

(Quelldatei von Michael D. Lee erstellt 13.05.2005, 20:21 Uhr)

8th WORLD CONGRESS OF METROPOLIS BERLIN 2005,

Commission 6, Friday, 13 May 2005:

Prof. Michael D. Lee, California State University, Final report and conclusions

I am honored to have the role of reporter for **Commission 6 of Metropolis: Water Management** and am grateful to our panel of experts for providing me with such an excellent body of material to summarize.

The theme of the **8th World Congress of Metropolis – Tradition and Transformation: The Future of the City** – permeated the presentations of this highly qualified and experienced group of water practitioners. It is clear from their words that one of the most important, traditional roles of the metropolis, the provision of the key basic services of water supply and sanitation to residents, will continue at an accelerated pace and that we can expect to see great transformations in both the models of service provision and in the nature of the challenges to be overcome. Public-private models of service provision will become increasingly common in our efforts to expand water and sanitation coverage and meet and sustain Millennium Development Goals. Similarly, increasingly sophisticated and integrated approaches to maintaining and upgrading expanding and aging infrastructure networks, ensuring supply reliability, and protecting the natural environment from the potential negative effects of urbanization and the generation of increased wastewater volumes will become commonplace.

We began the Commission 6 proceedings today with a wonderfully instructive and thought-provoking **visit to some of Berlin's premier water management innovations** that demonstrated different approaches to decentralizing the containment, treatment and productive use of stormwater.

Faced by non-point source pollution of sensitive groundwater and the overflowing of sewers by runoff, three different ways to deal with rainwater and surface runoff were **demonstrated by Berlin professors and researchers Diestel, Teschner, Jahn, Schmidt and Reichmann**. An innovative energy and water efficient research building at the Humboldt University, a state-of-the-art stormwater collection and treatment system developed by the Berlin waterworks, and a showcase rainwater collection and

substitution system at the flagship headquarters of the DaimlerChrysler corporation illuminated a very wide spectrum of possibilities to those lucky enough to attend this excellent field trip.

Following on from the field visits, we have been doubly fortunate to participate in this excellent panel discussion. The context for our talks today was clearly outlined by UNESCO Deputy Coordinator of the World Water Assessment Program, **Carlos Fernandez Jauregui**, who stressed the vital importance of effective water planning and governance.

This was echoed by Commission 6 **President Arturo Montiel Rojas** and the **Vice-President's representative, Mme. Francine Senecal**, in their words of welcome. Tomorrow Metropolis and UNESCO will sign a Strategic Cooperation Agreement at the closing session with respect to water management.

Dr. Koncagul told us how our urban populations have been growing five times faster than the rural population and if the Millennium Development Goals are to be reached by 2015, some 960 million urban dwellers will need to be supplied with potable water and more than 1 billion with sanitation facilities. As we know, cities directly shoulder the majority of the responsibility for meeting this challenge; the success of the Millennium Development Goal for water and sanitation thus depends largely on the efforts of metropolises. Meeting those goals requires good city governance. As **Ing. Alegria Calvo** also emphasized, some of the most rapid urban growth is taking place in the economically weakest countries and in regions where water resources are limited. As metropolises increase in size and water service is provided to millions of additional residents, wastewater volumes also rise exponentially, frequently without corresponding treatment infrastructure, especially in slum settlements. This does not have to be the case. Berlin's **Dr. Peter-Froehlich** suggested how we might cost-effectively expand sanitation coverage in lockstep with expanded water provision. Berlin sanitary engineers are pioneering research to develop new, affordable and effective decentralized sanitation technology that could be applicable in developing country situations, thus potentially accelerating the rate at which Millennium Development Goals could be reached without the need to build expensive sewers and treatment plants. We look forward to the results of this research.

Pointing to the need for more effective governance, **Ing. Alegria** articulated the many daunting challenges ahead for water provision, wastewater and stormwater management, and pollution prevention. Although a seemingly Herculean task, the panel also showed us that we have grounds to be optimistic. **Dr. Ningan and Vice-President Shui** illustrated just what can be achieved by dynamic, forward-looking Metropolises. Guangdong Province has made a huge leap forward in extending water and sanitation coverage to its residents, and is actively building water and wastewater facilities. In his written commentary, Dr. Ningan explained how the province has transformed itself from a place where you could not drink the tap water, to a region with the most advanced treatment technology and some of the purest drinking water in China. Similarly, Chongqing Province, with its 179 water plants treating close to 3 million cubic meters of water daily, is well on its way to meeting the Millennium Development Goal for water and sanitation. Very high levels of coverage will have been reached by 2015 for small and large cities across the province. Not only is coverage being addressed, but system reliability also, a key element in the sustainability equation. Storage reservoirs are being added along with watershed protection and sewer installation and stormwater separation, key steps to ensuring the protection of both public health and environmental quality. The sheer size and rapidity of these investments in our two Chinese examples provide a clear indicator of what Metropolis members can do with the right mix of political will, technical know-how, and fiscal ingenuity and flexibility. Chongqing's example of partial privatization provides a thoughtful model of public-private partnerships that could be extended elsewhere in China as well as in other countries. This theme was echoed in later papers. **Dr. Danho** of Abidjan described recent advancements in sustainable water management in his city, where water delivery is part privatized piped supply, part individual systems and part yet unserved. Drinking water is being sold in plastic bags at low prices to the unserved, while piped coverage is being expanded and public education carried out. Montreal has been providing assistance to Abidjan concerning wastewater contamination, an example of the kinds of city to city collaboration that the Metropolis Association can foment. The importance of education in preserving water supplies, preventing water contamination and facilitating the sustainable, cost-effective use of sewage sludge was stressed by **Mr. Astedt** of Stockholm.

