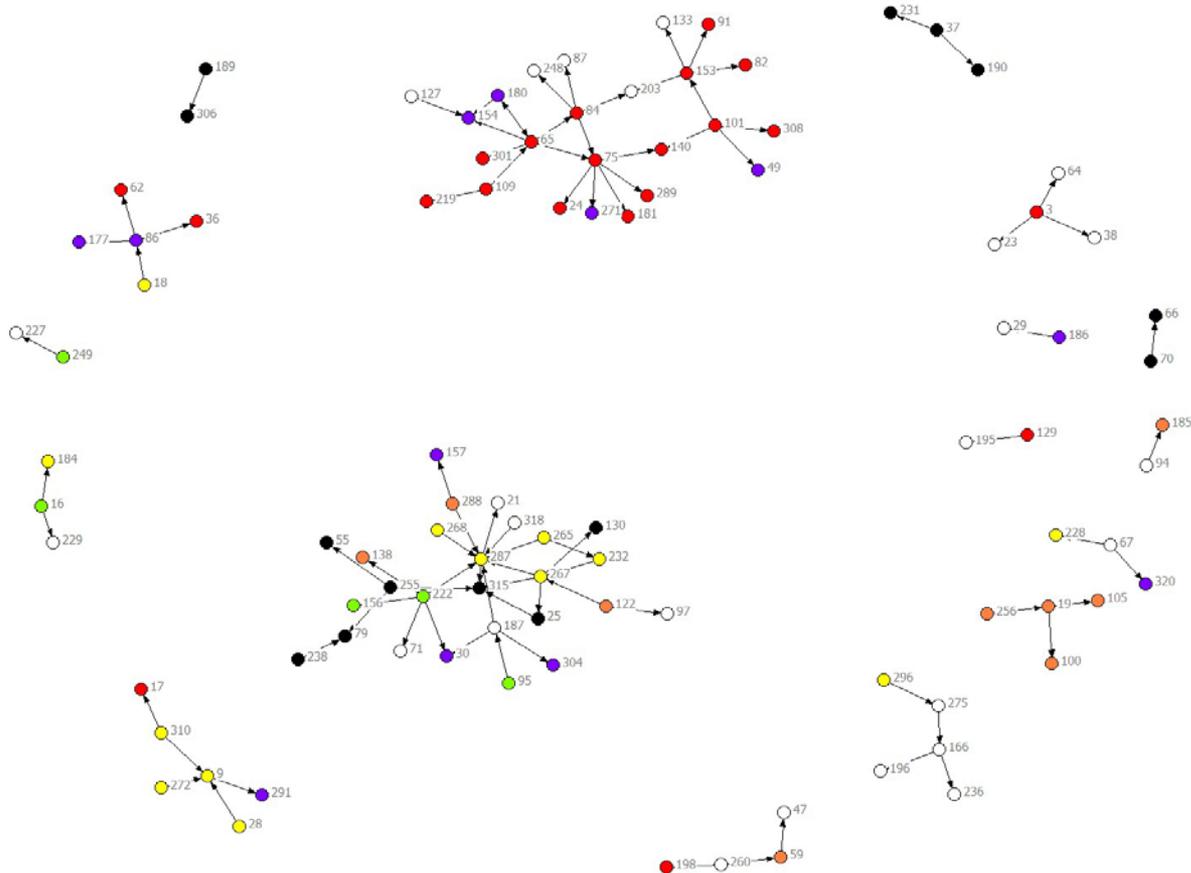


Evaluating Oil Spill Science Communication through Social Network Analysis



Sea Grant/GoMRI Oil Spill Outreach Program

- Four Sea Grant College Programs
 - Four specialists devoted to oil spill science, part time coordinator
 - Initial two-year investment
- Major components
 - Two-way transfer of information
 - Identify target audience needs (workshops, meetings)
 - Share oil spill science (bulletins, science seminars)
 - Evaluation



