Hybrid boat, Renewable Energy

Ángeles Cancela is Assistant Professor of the Chemical Engineering Department at the University of Vigo, teaching Chemical Engineering at the Industrial Engineering Faculty. Ph.D. in Chemical Engineering (University of Santiago de Compostela, 1997). Her principal research areas Renewable Energies Integration, Hybrid/Hydrogen-Batteries Vehicle Simulation, and Biofuels.

René Lastra Cid is a Ph. D. Student at the Chemical Engineering Department, University of Vigo, Spain.

Ángel Sánchez Bermúdez is full professor at the Chemical Engineering Department, University of Vigo, Spain.

Víctor Alfonsín is Assistant Professor, at the Navy University Center of Marín, Spain.

120. Characteristics of organic citriculture in Brazil

Dr. Christian Turra, Priscilla Santos

ABSTRACT:

This study aimed to discuss the main aspects of cultivation and marketing adopted by organic growers in the Brazilian citriculture. Therefore, a literature review on this subject and a qualitative research using interviews with certifiers, governmental institutions, farmers, cooperatives and grower associations were carried out. The organic citriculture is characterized by small growers who produce a variety of fruits and vegetables. Organic citrus growers considered the main difficulties in production the control of pests and diseases, followed by qualified labour, marketing and costs. The productivity of organic citrus is a little smaller than the conventional citrus. The most successful organic citrus producers, among all organic growers, are those who use a lower density of plants per area, a larger amount of soil covering per area and have a greater diversity of plants.

Keywords: certification, citriculture, sustainability agriculture, organic citrus, agricultural systems.

Dr. Christian Turra has undergraduate degree in Agronomist at the University of Estadual Paulista Júlio de Mesquita Filho, Master degree in Ecological Sciences at the University of São Paulo (2005), Ph.D. in Chemistry in the Environment and Agriculture at the University of São Paulo, Brazil (2010). He has 2 postdoctoral by University of São Paulo (2011 - 2013). He has experience in Agronomy and Sustainability, working mainly in the following line of research: chemical elements in soils, plants and beverages; certification; traceability; quality control of food; sustainable agriculture and metrology. He published a book about sustainability citriculture and 14 articles.

Priscilla Santos holds a bachelors in Law and Social Sciences (Pontifícia Universidade Católica do Rio Grande do Sul - PUC/RS), a postgraduate degree in Environmental and Urban Law (Universidade de Anhangera Uniderp) and a Masters of Science in Nature, Society and Environmental Policy (University of Oxford, UK). She is a lawyer, academic and policy analyst with international experience in social and environmental policy, with a focus on climate change and sustainable development. She has worked as a researcher, consultant and as a project manager at the Presidency of Brazil with climate change policies for mitigation and adaptation. She is currently a program officer for environmental and climate issues at the Royal Norwegian Embassy in Brasilia.

121. Synergy between the Multiple Supply Chains and Green Supply Chain Management (GSCM) Approaches: An Initial Analysis in Order to Foster Supply Chain Sustainability

Ana Lima de Carvalho, Livia Rodrigues Ignacio,
Prof. Dr. Kleber Francisco Esposto

ABSTRACT:

In order to reduce environmental impacts of productive systems, the concept of Green Supply Chain Management (GSCM) was created in the 90s. This approach seeks the improvement of environmental performance among all the participants in a supply chain, from the extraction of raw materials to the usage and final disposal of the product, through collaborative or conformity relationships between the parties. The multiple supply chains approach, established by Gattorna in 2009, brought to light different supply chain configurations based on the segmentation of customers into four psychological types: collaborative, innovative, efficient and dynamic. Given the recency of these approaches, there are still many opportunities to explore how they relate with each other and how the GSCM practices can be incorporated into different supply chains. This work aims to present an initial overview, based on literary analysis, of the synergy between the practices of GSCM and the four multiple chains configurations of Gattorna. In the preliminary discussion of this paper, it was possible to conclude that the Continuous Replenishment and the Lean supply chains have higher susceptibility to incorporate the GSCM approach in their operations, while the Agile and the Fully Flexible chains have less adherence to GSCM concepts.

Keywords: green supply chain management, multiple supply chains, sustainable supply chain.

Livia Rodrigues Ignacio is a Master's Student in Industrial Engineering, University of São Paulo, Brazil. Graduated in Environmental Engineering, is currently working as a Quality Consultant at Biosev, the world's second largest sugarcane processor. Livia has her research focused on sustainable management models in order to foster sustainability in the sugarcane industry. She has large experience with sustainability advisory services and management systems (ISO 9.001, ISO 14.001, OHSAS 18.001) applied to the cane's sector. Has interest to research management models and practices that lead to more sustainable value chains, how to really put sustainable models in practice, and how to show value and make "sustainable" reality.

Ana Lima de Carvalho is a Master's Student in Industrial Engineering, University of São Paulo, Brazil. Graduated in Electrical Engineering, emphasis in Electronics, has around four years of experience with supply chain advisory services, network design, manufacturing, supply chain strategies and PCP - Production and Planning Control. Her research is focused on supply chain management, more specifically in planning processes, such as Sales and Operations Planning (S&OP). Her research supervisor is Professor Kleber Francisco Esposto, co-author of this paper.

Prof. Dr. Kleber Francisco Esposto is graduated in Industrial Engineering by University of São Paulo (2000), Master in Industrial Engineering by University of São Paulo (2003) and Ph.D. in Industrial Engineering by University of São Paulo (2008). He is currently Professor at the Industrial Engineering Department by University of São Paulo, and also reviewer of Management & Production Periodic (UFSCAR), Production Periodic (São Paulo), GEPROS Periodic and Production Planning & Control (Online and Printed) Periodic. Has interest and large experience in Production Management, Operations and Systems, with focus on the following topics: Performance Measurement, Performance Management, Lean Production, Visual Management.

122. Ecological Sustainability in Rangelands: The Contribution of Dung Beetles in Secondary Seed Dispersal (Case Study: Chaharmahal and Bakhtiari Province, Iran)

Dr. Elham Omidezadeh Ardali, Prof. Dr. Maurice Hoffmann,
 Dr. Pejman Tahmasebi, Prof. Dr. Dries Bonte,
 Drs. Tanja Milotić, Iraj Rahimi Pordanjani

ABSTRACT:

Ecological sustainability has been recognized as one of the main aspects of sustainable development of rangelands, at which different kinds of animal including insects, make substantial contributions. Dung beetles, known as detritus-feeding insects, play several key roles in many ecological functions from which benefit both terrestrial ecosystems and human population. Specifically, they benefit rangelands through reducing greenhouse gas emission, nutrient cycling, plant growth enhancement, trophic regulation and pollination and secondary seed dispersal. This study examined secondary seed dispersal as one of the ecological functions of dung beetles, in Chaharmahal and Bakhtiari province, Iran. We applied an experimental approach to measure ecological functions of seed dispersal through functional groups of dung beetles. We tested whether or not, different functional groups influence secondary seed dispersal differently. Through repeated standardized samples of sheep dung, data obtained regularly over a two-month period. The results recognized, the role that dung beetles play in secondary seed dispersal. However, it is affected by seed size, so that seed removal increased in the order of, large, medium and small size, respectively. As a conclusion, it is suggested that if it is to guarantee ecological sustainability of rangelands, paying attention to the ecological functions of dung beetles is crucial.

Keywords: Ecological sustainability, functional groups, secondary seed dispersal, dung beetles, Chaharmahal and Bakhtiari province, Iran

Mrs. Elham Omidezadeh Ardali is a Ph.D. candidate in rangeland science (socio-economic) at Terrestrial Ecology Unit, Department of Biology Ghent University, Belgium. In his doctoral dissertation, he is studying the roles of dung beetle assemblages in dung removal and seed removal, in Chaharmahal&Bakhtiari Province, Iran.

Prof. Dr. Maurice Hoffmann is a part-time associate professor at Terrestrial Ecology Unit (TEREC), UGent. Also, Research Institute for Nature and Forest. <https://www.inbo.be/>.

Dr. Pejman Tahmasebi is an associate professor at department of Rangeland and Watershed Management, Faculty of Natural Resources and Earth Science, University of Shahrekord, Po.box 115, Shahrekord, Iran.

Prof. Dr. Dries Bonte is an associate professor at Terrestrial Ecology Unit (TEREC), UGent. Also, Research Institute for Nature and Forest. <https://www.inbo.be/>

Drs. Tanja Milotić is a junior assistant at Terrestrial Ecology Unit (TEREC), UGent. Also, Research Institute for Nature and Forest. <https://www.inbo.be/>

Mr. Iraj Rahimi Pordanjani was a former M.Sc. Student of Range Management, Department of Range and Watershed Management, University of Zabol, Iran.

123. Sustainable Development and Sustainability Management in the European Union Countries

Dr. Emília Huttmanová

ABSTRACT:

The terms sustainable development and sustainability are now used in many areas and spheres of life and become a modern phenomenon in determining the direction of progress. Sustainability is the goal of many strategic documents and should be implemented in economic and social life. The attractiveness of the terms sustainability and sustainable development leads to high frequency of their use, and is also evidence of their multidisciplinary. The aim of this paper is to evaluate the management of sustainable development in the countries of the European Union through selected indicators characterizing sustainable development and its major dimensions. Paper presents the results of the evaluation of sustainable development using selected methods and indicators.

Keywords: Sustainability, management of sustainability, sustainable development, indicators, quantification

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 a 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.

124. SDGs and human rights: how to measure states compliance?

PhDc. Gaia Tascioni

ABSTRACT:

In September 2015 UN General Assembly approved the SDGs and all over the world the expectations focused on the new UN Development Agenda. Apparently, issues concerning Human Rights and Human security, including absence of violence, promotion of sustainable peace and accountable institutions, have been strongly taken into account during negotiations. From this perspective, the SDGs go far beyond MDGs while acknowledging a deep connection with human development.

Nonetheless, the references made to human rights law in the final document are weak and fragmented. Moreover, the SDG 16, focused on security and promotion of the rule of law, is not time- bound and does not include clear indicators related to its targets.

In the light of this, the main objective of this paper is to analyse the grade of real recognition of human rights and security issues in the Post-2015 Agenda and to suggest possible indicators for SDG 16 targets based on juridical instruments.

For this reason connections between SDGs and existing human rights binding norms will be assessed in order to demonstrate how the inclusion of explicit references to core treaties in the above- mentioned indicators could promote a more effective monitoring.

Keywords: SDGs, Human Security, Human Rights, Human Development, Post-2015 Development Agenda

Ms. Gaia Tascioni is enrolled as joint PhD student at Sapienza University of Rome, Italy and at University Carlos III of Madrid, Spain. Her research activity is mainly about UN Post-2015. Development Agenda and to social, economical and cultural rights. Her thesis is dedicated on the one hand to the evolution of UN Development programs from 1946 to present day, analyzing the critical recognition of the concept of human security in this context. On the other hand, she is focusing on the development of juridical indicators suitable for measuring human security in the framework of the SDG's implementation reports.

125. Impact of SMEs in economic growth in Albania

Grisejda Myslimi, Krisdela Kaçani

ABSTRACT:

SMEs are main indicators of a country's economic development. They have a significant impact on the social development of a country. SMEs create jobs, compete with big enterprises, become part of the global market, contribute to poverty alleviation in developing countries, boost exports and reduce imports.

An important objective of this study is to analyze the impact of SMEs on economic growth in Albania during the period of 1995-2015. To achieve this objective, it will be evaluated empirically the impact of SMEs on the economic growth in Albania through the use of statistical programs. It will be interpreted the casual links between SMEs and economic growth. Economic growth is determined by Gross Domestic Product at current prices (real GDP). The result achieved empirically, will be also proved thanks to the various diagnostic tests.

Based on the empirical results it is evident that in the economic growth of Albania, affect major and micro enterprises. This result can be explained by the fact that large enterprises are more competitive than SMEs. They can withstand economic crises easier than SMEs, through the use of the economies of scale.

Keywords: SMEs, Economic growth, Real GDP, Size of the Enterprises

MSc. Grisejda Myslimi is Assistant Lecturer at European University of Tirana, Albania since September 2015. She teaches Financial Accounting and Management and cost accounting.

MSc. Krisdela Kaçani is Assistant Lecturer at European University of Tirana, Albania since September 2015. She teaches Microeconomics and Macroeconomic.

126. A New Process for Sustainable Wastewater Treatment in Chilean Copper Smelters

Dr. Henrik Hansen, Adrian Rojo, Claudia Gutierrez

ABSTRACT:

Chilean copper smelter wastewater treatment is a complex process that actually mostly is focused on fulfillment of threshold values more than sustainability. The actual wastewater treatment includes a number of precipitation, neutralization, clarifying and filtering steps. A new process for sustainable wastewater treatment in Chilean copper smelters is proposed. This process includes a) a lime neutralization step until pH 2-3 to remove the majority of sulphates present, b) an electro dialysis (ED) step to separate copper from arsenic for recovery, and c) an electrocoagulation (EC) step to precipitate arsenic.

The new process would reduce several of the environmental disadvantages in the actual copper wastewater treatment:

- 1) In the new proposed process, the lime and water addition for neutralization is reduced remarkably compared to the actual process.
- 2) In the new process the precipitated gypsum could be used for industrial purposes which is not possible in the original process, where the gypsum is heavily polluted with arsenic.
- 3) Copper can be recovered by an electro dialysis step, which is not the case in the actual treatment.
- 4) The electrocoagulation step would reduce the amount of ferric sulphate added compared to the original process.

Keywords: Sustainable wastewater treatment, Electrocoagulation, Arsenic removal, Copper recovery

Dr. Henrik Hansen, Universidad Technical Federico Santa Maria, is an experienced researcher in the fields of environmental processes and sustainable design of new wastewater treatment processes.

M. Sc. Adrian Rojo, Universidad Technical Federico Santa Maria,

M. Sc. Claudia Gutierrez, Universidad Technical Federico Santa Maria,

127. Factors affecting sustainable rangeland management: Analyzing livelihood cornerstones in Bazoft region, Iran

PhDc. Hojatollah Khedri Gharibvand, Dr. Hossein Azadi,
Dr. Mostafa Moradi Dashtpajardi, Dr. Elham Omidezadeh Ardali,
Prof. Dr. Frank Witlox

ABSTRACT:

Sustainable rangeland management (SRM) focuses on the many dimensions of people's life, through recognition of sustainable livelihoods, in which livelihood cornerstones are acknowledged. In spite of this fact, research has not sufficiently addressed this subject. It has been recognized that analysis of the main drivers, allows for more appropriate strategies which are not the mere understanding of livelihoods, but rather ways towards sustainable development of rangelands. In this study, experts' attitudes were elicited. The survey data were collected, in order to analyze the livelihood cornerstones, in the Bazoft region in Chaharmahal and Bakhtiari province, southwestern Iran. The participants were asked to characterize the prioritization of each driver in approaching SRM. A five-point Likert scale used to rank the livelihood cornerstones; including livelihood capital, vulnerability contexts as well as policies, institutions and processes (PIPs). We found that, experts associated the main drivers with PIPs, vulnerability contexts and livelihood capital, respectively. Then, they prioritized policy, human capital and trends as the factors extracted from the main drivers, in a more detailed assessment. Through these findings, we would offer policy makers should initially pay attention more on drivers that experts prioritized.

