

# On defining the variables and model structure

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# Identify the relevant variables

- Problem framing
  - management / scenario variables
  - target variables
- Intermediate variables: those that "lie on the path" between management/scenario and target variables

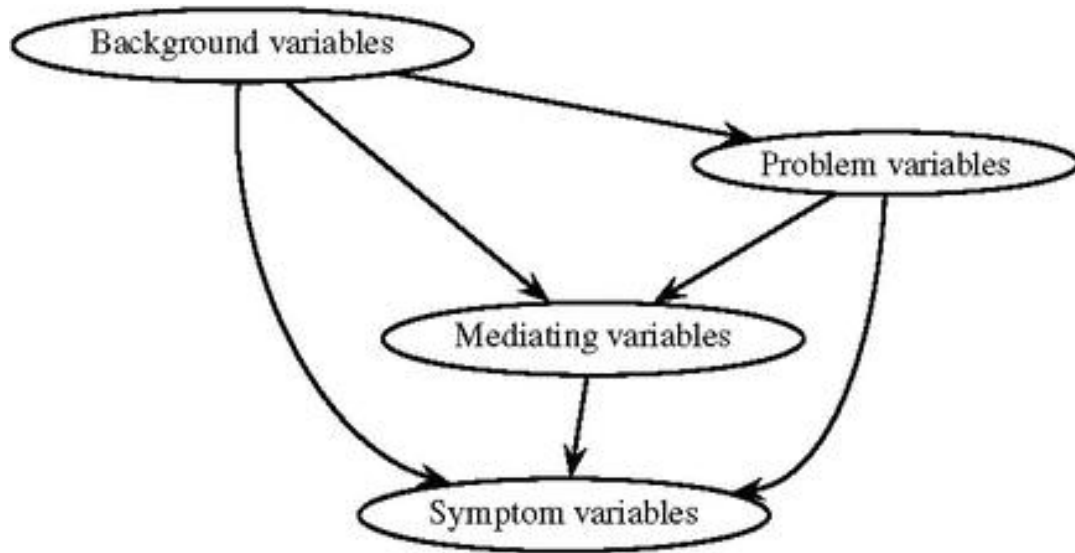


Figure from:  
Kjærulff U.B., Madsen A.L.  
(2013) Eliciting the Model. In:  
Bayesian Networks and  
Influence Diagrams: A Guide  
to Construction and Analysis.  
Information Science and  
Statistics, vol 22. Springer,  
New York, NY

