



WA2 - WA3 coordination meeting minutes

Meeting description		
Meeting	<p> Title: WA2-3 coordination meeting Place: EYDAP Headquarters Date: 3rd and 4th November 2014 Author of the meeting: Rita Ugarelli (SINTEF), Gerard van den Berg (KWR) Location: 156, Oropou Street, Galatsi, Athens </p>	
		
Attendants	DAVID SCHWESIG	IWW Water Centre, Germany
	ESTER VILANOVA	AMPHOS 21, Spain
	RONJON CHAKRABARTI	ADELPHI, Germany
	SIBYLLE KABISCH	ADELPHI, Germany
	KJELL HAAS	BRUINE DE BRUIN BV, Netherlands
	CHRISTOS LIOUMIS	CHEMITEC, Greece



	ADRIANA LAZARI	CHEMITEC, Greece
	DIMITRIS CALDERIS	CHEMITEC, Greece
	GERARDO ANZALDUA	ECOLOGIC INSTITUT, Germany
	MANUEL LAGO	ECOLOGIC INSTITUT, Germany
	CHENG SUN	INRIGO WATER AS, Norway
	PER KOLNER	LEIF KOLNER INGENIORFIRMA AS, Norway
	VASCO DE FREITAS	SEGNO, Germany
	CHRISTIAN NICLAS	SEGNO, Germany
	EFFIE MAKRI	TELINT, United Kingdom
	MANOLIS NIKIFORAKIS	TELINT, United Kingdom
	MANTHOS BIMPAS	TELINT, United Kingdom
	WEISS GEBHARD	UFT, Germany
	NADINE GERNER	EMSCHERGENOSSENSCHAFT, Germany
	ISSA NAFO	EMSCHERGENOSSENSCHAFT, Germany
	PERE CAMPROVIN	CETaqua, Spain
	NIELS RIEGELS	DHI, Denmark
	ANDERS KLINTING	DHI, Denmark
	GERARD VAN DEN BERG	KWR Watercycle Research Institute, Netherlands



	MARCEL PAALMAN	KWR Watercycle Research Institute, Netherlands
	JORGEN KROGSGAARD JENSEN	DHI, Denmark
	RITA UGARELLI	SINTEF, Norway
	HERMAN HELNESS	SINTEF, Norway
	SIGRID DAMMAN	SINTEF, Norway
	SEBASTIAN BIRK	UNIVERSITY OF DUISBURG-ESSEN, Germany
	MAKROPOULOS CHRISTOS	National Technical University of Athens, Greece
	DANOS MAMAIS	National Technical University of Athens, Greece
	CONSTANTINOS NOUTSOPOULOS	National Technical University of Athens, Greece
	ANDREAS ANDREADAKIS	National Technical University of Athens, Greece
	KATERINA ANTONIOU	National Technical University of Athens, Greece
	ALEXANDROS DOUKAS	National Technical University of Athens, Greece
	LAZAROS KARAGIANNIDIS	National Technical University of Athens, Greece
	ATHANASIA TSERTOU	National Technical University of Athens, Greece
	CONSTANTINOS RIPIS	Athens Water Supply and Sewerage Company, Greece
	ELENI SMETI	Athens Water Supply and Sewerage Company, Greece
	MARGARITA XANTHAKI	Athens Water Supply and Sewerage Company, Greece
	DIMITRA TSIGALOU	Athens Water Supply and Sewerage Company, Greece



	VASILIKI KAREGOU	Athens Water Supply and Sewerage Company, Greece
	MARIA PLIATSIKA	Athens Water Supply and Sewerage Company, Greece
	ELENI DROSSOU	Athens Water Supply and Sewerage Company, Greece
	CHRISTOS TOURIKAS	Athens Water Supply and Sewerage Company, Greece
	MARIA PSAROUDI	Athens Water Supply and Sewerage Company, Greece
		
Agenda	<p>DAY ONE: Coordination of WA2 and WA3 Activities</p> <p>10:00-10:15 – Coffee reception and introduction to the workshop (Rita Ugarelli (SINTEF), Gerard van den Berg (KWR))</p> <p>10:15-12:45</p> <p>WA2 and WA3 status/achievements/foreseen deviations (if any) in Athens (Greece) Speaker: Christos Makropoulos (NTUA)</p> <p>WA2 and WA3 status/achievements/foreseen deviations (if any) in the Westland region (horticultural sector, The Netherlands) Speakers: Kjell Haas (BdB), Marcel Paalman (KWR)</p> <p>WA2 and WA3 status/achievements/foreseen deviations (if any) in Llobregat River Delta (Spain) Speaker: Pere Camprovin (CETaqua)</p> <p>13:00-14:00 – Lunch</p> <p>14:00-15:00</p>	



