



Abstract-Topic E

Author	Jin-nan Wang, Xiao-liang Li, Cha-zhong Ge
Institution	Chinese Academy for Environmental Planning
Email	wangjin@caep.org.cn
Origin	China
Paper No.	E001

Title:

The development and outlook of green economy for China

Abstract:

The connotation and extension of green economy is defined preliminarily, based on the 8 sectors of the Green Economy concept raised in the green economy initiative (GEI) by UNEP, the status quo of China's Green economy development is identified. From 2005 to 2007, the investment in 8 green economy sectors accounted for about 8% of GDP, green GDP reduced by pollution damage accounted for 97% of GDP respectively in corresponding year; the investment in green economy sectors is expected to reach 6 trillion RMB in the Eleventh Five-Year period. It is proposed that green economy should be integrated into national economic and social development plan in next five years for China, environmental industry and renewable energy should become main component of green economy in China.



Abstract-Topic E

Author**Robert K. Miller**

Institution

Municipal and Financial Services Group

Email

bob.miller@mfgslc.com

Origin

USA

Paper No.

E002

Title:

Financial management practices to support sustainable development

Abstract:

Financial management practices to support sustainable development are dependent upon an effective national policy that provides significant disincentives to unsustainable development. In today's capitalistic marketplace, businesses are expected to act in their own enlightened self interest while maximizing the returns to their stockholders. Absent of effective regulations against unsustainable practices, businesses may jeopardize work safety and environmental impacts with devastating long-term results. Many nations have instituted regulations to curtail such practices, but the administration of these regulations is inconsistent from locale to locale. Consequently, businesses have often moved operations from highly regulated countries to less regulated countries, optimizing their profits while sub-optimizing local conditions. Because these issues have already been well-researched and documented, this paper will briefly describe how tax policy might be used to remove the incentive for unsustainable practices and will then focus on how financial management method will evolve. First, the methods for determining the cost-of-ownership will need to consider a longer-term view of all costs of ownership, including replacement and rehabilitation costs. Second, the methods for evaluating and prioritizing capital investments will need to consider social and environmental impacts as well as financial costs and benefits. Third, the methods for reporting results will need to include standard measurements of sustainability that can be verified and validated by outside observers. Fourth and finally, governments will need to determine how to use the measurements in order to identify when and how to intervene to stop unsustainable development practices. This last point may be the most difficult and controversial because it may appear to be the most subjective. The defense against accusations of unsustainable development has traditionally been through remediation of problems. Governments and societies have frequently received assurances of future remediation, only to be disappointed at a later date when the promised corrective action did not occur. This will require intervention in the marketplace that runs counter to attitudes toward less governmental regulation. This presentation is intended to demonstrate financial tools that support larger overall sustainability initiatives and programs.



Abstract-Topic E

Author	Yan Gang
Institution	Chinese Academy for Environmental Planning
Email	yangang@caep.org.cn
Origin	China
Paper No.	E003

Title:

The latest developments of emission trading in China

Abstract:

Since that China introduced the concept of emission trading and carried out series of emission trading pilots in the 1990s , emission trading has been widely explored in the past a dozen of years in China .This paper systematically summarizes the macro background and strategic significance of emission trading currently being carried out in China, comprehensively reviews the evolution of emission trading in local level, systematically describes the latest developments of emission trading in national and local level .Further more, in conjunction with the current new situation of pollutants reduction and needs of socio-economic development, some main recommendations for furthering the implementation of emission trading are also proposed in this paper.



Abstract-Topic E

Author	Jason Wen, Ph.D., P.E.
Institution	Utilities Superintendent
Email	
Origin	City of Downey, California, USA
Paper No.	E004

Title:

How a city playing a role in water management and sustainable development?

Abstract:

The economy of California is often cited as 7th largest in the world if it is an independent nation. More than half of California population is located in Los Angeles metropolitan area. The rapid growth and development in last hundred years made Southern California region one of major economic, industrial, and technology center.

Southern California with its semi desert climate has been facing various challenges in dealing with rapid urban development, drought and water shortages, storm water and wastewater management due to newly established environmental regulations. How does a city can balance the development and compliance with stringent environmental regulation to keep a sustainable society?

