



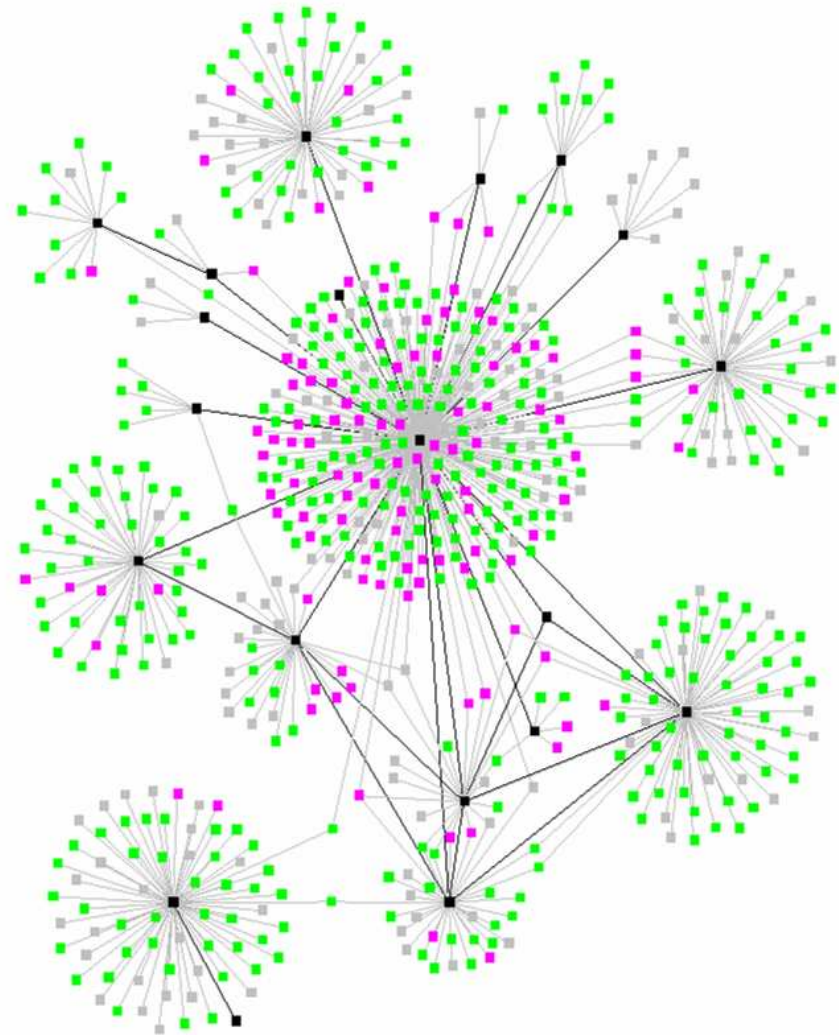
Communication Network Analysis, Stakeholders, and Information Flow

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The Spread

- Viral transmission
- Anticipate and contain
- CDC commissioned study
- Center point the “super spreader”



<http://www.orgnet.com/contagion.html>

Viruses and Climate Information?

- Who uses climate information?
- Who has access to climate information?
- How to efficiently spread information among a specific population?
- How to streamline outreach efforts?



