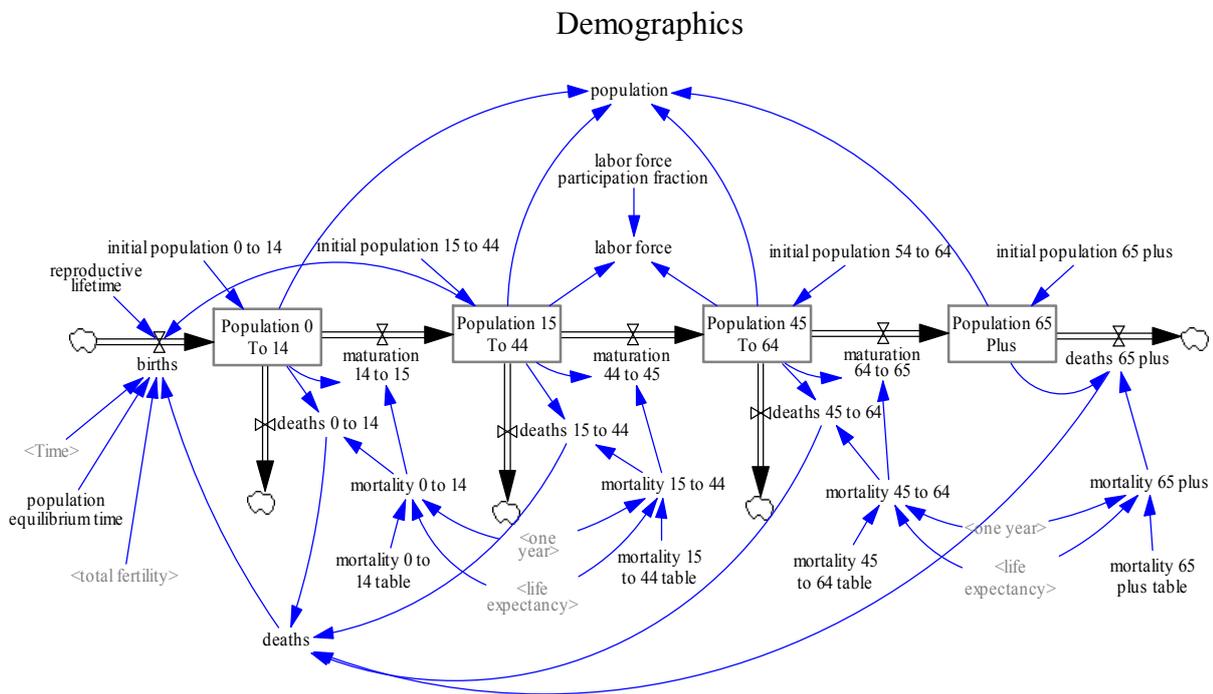


## Predicting Socio-Economic Change from Interactions of Social and Economic Indices: The Club of Rome Models\*

The Club of Rome (Meadows et al. 2008) mapped the interactions of numerous social and economic indices in a range of domains. A number of these, together with the final, integrating, diagram are reproduced below.

