ANNEX 3: AFTER-LIFE COMMUNICATION PLAN

1. AFTER-LIFE COMMUNICATION PLAN

This plan explains, how the EU-Life IWPM-Project Team intends to continue disseminating and communicating the IWPM-Project Results in future, after the end of the IWPM-Project. Furthermore, it is indicated, what external support would be helpful. In so far, the After-Life Communication Plan may also help to guide extra dissemination actions, be it through the EU-Commission or other potential supporters reading this plan, especially, after this IWPM-Project has been selected as one of the better projects to be presented before the EU-Commission (see conference references page 66, IWPM Final Report).

1.1 Overview of the IWPM-Project

The future is always hard to predict, and especially in infrastructure and environment it is impossible to deliver a reliable calculation, how much wastewater and contaminations are generated within a defined catchment area, from industry, agriculture, settlement etc. Therefore, wastewater treatment plants designed one or more decades ago, are often underloaded or overloaded. As shown in the box below:

The overall objective of the Project is to demonstrate how wastewater management and treatment technologies can be improved through an innovative IWPM-System, increasing the quality of effluent and reducing costs, in support of EU-Directives on Wastewater, on Integrated River Basin Management (IRBM; EU-Directive 2000/60/EC), and on Flora, Fauna, Habitat (FFH). The specific objective of the Project is to integrate wastewater purification through a new combination of electronic link (→ remote control) and physical connection (→ biologically activated pipe) of selected sewage treatment plants (STPs), in order to integrate their technical capacities and to enhance wastewater purification (as a result of equalised inflow peaks and full utilisation of all existing plant capacities at any time).

