D.T1.3.2: Toolkit for WAter Safety Planning Procedures Decision Support System (WASPP – DSS) - Guidelines

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Contents

D.T1.3.1: Toolkit for Water Safety Planning Procedures Decision Support System (WASPP – DSS) - DRAFT

1. Introduction

The MUHA toolbox (WASP DSS) was developed on the basis of following key hypothesis and elaborations:

1) <u>Hypothesis of the full consideration of the WHO guidelines</u> defining 11 modules in the life-cycle of Water Safety Plan life cycle as shown on the figure 1. The tool is at this stage focused on the sub-group "System Assessment", and especially on the Module 2 (Describe the water supply system) and module 3 Identify the hazards and assess the risk.
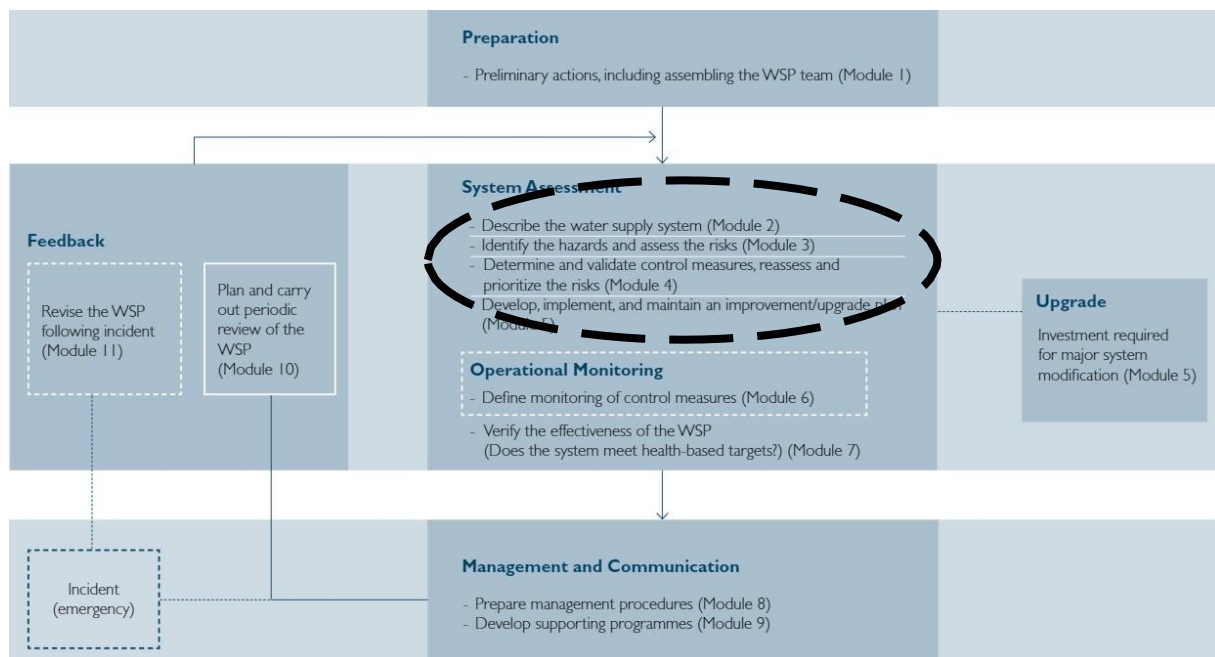

Figure 1: conceptual process flow of the WSP development following the WHO guidelines.

2) <u>Hypothesis of multidimensionality</u> regarding the water supply risk management where components of the water supply system as probably primary dimension (to start with) is related to other dimensions (hazards, consequences)

3) <u>Hypotesis of additive categories (open classifications)</u> of components, hazards, and consequences

4) <u>At this stage components – hazards – consequnces</u> are being addressed as multidimensional issue. Procedures on integration of measures (Module 4) are being tested and the way to integrate the measures in the OLAP cube. Other modules are considered for the later integration as well. Testing the measures could be observed for some components/hazards in the window shown as an example on the next figure.

Figure 2: testing of the integration of the measures in the component-hazard-consequences framework (new dimension).

