# Understanding Networks in Agroecology in FRNs

## **Useful References:**

<https://www.coursera.org/learn/social-economic-networks> - Cousera on Social and Economic Networks: Models and Analysis

<https://sites.google.com/msu.edu/kenfrank/social-network-resources>   
Ken Frank’s Social Network Resources site. This includes an introduction to social network analysis at: <https://docs.google.com/presentation/d/1fnqPQS825rA1aSCaCirQPzLNCwqcHJzB/edit#slide=id.p1>

<https://nicklin.kumu.io/stakeholder-mapping>   
Kumu map presentation from Claire Nicklin

<https://scholarworks.gvsu.edu/tfr/vol13/iss1/9/>   
Funder-Initiated Communities of Practice as a Means for Sharing and Creating Knowledge in Order to Strengthen the Adaptive Capacity of Systems   
Figure 3 in this paper shows how we used the SNA in the Andes CoP and provides some thoughts/ examples of how networks relate to knowledge sharing and creation.

<https://stats4sd.org/resources/583>   
FRN Observation Protocol

**Other interesting reading:**

Frank, K.A. 2011. Social Network Models for Natural Resource Use and Extraction. Social networks and natural resource management: Uncovering the social fabric of environmental governance. Pp. 180-205. Örjan Bodin & Christina Prell editors. Cambridge: Cambridge University Press. <https://www.researchgate.net/publication/281872806_Social_network_models_for_natural_resource_use_and_extraction>

Frank, K. A., S. Maroulis, D. Belman, and M. D. Kaplowitz. 2011. The social embeddedness of natural resource extraction and use in small fishing communities. Pages 309-332 in W. W. Taylor, A. J. Lynch, and M. G. Schechter, editors. Sustainable fisheries: multi-level approaches to a global problem. American Fisheries Society, Bethesda, Maryland. <https://www.researchgate.net/publication/264888462_The_Social_Embeddedness_of_Natural_Resource_Extraction_and_Use_in_Small_Fishing_Communities#fullTextFileContent>

Frank, K. A., Penuel, W. R., & Krause, A. (2015). What Is A “Good” Social Network For Policy Implementation? The Flow Of Know‐How For Organizational Change. Journal of Policy Analysis and Management, 34(2), 378-402. <https://doi.org/10.1002/pam.21817>

Coe, R and Soini Coe, E. 2023. Agroecological transitions in the mind. Elementa: Science of the Anthropocene (2023) 11 (1):00026. <https://doi.org/10.1525/elementa.2022.00026>.

Nicklin, C., Chancellor, T., Garcia, A., Gohole, L., Haussmann, B., Kaijage, P., Maland Cady, J., Miller, K., Moore, M., Nelson, R., Powers, M., & Somé, B. (2021). Funder-Initiated Communities of Practice as a Means for Sharing and Creating Knowledge in Order to Strengthen the Adaptive Capacity of Systems. The Foundation Review, 13(1). <https://doi.org/10.9707/1944-5660.1554>.

**Ethical challenges with social network research:**

R.L. Breiger, “Ethical Dilemmas in Social Network Research: Introduction to Special Issue.” *Social Networks* 27 / 2 (2005): 89 – 93. Read it online. <http://www.u.arizona.edu/~breiger/2005BreigerIntroEthics.pdf>

**Software Options:**

Standard statistical packages: R, STATA

KliqueFinder - <http://hlmsoft.net/wkf/>; the developers (Jordan T Bates, Ken A Frank) are currently working on a version which runs the algorithm in R: <https://jtbates.github.io/kliqfindr/>)

Netdraw - <https://www.betterevaluation.org/tools-resources/netdraw>; direct link - <https://sites.google.com/site/netdrawsoftware/download>

E-NET - <https://sites.google.com/site/enetsoftware1/>

ATLAS.ti - <https://atlasti.com/> (not free – alternative R package for qualitative data analysis: RDQA, <http://rqda.r-forge.r-project.org/>)

Kumu (<https://kumu.io/>) – tool for mapping networks and build a database of information associated with it.

Net-Map (<https://netmap.files.wordpress.com/2008/04/netmap_brochure.pdf>, IFPRI) - Net-Map is an interview-based mapping tool that helps people understand, visualize, discuss, and improve situations in which many different actors influence outcomes.