



Brussels, 27 March 2007
ENV.D.2 SD

**MINUTES FROM THE 1ST MEETING OF THE WASTE WATER REUSE WORKING GROUP
15TH MARCH 2007**

These minutes summarise discussions held at the EUWI-Med Waste Water Reuse Working Group (WWR-WG) meeting held in Brussels on 15 March 2007. The meeting was hosted by the Environment Directorate-General, at the European Commission.

Attendees are listed at the end of these minutes.

The meeting started off with a welcome note from the co-chair of the WWR-WG, Mr John Mangion (Water Director, Malta Resources Authority), followed by a presentation on the WWR-WG mandate by Sylvie Detoc and Sophie Breul-Busson (European Commission).

It was highlighted that this activity is a preparatory one. Based on the outcomes of the analysis to be carried out by the Group, it will be then considered which further action will be taken to address waste water reuse at the EU level. The meeting was divided into two sessions:

- **Session 1:** Existing Initiatives and Programmes at European and Mediterranean level
 - Integrated Concepts for Reuse of Upgraded Wastewater – Thomas Wintgens (AQUAREC)
 - Presentation on EUREAU – Bruce Durham (EUREAU)
 - Waste Water Reuse in Spain – Alejandra Puig (Directorate General for Water Ministry of Environment)
 - Presentation on MEDA Water – Peter Kampe (MEDA Water)
 - Waste water use in the Mediterranean: background and future orientations– George Kamizoulis (WHO/MED POL)
 - Jordan Experiences with Waste-water Reuse for Agriculture and Landscaping - Ahmad M Abu-Awwad (University of Jordan)
 - Waste-water Reuse Experience of Egypt - Hussein Abdel-Shafy (National Research Centre, Water Research & Pollution Control Department, Egypt)

- Effect of Water Quality on the Microbial Quality of Food Crops – Abid Nasser (Water Quality Research Laboratory, Ministry of Health, Israel)
- **Session 2: Next Steps**
 - Presentation of the results of the questionnaire – Niraj Shah
 - Agreement on the activities of the Working Group and Next Steps

All the presentations are available on the WWR-WG page of the EMWIS website: <http://www.semide.net/topics/WaterReuse/>

Main Discussion Points

The following is a synthesis of the main points from the discussions that followed from the two sessions:

- Definitions, guidelines, codes of practices: There needs to be an inventory and a clear understanding of waste water reuse definitions, standards, codes of practices and guidelines in order to encourage the development of such practises. A clear and commonly agreed definition of the terms related to waste water reuse (re-use, recycling, re-generated, etc.) and of the uses of treated waste water is needed. A lot of information already exists: the MEDA Project has a list with the details of all these standards; AQUAREC, MEDPOL. In particular was underlined the need to separate 'direct' and 'indirect' waste water reuse. It was pointed out that the standards currently in use are the WHO Standards and the Californian Standards..
- There is a need to specify the treatment requirements according to the uses. In particular, as the current largest use of treated waste water is for agriculture (with treatment requirements depending on the nature of the crop), we need to assess the advantages and risks of waste water reuse to farmers. Wider context: There needs to anchor the issue of WWR in the Climate change and water scarcity perspective; in addition, there is a need to identify different waste water reuse applications and how they could support the implementation of the Water Framework Directive
- Rural areas: It was pointed out that the Urban Waste Water Treatment Directive (UWWTD) does not cover the smaller agglomerations of less than 2,000 population-equivalent). There was a request that the Commission should look into developing guidelines for such small agglomerations.
- Economic aspects: There is little information outside of the research environment on the types and levels of treatment required for the safe use of recycled water and almost none on the financial implications (costs) of these types and levels of treatments. However, any such costs need to be set against the benefits of undertaking such an approach and compared with any available alternatives so as

to choose the best option – in other words a cost benefit analysis and cost effectiveness analysis needs to be undertaken as a decision tool. Cost effectiveness also needs to be taken into account when developing the guidelines..

- **Cost-benefit analysis:** Identify and define the benefits and risks of waste water reuse at a local, regional, national, and international level. For this, we need to measure the value of waste water on the communities and the economy as a whole in terms of the economic costs and benefits and promote the use of reuse through an appropriate set of economic incentives. This information can then be used to build an argument for the need to reuse waste water. The overall aim of this would be to convince policy makers and the public of the merits of such an approach (for example waste water reuse is needed because of the increasing levels of water scarcity in the EU-MED region).
- **Innovative solutions:** A participant emphasised the need to think of innovative solutions for waste water treatment and reuse. So far focus has been put on large scale infrastructure and at municipal levels. However, cheaper, small scale and decentralised units, even at a household level, should also be considered. In Malta this is happening in some hotels. The use of such small scale plants could be encouraged through requirements in building regulations/ standards. It was pointed out that separation and treatment at the source is cheaper and perhaps more effective than when aggregated. Further more as the implementation of the UWWTD has been slow the use of small scale decentralised technologies/ more localised solution could help to reduce this cost.
- **Public awareness/acceptance:** The public perception of the use of waste water is currently poor. There is a need for a coherent and concerted effort to increase awareness amongst the public, of the benefits of waste water reuse. (Australian and Singapore examples).
- **Lessons learnt:** It is important to review the EU-MED experience and develop detailed case studies of flagship, innovative projects and define experiences of what has worked and what has not; this also includes national experiences of developing policies with regards to waste water reuse (as has been the case in Spain). We also need to learn about the experiences from different areas of the world that have similar water scarcity problems – for example Australia (they are no longer using a river basin classification and instead use a concept of water portfolio management or integrated water cycle management).
- **Barriers:** We need to review the MED-EU institutional framework in order to identify barriers to policy development for safe and justifiable waste water re-use.
- **Research:** the group could help identifying further research needs related to waste water reuse.
- **Vision:** One of the objectives should be to have a vision of the future of waste water reuse for the EU and in the Mediterranean, including proposals for a way forward.

