



## Forest Operations under Challenging Conditions: Operating, Environmental and Safety Constraints

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### Message from the Guest Editors

Forest operations often need to take place on steep slopes. This is due to flatter land often being used for alternative land use. Operating on steep slopes presents technology and management challenges. Harvesting machines and systems are subjected to harsher working conditions that affect machine reliability, and can also reduce machine productivity due to the need to overcome gravity during uphill operations and the need for slower operations when working on side slopes or down steep slopes. Human manoeuvrability can also increase the safety risk as machines can roll over and ground-based workers can struggle to carry out manual work safely. Environmental damage can also be a consequence, as harvesting machines can disturb soil. Therefore, the correct technology must be applied according to the slope and soil conditions, and it needs to be operated according to good practice. This requires good planning as well as well trained and motivated employees. New technology can allow for forest operations to be cost effectively carried out on steep slopes while also minimising environmental impacts and reducing safety risks.





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