

# a new perspective on soil survey data

*Pierre Roudier, Dylan Beaudette & Dion O'Neale*



**Landcare Research  
Manaaki Whenua**





## The digital soil map for New Zealand

S-map is the new national soils database. When completed, it will provide a seamless digital soil map coverage for New Zealand. S-map is designed to be applied at any scale from farm to region to nation.

The current extent of the S-map survey is shown on the map to the left.

New: S-map database updates (November 2014).  
[Read more about these changes.](#)

[Maps & factsheets](#) >

[Factsheets by soil name](#) >



### What is S-map?

Existing soil databases are patchy in scale, age and quality. Many maps do not adequately describe the underlying properties of the soil types they represent. S-map integrates existing

reports and digital information and updates soil maps where existing data are of low quality. Our goal is to provide comprehensive, quantitative soil information to support sustainable development and scientific modelling.

### What is S-map Online?

Using S-map online you can:

- Explore interactive soil maps
- Learn about the soil in your backyard or paddock
- View detailed information about a soil class or attribute
- Create custom PDF soil maps for printing
- Download soil factsheets for specific locations

[S-map Online Service Status](#)

OK.

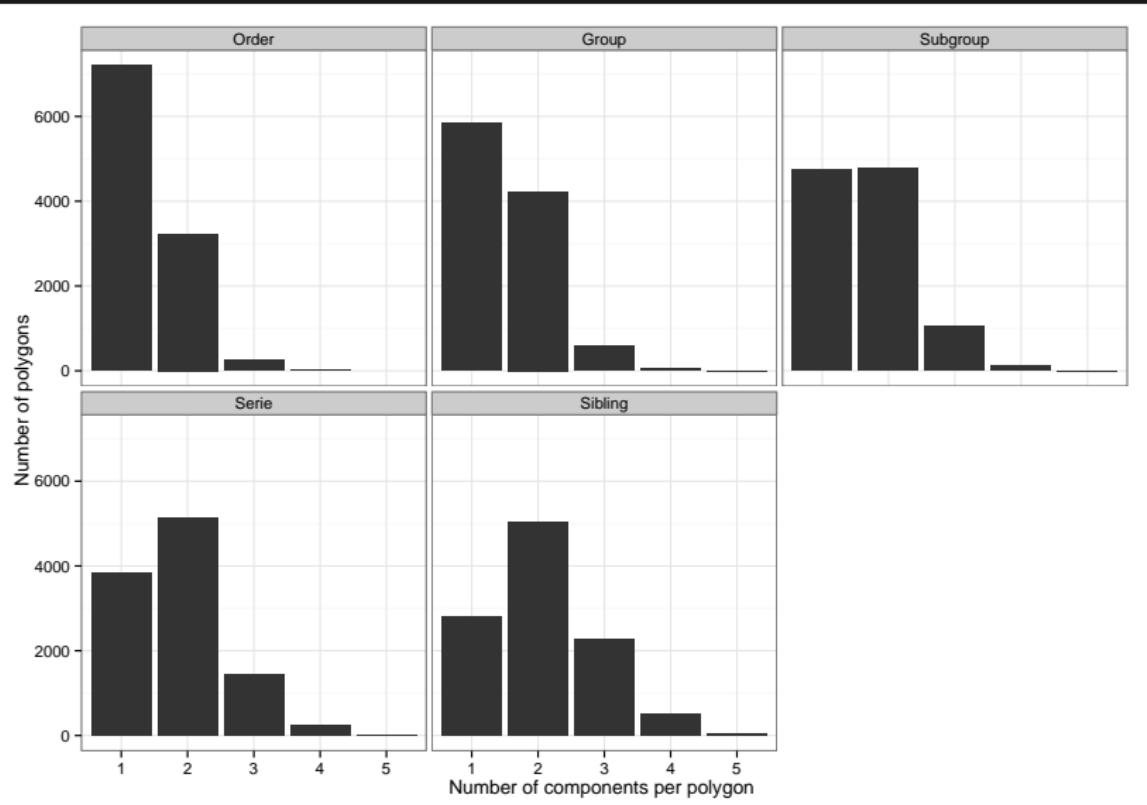
# NZ Soil Classification

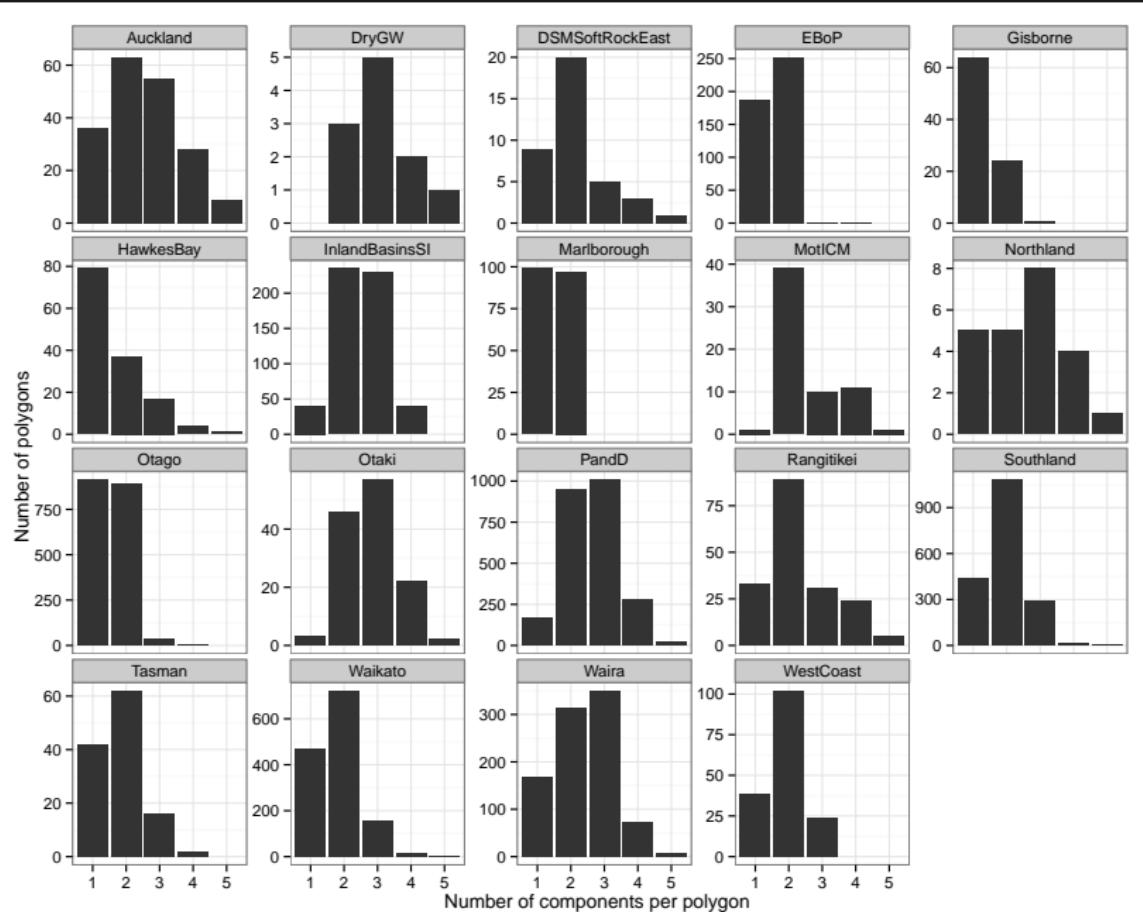
Order  
Group  
Sub-group

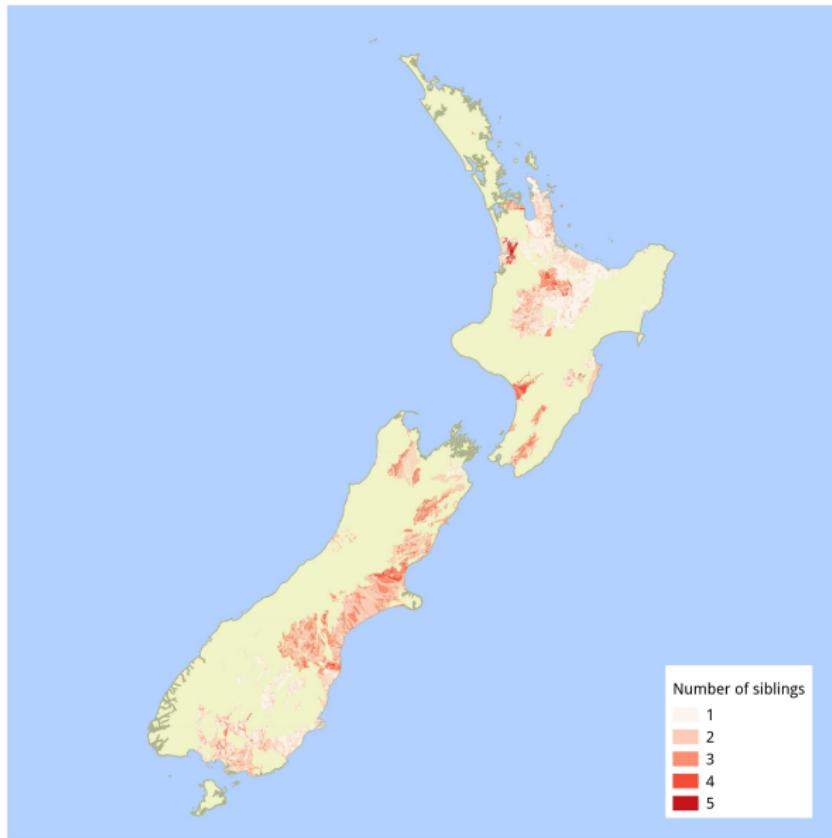
Family  
Sibling

soils do not occur on their own

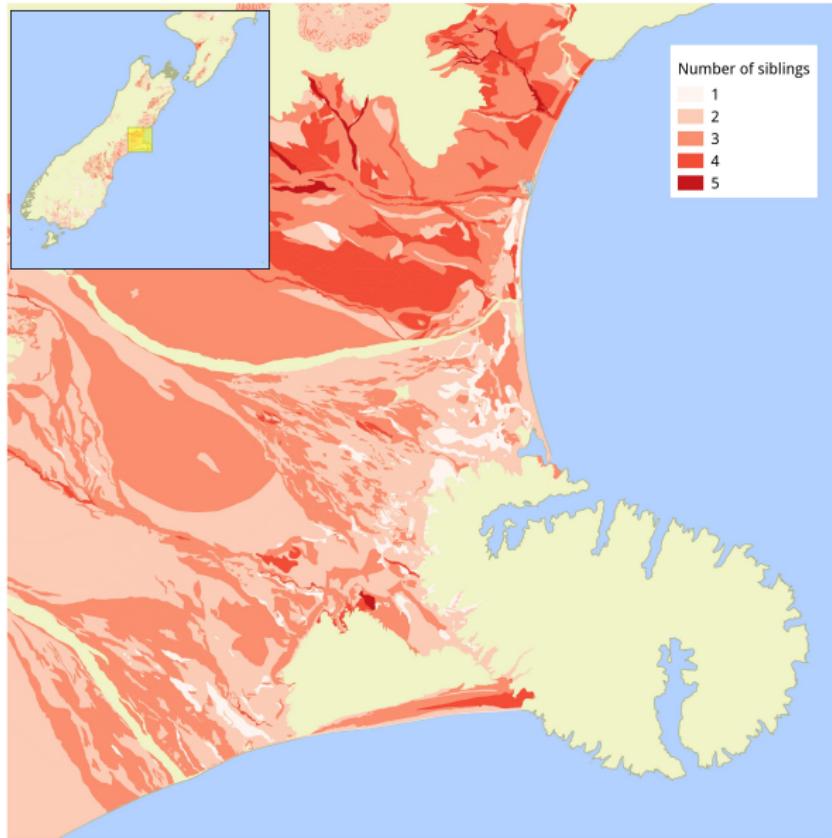
they occur in **associations**







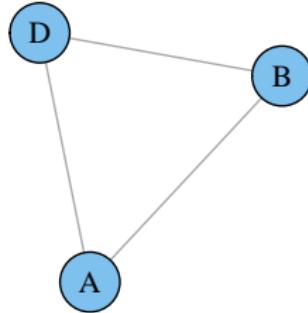
can we study soil associations?



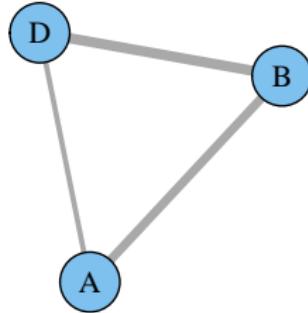
a means to represent co-occurrence of soils is  
the adjacency matrix

	A	B	C	D
A	0.00			
B	0.58	0.00		
C	0.00	0.00	0.00	
D	0.34	0.12	0.00	0.00

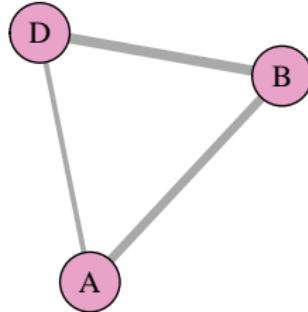
...and a representation of these relationships is  
a graph



