

Optical Remote Sensing of Irish Forest Disturbance: Challenges and Proposed Methodologies

Guy Serbin and Stuart Green, Teagasc Ashtown Research Centre

Forested land cover extents are important inputs into terrestrial greenhouse gas models and soil organic carbon models. Forest disturbances, either due to planned or unplanned events, can result in land use changes if the forest does not regenerate afterwards. Optical remote sensing of forest disturbance faces two main challenges in Ireland. Firstly, Irish forest are very small in extent and discontinuous, resulting in a large number of pixels containing forest mixed with other land cover types, necessitating the use of sub-pixel analysis techniques. Secondly, Ireland has issues with persistent cloud cover, limiting the number of scenes available, and further obscuring most scenes with some cloud cover and cloud shadows. This research will develop and test methodologies to determine where and when disturbances occurred, and if they persist.