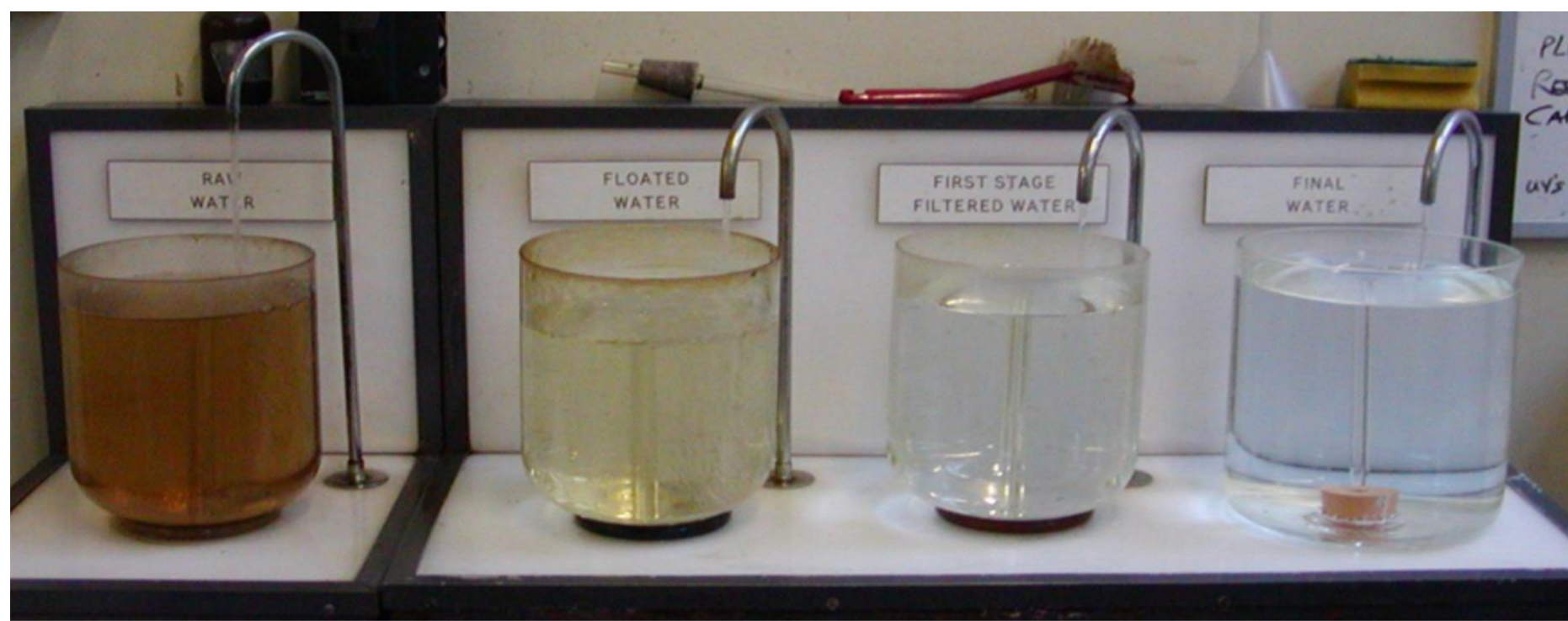


Aim: To investigate the benefit of using satellite imagery to assess the condition of peat and identify suitable areas for restoration in drinking water catchments in Scotland

Our drinking water catchments

1.

Many of the drinking water catchments in Scotland contain organic rich soils. When large areas of these soils are present it can result in high colour and organic carbon levels in the water supplying the water treatment works. This affects the water treatment process, making it more costly and energy intensive to treat.



Catchment risk assessment

2.

It is difficult for us to assess all of our drinking water supply catchments using conventional field based methods due to the large number of catchments that are in upland areas.

A method has been developed by Rezatec which uses satellite imagery to assess the risk that the condition of peat has to water quality.

Remote sensing data from multiple sources (Landsat, Sentinel and SRTM) have been used to create layers that are combined into two key outputs, Peatland Integrity and Water Quality Risk.

4. The peatland integrity score attempts to identify areas of the catchment that have degraded peatland areas.

The water quality risk index attempts to identify areas where soils are drier and connected to the water body i.e. colour/DOC is being produced.

The next phase is to continue to ground truth the outputs. If this proves successful Scottish Water will use this approach to:

- Prioritise catchments for further field based investigation
- Prioritise specific areas for intervention

3.

