

Developing and Using a Prototype Risk Assessment Model

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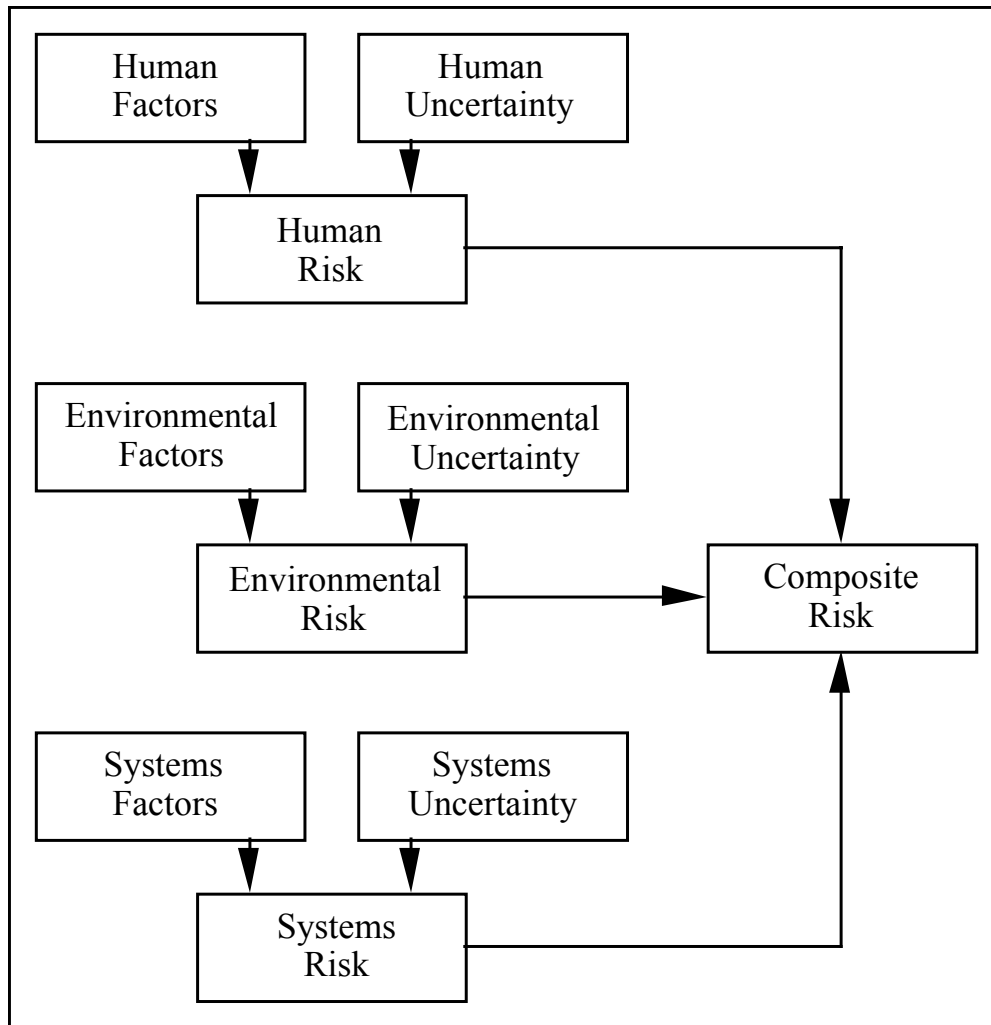
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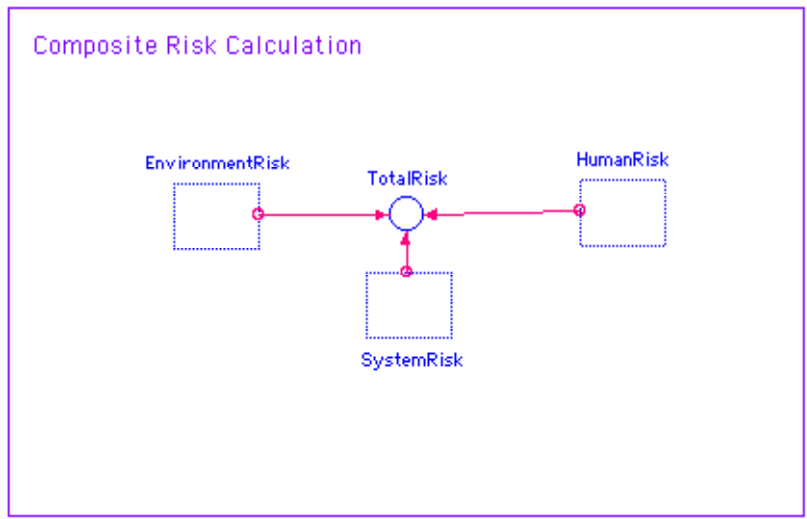
