

Stream I - Finance and Investment

Ask The Investor Question Time – Investing in Water

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Chair: Bastien Simeon, Head of Water, KPMG Global Infrastructure;

Panel: Patrick Mullen, Water and Sanitation Specialist, Global Water Unit, Infrastructure & Natural Resources Department, International Finance Corporation - Infrastructure Investment (CINUT);

Amy S.P. Leung, Director, Urban Development and Water Division, Southeast Asia Department, Asian Development Bank;

Luis de Lope, Concessions Director, Aqualia

The combined impact of the global financial crisis allied to an earlier food crisis and fluctuating energy costs has significantly hindered progress towards MDGs. In an effort to mitigate the effects IFI's have sought to promote greater private sector participation in the ownership and provision of public utilities such as water resulting in widespread concern about the impact on water management and affordability in the world's most water scarce regions.

- Is the assumption that the private sector will prove more successful in delivering quality service accurate or will the reliance on a cost recovery model further marginalise the world's poor?
- Is private sector participation improving the quality of life of people in the developing world through funding infrastructure projects; accelerating the sustainable reduction of poverty and dependency; and promoting broad-based economic growth and regional economic integration?
- What is the role, operations and impacts of IFI investment in developing countries?
- Do IFI grants, guarantees and loans fulfil their role in financing sustainable water infrastructure that have a significant effect in reducing poverty? Who really stands to gain from this increased lending?
- What is the impact of private finance on the public administration of water and sanitation services? Does it lead to greater transparency, fewer administrative bottlenecks and less corruption?
- As rising energy costs force water companies to focus increasingly on energy issues and in some cases leads to them becoming energy companies what issues does this raise about the integration and convergence between all utility assets and what are the implications for risk and investment?

The Role of the Private Sector: Panel Debate

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Chair: Bastien Simeon, Head of Water, KPMG Global Infrastructure

Panel: Yves Besse, CEO, CAB ambiental

Arantxa Mencia, International Business Director, Abengoa

Jaime Melo Baptista, Chairman of the Board of Directors, ERSAR

Frederic Gourdin, Director of Water Projects, Suez Environment

Between 1999 and 2010 the percentage of the world population served by the private sector has risen from 5% to 12% with 60 million additional people being added in the last year alone principally as a result of the IPO of Chongqing water in China and the granting of a major waste water concession in Mexico. How should the private sector contribute to the delivery of affordable and sustainable water supply and sanitation services, especially to poor communities?

- The role of private equity and infrastructure funds in the water sector has increased significantly in recent years with 17 companies now in the hands of financial investors. What is likely to happen to these acquisitions given that market conditions have changed substantially since 2008
- Will the private sector be the catalyst for the introduction of the technological and operational innovation required to secure future water supplies and underpin water conservation policies?
- What role can private industrial companies play in contributing to sustainable development by promoting private to private water and wastewater projects that meet not just their own industrial needs but also the wider humanitarian needs of those of the immediate community in which they exist (e.g. the Areva desalination plant in Namibia)?
- Countries like the UK have seen huge efficiency gains as a result of privatization which is leading many others to look at the private model. What should be the nature and structure of regulation in enabling private sector ownership to build and develop water infrastructure in order to achieve the desired public outcomes?
- Where companies such as Manila Water have moved from the public to the private sector what gains in operational efficiency and access to clean water have resulted?

A Roadmap for growth in the Water, Wastewater and Energy Sectors

Panel: **Jean Salessy**, CEO, Veolia Agua;

Fernando Faria, Head of Global Infrastructure for Portugal and Angola, KPMG Global Infrastructure

Rui Godhino, President, APDA; **Ricardo Sá**, President – Private Clients, Andrade Gutierrez S/A

The impact of increasingly stringent austerity measures caused by the financial crisis in the eurozone and the political struggles between Democrats and Republicans in the USA, at a time when policy makers are placing an increasing emphasis on sustainability, presents a challenge for the water sector to find new ways forward which combine greater cost reduction with the more efficient delivery of water services.