Keywords: Sustainable development of rangelands, livelihood cornerstones, experts' attitudes, human capital, policies, Bazoft region, Iran.

Mr. Hojatollah Khedri Gharibvand is a Ph.D. candidate in rangeland science (socio-economic) at Department of Geography, Ghent University, Belgium. He is potential to be an associate professor at Faculty of natural resources and geosciences, Shahrood University, Iran. In his doctoral dissertation, he is studying applications of multi criteria decision making in sustainable rangeland management. He provided a new theoretical framework and published its paper in *The Rangeland Journal* in the areas of sustainable livelihoods and rangeland management. His present research interests include sustainable livelihoods, socio economic issues in rangeland management and multi criteria decision making.

Dr. Hossein Azadi is a post-doc researcher at the Department of Geography, University of Gent, Belgium. Other Affiliated Organizations: 1. Department of Geography, Ghent University, Ghent, Belgium. 2. Centre for Environmental Sciences, Hasselt University, Hasselt, Belgium.

3. Economics Rural Development, Gembloux Agro-Bio Tech, University of Liege, Belgium. His main works have focused on integrated studies on "Food & Land" policies aiming at understanding the mutual impacts of different farming systems and land use change/development.

Dr. Mostafa Moradi Dashtpajardi is a Ph.D. candidate in watershed management in Tarbiat Modares University (TMU), Iran. He is also as a researcher in Karoon Watershed Management Office (KWMO), Iran.

Dr. Elham Omidezadeh Ardali is a Ph.D. candidate in rangeland science (socio-economic) at Terrestrial Ecology Unit, Department of Biology Ghent University, Belgium.

Prof. Dr. Frank Witlox is senior full professor of economic geography at the Department of Geography of the Ghent University. He is also a Visiting Professor at the Faculty of Science and Technology (Department of Geography) of the University of Tartu (Estonia). He is the Director of the Doctoral School of Natural Sciences (UGent). His research focuses on travel behavior analysis and modeling, travel and land use, sustainable mobility issues, business travel, cross-border mobility, city logistics, global commodity chains, globalization and world city-formation, polycentric urban development, contemporary challenges in agricultural land use, and locational analysis of corporations.

128. Reduction Of Air Pollution In Big Cities Enhanced by Architecture

Arch. Wojciech Kocki, Jakub Dziedzic, Dr. Małgorzata Pi-lawska,
Dr. Bartłomiej Kwiatkowski

ABSTRACT:

The World Health Organisation is concerned that only 12% of the urban population has the benefit of an atmosphere fulfilling the norms for clean air. Thus it becomes necessary to ensure acceptable living and working conditions for people.

The solution of the problem of access to clean air could lie in high buildings of modular construction. The core of the building around which the modules could move, vertically and/or horizontally, would be used for air-cleaning installations and for collecting and purifying "grey" water. For PM10 and PM2.5, bio prevention is proposed, by using modular installations with absorbent green screens. Employing living organisms to deal with pollutants, bioremediation, is increasingly used in industry and in everyday life. This solution would make use of the large effective surface areas of plants, mosses and lichens, which can collect and accumulate particulates.

To explain and illustrate the movement of air masses in a built-up area CFD simulation has been carried out, using the Ansys Fluent program and the results are presented and the effects of the proposed method of cleaning dust-laden air are analysed. The aim was to test the possibility of lowering the concentration of PM10 particulates at street, i.e. pedestrian level.

Keywords: urban sustainability, eco-friendly environment, high rise building, building façade, municipal dust, green panels, air cleaning, CFD simulation

M.S. Arch. Wojciech Kocki has graduate from Cracow University of Technology in 2013 and now is working at Lublin University of Technology preparing Ph. D. Thesis. He focus on research on high building for environment sustainability.

M.S. Jakub Dziedzic has graduated from Cracow University of Technology and is now Ph.D. student there. He focus on research on aero and thermo dynamics for clean air.

Dr. Małgorzata Pilawska is Associate Professor at Cracow University of Technology. Her research focus on fluidization technology for a clean environment.

Dr. Bartłomiej Kwiatkowski is a head of Department of Architecture and Urban Planning at Lublin University of Technology.

129. Ecofriendly PROcessing System for the full exploitation of the OLIVE health potential in products of added value

Dr. Joana Carvalho, Dr. Vilarinho Cândida

ABSTRACT:

The EcoPROLIVE project proposes an innovative processing for the full exploitation of high valuable constituents in the olive into novel products that are healthy and greener. The proposed process is very different from the current approaches of olive oil industrial production, and waste revalorization alternatives, as it follows a “zero waste” approach and all resulting products have commercial value.

Part of the process is based on previous work with further developments for quality and environmental improvements, such as the use of supercritical fluid extraction (SFE) with CO₂ instead of n-hexane extraction, and including pulsed electric field (PEF) technology to improve the drying performance and the oil extraction yields.

Demonstration of the technical and economical feasibility of the processing and its environmental study; ensuring the market uptake of the technology and novel products, scale-up from lab/pilot plant to preindustrial application; validation at an operational environment; monetizing the technology and developed process (patents) into scalable markets and replication in different scales and countries, starting with the main olive oil producers represented in the consortium (Spain, Italy, Greece, Portugal).

Keywords: Olive, health potential, zero waste, supercritical extraction

Dr. Joana Carvalho is the coordinator of the R&D department of CVR, Centro para a Valorização de Resíduos, Campus de Azurém da Universidade do Minho, Guimarães, Portugal 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. Doctor Joana Carvalho is always closely involved with the following and dissemination tasks of all projects. Additionally she is Relator Expert in the European commission.

Professor Candida 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).

130. Sustainable Energy Harvesting System Utilizing Fluid-elastic Vibration of a Tube Array due to Ocean Flow

Prof. Dr. Tomohiro Ito, Assoc. Prof. Dr. Atsuhiko Shintani,
Assist.Prof.Dr. Chihiro Nakagawa

ABSTRACT:

Various types of sustainable energy harvesting systems have been developed and in commercial use. After the accident in Fukushima nuclear power plant, these sustainable energy systems are become more important. But some of them such as wind turbine system deeply depend on the climate. And some types that utilize propeller and operate under the sea, have problems of corrosion or maintenance.

Thus, we developed a new energy harvesting system that utilizes "Fluid-elastic Vibration of a Tube Array" due to ocean flow. This system does not depend on the climate change and the generator is placed above sea surface.

In this paper, first, the theoretical study was conducted in order to confirm the possibility of energy harvesting. We found that the energy harvesting is feasible.

And next, a small scale test model was fabricated that utilized air flow instead of water flow, for convenience. Tests were conducted in the laboratory. The relationship between the flow rate and generated electricity were obtained.

From both the theoretical and experimental studies, we confirmed that the proposed system could be one of the sustainable energy harvesting systems.

Keywords: Sustainability, Renewable energy, Energy harvesting system, Fluid-elastic vibration, Tube array, Ocean flow,

Prof. Dr. Tomohiro Ito of Osaka Prefecture University graduated from Osaka University in 1977 in Japan and joined to Mitsubishi Heavy Industry. He conducted research works on the structural integrity of mechanical components of nuclear power plants, subjected to liquid flow or seismic excitations. In 1995, he received a doctoral degree from Tokyo Metropolitan University. In 2002, he quitted Mitsubishi Heavy Industry and became an associate professor of Osaka Prefecture University. In 2005, he became a professor of Osaka Prefecture University. His research field is mechanical dynamics and vibration problems. He has been conducting many research works including the development of energy harvesting system or structural integrities of the piping systems due to seismic excitations. In 2011~2014, he served as a Dean of College of Engineering.

Associate Prof. Dr. Atsuhiko Shintani graduated from Kyoto Institute of Technology and received the doctoral degree at Kyoto Institute of Technology in Japan in 1997. In 1998, he became an assistant professor of Osaka Prefecture University. In 2006, he became an associate professor of Osaka Prefecture University. His research area is mechanical dynamics and vibration engineering. He has been conducting various researches such as flow-induced vibration of rotating shaft or slender beams, stability of the high-speed-running vehicle at the seismic events, stochastic studies on the integrity of piping systems due to seismic excitation, and human engineering, and so on.

Assistant Prof. Dr. Chihiro Nakagawa graduated from The University of Tokyo in Japan and received the doctoral degree at The University of Tokyo in 2010. In 2010, she became an assistant professor of Osaka Prefecture University. Her research area is mechanical dynamics and vibration problems. She has been conducting researches on the development of various types of personal mobility vehicles and the assistant systems for the disabled children or adult persons.

131. Removal of Pb(II) using alginate - immobilized *Myriophyllum spicatum* beads

Dr. Jelena Milojkovic, Dr. Mirjana Stojanovic, Dr. Marija Mihajlovic,
Dr. Zorica Lopičić

ABSTRACT:

Directive 1999/31/EC requires that biowaste with more than 3% organic content isn't accepted for landfilling, directing toward more efficient use of biological material from the landfill. *Myriophyllum spicatum* is an aquatic weed which grows on every continent except Antarctica and it is noted for its capability to cause different problems, so its growth must be controlled. Utilization of bio-waste in the bioeconomy can be achieved with biosorption. In this study was investigated *M. spicatum*/alginate (5:1) biosorbent (MsA) for the removal of Pb(II) ions from aqueous solutions. MsA was characterized by Fourier transform infrared spectroscopy. The batch equilibrium was expressed by 5 isotherms and Redlich-Peterson isotherm model provided the best fit with the experimental data. Since, alginate-immobilized *M. spicatum* beads have superb Pb(II) uptake 200 mg/g they are appropriate cost-effective, environmental friendly biosorbent with potential application for continuous flow reactors. Managing and processing bio-waste must be deployed and integrated to meet the requirements of the sustainability.

Keywords: bioeconomy, biosorption, aquatic weed, Myriophyllum spicatum, alginate, lead, Environmental sustainability

Dr. Jelena Milojković, Research Associate, Institute for Technology of Nuclear and other Mineral Raw Materials (ITNMS), Head of Department QMS – Quality Management System at ITNMS. PhD thesis: “Biosorption of selected heavy metals by compost of *Myriophyllum spicatum*”, Department for Environment Protection, Faculty of Technology and Metallurgy, University of Belgrade. Coordinator of second theme: “Development biosorbents based on waste biomass” of the project TR31003 (2011 - present): Characterization of biosorbents, Investigations of parameters that affect on biosorption process and their optimization, Modeling biosorption process: Sorption isotherms, Kinetic and Thermodynamic models, Determination of mechanism of pollutant removal, Modification and Immobilization of biosorbents with natural polymers, Desorption studies for investigation of maximum regeneration capacity (the number of cycles of sorption/desorption), Utilization of life cycle assessment (LCA). Development and application of new materials for the remediation of degraded and contaminated soil, Anthropogenic Sources of uranium in Serbia.

Dr. Mirjana Stojanović, Principal research fellow, Institute for Technology of Nuclear and other Mineral Raw Materials (ITNMS). Deputy director of the ITNMS.

Project Manager of multidisciplinary project TR31003 (2011 - present): “Development of technologies and products based on mineral raw materials and waste biomass for protection of natural resources for safe food production” (which consists of 5 theme): possibility of using selected aluminosilicate minerals (zeolite, apatite, bentonite, sepiolite), waste biomass (aquatic weed *Myriophyllum spicatum* and its compost) and fruit factory waste materials (fruit pits) for obtaining new products and materials.

Mechanisms of distribution, translocation and fixation of uranium in soil-plant system, the study of cultivated and native plant species in order to phytoremediation of contaminated soil uranium; Anthropogenic Sources of uranium in Serbia-risk assessment on environment and Human Health.

Dr. Marija Mihajlovic, Research Fellow, Institute for Technology of Nuclear and other Mineral Raw Materials (ITNMS). Skills and expertise: Hydrothermal Carbonization of waste Biomass - grape pomace, characterization of grape pomace hydrochar and liquid phase, Biosorption, Phytoremediation, Sustainable Agriculture, Utilization of Phosphate Rock, Release of Plant Nutrients in the Exchange-Fertilizer Mixtures, Protein Structure, docking Studies.

Dr. Zorica Lopičić, Research Associate, o Institute for Technology of Nuclear and Other Mineral Row Materials (ITNMS). She graduated in Technology and Metallurgy Faculty, University of Belgrade, department of chemical engineering. She obtained her master diploma in industrial engineering at Ecole Centrale de Paris. She is employed in ITNMS, sector for Chemical engineering and environment protection. Her research focuses on environment protection with a special interest on monitoring of water and air pollution as well as developing strategies for their prevention. She is author of many technical and scientific papers including different topics related to environmental sustainability. She was also engaged on several national and company projects which was focused on different environmental aspect regarding pollution monitoring, abatement and prevention. She is preparing her PhD thesis at the Department for Environment Protection, Technology and Metallurgy Faculty, University of Belgrade .

132. Using Farming Systems Research as an Appropriate Approach in Agricultural Mechanization to Achieve Sustainable Development

Dr. Majid Dowlati, Atefe Malekian

ABSTRACT:

Farming Systems Research /Development (FSR/D) as a substitute for the conventional system of Research and Development (R&D) has been accepted by the majority of developing countries. The movement toward FSR/D due to consequences and problems have arisen by conventional R&D system. The important consequence of R&D is the increasing gap between poor and rich farmers mainly due to the one-way transfer of technology and also the better adaptation of research station with rich farmers compared to poor ones. Clearly, agricultural mechanization activities which improving management and productivity of poor farmers, while will be useful and effective that it is provided based on poor farmer's needs and conditions. This paper discusses FSR/D system and suggests some recommendations for sustainable agricultural mechanization development. In other hand, the agricultural mechanization has vital effects on sustainable agriculture in particular and also on sustainable development in general. Finally, FSR is recommended as an appropriate approach according to agricultural conditions of Iran.

Keywords: Agricultural development, Farming System Research, Mechanization, R&D, Sustainable Agriculture.

Dr. Majid Dowlati, was born in Hamedan, Iran on June 22, 1977 and received his M.Sc. in Mechanics of Agricultural Machinery from Shiraz University, Shiraz, in 2001 and received his Ph.D. in Mechanical Engineering of Biosystems from University of Tehran, Tehran, Iran in 2012. He is currently Assistant professor at Department of Mechanical Engineering of Biosystems, University of Jiroft and also vice-chancellor of Agriculture faculty. His research interests are in the machine vision technology, design and developing agricultural machineries, non-destructive tests and food engineering machinery. some publications: "Dowlati, M., Mohtasebi, S. S., and de la Guardia, M., (2012). Application of machine-vision techniques to fish-quality assessment. *TrAC Trends in Analytical Chemistry*, 40, 168-179" And "Dowlati, M., Mohtasebi, S. S., Omid, M., Razavi, S. H., Jamzad M., and de la Guardia M., (2013). Freshness assessment of gilthead sea bream (*Sparus aurata*) by machine vision based on gill and eye color changes. *Journal of Food Engineering*, 119(2), 277-287".

