

Fact Sheet 3: Social Network Analysis Results

Background

Social Network Analysis

Social Network Analysis (SNA) is a technique used to observe and interpret social networks. SNA provides both visual and statistical output to analyse human relationships within a network. It involves the mapping and measuring of relationships and flows (such as information or knowledge) between social elements such as people, groups or organisations. SNA is based on the intuitive notion that the patterns of social interaction are important influencing factors in the flow of knowledge or another property through the larger network.

Analysing a social network can be used to encourage diversity, to determine leadership development needs, to identify expertise, and to improve communication. In other fields it has been used to map terrorist networks or to trace the spread of disease through a community.

For governments, businesses and others involved in providing resources to individuals, groups, communities and organisations, the changes in the size, composition or geographic distribution of these entities is important because they present a large number of management issues concerned with meeting various resource needs.

SNA and the Catchment Knowledge Exchange

Social Network Analysis (SNA) has been used to describe the soil health social network in respect to knowledge exchange for both individuals and organisations involved in soil health in Victoria.

Within the Catchment Knowledge Exchange project, SNA will be used to:

- Benchmark the soil health knowledge network relevant to Victoria; and
- Identify opportunities and deficiencies in the communication of soil health knowledge.

Method

In the Catchment Knowledge Exchange project, the major phases in SNA include:

- Data collection
- Data mapping
- Data analysis

The SNA began with a discrete survey to gather information about the soil health network. A 'snowball' approach was used to disseminate the survey. Nineteen people were interviewed and the survey was circulated to individuals nominated through the interviews.

The information generated by the interviews and surveys was fed into a visualization program which developed individual and organisational 'maps' of the social relationships in soil health that could subsequently be analysed (using VisualLyzer software). The relationships between the social elements (soil health practitioners or organisations) were constructed in the context of the 'flow' or transfer of information and knowledge pertaining to soil health.

In the formation of the social network map the critical information elicited from the questionnaires included:

- Individuals from which soil health knowledge is sought
- Individuals to which soil health knowledge is provided
- Organisations from which soil health knowledge is sought
- Organisations to which soil health knowledge is provided

Results

Soil Health Practitioners

The soil health practitioner (individual) network had 58 individuals, of which 19 were interviewed and the remainder nominated as either sources or receivers of soil health knowledge. Some useful observations of the individuals include:

- 10 (17%) are located interstate and 3 (5%) overseas.
- Soil health researchers were well represented in DPI-PIRVic (10 or 17%) and CSIRO (4 or 7%)
- 5 of the CMA regions are represented with individuals having specified roles in soil health at a planning level. Mostly, these individuals are DPI-CAS staff
- The only representation from a local tertiary institution is Latrobe University with 2 individuals (one individual has links to the University of Ballarat)
- 3 individuals are actively operating as consultants