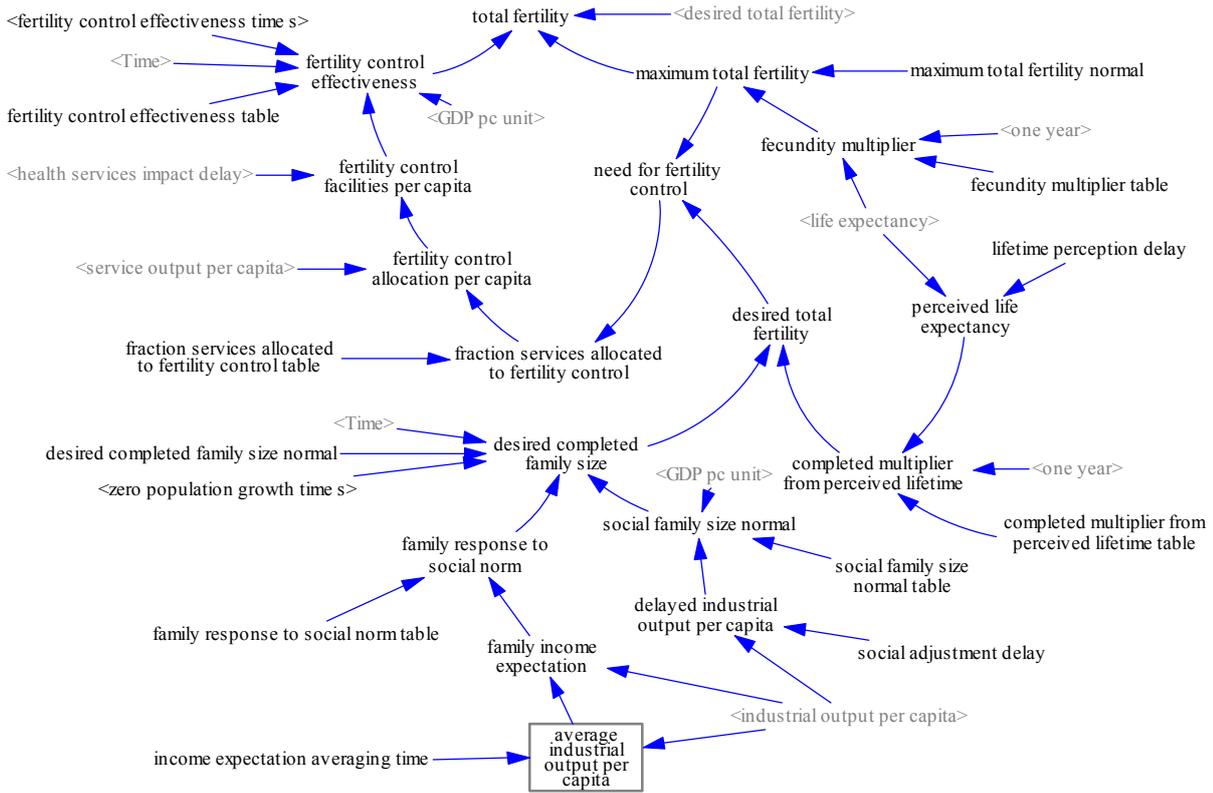
I have to confess that I am not entirely clear how weights are assigned to indicate the strength of the contributions of these various components as they add up in different scenarios. The way many of the social forces exert their effect remains unclear. The preceding variables clearly *influence* the subsequent ones. But *how* do they influence them ... and how is the differential strength of their influence calculated to compare with the strength of influence of other variables? Also, despite the use of curved lines, the *directions* of influence seem mostly to be one-way, linear. There are very few negative, never mind self-elaborating, self-amplifying, autopoietic, loops.

It is therefore not at all clear to me that the authors have achieved even the initial, subjective, level of measurement of the strength of the wind and electricity achieved by Newton and Franklin respectively - never mind the more sophisticated measures that came later. In the end, therefore, I am not sure that they help us to understand or measure – and thus how to damp down, amplify, or harness – the patterns of influence represented in Figure 1.