Atefe Malekian was born in Kermanshah, Iran on Feb 3, 1983 and received his M.Sc. in Agricultural extension and education from Ramin University, Ahvaz, in 2005 and she is currently Ph.D. student in agricultural extension in Shiraz university, Iran. Her research interests are in the Sustainable development and agriculture, water security conservation behaviors.

133. Assessment the Sustainability of Agricultural Systems in Golestan Province, Iran

Dr. Majid Rostami, Dr. Hoda Mohammadi

ABSTRACT:

Sustainable agriculture is a holistic approach to producing food, fiber, feed and fuel in a way that does not damage the environment and also must meet the needs of present and future population of the worlds, while considering agro-ecosystem health, social and economic equity and profitability. Therefore in each country or region the sustainable agriculture cannot be isolated from the concept of sustainable development. In order to study the sustainability of agricultural systems in Golestan province in the north of Iran during the period of 2002-2011, the current survey was conducted. The required data and information obtained from formal statistical database. For each year the total numerical value of sustainability calculated using 21 different indexes. Because of different nature of selected indexes and also wide range of them, in order to facilitate comparison all of the calculated indexes normalized. Based on results during the studied period the agricultural sustainability increased significantly. The lowest value of sustainability observed in the first year of study (i.e. 2002) but the highest value for sustainability calculated for 2009 and thereafter sustainability of agro-ecosystem decreased slightly. The main reasons for improvement of sustainability was decreasing the usage of chemical inputs such as fertilizers and pesticides and increasing resources use efficiency, crop yield, the cultivation area of nitrogen fixing plants and also increasing the net economical profits, during the recent years.

Keywords: Agro-ecosystem, Environment, Stability, Sustainability

Dr. Majid Rostami is Assistant Professor and Head of Agronomy Department in Malayer University, Iran.
Dr. Hoda Mohammadi is agroecologist and lecturer at department of agronomy, Malayer University. Iran.

134. Recycling in Saudi Arabia

Mouna Ahmed Eusman, Munira Abdelkader

ABSTRACT:

Saudi Arabia has the largest urbanization growth and economic development, in the MENA region, with significant increase in population of 29 million. Such population produce massive amount of household solid waste of 15 million per year, and with per capita waste generation estimated to be 1.5 kg/person/day.

However, the waste sorting and recycling process are in early stages with rate of 10%, these processes are driven unofficially by small active entities. Although there are several recycling and waste management factories across the kingdom, the factories are confined to deal with certain market such manufactories. As a result, the Saudi population does not efficiently participate in recycling household solid waste, due to the following factors:

- Lack of facilities such as: collection points and recycling bins installment in community and public areas.
- Lack of governmental assistant to enforce regulations and policies for recycling.

In our paper we will discuss how Naqaa is succeeded to create sustainable and successful approach to close the existing gap, and how we assist organizations and the community to implement recycling projects since the initiative was launched in 2011.

We will go through the weakness points identified from actions currently on ground, and how we can apply improvement measures in order to bring a better future environmental sustainability practices in the Kingdom.

Keywords: Saudi Arabia, recycle, household waste management, green business, recycling, waste management.

Mouna Ahmed Eusman was born and raised up in Saudi Arabia, she is a young social entrepreneur and sustainable development practitioner with special focus on environmental sustainability, and urban development. In 2010 as fresh university graduate she co-founded Naqaa Sustainability Solutions -the first social enterprise in Saudi Arabia led by young women that strive to promote environmental sustainability practices in Saudi Arabia community and business.

Mouna received her Bachelor of Science in health from Dar Al-Hekma University in Jeddah, and earned her Master in development practice from Paris School of International Affairs -SciencesPo. Also, Mouna has certificate in Sustainable Environmental Management from University of California Berkeley and certificate in Social Entrepreneurships from Babson College. Mouna is skilled project manager, social entrepreneurship trainer and mentor.

Mouna conducted several research projects in environment and sustainable development, and she has participated in several international events. Mouna speaks Arabic, English, and learning French.

Munira Abdelkader is a PR and Communications Manager at Naqaa Sustainability Solutions (Saudi Arabia), she is a young female, environmental activist in Saudi Arabia with keen interest in environment, sustainable development and climate change mitigation. Munira is a tracker for Adopt a Negotiator Project under the Global Call for Climate Action (GCCA), where she follows the Saudi negotiations within the UNFCCC process. In addition, she is the Saudi coordinator for Arab Youth Climate Movement which is a grass root movement for spreading awareness about climate change issues with the aim of achieving environmental sustainability in MENA region. Learning about Climate change issues and Sustainable Development is one of the main objectives of Munira's activities; in addition to that, these activities provided her with the perfect approach of environmental sustainability knowledge within the international context. Munira speaks Arabic, English fluent and advanced level in Spanish.

135. Lignocellulosic waste material – from landfill to sorbent and fuel

Dr. Zorica Lopivic, Dr. Mirjana Stojanović,
Dr. Jelena Milojković, Prof. Mirjana Kijevčanin

ABSTRACT:

The most important source of renewable energy in Serbia represents biomass (60.3 %) with total potential of 3.405 million toe. Almost half of this amount (1.67 million toe) represents agricultural and industrial waste, with further negligible revalorization. Various investigations have demonstrated that agricultural byproducts have promising capacities to remove a variety of pollutants, which might increase the sustainability of their life cycle. This paper investigates the possible use of lignocellulosic waste material (LCW), originating from food industry as biosorbent for heavy metals, and later as a solid fuel. For this purpose we have used peach stone particles (PS) obtained by mechanical activation of this LCW as Cu(II) sorbent. The physical and chemical characteristics of PS reveal its complex structure which was confirmed by SEM, and FTIR analysis. PS behavior on pyrolysis process was studied by dynamic thermo gravimetric and derivate thermo gravimetric analysis. Results show that this lignocellulosic waste can be applied as sorbent and as a fuel. This approve that this agricultural waste can be a resource more than a waste and that it does not need to be disposed of in the costly and inefficient way, which is especially important in developing economies, like Serbian.

Keywords: biomass, lignocellulosic waste, pollution prevention, sorption, fuel

Dr. Zorica Lopičić, Research Associate, Institute for Technology of Nuclear and Other Mineral Raw Materials (ITNMS). (*see also above*)

Dr. Mirjana Stojanović, , Principal research fellow, Institute for Technology of Nuclear and other Mineral Raw Materials (ITNMS). Deputy director of the ITNMS. (*see also above*)

Dr. Jelena Milojković, Research Associate, Institute for Technology of Nuclear and other Mineral Raw Materials (ITNMS), Head of Department QMS – Quality Management System at ITNMS. (*see also above*)

Prof. Mirjana Kijevčanin, Faculty of Technology and Metallurgy (TMF), University of Belgrade. She is professor at Faculty of Technology and Metallurgy and Head of Chemical Engineering Department. Her main areas of interests are: thermodynamics, energetics, renewable energy, process design and optimization, energy efficiency. She is author of many technical and scientific papers as well as team leader or participant in different scientific and practical projects on national and international level.

136. Generating of humic acids during bioremediation of soil contaminated by petroleum hydrocarbons

Dr. Jelena Avdalović, Dr. Gordana Gojgic-Cvijovic,
Dr. Srdjan Miletić, Prof. Dr. Miroslav M. Vrvic

ABSTRACT:

Petroleum and its derivatives are key sources of energy and raw materials for production, and are used in vast quantities in all domains of life and work. Accidental spillage during exploitation, transport, processing, storage and use of petroleum and its derivatives leads to pollution of soils and waters. The toxic effects of petroleum hydrocarbons are cumulative, while some are carcinogenic, mutagenic or teratogenic, so they therefore can endanger the health of future generations.

One of the technologies that has made a remarkable success worldwide in the area of remediation of pollutions caused by petroleum is bioremediation. Bioremediation is the process by which pollutants are transformed by biological methods into non-toxic compounds, or are completely degraded to carbon dioxide and water. Microorganisms are most often used as biological agents, since they possess the natural capacity for disintegration and transformation of pollutants (bioremediation potential), thanks to the unsurmised diversity of their metabolism and genetic changeability.

There is extensive literature about humification processes in soil, composts, ground water and river water. However, there is a shortage of information on humification processes during bioremediation and the effect of bioremediation treatment technology on these processes.

This study was focused on investigating researching humification process during the ex situ experiment of bioremediation of soil contaminated with petroleum and its products from the Refinery Pančevo, Serbia. During the five-months experiment, with biostimulation and bioventilation, the concentration of the total petroleum hydrocarbons was reduced from 23 to 2 g/kg (91.3%). An increase of the content of humic acids from 1.9% to 2.7% was observed during the bioremediation process. The FT-IR spectra and C/H ratio of humic acids extracted at the beginning and the end of the process indicate structural changes during the bioremediation process. The groups containing aromatic and carboxylic carbon increased, resulting in humic acids structures of higher aromaticity. The results obtained show that humification occurs during the bioremediation. It is probably a result of the fact that organic compounds which are the most resistant to biodegradation can be transformed and incorporate into materials analogous to humic substances. It is believed, that residual materials, after the process of biodegradation of petroleum and its derivatives, are not a serious danger for environment, on the contrary, the humic acids formed generally contribute to improvement of the environment.

Keywords: Bioremediation, microorganisms, petroleum, humification, humic acids.

Dr. Jelena Avdalović is research associate at Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Belgrade, Serbia. She received her Ph.D. in Biochemistry from Faculty of Chemistry, University of Belgrade in 2015. Her research interests include bioremediation of soil contaminated

with petroleum and its derivatives, humic acids and its influence on microorganisms isolated from contaminated soil and used for bioremediation, biogeotechnology and biohydrometallurgy.

Dr. Gordana Gojgic-Cvijovic is principal research fellow at Institute of Chemistry, Technology and Metallurgy and professor at Faculty of Chemistry, Belgrade at doctoral academic studies, study program Biochemistry. She received her Ph.D. in Biochemistry from Faculty of Chemistry, University of Belgrade in 1998.

Her research interests include microbial biochemistry, production and characterization of microbial bioactive products and biodegradation/biotransformation of organic pollutants by natural and artificial microbial consortia.

Dr. Srdjan Miletić is research associate at Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Belgrade, Serbia. He received his Ph.D. in Biochemistry from Faculty of Chemistry, University of Belgrade in 2014.

His research interests include bioremediation of soil contaminated with petroleum and petrol-products, humic acids and its antioxidative role, production of organically bonded microelements (iron, chrome, selenium, etc.) used in food and pharmaceutical industry.

Prof. Dr. Miroslav M. Vrvic is full professor, Department of Biochemistry, Faculty of Chemistry (www.chem.bg.ac.rs), University of Belgrade, Belgrade, Serbia and part owner. "BREM GROUP" (www.bremgroup.com), company for bio/remediation of hazardous waste and polluted sites, Belgrade, Serbia.

His research interests include microbiological chemistry, green chemistry and engineering, biogeochemistry, biotechnology of active substances, especially nutraceuticals, biogeotechnology and environmental biotechnology.

137. Biomechanical Control in Beekeeping: Sustainable Options to Fight Against the Honey Bees Decline Worldwide. A Mini-review.

Dr. Pier Paolo Danieli

ABSTRACT:

There is a great concern about the bees' decline worldwide. In last decades, several studies have depicted a dramatic scenario suggesting that honey bees (*Apis mellifera* L.) and beekeeping are at risk and, with them, the ecological services that managed as well as wild bees return to ecosystems, comprised the agro-ecosystems. Among conceivable causes, the parasitic mite *Varroa destructor* Anderson & Trueman, is believed to be a factor strongly related to honeybee colony collapse in many Countries. The chemical fight against this honeybees' parasite is showing a year-after-year decreasing efficacy due to the raising of resistance phenomena by the mite. Other more environmentally sound strategies, such as the use of organic acids or essential oils, are labor intensive and, in some circumstances, too expensive and unsafe to be adopted by beekeepers, especially in developing Countries. Biomechanical methods are environmentally sustainable in principle as no toxic substances are required and may be adopted by beekeepers safely. However some developed biomechanical methods may be labor intensive and costs may discourage beekeepers to perform them routinely. The pros- and cons- regarding the sustainability of existing biomechanical methods for contrasting *Varroa* mite infestations of honeybee colonies are summarized in this mini-review.

Keywords: Honeybee, biomechanical methods, colony collapse, ecological services, sustainable beekeeping, pollinators.

Dr. Pier Paolo Danieli graduated in 1997 in Biological Sciences - bio-ecological specialization - at the University of Tuscia. Several contracts for research collaboration were awarded to him from 2001 to 2008 within some National research programs carried out by the Animal Production Department of the University of Tuscia (Viterbo - Italy). From 2005 he is a Ph. D. in "Applied Biochemistry and Chemistry". From 2009 onward, he is working as an Academic Researcher in Animal Feeding and Nutrition at the Dept. of Agricultural and Forestry Sciences - University of Tuscia. He is a co-author of several scientific and technical works published through national and international paper. From 2010, he is member of the Italian Association for Animal Science Production (ASPA) and in 2013 he co-founded the Italian Association for Sustainability Science (IASS).

138. Importance of social and cultural behavior of Korean managers in the Slovak republic - in relation to sustainable development of slovak tourism

Dr. Peter Čuka

ABSTRACT:

There are significant social and cultural differences between Slovaks and Koreans. Korean managers (of KIA Motors) living in Slovakia have specific requirements, expectations and behavior.

In the field of tourism they prefer the classic geographical European destination - especially Germany, Austria, Switzerland and other countries.

Their favorite slovak destinations are High Tatras and Bratislava.

The paper is oriented to evaluation of importance of social and cultural behavior of Korean managers and their impact in the sustainability slovak tourism.

The main aim of this paper is to evaluate access of the Korean managers to slovak culture, their efforts to learn the Slovak language, understanding the slovak culture and their loyalty to visit the slovak destinations as a one of ways to sustainable tourism.

Keywords: Tourism, sustainability, cultural behavior, social behavior, Korean managers

Assoc. prof. Peter Čuka has been involved in the research of geography of tourism since 1989. He was awarded the doctoral degree at the Institute of Geography, the University of Łódź, Poland, and the post-doctoral degree at the Department of Geography and Regional Development, the University of Prešov, Slovakia. As an Associate Professor he lectured at the Faculty of Natural Sciences of the Matej Bel University in Banská Bystrica, Slovakia, where he worked as the Head of the Geography Department for five years.

Presently, Assoc. prof. Peter Čuka is lecturing at the Pedagogical University in Krakow, Poland, as well as the College of Business and Hotel Management in Brno, the Czech Rep.

Assoc. prof. Peter Čuka has completed scientific internships at the universities in Austria (Graz, Klagenfurt), Poland (Krakow, Łódź) and the Czech Rep. (Ostrava).

His research areas include: functions and the theory and methodology of tourism, development of recreational base in towns, tourist regions, types of tourism (urban, pilgrimage), using mind maps in tourism, and others.

He is the author of three scientific monographs and over 150 original scientific studies, of which more than 15 have been published abroad. Also, he is the author or co-author of two lecture books, yet another monograph, the update and review of the Military Geographic Atlas as well as numerous other papers, reviews, critiques and popular articles.