*Make it as simple as possible,  
but no simpler.*

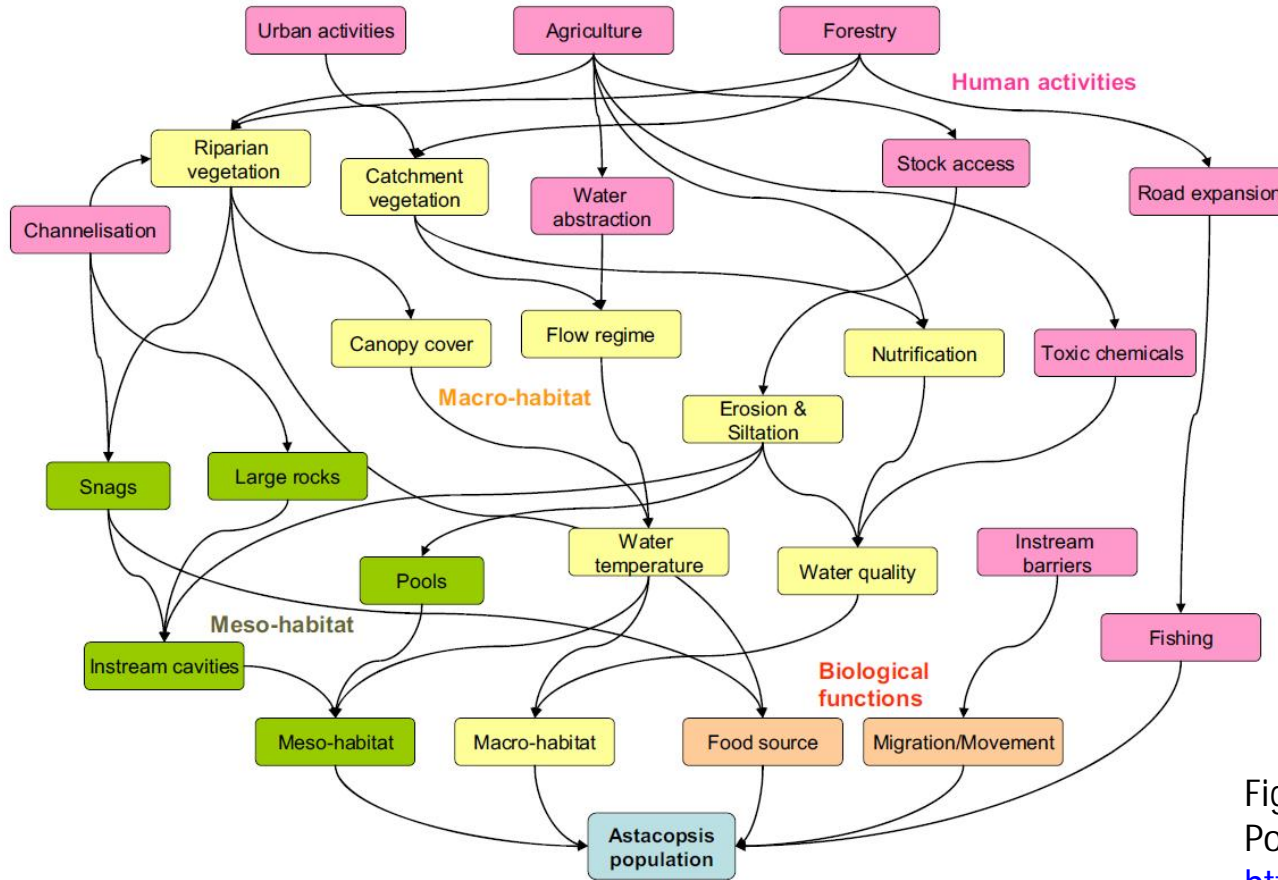


Figure from Chen & Pollino 2012:  
<https://doi.org/10.1016/j.envsoft.2012.03.012>

