



**Constructed Wetland Association
Annual Conference – July 2019
Birmingham, UK**

The annual conference of the Constructed Wetland Association was held in Birmingham, UK, with the main theme being on “Wastewater management and beyond”. The first day of the event consisted of a morning session with a keynote presentation, a site overview presentation, and an interactive workshop. After lunch, delegates went on a coach to visit an innovative constructed wetland for sewage treatment in the Midlands (Hulland Ward – see video [here](#)). The second day consisted of a mixture of presentations from practitioners, academics and NGOs involved in the planning, design, construction and operation of wetland systems.

The morning of day one started with Dr Fabio Masi’s keynote speech entitled: “Constructed wetlands: A multi-benefit, nature-based solution for current and future environmental and social challenges “. Fabio is an environmental chemist and founding partner of IRIDRA Srl. He is the co-author of over 450 designs for constructed wetlands around the world, collaborator on numerous international programmes and author of over 95 publications including a wealth of peer reviewed papers. His presentation covered the context and need for nature based solutions for water management, and included case studies of multipurpose systems built by IRIDRA.

The next presentation provided background to the afternoon site visit, including information about the design and first three years of monitoring conducted by Cranfield University of the innovative treatment wetland system at Severn Trent’s Hulland Ward sewage works. It is a modified “French wetland” design that combines onsite sludge and wastewater treatment with just two stages of vertical flow wetlands. The operation of the site differs from conventional French systems in that it does not employ a pretreatment screen (i.e., it is fed with crude sewage) and has the second stage cells retrofitted with artificial aeration for improved ammonia removal.

After a short coffee break, an engaging workshop was organised by Dr Masi (IRIDRA) and Dr Gabriela Dotro (Cranfield University) entitled “How to shift from a single purpose (treatment) to multi-purpose treatment wetlands”. About 40 delegates participated in the activity, which addressed three key questions for the design of multipurpose systems. Three flipcharts were scattered around the room. Each flipchart had a knowledgeable facilitator (Geoff Sweaney, Fabio Masi and Gaby Dotro) and one key question to answer during 15 minutes of discussion. At the end of the 15 minutes, the groups rotated to the next flipchart question. The outputs were summarised by the facilitators and shared with the entire group at the end of the session (Figures 1-3). The workshop had a very positive informal and formal feedback from the attendees and facilitators alike.

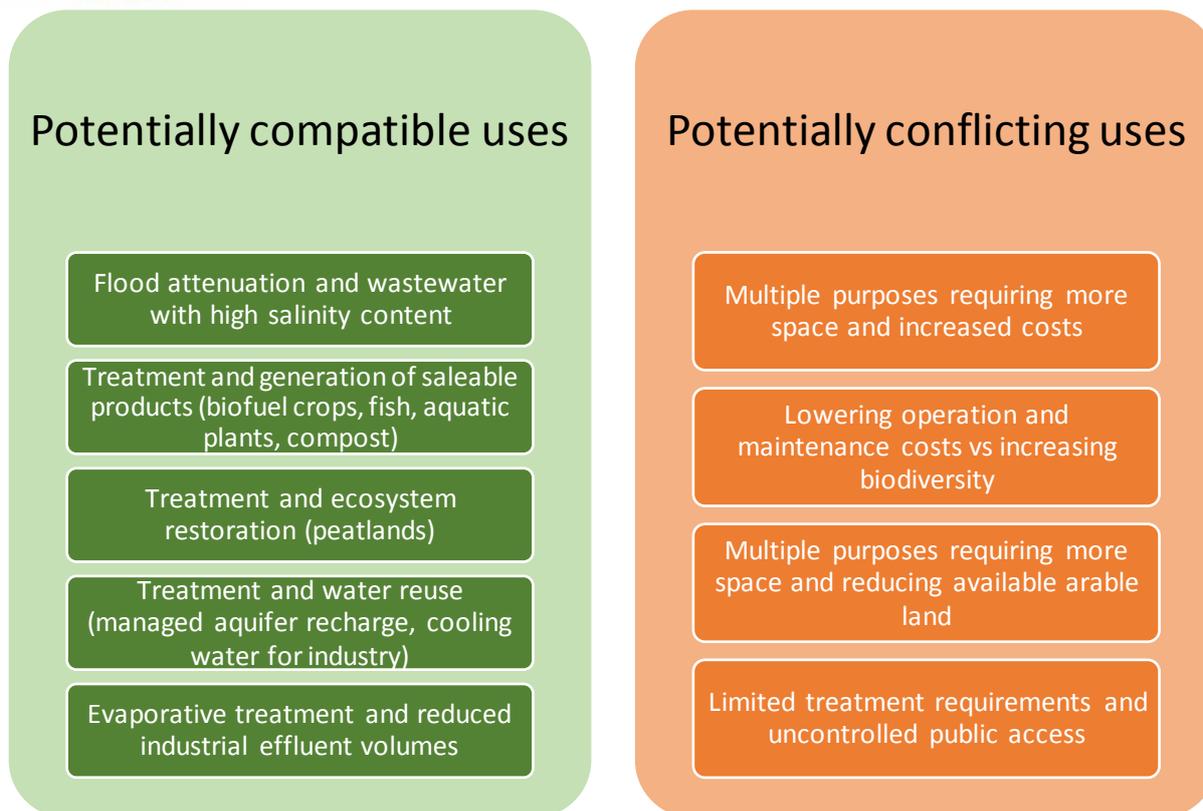


Figure 1. Outputs from the discussion of the question: 1) Envisioning a multipurpose system: What are some of the compatible uses / objectives for a wastewater treatment wetland? Are there any potentially conflicting uses that should be managed or avoided altogether?

