



018530 - SWITCH

Sustainable Water Management in the City of the Future

Integrated Project
Global Change and Ecosystems

**D4.1-18: List of Publications work package 4.1
Water use in sanitation and waste management**

Start date of project: 1 February 2006

Duration: 60 months

Revision [final]

Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)		
Dissemination Level		
PU	Public	√
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Switch Publications

PhD. Thesis

Winker, M. 2009. Pharmaceutical residues in urine and potential risks related to usage as fertiliser in agriculture. Hamburger Berichte zur Siedlungswasserwirtschaft 67, Hamburg University of Technology, Hamburg, Germany. (PhD THESIS)

Junhua, Z. 2010. Removal of pharmaceutical residues from separated urine. Faculty of Urban Construction and Environmental Engineering - Chongqing University, Chongqing, China. (PhD THESIS in chinese).

Chai Hongxiang. Study on technology and economy of water-saving about green building community. Chongqing University, China.

Liang Jianjun, Study on wastewater treatment with complex subsurface flow constructed wetland and biological contact oxidation. Chongqing University, China.

Huang Li. Water quality simulation and prediction of landscape water body in green residential district. Chongqing University, China.

Agudelo, C. 2011. Closing cycles in the built environment: Urban Harvest Approach- An urban resource management approach. Wageningen University. (PhD THESIS - to be finalized sept 2011)

Scientific Journals

Agudelo Vera, C., Mels, A., Keesman, K., and Rijnaarts, H. 2011. Resource management as a key factor for sustainable urban planning. Submitted to Journal en Environmental Management.

Agudelo vera, C., Leduc, W., Mels, A.R., & Rijnaarts, H. 2011. Harvesting urban resources towards more resilient cities. Submitted to Resources, Conservation and Recycling Journal

Mels, A.; van Betuw, W.; Braadbaart, O. Technology selection and comparative performance of source-separating wastewater management systems in Sweden and The Netherlands. Water Science and Technology. 2007, 56 (5) 77– 85

Mels, A., Castellano, D., Braadbaart, O., Veenstra, S., Dijkstra, I., Meulmand, B., Singelse, A., Wilsenach J.A. Sanitation services for the informal settlements of Cape Town, South Africa. Desalination. 2010, 251, 330–337.

Winker, M. 2010. Are pharmaceutical residues in urine a constraint for using urine as a fertiliser? Sustainable Sanitation Practice Issue 3, pp. 18-24.

Winker, M. 2010. Pharmazeutische Wirkstoffe in der aquatischen Umwelt, Deutschland im Fokus. In: Handbuch für Angewandte Limnologie. V.-4.1.2, Aquatische Ökotoxikologie, 28. Ergänzungslieferung 10/10.

Winker, M., Clemens, J., Reich, M., Gulyas, H. and Otterpohl, R. 2010. Ryegrass uptake of carbamazepine and ibuprofen applied by urine fertilization. Science of the Total Environment, 408(2010), pp. 1902-1908.

Scientific meetings

Agudelo, C., Mels, A. and Braadbaart, O. Multi-criteria framework for the selection of urban sanitation systems. 2nd SWITCH Scientific Meeting Dan Panorama Hotel, Tel-Aviv, Israel 25 - 29 November 2007.

Agudelo, C., Mels, A. and Rijnaarts, H. Waste water as a source for secondary resources and linkage to other urban systems. 5th SWITCH Scientific Conference 2010 "Sustainable Water management Improves Tomorrow's Cities' Health: achievements and way forward". Lodz, Poland. 13-15 October, 2010

Kujawa-Roeleveld, K. and Zeeman, G. Elimination of pharmaceuticals from concentrated wastewater. First SWITCH Scientific Meeting. University of Birmingham, UK. 9-10 Jan 2006

Mels, A., Guo, S., Zhang, C., Li, X., Wang, H., Liu, S., and Braadbaart O. Decentralised wastewater reclamation systems in Beijing – adoption and performance under field conditions. First SWITCH Scientific Meeting. University of Birmingham, UK. 9-10 Jan 2006.