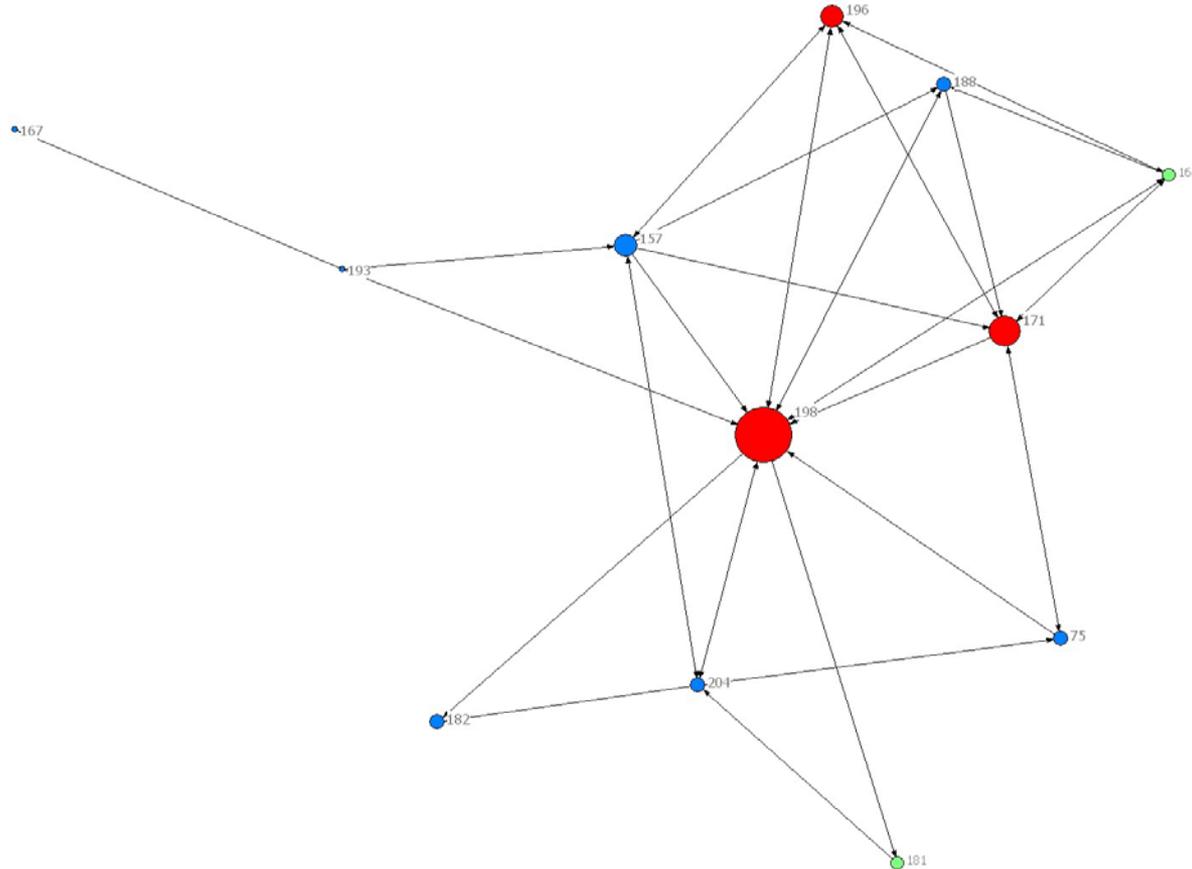
Evaluation Purposes

1. 2014 GoMRI-sponsored oil spill outreach survey
 - Identify oil spill science questions
 - Understand the network people are using
2. Baseline for evaluation (pre-test)



What Does it Look Like?

- SNA follows the same general principles as food web modeling.

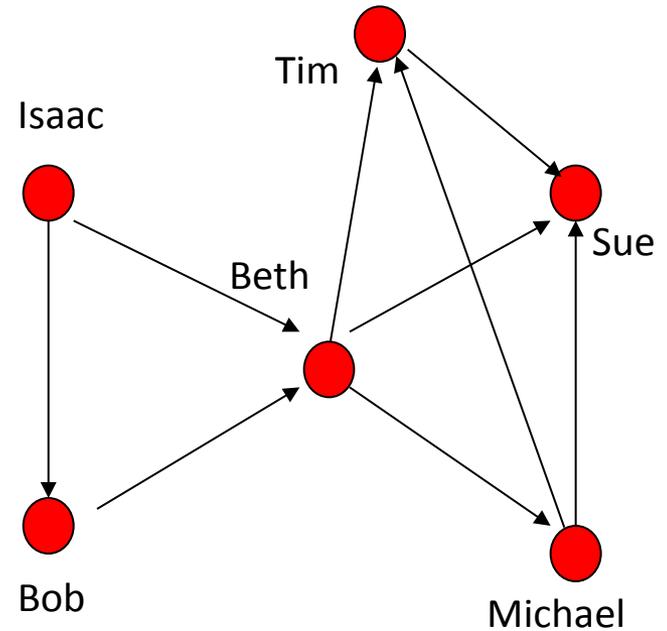


What Does SNA Tell Us?