139. Optimization of electrolytic cleaning of low steel carbon

Dr. Santiago R. Urréjola Madriñán, Javier Lora Garcíaís,
Dr. Rosa Devesa-Rey

ABSTRACT:

Electrolysis is an effective method for recovering rusted pieces in acceptable times of operation without generating practically no residues and with a very low cost. The process is controlled by the concentration of electrolyte used, the current intensity selected and the operation time, among others. Knowing the best operating conditions allow cleaning the rusted parts more efficiently. In this work, it was carried out an optimization of the cleaning process by means of an incomplete 3³ factorial design. The substrate selected consists of several low steel carbon probes (Fe>99.7%) which were subjected to oxidation in the laboratory to ensure homogeneity. The independent variables assayed included the concentration of the electrolyte employed (x1), the current intensity (x2) and the temperature of operation (x3), whereas the dependent variable was based on the weight differences of the probes after being subjected to the cleaning process. The results obtained showed that the optimal conditions for removing rust from low steel carbon were: 5% of electrolyte, a current intensity of 3 A and a temperature of operation of 40 °C. These results demonstrated the potential application of electrolytic cleaning combined to an optimization by means of a factorial design to restore low steel carbon pieces.

Keywords: Oxidation; electrolytic; metal; cleaning; factorial design

Dr. Santiago R. Urréjola Madriñán is Professor of the Defense University Center, Naval Academy, Spain, attached at the University of Vigo. Ph.D. on Chemical Engineering his principal research area are electrochemical corrosion and Environmental Sciences. He has also conducted research on the hydrogen and fuel cells technologies and others research into other renewable energies. As a researcher, he has participated in 16 financed research projects (in three of them as principal investigator) and he has been director or co-director of four doctoral theses. As a result of his research activity, he has published over 35 papers in journals, more than 100 contributions to congresses and 3 licensed patents. He reviews regularly for journals of several topics such as Engineering, Chemistry, Environmental Sciences or Educational.

Sub-lieutenant Mr. Javier Lora García is a Spanish Navy Officer and Graduated in Mechanical Engineering in 2016 in the Defense University Center, Naval Academy, Spain. His research is focused mainly to the restoration of metal pieces with several degrees of corrosion and the rust elimination by means of electropolishing techniques.

Dr. Rosa Devesa-Rey is Professor of the Defense University Center, Naval Academy, Spain. Her research focuses mainly in water treatment processes by using high spectra adsorbents, which can be employed for the removal of both organic and inorganic pollutants. Also, biofilm-mediated elimination of pollutants in water has been extensively studied, with the use of heterotrophic native biofilms in river sediments for the elimination of metals in natural streams.

As a result of her research activity, she has published more than 50 papers indexed in the Journal Citation Reports, more than 85 contributions to congresses and 3 licensed patents related to pollutant removal. She is also reviewer of international R&D Projects, she has participated in the Organizing Committee of 3 Congresses and she reviews regularly for journals of several topics such as Engineering, Chemistry or Environmental Sciences.

140. Remittances, Home Towns Association and Sustainable Development at the Communal Level: A Case of Ikorodu North Local Council Development of LAGOS STATE, NIGERIA

Dr. Olatomide Waheed Olowa

ABSTRACT:

Hometown Associations (HTAs) are migrant organizations in host communities, with members from the same community of origin, which send collective remittances back to their hometown for community development Purposes. This study examined HTA formation and institutional partnership arrangements with Community Development Associations (CDAs) in Ikorodu North Local Council Development Area (LCDA) of Lagos State. Data were collected using semi-structured interviews conducted on 100 participants comprising migrants families, CDAs' and government officials purposively selected for the study. The findings from the study suggest there is a role for CDAs to help leverage remittances to support community development in migrant source communities in the LCDA. The results highlight the importance of HTA and CDA partnership and the need to involve beneficiaries in development projects to make sure partnership arrangements are effective. Specifically, the empirical evidence showed that institutional partnerships have potential to help HTAs evolve to become a lasting development institution.

Keywords: Collective remittances, Home Town Association, Community Development Association, Local Council Development Area, Lagos State, Nigeria.

Dr Olatomide Waheed Olowa, is a lecturer with the Federal College of Education (Technical) Akoka, Lagos.

He holds a Ph.D in Agricultural Economics from the University of Ibadan, Nigeria having also bagged Msc in Agricultural Economics from the same university. He is a member of Nigerian Association of Agricultural Economists, Agricultural Society of Nigeria and Farm Management Association of Nigeria. He has taught Courses in Agricultural, applied and development Economics at graduate and under-graduate for a period that span more than a decades.

141. Evaluating the Trend of Changes in Groundwater Quality Parameters (Case Study: Jiroft Plain)

Dr Farshad Soleimani Sardoo, Ali Azare PhD Student

ABSTRACT:

In recent decades, population growth and development of agriculture, indiscriminate increase and exacerbate the decline in the quality of groundwater resources in most parts of the country. Thus, given the importance of this research to study the spatial and temporal changes in parameters of calcium, magnesium, pH, chloride, sodium sulfate and water in Jiroft discussed. The data from 40 wells in the region of Kerman province in 2002 - 2012 water harvesting and qualitative analysis had been done on it was used. In this regard, after normalizing the data to evaluate the accuracy of different geostatistical methods including the kriging and inverse distance weighted, and then map the spatial zoning in the software quality parameters ArcGIS9.3 was prepared using the best method of interpolation. The results showed that the amount of calcium, pH and chlorine in the water and magnesium, and sodium sulfate also has declined. But the quality of groundwater resources Jiroft in general in 2012 compared to 2002, decreased and the process of change if they do go to the South and West Water quality is reduced.

Keywords: Modeling, Jiroft plains, groundwater, spatial changes, interpolation

142. Future Challenges for the Breeders Struggling the Climatic Changes

Dr. Ilian Badjakov, Assoc. Prof. IVAN TSVETKOV,
Assist. Prof. IVAYLA DINCHEVA, Assoc. Prof. VIOLETA KONDAKOVA,
Prof. Atanas Atanassov

ABSTRACT:

The Climate Change is one of the major problems in the entire world. The limiting influence of harmful factors as climate and other environmental changes, it will be crucial to breed new varieties for improved resistance to abiotic and biotic stresses. Climate Change can be tackled through plant breeding and better use of Plant Genetic Resources. Generally, plant breeding is the art and science of genetically improving plants for the benefit of humankind. It is important to mention potential contribution of organically managed systems to climate change mitigation is identified in the careful management of nutrients and, hence, the reduction of N₂O emissions from soils.

The application of biotechnological approaches, developing and implementation of new "omics" technologies and infrastructure construction on a high scientific level will help in building a strategy to overcome the damage of Climate Change.

Keywords: Climate Change, plant breeding, organic agriculture, plant biotechnology, 'OMICS' technologies.

Dr. Ilian Badjakov is Chief assistant professor in Plant Genetic Resources Group at AgroBioInstitute, Sofia, Bulgaria. The research interests of Dr. Ilian Badjakov are directed to Berry research: assessment of genetic diversity across cultivated and wild species, genotyping, variety identification by using DNA marker systems; Evaluation of red raspberry cultivars for resistance to phytophthora rot root; Metabolite profiling of Bioactive berry compounds (tannins, flavonoids, terpenes) in regard to human health related activities. Chemometrics methods and their applications for food and feed quality analysis by Near Infrared Spectroscopy. Assessment of environmental and geographical impact to flavonoid synthesis.

Associate professor, IVAN TSVETKOV, AgroBioInstitute, Sofia, Bulgaria. Plant biotechnologies in grapevine research. Responsible person for creation and evaluation of grapevine genetic resources (valuable Bulgarian, foreign varieties, clones and wild grapes); Development of organic farming technologies.

Assistant professor IVAYLA DINCHEVA, AgroBioInstitute. Phytochemistry research using mass spectrometry (GC-MS, LC-MS/MS), method validation with focus on bioactive compounds (alkaloids, tannins, flavonoids, terpenes, sterols etc.) and factors affecting their biosynthesis.

Associate professor, VIOLETA KONDAKOVA, AgroBioInstitute. Plant Virology and Biotechnologies, Head of Plant Genetic Resources Group. Management of berry genetic resources and related scientific projects directed to their investigation In the context of their bioactivities and health benefits.

Atanas Atanassov - Professor and director of Joint Genomic Centre - Sofia, Bulgaria.

143. Economic Evaluation of the National Program for Community Empowerment on Indonesian Rural Poverty: -A Case Study of Aceh Province

Sachnaz Desta OKTARINA, Dr. Jun FURUYA

ABSTRACT:

As the largest community-driven development (CDD) program in the globe, National Program for Community Empowerment of Indonesia (PNPM Mandiri) faces a noble target to achieve Sustainable Development Goal (SDG) which is declared in 2015 that formerly named Millennium Development Goal (MDG). In the intervening time, PNPM Mandiri was transformed to newly-established institution, Village Law, according to the Law no.6 / 2014. For encountering those challenges policy-makers needs to evaluate their existed development program and re-design the blueprint of present institution to favor the marginalized poor to sustain their economic viability.

This article seeks to investigate determinants of village budget allocation of PNPM Mandiri investments from its first earmarked in 2007 and 2011. An evaluation of their return to investment in terms of poverty mitigation within the time frame was also incorporated within the study.

It was finally documented that villages-specific endowment prior to PNPM Mandiri establishment were suggested to have reasonable contribution to endogeneity on villagers' decision to select particular allocations. And these allocations of investment were relatively significant to alleviate village's poverty.

Keywords: Sustainable Development Goal, Community-Driven Development Program, Indonesia, Economic Evaluation

Mrs. Sachnaz Desta OKTARINA is Ph.D candidate on International Collaborative Expert Education Program for Sustainable Agricultural and Rural Development, Division of Appropriate Technology and Sciences for Sustainable Development, Faculty of Life and Environmental Sciences, University of Tsukuba, JAPAN. The studies on rural development such as sustainable agriculture development, econometrics, agricultural economics, institutional economics, applied statistical analytics, and impact evaluation methodology which related to poverty mitigation policy are of her interest. Subsequently, She conducted research about economic evaluation of community-driven development program in her country and accomplished poster presentation award from Agricultural Economics Society of Japan (AESJ) Annual Meeting in 2014 and Ministry of Education, Culture, Sports, Science, and Technology (MEXT) Japan scholarship award in 2011.

Jun FURUYA Ph.D. is a sub-project leader of the JIRCAS (Japan International Research Center for Agricultural Sciences) project "Development of agricultural technologies based on sustainable management of environment and natural resources in developing regions." He is also a section leader of the MAFF (Ministry of Agriculture, Forestry, and Fisheries) project in relation to development of mitigation and adaptation technologies to climate change. His research topics revolves around Development Economics, Agricultural Economics, Development Research, Agriculture and Food Safety Economics, Global Studies, Rural Development, and Economic Modeling. He also teaches both as a lecturer and an academic supervisor in University of Tsukuba, Faculty of Life and Environmental Science, Division of Appropriate Technology and Sciences for Sustainable Development.

144. Innovation as a Key Factors of Small Business Competition

Dr. Monika Sipa

ABSTRACT:

The contemporary world is characterized by quick changes and the propagation of knowledge-based economies, and consequently, the necessity to constantly introduce innovations by the enterprise. However, this process involves numerous dangers, as the features of innovative processes are high costs and high level of risk. While implementing innovations, enterprises set goals which are to be achieved thanks to them. In the case of small entities it seems that the essential aim for the introduction of changes is the reduction of costs connected with the activity, which is often indicated as the factor for the formation of the competitive position. Therefore, the primary goal of the compilation was the identification of changes in the area of determining the aim of innovation introduction by small enterprises functioning in the Southern Region of Poland. The analysis included the level of innovativeness and competitiveness of the examined companies. The conclusions were based on the results of two original studies concerning innovativeness and competitiveness of small enterprises, conducted in years 2006/07 and 2013.

Keywords: small enterprises, competition, competitiveness factor, innovation,

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.

145. The Changes of the Population Structure and its Consequences in Selected EU Countries - Some Aspects

Dr. Andrzej Skibiński

ABSTRACT:

The analysis of the population structure allows to define many of socio - economic consequences. Demographic change (population ageing) in Europe is seen as a challenge for many policy areas: from family policy; through education, lifelong learning and labour market policy; to social protection systems, and pensions, health and long-term care in particular. Although the degree and speed of the population ageing in individual regions of Europe differ substantially, the consequences have an impact on the entire European Union. The article focuses on to the implications of the observed demographic trends for the labour market. Hence, the aim of this publication is to indicate the impact of demographic changes on the size of labour force in the selected UE countries. The quantitative and qualitative analyses were used herein and conducted based on data from Eurostat and the OECD Statistics statistical databases, taking into account demographic projections. Absolute Increases dynamics and indicators (single base and chain ones) were the methods used for time series changes. The temporal scope of the analyses was largely determined by data accessibility.

Keywords: Population ageing, labour market, demographic processes

Dr. Andrzej Skibiński is currently assistant professor in Department of Economics, Investment and Real Estate at Faculty of Management, Czestochowa University of Technology, Czestochowa, Poland.

Andrzej Skibiński scientific interests are in the areas of: demography, labour market, socio-economic policy, age management. He is the author of many publications in the field of economy, demographic changes and labour market. In recent years, he has published on population dynamics and their implications for ageing and the labour force. He is a member of scientific societies such as:

The Polish Economic Society

The Polish Society for Social Policy

146. Bricolage concept in risk culture assessment

Dr. Iwona Gorzeń-Mitka

ABSTRACT:

When faced with challenging conditions in which companies operate today, rapid access to various forms of resource can be a key determinant of organisational resilience on risk. Management of risk is considered to be a powerful instrument for sustainable development in organization. The concept of bricolage offers the potential to better understanding of organisational resourcefulness in a time of disruption. Also 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. The research questions of the study explore the relationship between bricolage and risk management culture. This paper presents some emerging findings from the bricolage analyse in risk management culture practice of polish SMEs from sustainable development perspective. Theoretical considerations is supplemented by a results of the study in Polish SMEs. Additional aim of this study is, at least partially, fill a gap on the bricolage and risk management culture in SMEs. These preliminary findings show that that flexibility of decision making processes, organisational culture combined with bricolage enhance the effectiveness of risk management in SMEs.

Keywords: SMEs sector, bricolage, organizational culture, risk management, sustainable development

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).

147. Assessment of Groundwater Resources for Sustainable Development in an Agricultural Dominated Area - A Case Study

Dr. Gulshan Kumar Sethi, Dr. B. S. Chaudhary,
Dr. Kamal Jain, Dr. Omvir Singh and Dr. Sanjay Goyal

ABSTRACT:

For sustainable development of groundwater its evaluation in terms of availability and demand is to be done in a holistic manner. Various sources that contribute to groundwater in the area are recharge from rainfall, seepage from canals, return recharge from irrigated fields and recharge from the existing ponds and water conservation structures. The availability is to meet the domestic demand, irrigation requirement and industrial usage in district Yamuna Nagar, Haryana of India which is under consideration as water levels are declining at a fast rate in the major part of the study area.