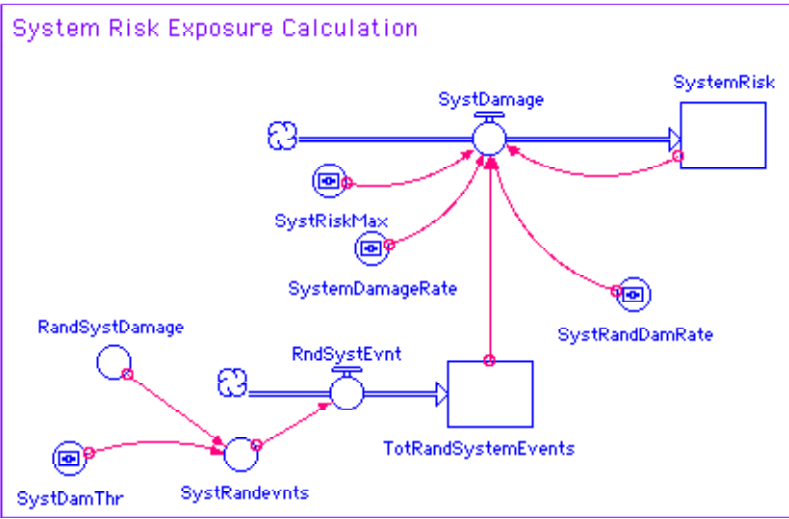
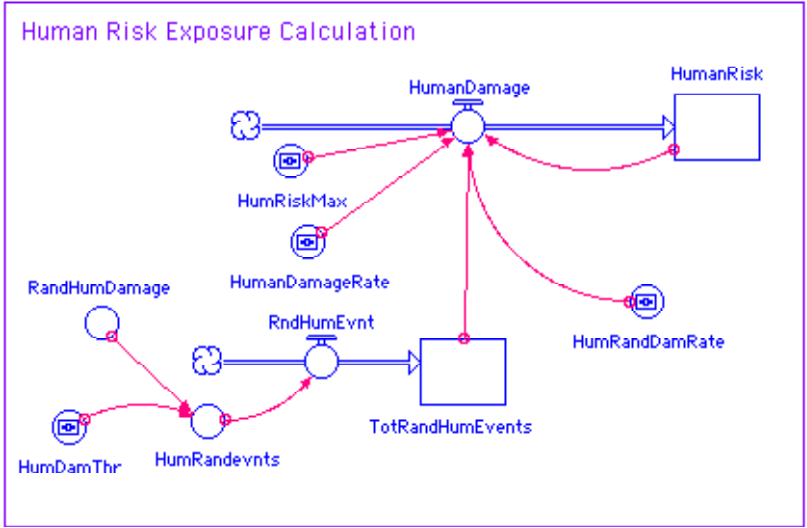
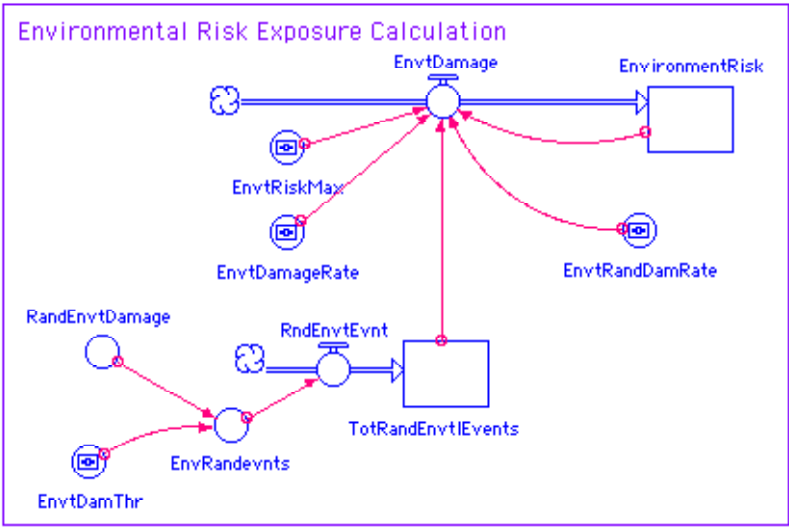
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Assumed Categorization of Risks

