Key Datasets for Resilience and Climate Change Data Improvements

Quarterly Progress Update: September 2019

Introduction

LINZ understands the vital importance of having reliable, accessible information to inform those working in emergency management and climate change. This is why LINZ is investing in working with other lead agencies to improve the key datasets.

A key dataset improvement plan was approved in June 2019. Quarterly updates will be shared with the NZGIS4EM Committee as our customer representative and with Ministry of Civil Defence and Emergency Management to inform its related work on Essential Elements of Information. Next update due January 2019.

Data Improvement Highlights: Quarter 1

- NIWA updated the Rivers and Catchments data and released the data under Creative Commons license CC-BY 4.0 [Read more](#)

- Stats NZ launched census 2018 data. [Read more](#)

- LINZ released river name datasets (line and polygon) as a pilot to help understand the benefit of combining river names and location. [Read more](#)

- Eight Regional Councils have assessed the LiDAR tender submissions and are in the process of identifying a preferred supplier.

- LiDAR data for [Marlborough](#) and [Manawatu-Whanganui](#) has been released plus a [tutorial](#) for creating DEMs from Open Topography.

- Building outlines for Taranaki have been added to the national dataset. [Read more](#)

- 10m imagery has been update on LINZ Data Service. [Read more.](#)

- All lead agencies remain engaged with the resilience and climate change key dataset improvement project.

Priority Improvements Update: Quarter 1

Key datasets to support those working in resilience and climate change have been identified and their fitness for purpose assessed. Consultation with the user community, and collaboration with the key dataset lead agencies, identified the following data improvements which can be progressed over the next 12 months.

Below is an update on progress during Quarter 1 (June to September 2019) and planned milestones for Quarter 2 (October – December 2019).

▪ Lead agency is on track to deliver priority improvement to agreed timeframe

▣ Lead agency has delivered data improvements to the public this quarter.

▪ Lead agency is obtaining organisational buy in to deliver priority improvement.

1. LINZ to provide a more comprehensive national coverage of **addresses** by June 2021.

   Q1 Gained agreement from some Territorial Authorities for LINZ to access complete address datasets, rather than just recent changes, and recently gained short term access to an address validation tool for address analysis.

   Q2 Understand the validation process, with the intention of having some sample additional addresses to assess for quality and validity. Plan for stakeholder engagements in the new year.

2. LINZ to work with all regions to coordinate the acquisition and release of **LiDAR** data into open national datasets by June 2023.

   Q1 LINZ has issued a Request for Tender to procure LiDAR capture services on behalf of the 8 Regional Councils. Submissions due 4 September 2019. LiDAR for Marlborough and Manawatu-Whanganui has been released.

   Q2 Evaluate tenders and identify preferred supplier. Release additional data to continue to build national height dataset and publish blog on converting LiDAR data to NZVD2016 datum.

3. NZTA understands the importance of providing easy access to **road closure** data, but currently is unable to commit to an improvement plan.

   Q1 Road closure network has not progressed due to recent restructure at NZTA.

   Q2 NZTA to create high level understanding of the work required to develop a road closure network of state highways and local roads. This improvement is also being discussed with Ministry of Civil Defence and Emergency Management.

4. Stats NZ understands the importance of providing **small geography population count** information for use in responding to emergency events and will explore options with LINZ on how best this could be achieved.

Q1 First release of 2018 Census data is now available at SA2 level (area unit replacement) attributed with population count, age sex and ethnicity, and also available as Esri REST services.

StatsNZ Website: https://www.stats.govt.nz/information-releases/2018-census-population-and-dwelling-counts-nz-stat-tables
Esri REST services:
https://s3-stats.cloud.eaglegis.co.nz/arcgis/rest/services/Census2018
Datafinder:
https://datafinder.stats.govt.nz/data/category/census/2018/?page=3

Q2 Publish SA1 (meshblock replacement) dataset with population counts and a variety of attributes. Provide further information to Senior Managers about small geography population counts.

5. LINZ to improve access to **parcel** attribution by June 2020 and investigate the feasibility of creating a property boundary layer by June 2021.

Q1 Publishing the parcel data as an Esri REST service is the first step towards improving access to the attribution. Project Brief for publishing key datasets as Esri REST services has been approved.

Q2 Publish Parcels as an Esri REST service. Opening up the District Valuation Role is the key to generate a property boundary. Aim to provide restricted access to some individual Council District Valuation Roll data for testing. Release the Property Data Management Framework for expert review.

6. LINZ to complete national coverage of **building outlines** by June 2020.

Q1 Taranaki buildings published in September. Buildings in Bay of Plenty, Gisborne and Marlborough have been captured and are currently being verified.

Q2 Aim to publish buildings for Marlborough (already completed Q2), Bay of Plenty, Gisborne and investigate capturing buildings in areas where there is no aerial imagery e.g. Southland.

7. Fire and Emergency New Zealand understands the importance of the **suburbs** dataset and is working with LINZ to establish options regarding the dataset by December 2019.

Q1 Fire and Emergency and LINZ shared the key dataset initiative with the Fire and Emergency Communication Centres environment manager. High level options were discussed alongside Emergency Services sector requirements. There are concerns about the amount of work required when resources have to remain focused on organisational priorities.

Q2 Fire and Emergency legal team will be engaged to provide an opinion on the implications of Creative Commons licensing in light of Emergency Services sector requirements for the dataset.

8. LINZ to create a national **topographic basemap** by June 2022.

   Q1 High level design and business case approved for basemaps project. Beginning with aerial imagery basemap. Topo basemap has been reprioritised and will be second basemap to be built.

   Q2 Aiming to develop aerial imagery basemap and test inhouse by February 2020. Update website to provide information about Topo50 and Topo250 update schedule and link to update history.

9. LINZ to establish a process for coordinating the capture and delivery of **imagery** and LiDAR during an event by June 2020.

   Q1 LINZ has developed internal processes to establish roles and responsibilities during an emergency response to coordinate data capture. Discussions with flying companies during LiDAR tender helps understand capacity. Learnt more about Geospatial Intelligence Centre offering https://geointel.org

   Q2 LINZ to run staff exercise to test the emergency response processes. Draft specification for aerial imagery capture during an emergency response to ensure timely data delivery. Plan user requirements workshop for March 2020. Publish new imagery.

10. LINZ to create and maintain a national **coastline** dataset based on the best available data by June 2020.

    Q1 Initiated engagement with Councils via LGGA. Recruitment of a summer student to work on LINZ data is in progress.

    Q2 Approve Project Brief. Start Stage 1 to bring together the best available LINZ coastline data. Meet with key Councils.

11. NIWA to improve the availability of **river network and water catchment** data by releasing under Creative Commons license and publishing scale dependant webservices by June 2020.

    Q1 Rivers Lines and Watersheds are now available as CC BY 4.0
    https://catalogue.data.govt.nz/dataset/river-lines1
    https://catalogue.data.govt.nz/dataset/watersheds1

    Q2 Improve metadata and test options for improved data delivery at a national and regional scale.

12. LINZ to publish key datasets as **Esri REST services** by June 2020.

    Q1 Project Brief has been approved.

    Q2 Publish LINZ key datasets as Esri REST services

13. KiwiRail to improve access to **rail** network data by June 2020.

    Q1 Recent focus has been on GIS team structure changes at KiwiRail.

    Q2 Improve attribution and metadata for all public datasets.