Relationships are uncovered through questions we ask

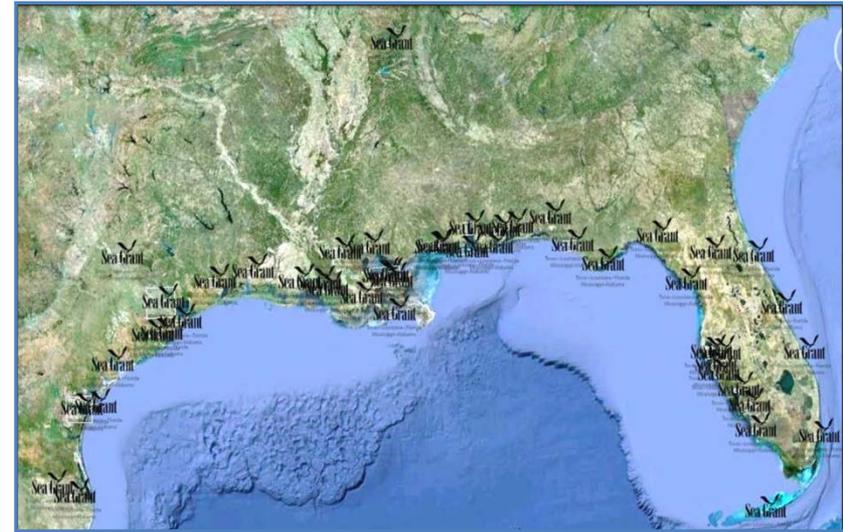
Network structure is analyzed based on key indicators

- Direction of information flow
- People who are overly central
- People who are loosely connected and who may be under-utilized
- Divisive subgroups
- Network level of overall connection



Methods

Survey development Sampling method



Round one (333 people)

- Contacts from Gulf-wide Sea Grant network
- 3-4 contacts per state per target audience group
- GoMRI outreach contacts (26 people)

Round two and three

- Contacts based on round one survey responses
- Limitation: network is constrained by those who completed the survey