Evapotranspiration method using crop coefficient and pan evaporation is used for calculating the water requirement for each crop in two different seasons, monsoon(kharif) and non monsoon(rabi) for each block of the district. While estimating the gross irrigation water requirement (GIWR) the rainfall component is subtracted from seasonal evapotranspiration to determine the net irrigation water requirement (NIWR). Similarly seasonal requirement for domestic and industrial usage is calculated from population data and industrial consumption data. Nearly 96% of gross groundwater requirement is for irrigation.

Quantification of groundwater recharge from different sources is done for assessment period of five years. Wetted perimeter for estimating seepage from canals is calculated using Lacey relation whereas rainfall infiltration factor (RIF) and water table fluctuation (WTF) methods have been used for calculation of rainfall recharge. Net availability is the compared with net demand and it was found that groundwater development in all the blocks exceeds 100% and distinct is overexploited. Thus there is an urgent need to manage this precious resource on sustainable basis for the times to come. Artificial groundwater recharge is therefore recommended in the study area.

Keywords: Yamuna Nagar, Evapotranspiration, crop coefficient, infiltration factor, return recharge, wetted perimeter, groundwater development,

Dr. G K Sethi is an Associate Professor in MLN College Yamuna Nagar, India for last thirty one years. His area of research is Remote Sensing & GIS applications with special reference to groundwater hydrology, groundwater management and artificial groundwater recharge. He has published six papers in national and international journals and nine in conferences and seminars. He organized International seminar on "ICT in the New Millennium" in collaboration with HumanIT Karlstad University, Sweden & Society for Education and Research Development(SERD) India on March 3,2012 and National Seminar on "Women Empowerment through Education and Technology" on March 30-31, 2014 sponsored by DHE, Haryana, India in his parent institution.

Dr. B S Chaudhary is Professor in Department of Geophysics, Kurukshetra University, Kurukshetra, India. Seven students have completed their PhD thesis under his supervision and has as many as 48

research publications in national and international journals. Remote Sensing & GIS, Hydrology, Electrical Prospecting and groundwater hydrology are his key research fields. Presently he is Registrar in Chaudhary Bansi Lal University, Bhiwani, India.

Dr. Kamal Jain is Professor in Department of civil engineering , IIT Roorkee, India. He got published 95 research papers in Journals of repute and 17 students completed their PhD work under his able guidance. His research interests includes Photogrammetry, Analytical And Digital Photogrammetry, Photogrammetry, Satellite Photogrammetry, Photogrammetry, Close Range Photogrammetry, Mapping, 3D Virtual City, Mapping, Topographical Survey, Engineering Survey, Rail/Road/Canal route alignment and layout, GIS, Web GIS, DSS, KBS, GPS, DGPS, Vehicle Navigation & Tracking.

Dr. Omvir Singh is Professor in Department of Geography, Kurukshetra University, Kurukshetra, India. He has 40 research publications to his credit in national and international journals. He has supervised many students for their MPhil thesis in the department of geography.

Dr. Sanjay Goyal is an Associate Professor in RKSD college Kaithal, India. He has 14 research publications to his credit in national and international journals. His research interest are in GIS, groundwater assessment , groundwater quality, electrical resistivity techniques.

148. Systemic Design for the houses of Ahuacutzingo, Guerrero. Mexico.

Marianna Marozzi

ABSTRACT:

In Mexico, following many years of colonization and public corruption, it is still not possible to find a sustainable development of the rural areas. The situation of local farmers remains very difficult to accept. There are several problems concerning environment, food and waste water. This paper presents a project that shows how the houses and the everyday life are related to the surrounding environment. The project was conducted as part of the collaboration between the Politecnico di Torino and the Mexican organization "Red Mexicanas de Mujeres", having the final purpose of transforming an entire rural village into a systemic village.

The proposal contained in this paper is not a radical change of the present situation. It is a quality change of house daily input and output, especially food, water and energy. It shows also a possible modification of some of the activities inside the house.

The aim is to demonstrate that it is possible to establish a sustainable life for the village, by changing the way of life from the present situation into a systemic approach, where environment, people and all the connected elements are balanced in a holistic view.

Keywords: Systems Thinking, Systemic Design, Environmental Design, Economic Sustainability, Global/Local issues, Rural

Marianna Marozzi is currently living in Maliana, East Timor. She is working as community developer for the local NGO Sols 24/7. She is collaborating with young local people to teach them and to make small projects with them. She joined this program of voluntary service just after her Master graduation in Ecodesign at Politecnico di Torino. During her university career she studied in depth about systemic thinking and a different approach of the way of designing. This course of study is focused to assure the protection of land resources and to eliminate waste as output. Environmental issues have always been the priority in her projects and in her interests.

149. Public-Private Partnership in Prevention of Influenza for the worker of industry the State of Ceará

César Augusto Ribeiro, Ana Vilma, Karine Ana Borges Medeiros ,
Kassandra Maria de Araújo Morais

ABSTRACT:

Influenza is an acute viral infection that affects the respiratory system, with high transmissibility and global distribution, with a tendency to easily spread in seasonal epidemics. Influenza vaccination is one of the most effective measures for the prevention of severe influenza and its complications.

The flu was the main cause of absenteeism in 2015, affecting the productivity of companies and the economy in Brazil. However, it is a great challenge access to vaccination for this audience that is not part of the government's priority group, he can not buy vaccine in the private network and generate absence at work to move to the vaccination posts.

The occurrence of influenza among workers increases the cost the health public. In 2015 a public-private partnership between the Public Health's Secretary and the Industry Social Service in Ceará was established, aiming to lead the national campaign of vaccination against influenza in industries, facilitating the access of workers to the vaccine without increasing the absence of these professionals in office hours. With the partnership, the vaccine within the industry facilitates access of workers and contributes to the improvement in health and reduction the absenteeism related to flu.

Keywords: vaccine, partnership, absenteeism, industrial workers

César Augusto Ribeiro CEO in Industry Social Service – SESI Ceará . Bachelor in Business Administration in the University Anhembi Morumbi. Master of Business Administration (MBA) - Business Management in Ohio University. Master of Business Administration (MBA) - Administration and Finance in Getulio Vargas / FGV.

* Member of the Board of Directors of the SPA - Ceará / Government of the State of Ceará

* Effective Theme Board Member of Innovation and Technology / Federation of Ceará State Industries - FIEC

* Effective Member of the Board of Education Theme / Federation of Ceará State Industries - FIEC

* Permanent Guest in the Thematic Council on Foreign Relations / Federation of Ceará State Industries - FIEC.

Ana Vilma - State Coordinator of immunization of the Government of the State of Ceará. Degree in nursing from the Federal University of Ceará and Pedagogic Education from the State University of Ceará. Public Health Specialist, Management Systems and Local Health.

Karine Ana Borges Medeiros is a nurse, a specialist in Emergency and Emergency Technical Advisor in the National Immunization Program (NIP) of Ceará Health Department.

Kassandra Maria de Araújo Morais Psychologist, consulting expert in business management and administration quality. Health and safety for the industry manager, the Social State of Ceará Industry Service.

150. Developing a Framework for Ranking State and Municipal Governments on Fiscal Sustainability

Davina Kaldani, Dr. Eva Kaye-Zwiebelis, Autumn Carter, Jhanvi Aroskar, Jinhui Liu, Madhusudan Ravi, Kimberly Ang

ABSTRACT:

Fiscally distressed governments tend to draw public attention only amid prominent events like bankruptcy filings, credit downgrades, and serious service cuts. Ideally, before the situation became so severe, the public would be able to quickly assess a government's financial health, both individually and relative to peers.

Recognizing the challenge of consistently assessing governments' fiscal health, we developed a uniquely broad data set and proxy measures of fiscal health. For more than 10,000 state and municipal governments in the United States, we extracted comparable data points from audited annual financial reports (FY 2008-09 to 2013-14). We then calculated a budget balance ratio, an asset flexibility ratio, and a pension funding ratio, which we used to rank governments' relative performance.

Previous work largely focused on state- and country-level comparisons of fiscal condition using limited samples due to restricted data availability and great variability in accuracy, particularly at the municipal level. These limitations restricted comparability across governments over time and geography. However, we successfully compiled a broad, multi-year public finance database that makes comparisons across thousands of American cities, counties, and state governments possible. Furthermore, our high-level framework of analysis illustrates a way to create simple, broadly applicable measures of municipal financial health.

Keywords: government fiscal condition, fiscal solvency, financial ratios, fiscal sustainability, budget balance, asset flexibility, pension funding, public finance, municipal finance

Davina Kaldani is a Research Analyst at United States Common Sense in Mountain View, California, USA. She obtained her MSc in Economics from the University of London, School of Oriental and African Studies (SOAS), U.K. She has a special interest in building knowledge about different challenges that governments face, which makes them unsustainable. Her areas of interest include government finances, labor markets, income inequality, and natural resources. She recently worked on California's income inequality, labor market, and unsustainable water management systems. Her current research focuses on paths to municipal financial insolvency.

Dr. Eva Kaye-Zwiebelis is a Project Manager at the non-partisan non-profit policy group, United States Common Sense in Mountain View, California, USA. She is an independent researcher who studies public goods and institution building. Her previous research examines community-based systems for natural resource management among Kenyan pastoralists and post-conflict police reform in Sierra Leone. She received her PhD in Political Science from Princeton University.

Autumn Carter is the Executive Director of the non-partisan non-profit policy group, United States Common Sense in Mountain View, California, USA. She received her B.A. in Political Science from Stanford University. Her research interests include public finance, governance standards, and financial disclosure.

Jhanvi Aroskar is a Project Coordinator at the non-partisan non-profit policy group, United States Common Sense in Mountain View, California, USA. She received her MBA in Marketing from Gujarat University. Her interest include project and product management, government sustainability, and education.

Jinhui Liu is a Data Processor at United State Common Sense in Mountain View, California, USA and works in public policy research. His main focus is on public pension and governmental debt. After

graduating from University of California, Santa Barbara with a Bachelor Degree in Economics and Accounting in 2013, Jinhui Liu joined United State Common Sense and proved himself a valuable addition to the team with his strong background in account and commitment to achieve. Recent projects he worked on is Govrank.org, a platform offering free public access to the financial data of state and local governments across the U.S.

Madhusudan Ravi is a Programmer Analyst at the non-partisan non-profit policy group, United States Common Sense in Mountain View, California, USA. He received his B.A. in Sociology from the University of Virginia and his P.B.C in Finance and Real Estate from Virginia Commonwealth University. His research interests include economic data and government finance.

Kimberly Ang is the Director of Strategic at the non-partisan non-profit policy group, United States Common Sense in Mountain View, California, USA. Kimberly leads USCS' network of freelance researchers and manages the organizational research agenda. Prior to her role as Director, Kimberly was a researcher with USCS, penning articles on California school finance system, income inequality, and teacher tenure. She studied statistics and public policy as a graduate fellow at the University of Chicago (MAPSS 2013) and graduated magna cum laude from the University of California, San Diego (BA 2011).

151. The Promotion of Psychological well-being of Students in School and the Integration of Family and Community

Dr. Enkeleda Stefa

ABSTRACT:

This paper highlights the role that school, family and society play in the improvement of educational programs aiming the well-being and good health of children.

These factors have a key role to support the formation of children in their personal development and to seek positive and constructive values of living together. The family is a microcosm where children initially create affective ties and interactions. It is a step before the external macrocosm. It is a source of information, it is the model for a wider structure. It is the basic connection with the outside world. The school is a place where children spend a considerable part of their time and get knowledge and learn to know themselves and those around them. The society plays a decisive role, as the acceptance and integration in it contributes to their positive emotions and confidence to fulfill themselves. The relationship between the individual and the environment activates the cognitive processes and continuous assessment of the reality, which are attached to different forms of adaptation.

Health and well-being are therefore the result of human interaction that has certain biological particularity with his environment, in a social context that enables the activation and enhancement of individual competencies.

Keywords: Well-being, children, family, school, society

Enkeleda Stefa is a teacher of Italian Language of High School in Tirana, Albania. She is doing PH.D in Pedagogy at the European University of Tirana, Albania. She is investigating on well-being of children and adolescents at school and the role that school, family and society play in improving educational programs aiming the wellbeing and a good health of children and adolescents. She is interested in identifying the different conceptions of the psychological well-being of children and adolescents in schools and its promotion and also if it impacts on a training and education to their best.

152. Applicability of Environmental Landscape Diagnostic Methodologies Based on GIS

Dr. Enrique Valero, Dr. Juan Picos, Dr. Xana Álvarez, Fran Abilleira

ABSTRACT:

This work has shown that using a methodology that considers complex variables such as Visual Fragility and Visual Quality, gives the possibility to establish a zoning including the landscape factor in spatial planning processes. In addition, it has shown that it is possible to adapt this general methodology to the specific circumstances of the area. The proposed model allowed its application in large, mid-scale or even in particular cases by the modification of the scale at which the source variables are obtained. For the three areas of study, there have been simulated 600 points of view including a population of 152,500 fixed observers and a million of mobile observers, systematically reinforced by 300 viewshed of densification. The calculation of Visual Fragility Acquired by superimposing a large number of viewshed reduced the subjectivity and provided a great consistency to the results. With the consistent and comparable results in three areas, taking into account their differences in topography, morphology, land use and population pressure, indicated that the model could be applied in almost all the coastal area of Galicia.

Keywords: geographic information systems, landscape planning, infrastructures effects

Enrique Valero is Professor and Director of Forestry School, University of Vigo. Head of AF-4 Research Group where we investigate on environmental monitoring of the water status and assess environmental impact: field sampling and study of the physicochemical parameters of the water, noise studies, habitat assessment in rivers, improvement of riparian forests, assessment of small hydropower plants, etc.

Juan Picos is Professor at University of Vigo (Forestry Engineering), Department of Natural Resources and Environment Engineering. Member of AF4- Research Group.

Xana Álvarez is Professor at University of Vigo (Forestry Engineering), Department of Natural Resources and Environment Engineering. Member of AF4- Research Group.

Fran Abilleira is a Student of Forestry Engineering at University of Vigo.

153. Binding International Standards to be Implemented, *jus cogens*.

PhDc. Erjona Ramaj

ABSTRACT:

Article 53 of the Vienna Convention of 1969 states that a treaty is considered invalid if it is in conflict with existing norms of *jus cogens*, and under Article 64 of the treaty becomes invalid if it conflicts with a norm youngest of the same nature. The case Nicaragua against the United States made clear that the notion of *jus cogens* is steadily entrenched in international law, however, is still necessary to determine accurately that power rates referred to in Articles 53 and 64 of the Vienna Convention.

Jus cogens norms include more those norms relating to morality or natural law than with traditional positivist rates derived from State practice.

In general, this includes making aggressive war, crimes against humanity, war crimes, sea piracy, genocide, apartheid, slavery, and torture.

Jus cogens norms are norms of customary international law which are so important, it can not be changed through treaties.

Under the Vienna Convention on the Law of Treaties, any treaty that is contrary to *jus cogens* norms is invalid.

Jus cogens norms are not listed, there is no catalog, their determined by any authoritative body, but these rates come from judicial practices and political and social attitudes, which are not values static.

Jus cogens norm of unconditional right international, accepted and recognized by the international community norm from which no deviation is permitted.