- New Challenges for the European Water Sector
- The impact of financial deleveraging on a capital intensive industry
- Alliance Contracting Model for Water, Wastewater and Energy Sectors
- Alternative funding models
- Achieving better integration within and between organisations
- The benefits of greater integration between the water and energy sectors

Stream 2 - Water Security and Sustainability

Water and Energy: Keynote

Speaker: **Leon Awerbuch**, President and CTO, Chairman of IDA Programs. Past President of IDA, Leading Edge Technologies, and International Desalination Association

Gesner Oliveira, President, GO Associados, Main Board Director of SABESP and Companhia Energetica de Sao Paulo

Prof. Muthanna Al-Omar, General Manager, Abu Dhabi Water and Electricity Authority

The water-energy nexus has rapidly moved to the heart of the strategic agenda for both the development of nations and a world which increasingly relies upon a sustainable supply of both resources. Rapid population growth is driving demand whilst the emergence of new technologies such as recycling and desalination are increasing the need for new energy sources. Far from being managed as separate issues a consensus is now emerging amongst policy makers, regulators, practitioners and scientists that energy and water issues need to be viewed and managed in a holistic way.

- What is the role of policy makers in fostering integrated water–energy planning and management and how important is it to combine these with food and climate policies?
- What opportunities are created by the massive scale of urbanisation for bringing water and energy policies together?
- What steps is the private sector taking to look at water and energy in a more integrated way?
- What implications does the link between water and energy have for technology developments in the fields of renewable energy allied to potable and waste-water treatment?
- What are the prospects for the future reduction of energy to reduce the carbon and environmental footprint of desalination?
- Desalination in UAE: Production, Demand Forecast and Environmental Concerns

Sustainable Water Management and Water Security: Panel Debate



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Chair: **Barbara Prommegger**, Sales Director Latin America, HOBAS Pipe Systems

Roberto Zocchi, Central Director Engineering & Laboratory Service Companies, Gruppo Acea

Dr Alaeddin Idris, Planning Coordinator and IAO Member for the Evaluation Commission, Sharjah Electricity and Water Authority

Alistair Clark, Corporate Director, Environment and Sustainability, European Bank of Reconstruction and Development

In March 2010 a report by the World Bank Independent Evaluation Group found that the effects of water shortages are felt strongly by 700 million people in 43 countries. This situation will become increasingly grave and current projections suggest that by 2030 the world will need to provide 50% more food and energy together with using 30% more water whilst mitigating the effects of climate change. A holistic approach to the sustainable management of water resources and water security has moved to the centre of the policy making agenda for those charged with sustainable water management and water security.

- What are the technologies and expertise available to confront these challenges in respect of green water, blue water and wastewater management
- What is required in terms of effective governance, financing and regulation to enable technical innovation
- How do you develop bankable projects which enable access to the available financing sources and mechanisms which are available particularly in the world's poorer countries and what cost recovery mechanisms can be put in place?
- The importance of an integrated approach to managing ground water resources
- Factors affecting Investment in groundwater technologies

Making Cities Work

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Chair: Bo Carlsson, President, Sweco Environment

Panel: Mokhtar Jaait, Director of Research and Development, ONEP, Morocco

Szymon Tamborski, Managing Director of Poznan branch, Dourbud S.A.; **Ramesh Negi**, CEO, Delhi Jal Board

Urbanisation is occurring on an unprecedented scale and by 2050 seventy percent of the world's population will live in cities. Many cities now face the pressing need to provide the water and energy infrastructure to support the economic development required to reduce poverty, attract investment and provide a healthy environment to support growing populations.

