

Questionnaire for WP6 – Feedback on selected WWT and irrigation strategies

We want to create one strategy per country where municipal wastewater treatment plant (WWTP) effluent could be reused for irrigation. We need your support to provide data to identify the most promising strategies.

Please fill in the questionnaire **as much as possible**, the more the better! The fields to be filled in are marked yellow.

Please answer based in your experience

Strategy	1) How do you consider the potential of the following strategies?	2) Which measure do you consider supportive for the selected strategies?
<p>EXAMPLE : <u>DST-based results</u></p> <p>CH1: Reuse of municipal WWTP typical secondary effluent for irrigation of non-food crops</p> <p>Technology suggested: No treatment necessary</p>	<p><input type="checkbox"/> Not suitable</p> <p><input type="checkbox"/> Poorly suitable</p> <p><input checked="" type="checkbox"/> Reasonably suitable</p> <p><input type="checkbox"/> Highly suitable</p> <p><input type="checkbox"/> No answer</p>	<p><input type="checkbox"/> political (e.g. policy)</p> <p><input type="checkbox"/> economic (e.g. water pricing, subsidies)</p> <p><input type="checkbox"/> social (e.g. foster social acceptance)</p> <p><input checked="" type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies)</p> <p><input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations)</p> <p><input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)</p>
<p>Additional comment? (please state)</p>		

Strategy	1) How do you consider the potential of the following strategies?	2) Which measure do you consider supportive for the selected strategies?
<u>DST-based results</u> EGYPT, EG1: Reuse of municipal WWTP typical secondary effluent for irrigation of non-food crops Technology suggested: No treatment necessary	<input type="checkbox"/> Not suitable <input type="checkbox"/> Poorly suitable <input checked="" type="checkbox"/> Reasonably suitable <input type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input checked="" type="checkbox"/> political (e.g. policy) <input type="checkbox"/> economic (e.g. water pricing, subsidies) <input checked="" type="checkbox"/> social (e.g. foster social acceptance) <input type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state) <i>Good start to make the public and policy makers aware of the possibilities.</i>		
<u>DST-based results</u> EGYPT, EG2: Reuse of typical municipal wastewater for agriculture purposes in desert areas Technology suggested: Lagooning: Australia I	<input type="checkbox"/> Not suitable <input checked="" type="checkbox"/> Poorly suitable <input type="checkbox"/> Reasonably suitable <input type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input type="checkbox"/> political (e.g. policy) <input type="checkbox"/> economic (e.g. water pricing, subsidies) <input type="checkbox"/> social (e.g. foster social acceptance) <input type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state) <i>Concern about high temperatures, vaporizing water</i>		

Strategy	1) How do you consider the potential of the following strategies?	2) Which measure do you consider supportive for the selected strategies?
<u>Pilot-based result</u> EGYPT, EG3: Reuse of drainage Canal Water for irrigation Technology suggested: MADFORWATER Pilot (Lake Manzala, Egypt) with innovative gated pipe	<input type="checkbox"/> Not suitable <input type="checkbox"/> Poorly suitable <input checked="" type="checkbox"/> Reasonably suitable <input type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input checked="" type="checkbox"/> political (e.g. policy) <input type="checkbox"/> economic (e.g. water pricing, subsidies) <input type="checkbox"/> social (e.g. foster social acceptance) <input type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state) <i>Depending on the political situation discussed in up5. More policies needed.</i>		
<u>Agro-economic model result</u> EGYPT, EG4: Water (re)use in the technology scenario Technology suggested: Wastewater with innovative gated pipes and calibrated nozzles	<input type="checkbox"/> Not suitable <input type="checkbox"/> Poorly suitable <input type="checkbox"/> Reasonably suitable <input checked="" type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input checked="" type="checkbox"/> political (e.g. policy) <input type="checkbox"/> economic (e.g. water pricing, subsidies) <input type="checkbox"/> social (e.g. foster social acceptance) <input type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state) <i>Suitable for multiple crops, versatile. Again more policies needed.</i>		

Strategy	1) How do you consider the potential of the following strategies?	2) Which measure do you consider supportive for the selected strategies?
<u>DST-based results</u> MORROCO, MO1: Reuse of municipal WWTP typical secondary effluent for irrigation of non-food crops Technology suggested: No treatment necessary	<input type="checkbox"/> Not suitable <input type="checkbox"/> Poorly suitable <input checked="" type="checkbox"/> Reasonably suitable <input type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input type="checkbox"/> political (e.g. policy) <input type="checkbox"/> economic (e.g. water pricing, subsidies) <input checked="" type="checkbox"/> social (e.g. foster social acceptance) <input type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state) <i>If the quality already complies to regulations. Cost-effective. More of a social factor, to make it more acceptable.</i>		
<u>DST-based results</u> MORROCO, MO2: Reuse of typical municipal wastewater for irrigation of crops to be eaten raw. Technology suggested: Wetlands: Nicaragua	<input type="checkbox"/> Not suitable <input type="checkbox"/> Poorly suitable <input checked="" type="checkbox"/> Reasonably suitable <input type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input type="checkbox"/> political (e.g. policy) <input type="checkbox"/> economic (e.g. water pricing, subsidies) <input checked="" type="checkbox"/> social (e.g. foster social acceptance) <input type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state) <i>Social factor → especially because it's eaten raw. Perhaps the people would not accept this kind of treatment as enough to make it clean enough for their food.</i>		

