

- WORKSHOP 1 -

Challenges in Managing Fluvial Systems in the Anthropocene: Innovations in Analysing Rivers Co-evolving with Human Activities: an academic-stakeholder workshop



1. **Workshop Title:** Challenges in Managing Fluvial Systems in the Anthropocene:
 Innovations in Analysing Rivers Co-evolving with Human Activities: an
 academic-stakeholder workshop

2. **Organisers:**

- Peter DOWNS, University of Plymouth (Peter.downs@plymouth.ac.uk);
- Hervé Piégay, CNRS UMR 5600 EVS, University of Lyon (herve.piegay@ens-lyon.fr)



3. **Workshop description:** Human actions over the last 100-300 years have become an integral if not dominant influence on the hydrology, geomorphology, and ecological functioning of fluvial systems, with significant implications for developing approaches to river management that ensure river resilience and maximise their long-term ecosystem service potential. Analysing fluvial systems over such time-scales requires that human activities are considered along with natural factors during the diagnostic process, and that analyses are capable of locale-specific differentiation of cause and effect by integrating local- to catchment-scale drivers for change. This challenge requires novel analytical methods applicable at 'historical' spatial and temporal scales: progress is being facilitated by advances in remotely-sensed and passively-monitored data, enhanced modelling capabilities, novel uses of historical data and sediment archives, etc. This knowledge exchange workshop will showcase innovative methods for studying the co-evolutionary trajectory of river systems with discussions focused on developing joint academic-practitioner viewpoints of the primary challenges facing sustainable approaches to river management in the Anthropocene.



4. **Number of participants:** Approximately 45

5. **Schedule:** 09h00 – 18h00

6. **Registration rate:** free (registration covered by a grant from the Collegium de Lyon IAS)



7. **Language:** English

8. **Preliminary programme** (see on reverse)

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Programme

Time slot	Workshop topic	Speakers
09:00 – 09:30	<i>Arrival, Registration, Coffee</i>	
09:30 – 09:45	Rationale for workshop (& feedback from SCR?)	Downs, Piégay
09:45 – 10:15	Challenges in managing co-evolving fluvial systems: stability, thresholds, and the Anthropocene	Anne Chin, U Colorado Denver
10:15 – 10:45	The legacy of land-use changes and fluvial response	Allan James, U South Carolina
10:45 – 11:00	Moderated discussion – management implications	
11:00 – 11:15	<i>Coffee break</i>	
11:15 – 11:45	Adopting ‘river culture’ to avert riverscape diversity crises	Karl Wantzen U Tours
11:45 – 12:15	The socio-ecology of heavily managed rivers: the River Rhône	Emeline Comby U Bourgogne Franche-Comté
12:15 – 12:30	Moderated discussion – management implications	
12:30 – 13:30	<i>Lunch</i>	
13:30 – 14:00	Cumulative impact of human activity on the evolution of fluvial systems	Peter Downs, U. Plymouth Piégay, Piffady
14:00 – 14:30	Impacts on the dynamics of Alpine Rivers	Vittoria Scorpio U Bozen-Bolzano
14:30 – 15:15	Round table discussion in groups – call for ideas	
15:15 – 15:30	<i>Coffee break</i>	
15:30 – 16:00	Insights from historical fish populations for future management	Rob Lenders Radboud U
16:00 – 16:30	Multiple stressors and the response of riparian vegetation	John Stella SUNY Syracuse
16:30 – 17:00	Habitat measurement and responses to change	Ian Fuller Massey U
17:00 – 17:30	<i>Wrap-up: summary and implications of co-evolution for sustainable river management</i>	Peter Downs
17:30 – 18:00	<i>Networking</i>	