

Welcome to the first Cumbrian Lakes Research Forum (CLRF)

- The Cumbrian lakes are some of the best-studied in the world with extensive ongoing research of international impact
- Like many lakes worldwide they have experienced, and are facing, multiplying pressures from anthropogenic activity
- The aim of CLRF is to create a dialogue between organisations undertaking fundamental research and those with a responsibility for managing the environment in order to:
 - i) transfer knowledge on new ideas, approaches and techniques from researchers to practitioners;
 - ii) identify gaps in knowledge from the manager's viewpoint that researchers could help fill;
 - iii) help provide solutions to environmental problems

Bringing together local players



RESEARCH

- Lake Ecosystems Group, CEH
- University of Lancaster
- University College London
- University of Durham
- University of Hull
- University of Liverpool
- Queen Mary University of London
- University of Nottingham
- University of Cumbria
- FBA



MANAGEMENT

- Environment Agency
- Natural England
- LDNPA
- United Utilities
- Land owners (National Trust, Forestry Commission, farmers...)
- Rivers Trusts
- Conservation charities
- Local groups of citizens

The Lake District Still Waters Partnership

- Set up in late 1990s
- *‘The purpose of the LDSWP is to make informed decisions about where to target action and resources to protect and enhance the lake environments of the Lake District, and where appropriate further afield.’*

Twitter

#CumbLakeRF

With your agreement we will take photos of your talks periodically and tweet them.....

Format for the day

Morning

- Four science talks
- A demonstration on hydroacoustics
- Session to identify research gaps from a manager's perspective

LUNCH

Afternoon

- Three science talks
- A demonstration on collecting real-time lake data
- Discussion on research gaps for lake management
- Discussion on usefulness and format of future workshops

TEA & CLOSE

Programme this morning

- 10:20 *Talk 1:* Phil Barker- Long term changes in nitrogen in Cumbrian lakes
- 10:40 *Talk 2:* Stephen Maberly- Cumbria: an internationally important region for long-term lake research
- 11:00 *Talk 3:* Ellie Mackay- Internal phosphorus loading and remediation
- 11:20 *Talk 4:* Melanie Fletcher and Bill Brierley- Scums and satellites
- 11:40 *Demonstration 1:* Ian Winfield- Hydroacoustics: from fish surveys by specialised scientists to habitat monitoring by citizen scientists
- 12:10 Discussion to identify current and future research gaps
- 12:30 Lunch