

# Appendices

# Appendix I

## New Zealand Land Use Capability Classification

New Zealand Land Use Capability Units (From Our Land Resources a bulletin to accompany New Zealand Land Resource Inventory Worksheets, 1979)

The Land Use Capability (LUC) is an ordered arrangement of the land according to those properties that determines its capacity to sustain production permanently. The LUC takes into account physical limitations, management requirements and soil conservation needs.

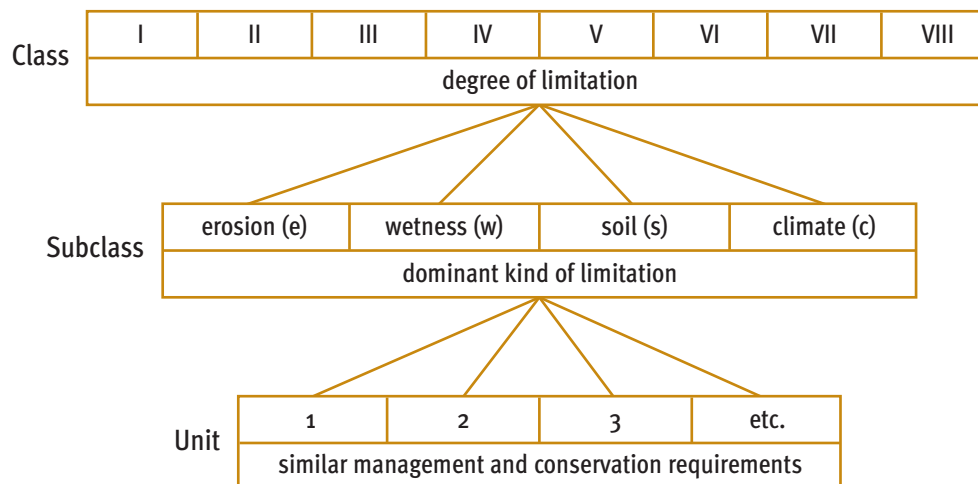
As a basis for the land use capability assessment, an inventory is made of the facts about the land. The facts recorded are: rock type, soil, slope, erosion degree and type, and vegetation. Additional information on climate is also factored in. This information is then displayed on the New Zealand Land Resource Inventory Worksheets as land inventory units.

These units are areas of land which, in terms of the five physical factors mapped, have uniform characteristics. They are therefore 'homogeneous' for every factor.

The classification has three components – a class, subclass and a unit. The diagram below illustrates the relationship between the various components of the land use capability classification:

### New Zealand Land Use Capability

The classification has three components – a class, a subclass and a unit. The diagram below illustrates the relationship between the various components of the land use capability classification.



The capability class is the broadest grouping of the capability classification. It is an assessment of how versatile the land is for sustained production taking into account its physical limitations. It give the general degree of limitation to use.

There are eight classes represented by roman numerals. Classes I-IV are suitable for cropping, pasture or forestry while Classes V-VII are limited to pastoral or forestry use. The limitations reach a maximum with Class VIII land which is not suitable for grazing or production forestry; it best serves a protection function.

The capability subclass is identified by a lower case letter in the land use capability code. It divides the land within each class according to the major kind of limitation to use. There are four kinds identified but only the dominant one for each land unit is recorded.

The four subclasses are:

- e erodibility where susceptibility to erosion is the dominant limitation to use
- w wetness where a high water table, slow internal drainage, and/or flooding constitutes the major limitation to use
- s Soil limitation Where the major restriction to use is a limitation within the rooting zone. This can be due to a shallow soil profile, stoniness, rock outcrops, low soil moisture holding capacity, low fertility (where this is difficult to correct), salinity or toxicity
- c climate Where the climate is the major limitation to use

In the land use capability code, the capability unit is represented by an Arabic number. It groups together land inventory units which require the same kind of management and the same kind and intensity of conservation treatment. Units of land having the same land use capability unit number are capable of growing the same kind of crops, pasture or forest species and have about the same potential yield.

The capability units are arranged in order of decreasing versatility of use and increasing degree of limitation to use.

### Capability Classification

Class	Cropping Sustainability	* General Pastoral & Production Forestry Suitability	* General Suitability
I	High	High	Multiple land use
II			
III	Medium		
IV	Low		
V	Unsuitable	Medium	Pastoral or Forestry land
VI			
VII		Low	
VIII		Unsuitable	Catchment protection land

increasing limitations to use
decreasing versatility

\* land use capability classes IV – VII which have wetness as the major limitation and those units in very low rainfall areas of those occurring on shallow soils are normally not suited to production forestry.