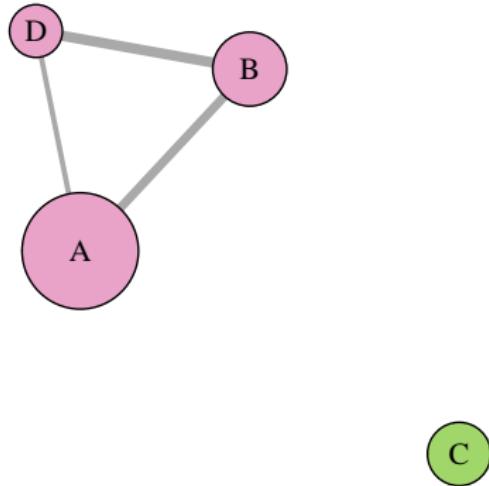
C



C

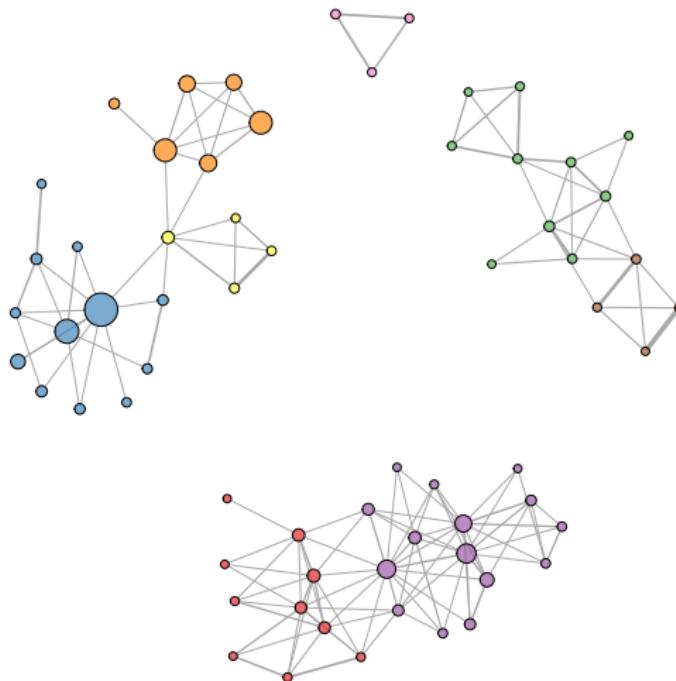


C

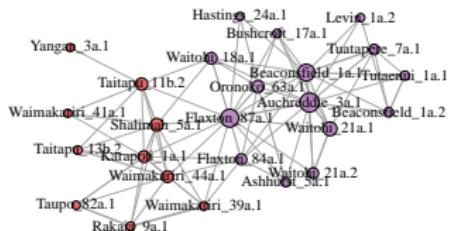
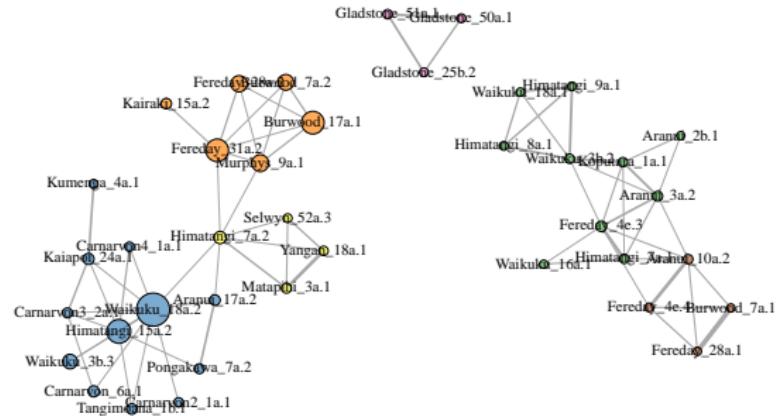