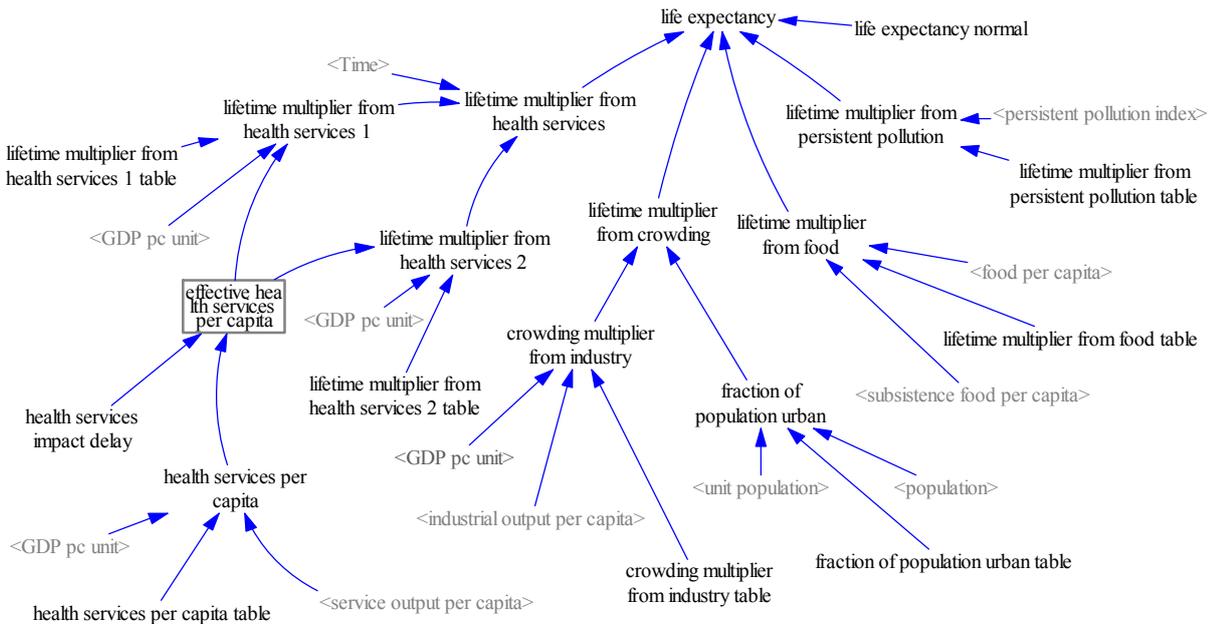


\* I am deeply grateful to Luciano Gallon for drawing my attention to the existence of these models and helping me to download them.

