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What's in a lake? Glacial Lake Outburst Floods in the Peruvian Andes.

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Climate change is resulting in mass loss and the retreat of glaciers in the Andes, exposing steep valley sides, over-deepened valley bottoms, and creating glacial lakes behind moraine dams. Glacial Lake Outburst Floods (GLOFs) present the biggest risk posed by glacier recession in Peru. Understanding the characteristics of lakes that have failed in the past will provide an aid to identifying those lakes that might fail in the future and narrow down which lakes are of greatest interest for reducing the risks to local vulnerable populations.

Using a newly created lake inventory for the Peruvian Andes (Wood et al., in review) and a comprehensive GLOF inventory (unpublished) we investigate lakes from which GLOFs have occurred in the past. This is to establish which physical components of the glacial lake systems are common to those lakes that have failed previously and which can be identified remotely, easily and objectively, in order to improve existing methods of hazard assessment.