Qiang, H., Li, H., and Zhai, J. Application of Sustainable Water System – the Demonstration in Chengdu (China) - Belo Horizonte, Brazil. 30 Nov – 4 Dec 2008

Roman, A., Winker, M., Tettenborn, F. and Otterpohl, R. Informal Settlements and Wastewater Reuse: Improve of Urban Environment and Alleviate Poverty in Lima, Peru. 2nd SWITCH Scientific Meeting Dan Panorama Hotel, Tel-Aviv, Israel 25 - 29 November 2007.

Tettenborn, F., Kaneva, I., Grünauer, J., Winker, M., Otterpohl, R. Transport and Logistics basics in the context of new sanitation concepts. 2nd SWITCH Scientific Meeting Dan Panorama Hotel, Tel-Aviv, Israel 25 - 29 November 2007.

Winker, M., Gulyas, H. and Otterpohl, R. Fertilization of rye grass with carbamazepine, ibuprofen, and 17 α -ethinylestradiol spiked urine – a greenhouse experiment. 3rd SWITCH Scientific Meeting - Belo Horizonte, Brazil. 30 Nov – 4 Dec 2008.

Chapter in a Book

Agudelo, C., Mels, A., and Rovers, R., 2009. Urban Water Tissue: Analysing the Urban Water Harvest Potential. pp. 63- 78. In Dobbelsteen, A., Dorst, M. and Timmeren, A. (eds), Smart building in a Changing Climate. Techne Press, Amsterdam.

Reports

STOWA (2009) Sorption and biodegradation of pharmaceutical compounds in soil Application of urine as a natural fertiliser for energy crops.

STOWA (2009) Removal of pharmaceutical compounds in urine by Ozone and Granular Activated Carbon.

Conference proceedings

Agudelo, C., Mels, A., and Rovers, R. 2009. URBAN Water Tissue: analysing the urban water harvest potential. In Proceedings of the SASBE 2009, Delft, The Netherlands.

Agudelo Vera, C.M., Mels, A.R., Keesman, K.J., Rijnaarts, H.H.M. 2010. Urban Harvest Approach (UHA): Towards sustainable resource management in cities. In proceedings of

the 3rd International Conference on Eco-Efficiency - Modelling and Evaluation for Sustainability: Guiding Eco-Innovation and Consumption, 09-11 June 2010, Egmond aan Zee the Netherlands.

Agudelo Vera, C.M., Mels, A.R., Keesman, K.J., Rijnaarts, H.H.M. 2011. Low impact urban design by closing the urban water cycle. In proceedings of The future of urban water: solutions Conference. 24-26 January 2011, UNESCO, Paris.

Kujawa-Roeleveld, K., Schuman, E., Grotenhuis, T., Kragić, D., Mels, A. and Zeeman, G. Biodegradability of human pharmaceutically active compounds (PhAC) in biological systems treating source separated wastewater streams. In: New Sanitation Concepts and Models of Governance, Wageningen, the Netherlands, 19 - 21 May, 2008. - Wageningen : 2008

Leduc, W., Agudelo, C., Rovers, R., and MELS, A. 2009. Expanding the exergy concept to the urban water cycle. In Proceedings of the SASBE 2009, Delft, The Netherlands.

Mels, A., Meulman, B., and Castellano, D. Sanitation in developing countries: a business opportunity? In proceedings of Sanitation Challenge Conference, 19 May 2008, Wageningen, the Netherlands.

Telkamp, P., Mels, A., van den Bulk, J., Koetse, E., and Braadbaart, O. User acceptance of vacuum toilets and grey water systems in The Netherlands, Norway and Germany. In proceedings of Sanitation Challenge Conference, 19 May 2008, Wageningen, the Netherlands.

Winker, M., Clemens, J., Reich, M., Gulyas, H. and Otterpohl, R. 2008. Behaviour of three pharmaceuticals in soil applied by urine fertilisation. In: International Symposium Coupling Sustainable Sanitation & Groundwater Protection, 14.-17. October 2008, Hannover, Germany. (POSTER)

Winker, M., Dimova, D., Ritter, K., Otterpohl, R. and Clemens, J. 2010. Effect of Five Pharmaceutical Substances contained in Urine on the Germination of Cress and Cereal Seedlings. In: IWA Conference Sustainable solutions for small water and wastewater treatment systems, 19-22 April 2010, Girona, Spain.

