



Land Environments of New Zealand

Nga Taiao o Aotearoa

Landcare Research, Private Bag 3127, Hamilton.
Website: lenz.landcareresearch.co.nz

What is LENZ?

Land Environments of New Zealand, or LENZ, is a radically different environmental classification of New Zealand based on a set of 15 underlying climate, landform, and soil variables. LENZ is designed to facilitate conservation and resource management at a range of scales.

Why LENZ?

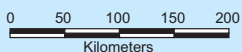
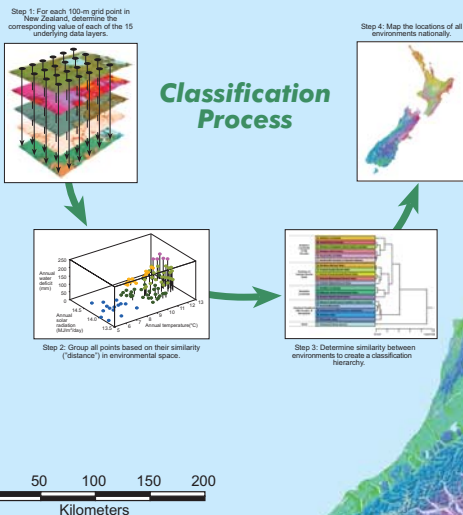
- 1) Growth of ecosystem management as reflected in national legislation, government policy, and international agreements
- 2) Increase in monitoring and reporting requirements
- 3) Need for spatially explicit, quantitative tools including maps showing the distribution of areas with similar ecosystem character.

LENZ Classification

LENZ classifies New Zealand into environments with varying degrees of similarity using multivariate classification techniques. Whereas traditional ecosystem classifications generally rely on subjective synthesis of multiple information sources, multivariate classifications offer significant advantages because they are flexible, explicit, repeatable, and scalable.

At the heart of LENZ lies the concept of environmental distance. Environmental distance measures how "close" (similar) two areas are based on a given set of environmental variables. For LENZ, the set consisted of the 15 underlying data layers.

Climate Variables



LENZ Level III Classification

LENZ Hierarchy

LENZ consists of four levels of classification (Levels I to IV) for description and mapping at various levels of detail and geographic scales. A standard set of classification levels promotes a common framework for activities such as environmental reporting and maximises the ability to readily compare or combine results from different studies.

Level	Number of Environments	Grid Resolution	Suggested Map Scale	Suggested Geographical Extent
I	20	100m	1: 2–5,000,000	National
II	100	100m	1: 1,000,000	National–Regional
III	200	25m	1: 250,000	Regional
IV	500	25m	1: 50,000	Regional–District

LENZ Applications

The environmental factors that influence the distribution of native flora and fauna also influence human uses of the landscape. Therefore LENZ has applications for a broad range of issues including:

- Biodiversity conservation
- Ecological restoration
- Biosecurity
- Risk management
- Public health
- Economic development

Landform

Soil Variables

LENZ Underlying Data Layers © Landcare Research.

LENZ Classification © Ministry for the Environment.



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