5) Priority hazards are those identified by the MUHA project AF. Other hazards are voluntary defined by the user, having in mind the development of WSP covering for all potential hazards and their consequences.

6) The work on your water supply system will be later possible to download as an excel file for further, more detailed elaboration potentially being able to elaborate it to full Water Safety Plan

7) User is registered. In this way his/hers work is saved after each entry, enabling also later work and changes.

2. Guidelines

MUHA toolbox is available at: http://muha.apps.vokas.si/

1. Step

Register – create new user / login → every user sees just their inserted information

The registration procedure is open, required information for the registration is shown on the figure 3.

D.T1.3.1: Toolkit for Water Safety Planning Procedures Decision Support System (WASPP – DSS)

Figure 3: Registration window for the toolbox

Currently, for the testing purpose one user is associated with one water supply system. Later one user will be able to define several WSS and develop different selection of components/hazards/consequences, attribuding also occurance in different way for every WSS under elaboration.
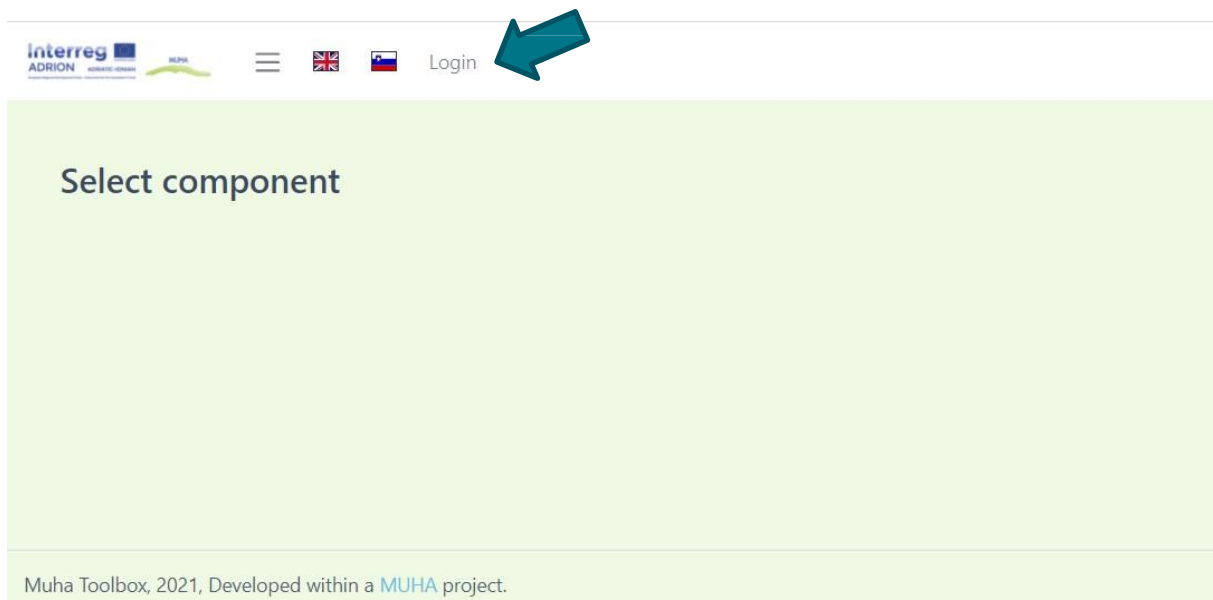

