

## **Designing the RiverCare knowledge base and web-collaborative platform to exchange knowledge in river management**

Juliette Cortes Arevalo (1), Robert-Jan den Haan (2), Mascha van der Voort (2), and Suzanne Hulscher (1)

(1) University of Twente, Water Engineering and Management Department, Enschede, Netherlands  
(v.j.cortesarevalo@utwente.nl), (2) University of Twente, Design, Production and Management Department

Effective communication strategies are necessary between different scientific disciplines, practitioners and non-experts for a shared understanding and better implementation of river management measures. In that context, the RiverCare program aims to get a better understanding of riverine measures that are being implemented towards self-sustaining multifunctional rivers in the Netherlands. During the RiverCare program, user committees are organized between the researchers and practitioners to discuss the aim and value of RiverCare outputs, related assumptions and uncertainties behind scientific results. Beyond the RiverCare program end, knowledge about river interventions, integrated effects, management and self-sustaining applications will be available to experts and non-experts by means of River Care communication tools: A web-collaborative platform and a serious gaming environment. As part of the communication project of RiverCare, we are designing the RiverCare web-collaborative platform and the knowledge-base behind that platform. We aim at promoting collaborative efforts and knowledge exchange in river management. However, knowledge exchange does not magically happen. Consultation and discussion of RiverCare outputs as well as elicitation of perspectives and preferences from different actors about the effects of riverine measures has to be facilitated. During the RiverCare research activities, the platform will support the user committees or collaborative sessions that are regularly held with the organizations directly benefiting from our research, at project level or in study areas. The design process of the collaborative platform follows an user centred approach to identify user requirements, co-create a conceptual design and iterative develop and evaluate prototypes of the platform.

The envisioned web-collaborative platform opens with an explanation and visualisation of the RiverCare outputs that are available in the knowledge base. Collaborative sessions are initiated by one facilitator that invites other users to contribute by agreeing on an objective for the session and ways and period of collaboration. Upon login, users can join the different sessions that they are invited or will be willing to participate. Within these sessions, users collaboratively engage on the topic at hand, acquiring knowledge about the ongoing results of RiverCare, sharing knowledge between actors and co-constructing new knowledge in the process as input for RiverCare research activities. An overview of each session will be presented to registered and non-registered users to document collaboration efforts and promote interaction with actors outside RiverCare. At the user requirements analysis stage of the collaborative platform, a questionnaire and workshop session was launched to uncover the end user's preferences and expectations about the tool to be designed. Results comprised insights about design criteria of the collaborative platform. The user requirements will be followed by interview sessions with RiverCare researchers and user committee members to identify considerations for data management, objectives of collaboration, expected outputs and indicators to evaluate the collaborative platform. On one side, considerations of intended users are important for co-designing tools that effectively communicate and promote a shared understanding of scientific outputs. On the other one, active involvement of end-users is important for the establishment of measurable indicators to evaluate the tool and the collaborative process.