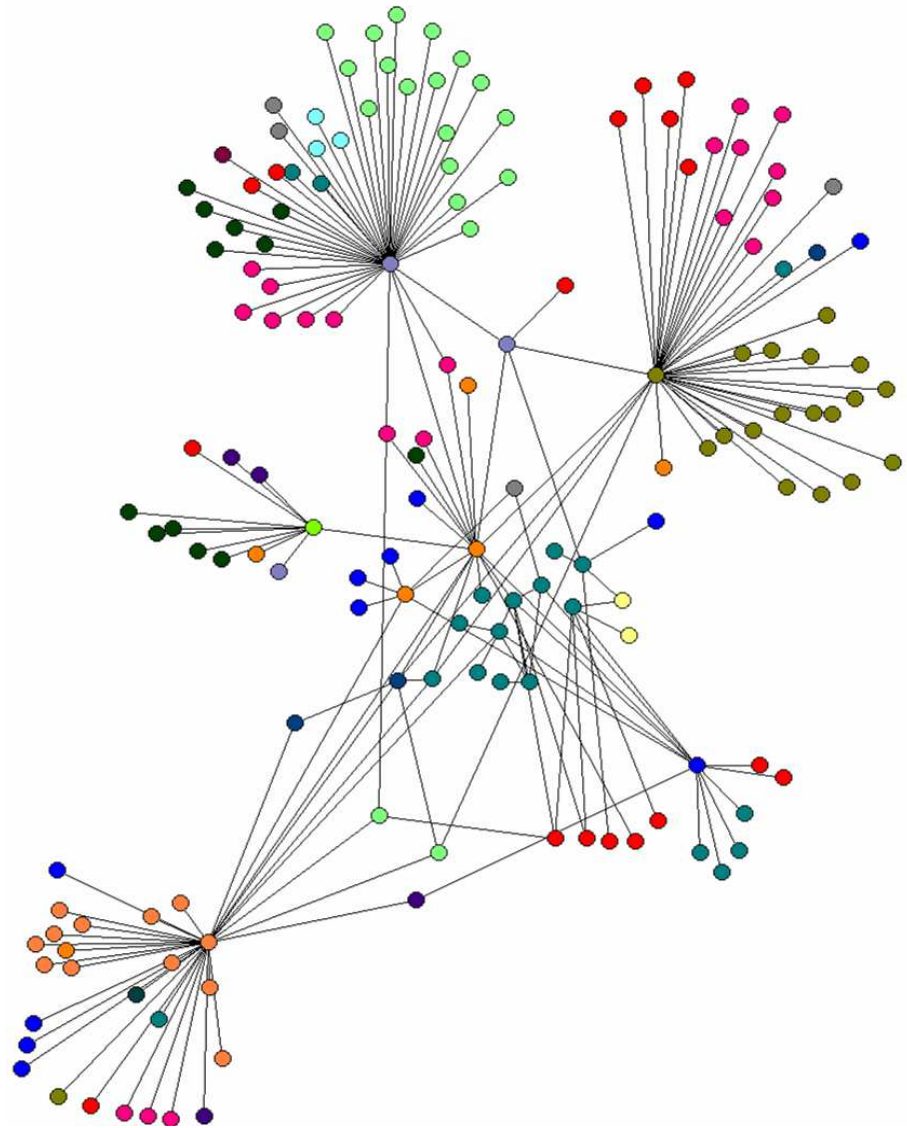
Social Network Analysis?