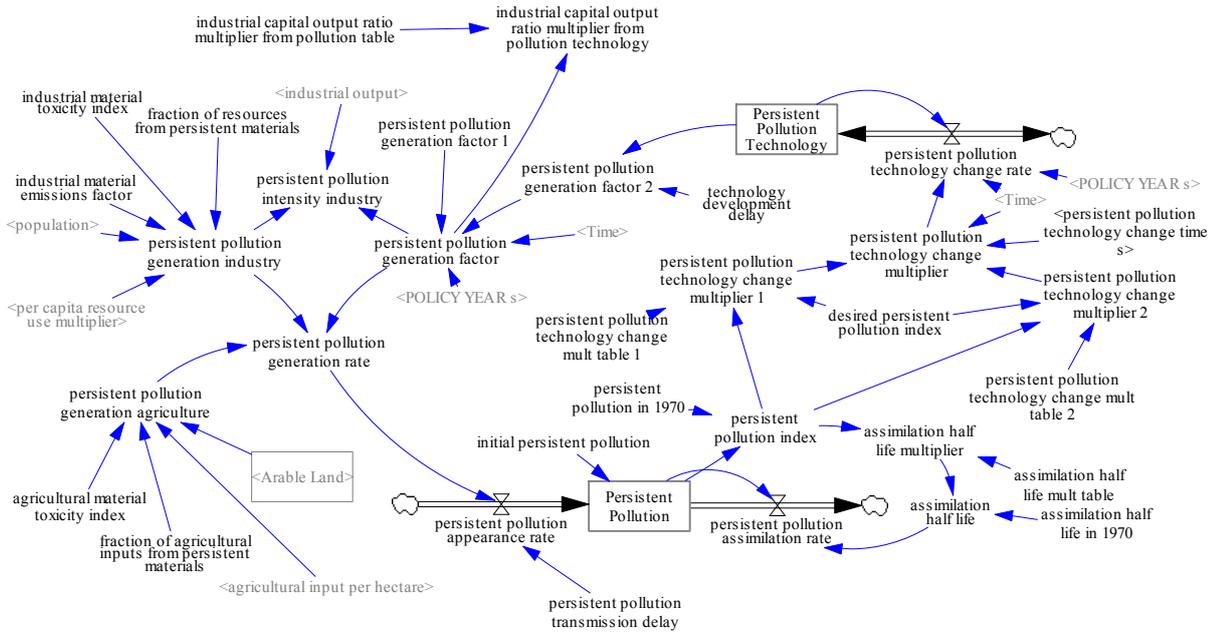
# Fertility



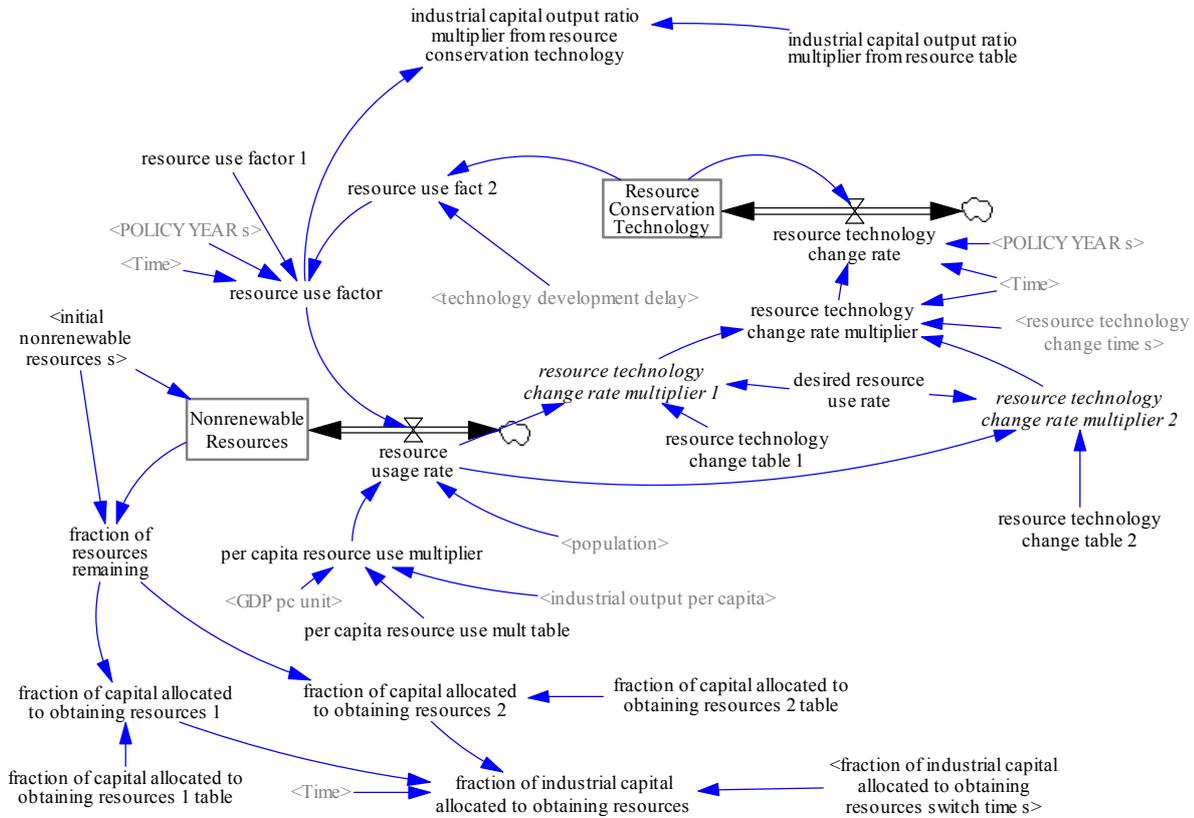
# Life Expectancy