# Appendix II

## Erosion Distribution Maps (from the NZLRI)

### Debris Avalanche



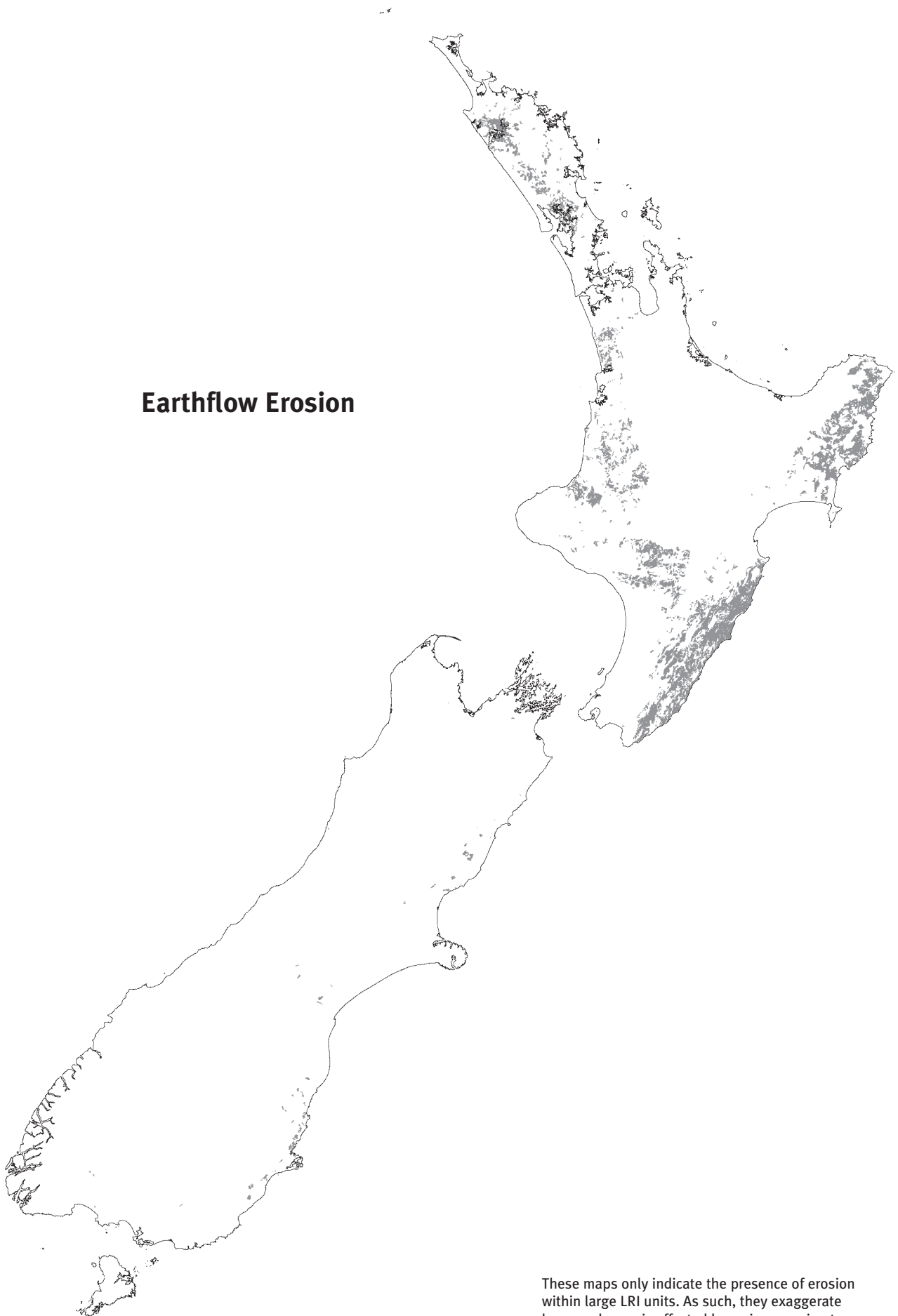
These maps only indicate the presence of erosion within large LRI units. As such, they exaggerate how much area is affected by a given erosion type.