- Sewage infrastructure and improved drainage
- Potable Water Supply
- Cities on Estuaries - preparing for and managing flood risk
- Sustainable Urban Drainage (SUDS) - designing into new developments
- Trenchless Technologies: establishing the collector to the Czajka WWTP in Warsaw involved jacking more than 7kms of 3m diameter pipes alongside and below the Vistula river where high groundwater levels lay only 1-2 metres below the surface

Desalination

Panel: Nikolay Voutchkov, President, Water Globe Consulting, LLC;

William Chang, Executive Managing Director, Emirates Sembcorp Water & Power Company (ESC)

Miguel Angel Sanz, Development & Innovation Director, DEGREMONT SA

Dr. Corrado Sommariva, Managing Director Generation Middle East, ILF Consulting Engineers Abu Dhabi and President, IDA

With desalination plants still being one of the greatest users of energy, the pressure is on to find cost-effective, energy-efficient ways of supplying water to energy-scarce areas whilst increasing the sustainability of the procedure.

- Current challenges and opportunities
- Cost-effectiveness - innovative means of cost-control
- Competition and innovation
- Experimental technologies and processes
- Energy saving techniques to minimise environmental impacts: incorporating sustainability

Innovations Forum at WEX

Sponsored by:



Panel: Frank Rogalla, Head of Innovation, Aqualia ;

Helge Daebel, Sector Specialist, Water & Marine Renewables , Emerald Technology Ventures

Andrea Gysin, General Manager - Interim, Isle Utilities; **Piers Clark**, Commercial Director, Thames Water

Interactive forum beginning with short introductory presentations by panellists relating to innovation in the water sector. These will be followed by presentations of innovative technologies in the water sector from selected companies and questions, analysis and debate involving both audience and panel

Stream 3 - Regional Business Forums

Middle East and North Africa

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Chair: Richard Menezes, Managing Director, Utico

Speakers: Mohsen Mortada, General Manager, Malcolm Pirnie/Arcadis, Middle East

Hamed Said Al-Hasni, Director of Water Quality, Public Authority for Electricity & Water, Oman; **Abdullah Al-Alshaikh**, Deputy Governor for Planning & Development, Saline Water Conversion Corporation (SWCC) and Director, International Desalination Association (IDA).

- Changes and developments in regulation, policies and privatisation strategies
- Guaranteeing the security and supply of water and energy resources to meet the demands of population and industry
- Investment in the development of sustainable, alternative and renewable technologies
- Challenges and opportunities for investment in a rapidly growing market
- Strategic importance of water resources and its impact on interstate relations
- Developments in desalination and its role in addressing the sustainability challenge
- The effect of the red tide on desalination plants in the Arabian Gulf
- Desalination in Saudi Arabia

Asia

Moderator : Sahana Singh, Editor ,Asian Water

Panel: Allard M Nooy, Chief Executive Officer, JITF Water Infrastructure, India

Jim Southworth, President, Jim Southworth Consulting

- Singapore as the hub of the world for best know-how on water combining pragmatism and political will
- What can other Asian countries learn from Singapore?
- What progress is being made in the Indian Water Sector in recent years and what are the changes driving business opportunities?
- Addressing the problem of weak governance in the water sector and better regulatory enforcement
- Case studies from other countries in the region

Central and Eastern Europe

Moderator: Marek Gromiec, National Council for Water Management, Poland

Speaker: Mariana Iteva, Country Director for Bulgaria, Veolia Water

- Update on the European WFD and associated directives
- Key policies for adaptation to climate change and population growth to maintain sustainability
- What does current financial instability mean for future investment in the water sector?
- Priority areas of concern and investment
- Case studies

Latin America

Moderator : Ing. Jose Miguel Guevara Torres, Projects Coordinator of Valle de México, Comisión Nacional del Agua

Dante Ragazzi Pauli, Executive Adviser to the Board of Directors, SABESP

- The challenge of improving water and sewage networks
- Emerging opportunities for investment and development at an international level
- Public-private collaboration
- Regulatory inconsistencies: what can be learnt from successful models?
- Political, climatic and financial instability: what does it mean for the future of the water, wastewater and energy industry?
- Progress towards achievement of the MDGs and what still needs to be done

