Farming is a stressful and risky business. Indeed, farmer mental health is an on-going challenge for the rural community. One source of risk is weather and climate, which play a major role in the productivity and profitability of farms. At the extreme end, weather disasters such as flooding can be costly. More generally, weather has also been shown to influence well-being across the wider population, even when livelihoods are not dependent on the weather. Climate change models predict more extreme and variable weather across New Zealand's agricultural landscape. Therefore, this project will investigate the extent to which recent weather and deviations in climate affect farmer well-being.

In this project you will join up recent climatic data and responses from the 2021 Survey of Rural Decision Makers 2021 (SRDM). The SRDM is a biannual survey, conducted by Manaaki Whenua - Landcare Research (MWLR). It provides data on over 4,500 commercial and lifestyle farmers, foresters, and growers across the country, with locations recorded by postcode. You will undertake a literature review into the effects of weather and climate on well-being. Then, you will process one or more weather variables by postcode, from around the time the survey was undertaken. Next, you will process the SRDM well-being data and any other relevant co-variates. You will use regression models to investigate the influence of weather on farmer well-being and produce a paper detailing these effects.

This project is fully funded by MWLR. You will be supervised by Dr Zack Dorner in the Waikato Management School, and will work independently on this project. There is also a second, related project also being funded for a summer research scholarship on climate and well-being. Therefore, you will benefit from the wider support network of MWLR and another scholarship student working with similar data and analytical techniques. This is an excellent opportunity to improve your data skills, broaden your networks, and work on a project that is highly relevant to one of our most important industries.

STUDENT SKILLS:
- Ability to perform an econometric analysis. Help on specific analysis methods and software will be provided.
- Writing skills for summarising literature, reporting on and discussing results.
- Basic data cleaning and set up

PROJECT TASKS:
- Perform a literature review on climatic variations and well-being, with a particular focus on the agricultural sector.
- Prepare the data on relevant recent weather/climatic variations by postcode.
- Prepare the data on farmer well-being and any other relevant co-variates.
- Analyse the data using an appropriate regression model to quantify the impact of weather/climatic variations on well-being.
- Compile a report (around 6,000 words) from tasks 1 through 4.
- Create a final research poster highlighting key insights and findings from their report.

EXPECTED OUTCOMES:
- Student’s Research Poster (as per clause 6 of the Scholarship regulations)
- A report that will contribute to analysis of the well-being of farmers, foresters, and growers. A determination will be made if this report could form the basis for a journal article and/or other forms of research communication
- An opportunity for the student to develop econometric analysis skills and networks with MWLR and a fellow student with similar research interests.
- Maintenance and potential expansion of research networks with MWLR
- A poster will be provided to University of Waikato for promotion of this summer research project and may assist in communicating findings more widely from the research.