

# Space-based Dam Monitoring Project Secures New Funding



HR Wallingford, a specialist in water research, will broaden its space-based dam monitoring system, DAMSAT, to include water dams in a bid to reduce the risk of failures. The UK Space Agency has extended the organization's funding following a pilot project to monitor tailings dams used to store toxic mine waste in Peru. Ultimately the technology could be employed worldwide to reduce the risks to those living downstream of dams.

Over the next two years, [HR Wallingford](#) will use the ground-breaking DAMSAT software to monitor movement at several water dams in the Cerro de Pasco region of Peru. The system uses Earth Observation (EO) techniques – including the analysis of spectral responses and iron traces from satellite images as well as data from navigation systems – combined with real-time in-situ devices.

## Remote dam monitoring

The consequences of water dam failures can be catastrophic. Earlier this year a breach at Tiware dam in India flooded seven villages and swept away 20 people, according to local media reports. [DAMSAT](#) could help to prevent such devastation by alerting authorities of problems with structures before they are at risk of failing.

According to Marta Roca Collell, project manager at HR Wallingford, DAMSAT allows authorities to monitor dams remotely, particularly useful in isolated locations or where there are concerns about dam management.

DAMSAT's potential in the water sector is huge. Globally, nearly 60,000 dams are registered with the International Commission for large Dams (ICOLD), which are estimated to hold 16, 201 km<sup>3</sup> of water - the same volume as around 6.5 billion Olympic-sized swimming pools.

HR Wallingford leads the research consortium alongside international partners. The group is sponsored by the [UK Space Agency's International Partnership Programme \(IPP\)](#), a five-year, £152 million programme designed to partner UK space expertise with overseas governments and organizations to deliver sustainable, economic or societal benefits.