Sub-Saharan Africa

Speaker: Sering Jallow, Head of Water and Sanitation, African Development Bank

- Building capacity for water resources Southern Africa
- Programmes for integrated water resources management in the region
- Developing and using groundwater resources in a sustainable manner
- opportunities for public private partnership and the role of IFI's in the region
- Developing trans-boundary water infrastructure

Stream 4 - Intelligent Infrastructure, Asset Management and Non-revenue Water Management

Intelligent Infrastructure and Non-Revenue Water Management - Intelligent Infrastructure

Sponsored by



Chair: Gavin Van Tonder, Director of Marketing, Itron

Speaker: Mohammed A EL-Ramahi, Head of Utilities and Asset Management, MASDAR

Daniel Rudolph, Head of Industrial Hydrodynamics, Hydraulic Engineering Unit, Deltares

A booming global population accompanied by climatic changes, have led to severe water shortages and made the need for improvements in water asset management a critical necessity. With much of the infrastructure reaching the end of its useful life water utilities face the challenge of balancing ageing pipes, maintenance costs, increased pressures for efficiency and sustainability and a challenging outlook for water supplies. But are they making the most out of their infrastructure when it comes to measuring, monitoring and operating their water networks?

- What is the smart water network?
- Can Smart Water Networks make significant contribution in the efforts towards sustainable, efficient, affordable and pure water for all?
- How is the new technology and innovation leading the way in the adoption of new methodologies for Utilities?
- Data Technologies for Water networks
- The impact of AMI in enabling Utilities and their customers to achieve a better balance between demand and supply
- Benefits of smart water network

Advanced Asset Management and Non-Revenue Water

Sponsored by:



Chair: Dr Slavko Velickov, Water Industry Director, EMEA, Bentley Systems

Speaker: Waleed Sukkar, Advisor to the Minister of Water and Irrigation, Managing the International Cooperation and Planning, Jordan;

Kevin Woodward, United Utilities, Network Operations Manager (TBC); Operations Director, **Izmir Utilities** (TBC);

Nivaldo Rodrigues da Costa, Manager for the EAST Operations Division (Water), SABESP (TBC)

Our towns, cities and infrastructure networks rely heavily on how pipe networks and related assets are managed. In fact, more than 75% of the total budget of designing, building and managing either a water or wastewater utility is in pipe networks. Yet because pipes are out of sight this often had the effect of keeping them out of mind of those who are in charge of maintaining those pipes. A new approach is required and the numerous stakeholders involved make this a complex and highly dynamic task. A holistic approach is required to achieve the best results for all concerned.

- Adapting to and responding to climatic and demographic changes – Planning for the future and building for growth
- Impact of new technologies on network infrastructure: targets, improvements and best-practices
- Regulation of investment and the prioritisation of new investment drivers
- Meeting Sustainability Requirements and energy efficiency
- How far will sensors, fibres, artificial intelligence, and computers replace human operators in running networks and treatment plants
- Case Study: Use of advanced technologies in infrastructure and Asset management

Non – Revenue Water

Sponsored by:



Moderator: Marc Bracken, PEng, VP and General Manager of Echologics Engineering

Speaker: Piers Clark, Commercial Director, Thames Water

Reducing and controlling non revenue water is a complex task. Careful strategic planning encompassing the entire life cycle from sustainable procurement policies through to the use of advanced methods for the assessment of underground assets is critical for all utilities in the implementation of successful non revenue water management programmes.

