# Reference Card: enaR (v1.01)

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# **Data Input**

pack() - helps consolidate ENA network data and create an R network data object
 unpack() - extracts ENA network data elements from an R network data object
 read.scor() - reads a SCOR formatted data file and creates an enaR data object
 read.wand() - reads a SCOR formatted data file and creates an enaR data object

**balance(**x = ``network object'')- applies automatic balancing algorithm to x **ssCheck(**x = ``network object'')- checks to see if network model is at steady-state

# **Ecological Network Analysis**

#### **Patten School**

enaStructure(x = "network object") - performs structural analysis on network model x
enaFlow(x = "network object") - performs flow analysis on network model x
enaStorage(x = "network object") - performs storage analysis on network model x
enaUtility(x = "network object") - performs utility analysis on network model x
enaControl(x = "network object") - performs control analysis on network model x
enviorn(x = "network object") - performs unit environ analysis on network model x

### **Ulanowicz School**

## **Miscellaneous Functions**

**get.ns(**x = "network object") – returns whole network statistics from all ENA algorithms mExp(x = "matrix", m) – performs matrix exponentiation raising matrix x to the power m TET(x = "network object") – find total environ throughflows

50 SCOR formatted trophic ecosystem models are available from <a href="http://people.uncw.edu/borretts/documents/ecosystem\_networks\_50\_trophic.tgz">http://people.uncw.edu/borretts/documents/ecosystem\_networks\_50\_trophic.tgz</a>