EX-CYCLONE GITA

18th February 2018



Digitise the affected area

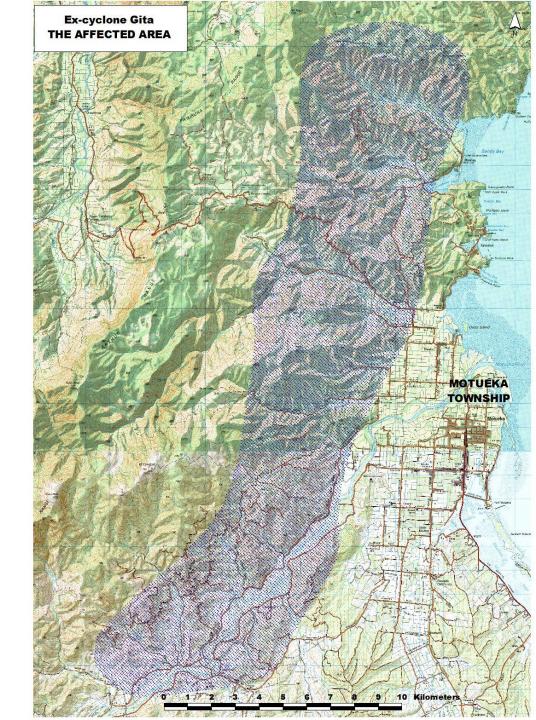
Digitise the catchments

Digitise the slips

Digitise the vegetation types

Analyse the results

Approximately 30 km x 6 km



Digitise the affected area

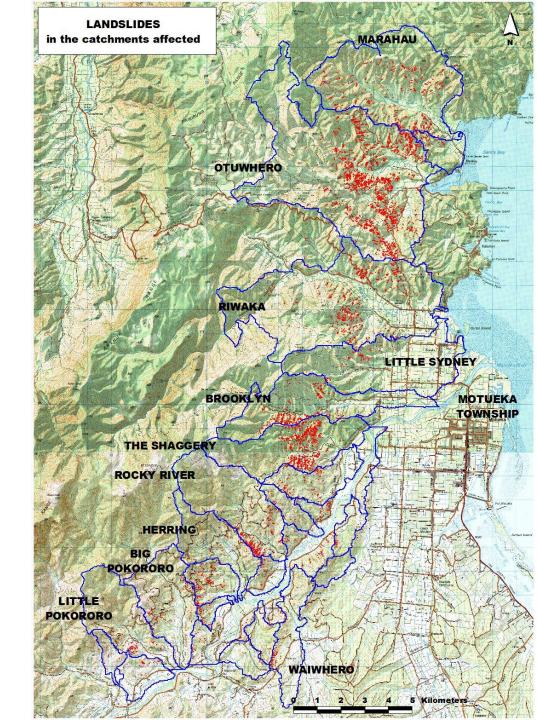
Digitise the catchments

Digitise the slips

Digitise the vegetation types

Analyse the results

- 11 major catchments affected
- Total of 4,719 slips identified
- Total slip area 178.5 hectares
- Estimated sediment 892,500 m³



Digitise the affected area

Digitise the catchments

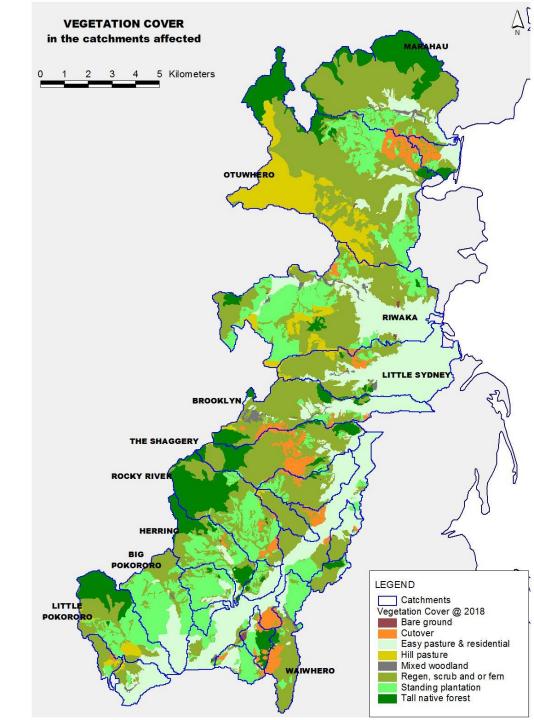
Digitise the slips

Digitise the vegetation types

Analyse the results

Main Vegetation Types

- Cutover (harvested areas)
- Standing Plantation
- Regen native, scrub & fern
- •Tall native forest



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The Main Facts

The most slips occurred in Regen native, scrub and fern, the most common land cover.

