TsunamiHazard2021

Shapefile

Tags

Tsunami, Hazard, New Zealand

Summary

This dataset defines the coastal sections, tsunami warning zones, and expected maximum tsunami height for return periods of 100, 500, 1000 and 2500 years at the 50th and 84th percentile of confidence. The dataset is intended to inform tsunami hazard. It derives from the model described in Power et al. (2022).

Description

This dataset defines the maximum tsunami height (maximum amplitude) expected to be exceeded once every 100, 500, 1000 and 2500 years on average at the 50th and 84th percentile of confidence, as estimated by the model described in Power et al. (2022). The dataset also defines the coastal sections that were used for this modelling. The expected maximum tsunami heights are presented for each of these coastal sections.

Please note that the expected maximum tsunami height will typically only occur at one location within each coastal section. It is a conservative (pessimistic) assumption if this height is used throughout the section.

Credits

GNS Science.

Use limitations

This data is intended to be used in conjunction with Power et al. (2022), and with acknowledgement of the limitations of the methodology expressed there (and in particular those on page 53 of that report).

Extent

West	-177.141870	**East**	178.776876
North	-34.213102	**South**	-47.471046

Scale Range

Maximum (zoomed in) 1:5,000
Minimum (zoomed out) 1:150,000,000

Topics and Keywords

THEMES OR CATEGORIES OF THE RESOURCE   geoscientificInformation, oceans

* CONTENT TYPE   Downloadable Data
   EXPORT TO FGDC CSDGM XML FORMAT AS RESOURCE DESCRIPTION   No

PLACE KEYWORDS   New Zealand

PLACE KEYWORDS   Chatham Islands

TEMPORAL KEYWORDS   2021

THEME KEYWORDS   tsunami

THEME KEYWORDS   probabilistic

THEME KEYWORDS   hazard

THEME KEYWORDS   national

Citation

* TITLE   TsunamiHazard2021
PUBLICATION DATE   2022-11-01   00:00:00

PRESENTATION FORMATS   ***** digital map

OTHER CITATION DETAILS
   Dataset DOI:
   https://doi.org/10.21420/C3CK-FB93

   Power WL, Burbidge DR, Gusman AR. 2022. The 2021 update to New Zealand's National Tsunami Hazard Model. Lower Hutt (NZ): GNS Science. 63 p. (GNS Science report; 2022/06). doi:10.21420/X2XQ-HT52.

Citation Contacts

RESPONSIBLE PARTY
   INDIVIDUAL'S NAME   William Power
   ORGANIZATION'S NAME   GNS Science
   CONTACT'S POSITION   Senior Geophysicist - Scientific Programmer

CONTACT'S ROLE   point of contact

Resource Details

DATASET LANGUAGES   * English (NEW ZEALAND)
DATASET CHARACTER SET   utf8 - 8 bit UCS Transfer Format

SPATIAL REPRESENTATION TYPE   * vector

* PROCESSING ENVIRONMENT   Version 6.2 (Build 9200); Esri ArcGIS 10.8.1.14362

CREDITS
GNS Science

Extents

EXTENT
  GEOGRAPHIC EXTENT
    BOUNDING RECTANGLE
    EXTENT TYPE   Extent used for searching
    * WEST LONGITUDE   -177.141870
    * EAST LONGITUDE   178.776876
    * NORTH LATITUDE   -34.213102
    * SOUTH LATITUDE   -47.471046
    * EXTENT CONTAINS THE RESOURCE   Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM
  * WEST LONGITUDE   -177.141870
  * EAST LONGITUDE   178.776876
  * SOUTH LATITUDE   -47.471046
  * NORTH LATITUDE   -34.213102
  * EXTENT CONTAINS THE RESOURCE   Yes

Resource Maintenance

RESOURCE MAINTENANCE
  DATE OF NEXT UPDATE   2025-11-01   00:00:00

Resource Constraints

CONSTRAINTS
  LIMITATIONS OF USE

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organisation's use of, or reliance on, the contents of this report.

This data is intended to be used in conjunction with Power et al. (2022), and with
acknowledgement of the limitations of the methodology expressed there (and in
particular those on page 53 of that report).