This presentation will discuss experience and practice a municipal government had in dealing with the following:

- Water resource. How did a city work with developer to allocate new water resource and build new water infrastructure for the services.
- Storm water management. To comply with storm water regulation, the city has requested the developer to invest local storm-water catch facility to prevent storm water pollution and enhance groundwater recharge.
- Recycled water use. The City has encouraged and sometime requested new and remodelling construction sites to use recycled water when it is readily available to reduce the potable water demand.
- Local regulation. The city has been utilizing ordinance to enforce some water conservation requirement and also worked together with developer to build a more water sustainable project.
- Conservation. Conservation has been redefined not only a sustainable life style but also as a water resource. Actually, it is a rather green resource. The city



Abstract-Topic E

working with federal and state and other local governments has provided financial incentives to enhance the conservation activities, including public event, school education program, and distribution of free water and energy efficient appliances.

Experience of resource management in US in recent years might be 'seen' in China today or in near future. The lessons learn to manage a sustainable development will be informative to assist Chinese local government and society to face these new challenges.



Abstract-Topic E

Author BRENDA NATALIA LOPEZ NINO

Institution China University of geosciences

Email s.m.minas@lse.ac.uk

Origin natalopez78@gmail.com

Paper No. E005

Title:

Levels and trends of pollutants generated by e-waste activities in China

Abstract:

The export of electronic and electrical solid waste (called WEEE) from developed countries, such as the United States and Japan, to developing countries like China, Vietnam, Pakistan and India has been increasing over past years. Well known environmental impacts have been the result of the implementation of basic or primitive technology used for the recycling of electronic and electrical equipment (EEE), due to the release into the environment of organic compounds (PAHs, PCBs, PBDEs) and heavy metals, which represent a real threat to ecosystems and human health. Studies made in South and Eastern China in e-waste activity locations at Guiyu, Taizhou, Zhejiang and Qingyuan, have detected high concentrations of these pollutants in soil samples as well as in plants, trees, snails in the surrounding areas; and the present of PCBs in breast milk, Cadmium and Lead in blood from children and neonates involved in e-waste recycling activities has been also recognized. These cases are demonstrating the possible mobility and distribution of these contaminants through the soil, sediments, air and biota, and human beings as well. By an integrative analysis of relevant and available information on e-waste activities in China during the last five years, the data comparison of existing surveys of pollutant levels of PAHs, PCBs, PBDEs and heavy metals in soil, sediments and air media; their interactions and trends with their surrounding biota; the possible bioaccumulation and contamination pathways in workers and residents of the e-waste activity areas; and the ecosystem and human health risk generated are described. Finally, this descriptive panoramic in the principal Chinese e-waste activity locations, where the main studies have been realized looks to provide tools for a future proposal to propend sustainable management of these forms of activities. **KEYWORDS:** e-waste activities, organic pollutants (PAHs, PCBs, PBDEs), heavy metals



Abstract-Topic E

Author	Zhixi* Zhu, Posong Li, Hongtao Bai
Institution	The College of Environmental Science and Engineering, Nankai University
Email	zhuzhixi@gmail.com
Origin	Tianjin, China
Paper No.	E006

Title:

A review of scenario analysis in strategic environmental assessment

Abstract:

Strategic Environmental Assessment (SEA) inherently needs to address uncertainty. However, no systematic analysis on uncertainty in SEA has been reported to date and the theoretical foundations for addressing uncertainty in SEA have not been constructed. Therefore, it has been hard for SEA practitioners to select appropriate methods and tools to deal with uncertainty in order to meet SEA objectives. Scenario analysis is perhaps the most utilized tool to cope with uncertainty in SEA. However, very little research has been done on the advantages of scenario analysis when compared with other uncertainty analysis methods. Although several environmental assessment, including SEA cases in which scenario analyses were employed, are available in the literature, the methodological advantages and disadvantages of scenario analysis in the framework of SEA are still insufficient. This situation is perhaps more evident in China where the word "scenario" appears to be abused and misused. Therefore, many problems still persist in applying scenario analysis in SEA in China. Through the review of the above existing problems, expectations for future research are conclude.

Key words: scenario analysis; strategic environmental assessment; uncertainty; China



Abstract-Topic E

Author	Yan Zhang, Ph.D., P.E.
Institution	Jordan, Jones and Goulding, Inc, Technical Director
Email	yan.zhang@jjg.com
Origin	GA, USA
Paper No.	E007

Title:

Integrated master planning for stormwater management – Building a sustainable and green university campus

Abstract:

The 700-acre Emory University campus in the historic North Druid Hills neighborhood in Metro-Atlanta is highly developed, with some drainage basins exhibiting impervious cover of more than 50 percent. Aging campus utilities serve over 100 major buildings with about 7 million gross square feet of built space. The University has a Campus Development Plan that contemplates growing its facilities by 50 percent over the next 20 years, but also has broad sustainability and community goals. While highly constrained by its campus environmental settings, the University is challenged to comply with stormwater regulatory compliance requirements for water quality and quantity for all its redevelopment activities on campus. The stormwater master plan was designed to help guide the campus infrastructure decision-making to support a sustainable campus growth and to protect and improve the environment.