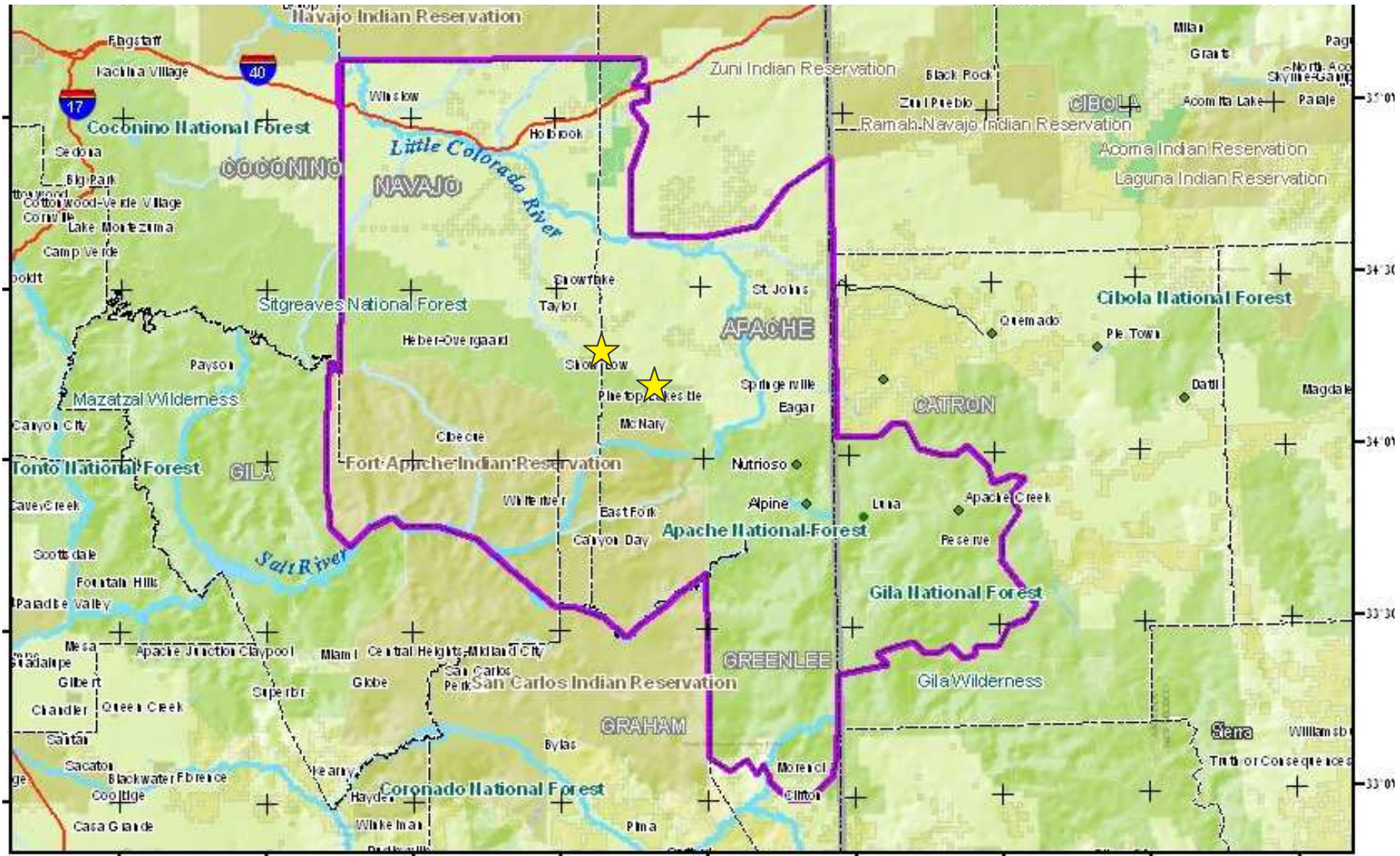
Employed in multiple disciplines including social sciences, mathematics, business

Map of individuals' relationships

Nodes and Pathways

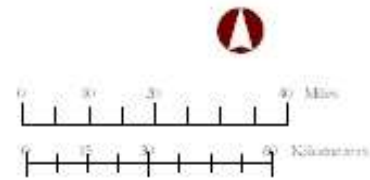
Typical analysis examines information flow, conflict and cooperation, social structure, communication structure, and social capital.





Legend

- Assessment Area
- County
- Municipality
- River
- Bureau of Land Management
- Fish and Wildlife Service
- National Park Service
- Bureau of Indian Affairs
- Forest Service



Map projection and Coordinate System: UTM
 Zone: 12 Units: Meters Datum NAD 27

Map composition by
 Nick Rattray, January, 2005



Methods

Sampling:

Initial sample:

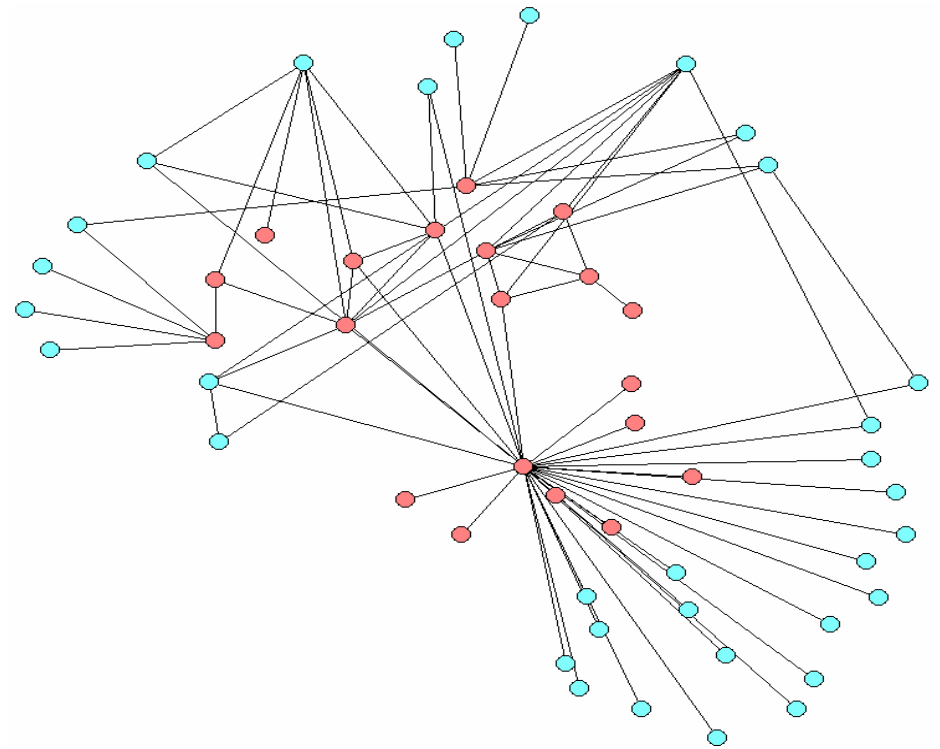
Individuals who deal with water-related issues in the Show Low and Pinetop-Lakeside area that occupy positions within municipal, county, commercial, and public interest organizations.

Snowball Sampling:

Through the responses from the initial population, the sample size grows to include the individuals mentioned in the interviews.

Data Collection Methods:

Key informant interviews based off of a survey instrument. The hand-written notes are then typed as a word document.



The Interview Instrument

(Use this first question to list all the people the informant talks to about water-related topics.)

1. Who do you communicate with in a professional capacity about water-related topics?

(Please have the informant answer each of these questions for each individual cited in #1)

2. Do you communicate with this person on a daily, weekly, monthly, or infrequent basis?
3. What percentage of the time do you communicate with him/her via phone, email, face-to-face, other?
4. What percentage of the time do you contact him/her? What percentage of the time does he/she contact you?
5. Is the general nature of your communication informational, organizational, logistical, other?
6. Where does the content of your communication come from?
7. Do you pass the content of your communication on to anyone else? If so, who?
8. How would you characterize your interactions with this person? (i.e. good, friendly, easy, bad, negative, tension-filled)
9. If the interactions are good, then: Why do you think you are able to interact well?
10. If the interactions are bad, then: Why do you think you do not interact well? What would ease the interactions?

Sample

Data on a total of 177 individuals

- 20/27 1st level interviews
- 17/49 2nd level interviews
- 101 3rd level individuals (will not be interviewed)

Data from about half of these interviews has been inputted into UCINet and NetDraw.