The greatest density of slips per hectare was in cutover. Older cutover was more prone.

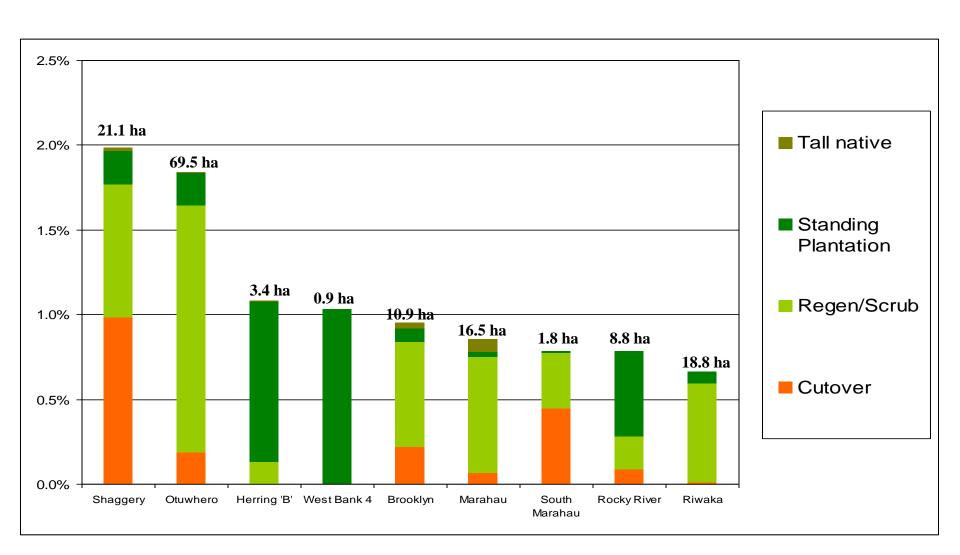
The lowest density of slips was in tall native forest.

Slips in cutover were 30 times more common than in tall native forest.

		Regen, scrub and	Standing	Tall native
	Cutover	or fern	plantation	forest
Number of slips	935	3270	794	72
Slip area (ha)	28.2	109.2	27.7	2.6
Vegetation cover area (ha)	763.6	7651.1	3581.2	2217.0
Percent slips	3.7%	1.4%	0.8%	0.12%

Final Analysis - worst affected catchments

Slip area as a percentage of catchment area by vegetation type



The Gita Video

During and soon after the turmoil and destruction caused by excyclone Gita, some visitors and the locals in Marahau made a video.

It is well worth viewing. It gives some idea of the level of damage and how it affected the community there.

The 20 minute video is on **YouTube** and can be found there by searching for:



Or by typing

https://www.youtube.com/watch?v=7EaatPsRPok

into your browser.

TDC Rules for Forestry on LDA2

The report for the community also included an appraisal of TDC policies, regulations and compliance actions (as at February 2018). These included:

- 1. A summary of the relevant TDC Policies in the Tasman Resource Management Plan (TRMP)
- 2. A summary of the Rules relating to Land Disturbance Area 2 (Separation Point Granite).
- 3. A summary of the Resource Consents for plantation harvesting and earthworks on Separation Point Granite (SPG).
- 4. A summary of the Consent Monitoring Reports (where they existed).
- 5. An analysis of the slippage down through this regulatory hierarchy.

Key Findings

- Harvesting on SPG was a Permitted Activity (ie. no consent needed) provided it used cable harvesting methods.
- Conversely, ground-based harvesting required a Discretionary Consent.
- However, that consent only covered the construction of roads and landings and harvesting within riparian areas.
- Logs and slash could be left in streams if it did not dam or divert the water course or destroy aquatic habitat.
- Permitted activities were infrequently monitored by the TDC Forestry Compliance officer.
- Compliance reports were infrequent and in instances where 'minor' non-compliance had occurred, no action had been taken.
- No abatement notices had been issued by TDC following Gita.
- These rules applied during Gita until the NES-PF was introduced.

The National Environmental Standard for Forestry

- Three months after Gita the National Environmental Standard for Plantation Forestry (NES-PF) was introduced (May 2018). This standard set the rules for forestry for the entire country.
- These rules cover operations including planting, thinning, earthworks, and harvesting and are essentially permissive but most require a number of conditions to be meet.
- There are exceptions though. Rule 6 (3) (a) of the NES-PF allows more stringent rules to be imposed, including specifically on SPG.
- The TDC did not introduce any more stringent rules for years afterwards, leaving the old 2005 rules in place despite the RMA requirement to review its plans every 10 years.
- More recently, TDC have made minor changes for increased stringency for forestry on SPG, most relating to earthworks.
- It is understood that TDC plans to start public consultation on the review of rules for land disturbance on SPG later in 2024.