The Stormwater Master Plan includes the environmental planning, engineering and modeling tools needed to support the University’s growth needs; while creating practical, environmentally friendly and aesthetic campus environments. Drainage utility infrastructure needs were analyzed holistically in broader watershed context under existing and planned future development conditions. Recommendations were made in conjunction with the Campus Development Plan to incorporate new and retrofit Green Best Management Practices (BMPs), designed to restore natural hydrologic functions. Some Green BMPs include roof gardens, stormwater infiltration areas (primarily under athletic fields), porous pavements, rain gardens, grass swales and vegetated filter strips, on-campus stream rehabilitation, and detention facility retrofitting. These Green BMPs were analyzed for the water quantity and water quality benefits and were prioritized in consideration of the estimated cost opinions. The plan also established implementation strategies to



Abstract-Topic E

help the University achieve environmental sustainability, while retaining its best-in-class reputation for environmental stewardship.



Abstract-Topic E

Author	Mack R. Cain, RLA, LEED AP
Institution	Director of Landscape Architecture Jordan Jones & Goulding, Inc.
Email	Mack.cain@jjg.com
Origin	GA, USA
Paper No	E008

Title

Design with the land - A site sensitive and sustainable design approach

Abstract:

Rapid Growth and modernization has caused designers and developers to move away from the natural systems that once governed the kind of structures developed on a site or in a specific climate. Building had to respond to the natural conditions and climate to be functional and livable. There was a time when a climate and environment could be identified by the type of architecture in the area. With the development of climate controlled environments, structures no longer had to conform to the natural forces around it, but could defy all the conditions and set its on style. The onset of high energy costs and poor environments has spurred the need to reexamine the principle of "Design with the Land and the Environment."

Site design has also fallen victim to the propensity to impose the will of man upon the environment rather than conform and blend with the natural conditions. As a result we have covered the earth with hard surfaces, altered the natural systems, and mass graded the shape of the land. Rather than design to fit the natural conditions, we alter the natural conditions to fit our designs. This heavy handed approach has created heat islands, erosion, poor water quality, polluted air, crowded and unhealthy environments in both the poor and wealthy areas.

In an effort to correct these problems, man has tried to write rules and ordinances to mandate specific conditions for development. Although these attempts have helped in some degree, they are far from the answer. It is impossible to legislate good design or responsibility. That has to be developed by creative minds in response to the conditions and replicated by those who recognize the value. That is the same force of development that created the air conditioned, mirrored glass towers that litter the landscape. Except now it is essential to direct that energy toward sustainable site design and environmentally responsible design.



Abstract-Topic E

The presentation will focus on a variety of highly effective site and architectural designs that have responded to the natural systems and set a standard in sustainable and site sensitive designs. These projects actually defied many of the legislated rules that were intended to create these very responses. The presentation will take each project and go through a step by step development process of how these results were achieved and the obstacles that had to be overcome.

In many cases, if a developer can see the target, it is easier for him to accept the conditions necessary to reach that target. However, most of the examples for development that we have today are the same problems we are trying to correct. Most developers, designers and contractors are unwilling to be pioneers on a new tract, but want only to create their projects successfully. That in turn tempts them to become followers and copiers rather than innovators.

This presentation is designed to show that a commercial building, a hotel, and an athletic park do not require that the land be totally flattened and altered to be constructed. That design can respond to the natural colors, shapes, systems and contours of the land and not be expensive or impossible to construct. It simply takes a different minds set and priority process to make it happen. The intent of the presentation will be to help designers, developers and contractors recognize that there is a way to comply with the Vision of a Green Globe without stripping the land and flattening the topography.