	<p>WA2 and WA3 status/achievements/foreseen deviations (if any) in Hoffselsva River (Oslo Area, Norway) Speakers: Cheng Sun (Inrigo Water), Herman Helness (Sintef)</p> <p>WA2 and WA3 status/achievements/foreseen deviations (if any) in Emscher River (NW Germany) Speakers: Gebhard Weiß (UFT), Christian Niclas and Vasco de Freitas (SEGNO), Nadine Gerner (EG)</p> <p>15:00-15:30 – Coffee Break</p> <p>15:30-15:45 – WP 42 solution package – suggested approach and discussion (Ronjon Chakrabarti, Sibylle Kabisch (ADELPHI))</p> <p>15:45-17:00 – Moderated discussion and group brainstorming on foreseen criticalities (Rita Ugarelli (SINTEF), Gerard van den Berg (KWR))</p> <p>17:00-17:15 – Wrap up and agreed list of actions. Evaluation of DAY ONE.</p> <p>17:30 - 18:30 –WA1 internal meeting. Participants: IWW, ECOLOGIC, UDE, DHI, EG</p> <p>20:30 – Social dinner</p> <p>DAY TWO: Excursion and Coordination of WA1 and WA3 Activities</p> <p>9:00-10:15</p> <p>Introducing the DESSIN Analytical framework to evaluate changes in ecosystem services - An update of progress with Work Area 1 (Geraldo Anzualdo)</p> <p>Practical example: Relevant ESS in the Emscher catchment in general and with focus on effects by innovative technologies (Nadine Gerner)</p> <p>10:15-10:30 – Coffee break</p> <p>10:30-11:30 – Group brainstorming to plan work ahead for ESS framework application on each pilots</p> <p>11:30-12:00 – Next steps: deadlines, responsibilities, wrap up of agreed list of actions. Evaluation of DAY TWO.</p> <p>12:00-14:00 – Transfer to pilot location and Lunch</p> <p>14:00-15:00 – Site visit</p>
	<p>15:00-16:00 – Opportunity for targeted Bilateral meetings on specific tasks. Please inform organisers if interested. Opportunity (eventually) for partners that cannot return home on day 2, if they want to discuss specific tasks - currently in the list (as for partners request):</p> <ul style="list-style-type: none"> • Meeting within WP 31.1 (lamella settler) between EG, UDE, UFT, SINTEF • Meeting within WP 42 (market analysis) between adelphi, EG, UFT,



	<p>SEGNO, ...</p> <ul style="list-style-type: none"> • Possibility for continuation of WA1 internal meeting. <p>16:00-17:00 – WAMT meeting (David Schwesig (IWW), Gerard van den Berg (KWR), Rita Ugarelli (SINTEF), Geraldo Anzualdo (Ecologic))</p>
Background	
	<p>The combined DESSIN WA2/WA3 meeting was initiated to discuss the progress of the activities in WA2 and WA3, and to define actions and goals for the next months of the project. It was also organised with the intention to give the researchers in WA2 and WA3 the opportunity to meet each other and look for common issues and options for collaboration. During the preparations of the meeting, it was concluded that the research (WA2) and demonstration (WA3) activities are strongly linked to the development of the Ecosystem Services Framework in WA1, as this should be applied for each of the pilot cases. Therefore, we decided to include a dedicated session on WA1 developments at Day 2 of the meeting. The activities, and partners involved in WA2/WA3, are also strongly related to activities in WP42 (specifically solution packages for SMEs). For that reason, a link to WP42 was included in the project to discuss opportunities for market uptake. At the end of Day 2 also a meeting of the Work Area management team was organised.</p> <p>Athens was chosen as location, as this also gave the opportunity to visit the decentralised waste water treatment pilot at Metamorfosi (Athens). The meeting location and logistics were organised by NTUA and EYDAP. EYDAP also offered access to their waste water facilities, where the DESSIN pilot takes place.</p> <p>All presentations are available through the DESSIN project website, as well as the signed attendants lists. These minutes give a brief overview of the main discussions and outcomes. Specific actions will be taken up in the day to day Work Package activities.</p>
Day 1 (meeting)	
	<p>After a welcome to the participants by the organizers, Christos Macropoulos (NTUA) presented the activities in Athens and introduced the Greek team carrying out the work. Goal of the research is to develop compact mobile units (packaged treatment plant) for treatment of extracted water (including, and to investigate reuse of treated waste water in e.g. unrestricted areas. Progress of activities is according to plan and no delay is foreseen. At present, the packaged treatment system is configured and partly installed on site. A synergy will be realized with the FP7 project</p>



MARSOL. In MARSOL treated waste water from the DESSIN pilot will be used for aquifer recharge, thus introducing the ESS methodology in MARSOL.



