

## **1. WP4 Dissemination strategy and political impacts**

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The current timing is ideal to provide information since at the moment there is a political processes taking place in the EU to establish minimum requirements for water reuse.

### **1.1. Current status of EU minimum requirements**

Currently there is pressure to for the EU pass regulation for water reuse. There is recognition of a lack of fresh water supplies in EU and at the moment less than 3% of water is reused. A water reuse directive pushed for 2018, many steps need to take place before then, including finalization of the JRC document on minimum requirements, public consultation, scrutiny etc.

The FRAME project can have a large impact by giving more scientific basis for the recommendations in the minimum requirements document. Therefore the technical guide (D4.2) and the stakeholder handbook can provide a contribution which can be viewed side-by-side with the JRC document.

### **1.2. Comments to water reuse public consultation**

The deadline to submit comments is 27th Jan. FRAME will submit as a consortium to increase impact. More information is available at: <http://ec.europa.eu/environment/water/reuse.htm> . It is agreed that the JRC document on minimum requirements has some short-comings which should be addressed in the consultation. These include lack of guidance in analysis/monitoring strategies, lack of justification of certain thresholds.

## **2. WP3 Decision support tool and modelling**

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### **2.1. Decision support tool**

It would be beneficial if the user could input the native groundwater quality. The meaning is not for this to be implemented into the transport model, but be added to the visualization.

It is agreed that the tools should be augmented with further information about other aspects e.g. recommendations for source control and SAT implementation. It is still unknown how this information should be included in the interface.

### **2.2. Transport modelling**

The question of including pathogens and viruses in the transport model is raised. If this is not feasible in the time frame there should at least be a discussion of how to implement it later. A literature search will be conducted by Uwe to find a very simple model based on pore size, retention time, soil type etc.

## 3. WP2 Treatment Strategies

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### 3.1. Pilot-scale studies

The sequential biofilter system (seqBMF) can offer an additional treatment step to be used in addition to other techniques, (ozone, GAC). More critical is the entire process chain and how the seqBMF can fit into such a chain. Intermedial ozone will be tested in the seqBMF columns in the new year.

The modelling strategy of the BRGM team is considered as a possible application of the TUM column data. This could be a valuable complementary addition to an extensive analysis/characterization experiment and could provide a valuable dataset to test models.

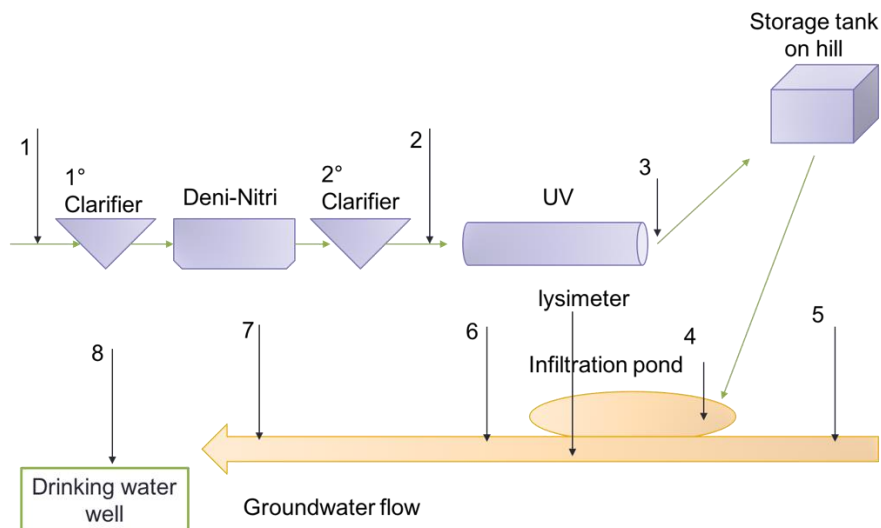
### 3.2. Full-scale studies

#### 3.2.1. El Port de la Selva

EPDLS sampling campaign in January/February was discussed in detail with number of sampling points and predicted number of samples for each point. The full battery of available analytical tests are planned to be applied. It is advised that a team from FRAME is sent to EPDLS to accompany the sampling for as long as possible. CCB (Consortia Costa Brava) and Veolia Spain will likely do monitoring of standard parameters and priority substances. TUM will coordinate joint sampling events to benefit from their activities. Not all parameters need to be measured at all sampling points (Fig. 1).

- Samples before and after UV are suggested only for pathogens/ARGs.
- Uwe will check what capacities there are in Spain to do FIB analysis directly on-site, since they need to be analyzed within 24 h.
- Sampling locations for CECs/Non-target: 1, 2, 4, 5, 2xLys, 6–8 (Fig. 1).
- For SPE (bioassays), the pump and equipment could be sent to EPDLS for extraction on-site. The solvents however need to be ordered and delivered directly to EPDLS. Maximum 4 sampling locations for bioassays.
- Bulk parameters will be measured at all locations.

Source control is the major issue at EPDLS, large variability (spikes in conductivity), they have sea-water intrusion into the sewer system. Data from online measurements of conductivity nitrate or phosphate would be helpful. There is also online conductivity measurement at the groundwater monitoring well.



**Figure 1. Basic schematic of EPDLS showing sampling locations 1–8. 5: upstream groundwater well (for background) 4: Direct sampling of pond. Lysimeters are useful since there is no background dilution from groundwater in these samples.**

## 4. WP1 Water quality characterization

### 4.1. PFAS analysis

Analysis results of the Braunschweig sampling campaign and TUM column experiments was shown.

### 4.2. Nitrosamines analysis

The nitrosamine method is validated and can measure below EQS concentrations. Effluent wastewaters at our disposal should first be screened using the method. Since ozonation experiments are planned at TUM, these samples could also be used for nitrosamine analysis.

## 5. WP5 Management

### 5.1. Next meetings

#### 5.1.1. Final Project workshop

It is thought that it will be better to have a dedicated final conference. It is possible to do this jointly with partners from UNESCO (IHP). The planned dates are 19–28th of Feb 2018 with start on Tuesday at 1 pm. It was agreed that posters from participants could be welcomed and time allotted for poster sessions as well as presentations from others. It is also suggested to invite 1 or 2 keynote speakers.

#### 5.1.2. Munich April 2017

The next FRAME meeting in Munich is planned for the 27th–28th April 2017. A short, dedicated stakeholder session is planned with 2–3 short presentations with some results highlights (max. 2 h) and statement to minimum requirements. A video link is planned for the stakeholder session