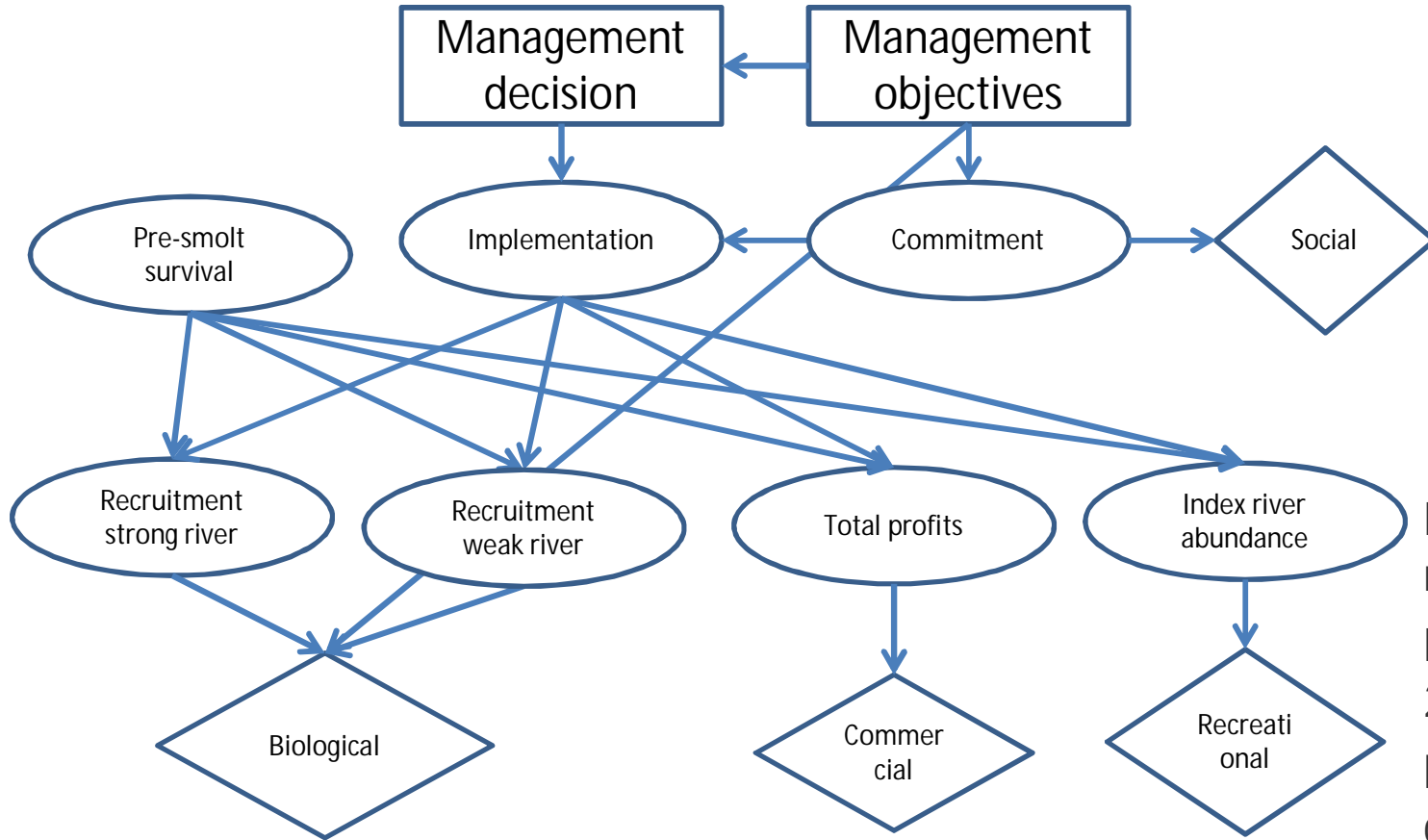
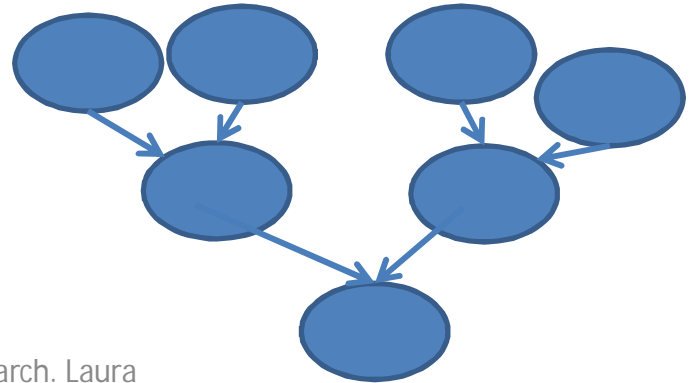
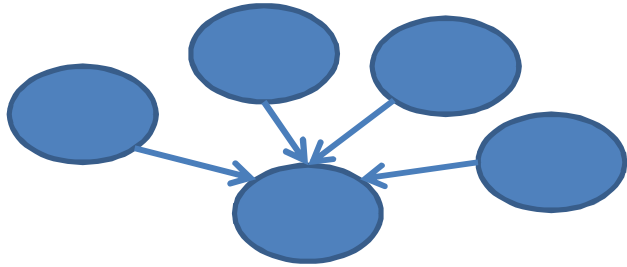


Figure redrawn from Levontin et al. 2011

<https://doi.org/10.1093/icesjms/fsr004>

# Guidelines

- Follow causal connections
- Keep the structure as simple as possible
  - Consider different structures



# Make sure that

- the model and its variables are defined unambiguously in terms of e.g.
  - Time
  - Spatial area
- these definitions make sense together