Unlike the common law, which traditionally requires the consent and

It lets change obligations between states through treaties, norms *jus cogens* can not be violated by any state "through treaties international or local regulations or special customary, or even through general rules of customary not have the same normative force.

Keywords: Key words: *jus cogens, binding international norms, Vienna Convention, customary international law, international treaties.*

Erjona Ramaj is a PhD student at the European University of Tirana. She graduated in Law at the University of Tirana, Faculty of Law in 2009. She completed a Master in 2010 at the European University of Tirana. She has a the Licence for Lawyer. She has done some different trainings in the field of justice, and precisely in the field of mediation.

154. Pillars Of Social And Economic Development 21 Century (Knowledge Based Economy-Human Capital)

Assoc. Prof. Dr. Fazil Yozgat

ABSTRACT:

In this study had been investigated from cognitive ability to economic development in Turkey. Turkey has young population, and developing country. It has candidate member of European Union. It has member of OECD. This means that I compared with OECD countries Pisa examination. I used to EURESTATs data EU countries. The main objectives of this study are to compare developing and developed countries population and education system for economic and social development.

There are several papers and research human capital and economic development. We should be investigating multidisciplinary approach. Because it is differ from social, cultural, economic and political level.

In this study welfare level and GDP is dependent variable. Enrollment, student, education programs, population, employment, IQ tests and Pisa scores are independent variables. There is positive correlation individual and cognitive skill to human and social capital. But there is cultural and social effect for measurement. I find that high average scores are strongly associated with increases in school enrollments and large reductions in the unemployment.

I used official statistical data fort this paper. United Nations, OECD, EURESTAT, and World Banks data had been used .Classical method and programs are insufficient for in the World. Globalization, unemployment and for job ability requires new paradigm. I investigated and compared with these subjects.

, "21st century skills", "career readiness", "next generation learning", "new basic skills", "higher order learning " requires new program paradigm for Turkey.

Keywords: Knowledge based economy, Social capital measurement, Economic development,

Assoc. Prof. Dr. Fazil YOZGAT,he was born 1958 in Turkey. He graduated, Ankara University, Faculty of Educational Sciences: 1981 (Undergraduate) Anadolu University Faculty of Economics, (second university)Gazi University, Institute of Social Sciences: 1990 (Bachelor degree) İstanbul University Institute of Social Sciences: 1995(PhD)

Work experience: Research Assistant Ataturk University,:1985-1995 Asist.Prof.Dr. Cumhuriyet University: 1995-2012 .He is working as lecture Assoc. Prof.Dr. Cumhuriyet University: his interest area are political economy, social structure.

155. Sustainable Urban Public Squares

Homa Javadi

ABSTRACT:

Urban public spaces have had a prominent role in social and economic life of people. Among different types of urban public spaces, square has always played a central role through the history of urbanity and urban life. Square is a mixed-use and multi-dimensional environment, where all kinds of activities including social, political, religious, environmental, economical, etc. are taken place there. A place designed for all people from different social levels and incomes. Accordingly, to understand how a square could serve urban life efficiently and improve the quality of urban life, the concept of sustainable squares should be considered. As it is clear, sustainability deals with society, environment, and economy. Therefore, when the term of sustainability is merged with urban squares, it is necessary to investigate how an urban square could be sustainable and serve the sustainability of urban communities. To do so, in this study through seminal literature the concept of urban public square and the principals of its designing are defined. Then, the indicators making an urban square environmentally, socially, and economically sustainable are determined.

Keywords: Urban Public Square, Sustainability, Physical Environment, Society, Economy

Homa Javadi holds the degree of Master of Architecture, graduated from Eastern Mediterranean University, in North Cyprus, 2015. She is a researcher in the field of theory of architecture, with a special experience related to relation of tourism and architecture, hospitality, and tourist satisfaction. Her research interest are sustainable development, urban studies, theory of architecture, tourism, and the relation between tourist satisfaction and historical urban zones. She has offered two papers, one related to Tourism in TOURAVEL'15 Conference regarding to architecture and tourism studies, and another to CPUD'16 Conference related to strategic planning and sustainable development in urban societies.

156. An alternative perspective to “the Owenite Movement” window to sustainable cities: Neighbourhood Cooperatives”

Dr. I. Bakir Kanli

ABSTRACT:

The struggle for sustaining existence and environment of humans is as old as humanity. Capitalism has accelerated problems relating to sustainability. Many scholars have endeavoured to address these problems by purposing an alternative social order.

Robert Owen is one of these scholars. He shares that the clues for reaching sustainable communities could be achieved by advocating a cooperative-oriented life style. Even though his idea of villages of cooperation became an intellectual phenomenon this theoretical phenomenon of the Owenite Movement, proved a practical failure due to several inaccuracies.

In this paper, developments of the cooperative system concepts, the Owen’s point of view and his implementations are analysed. Through the analyses the new term of “Neighbourhood Cooperatives”, which may play a key role in fulfilling the basic services of local community, is proposed. The term is considered as a strategic tool embracing entirely the components of sustainability. These components include social, economic, environmental and governance which are also seen as a building blocks leading to sustainable cities. The paper also deals with the scope of neighbourhood cooperatives, its functions and services, and their positions at a management level. And in the final section particular inferences will be made regarding possible benefits such as social, cultural, economic and governance.

Keywords: Sustainability, Neighbourhood, Cooperative, Owenitemovement, Neighbourhood Cooperatives

Dr. I. BakirKanli is an Assistant Professor in the Faculty of Political Science, Department of Public Administration at Marmara University in Istanbul. He received his Bachelor’s Degree in Urban and Regional Planning Department from Yildiz Technical University, Istanbul in 1991. In 1994 he completed his MBA Programme in the same university. After that he received his PhD degree in the field of Regional Planning from Istanbul Technical University in 2004. Kanli, who worked in the private sector for more than twenty years, at the same time, took part in an international project named “Local Agenda 21 in Turkey” as Secretary General of Sakarya Province supported by UNDP and IULA-EMME. His academic research interests focus on sustainability, cooperatives, neighborhoods and urban studies including urban identity and local governments.

157. The Peace, Love, Harmony and Perfection are Basis Components of Holistic Sustainable Development the Nation and Civilization

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

ABSTRACT:

Nikolai Suvorov book "Man of the Future. Aristos Anthropos - The perfect man" was published by International publishing E.RA, Moscow - Israel in 2014 year. In the book developed basis for the formation of a perfect man - a man of the future, as an holistic energy-information essence.

The main result of the book: scientifically formulated and quantified the category of quality and perfection.

In this scientific work the book is presented in the form of three essays: Essay of the Peace, Essay of the Love, and Essay of the Harmony-perfection. The collection of three essays it is 150 of short and capacious statements.

We believe that the presentation of the book in the form of three essays: Peace, Love, Harmony-perfection will help to better understand the essence and image of the Man of the Future - Perfect man.

The perfect man can and must become a reality, because the received scientific criteria of perfection - it is harmony.

Harmony will help transform the Homo sapiens into the new man of the perfect man - Aristos Anthropos.

Keywords: Peace, love, harmony, perfection, the perfect man

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.

Prof. Dr. Iryna Suvorova is Leading Scientific Researcher of the Department for Nonconventional Energy Technologies. 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.

An authority in the field of mathematical and computer modeling.

158. Governance for Sustainable Development

Dr. Ruxandra Malina, Dr. Dacinia Crina Petrescu

ABSTRACT:

The paper investigates which are the consequences of the current participation of the national courts and of the Court of Justice of the European Union in setting sustainable trends for consumer policy, based on preliminary ruling procedure analysis. A study on governance for sustainable development - consumer protection is of paramount importance since the consumer protection represents a central EU policy, which has already become transversal. In the history of European Union (EU) consumer policy, the Court of Justice of the European Union through its case law has played a crucial role in establishing the legitimacy of consumer protection measures at EU level. The focus of the analysis is based on the fact that an effective consumer protection framework relays on the uniform application and control of law. The main research objective was to reveal the image of the EU consumer law application and interpretation process according to the variables that best characterized it - procedure type, matter of the cases, duration of finalized procedure, country - focusing on short to medium timeframe (01.01.2010-31.12.2015). The study reveals the importance of the preliminary ruling procedure, which can be understood as national courts proactive measure to define or clarify issues related to consumers. The authors argued that sustainability should be viewed as a socially instituted process of adaptive change in which the legal dimension is a necessary element, as long as knowledge and understanding of the law is a cornerstone of social cohesion.

Keywords: sustainability; governance; consumer; law; Court of Justice of the European Union; preliminary ruling

Ruxandra Malina Petrescu-Mag is Assistant Prof., PhD and senior researcher at Babes-Bolyai University, Faculty of Environmental Science and Engineering, Cluj-Napoca, Romania and PhD supervisor at University of Liège, Agro-Bio Tech Gembloux, Belgium. She is specialist in environmental law, agricultural and environmental policies, author and coauthor of more than 8 books, 40 scientific articles and coordinator or member in over 10 research projects.

Dacinia Crina Petrescu is Associate Prof., PhD at Babes-Bolyai University, Faculty of Business, Cluj-Napoca, Romania and. She is specialist in consumer behavior, negotiations and sustainable development, author and coauthor of more than 9 books, 60 scientific articles and coordinator or member in over 7 research projects.

159. A CGE Analysis of the Economic Impact of Trade Liberalisation on the Algerian Economy

Dr. Mohammed TOUITOU

ABSTRACT:

The principal focus of the study is to show the nature and extent of the incentives trade policy liberalisation could provide on the way to further boost the economy of Algeria. It also tries to find out what the economic position would be, should the trade regime be more or fully liberalisation by reducing or elimination the existing tariff. In this study, different types of external price shocks are also considered in order to test the response of the economy.

Model results indicate that by reducing tariffs, domestic output increase in almost all the sectors but government revenue and saving decline significantly. Government revenue fall due to the reduction/elimination of tariff could be compensated by reducing net subsidies to the corporate sector and also by increasing income tax in a progressive way. Exports also increase showing the justification of the liberalisation and also supporting the argument that tariffs bias exports. But the increase in total import is bigger than the increase in exports which causes a deterioration of the real balance of trade, but the elimination of tariff increase private consumption and total absorption.

Export price shocks in petroleum sectors show a fall in domestic output and consequently a fall in value added and total employment. Domestic terms of trade of exports deteriorate and exports fall. This also causes a fall in GDP, private consumption and total absorption. The government revenue declines and budget deficits worsen. A 10 percent devaluation in the real exchange rate shows a fall in domestic output in aggregate agriculture and service whereas an increase in output in industry. GDP at factor cost also falls simultaneously with a fall in total absorption and private consumption. Devaluation pushes up exports in the majority of the sectors and brings down import in some sectors only.

Keywords: External Shocks, trade policies, Algerian Economy, Computable General Equilibrium Model

Dr. TOUITOU Mohammed is Associate Professor at Faculty of Economics, University of Algiers 3, Algeria. Member of Economics and Tourism Research Group where investigates on development of tourism and sustainable economic development in Algeria and its impacts.

160. Anthropogenic Effects of Cement Production on Soil Ecosystem of Western Forest Steppe of Ukraine

Dr. Oksana Iziyomova

ABSTRACT:

Purpose. To study the changes in the properties of podzolic black soil, the formation of ground modes for practical measures to full implementation of the soil ecosystem functions in the conditions of anthropogenic impact of cement production.

Methodology. The methodological basis of research was the concept of environmental monitoring. In the field studies, the methods of comparative analogy with regional control were used. The laboratory tests were conducted in accordance with generally accepted in soil science certified and standardized methods.

Results. It is established that continued accumulation of techno genesis products in soil at a distance of 20 km from the sources of its release leads to disruption of balanced intra-system evolutionary relationships in the formation of the chemical, physical, chemical-physical and biological components of soil ecosystems.

Conclusions and Implications. This suggested a zonal division of territories by the condition of soil with a determination of areas for eco-safe land use. The results of work might be used for justification of technological solutions with regulation of elements of fertility of soils in case of agricultural use of polluted areas; also for maintenance of ecological certification of companies for production of cement and planning industrial zones of urban territories.

Keywords: cementproduction, podzolic black soil, soil absorbing complex, acidity, nutrients, humus, Azotobacter.

Dr. Oksana Iziyomova is Associate Professor in the Department of Ecology at the Zhytomyr State Technological University, Ukraine. She obtained her PhD from the National Scientific Centre "Institute of Agriculture of the National Academy of Agricultural Sciences of Ukraine". Her research focused on the investigation of soils that are polluted by the wastes of cement production and contributed greatly to the understanding of consequences of environmental pollution for chemical, physical and biological compounds of soil ecosystem. Her current research project investigates changed soil status for reclaimed areas after surface mining. She published numerous articles on soil pollution in anthropogenic impact conditions.

161. The policies of Bank of Albania for Providing Financial Stability.

Dr. Orkida Ilollari

ABSTRACT:

This study is an attempt to look onto the hypothesis, forecasts and questions that are now at the center of the economic world debates on ensuring financial stability.

The purpose of this study is to give a contribution in improving the use of the macroprudential instruments and the real impact they have on the economy. This study aims to collect and analyse data in assessing the performance of the macroprudential instruments, to create institutional regulations in regards to monetary policy and to make a prediction about the right moment when these instruments should be activated. It may be possible that crises are less costly for the economy and achieve the financial stability. These macroprudential instruments, adapted according the characteristics of each country, may be able to utilise all the appropriate means to contain the systemic risk.

The main focus of this study is to analyse the monetary policies and the macroprudential instruments used by central banks as the supervisory authorities in ensuring financial stability.

The macroprudential instruments include the inherited requests and the accumulation of the capital in the perspective of the provisions of liquidity indicators and the prudential assessment of the collateral.

Keywords: Macroprudential instruments; Financial stability; Institutional regulations; Non-conventional monetary.

Dr. Orkida Ilollari is the current Masters' Program Director at the European University of Tirana. In addition, Orkida lectures on several finance-related subjects at the bachelor's and master's degree in the University. Before joining the European University of Tirana, Orkida had a long career in the banking sector. She held several positions in the retail department, finance department and, most recently, she was manager of the mortgage products development division at Raiffeisen, the largest bank in Albania. Orkida graduated in Finance at the University of Tirana. She holds a Master's degree in Business Management and she recently obtained a PhD for her thesis on "The policies of Bank of Albania for providing financial stability. The role and the effects of the macroprudential instruments -2006 - 2014". Orkida is fluent in Albanian, Italian and English.

162. Sustainable Management and Strategy in the Future for Port of Vlora.

PhD Shkëlqim Sinanaj

ABSTRACT:

Maritime port of Vlora is the largest port in the south of Albania. Sustainable management not only creates marine leisure routes, but it facilitates the efficient logistics operations and is an active partner to the industry. Development and operation of public port facilities, construction and rental of storage data, terminal and storage area should be the priority of the port administration building. Vlora port must be a multi-purpose port and conceived as a marine leisure area. Increasing demands and responsibilities of the board on the port helps make proper decisions for bringing new customers to the business. Professional boards should be focusing on commercial development and customers, establishing long-term goals as a safe business area for the future. Future strategy should aim to be an active contributor port processes affecting the overall framework of regional and national level, providing better infrastructure and a safe port. The objective of the paper is that the alternative models aimed at the port of the development to create a sustainable economic development of it's membership, through the transformation of port space, construction quays and model Commerce.

