Title of dataset	**Livestock numbers, 1971 - 2019**
Variables	**geography_type:** Category of geography data (New Zealand or regional) **geography_name:** Name of geographical type (New Zealand or region) **year:** Year of data collection **animal:** Type of livestock animal **count:** Number of animals
Environmental reporting topic	Livestock numbers is a direct measure of the 'Resource use and management, and other human activities' topic.
Environmental reporting category	The accuracy of the data source is of high quality.
Environmental report	Our land 2021
Relevant measure on the Stats NZ Tatauranga Aotearoa, Environment website	Livestock numbers
Other data and reports which relate to this measure	Related indicators: • Agricultural and horticultural land use • Change in farm numbers and farm size • Change in use of Māori land for primary production Related content: • Our land 2021 • Environment Aotearoa 2019 • Our land 2018 • Environment Aotearoa 2015 • Agricultural production statistics: June 2019 (final) • Agricultural production survey: including Livestock, Horticulture and Forestry: from 1 July 2018 to 30 June 2019 questionnaire 2019 • ANZSIC 2006 industrial classification

Methodology (collection & analyses)	This data comes from the Agriculture Production Survey (APS). The population of the APS census and survey is all businesses registered for goods and services tax and classified by Stats NZ's Business Frame as being engaged in horticulture, cropping, livestock farming, or exotic forestry operations. Farms that are goods and services tax (GST) registered and earn over $60,000 during a financial year are included. Every five years Stats NZ conducts a census of all farms (52,300 in 2017) and undertakes a sample survey in non-census years (28,700 farms were surveyed in 2019). Respondents report the number of livestock as at 30 June for each farm. Here, we report only on cattle, sheep and deer, we do not report on other types of farmed animals such as pigs, chickens and goats. The source of the target population of farms has been based on the Business Frame from 2002 and Business Register from 2015. From the target population, survey years select samples stratified by region, size, and farm type. Census years will not contain sampling error. However, there will be error with the imputation process applied to the data, given that not all farms respond. Survey years will contain sampling error. We present livestock numbers data back to 1971 at the New Zealand level, and back to 1990 at the region level. Territorial authority (TA) and grid level data is presented for census years back to 1994. Counts are comparable across geographies and time, as they are estimated using the same methodology. The question regarding the total number of animals has remained unchanged over time. Prior to 2017, New Zealand and regional totals released on InfoShare have been through a confidentialising process, with values changed to NA where there are confidentiality risks to respondents. Since 2017, data has been perturbed to protect confidentiality. The map provides counts per square kilometer of area inside the coast. Full hexagons are 346 square kilometers, which is approximately equivalent to an 18 x 18 kilometers square. For the 1994 year, a small amount of data was unable to be incorporated into the grid. For the 1994 year, a small amount of data was unable to be incorporated into the grid. This estimated 1994 under-count was 3.4 percent for total cattle, 2.5 percent for dairy

	cattle, 4.1 percent for beef cattle, 3.7 percent for sheep, and 2.7 percent for deer. For other years and animal types, less than 1 percent of data was missing.
Limitations to data & analysis	2004–19 deer figures are not directly comparable with those from 2002 and 2003 due to an under-count in deer numbers of about 70,000 deer at 30 June 2002, and 50,000 at 30 June 2003 (see Agricultural Production Survey: June 2004 (Final). For further detail about events impacting the time series, see Agriculture Production Surveys and Censuses. Due to confidentialising or suppression of values, region or TA totals may not sum exactly to national totals for any given year. Mapping methods ensure confidentiality at the farm or business level is maintained, while providing an indicator of the spatial pattern of livestock numbers.
Changes to time series	
References	