



Tuesday March 10, 2009
14:30 to 17:00

Lyon Convention Center
France

WATER IN THE CITY

Moderator

- **Alexander Zehnder**, Scientific Director, Alberta Water Research Institute, Canada

Speakers

- **Asit K. Biswas**, President, Third World Center for Water Management (TWCWM), Mexico
- **Ek Sonn Chan**, General Director, Phnom Penh Water Supply Authority (PPWSA), Cambodia
- **Patricia Burkhardt-Holm**, Professor, MGU Programme (Man, Society, Environment), University of Basel, Switzerland
- **Jean Lapègue**, Manager Water and Hygiene Programmes, Action contre la Faim, France
- **Peng Kah Poh**, Director (Info Comm) and Deputy Director, PUB Singapore
- **Cecilia Tortajada**, President, International Water Resources Association, Mexico

Summary

- The purpose of this session is to provide insight into supplying good quality water and sanitation to the poorest cities even though it is difficult to generalise water problems as cities vary.
- It is criminal that people do not have access to clean drinking water taking into account current knowledge and technology. The world is not facing a water crisis. Even in the most arid places, people should have access to clean drinking water if resources were adequately managed.
- Since the 1960's, an increasing number of countries have scarcer access to water. It is falsely assumed that such a trend will continue as people do not understand that water is a reusable resource. For example, in Colorado USA every drop of water is used 7 times. The problem is due to poor management and not to physical scarcity.
- Success comes with good policies and management. Managing water situations in mega cities is a complex affair which requires skilled dedicated people. Generally, the manager of a utility in a developing country will be an administrator who will remain in place for a period of 2,5 years. He/she will not have the competencies or the time to make and follow through the necessary changes.
- This is surprising as clean drinking water is essential for economic growth. Sick people are not productive.
- Access to such clean drinking water has a price which is estimated to cost between 2 to 5% of disposable income.



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- Examples of successful management of water exist in developing countries.
- In Cambodia, the supply of water in Phnom Penh covers 375 km² and concerns 1,7 million inhabitants. In 1993, the water system was in a dire state. Politicians granted financial and operational autonomy to the water works. This combined with external financial assistance and better management led to a complete turnaround.
- Efforts were concentrated on:
 - Restructuring management
 - Changing the culture
 - Promoting self reliance
 - Training and exchanging best practices
- This helped :
 - Reducing losses thanks to replacing the old pipes and quickly repairing leaks
 - Maximising revenues thanks to better metering, billing, collection and fighting illegal connections
 - Providing the right level of service through service contracts and realistic pricing according to costs
- The gains were measured:
 - Water loss went from 72% in 1993 to 6,2% in 2008
 - Collection improved from 48% to 99,9%
 - 1000 connections were served by 20 employees in 1993 and only 4 in 2008
- Countries such as Singapore show how in over forty years it is possible to create a world class operation from nothing. The nation state of Singapore covers 704 km² and has a population of 4.6 million inhabitants. It experiences high levels of rainfall.
- Singapore manages the supply and demand aspects. A portfolio of water supply is managed from different sources and according to uses. Water is provided by rainfall trapped in water encatchments, by pumping, by desalination and importation. Reused water is directed to non drinking usages. Through education, people are more likely to better manage the demand side.
- Mexico highlights the difficulty supply water when there is weak management. Mexico city covers 4925 km² (0,3% of the country's surface) and concerns 20 to 25% of the population and 32% of GDP.
- In Mexico City, 40% of the water is wasted. Excessive pumping of water has led to the subsiding of certain areas of Mexico City. Gravity driven sewage is now impossible making it very vulnerable to flooding leading to extreme sanitation problems. The need also to pump in water and pump out sewage water is becoming increasingly expensive as it consumes 20% of the country's energy.
- The challenge of water sanitation in poor situations is not a challenge of money but one of priorities. Problems are numerous and cover such different aspects as:
 - Lack of proper housing
 - Lack of public services
 - Difficulty in accessing certain geographical areas

- Pollution problems
 - Low level of education and skilled people
 - Malnutrition
 - Insecurity
 - Poor social cohesion
- This requires a constant effort in education and ensuring that the poorer people are considered as citizen with rights.
 - When it comes to sanitation, it is also important to consider the long term impact of emergent pollutants on eco systems. Pollutants such as oestrogen from birth control pills can be found in surface, ground, drinking and bottled water. The man made pollutants are far more concentrated and durable than there natural counterparts. Dealing with this pollution constitutes the next big technical challenge for water supply.

Quotes

"Problems lie in poor policy, management and corruption. It should be possible to better situation in the next 10 or 15 years."
Asit K. Biswas

"When it comes to supplying clean drinking water: Do or die!"
Ek Sonn Chan

"When promoting reuse water, it is important to take into account the public's perception. In Singapore, we call it New Water!"
Peng Kah Poh

"It is easy to blame governments. But governments represent people. The apathy of people compounded by the apathy of governments is the main excuse!"
Asit K. Biswas

"The answer is: education, education, education!"
Asit K. Biswas

"Putting good infrastructure is lost, if people aren't educated to take care of the resources they have."
Alexander Zehnder

"It is a qualitative problem and not a quantitative one. We need the right governments and management. The technology is here!"
Alexander Zehnder

"The future water problem will be in small and medium sized cities which lack the political and financial clout and technical expertise."
Asit K. Biswas

"Make the link between governments, utilities and citizens."
Cecilia Tortajada

"Serve the poorest first as they are dying. Promote the right to have access to clean drinking water."
Jean Lapègue



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BioVision 2009 session reporting

“Be open to see the problems as challenges. Be responsible and be creative!”
Patricia Burkhardt-Holm



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