Keywords: Port, free terminal area, coastal areas, port management.

PhD. Shkëlqim Sinanaj is a full-time professor at the University of Vlora "Ismail Qemali", and the Head of Department of Nautical Sciences, specialised in port management, protection of coastal areas and maritime transport. He has attained the grade PhD in Environment, Thesis "Different environmental impacts and protection of coastal areas". He also, attained Certificate "Instructor Operational Training" for Navigational Simulator NTPro 500(ECDIS), Certificate "Training course for Trainers", Certificate Train the Trainers "Liquid Cargo Handling Simulator" LCHS 5000.

163. Visions for Urban Landscape Sustainability, Past, Present and Future

Assoc/Researcher Dina Salem

ABSTRACT:

Sustainable landscape is widely understood as a key contributor to urban sustainability for the fact that all landscapes has a social, economic, cultural and ecological function for the community's well-being and quality of life. This paper briefly reviews the concepts of landscape planning and its role in creating urban quality even before sustainability oriented developments; Sustainable development and the changes in its interpretation as well as visions for landscape sustainability are demonstrated, defined and classified. Challenges facing sustainable landscape planning are discussed. Finally, the paper discusses how our future urban open spaces could be sustainable and how does this contribute to urban sustainability pillars.

Keywords: Sustainable urban landscape, socio-ecological sustainability, green infrastructure

Dina Salem is an associate researcher at Housing and Building Research Center and a LEED accredited professional with neighborhood specialty, investigates sustainable development visions and sustainability assessment specially urban landscape sustainability as a key contributor to sustainable development.

164. A question of time: Relations Between Age and Business Negotiations

Dr. Julianna Nádai , Dr. Anna Garai

ABSTRACT:

Our paper aims to find answers to the question how much business success negotiation success is determined by the business partners age and the amount of time spent in various fields of economy.

In the 21st century it seems to be a global phenomenon that business negotiators' ages tend to decrease due to the digitalization of business processes. In Central Eastern Europe this move is likely to be accelerated in the past 15 years. This paper presents parts of a research into the role of the effect of age versus business experience. Generation gaps between Hungarian business partners is obvious as they have developed different corporate behavior styles. Thus, the factors age and generation are dominant in negotiations between two nations as differences in cultures also make negotiation situations more subtle. In our research we introduced age-related dichotomies which provide a theoretical framework for research can focus on practical results in a well-defined system, by taking existing models into account as well. In our paper we describe generation dependent business behavior in terms of Hungarian – German relations.

Keywords: dichotomies, age, business behavior, models, Central Eastern Europe

Dr PhD Julianna Nádai, Assistant Professor at Széchenyi István University, Faculty of Economics, Department of International 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.

Dr PhD Anna Garai, Széchenyi István University, Győr, Hungary. Associate Professor at Széchenyi István University, Faculty of Economics, at the Department of International 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.

165. Building Sustainable Creativity: A Conceptual Framework

Dr. Pedro Carmona

ABSTRACT:

Climate change, limited energy resources and population growth raise questions about sustainability and decisions for future generations. There is a need to contribute to a more sustainable world. This can be achieved with the use of creativity in, for example, product lifecycle management. Built on the literature about creativity and sustainability, a conceptual framework of sustainable creativity is proposed on the integration of the fields. The proposed framework is an attempt to the creation of sustainable concepts and includes the domains of “decomposition” and “integration” where the problem-, idea-, and concept-space are built on. Feedback loops are analysed and discussed as an important part of any radical/incremental product/service development within lifecycle management activities.

Keywords: Climate change, sustainability, product lifecycle, population growth

Dr. Pedro Carmona is Assistant Professor of Universidade Lusófona and Adjunct Professor at ISEL (Lisbon, Portugal) in industrial/mechanical engineering courses. Investigates on creativity, product service systems, and sustainability. Currently reviewer of the journal of cleaner production.

166. Stereotypes: An obstacle or trigger to business success?

Dr. Julianna Nádai

ABSTRACT:

The present paper focuses on the role of existing stereotypes in business negotiation processes. How can stereotypes help or prevent us from successfully negotiating between two nations?

Stereotypes are a core research topic when dealing with business relations and corporate behavior. I will give an overview of how much stereotypical way of thinking can motivate businesspeople to find business partners in other countries and how much they are a barrier in launching deals. Stereotypes are claimed to be mostly negative but most of them are based without any experience while others are constructed as a result of direct interactions. In the paper I am describing decision mechanisms derived from stereotypical knowledge of the business partners. And next, I will focus on the decisions made on various elements in a business process like attitudes to information gained from the partner, payment system or selecting partners, which are influenced by existing stereotypes of each negotiator. The paper also reveals how shared values of different cultures can lead to successful or failed negotiations in terms of Hungarian and Austrian business relations.

Keywords: Stereotypes, negotiations, cultures, success, attitude

Dr PhD Julianna Nádai, Assistant Professor at Széchenyi István University, Faculty of Economics, Department of International 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.

167. The Impact of Credit Risk Management in the Profitability of Commercial Banks During The Period 2005-2015 in Albania”.

Dr. Sokol Ndoka, Manjola Islam

ABSTRACT:

Albanian Financial institutions face difficulties for a multitude of reasons but the major cause of Albanian banking problems are related to the credit risk. For the Albanian banks, loans are the largest source of credit risk as they are not active in trading derivatives. Banks objective is to manage credit risk in order to prevent losses and to maximize its profitability.

The main purpose of this research is to study if it exist a relationship between Credit risk management and profitability of commercial banks in Albania. The main indicators used in this study are Return on Equity, Return on Assets, Non-performing Loans Ratio and Capital Adequacy Ratio. The research collects data from the 16 banks operating in the Albanian Banking system from 2005 to 2015. Statistical test are performed in order to test the relationship between the four indicators and the profitability of commercial banks in Albania. This study provides a contribution within the identification of credit risk factors that affect more the profitability of the Albania Banks and the finding of a scientific solution in order to manage the credit risk in a more efficient way.

Key Words: Profitability, Capital Adequacy, Return on Assets, Return on Equity, Credit risk management, Non-performing Loans Ratio

PhD (c). SokolNdoka is Assistant Lecturer at European University of Tirana, Albania since February 2015 and he is also PhD (c) in this university. He teaches Financial Accounting and Management and cost accounting.

MSc. ManjolaIslami is Assistant Lecturer at European University of Tirana, Albania since September 2015. She teaches Money and Banking, Financial Markets and Basic Finance.

168. Raising Awareness of Gender-Based on Heaven Earth

Cresentia Nila Rahayu

ABSTRACT:

Being named as a heaven earth, Indonesia is known for its enriched natural resources. The Westerners believe Indonesia is the superpower country in South Asia. Yet it does not make Indonesia to be the safest place on earth for women. As recorded by The National Commission on Violence Against Women in the 2015 there were 321.752 cases of violence against women - around 881 cases every day. The 305.535 cases were obtained from the religious court data and the 16.217 cases were reported from other NGOs. According to their observations, the rate of violence against women increased by 9% from the previous year. It assesses Indonesia to be a state of sexual violence emergency. Meanwhile, the Indonesian government seeks to aggravate the punishment for perpetrators to increase the maximum period of imprisonment for 20 years and provide additional punishment in the form of chemical castration, chip mounting, and the publication of the identity of the perpetrators. On the other hand, The National Commission on Violence Against Women's demands are to strengthen Indonesian law implementation first before others. This research is about to seek what best resolution could be obtained from the dispute while analyzing the case from the view of feminism.

Keywords: Policy, Gender, Violence, Sexual, Punishment, Government, Feminism.

Cresentia Nila Rahayu is a post-graduate student of Gadjah Mada University of Yogyakarta, Indonesia. She takes a special program of International Relations namely Global Humanitarian Diplomacy and her passion is in sosio-cultural issue and sustainability including refugees and gender.

169. The Nexus Between Microfinance and Sustainable Development: Examining The Regulatory Changes Needed For It's Efficient Implementation

Apoorva Ramaswamy, Aditya Krishnamoorthy

ABSTRACT:

Micro-Finance as a concept has been largely hit or miss in it's implementation. While Mohammed Yousuf helped launch the concept into the mainstream in the early 2000's, the use of Microfinance as a means of achieving Sustainable Development has gained traction only in recent years.

The aim of this paper is to analyze the regulatory changes which are required in order to ensure that Microfinance Institutions function efficiently, in order to contribute to Sustainable Development in India.

Through the course of this paper, the authors will examine a variety of Microfinance models in order, to comprehend their impact on Sustainable Development.

For this purpose, the authors will conduct quantitative and qualitative analysis of various stakeholders in the field of Microfinance and examine a number of successful Microfinance models from other developing nations, to assess the various challenges and issues faced by these institutions. Through the outcome of this analysis, the authors will seek to understand the regulatory status quo & the lacunae prevailing in the law and will thereby seek to arrive at solutions, in order to successfully implement Microfinance as a means to Sustainable Development in India.

Keywords: Microfinance, Sustainable, Development, Regulation, India, Qualitative, Stakeholder

Miss. Apoorva Ramaswamy is a fourth year student at the Hidayatullah National University where she is pursuing a BA. LL.B degree with a double honours in Trade and Investment and Intellectual Property Rights. Her areas of interest include environmental rights, socio-economic justice, land rights. She has interned for short stints at the Center for Social Justice, CEERA National Law School Bangalore, Economic and Political Weekly. She has worked on a project on analysis of Supreme Court Judgments on land acquisition, by the Land Rights Initiative at the Center for Policy Research, Delhi.

Mr. Aditya Krishnamoorthy is a 4th year Student at the Hidayatullah National Law University Raipur, where he is currently pursuing his BA. LLB (Hons.) Degree, while majoring in Corporate Laws and Trade & Investment. His areas of interest includes Prive Equity & Venture Capital, Corporate Finance, General Finance & Investment Law. His Internships are varied and include large financial institutions such as KPMG & Sundaram Finance, MNC's such as the Walt Disney Company, Top Tier Law firms in India, as well as a stint with the Advocate General, among others.

170. Entropy and sustainability in a neighborhood in Bogota, Colombia

Prof Mauricio Vinasco

Abstract:

An analysis is made on sustainability from a thermodynamic and entropic points of view. An initial theorist approach was made. Then based on a couple of indicators, an experimental analysis with relation on the degree of sustainability was made on a block in Bogota and in a small village constructed by 20 persons, one hour from the big city. Firstly the idea was to measure how far from an internal equilibrium and with respect with the surrounding is a community in many fields, i.e., how far from a sustainable situation. The factors observed where the ecological – energetic, the social – economic, the social – political and in the urbanistic points of views. In each one of the previous fields, the population showed some signs of resilience. After this a proposal on what should be modified on the block or in the village is presented to the people in order to make real a sustainable situation or almost to approximate to it.

Keywords: Urban Sustainability, Sustainability measurable parameters, public policies

Prof. Mauricio Vinasco is associate professor in the Basic Sciences department at Universidad de La Salle in Bogota, Colombia. Actually interested in urban sustainability, clean energy sources. Interested as well in other fields as astronomy and radio astronomy.

171. Political Determinants of National Environmental Performance in the European Union

Dr. Constantin-Marius Apostoae, Dr. Alexandru Maxim

Abstract:

As environmental degradation still occurs around the world, with significant and sometimes irreversible consequences on current and future generations, the society looks towards the public sphere for solutions to improve the quality of the environment. The extent to which certain political elements affect the quality of the environment and contribute to the differences in national environmental performances is not well known which makes it necessary to look into. Therefore, the aim is to identify those elements of political nature which tend to affect in some manner, in the sense of boosting or inhibiting, the environmental performance of a country. The main research method consists of an OLS regression analysis (with standard errors) where the dependent variable is the Environmental Performance Index, chosen for its ability to best capture the “environmental sustainability” concept (rather than its specific components). The explanatory variables were selected to best gauge the political landscape and are drawn from the Manifesto Project Dataset. The findings reveal the direction and strength of the political determinant factors on a country’s environmental performance. Such an innovative research endeavour promises to offer valuable insights given the role that political parties play in the decision making process as representatives of peoples’ interests.

Keywords: environmental sustainability, environmental policy, environmental performance, political parties, electoral manifestos, European Union

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Dr. Alexandru Maxim is a Researcher at the CERNESIM Environmental Research Center, Alexandru Ioan Cuza University of Iași, Romania. He is the director of a research grant entitled –The energy security of the European Union in the new political, technological and commercial context (UAIC Grant for Young Researchers competition GI-2015-15). He has been involved in the management and implementation of 5 projects focused on ecosystem services, energy and environmental policies and economic development (Horizon 2020, COST etc.). He also has several years of practical experience in the strategic assessment of the energy sector (working for GE Energy Europe). Dr. Maxim has a PhD in Marketing (Summa cum Laude rating) during which he analysed household consumers’ preferences regarding renewable energy. His current research interests include: sustainable development, public goods, EU socioeconomic and environmental policies and energy markets.

172. Analysis of International Trade Relations between Malaysia and BRICS countries

Dr. Irwan Shah Zainal Abidin, Muhammad Haseeb, Dr. Lee Wen Chiat

Abstract:

The main objective of this study is to explore the long-run and short-run relationship between trade and other macroeconomic variables of Malaysian and the BRICS countries. To test relationship between trade and other macroeconomic variables, the empirical investigation will be conducted based on the dynamic ordinary least square (DOLS) and fully modify ordinary least square (FMOLS) model for the period 1980 - 2015. Results of both DOLS and FMOLS shows that out of all the variables included in the model distance between Malaysia and BRICS countries and corruption of both side have negative effect on bilateral trade between them. Whereas, GDP, GDP per capita and trade to GDP ratio are positively contribute in the bilateral trade. However, inflation and exchange rate of Malaysia and BRICS countries not have any effect on the bilateral trade between Malaysia and BRICS countries. The findings suggest that economic strengthening as the basis for increase in trade between Malaysia and BRICS members. Investment appears to be complementary to the trading relations in the Malaysia-BRICS case. The social capital also plays role in supporting the trade.

Keywords: Malaysia, BRICS, International Trade

Dr. Irwan Shah Zainal Abidin is a Senior Lecturer at the Department of Economics and Agribusiness, School of Economics, Finance & Banking, College of Business at Universiti Utara Malaysia (UUM). His research interest is in economics, specializing in International Trade, Development Economics, Malaysian Economy, Malaysia-OIC Trade, and Political Economy.