structure of networks  
can help us  
gain insight from data

Rangitikei

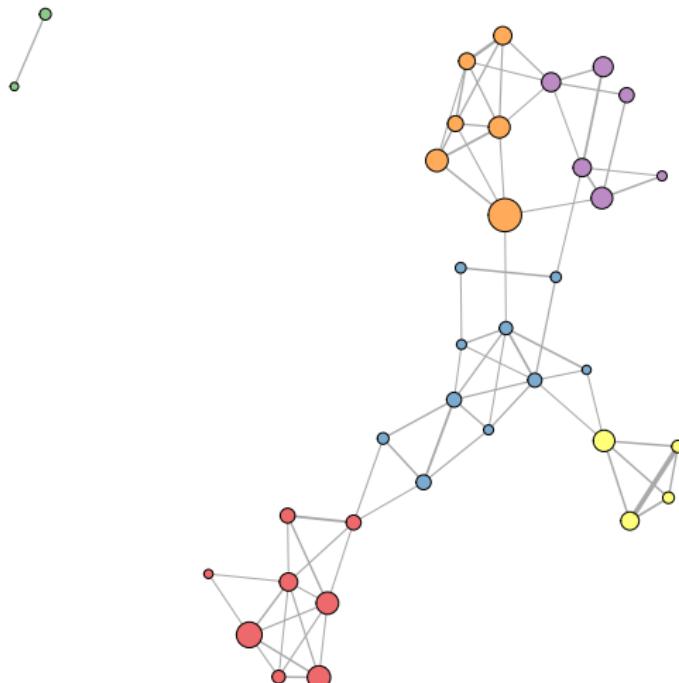


## Rangitikei

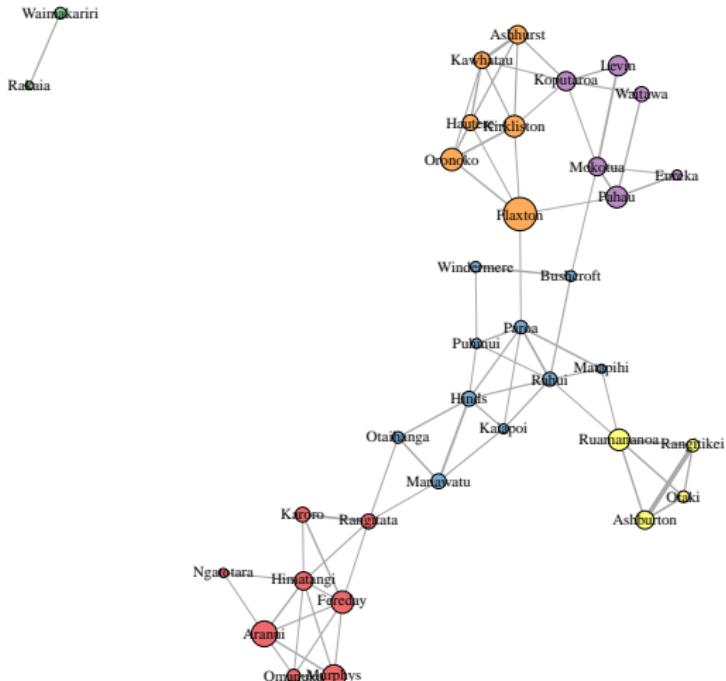


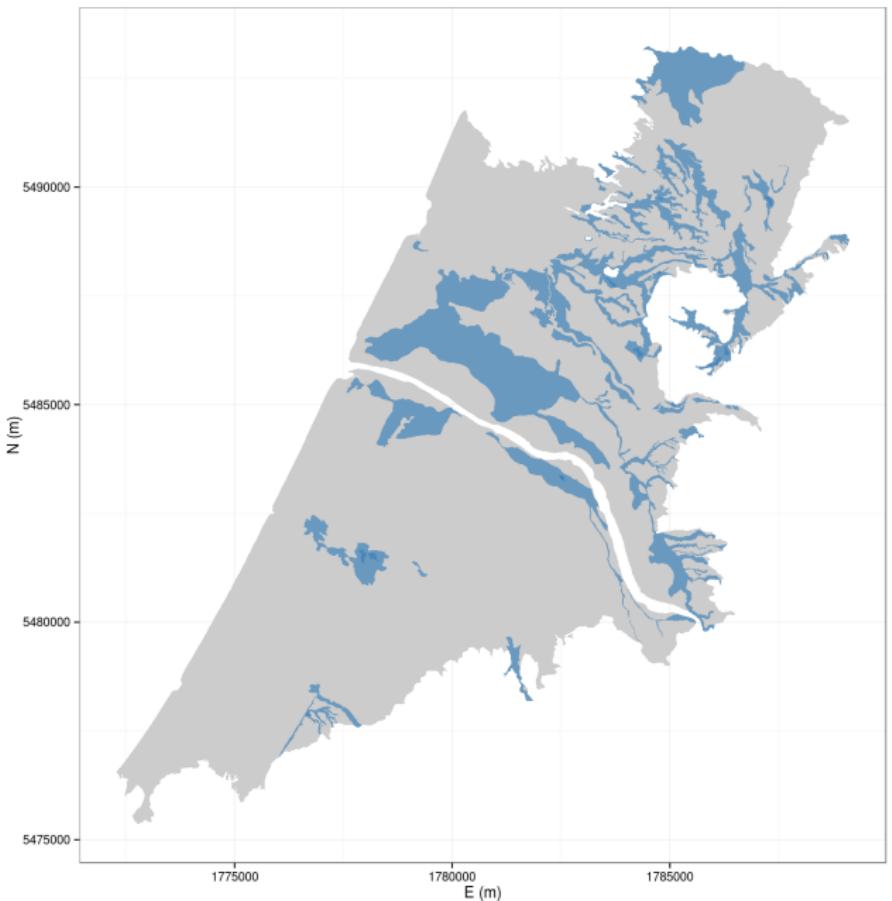
**networks** can be built for  
different **hierarchical levels**  
of the NZSC