## Soil slip and Earth slip



These maps only indicate the presence of erosion within large LRI units. As such, they exaggerate how much area is affected by a given erosion type.

## Earthflow Erosion



These maps only indicate the presence of erosion within large LRI units. As such, they exaggerate how much area is affected by a given erosion type.

## Gully Erosion



These maps only indicate the presence of erosion within large LRI units. As such, they exaggerate how much area is affected by a given erosion type.

## Scree Erosion



These maps only indicate the presence of erosion within large LRI units. As such, they exaggerate how much area is affected by a given erosion type.

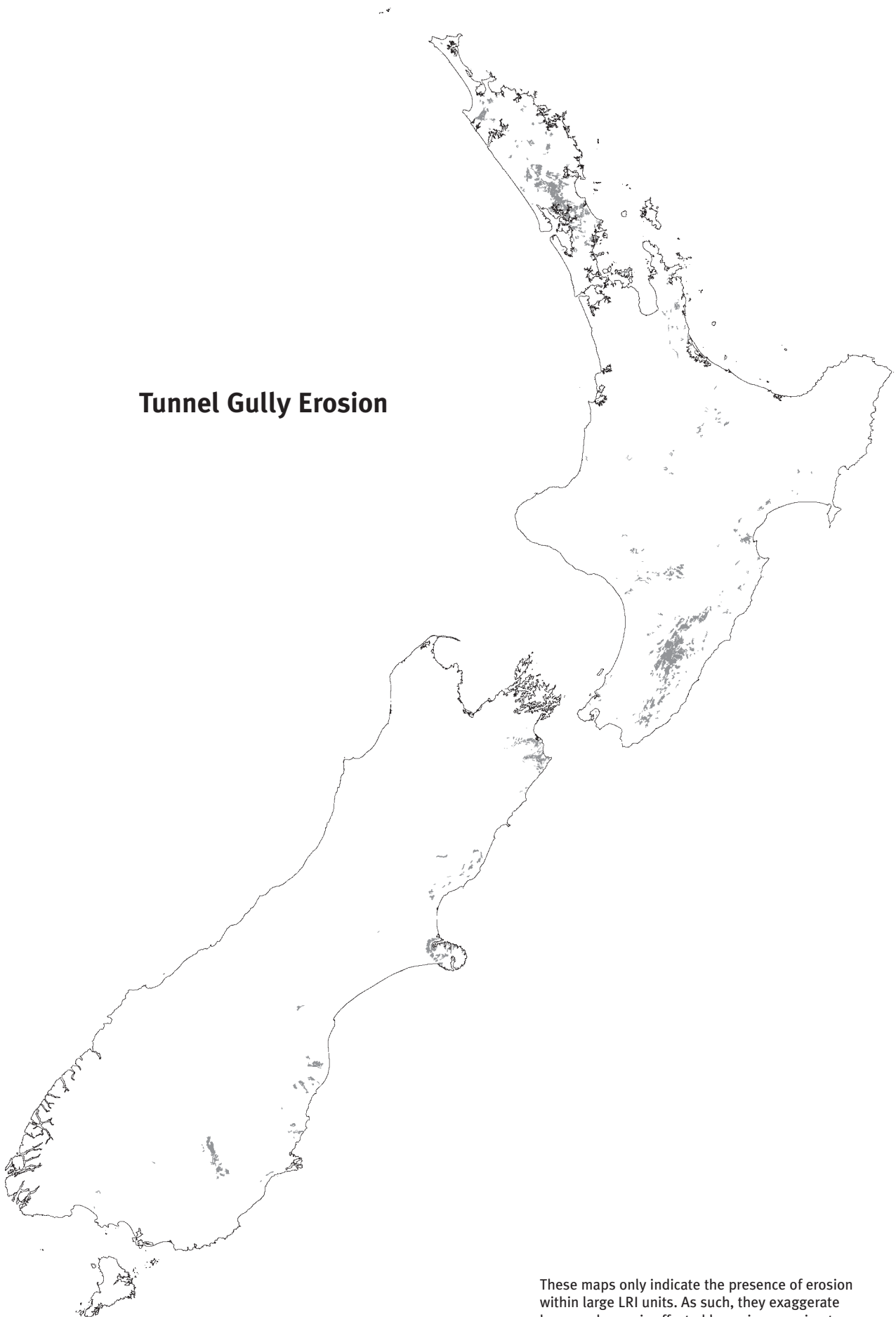


## Slump Erosion



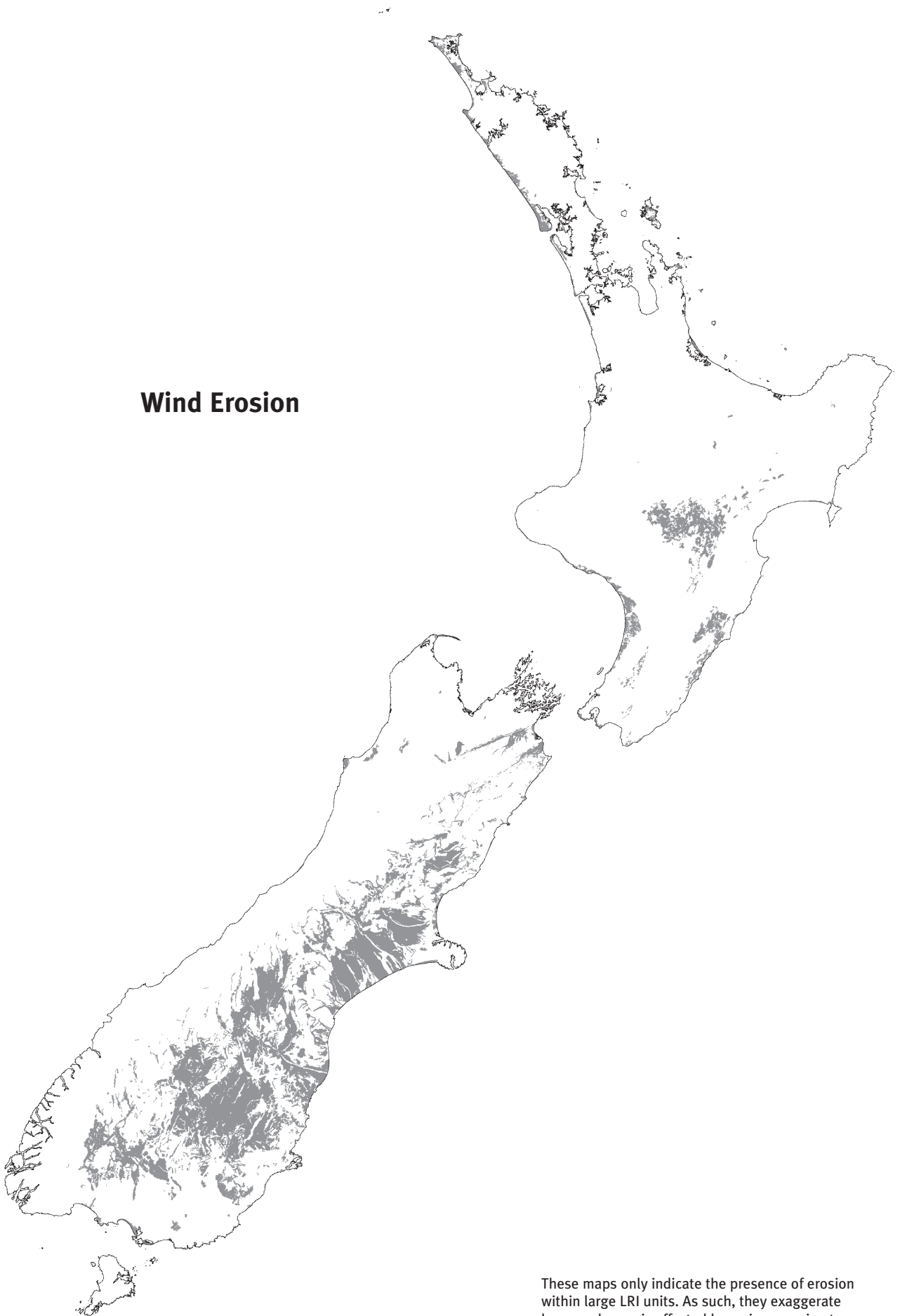
These maps only indicate the presence of erosion within large LRI units. As such, they exaggerate how much area is affected by a given erosion type.

## Tunnel Gully Erosion



These maps only indicate the presence of erosion within large LRI units. As such, they exaggerate how much area is affected by a given erosion type.

## Wind Erosion



These maps only indicate the presence of erosion within large LRI units. As such, they exaggerate how much area is affected by a given erosion type.

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