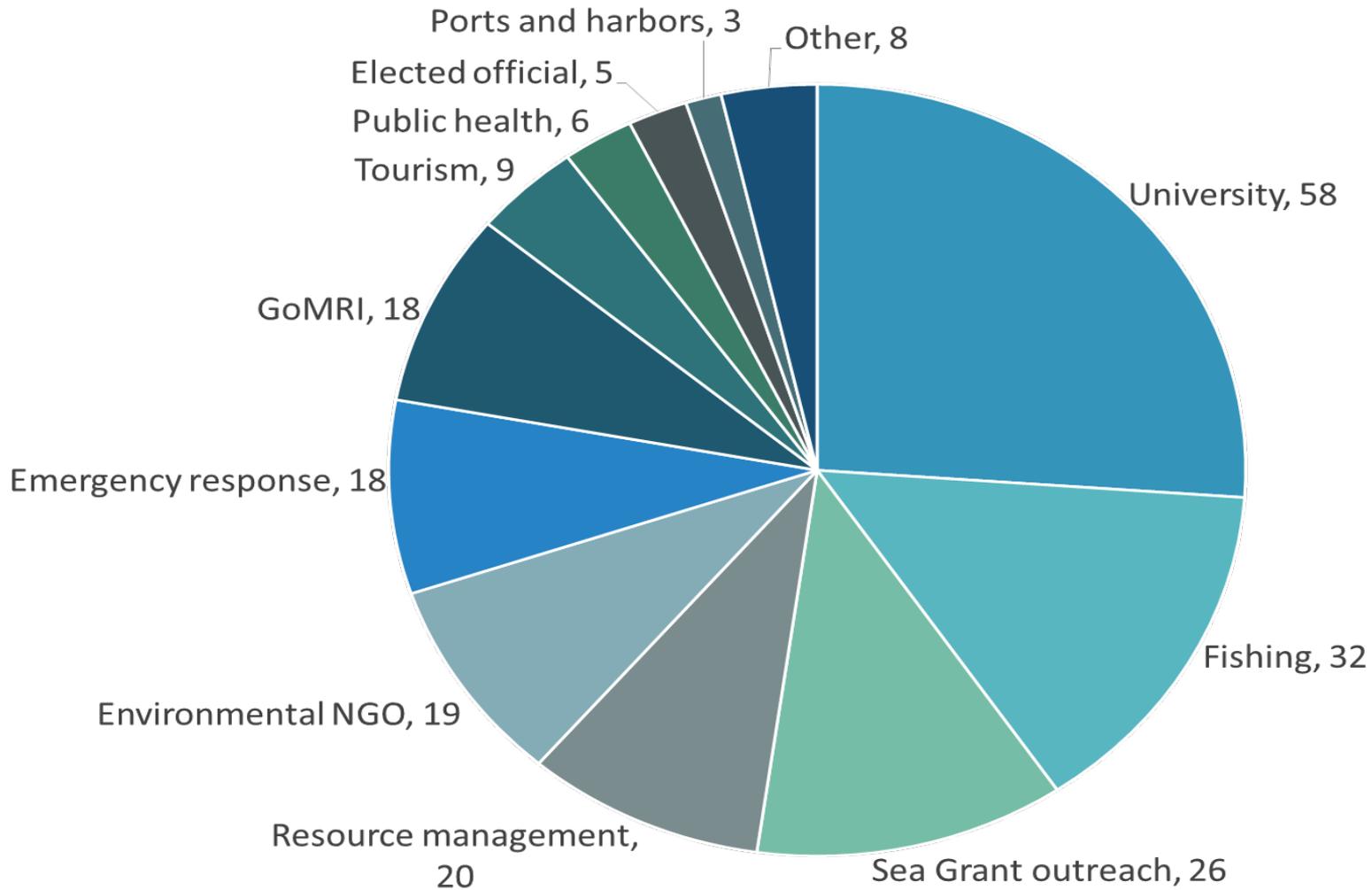
Response Rate

Round	Number contacted	Number responded	Response rate
Round 1	333	139	41.7%
Round 2	85	53	62.4%
Round 3	56	30	53.6%
Total	474	222	46.8%

80% of respondents indicated they received oil spill information in last 12 months



Number of Responses by Target Audience



Network Centrality Measures

- Degree Centrality: the number of links incident upon a node (i.e., the number of ties that a node possesses)
- Betweenness Centrality: Quantifies the number of times a node acts as a “bridge” along the shortest path between two other nodes.