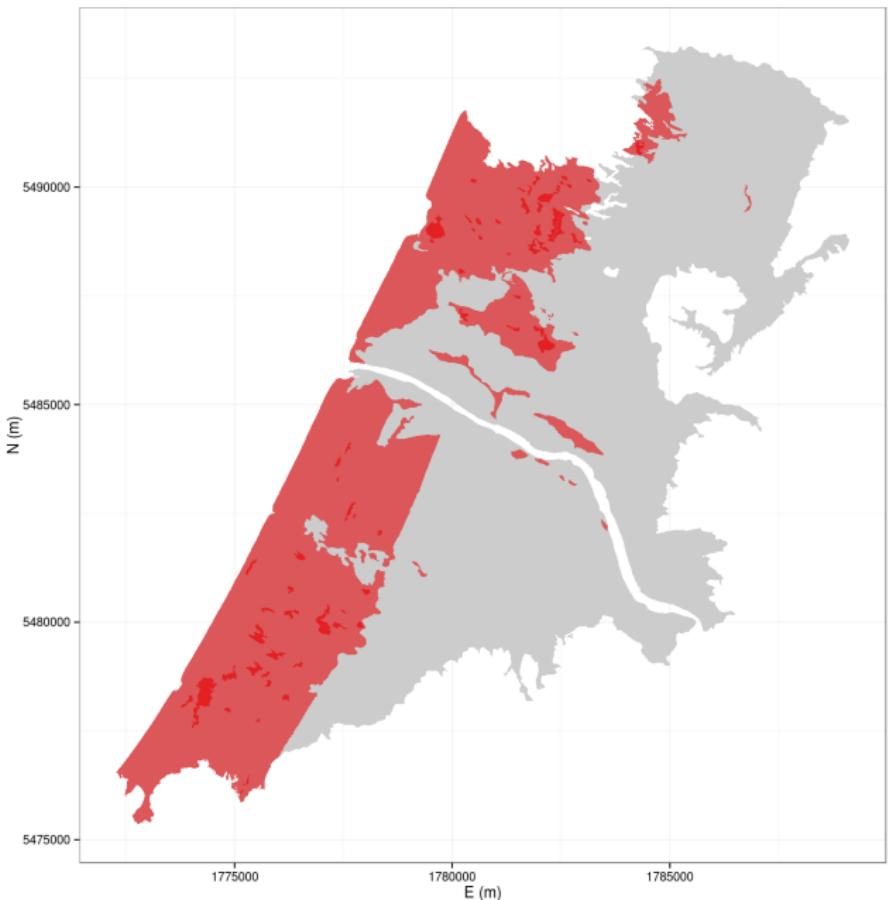
Otaki

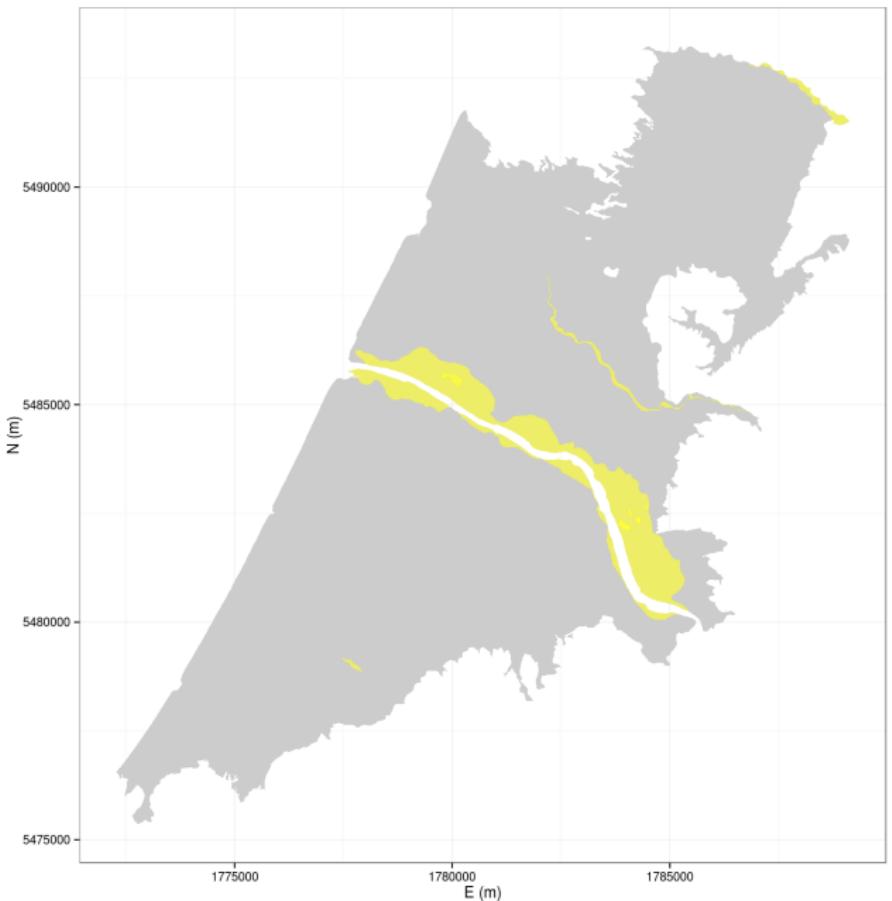


### Otaki



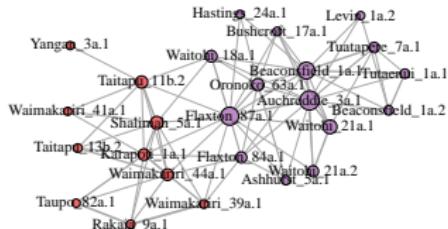
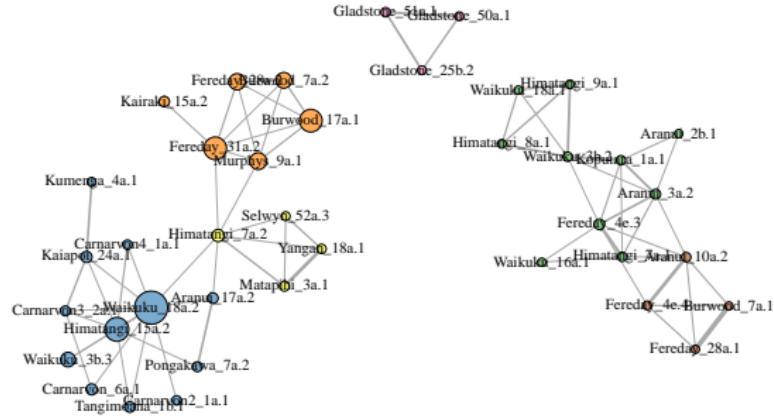


