



NZ Coastal Hydrosystems

Metadata

File Identifier

fb6e72a8-ab21-226c-e619-7088c8f2765a

Language

eng

Character Set

Character Set Code

utf8

Hierarchy Level

Scope Code

dataset

Hierarchy Level Name

dataset

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Role Code

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Date Stamp

Date

2017-02-02

Metadata Standard Name

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

Metadata Standard Version

1.1

Reference System Info

Reference System

Reference System Identifier

Identifier

Code

2193

Identification Info

Data Identification

Citation

Citation

Title

A classification of New Zealand's coastal hydrosystems

Alternate Title

New Zealand coastal hydrosystem classification

Alternate Title

NZCH

Date

Date

Date

Other Citation Details

Hume, T., Gerbeaux, P., Hart, D., Kettles, H., Neale, D. 2016. A classification of New Zealand's coastal hydrosystems. Report prepared for the Ministry for the Environment. Niwa Client Report 2016-062. 120pp. October 2016. This report can be found on the Ministry for the Environment publication website <http://www.mfe.govt.nz/publication-search>.

Abstract

Coastal hydrosystems describe coastal features that span a gradient from near coast freshwater lakes/wetlands (lacustrine/palustrine environments) to marine. The term 'coastal hydrosystem' avoids the common error of referring to all such features as estuaries, mislabelling the numerous types that are non-estuarine and have different behavioural characteristics and management sensitivities from any truly estuarine environment. It also encompasses the coastal systems that do not represent end-of-river environments (e.g., some pocket beaches and embayments) or are so large and complex as to be fed by several freshwater drainage features (rivers, streams, wetlands) but which are dominated by none (e.g., some harbours, fjords, sounds and coastal-lacustrine systems). It also incorporates the multiple aspects of each system, including beaches, spits, barriers, river mouths, wetlands, saltmarshes and other geomorphic, ecological and hydrological features. The New Zealand Coastal Hydrosystem classification (NZCH) is a classification of coastal hydrosystems within New Zealand including some offshore islands. The coastal hydrosystems classification is based on a hierarchical view of the abiotic components that comprise the environments of coastal hydrosystems. This classification presents detail at the geomorphic class level because this level is particularly important for coastal management and conservation needs at national and regional scales. The primary GIS is the point layer. Supporting files (attached) include: a CSV database of environmental variables; GIS polygon layer; and Google Earth (.kmz) point and polygon exports. The database, GIS and Google Earth files should be used in conjunction with the Classification of New Zealand's Coastal Hydrosystems report (Hume et al. 2016) (also attached) which documents a full description of the database, the calculation procedures and limitations to the variables. The spreadsheet comprises a database of 500 New Zealand coastal hydrosystems and their associated environmental variables developed for the report. The GIS point file comprises 500 New Zealand coastal hydrosystems and their associated environmental variables developed for the database. The environmental variables are mapped at 1:50,000 scale. NOTE: Within the point attribute file -9999 represents the environmental variables with no data as shown in the spreadsheet as a blank cell. Make sure to exclude these values from analyses. The polygon files comprise 420 New Zealand coastal hydrosystems depicting their general shape of the water body basin at high tide and upstream limit. The .kmz files are derived from the NZCH GIS point and polygon layers for use with Google Earth. The report provides a classification of coastal hydrosystems within New Zealand including some offshore islands. The coastal hydrosystems classification reconciles and clarifies coastal hydrosystem terminology and produces a hierarchy and classification of coastal wetland, riverine, estuarine and marine types. This report identifies and provides a list of environmental variables that describe the characteristics and properties of about 500 discrete coastal hydrosystems that can be used to provide national and regional statistics on coastal hydrosystems. An Identification Key is provided to guide the determination of the classes.

Purpose

Used to provide environmental variables and a geomorphic class type for New Zealand's coastal hydrosystems.