Marcel Paalman (KWR) and Kjell Haas (Bruine de Bruin) presented progress at the Westland pilot in the Netherlands. A full scale ASRO system (ASR plus Osmosis, Freshkeeper) will be realized, thus increasing the efficiency of ASR systems in coastal brackish aquifers. Implementation of the new system will take place early 2015. Main issues are clogging due to remobilization of clay and redox reactions. The pilot addresses issues related to improvement of technical aspects of clogging (Philips involved), adaptation to changing policy (application of less RO systems), and developments in the European market (less RO systems, starting point for finding solutions in RO systems installed). So far the pilot has attracted international attention (recently a high level delegation from Vietnam visited the site) and results have been presented internationally (e.g. during the Conference on deltas in climate change). Apart from some delay in implementation, no further delays are foreseen.



Pere Camprovín (CETaqua) presented the Llobregat pilot. The Llobregat river is a small water stream. Goals is to increase the water table by revitalizing an ASR system (Sant Joan Despi) using treated (by sand filters) waste water into the aquifer. Currently, the opportunities for infiltrating water with high levels of a.o. turbidity, ammonium, aluminum, nickel and phosphorus are investigated, using a design pilot scheme (column experiments). Early November a local kick off will take place with relevant authorities. In July 2015 start of the injection phase will take place. Ester Villanova (A21) presented the results of a first estimation of ecosystem services for the Llobregat case.

Herman Helness (SINTEF) and Cheng Sun (Inrigo Water) presented the activities at Hoffselva and the development of the high rate filter (HRF) solution, respectively. The goal is to demonstrate two solutions for distributed treatment of combined sewer overflow (CSO): a lamella settler for installation in storm water tanks and a high rate filter suited for installation on CSO outlets. The activities are progressing as planned with installation of the HRF at the demo site in January 2015. The lamella settler solution will first be demonstrated in Germany and is to be moved to Hoffselva after one year. Currently, the possibility of linking DESSIN with a Norwegian project, Water Quality Tools, through collaboration with NIVA on water quality monitoring in Hoffselva is investigated. This will broaden the perspective of the evaluation in DESSIN to include also the effects of the solutions on the Oslo fjord where Hoffselva ends.



The update on the Emscher case was introduced by Nadine Gerner (EG), presenting briefly the general situation in the Emscher catchment as related to the history of the region. The purpose of the two technologies with regard to an improvement of water quality was pointed out –the Real-Time-Control of the sewer network and the lamella settler unit aim at reducing CSO volume and load. The background, development and current status of the RTC of the sewer network was presented by Christian Niclas (SEGNO). Subsequently, Gebhard Weiß (UFT) reported on the work done and developmental stage of the cross-flow lamella settler unit. The progress of activities in both demo projects is as planned.



Ronjon Chakrabarti, Sibylle Kabisch (ADELPHI) introduced the route to market. The following questions were raised to the audience (specifically the SMEs):

- Do you see the structure of the solution package work for your case?
- Who would sell the solution package to a new client?
- What DESSIN support services do you need?

DESSIN should set up showcases, realize improvements, demonstrate benefits for specific cases, and develop convincing arguments.

After the presentations and discussions, a moderated discussion on critical issues was held. Focus was on scalability (in place and time) of the ESS approach. Local effects are leading for setting up a ESS tool, but scalability needs to be taken into account.



Day 2 (meeting)

Day 2 started with a presentation of Geraldo Anzaldúa (Ecologic) on ecosystem services. ESS are benefits that we as society obtain from ecosystems. Based on CICES (common international classification on ecosystem services) and WG MAES (map and assess ecosystem services) a ESS system is developed within DESSIN to link human society and their well-being with the environment. Nadine Gerner (EG) presented the first experiences with ESS in practice.

Ecologic will come with a proposal to make further steps. One option may be to organize skype meetings per pilot by Ecologic to see where the services fit in. Basis for this exercise is an extensive Excel sheet that includes an overview of ecosystem services. Ecologic will distribute the draft Excel spreadsheet for ESS with the DESSIN partners for internal use only. The final spreadsheet will become available with the report. Indicators for direct and indirect effects are important and need to be defined where possible.

Day 2 (site visit)

The site visit to the waste water treatment plant of EYDAP in Athens, where the modular system is placed and will be tested during the next years.





Overview of the decentralised waste water treatment pilot at EYDAP.



Explanation of the treatment unit at EYDAP by mr. Christos Lioumis of Chemitec