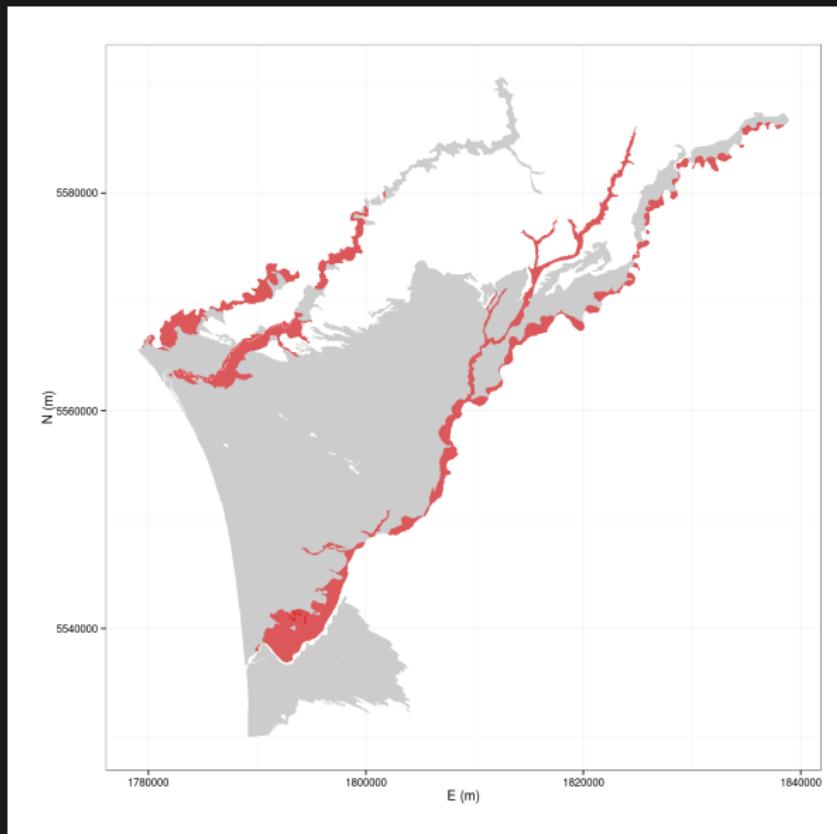




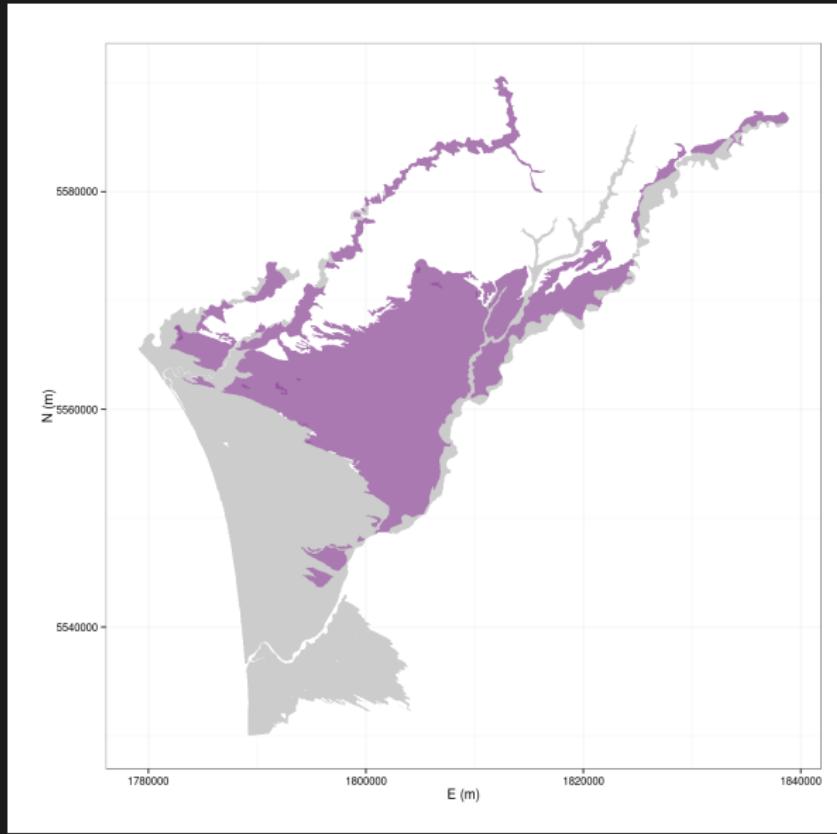
data driven approaches  
and  
pedagogical expertise  
can meet