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Dr. Lee Wen Chiat, School of Economics, Finance and Banking (SEFB), College of Business (COB), Universiti Utara Malaysia (UUM), Sintok 06010 Kedah, Malaysia

173. Resident attitudes towards tourists and tourism growth: A case study from the Middle East, Dubai in United Arab Emirates

Dr. Esmat Zaidan

Abstract:

The rapid development of tourism worldwide is giving rise to many anxieties about the actual as well as potentially negative consequences of tourism on host societies. However, despite such concerns, much of the academic research on tourism remains grounded in economic analysis with far less attention being paid to assessing the socio-cultural impacts of tourism, whether real or perceived. The neglect in this regard is particularly acute when it comes to research on the rapidly expanding tourism industry in the United Arab Emirates. This paper addresses this research gap by way of examining resident perceptions of tourism in the City of Dubai. In particular, this study, which was based on responses gathered from over 400 Emirati citizens, explores local attitudes to further tourism growth as well as resident perceptions of the cultural, economic, and behavioural similarities and differences of tourists and themselves. The general findings are then situated within a conceptual framework (Irridex model) designed to show the varying levels of tolerance of a host population to changes in tourist numbers.

Keywords: Tourism, social carrying capacity, resident perceptions, survey, Dubai

Dr. Esmat Zaidan works as an Assistant Professor in Policy, Planning, and Development at the Department of International Affairs in the College of Arts and Science. Before joining Qatar University, she was working as an Assistant Professor in Urban Planning in the United Arab Emirates University in UAE. Dr. Esmat received her PhD degree from University of Waterloo in Canada in 2011 in Geography and Environmental Management. She holds two master degrees, a Master of Economic Development from University of Waterloo and a Master of Urban Planning from Birzeit University in Palestine. Her bachelor degree is in Civil Engineering. Dr. Esmat was teaching at University of Waterloo since she was a PhD student. Before she relocated in Canada, Dr. Esmat worked in Palestine with International Development Agencies such as The World Bank (WB) and the European Committee (EC) as an Urban Planner and Infrastructure Development Engineer for more than nine years. Her research interests focus on sustainable urban planning and development, more specifically on tourism planning and development and sustainable transportation planning using Geographic Information Systems (GIS).

174. Rethinking the role of business to drive sustainable development

Mr. Abiodun Dominic Odunuga

Abstract:

The global discourse has resonated with the reality that the achievement of the Sustainable Development Goals (SDGs) will also be hinged on the roles of businesses and the private sector. This idea was reinforced at the Third International Conference on Financing for Development which held in Addis Ababa in 2015. This is imperative if we must achieve the ambitious vision to end Global Poverty by 2030 as expressed through the SDGs.

Progress has been made over the past few years with the integration of the private sector as a development driver in achieving the development goals. Nevertheless, there is a dire need to engage in alternative pathways at various levels to help realize our global objectives faster and more effectively. This paper seeks to elaborate on the discourse of leveraging new business models to achieve the SDGs by expanding the horizons associated with practices such as frugal innovation in Europe and social entrepreneurship across the world.

Results based findings and concrete evidences across sectors will be used to provide insights into how stakeholders can begin to re-think the value addition and enormous potential embedded in new business frameworks to achieve economic sustainability and in turn foster sustainable development.

Keywords: SME, Social Entrepreneurship, Entrepreneurship, Frugal Innovation, MicroFinance, Economic Sustainability, Business Models

Mr. Abiodun Dominic Odunuga is a development practitioner and serial social entrepreneur. He is the co-founder of LaceUp Africa, an organization committed to addressing development challenges and inclusive growth in Africa by supporting the growth of innovative practices, scaling up promising businesses and connecting young entrepreneurs with impact investors and resources. He has cognate field experience having worked on various projects and forums alongside organizations such as the United Nations, Africa Development Bank, and The Commonwealth on themes related to education, environment and sustainability. He is an Associate at Policy, Planning and Public Sector Management for Results (3PSMARS) - A growing Think Tank with a vision to be number one in knowledge management of Managing for Development Resources (MfDR) and Results Based Management (RBM) in public policy, planning and management for sustainable development. He holds a Masters degree in Development Practice from SciencesPo, Paris. He currently serves as an Associate at Action Connected - A ground breaking online platform serving the needs of stakeholders such as Funders, Implementers and Beneficiaries.

175. Basic Income: An Instrument to Attain the Sustainable Development Goals in India

Ravichandra Tadigadapa

Abstract:

This paper aims to evaluate the utility of a Government-administered provision of an unconditional basic income to all citizens, with special focus on the impetus it may provide to meeting the Sustainable Development Goals by 2030. The paper examines previous basic income (or other unconditional cash transfer) pilot projects from across the world to establish the likely effect of the provision of a basic income. It also examines the current social welfare set-up of the Union Government of India and highlights how applying basic income would instead solve the current problem of corruption and leakages. It therefore, lists policy recommendations for any Government to consider when providing for a basic income project.

Keywords: Basic Income, Sustainable Development, Poverty Alleviation

Mr. Ravichandra Tadigadapa is a student of the International Baccalaureate Diploma Program at the Cathedral and John Connon School. His current subject choices are Economics, English and History.

176. Sustainable energy industry coupled with social license to operate, the coal example

Dr. Wan Shen, Dr Ruifeng Li, Dr Qing Guo

Abstract:

From the present to the predictable future, coal remains the basic energy source around the world. Exploitation and utilization of coal resources play a key role in developing the world's economy. Therefore, to ensure the success of coal projects, it's necessary to realize the sustainable development of the coal industry. The utilization of Social License to Operate in a scientific and reasonable way is closely associated with not only the successful implementation of an engineering project, but the healthy development of mining companies and social stability. This research conducts a data mining and analysis on internet data in connection with coal exploitation in the past decade. A statistical review of factors affecting Social License to Operate of coal exploitation has been conducted on worldwide network media, searching the amount of internet users and report coverage of six representative mainstream print media. Through the above three channels, the order of importance regarding factors affecting Social License to Operate in connection with coal exploitation is obtained and verified. The results would provide support and advice to world coal industry on sustainable mining on a global scale and of the major coal-producing countries.

Keywords: Coalproduction, Social License to Operate, sustainable energy, data mining

Dr. Wan Shen is a senior research fellow of Shenhua Science and Technology Research Institute, China. He received PhD degree at RWTH-Aachen University, Germany, in 2010 and currently his research focuses on Energy materials, Energy Economics and Low Carbon Technologies.

Dr Ruifeng Li is vice dean of Shenhua Science and Technology Research Institute, China.

Dr Qing Guo is director of Shenhua Science and Technology Research Institute, China.

177. Energy and mining industries related to the global media landscape

Dr. Wan Shen, Dr Ruifeng Li, Dr Qing Guo

Abstract:

This paper analyzed the global media landscape relevant to the energy and mining industries. The aim of the report is "to raise awareness among the general public about the contribution of coal to economic growth and the overall energy mix". In order to achieve this objective, the paper prioritizes international/global media and developed market stakeholders as the coal industry typically faces its strongest public resistance there. Statistical analysis on the degree of attention of internet users to the factors affecting Social License to Operate in connection with coal exploitation were analyzed by data mining of internet data in connection with coal exploitation in the past decade, from which the distribution of the factors around the world are obtained. Moreover, the difference between different media on the degree of attention to the same influencing factors was illustrated. According to the the distribution regarding different influencing factors in the world and the difference on the degree of attention to the factors between different media, this paper provides strategic suggestions from the perspective of world coal industry and coal compines.

Keywords: Media landscape, coal production, sustainable energy, data mining

Dr. Wan Shen is a senior research fellow of Shenhua Science and Technology Research Institute, China. He received PhD degree at RWTH-Aachen University, Germany, in 2010 and currently his research focuses on Energy materials, Energy Economics and Low Carbon Technologies.

Dr Ruifeng Li is vice dean of Shenhua Science and Technology Research Institute, China.

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178. Designing and Managing Situated Creativity in Urban Space

Isshin Sasaki

Abstract:

The poster explores a clue to a spontaneous and sustainable management of urban space in Southeast Asia. With the focus on consideration on Space co-creation and situated creativity by local inhabitants in self-habitable areas, the dynamics of productive process could be characterized by the relationship between a top down approach and a bottom up approach in architectural design towards to the creation sustainable urban environments. In addition, the poster reports that it will become increasingly an important for both local governments and local inhabitants to share an opportunity to recognize local issues as not only an urban stock but also a tourism resource, and to reorganize the evaluating structure conforming with local aspects in order to respond to urban transformation in the sudden development of the industry. This poster aims at developing a model of space co-creation in urban space with the designing for Asian development and the need to secure a balance between modern planning philosophies and local traditions, based on an architectural perspective on design.

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 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.

179. Benchmarking the environmental performance of Chemical Energy Storage Technologies based on hydrogen

Dr. Tatiana García-Armingol, Dr. Victor Ferreira, PhDC Patricia Royo, Dra. Ana M. López Sabirón, Dr. Germán Ferreira

Abstract:

Currently, the mitigation of the environmental impact has become in a major challenge and among all the impact categories, there is a great concern about CO₂ and other greenhouse gases (GHG) emissions. In particular, hydrogen (H₂) and, therefore, its associated chemical energy storage technologies have special interest, since, it is considered as an ideal green energy carrier of the future. However, H₂ is difficult to store because, as the lightest element, it is hard to squeeze enough of it into a small enough space to be useful.

Several commercial and emergent technologies with acceptable energy density, based on the gas compression and absorption/adsorption, are already efficient almost 100% for its storage, but drawbacks are associated to safety and cost issues, which have been fully analyzed. Nevertheless, the environmental implications have not been addressed. Thereby, this study intends to evaluate the environmental impacts of these technologies from a Life Cycle Assessment (LCA) point of view through RECIPE method for comparison aims. The outcomes obtained here can be environmentally useful for making decisions at the moment to choice of these technologies.

Keywords: Chemical Energy Storage•Hydrogen•Life Cycle Assesment• Carbon footprint

Dra. Tatiana García-Armingol is an Established Researcher in Process Integration Group of the Energy and Environmental Technologies Area at CIRCE. She is Chemical Engineer and PhD in Engineering from the University of Zaragoza, both with honors, achieving a relevant national and international research and industrial experience and including a research stay in Imperial College of London. She has been recently granted by the Torres Quevedo Program of the Spanish Science and Innovation Ministry, aimed to promote innovative post-doctoral research activities. Considering only indexed peer review international journals, she has an accumulated impact factor of 32.90. During the last 10 years, she has gained a very valuable experience in broad range of R&D projects related to the efficient energy management, environmental assessment, the use of alternative fuels, diagnostic methods applied to the instrumentation for monitoring various energy and environmental meaningful parameters, industrial process sustainability and development of software tools based on LCA/LCC premises as a path to perform multi-objective optimization along the whole value chain.

Dr. Victor Ferreira is an established Researcher in Process Integration Group of the Energy and Environmental Technologies Area at CIRCE. He is Chemical Engineer by the University of Carabobo/Venezuela and PhD in Chemical Engineering by the University of Porto in 2013. He has a high experience the development of systems and new materials for the production of value-added products such as PCMs for energy storage, H₂ and C₂ hydrocarbons, etc.) and R&D activities by means of several R&D project participations (>7). He is author and/or co-author of several indexed research papers (>10) and he also has participated in several international congresses (>15).

PhDc Patricia Royo is a First Stage Researcher working as researcher in the Process Integration Group of the Energy and Environmental Technologies Area at CIRCE. She is an Industrial Engineer, remarkable qualified and including a stay at Chalmers University of Technology. At present, she is a PhD candidate in Renewable Energies and Energy Efficiency by University of Zaragoza. Her final project was recognized at the University Challenge-EDP Renewables 2014 awards and in 2015 by the Association of Industrial Engineers of Aragon and La Rioja (COIIAR), MLN Constructions, Brial-Enática Renewable Energies and IDECONSA. Developing her activity at CIRCE includes collaborative R&D projects at European and National level, mainly focused on innovative products and industrial systems considering PCMs integration, energy transference/storage and life cycle assessment. These researches resulted in the publication of scientific articles in indexed international journals with high impact (Q1), and articles in national journals. Finally, she participated in international conferences and achieved a 3rd place in the international competition "Solar Decathlon China 2013" about sustainable and energy-efficient buildings.

Dra. Ana M. López Sabirón is an Established Researcher and Head of the Process Integration Group in the Energy and Environmental Technologies Area at CIRCE. She is Chemical Engineer and PhD in Engineering by University of Zaragoza. During her professional carrier, she has made a positive contribution to the R&D knowledge through co-operations and collaborations, including two pre-doctoral stays. Currently, she conducts research independently which advances a research agenda, her activity is mainly focused on the analysis of industrial systems (specially intensive energy consumers) and innovative services/products from the eco-efficiency and the environmental analysis point of view considering the life cycle perspective, energy storage (Phase Change Materials), among others. In this sense, she has executed/lead more than 15 collaborative R&D projects at European and National level. She has also supported technical assistances and researches to industrial companies by private contracts. Dra. López-Sabirón has published several technical and scientist papers in international indexed peer review journals and book chapters. She has participated in conferences, and has organized and chaired different conference seasons.

Dr. Germán Ferreira is Leading Researcher and Head of the Energy and Environmental Technologies Area at CIRCE. He is B.Sc. (Hons) in Chemical Engineering by University of Carabobo (Venezuela) and M.Sc. in Eco-efficiency, Saving Energy and Industrial Ecology by University of Zaragoza. He also holds an European Ph.D. from the University of Zaragoza in Engineering that includes a research stay at University of Cambridge. His professional activities have been recognised with more than 5 National and International Fellowships and other relevant research awards. During the last 10 years, Dr. Ferreira has carried out his professional activities on research and development, teaching and industrial manufacture areas focused them on Energy, Renewable Energy, Energy Efficiency, Eco-efficiency and Environmental Analysis fields in different important International Centres and Universities. He has developed works for several industrial processes using data from industry, experimental works and advanced mathematical modelling to uncover physical characteristics and environmental impacts of them. In addition, he has teaching experience in BSc, MSc and specialization courses. Dr. Ferreira has participated and leaded several R&D projects on the energy and environment field. He is author of several peer-review articles and book chapters published in several International Scientific Journals, International Conferences and Books.

180. Material Flow Cost Accounting as a Tool for Improved Resource Efficiency in the Hotel Sector: A South African Context

Dr. Celani Nyide

Abstract:

Material Flow Cost Accounting (MFCA) is one of the Environmental Management Accounting (EMA) tools that has been developed to enable environmentally and economically efficient material usage and thus improve resource efficiency. However, the use of this tool to improve resource efficiency in the South African hotel sector remains unknown. An exploratory study, qualitative in nature, was conducted using a single case study with embedded units approach. A Hotel Management Group that met the selection criteria formed part of this study. In-depth interviews were conducted with 10 participants and additional documents were analysed. The investigated hotels have developed technologies that provide an environmental account in both physical and monetary units which constitute the use of MFCA to improve resource efficiencies. However, the study established a number of factors that affect the implementation of MFCA by the hotel sector in a South African context. Therefore, the study concludes that the practice of MFCA for improved resource efficiency is still very poor within the investigated hotels and the use of this tool is not up to the level that exploits its full potential.

Keywords: Environmental Management Accounting, Environmental Performance, Hotel Sector, Material Flow Cost Accounting, Resource Efficiency

Dr. Celani Nyide is a lecturer at Durban University of Technology in the Department of Finance and Information Management. He lectures Cost Accounting, Financial Management and Management Accounting to undergraduate students. He also supervises Masters and PhD students. His research interests include Environmental Management Accounting, Management Accounting Practices and Sustainability Reporting.

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