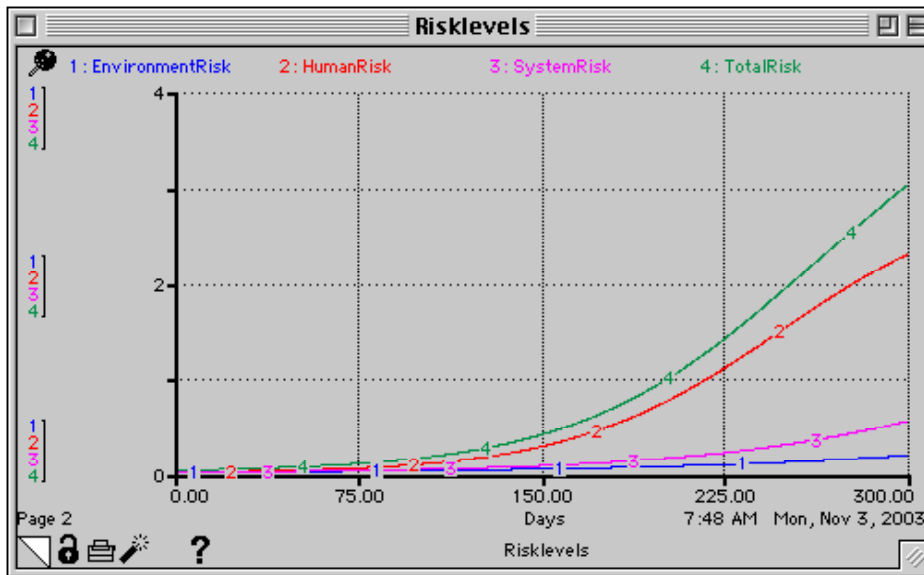
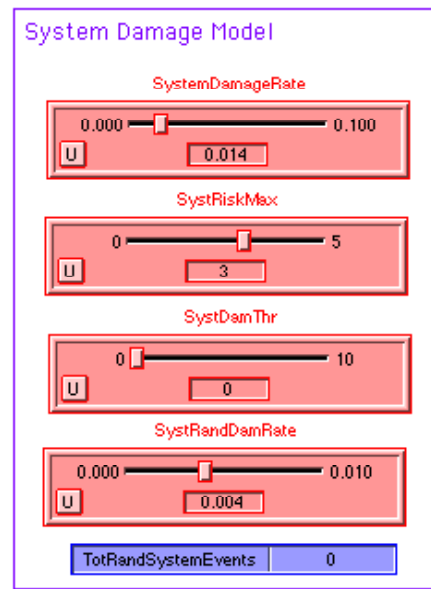
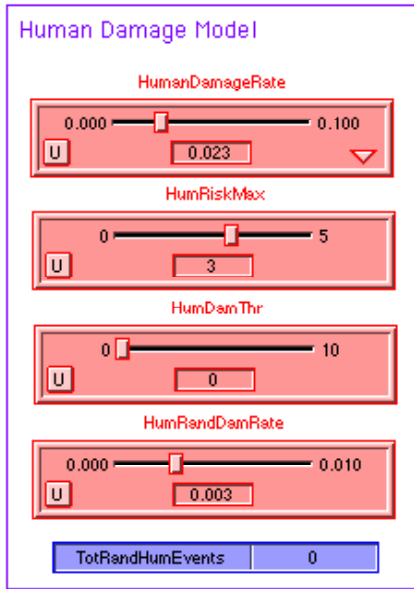
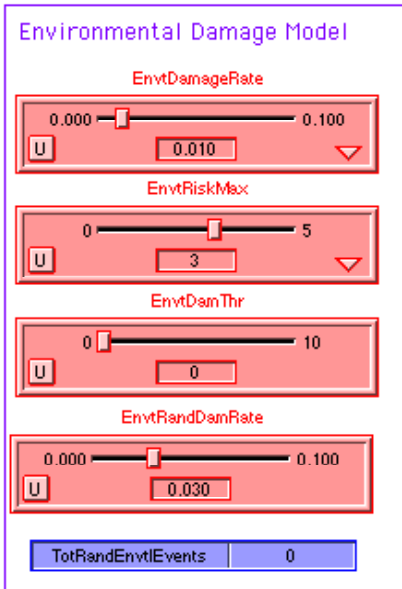
- None (0)
- Low (1)
- Moderate (2)
- High (3)
- Catastrophic (4)
- Unknown (5)