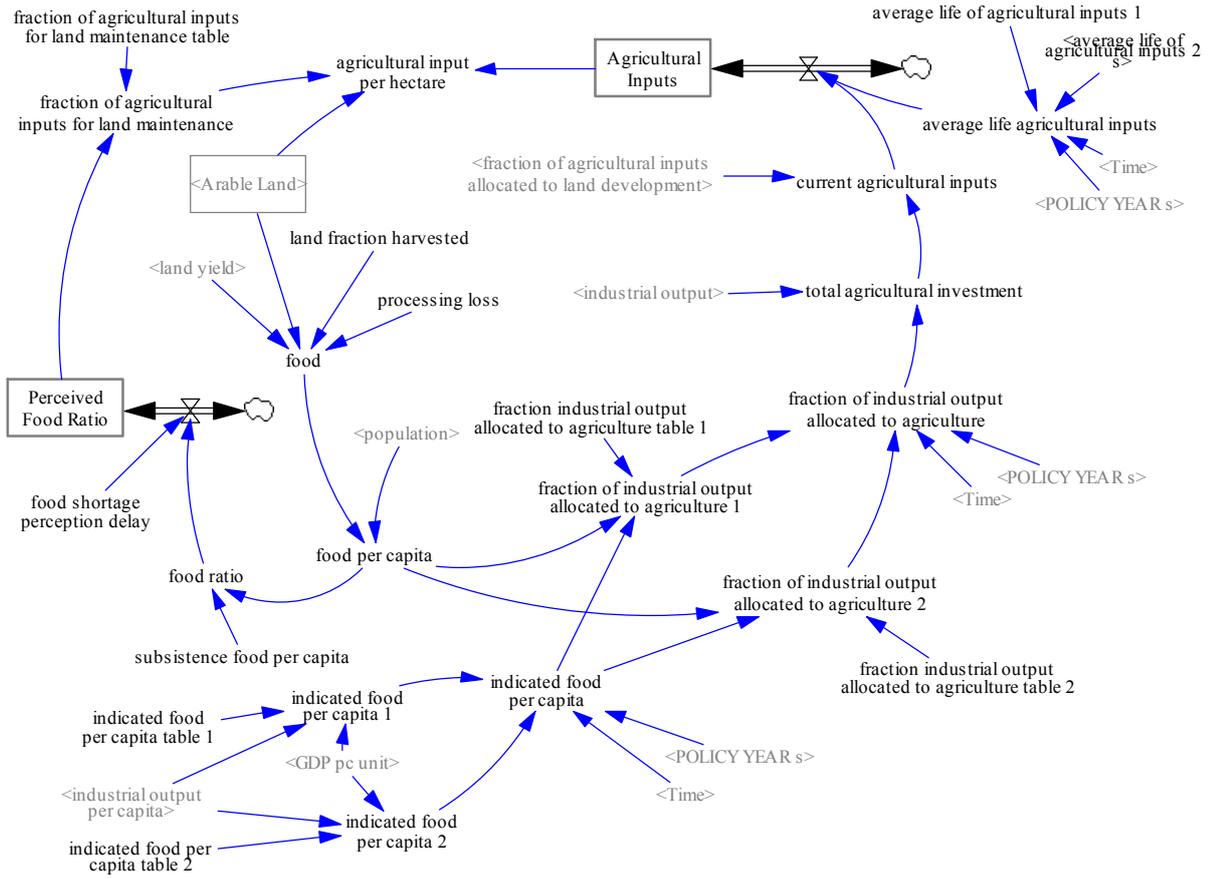
## Persistent Pollution



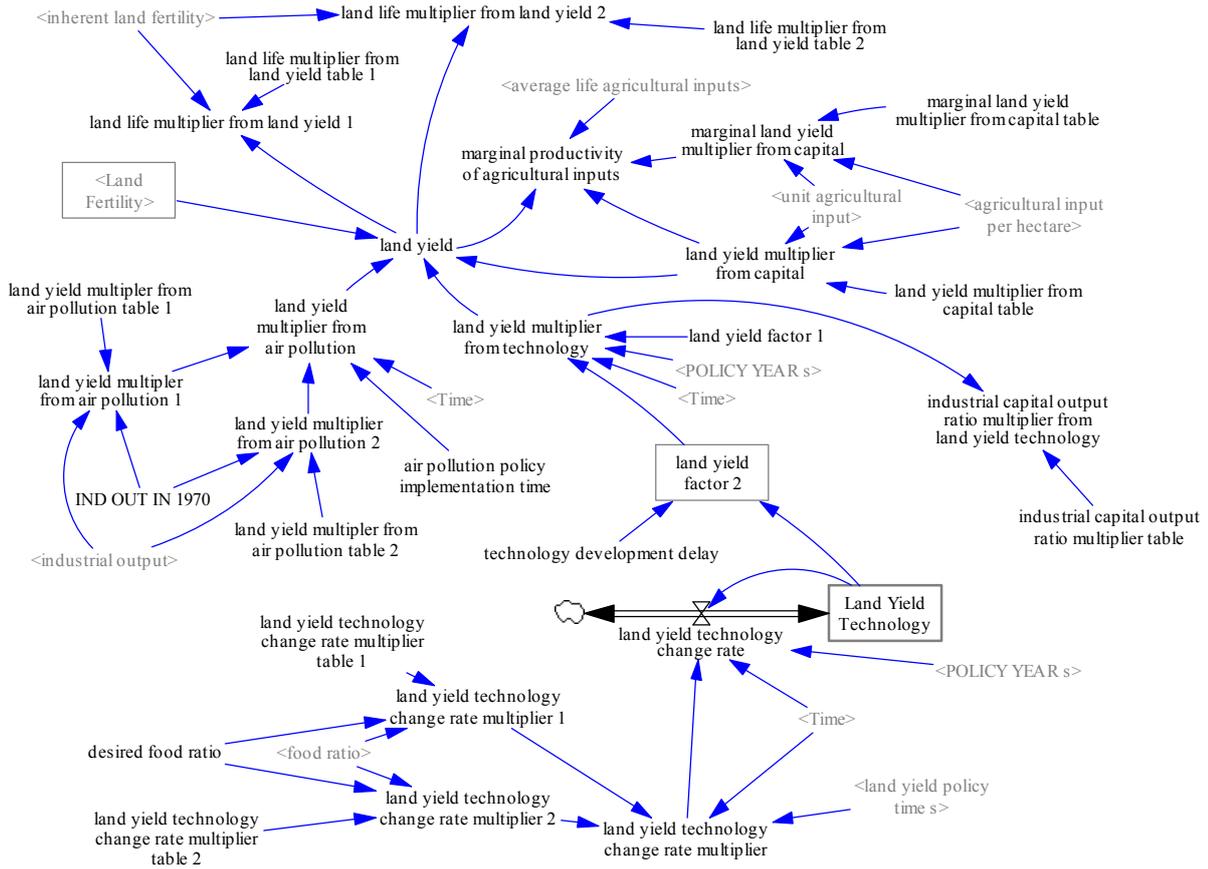
## Non Renewable Resources



