



## Highly erodible land 2012 South Island

### Metadata

#### File Identifier

79F0C4A0-58CE-4870-B4FE-7AA92F5B80CF

#### Language

eng

#### Character Set

##### Character Set Code

utf8

#### Hierarchy Level

##### Scope Code

series

#### Hierarchy Level Name

series

### Contact

#### Responsible Party

##### Organisation Name

Stats New Zealand

#### Contact Info

##### Contact

##### Address

##### Address

##### Country

Australia

#### Role

##### Role Code

pointOfContact

### Date Stamp

#### Date

2019-03-14

### Metadata Standard Name

ANZLIC Metadata Profile: An Australian/New Zealand Profile of AS/NZS ISO 19115:2005,  
Geographic information - Metadata

### Metadata Standard Version

**Reference System Info****Reference System****Reference System Identifier****Identifier****Code**

27200

**Identification Info****Data Identification****Citation****Citation****Title**

Highly erodible land

**Alternate Title**

Land at risk of erosion

**Date****Date****Date****Other Citation Details**

HEL

**Abstract**

This metadata record describes an image of land predicted to be at risk of severe mass movement erosion for the South Island. The image was produced using the Highly Erodible Land model that identifies land at risk to the main forms of mass-movement soil erosion in New Zealand: landsliding, gullyng, or earthflow erosion. If the land has protective woody vegetation, then it is not at risk (Dymond et al., 2006). The Highly Erodible Land model identifies five classes of land at risk of erosion: (1) High landslide risk – delivery to stream; (2) high landslide risk – non-delivery to stream; (3) Moderate earthflow risk; (4) Severe earthflow risk; and (5) Gully risk. Landsliding occurs on steep slopes where the soils do not have protective tree roots. The slope angle at which land is considered at risk to landsliding depends on rock strength. Where land is steeper than this slope threshold and does not have woody vegetation, it is considered at risk to landsliding. There is no slope threshold for land at risk to gullyng or earthflow erosion. Where land is at risk to gullyng or earthflow erosion and does not have woody vegetation, it is considered at risk. The different types of mass-movement soil erosion are not ranked in severity, except for earthflow risk which has extreme and moderate classes of risk. Use: These data provide a regional perspective on land at risk of soil erosion.

**Purpose**

Prioritisation of land at regional and catchment scales for soil conservation works. For identifying where significant soil erosion is occurring and where soil conservation

work such as afforestation or space-planted trees is required.

#### Credit

John Dymond, Maanaki-Whenua - Landcare Research

#### Status

Progress Code

completed

#### Point Of Contact

Responsible Party

Organisation Name

Ministry for the Environment

Contact Info

Contact

Address

Address

Country

Australia

Electronic Mail Address

Bridget.McNeill@mfe.govt.nz

Role

Role Code

pointOfContact

#### Resource Maintenance

Maintenance Information

Maintenance And Update Frequency

Maintenance Frequency Code

unknown

Date Of Next Update

Date

2021

#### Descriptive Keywords

Keywords

Keyword

New Zealand

Type

Keyword Type Code

theme

Thesaurus Name

Citation

Title

ANZLIC Jurisdictions

Date

Edition

| Version 2.1

Edition Date

| Date

| 2008-10-29

Identifier

| Identifier

| Code

| <http://asdd.ga.gov.au/asdd/profileinfo/anzlic-jurisdic.xml#anzlic-jurisdic>

Cited Responsible Party

| Responsible Party

| Organisation Name

| ANZLIC the Spatial Information Council

| Role

| Role Code

| custodian

## Descriptive Keywords

Keywords

Keyword

| GEOSCIENCES-Geomorphology

Keyword

| HAZARDS-Landslip

Keyword

| SOIL-Erosion

Type

| Keyword Type Code

| theme

Thesaurus Name

Citation

Title

| ANZLIC Search Words

Date

Edition

| Version 2.1

Edition Date

| Date

2008-05-16

Identifier

Identifier

Code

<http://asdd.ga.gov.au/asdd/profileinfo/anzlic-theme.xml#anzlic-theme>

Cited Responsible Party

Responsible Party

Organisation Name

ANZLIC the Spatial Information Council

Role

Role Code

custodian

Resource Constraints

Security Constraints

Classification

Classification Code

unclassified

Resource Constraints

Legal Constraints

Access Constraints

Restriction Code

license

Resource Constraints

Legal Constraints

Use Limitation

The Highly Erodible Land dataset is provided under the Landcare Data Use License <https://iris.scinfo.org.nz/license/landcare-data-use-licence-v1/>

Use Constraints

Restriction Code

license

Resource Constraints

Legal Constraints

Use Limitation

Not to be used for making soil conservation plans for individual farms

Use Constraints

Restriction Code

otherRestrictions

Other Constraints

Not to be used for making soil conservation plans for individual farms

## Spatial Representation Type Code

grid

## Representative Fraction

Denominator

Integer

50000

## Language

eng

## Character Set

Character Set Code

utf8

## Topic Category Code

environment

## Topic Category Code

geoscientificInformation

## Extent

EX \_ Extent

Geographic Element

EX \_ Geographic Bounding Box

166.264966174.552817-47.400747-40.336922

## Data Quality Info

DQ \_ Data Quality

Scope

DQ \_ Scope

Level

Scope Code

series

Level Description

Scope Description

Other

series

## Lineage

LI \_ Lineage

Statement

A summary of methodology: These national maps of soil erosion are modelled from three factors: (1)slope; (2) land cover (from satellite imagery LCDB v4.0, nominal date 2012/13); and, (3) rock type. Further details... The Highly Erodible Land (HEL) system identifies land highly susceptible to mass-movement erosion using a combination of the erosion terrains derived from the NZLRI database, a 15-metre digital elevation model (DEM) to determine topography, and land cover mapping. It considers the main forms of mass-movement erosion in New Zealand (landsliding, earth flows, and massive gullyng). Highly erodible land was defined as "land with the potential for severe erosion if it does not have protective woody vegetation" and was

identified by: •defining slope thresholds for each erosion terrain and assigning all land above the threshold to HEL on the basis of landslide risk (thresholds ranged from 24° on weak Tertiary-age mudstone to 45° on hard greywacke) Note that slope thresholds shown as 90 and over represent no threshold, i.e. any slope is at risk of erosion. •assigning all pixels mapped with moderate or severe earth-flow erosion and gully erosion (from the NZLRI) to HEL •determining whether land identified as HEL has existing woody vegetation cover (if protected it is excluded from HEL). Space-planted trees, a soil conservation measure, are not taken into account in the HEL model. John D has estimated that 5 - 10% of HEL actually has space-planted trees. Because it uses the DEM to identify slopes, the HEL system is capable of higher spatial resolution than the NZLRI approach alone.

## Metadata Constraints

### Security Constraints

#### Classification

##### Classification Code

unclassified

## Metadata Constraints

### Legal Constraints

#### Use Limitation

Attribution 4.0 International

#### Use Limitation

<https://creativecommons.org/licenses/by/4.0/>

#### Use Constraints

##### Restriction Code

license