How mathematicians can help to regenerating landscapes for a sustainable future

Emily Shuckburgh
Cambridge Zero, University of Cambridge

Many landscapes around the world are degraded, including through deforestation, intensive agriculture, urbanisation, pollution and climate change. This is having a devasting impact on biodiversity and in many instances is further exacerbating climate change. Moreover, healthy landscapes mean healthy people – we rely on the land for producing our food, our fresh water, and for our physical and mental wellbeing. We cannot keep plundering them, something has to change.

Understanding how we could manage the land differently to regenerate the natural processes that sustain us requires bringing together expertise from multiple domains across the sciences and social sciences to develop solutions that work for climate, nature, and importantly for the people who live and work in the landscapes. Importantly, it means taking a view of the landscape as a holistic system. As will be described in the talk, mathematicians can play a central role in supporting that analysis.