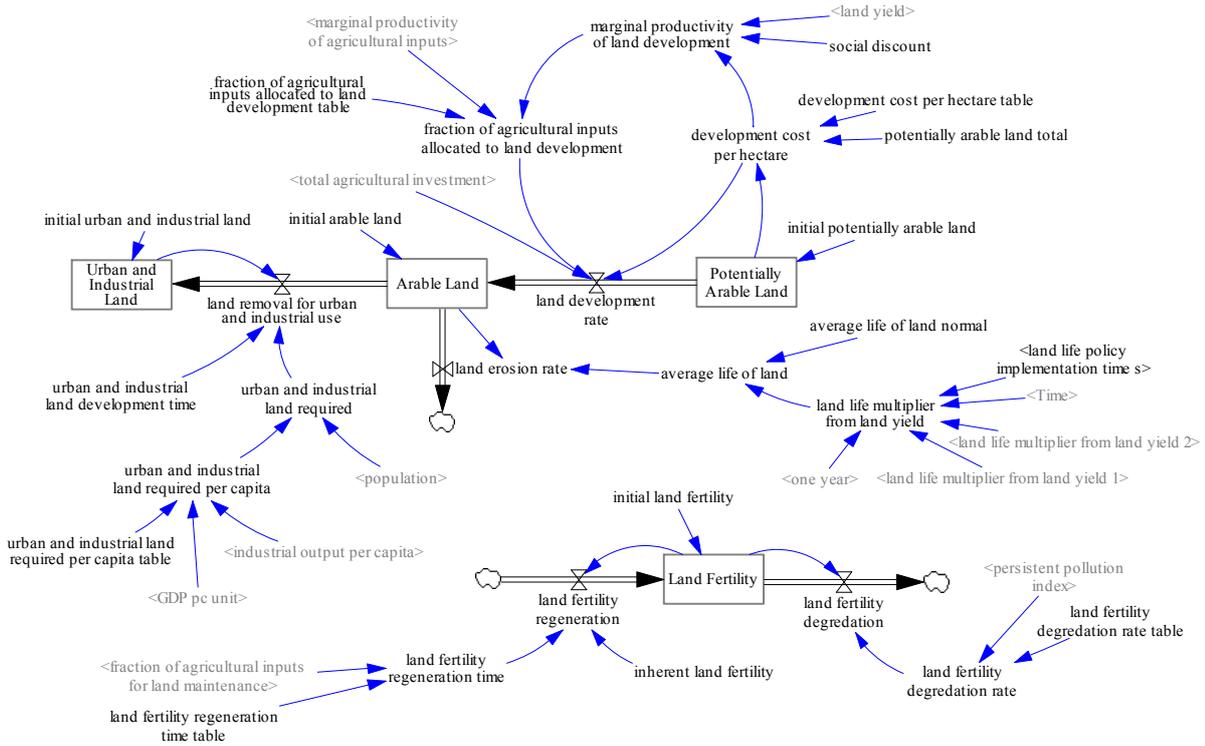
# Food Production



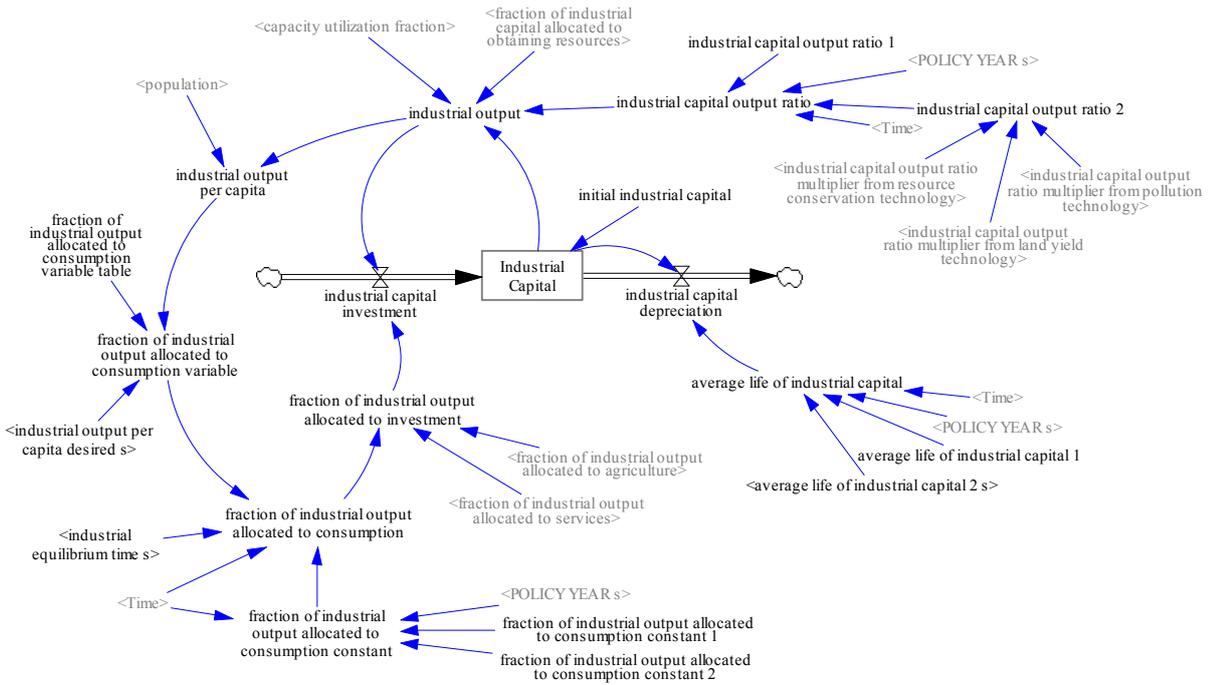
# Agricultural