## Rangitikei



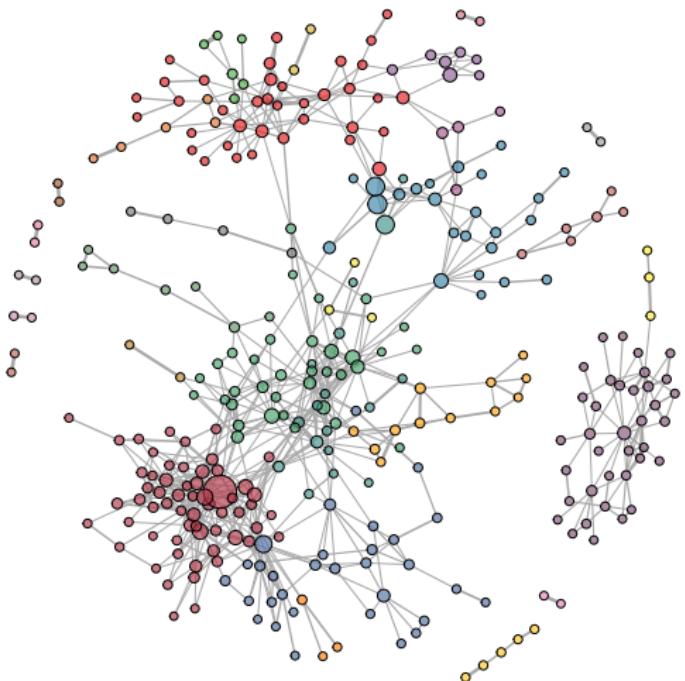


"older alluvial soils"

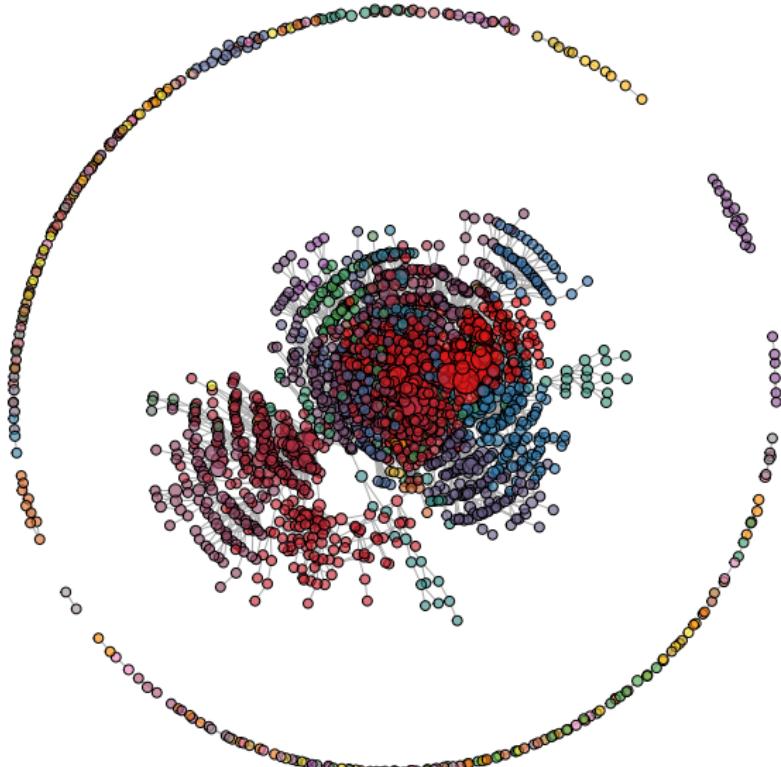


"terraces soils & allophanic terraces soils"

some regions show **more complexity** than others



networks can be also generated at the national scale



a quantitative approach to pedagogical complexity

data driven — but requires pedagogical expertise

discover and explore buried knowledge

*"Where is the **Life***

*we have lost in **living**?*

*Where is the **wisdom***

*we have lost in **knowledge**?*

*Where is the **knowledge***

*we have lost in the **information**?"*

T.S. Eliot, "The Rock" (1934)

# Thanks.

[roudierp@landcareresearch.co.nz](mailto:roudierp@landcareresearch.co.nz)

@pierreroudier



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