

BL5323 – Spatial Modelling for Environmental Sustainability (4MCs)

Spatial and social data management and analysis are essential to support environmental sustainability interventions. Information on carbon stocks distribution, biodiversity, land-use change and opportunity costs help devise, monitor and assess the effectiveness of conservation and nature-based climate solutions interventions. Environmental sustainability practitioners that are able to handle and analyse large quantities of spatial and social data generated by remote sensing and social media are in high demand, especially towards the monitoring and verification of carbon credits. To fill this demand gap, the module trains students in the integration of spatial and social modelling skills with an emphasis in geographic information systems and machine learning to answer environmental sustainability questions. Topics covered in the module include GIS, biodiversity modelling, remote sensing, deforestation modelling, boosted regression trees, deep learning, conservation planning and social and behavioural science methods including discrete-choice modelling, the Q-method and structural equation modelling.