Figure 1

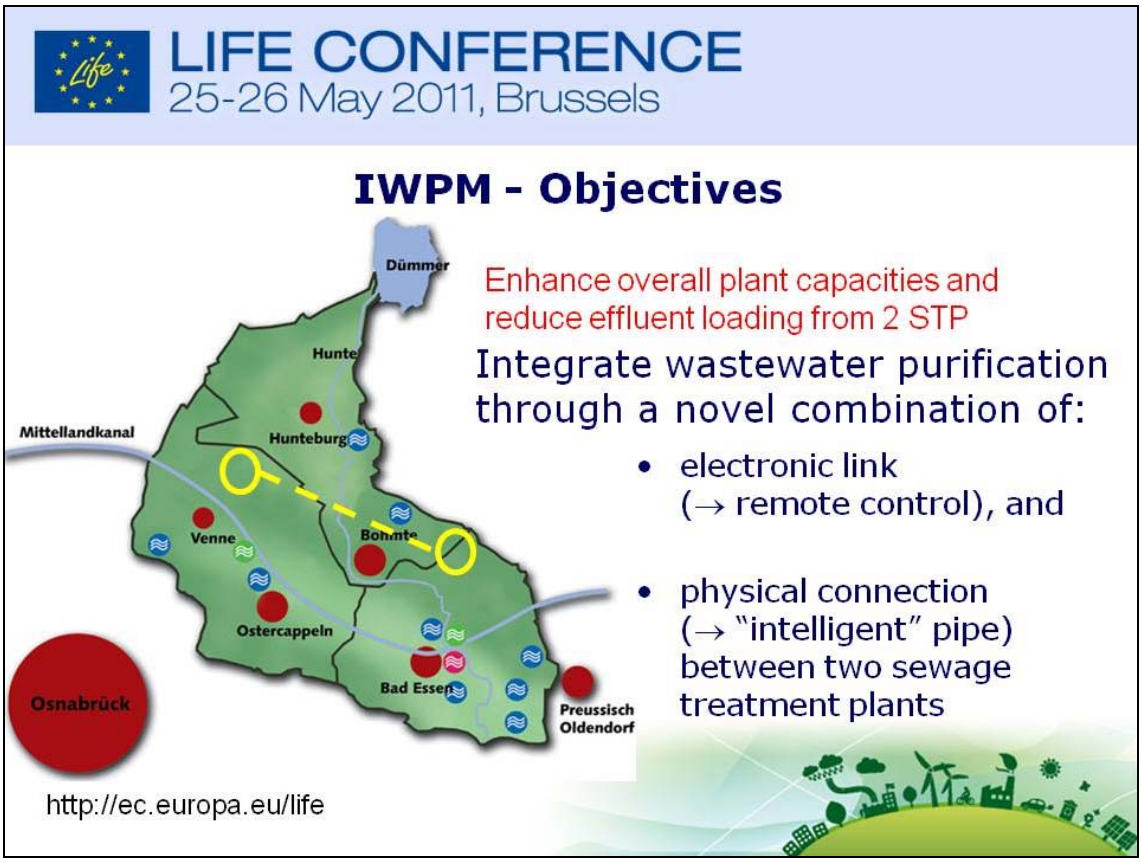

Figure 2

To realise a technology-based solution according to these objectives, innovative technologies and methodologies have to be installed. The box below shows photos of some IWPM-components installed. On top left, one can see the construction of a twin connection pipe built between one underloaded and one overloaded sewage treatment plant, partly in no-dig-technology to protect the plants and under-pass a water canal. The photo top right shows an interconnection pumping station, allowing full flexibility in operations of the twin pipes, to be operated bi-directional (from A to B and B to A), and with a technical option to inject activated sludge for the operation as biologically activated reactor (with 1.000 m³ pipe volume serving as hydrolysis reactor supporting biological phosphorus removal etc.). The photo bottom left shows pre-sedimentation tanks in one the sewage treatment plants, fully covered to prevent from odours and other gaseous emissions (note: in densely populated areas, such environmental protection devices are essential under EIA-perspectives). On bottom right, the so-called MSBR (multifunctional sequencing batch reactor) is shown with a very robust and energy-efficient, still cheap set of rotating and floating surface aerators.

Figure 3

The operational results of IWPM were successful, under some aspects more successful than originally expected. The box below indicates that especially the MSBR came to better elimination rates (especially in terms of nutrients, which are very important for the sensitive aquatic eco-system in the Project area) than would have been calculated according to official guidelines.

1.2 Communication Strategy

First of all, the Project has been reported to the local and regional press, which is one of the strong drivers of public opinion and municipal decision makers and quite relevant for municipal water associations like the Beneficiary WVW. Secondly, a wide and international reach has been realised with the website *www.eu-life-iwpm.de*. Furthermore brochures have been created as well as a poster, a notice board and a Layman´s report and the project has been disseminated during several events and conferences.

Figure 4

The results of the IWPM-Project Dissemination were remarkable, not only in terms of environmental/technical operations (see 1.1), but also in terms of institutional/political issues (see **Figure 5**). The idea of an integration of water purification management has convinced the municipal council of a third wastewater system to join the IWPM-structure, where through the number of sewage treatment plants operated with integrated purification management IWPM is three today, not only two (as expected).

Figure 5

As the transferability study of IWPM with a lot of project options researched has revealed, IWPM can be very positive, but needs favourable geographic and natural site-conditions to be applicable. The distance between plants to be inter-connected is one issue. Whenever the distance is lower than let's say 40 km (maybe longer, if wastewater can be collected along the pipe track), whenever stringent effluent standards have to be fulfilled (especially regarding nutrients or xenobiotics), and wherever seasonal or daily, weekly peaks can be counterbalanced by shifting wastewater between different areas, IWPM should be researched and implemented depending on the outcomes of a case-specific CBA.

A strong burden may be contra-productive political interests, which often keep municipalities away from cooperating with each others, or delegating executive water management to professional service providers, which could bundle water purification on an integrative scale.

The IWPM-Project Team intends to undergo the following actions:

1. Build a second, somehow different and complementary demonstration case in Spain, where the extension of an existing sewage treatment plant would be impossible (or very costly) within its boundaries, but could be realised as kind of a "out of fence" extension by an IWPM-driven combination in the neighbourhood. In the coming months, the Team in collaboration with the municipal wastewater utility will decide, how to move forward and overcome certain institutional, financial difficulties.

2. Discussing with national expert panels, like wastewater associations and working groups for national water management, especially in the EU-New Member States, have revealed that there is a big need and will to include IWPM as one of the important options in future. However, wastewater management plans and the research of technical alternatives, as elaborated by consultants often assigned with EU-ISPA- or IPA-financing etc., do not consider innovative options like IWPM, but are usually limited to a "one STP-focus" (even in cases, where a programme of many STPs is to be engineered, the focus is limited to the question, whether to build centralised or decentralised, and does not consider interconnection of various STPs under the IWPM-principle).

   The dissemination programme under this EU-Life IWPM-Project could not change this situation. Many more workshops, training activities or even IWPM-focused consulting assignments would be necessary to make sure that IWPM is implemented in cases, where it is advantageous (like in the EU-Life Demonstration Project Bad Essen), and harvest the benefits lying in IWPM under the conditions mentioned above.