Strategy	1) How do you consider the potential of the following strategies?	2) Which measure do you consider supportive for the selected strategies?
<u>Pilot-based result</u> MORROCO, MO4: Reuse of municipal WWTP tertiary effluent for olive trees irrigation Technology suggested: MADFORWATER Pilot (Agadir, Morocco) with innovative calibrated nozzles and drip irrigation	<input type="checkbox"/> Not suitable <input type="checkbox"/> Poorly suitable <input type="checkbox"/> Reasonably suitable <input checked="" type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input type="checkbox"/> political (e.g. policy) <input checked="" type="checkbox"/> economic (e.g. water pricing, subsidies) <input type="checkbox"/> social (e.g. foster social acceptance) <input type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state) <i>Quite expensive, but effective looking at technology.</i>		
<u>Agro-economic model result</u> MORROCO, MO5: Water (re)use in the policy scenario Technology suggested: Wastewater with innovative calibrated nozzles	<input type="checkbox"/> Not suitable <input type="checkbox"/> Poorly suitable <input checked="" type="checkbox"/> Reasonably suitable <input type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input checked="" type="checkbox"/> political (e.g. policy) <input type="checkbox"/> economic (e.g. water pricing, subsidies) <input type="checkbox"/> social (e.g. foster social acceptance) <input type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state)		

Strategy	1) How do you consider the potential of the following strategies?	2) Which measure do you consider supportive for the selected strategies?
<u>DST-based results</u> TUNISIA, TU1: Reuse of municipal WWTP typical secondary effluent for irrigation of non-food crops Technology suggested: No treatment necessary	<input type="checkbox"/> Not suitable <input type="checkbox"/> Poorly suitable <input checked="" type="checkbox"/> Reasonably suitable <input type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input type="checkbox"/> political (e.g. policy) <input checked="" type="checkbox"/> economic (e.g. water pricing, subsidies) <input checked="" type="checkbox"/> social (e.g. foster social acceptance) <input type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state) <i>Make it more interesting in general to invest in waste water treatment technology, as well as inform the public.</i>		
<u>DST-based results</u> TUNISIA, TU2: Reuse of municipal WWTP typical secondary effluent for irrigation (NT 106.03 standard) Technology suggested: Wetlands: Nicaragua	<input type="checkbox"/> Not suitable <input type="checkbox"/> Poorly suitable <input checked="" type="checkbox"/> Reasonably suitable <input type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input type="checkbox"/> political (e.g. policy) <input type="checkbox"/> economic (e.g. water pricing, subsidies) <input type="checkbox"/> social (e.g. foster social acceptance) <input type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state) <i>Concerns about the average temperatures as well.</i>		

Strategy	1) How do you consider the potential of the following strategies?	2) Which measure do you consider supportive for the selected strategies?
<u>Pilot-based result</u> TUNISIA, TU3: Reuse of municipal WWTP secondary effluent for irrigation Technology suggested: MADFORWATER Pilot (Chotrana, Tunisia) with innovative calibrated nozzle, model for irrigation scheduling, and plant growth-promoting bacteria	<input type="checkbox"/> Not suitable <input type="checkbox"/> Poorly suitable <input type="checkbox"/> Reasonably suitable <input checked="" type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input type="checkbox"/> political (e.g. policy) <input checked="" type="checkbox"/> economic (e.g. water pricing, subsidies) <input type="checkbox"/> social (e.g. foster social acceptance) <input checked="" type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state)		
<u>Pilot-based result</u> TUNISIA, TU4: Reuse of textile WW for non-food crops irrigation Technology suggested: MADFORWATER Pilot (Gwash, Tunisia) with innovative calibrated nozzle	<input type="checkbox"/> Not suitable <input type="checkbox"/> Poorly suitable <input checked="" type="checkbox"/> Reasonably suitable <input type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input type="checkbox"/> political (e.g. policy) <input type="checkbox"/> economic (e.g. water pricing, subsidies) <input type="checkbox"/> social (e.g. foster social acceptance) <input checked="" type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state) <i>would add the model for irrigation scheduling as well, to take away the human factor of not knowing how to use this technology.</i>		

Strategy	1) How do you consider the potential of the following strategies?	2) Which measure do you consider supportive for the selected strategies?
<u>Agro-economic model result</u> TUNISIA, TU5: Water (re)use in the policy scenario 1 Technology suggested: wastewater with innovative calibrated nozzle	<input type="checkbox"/> Not suitable <input type="checkbox"/> Poorly suitable <input checked="" type="checkbox"/> Reasonably suitable <input type="checkbox"/> Highly suitable <input type="checkbox"/> No answer	<input checked="" type="checkbox"/> political (e.g. policy) <input type="checkbox"/> economic (e.g. water pricing, subsidies) <input checked="" type="checkbox"/> social (e.g. foster social acceptance) <input type="checkbox"/> water management (e.g. institutional coordination, regional planning and training for proposed technologies) <input type="checkbox"/> legal (e.g. increase of legal enforcement, new water quality regulations) <input type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state)		

3) Is anything missing in general?

4) What is your country of origin?

- ☐ Tunisia
- ☐ Egypt
- ☐ Morocco
- ☒ Europe