Spatial Reference

ARCGIS COORDINATE SYSTEM
* TYPE   Geographic
* GEOGRAPHIC COORDINATE REFERENCE   GCS_WGS_1984
* COORDINATE REFERENCE DETAILS
GEOGRAPHIC COORDINATE SYSTEM
WELL-KNOWN IDENTIFIER   4326
X ORIGIN   -400
Y ORIGIN   -400
XY SCALE   11258999068426.238
Z ORIGIN   -100000
Z SCALE   10000
M ORIGIN   -100000
M SCALE   10000
XY TOLERANCE   8.983152841195215e-09
Z TOLERANCE   0.001
M TOLERANCE   0.001
HIGH PRECISION   true
LEFT LONGITUDE   -180
LATEST WELL-KNOWN IDENTIFIER   4326
WELL-KNOWN TEXT
GEOGCS["GCS_WGS_1984",DATUM["D_WGS_1984",SPHEROID["WGS_1984",6378137.0,298.257223563]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433],AUTHORITY["EPSG",4326]]

REFERENCE SYSTEM IDENTIFIER
* VALUE   4326
* CODESPACE   EPSG
* VERSION   6.14 (3.0.1)

Spatial Data Properties

VECTOR

* LEVEL OF TOPOLOGY FOR THIS DATASET   geometry only

GEOMETRIC OBJECTS
FEATURE CLASS NAME   TsunamiHazard2021
* OBJECT TYPE   composite
* OBJECT COUNT   268

ARCGIS FEATURE CLASS PROPERTIES

FEATURE CLASS NAME   TsunamiHazard2021
* FEATURE TYPE   Simple
* GEOMETRY TYPE   Polygon
* HAS TOPOLOGY   FALSE
* FEATURE COUNT   268
* SPATIAL INDEX   TRUE
* LINEAR REFERENCING   FALSE

Distribution

Fields

DETAILS FOR OBJECT TsunamiHazard2021

* TYPE   Feature Class
* ROW COUNT   268

FIELD FID

* ALIAS   FID
* DATA TYPE   OID
* WIDTH   4
* PRECISION   0
* SCALE   0
* FIELD DESCRIPTION
  Internal feature number.

* DESCRIPTION SOURCE
  Esri

* DESCRIPTION OF VALUES
  Sequential unique whole numbers that are automatically generated.

FIELD OBJECTID

* ALIAS   OBJECTID
* DATA TYPE   Integer
* WIDTH   10
* PRECISION   10
* SCALE   0
* FIELD DESCRIPTION
  Internal feature number.

* DESCRIPTION SOURCE
  Esri

* DESCRIPTION OF VALUES
  Sequential unique whole numbers that are automatically generated.

FIELD SHAPE

* ALIAS   Shape
* DATA TYPE   Geometry
* WIDTH   0
* PRECISION   0
* SCALE   0
* FIELD DESCRIPTION
  Feature geometry.

* DESCRIPTION SOURCE
  Esri

* DESCRIPTION OF VALUES
    Coordinates defining the features.

FIELD SECTN_CODE

* ALIAS   SECTN_CODE
* DATA TYPE   Integer
* WIDTH   5
* PRECISION   5
* SCALE   0
FIELD DESCRIPTION
    Code number of coastal section. Coastal sections are 20 km subdivisions of the warning zones. Hazard data is provided for each coastal section in separate fields.

DESCRIPTION SOURCE
    GNS Science

FIELD SECTN_NAME

* ALIAS   SECTN_NAME
* DATA TYPE   String
* WIDTH   50
* PRECISION   0
* SCALE   0
FIELD DESCRIPTION
    Name of coastal section.

DESCRIPTION SOURCE
    GNS Science

FIELD WZONE_CODE

* ALIAS   WZONE_CODE
* DATA TYPE   Integer
* WIDTH   5
* PRECISION   5
* SCALE   0
FIELD DESCRIPTION
    Warning zone code number. Warning zones comprise several coastal sections.

DESCRIPTION SOURCE
    GNS Science

FIELD WZONE_NAME

* ALIAS   WZONE_NAME
* DATA TYPE   String
* WIDTH   100
* PRECISION   0
* SCALE   0
FIELD DESCRIPTION
    Warning zone name.

DESCRIPTION SOURCE

GNS Science

FIELD H100y50p

* ALIAS   H100y50p
* DATA TYPE   Single
* WIDTH   13
* PRECISION   0
* SCALE   0

FIELD DESCRIPTION
The expected maximum tsunami height (maximum amplitude) in metres at the 100 year return period and at the 50th percentile of confidence. See Power et al. (2022) for details.