Production



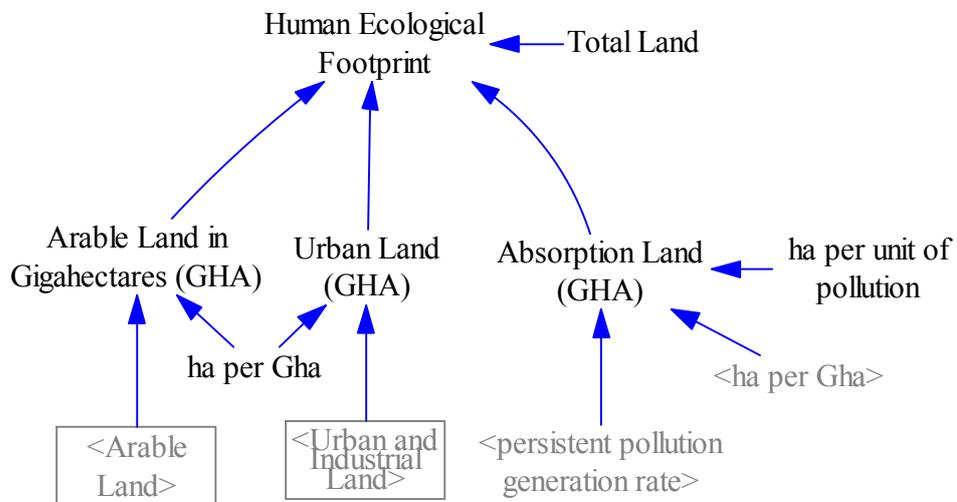
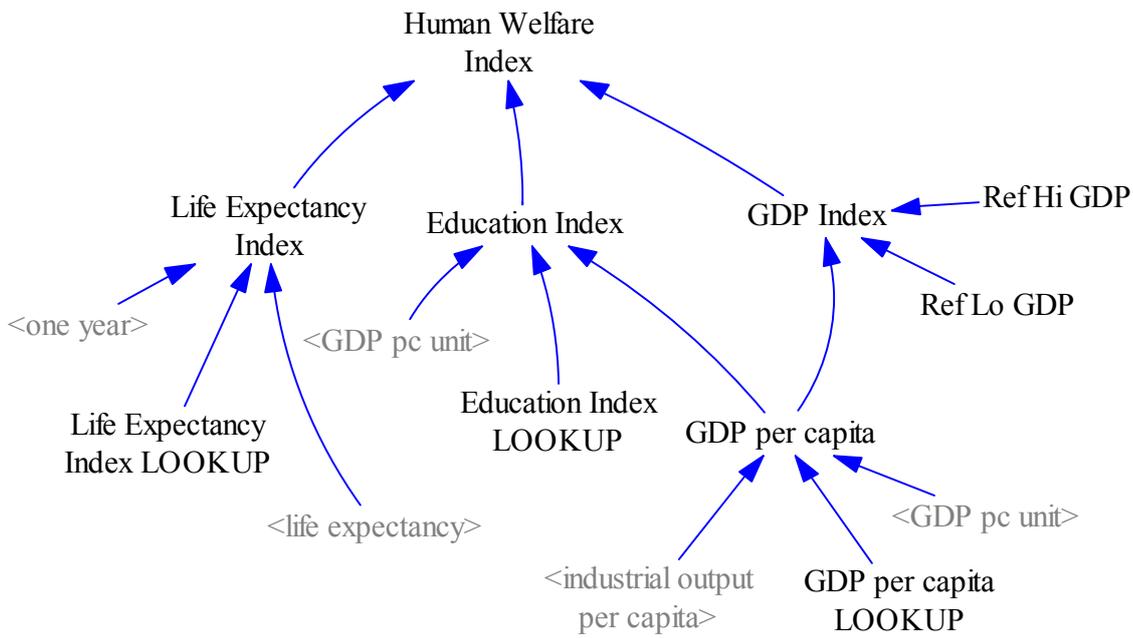
# Land Development Loss Fertility