- How Thames Water delivered its leakage target during the worst winter on record
- Identifying key strategies for the implementation of successful NRW programmes
- Predicting long term effects by understanding how different factors and practises impact leakage
- Measuring the extent of water loss.
- Using advanced methods to efficiently assess the condition of underground assets
- Case study : Best Role models around the world in leak management strategies

Stream 5 - Wastewater Treatment, Sludge Management and Waste to Energy

Wastewater Treatment and Reuse Workshop

Panel: Dr Ralf Bufler, President, Poyry Environment;

Ghassan Ejje, Senior Vice President, BESIX

Dr Abdul Aziz Al Turbak, Professor Civil Engineering Department, King Saud University,

Integrated management of water and wastewater can provide a holistic and sustainable water supply for our ever increasing demand. Reusing water by linking with wastewater treatment plants is more cost-effective and practical.

- Innovative technologies
- Reducing Energy usage during the treatment of waste water including the implementation of advanced aeration technologies
- International best-practice and environmental concerns
- What are the benefits of investment in wastewater reuse and management
- What is the role of policy makers and financial movers and shakers in promoting a waste water management revolution
- What are the barriers to waste water management and reuse as a priority and what will be the socio economic and environmental impacts of inaction.

Bio-Energy/Biogas from Organic Waste and Co-Digestion Plants

Sponsored by:



Speaker: Piers Clark, Commercial Director, Thames Water;
Karen Kubick, Head of Wastewater Collection, San Francisco Water (tbc)
Richard Ratcliff, UK ETS Water Business Director, MWH Global

More than 30% of the municipal solid waste generated in Europe and USA is food waste which would need support fuel if incinerated. When committed to landfill it would generate unwanted methane release that has 20-25 times the greenhouse effect of CO₂. Even with landfill gas extraction, at least half of the methane is released to the atmosphere. In China and India food waste generation rises to more than 50%. At the same time this "waste" is a lost bio-fertilizer resource with valuable organic material, phosphorous, nitrogen and trace elements. Leaders of cities around the world are now considering on a strategic level what to do with their increasing waste problem. Many are looking at the merits of biogas extraction as a potential solution to this problem, either as food-waste only digestion or co-digestion with sewage sludge and other organic waste materials.

- Does the co-digestion of sewage sludge with other organic wastes make sense?
- What are the demographic, technical, economic, legal and policy barriers to the wider co-digestion of waste
- How important is the establishment of a clear and appropriate economic and regulatory framework in realizing the true potential of co-digestion?
- What are the operational advantages and improved overall process economics that can be obtained from co-digestion;
- Oslo Biowaste project: Source separated food waste from households and restaurants will be turned into bio-fertilizer and biomethane fuel for Oslo's buses. Plant start up at the end of 2012.
- Ecopro codigestion project: More and more anaerobic digestion plants for sewage sludge are considering co-digesting sludge with biowaste. This plant has operated for 4 years and has confronted many of the challenges of Co-digestion

Sewage Sludge Digestion

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Panel: Pal Smits, Managing Director, Lindum AS; **Alan Cooper**, Vice President, Technology, Parsons Water & Infrastructure;
Miguel Angel Sanz, Development & Innovation Director, DEGREMONT SA

The world is facing a rapidly increasing amount of sewage sludge, due to ever stricter wastewater discharge limits and investment in wastewater treatment throughout the developing world. The safe and economically viable treatment and disposal of sludge is without doubt one of the biggest challenges currently facing this industry worldwide.

- What has been the response of the industry to increasingly stringent standards and regulations
- Selecting and procuring the most innovative technologies for sludge treatment and management including reduction of energy demand and generation of energy from the process: Washington DC Blue Plains - the largest and most advanced sludge digestion and bio-fertilizer project in the USA
- The sludge centre concept: developing integrated sewage based bioenergy and climate mitigation strategies for emerging markets : Delhi
- Upgrading existing sludge digestion plants to Advanced Digestion: Davyhulme Project: Advanced sludge digestion + incineration; the largest in the world;
- Chile, Maphocho Project - Santiago: converting an conventional plant into an advanced anaerobic digestion plant. Presented by Agbar-Degremont JV
- Lindum (small-scale sludge centre concept).