The principle projects to be illustrated are:

Southern Progress Magazine Headquarters Compound:	Birmingham, AL
Simmons Mattress Headquarters:	Atlanta, GA
Cherry Park Recreation Complex:	Rock Hill, SC
Middleton Gardens Hotel:	Charleston, SC
John Sibley Horticultural Center:	Callaway Gardens, GA



Abstract-Topic E

Author**William D. Q. Fang**

Institution

Amwest Academy of Environmental Science

Email

williamdqf@gmail.com

Origin

California, USA

Paper No

E009

Title:

Environmental physics and living environmental of mankind

Abstract:

This report provides an overview of the physical pollution (noise pollution, electromagnetic pollution, thermal pollution, light pollution, etc.) to human survival. It includes the discussions on the birth, formation, and development of environmental physics; pointing out that power, heat, sound, optical, electromagnetic and other physical environment are inseparable from the survival of human living conditions. The key questions are "modest". Therefore, this report introduces the concepts of the "harmonious physical environment" and "harmonious physical factor"; focuses on the noise of the physiological and psychological effects, Noise Maps, sound landscape, environmental acoustics and noise control engineering disciplines, urban noise monitoring, new progress in noise control. This report also provides a brief study on environmental heat pollution, global warming research and countermeasures, discussions on environmental optics, green energy. This report also emphasizes on new trends on nanotechnology and silicon quantum dots, pointed out that the high efficiency and low-cost of the nanocrystals would be the future trends for the solar energy utilization in the future.



Abstract-Topic E

Author	Yangzhao SUN, Guanghui ZHOU
Institution	Foreign Economic Cooperation Office, Ministry of Environmental Protection
Email	sun.yangzhao@mepfeco.org.cn
Origin	China
Paper No.	E010

Title:

Overview and Case Studies on Clean Energy and Energy Efficiency under Sino-Italian Cooperation Programme for Environmental Protection

Abstract:

In 2000, in order to accelerate sustainable development of China and promote cooperation between China and Italy on international and regional environment issues, Ministry of Environmental Protection of People's Republic of China and Italian Ministry for the Environment, Land and Sea signed "Sino-Italian Environmental Protection Cooperation Programmer" agreement (SICP). Under SICP, a series of projects were carried out, focusing on improving energy efficiency of key industrial sectors and using clean or renewable energy.

The project of energy efficiency planning did investigations and analyses in Taiyuan, Suzhou and Jinan regarding urban energy and environmental status, and major energy-consuming industries. The project enhanced local government's capabilities in environment and energy planning as well as related policy development and decision making. Additionally, Taiyuan project put forward an optimized investment plan on energy efficiency and emission reduction, and gave suggestions on related policies and technologies.

Taking the advantage of local hydropower, projects of renewable energy in Qinghai built up one 20 KW independent photovoltaic power plant and one 2×250KW small hydropower plant in Nangqian County, which provided electricity to Tibetans for their domestic use.



Abstract-Topic E

In Zhongwei city of Ningxia Huir autonomous region, a 7MW biomass power plant was in planning, and most of its fuels are local wastes of biofuels, which boost the development of renewable energy in Ningxia.

The two countries jointly established a China sustainable development and energy efficiency website (www.e2-china.com). It provides a wide spectrum of knowledge for different industrial sectors, and practical approaches and procedures on energy efficiency diagnose and energy auditing.

The presentation will presents the state of art in clean energy practices in China, discuss several case studies, and share with our view of the future development need and trends in the field.



Abstract-Topic E

Author	Randy Knott
Institution	MACTEC Engineering and Consulting, Inc.
Email	raknott@mactec.com
Origin	Georgia, USA
Paper No.	E011

Title

Coastal Barrier Island Ecosystem Repair/Restoration as a Mitigation Means of Mainland Disaster Protection Against Water and Wind Forces

Abstract:

The repair/restoration of a coastal marsh using fine-grained maintenance dredged material from a nearby shipping channel was performed as a pilot project for restoring and augmenting the size of a barrier island on the Gulf Coast of the State of Mississippi in the United States. This beneficial use of dredged material, not only provided an ecological habitat for coastal fish and wildlife, but also augmented the size of a coastal barrier island. This augmented barrier island in its new size and configuration helped buffer and dissipate the powerful energy of Hurricane Katrina and other storm surges experienced by Coastal Mississippi in 2005. Engineering and scientific challenges included site selection, location, size, and shape; soil bearing, stability, and performance of containment dikes for sediment in-fill; in-fill sediment characterization; and in-fill sediment and ecosystem performance. This project demonstrated that engineering along with the application of appropriate environmental sciences can provide engineered systems to produce coastal protection and other benefits through creation and/or augmentation of offshore barrier islands.