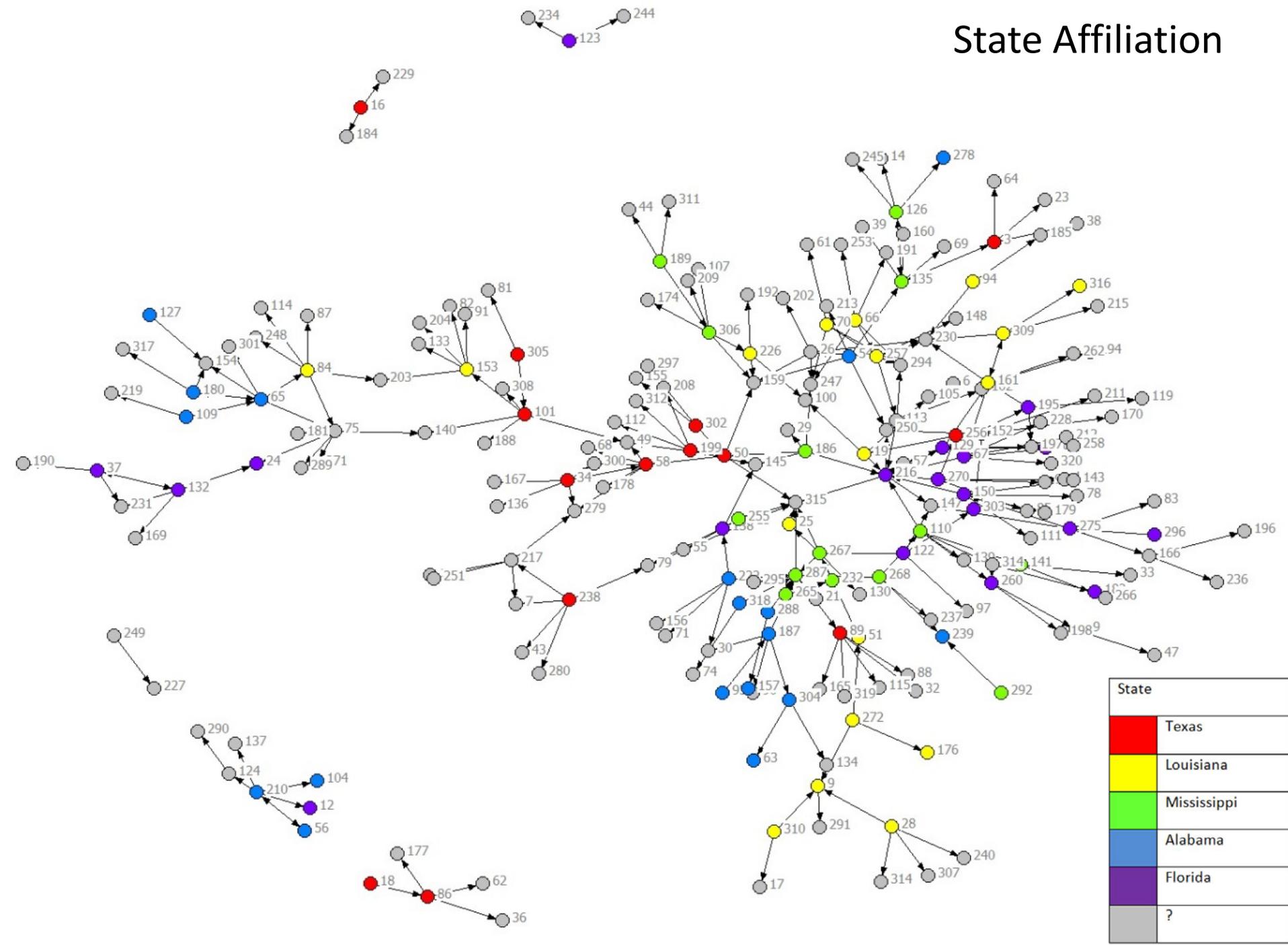


Survey Item

*Please identify up to five individuals who provide the most **credible, relevant and timely** oil spill science information for your needs.*