Next steps

These discussion points were then categorised as key issues that the WWR-WG will focus on in the coming year, and listed into a table (presented in the next page). It was agreed that all the members will be responsible for developing and delivering on aspects of the contents.

The tasks for the drafting of the Mediterranean document on WWR are the following:

- **Lead contributor of each chapter:** Coordinates the drafting of each chapter. More specifically, the Lead contributor communicates and collaborates with all the “contributors” (co-drafters and example providers) of the corresponding chapter, collects their contributions and produces, by including his/her inputs where necessary, the corresponding chapter. The Lead contributor delivers the corresponding chapter to the co-chairs, according to the defined timeframes.
- **Contributors (co-drafters and example providers):** Collaborate with the Lead contributor of the corresponding chapter for the drafting of specific parts of the document. The co-drafters and example providers provide the Lead contributor of the corresponding chapter with their contributions and with specific case studies, practices, etc., to be included (after the evaluation of the Lead contributor) in the proper part of the document.
- The co-chairs are in charge of the homogenisation of the whole document and the final review.

The Table was circulated to the members for their comments and suggestions.

Timeframe of Activities:

The following time frame of activities have been envisaged:

- Final table of contents: 30 April
- First Draft sent by the lead contributors to the co-chairs of the WWR-WG: 15 June
- Circulation of First Draft: 01 July
- Comments of First Draft to be received by: 31 August
- Second Draft to be circulated: 15 September
- Comments of second Draft to be received by: 01 October
- Second WWR-WG meeting: 12 October (TBC)
- Final Draft: 26 October
- Final Draft to be sent to the Strategic Coordination Group: 7/8 November
- Presentation to the EU Water directors: 29/30 Nov.

Key Issues **(Draft)** and Allocation of Tasks

Key Issues	Lead Contributor	Other Contributors
<p>Definitions/ terminologies</p> <p>Definition of applications/uses</p> <p>Establish a reference framework of guidelines (including an inventory of the current (2007) guidelines). Compare the guidelines; carry out gap analysis / identify weaknesses; and propose areas of further research.</p>	<p>Commission – check the WFD and the Urban Directive</p> <p>Bruce Durham</p> <p>George Kamizoulis</p>	<p>Spain (Alejandra Puig Infante)</p> <p>Ahmad Abu Awwad</p> <p>Hussein Abdel Shafy</p> <p>Maria Z Dodou</p> <p>Abid Nasser</p> <p>Peter Kampe</p> <p>Jean Duchemin</p>
Vision – Future of waste water reuse in the urban context		
<p>Making the case for waste water reuse</p> <p>Develop best practice case studies</p>		<p>George Kamizoulis</p> <p>Hussein Abdel Shafy</p> <p>Jean Duchemin</p> <p>Ahmad Abu Awwad</p> <p>Abid Nasser</p>
Policy and institutional issues (e.g. decentralised implementation of waste water reuse – the case for and against)		<p>Bruce Durham</p> <p>Hussein Abdel Shafy</p> <p>Abid Nasser</p> <p>Sacha Gabizon – (focus on small scale systems)</p>

Key Issues	Lead Contributor	Other Contributors
<p>Why is it important to deal with water reuse in the Euro-Med context?</p> <p>Why is policy development on waste water reuse important?</p> <p>Better implementation of existing legislation and the issue of convergence to the legislation</p>	Thomas Wintgens	Bruce Durham
<p>Economics of waste water reuse</p> <p>CBA and cost effectiveness analysis</p>	Bruce Durham	<p>Spain (Alejandra Puig Infante)</p> <p>Thomas Wintgens</p> <p>Peter Kampe</p> <p>Peder Pederson</p>
<p>Cross-benefits of waste water reuse</p>	Jean Duchemin	<p>George Kamizoulis</p> <p>Hussein Abdel Shafy</p>
<p>Environmental Impacts – water and nutrients</p>	Gunnar Noren	<p>Ahmad Abu Awwad</p> <p>Hussein Abdel Shafy</p>

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