Figure 4: Registration window for the toolbox

After the registration, you can describe/enter the information on your water supply system components by selecting all components present in your WSS.
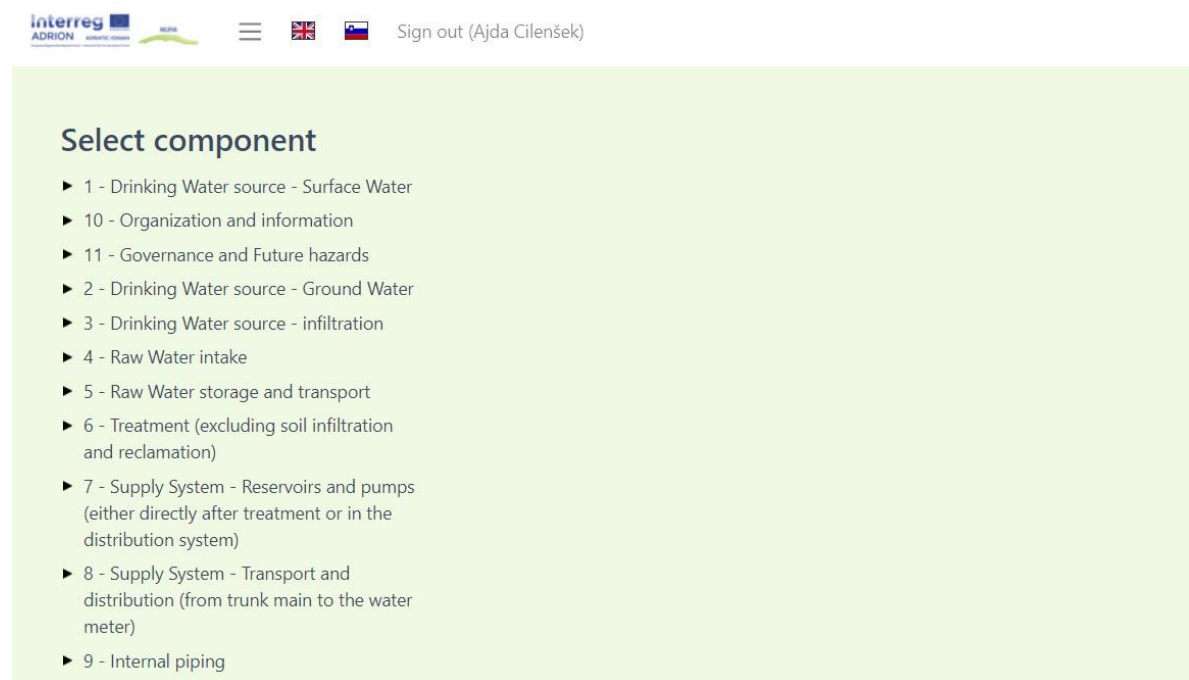
Figure 5: Categories of components (basic window)

By clicking on the selected component, more detailed view on the components within specific category is displayed on the right hand side of the screen, next to the basic list of the components:

Figure 6: Detailed view on the component – describing the component-hazard-consequences mix

3. Step:

When selecting that this component is present in your WSS, please indicate the possibility of occurrence of every listed Hazard with related consequences for this specific component. You should select the most appropriate Probability of occurrence, select for which MUHA hazard this consequence applies and insert your comment.

Comments are extremely important because they will serve as basis for the improvement of the database and the connections among the dimensions components – hazards - consequences.

Please go through the whole database of hazard strings and make comments for at least those components, which are present in your WSS or sub components of the WSS (DMA).

Figure 6: Detailed view on the selected component – (click for selection) and attributed fields. Please attribute as valid for the component in your test WSS. Open field for comments.

3. Aim of the testing stage

In the first stage of the testing, the MUHA project partners are invited to test and comment:

- The overall approach regarding the DSS, addressing the complex relationships among components, hazards and consequences in a water supply system from the prism of multidimensionality.
- Checking if the components are correctly related to related hazards and consequences – provide the comments in the comment window
- Attribute (provide your personal best guess) the occurrence probability of the hazard and consequences on the WSS. This is intended to start the qualitative assessment which as anticipated by the WHO procedures.

4. Expected later upgrades and modifications

This version of the WASP-DSS is based upon the manual identification of the components of the water supply system and hazards, which might affect the components of the WSS.

9

Initially proposed approach, using standardized set of spatially defined components of the WSS is for the moment put aside, having in mind the considerations that spatial data of WSS components might be considered as sensitive data, which should not be released to the non-authorized persons.

Further considerations of this approach will be considered, recognizing the potential benefits of users in automatic transfer and identification of components of WSS considered for the development of Water Safety Plans.

Current version is enabling the identification of the Water supply system only through the dimension of components. We are working on the upgrade enabling the user to observe the multi-dimensionality of the addressed WSS also from other perspectives – hazards, consequences, probability of occurrence and measures.

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D.T1.3.1: Toolkit for Water Safety Planning Procedures Decision Support System (WASPP – DSS)