DESCRIPTION SOURCE
GNS Science

FIELD H500y50p

* ALIAS   H500y50p
* DATA TYPE   Single
* WIDTH   13
* PRECISION   0
* SCALE   0

FIELD DESCRIPTION
The expected maximum tsunami height (maximum amplitude) in metres at the 500 year return period and at the 50th percentile of confidence. See Power et al. (2022) for details.

DESCRIPTION SOURCE
GNS Science

FIELD H1000y50p

* ALIAS   H1000y50p
* DATA TYPE   Single
* WIDTH   13
* PRECISION   0
* SCALE   0

FIELD DESCRIPTION
The expected maximum tsunami height (maximum amplitude) in metres at the 1000 year return period and at the 50th percentile of confidence. See Power et al. (2022) for details.

DESCRIPTION SOURCE
GNS Science

FIELD H2500y50p

* ALIAS   H2500y50p
* DATA TYPE   Single
* WIDTH   13
* PRECISION   0
* SCALE   0

FIELD DESCRIPTION
The expected maximum tsunami height (maximum amplitude) in metres at the 2500 year return period and at the 50th percentile of confidence. See Power et al. (2022) for details.

DESCRIPTION SOURCE
GNS Science

FIELD H100y84p

* ALIAS   H100y84p
* DATA TYPE   Single
* WIDTH   13
* PRECISION   0
* SCALE   0
FIELD DESCRIPTION
The expected maximum tsunami height (maximum amplitude) in metres at the 100 year return period and at the 84th percentile of confidence. See Power et al. (2022) for details.

DESCRIPTION SOURCE
GNS Science

FIELD H500y84p

* ALIAS   H500y84p
* DATA TYPE   Single
* WIDTH   13
* PRECISION   0
* SCALE   0
FIELD DESCRIPTION
The expected maximum tsunami height (maximum amplitude) in metres at the 500 year return period and at the 84th percentile of confidence. See Power et al. (2022) for details.

DESCRIPTION SOURCE
GNS Science

FIELD H1000y84p

* ALIAS   H1000y84p
* DATA TYPE   Single
* WIDTH   13
* PRECISION   0
* SCALE   0
FIELD DESCRIPTION
The expected maximum tsunami height (maximum amplitude) in metres at the 1000 year return period and at the 84th percentile of confidence. See Power et al. (2022) for details.

DESCRIPTION SOURCE
GNS Science

FIELD H2500y84p

* ALIAS   H2500y84p
* DATA TYPE   Single
* WIDTH   13
* PRECISION   0
* SCALE   0

FIELD DESCRIPTION
The expected maximum tsunami height (maximum amplitude) in metres at the 2500 year return period and at the 84th percentile of confidence. See Power et al. (2022) for details.

DESCRIPTION SOURCE
GNS Science

FIELD SHAPE_Leng

* ALIAS   SHAPE_Leng
* DATA TYPE   Double
* WIDTH   19
* PRECISION   0
* SCALE   0

FIELD SHAPE_Area

* ALIAS   SHAPE_Area
* DATA TYPE   Double
* WIDTH   19
* PRECISION   0
* SCALE   0
* FIELD DESCRIPTION
   Area of feature in internal units squared.

* DESCRIPTION SOURCE
   Esri

* DESCRIPTION OF VALUES
   Positive real numbers that are automatically generated.

Metadata Details

* METADATA LANGUAGE   English (NEW ZEALAND)
* METADATA CHARACTER SET   utf8 - 8 bit UCS Transfer Format

METADATA IDENTIFIER   ceb53322-0e2a-444a-bb1e-3edbddae5312

SCOPE OF THE DATA DESCRIBED BY THE METADATA   * dataset
SCOPE NAME   * dataset

* LAST UPDATE   2022-10-13

ARCGIS METADATA PROPERTIES
METADATA FORMAT   ArcGIS 1.0
METADATA STYLE   ISO 19139 Metadata Implementation Specification GML3.2
STANDARD OR PROFILE USED TO EDIT METADATA   ISO19139

CREATED IN ARCGIS FOR THE ITEM   2022-10-10   13:54:02
LAST MODIFIED IN ARCGIS FOR THE ITEM   2023-03-08   11:20:07

AUTOMATIC UPDATES
HAVE BEEN PERFORMED   Yes
LAST UPDATE   2022-10-13   11:20:07

Metadata Contacts

METADATA CONTACT
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ORGANIZATION'S NAME   GNS Science
CONTACT'S POSITION   GIS Analyst
CONTACT'S ROLE   point of contact

Metadata Constraints

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