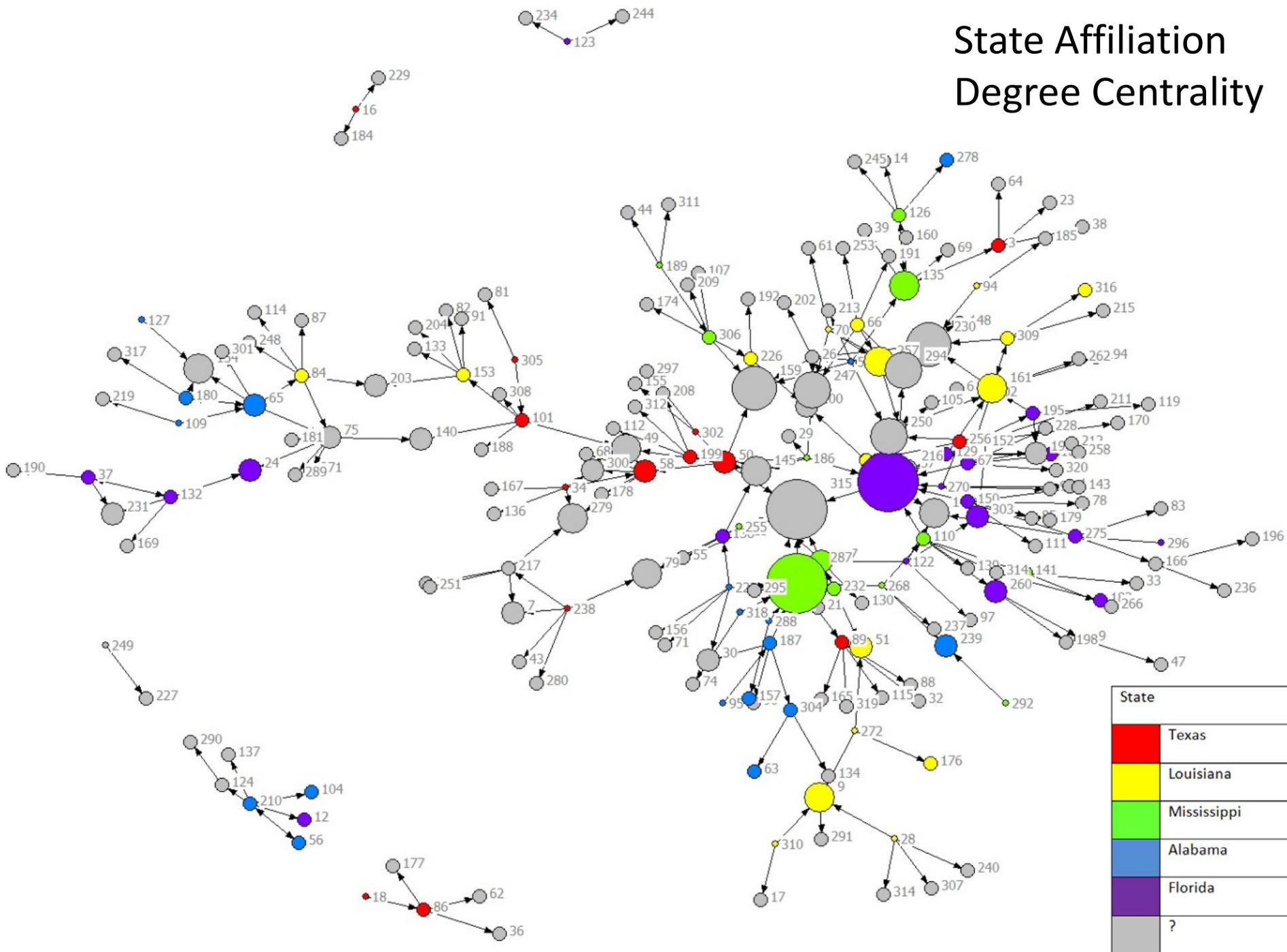


State Affiliation



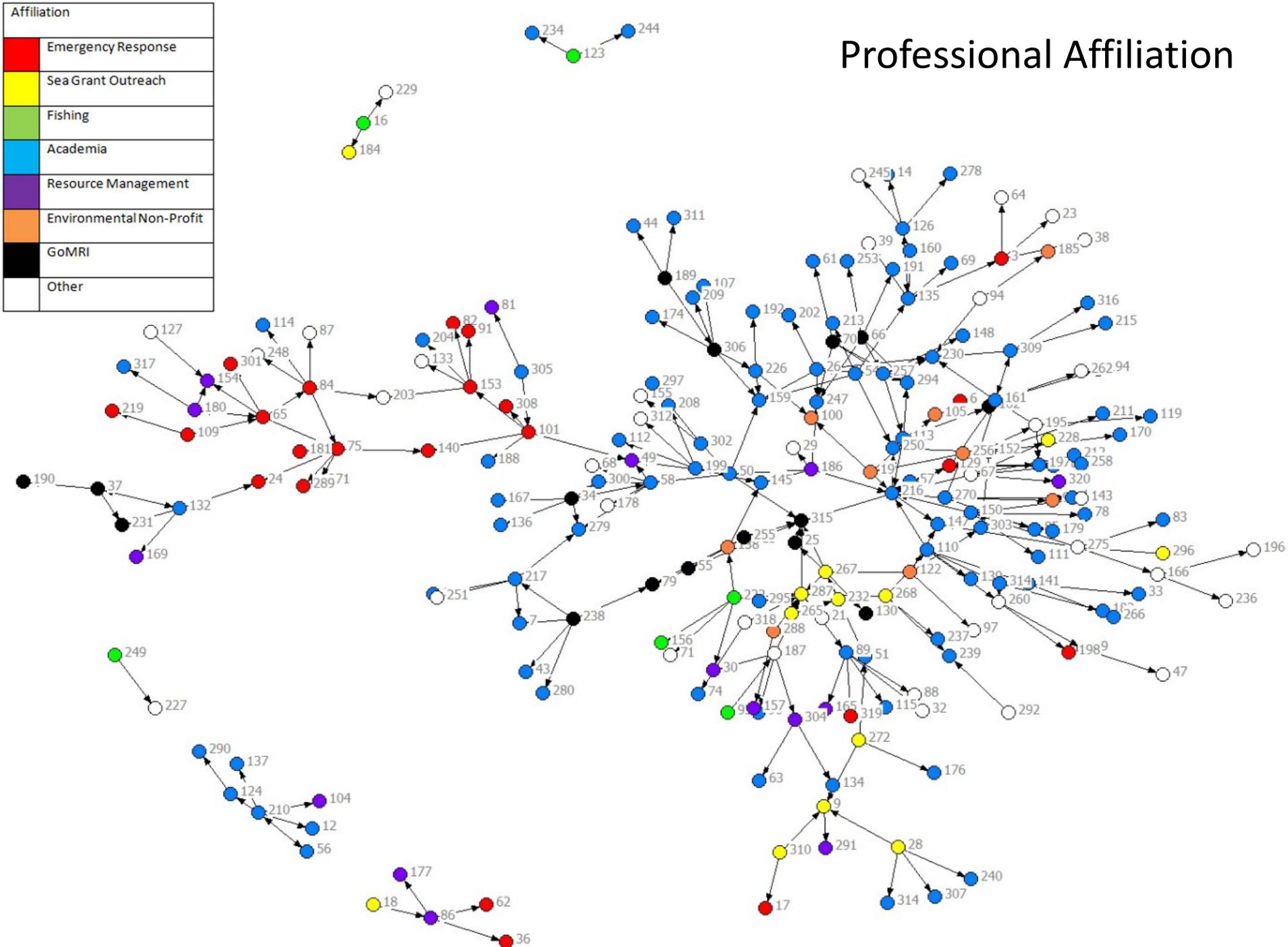
State Affiliation

Degree Centrality