The two China case-studies illustrated the challenge of expanding service. Another challenge of course is to maintain and sustain the quality and reliability of coverage that has already been achieved. **Mmes. Senecal and Dandavino** gave us a very clear picture of Montreal's historic efforts to get to grips with its ageing water network. The complexity of this project and its satisfactory outcomes should give many other cities encouragement concerning the ability of citizens to grasp and embrace capital development projects, even when they must tax themselves to do so, as long as they understand and recognize the long-term benefits. Billions of Euros will be spent by Metropolis members in the coming decades to consolidate and preserve past gains, let alone to forge ahead to meet Millennium Development Goals of halving the population without access to adequate water and sanitation. As pointed out by **Tom Roper**, full privatization or public-private partnership models will likely become increasingly common means to achieving both objectives. It should not be compulsory but be determined on a case-by-case basis to avoid unsuitable privatizations that end up with more expensive, lower quality services, especially to the poor. Undoubtedly, private expertise can help improve water utilities and good examples do exist. New private and public finances will be available to stimulate these new arrangements although proper care should be taken to examine the political and social acceptability of the various models when pursuing such options. An example of the potential for public-private partnership is the model used in our host city, Berlin. Following the insightful explanation provided by Engineer **Joerg Simon**, the potential for this kind of partnership is obvious and many of the world's metropolises will adopt some degree of privatization in water and wastewater management in the coming decades. They would do well to look at Berlin's innovative approach of interagency and interdisciplinary cooperation as a potential model for replication.

One of the strengths of the Metropolis is that it brings practical information and experiences to the attention of those key individuals charged with the responsibility of designing and developing water and wastewater systems for a growing population.

It is clear that within the ranks of Metropolis, problems faced by one city are already being tackled in another with many relevant experiences that can be emulated or modified for a different context. Having taught integrated water resources management for a number of years now, I now have a new model to present, thanks to the work of the

Melbourne and the State of Victoria. The integrated, holistic and systematic approach presented by **Prof. Neilson** in its new 50 year plan provides a framework that many Metropolis members could learn from and that should be watched closely over the next 20 years of this organization as Melbourne cycles through its planned five year revisions. As a fast growing but relatively water scarce region, Melbourne faces many of the challenges found elsewhere but has developed an excellent blueprint for living within its means through conservation of supplies, substitution of treated wastewater for non-potable needs and protection of the environment through targeted wastewater plant effluent disposal. The State Of Mexico is also faced with wide-ranging environmental, social, environmental and policy challenges to achieving long-term sustainability. **Dr. Arreguin Cortes** showed how this highly urbanized region is also developing a systematic understanding of its major challenges and the best options to resolve them in an integrated, long-term program of water and watershed management.

While Metropolis provides a forum for members to network and to share experiences and provide mutual assistance, it should not forget the many resources that members can access outside its membership. Thanks to **Dr. Tejada-Guibert**, we are now more aware of the excellent set of resources and tools being assembled for the world's metropolises by UNESCO's International Hydrology Programme. It's current Phase 6 of initiatives concerning Water Integration: Systems at Risk and Social Challenges will be very useful to the successful achievement of water management outcomes. The IHP is producing and will make available guidelines for improving data acquisition for integrated urban water management, a manual of water and environment sensitive urban development practices, a model for sustaining groundwater systems, a guide to integrating climatic considerations into water management and many more. A global network of supporting organizations is being assembled by UNESCO across Asia, Latin America, Europe, Oceania and Africa that can provide Metropolis members with training and important information on the many different aspects of water management needed for success in the 21st century and I urge all of us to seek them out in the coming years.

On a final note, this World Congress of Metropolis has been particularly noteworthy for its inclusion of special workshops to bring youth and women's voices and concerns more into the mainstream. In closing, therefore, I'd like to remind us of the comments of **Ing. Alegria Calvo** who pointed out the important role played by women in the water sector

as principal users of water in the household; they are key players in our efforts to keep community water and sanitation systems functioning and in mobilizing labor and financial resources for both construction and cost recovery.

Having been present in Seoul when this Commission was created, I would like to thank **Governor Arturo Montiel Rojas** of the State of Mexico, President of Commission 6: Water Management for his leadership in proposing and guiding this important Metropolis initiative and the work of its 17 representatives and hope that we will all meet again at the 9th World Congress of Metropolis, wherever it might be, to report back on the continuing progress in meeting our collective goals in meeting the call to Rescatemos la vida, rescatemos el agua (Preserve Lives, Preserve Water). I would like to thank all his staff in the State of Mexico and those of **Arquitecto Benjamin Fournier Espinosa**, Secretary of Water, Public Works and Infrastructure for advancing the work of Commission 6 and particularly thank **Monica Salazar** for all her hard work in bringing this session to fruition.

We can all look forward to the creation of a new World Center of Expertise in Water Management for Cities that can bring together the expertise of the academic, private and public sectors to help cities maximize the benefits they can bring to society in the field of water and wastewater management and the social, cultural, economic and environmental improvements they can make in the lives of more than 50% of the world's population.