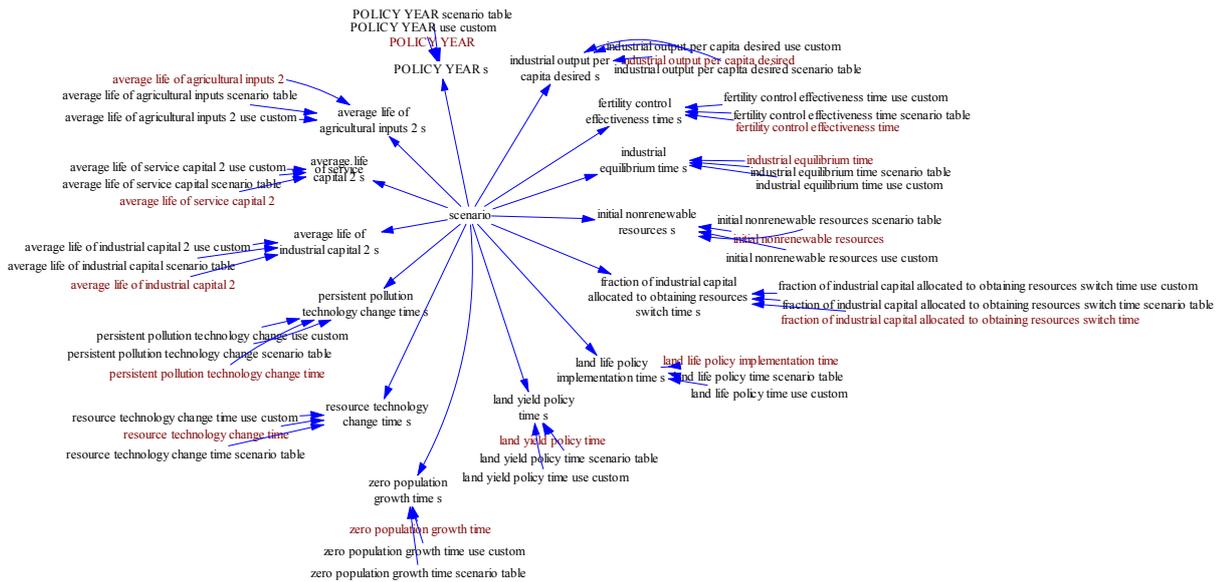
# Industrial Productivity







# Scenario Inputs



All this structure is just a way to allow changes to the scenario number to be used to replicate each scenario. When the scenario number is 0 (or ... use custom is 1) the ...s values used match exactly the input constant (shown in magenta).

## References

Meadows, D. H., Meadows, D. L., and Randers, J. [www.Vensim\models\sample\WRLD3-O03\World3\\_03\\_Scenarios.wmfView](http://www.Vensim\models\sample\WRLD3-O03\World3_03_Scenarios.wmfView)