Pathways to environmental risk reduction in steep-land forestry

Duncan Harrison, Tim Payn, Chris Phillips, Les Basher, Marie Heaphy
Re-cap 3.2b: minimising and mitigating steep land harvest impacts

- Inform policy relating to sustainability credentials of our planted forests.
- Improve forest design and planning practices
- Design and test alternative management practices
- Assess the impacts on the environment, ensure social acceptability
Pathways 2015 – 2016

• Planting of a trial.
• Organise a meeting for all stakeholders with an interests in erosion and debris flow modelling and risk analysis.
• Continue to champion the importance of a cohesive national collection data of erosion and debris flows data.
• Gather data for the calibration and validation for the SoSlope model for NZ conditions
Alternative Management Practises

- **Trials**
  - Williows & Pine
    - Designed
    - Planted
    - Spot spray
    - Aerial release completed
  - Root reinforcement (radiata, manuka)
Stakeholder Engagement & Informing policy

- Developing good practice for steepland forestry workshop
  - Debris flows fact sheet.
- GDC environmental impacts of forestry report
- Marlborough Mitigating fine sediment
- Continue support for development of NES-PF
Ensuring Licence to Operate


<table>
<thead>
<tr>
<th>Goal</th>
<th>Reason</th>
<th>Constraints determined by stakeholders</th>
<th>Actions</th>
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<tbody>
<tr>
<td>Identification of effective mitigation measures.</td>
<td>To minimise the impact of debris flow events, particularly off-site. To minimise the impact of erosion on freshwater values and soil quality.</td>
<td>Lack of knowledge on erosion and debris flow mitigation measures and their performance.</td>
<td>National standardised methods for the collection and storage of mitigation measure designs, location and performance.</td>
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Future Pathways

• Alternative Management Practises
  – Measurement of trial
    • Survival rate
    • Root collar
    • LiDAR & aerial images
Future Pathways: Managing Risk

• Managing Risk
  • Debris mitigation
  • Best management practices for debris flow mitigation manual

• SlideForNet/SlideForMap/SoSlope
  – NZ data for further model development, calibration & validation
Future Pathways: data collection

• Possible creation of web based application to capture national erosion and debris flow data
http://research.nzfoa.org.nz/
www.gcff.nz

Duncan Harrison
Geo-Spatial Scientist
duncan.harrison@scionresearch.com

13th May 2016
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