Preliminary Results

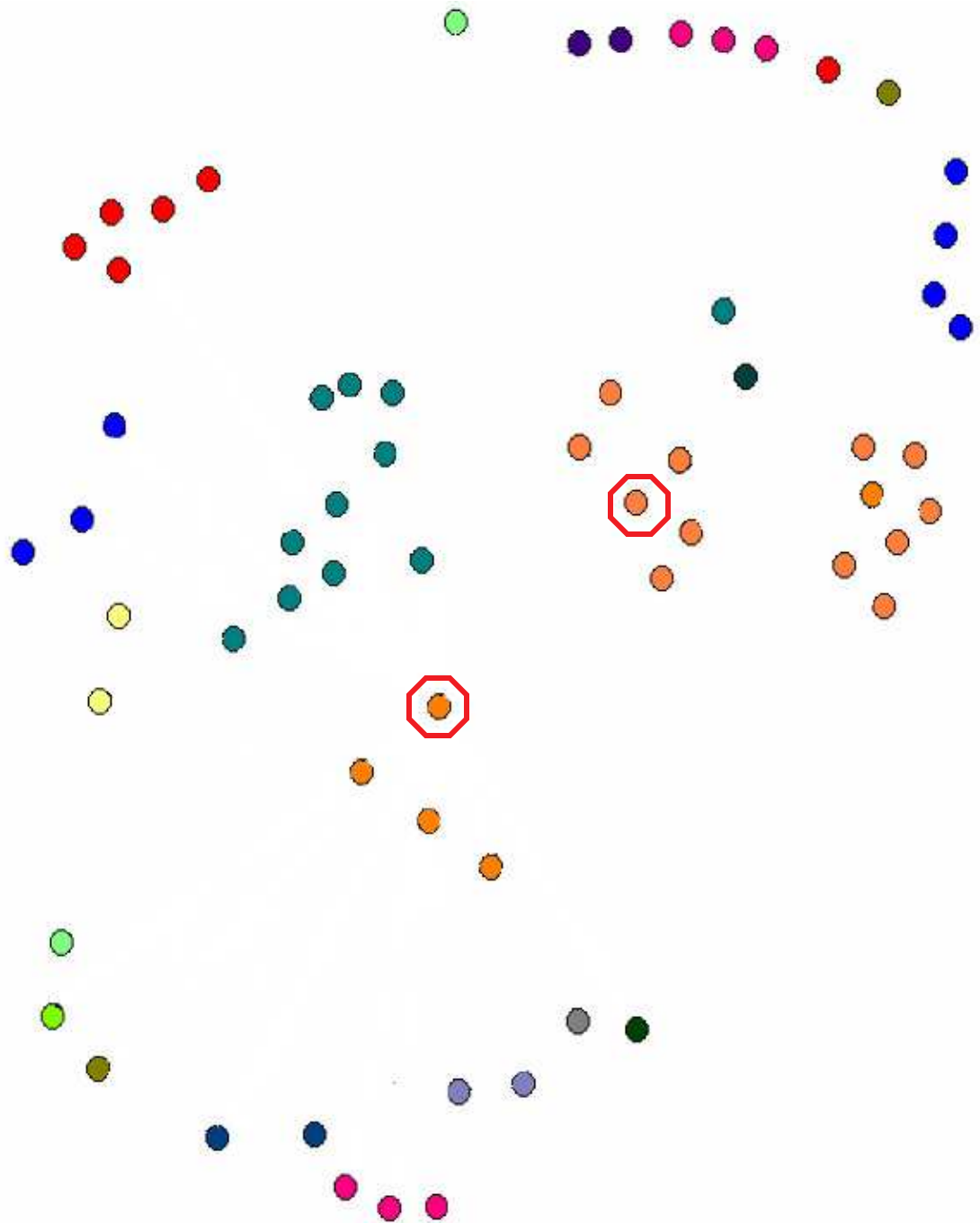
Two examples of information flow

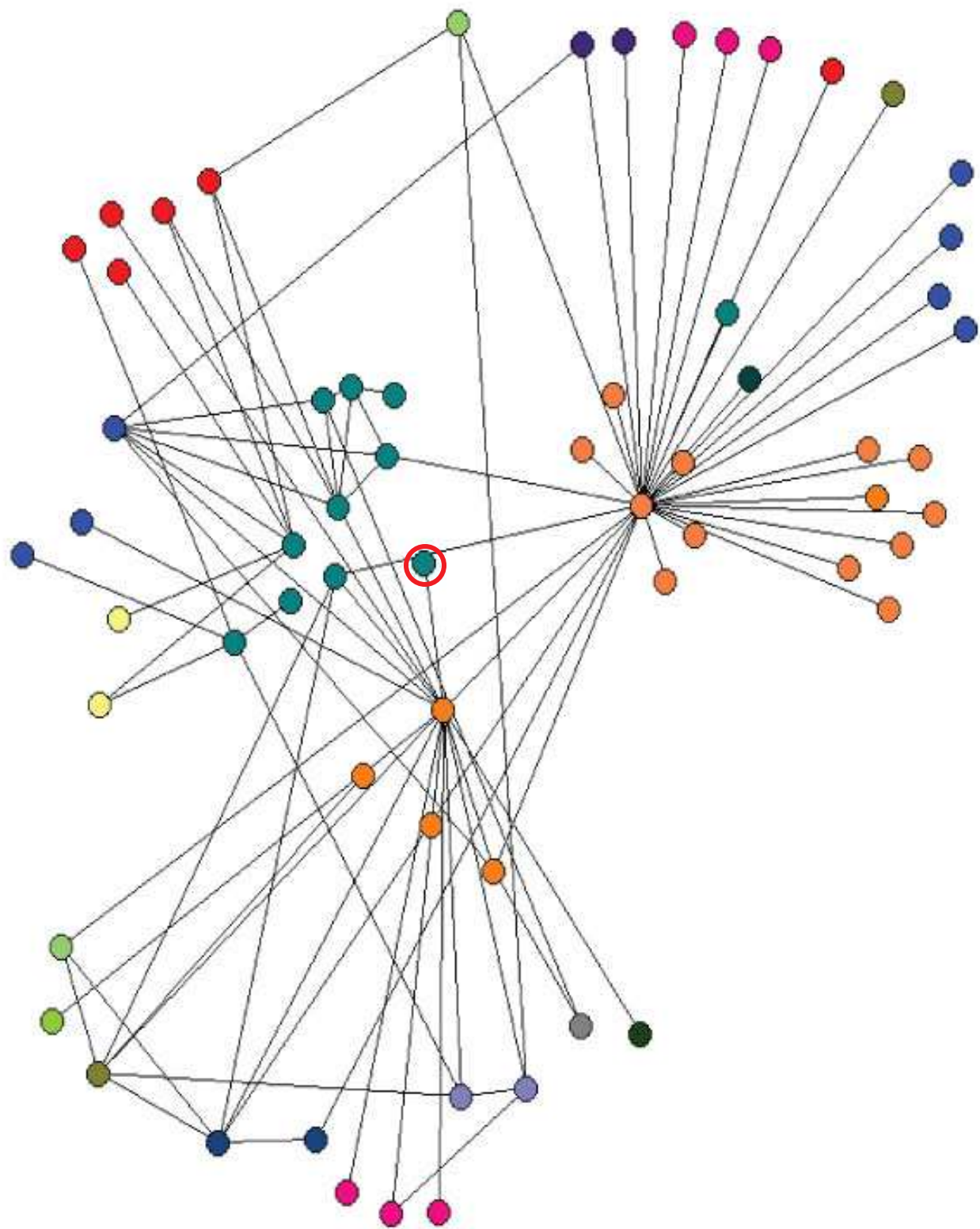
Knowledge brokers

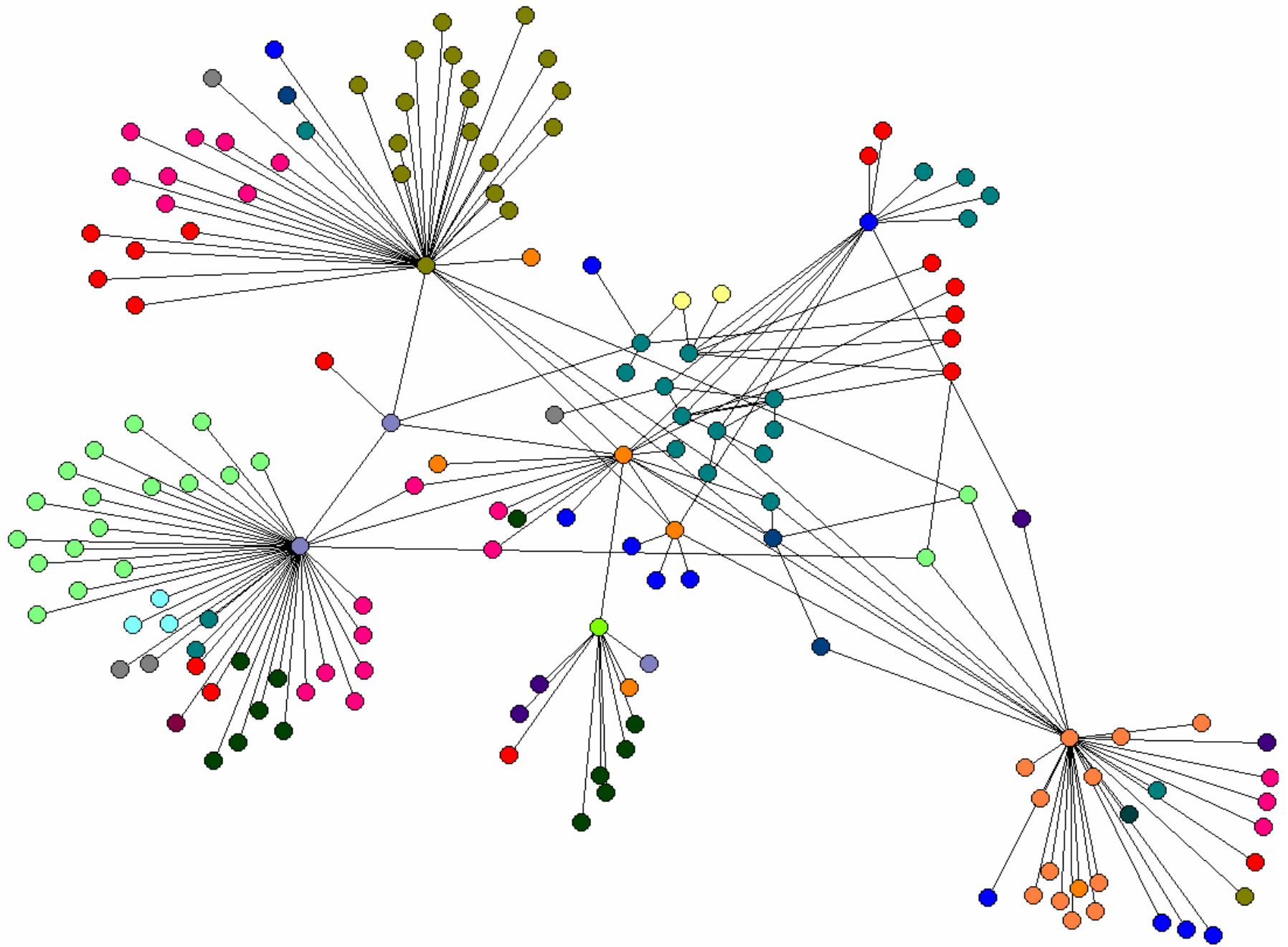
Untapped potential

Isolated individuals









Potential Application

Climate information dissemination

- Strategic plan
- Determine the spread of information
- Find isolated populations

Self Analysis

- Redundancy and efficiency
- Strategic evolution



The Major Drawback

Time intensive

- data collection
- scheduling interviews

Solution: larger research team