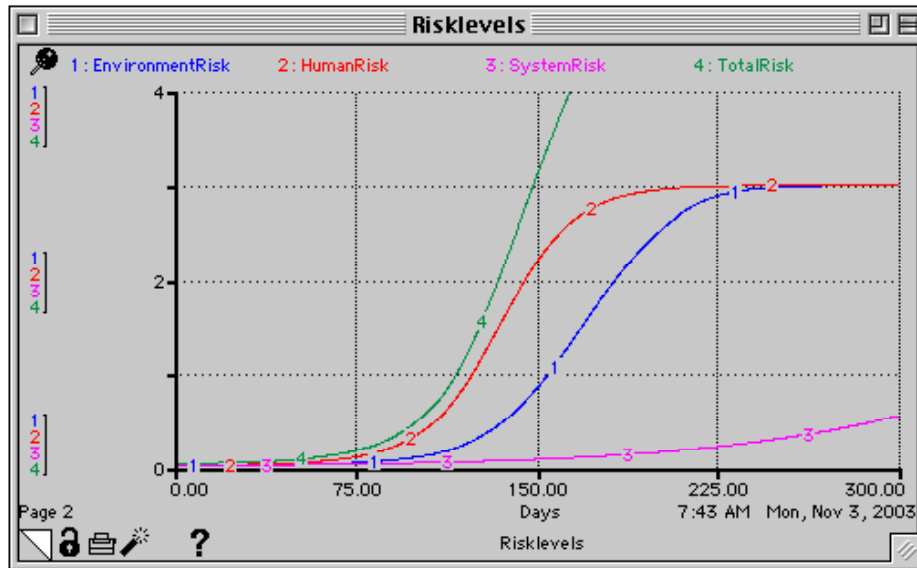
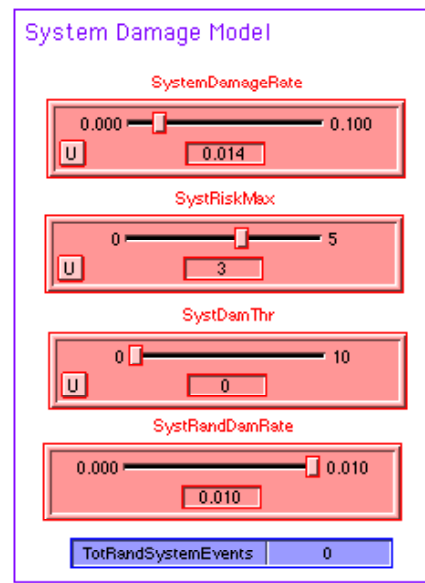
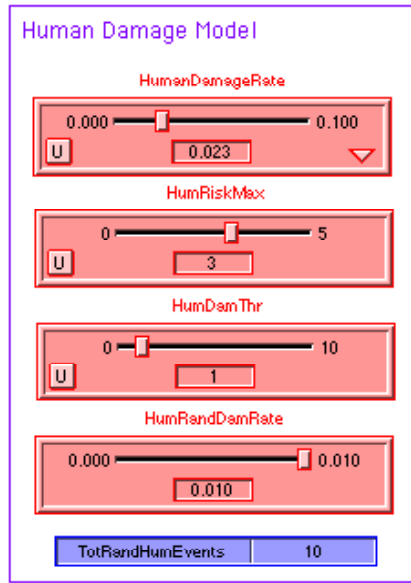
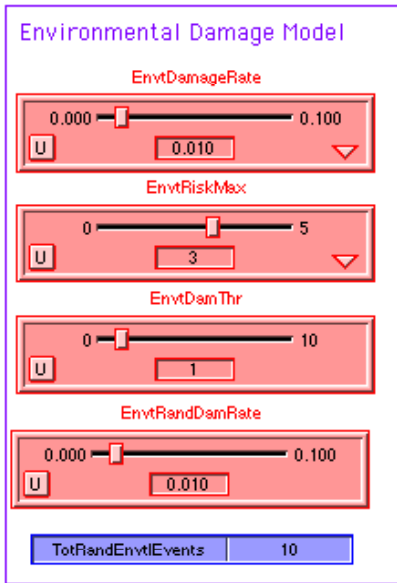
The prototype risk impact assessment model calculates the contribution of human, environmental, and systems factors as well as the contributions of uncertainties in the risks associated with those activities to the overall composite risk.



