Read me for SES vulnerability analysis 012716

* Refer to Read me for SES vulnerability analysis 012616 where necessary
* at port level:
  + need to filter for métiers that account for 90% of revenue/yields. Right now, this filter is done at the coastwide level
  + need to determine interaction strengths (correlations) in a port specific way
* spurious correlations? Ie, are there boats that do both?
  + crab and sardine? crab and urchin?
  + lobster and chinook? lobster and sablefish?
  + urchin and chinook?
* Might be worth considering correlations in revenue per trip and pounds per trip
* Simulations will tell us about the expected % change in # trips for each node. Worth translating into expected % changes in revenue (economic consequences) and landings (ecological consequences)
* We chose to evaluate correlations between trips to determine interaction strengths. Trips best match the unit of decision a skipper makes and negative correlations between them can implicate a direct trade off in deciding to target one stock vs another. In contrast, correlations between revenues and correlations between landings can be influenced more by indirect effects such as shared environmental conditions, common market forces, and other factors.
* For simulations, what to do about diagonal (self-damping)?
* Next steps:
  + Emma will
    - troubleshoot potential spurious correlations and create commented code for repeating this in the future
    - create undirected networks for coastwide and ports above (so long as they have POT1) using Jaccard distance (interaction strengths between nodes in the network will be defined based on the similarity in vessel composition among pairs of métiers)
    - may still be worth comparing structure of directed networks where interaction strengths are based on propriton of vessels shared between métiers
    - read a paper about FCM – Ferrarini 2011
      * what to do about diagonal (self-damping)?
  + I will
    - read a paper about FCM – Ferrarini 2011
      * what to do about diagonal (self-damping)?
    - Run FCM for coastwide network based on trips to equilibrium and with crab closure
    - create top 90% for each of the ports listed at the top of this doc and create correlation matrices based on trips, revenues, pounds
      * tell emma when matrices are on git so she can do structural properties