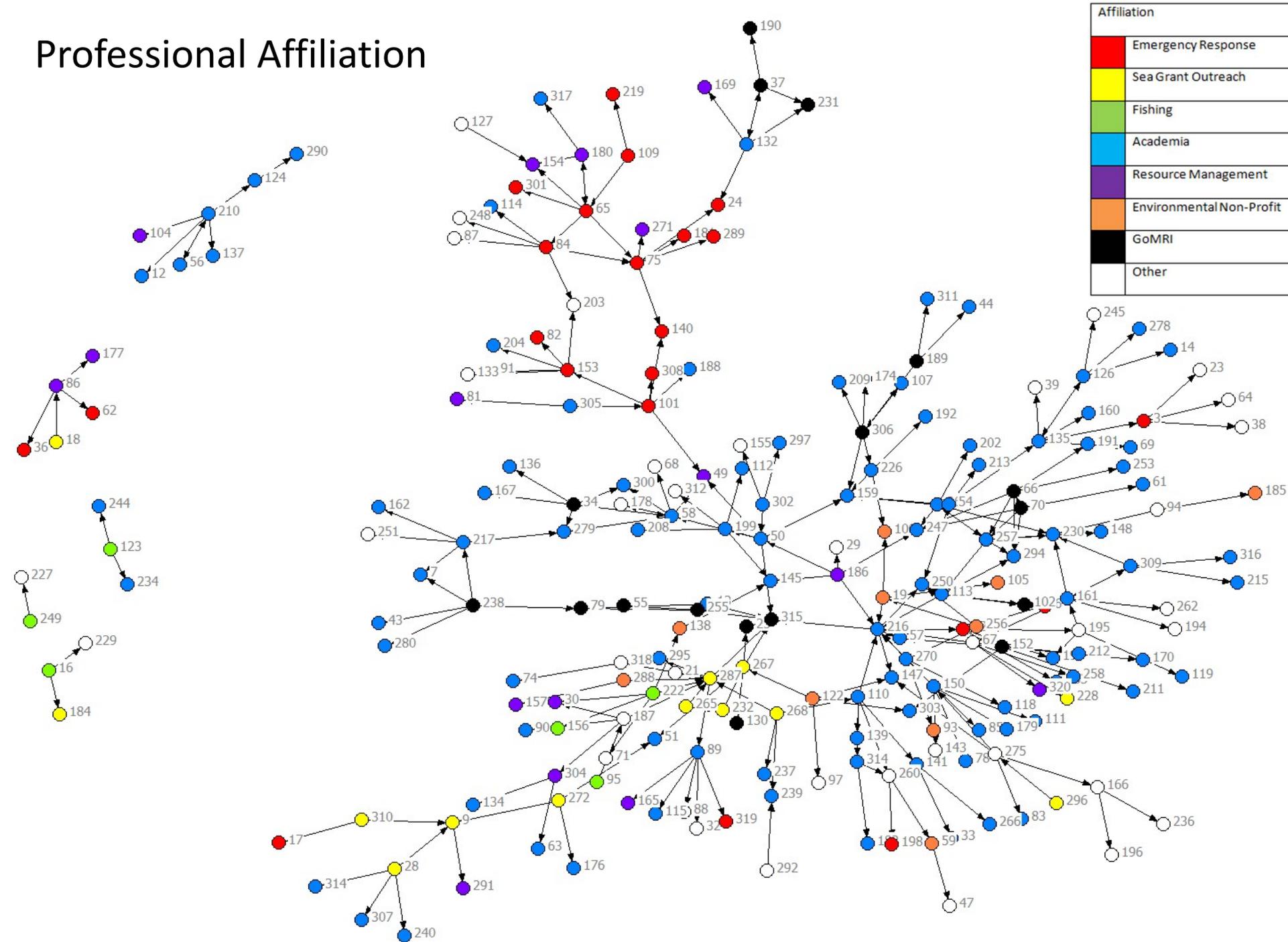
Affiliation	
■	Emergency Response
■	Sea Grant Outreach
■	Fishing
■	Academia
■	Resource Management
■	Environmental Non-Profit
■	GoMRI
○	Other