Credit

T. Hume (Hume Consulting Ltd) P. Gerbeaux (Department of Conservation) D. Hart

(University of Canterbury) H. Kettles (Department of Conservation) D. Neale
(Department of Conservation)

Status

Progress Code

completed

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Resource Maintenance

Maintenance Information

Maintenance And Update Frequency

Maintenance Frequency Code

notPlanned

Resource Format

Format

Name

*.xml

Version

Unknown

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

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Role Code

custodian

Descriptive Keywords

Keywords

Keyword

BOUNDARIES-Biophysical

Keyword

GEOSCIENCES-Geomorphology

Keyword

MARINE-Coasts

Keyword

MARINE-Estuaries

Type

Keyword Type Code

theme

Thesaurus Name

Citation

Title

ANZLIC Search Words

Date

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Date

2008-05-16

Identifier

Identifier

Code

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

Cited Responsible Party

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Organisation Name

ANZLIC the Spatial Information Council

Role

Role Code

custodian

Resource Constraints

Legal Constraints

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Access Constraints

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Spatial Representation Type Code

vector

Language

eng

Character Set

Character Set Code

utf8

Topic Category Code

environment

Topic Category Code

geoscientificInformation

Extent

EX_ Extent

Geographic Element

EX_ Geographic Description

Identifier

Authority

Citation

Title

ANZMet Lite Country codelist

Date

Edition

Version 1.0

Edition Date

Date

2009-03-31

Identifier

Identifier

Code

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

Cited Responsible Party

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Organisation Name

ANZLIC the Spatial Information Council

Role

Role Code

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Code

nzl

Extent

EX _ Extent

Geographic Element

EX _ Geographic Bounding Box

166.343453818-175.899620296-47.2230279925-34.4262589176

Distribution Info

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Transfer Options

Digital Transfer Options

On Line

Online Resource

Linkage

URL

<https://data.mfe.govt.nz/layer/53565-nz-coastal-hydrosystems/>

Data Quality Info

DQ _ Data Quality

Scope

DQ _ Scope

Level

Scope Code

dataset

Level Description

Scope Description

Other

dataset

Lineage

LI _ Lineage

Statement

Data mining and computation using numerical and analytical models and GIS were used to derive the NZCH database. Variables were derived from NIWA's digital elevation model (DEM) (30 m cell size) of New Zealand, the 1:50,000 Digital Topographic Database, the New Zealand Land Resource Inventory (NZLRI) and Land Cover Database (LCDB) and the New Zealand EEZ Tidal Model, digital files of the RNZN hydrographic charts, and various publications and reports. Computation using numerical and analytical models and GIS was also used to derive the variables. A full description of the database and calculation methods is provided in: Hume, T., Gerbeaux, P., Hart, D., Kettles, H., Neale, D. 2016. A classification of New Zealand's coastal hydrosystems. Report prepared for the Ministry for the Environment. Niwa Client Report 2016-062. 120pp. October 2016. This database comprises information from two sources. The first is the database developed for over 400 estuaries in the Estuarine Classification Database of Hume et al. (2007): Hume, T., Snelder, T., Weatherhead, M., Liefing, R. (2007) A controlling factor approach to estuary classification. *Journal of Ocean and Coastal Management* 50, Issues 11–12: 905–929. <http://dx.doi.org/10.1016/j.ocecoaman.2007.05.009> It provides the following variables: Council region; Geomorphic class (NZ coastal hydrosystem classification); Coordinates of mouth (NZTM2000); Width of mouth (m); Shoreline perimeter length (m); Surface area at spring high tide (m²); Intertidal area (% of high tide area); Mean depth at spring high tide (m); Total volume at spring high tide (m³); Spring tidal range (m); Spring tidal prism (m); Catchment area (km²); River inflow volume during a tidal cycle, 12.4 hr (m³); Coordinates of mouth (NZMG). It is important to note that this database was compiled over 2003-2006 and that there is now more up-to-date information available for some of the variables via the NZ River Environment Classification (REC2) and in particular, updates to the LCDB and Google Earth imagery. This has not been incorporated into the NZCH database. The second source is data compiled as part of this study to incorporate environmental variables for damp sand plain lakes, waituna-type lagoons, hāpua-type lagoons, beach streams and freshwater river mouths systems. For these systems the dataset of variables is more limited because for instance waituna-type lagoons, hāpua-type lagoons, beach streams and freshwater river mouths have no tidal incursion and therefore no tidal prism or intertidal area.

Disclaimer - This dataset was created for the purpose of developing and

testing a classification for New Zealand coastal hydrosystems. Its accuracy and integrity reflects that purpose. We recommend that users exercise their own skill and care with respect to their use of the data and that users carefully evaluate its accuracy, currency, completeness and relevance of it for their particular purposes. MFE does not guarantee, and accepts no legal liability whatsoever arising from, or connected to, the use of this dataset.

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