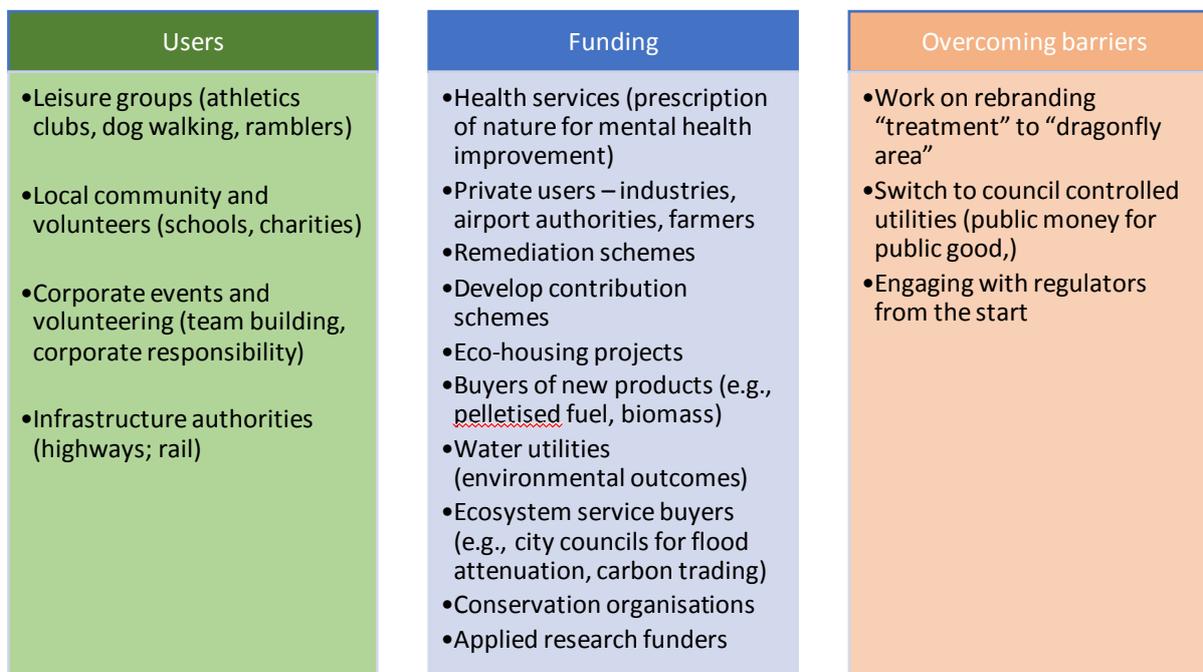
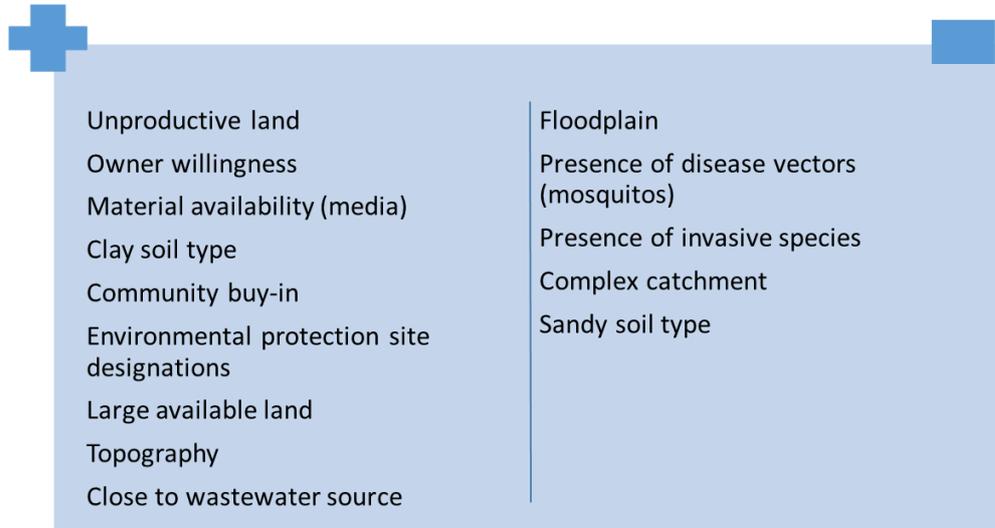


Figure 2. Outputs from the discussion of the question: 2) Engaging within co-productive model for wetland systems: what are some potential partnerships that could help maximise the success

potential of a multipurpose wetland scheme? *Think about end use, finance, regulation, national or international strategies.*



Unproductive land	Floodplain
Owner willingness	Presence of disease vectors (mosquitos)
Material availability (media)	Presence of invasive species
Clay soil type	Complex catchment
Community buy-in	Sandy soil type
Environmental protection site designations	
Large available land	
Topography	
Close to wastewater source	

Figure 3. Outputs from the discussion of the question: 3) Working with your site limitations: what are some of the key attributes of a candidate physical site that could help or hinder the construction of a multipurpose wetland system?