



Questionnaire for WP6 – Feedback on selected WWT and irrigation strategies

We want to create one strategy per country where municipal wastewater treatment plant (WTP) 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 : <i>DST-based results</i></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>
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> 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 type="checkbox"/> Reasonably suitable <input checked="" 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 checked="" type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state) <i>raw treatment / non food crops / 10000 m³/day / Prod cost @ 382 WWTP in 2012</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 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 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>beginning / 15. forgoe / 10000 m³/d / 0.39 \$/m³ / cost will be the main issue</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 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 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>Hybrid Constructed WL / 250 m³/d. / 0.42 \$ / m³ Again the cost may be the main issue (from my knowledge of Egyptian situation)</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 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>Gated pipes / Cotton main use, alfalfa Sugar h. / 10 000 m³/d / cost not quoted / Large potential</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 type="checkbox"/> Reasonably suitable <input checked="" 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>no treatment / 10 000 m³/d / 0 cost / 73 WWTP / not applicable without treatment</i> <i>Informal Reuse already existing largely in the country</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 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 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>wetlands / Dir. of crops eaten raw / 0.16 \$/m³ / 32511 m³/y</i> <i>The ph in Morocco... no one wants to assume the cost of 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> 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 checked="" type="checkbox"/> Not suitable <input 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 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>Too expensive</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 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>Again cost may be difficult to assume by farmers. Ph of exportation with irrigation water quality that doesn't comply with foreign (i.e. European) regulation to come</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> 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 type="checkbox"/> Reasonably suitable <input checked="" 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)		
<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 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>cost of 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> 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 checked="" type="checkbox"/> Not suitable <input 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 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>Excessive cost</i>		
<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 checked="" type="checkbox"/> Not suitable <input 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 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 checked="" type="checkbox"/> environmental (e.g. monitoring and reporting of water quality)
Additional comment? (please state) <i>Excessive cost and huge pbs related to WW quality</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 type="checkbox"/> Reasonably suitable <input type="checkbox"/> Highly suitable <input checked="" 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>Not clear on the cost extra cost?</i>		

3) Is anything missing in general?

Need to take care about the quality of TNR quality and possibility to export goods to Europe with the coming regulations

4) What is your country of origin?

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