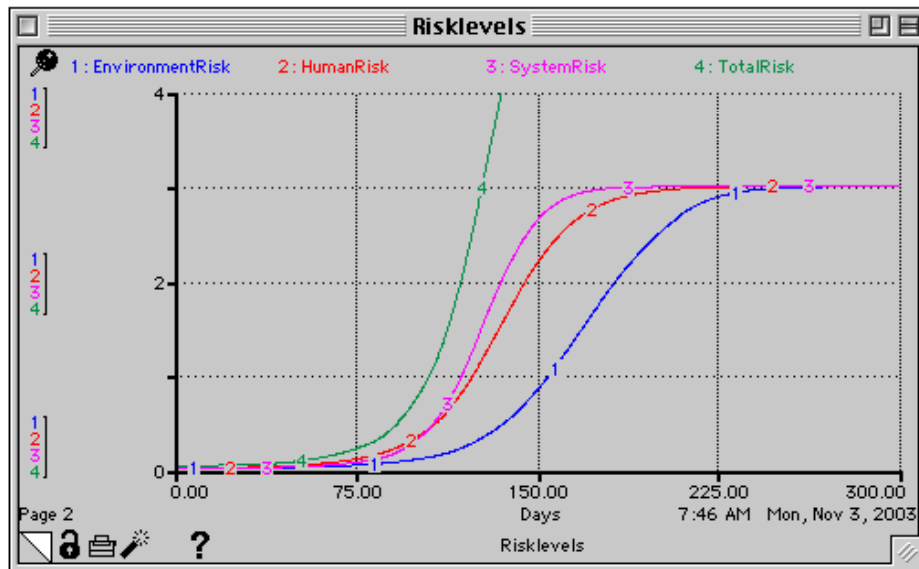
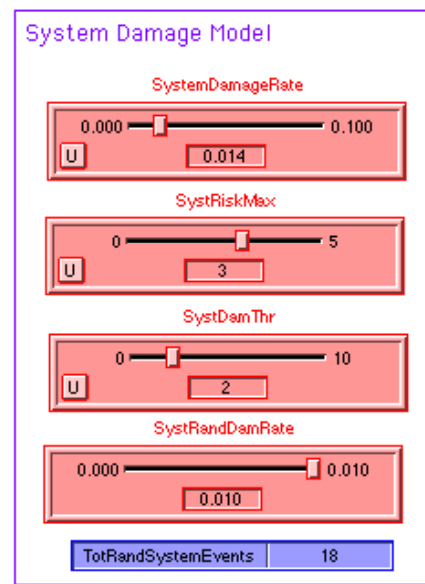
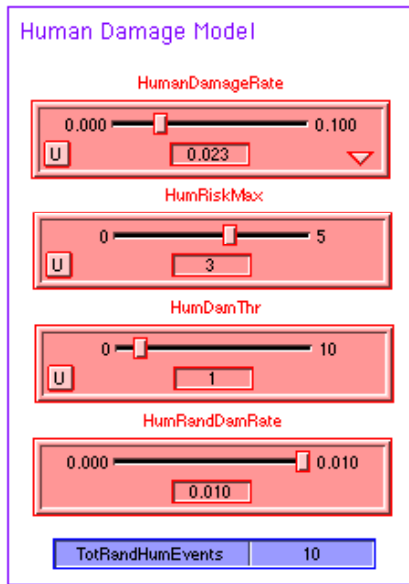
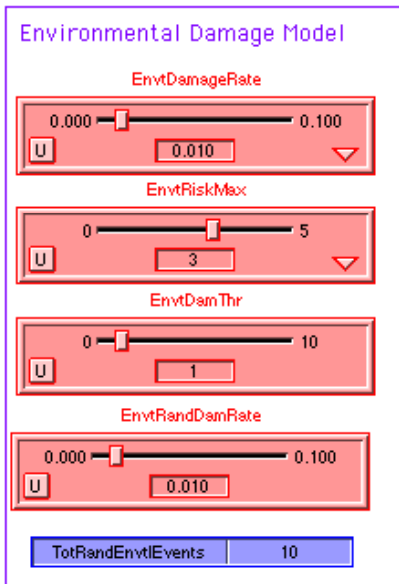
Prototype risk impact assessment model is implemented in systems dynamics software.



Risk impact calculations with no human, environmental, or systems uncertainty. Scale shows risk categories 0 to 4.



Risk impact calculations with human and environmental uncertainties and no systems uncertainty. Scale shows risk categories 0 to 4.



Risk impact calculations with human, environmental, and systems uncertainties. Scale shows risk categories 0 to 4.

Prototype risk impact assessment model can be used to study the impact of different deterioration rates of the human, environmental, and systems components.

The model could also be used to assess the effect of uncertainties in the nature and protective capabilities associated with those components.