Master thesis

Agudelo, C. August 2007. Development and Testing of a Multiple Criteria Framework for the Assessment of Urban Sanitation Systems. Wageningen University.

Akanyeti, I. November 2006. Evaluation of Combined and Source Separated Wastewater Treatment Systems in terms of Pharmaceutical Compounds Removal in combination with Nutrient and Energy Recovery. Sub-department of Environmental Technology Wageningen University

Boonman, J. March 2007. Analysis of the drivers and barriers for implementation of non-conventional sanitation systems in the projects Drielanden and the Waterspin and a performance assessment of these systems. Wageningen University.

Chang, Z. May, 2006. An assessment of centralized and decentralized wastewater reclamation systems in Beijing. Wageningen University.

Koetse, E. July 2005. The implementation of DESAR concepts in two projects in Germany. This research encompasses an inventory of the practical applications of two selected projects in Germany where DESAR systems are applied in order to provide better information for technology selection in the future for interested parties. Wageningen University.

Schuman, E. July 2008. Fate of human pharmaceuticals in biological treatment systems treating concentrated wastewater under various environmental conditions. Sub-department of Environmental Technology Wageningen University

Shouk, I. April 2009. Developing innovative sanitation scenarios: Maawa El Sayadeen Settlement in Alexandria Egypt. Wageningen University.

Stoll, N. Potential Costs and Revenues of Ecological Sanitation in Accra (Ghana). Is there a chance for urine-based fertilizer to be market competitive? - TUH

Telkamp, P. July 2006. Separate collection and treatment of domestic wastewater in Norway. A research into the establishment and performance of non-conventional sanitation systems at the sites "Kaja" and "Torvetua". Wageningen University.

Tettey-Lowor, F. August 2008. Closing the loop between sanitation and agriculture in Accra, Ghana. Improving yields in urban agriculture by using urine as a fertilizer and drivers & barriers for scaling-up. Wageningen University.

van Betuw, W. December 2005. "Evaluated Source Separating Wastewater Management Systems (SSWMS)" - A research into the performance of Source Separating WMS in the Netherlands and Sweden, and the drivers and barriers that were crucial for their implementation. Wageningen University.

van den Bulk, J. New initiatives in sanitation systems - Comparative assessment of the implementation process and actual performance of the Casa Vita project (Deventer) and the Flintenbreite project (Lübeck). Wageningen University.

Wang, H. December, 2006. Decentralized wastewater reclamation in Beijing - An assessment of the performance of 4 systems and the drivers and barriers for implementation. Wageningen University.

Yan Jing. 2010. Study on Integrated Design of Water-saving and Water Reuse in Green Building. Chongqing University, China.

Han Yi. Simulation and Ecological Treatment of Urban Runoff based on Total. Chongqing University, China.

Wang Yan. Study on Eco-Protecting Technology of Water Quality in Green Residential District. Chongqing University, China.

Wei Wuqiang. Study on the Combined Process of SBR and Constructed Wetland for Domestic Wastewater Reclamation and Reuse. Chongqing University, China.

Shi Xiaofei. Study on Treatment of District Sewerage with the Combination Process of Biological Contact Oxidation and Constructed Wetlands. Chongqing University, China.

Student Reports

Floor, J. Guerena, P.C., Goor, van den, R. Zhang, Y. , Sierra, H.A. October 2007. Report within AMC course at WUR: Identifying sustainable options for reducing or ending pharmaceutical contamination in The Netherlands. Sub-department of Environmental Technology Wageningen University

Jibichibi, B., Tuantet, K., Khanal, S. and Regelink, I. December 2007. Report within AMC course at WUR: Veterinary Pharmaceuticals. Effects of Veterinary pharmaceuticals on the environment and solutions to decrease their emissions in the Netherlands. Sub-department of Environmental Technology Wageningen University.