Professional Affiliation



Professional Affiliation

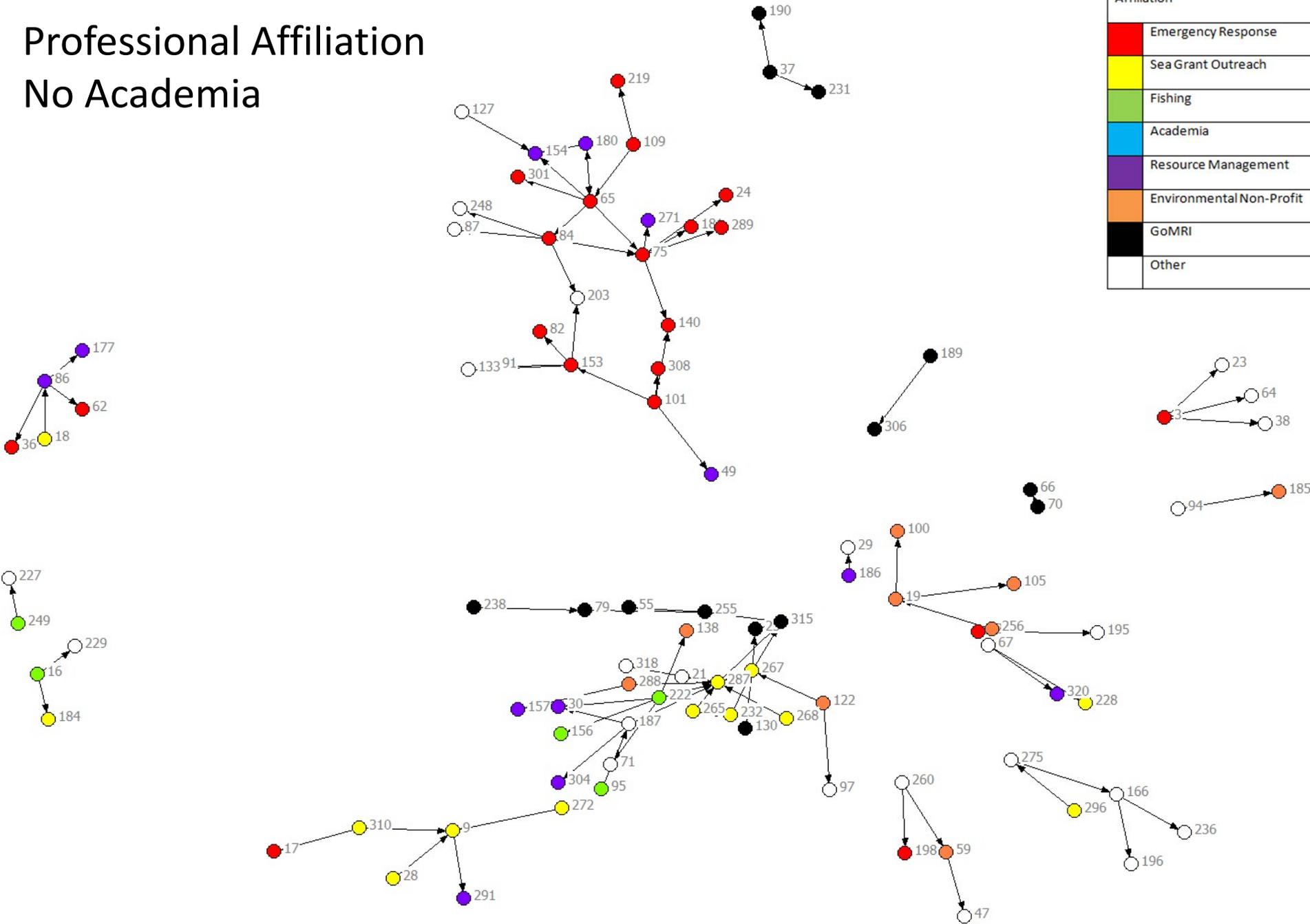
Affiliation	
■	Emergency Response
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■	Fishing
■	Academia
■	Resource Management
■	Environmental Non-Profit
■	GoMRI
■	Other



Professional Affiliation

No Academia

Affiliation	
■	Emergency Response
■	Sea Grant Outreach
■	Fishing
■	Academia
■	Resource Management
■	Environmental Non-Profit
■	GoMRI
■	Other



Applications

- Identify areas where greater representation may be needed
- Address gaps in the network
- Rapid response
- Helps tell the tell story of addressing GoMRI goals
- Identify central players in states/sectors other than one's own
- Scenario planning
- Evaluation



Limitations

- Lack of anonymity
- Data generated through self report:
 - Accuracy of informant recall
 - Potential ambiguity of concepts
 - Overstatement of connections
- While describing what patterns exist, SNA does not explain why.
- Missing data



Limitations

- Sampling
- Each of these people have their own network of colleagues outside of GoMRI, or their immediate circle of coworkers.



Thank You

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