

Session 2 – Model Evaluation

Slide 1

Overview

Data-Driven Approach

Biometric Principles

Techniques

Summary

What are growth and yields models used for?

- Updating inventory or cruise data
- Evaluating silvicultural options
- Harvest Schedule
- Future Wood Supply
- Habitat Availability

- Ultimately, for informing decisions – time, energy, \$

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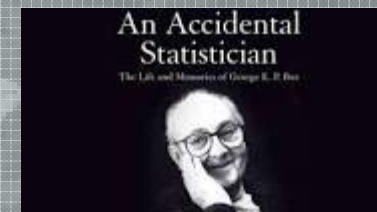
Techniques

Summary

Essentially, all models are wrong, but some are useful...

Implicit in this comment are several questions:

- How wrong
- How useful
- Does useful outweigh wrong



Model Evaluation is aimed at answering these questions. Perhaps a better term is Model Validation.

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“Validation is an evaluation of the usefulness of a model, as a whole, in providing suitably reliable information for a specific problem or type of problem with explicitly stated objectives.”

Thus,

- Not looking for truth**
- Not academic accuracy**
- evaluation...within a context**

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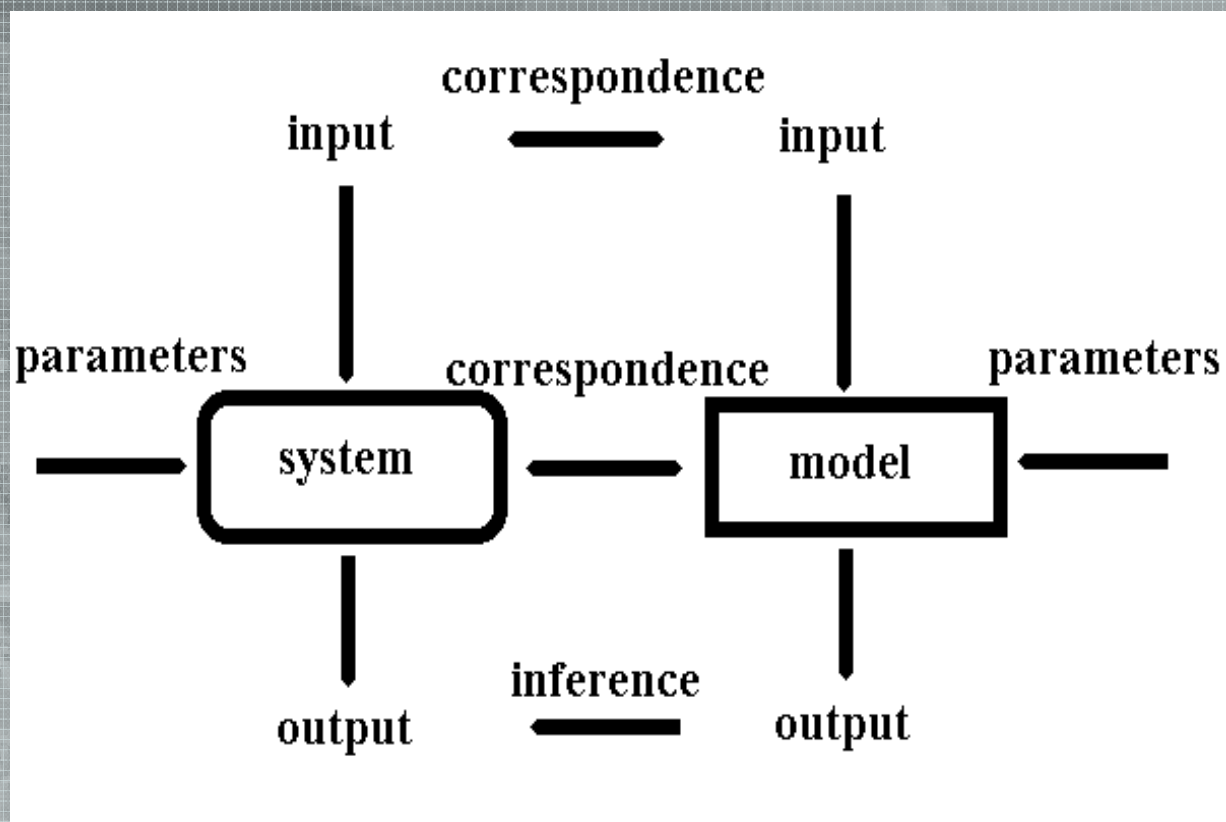
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A Model

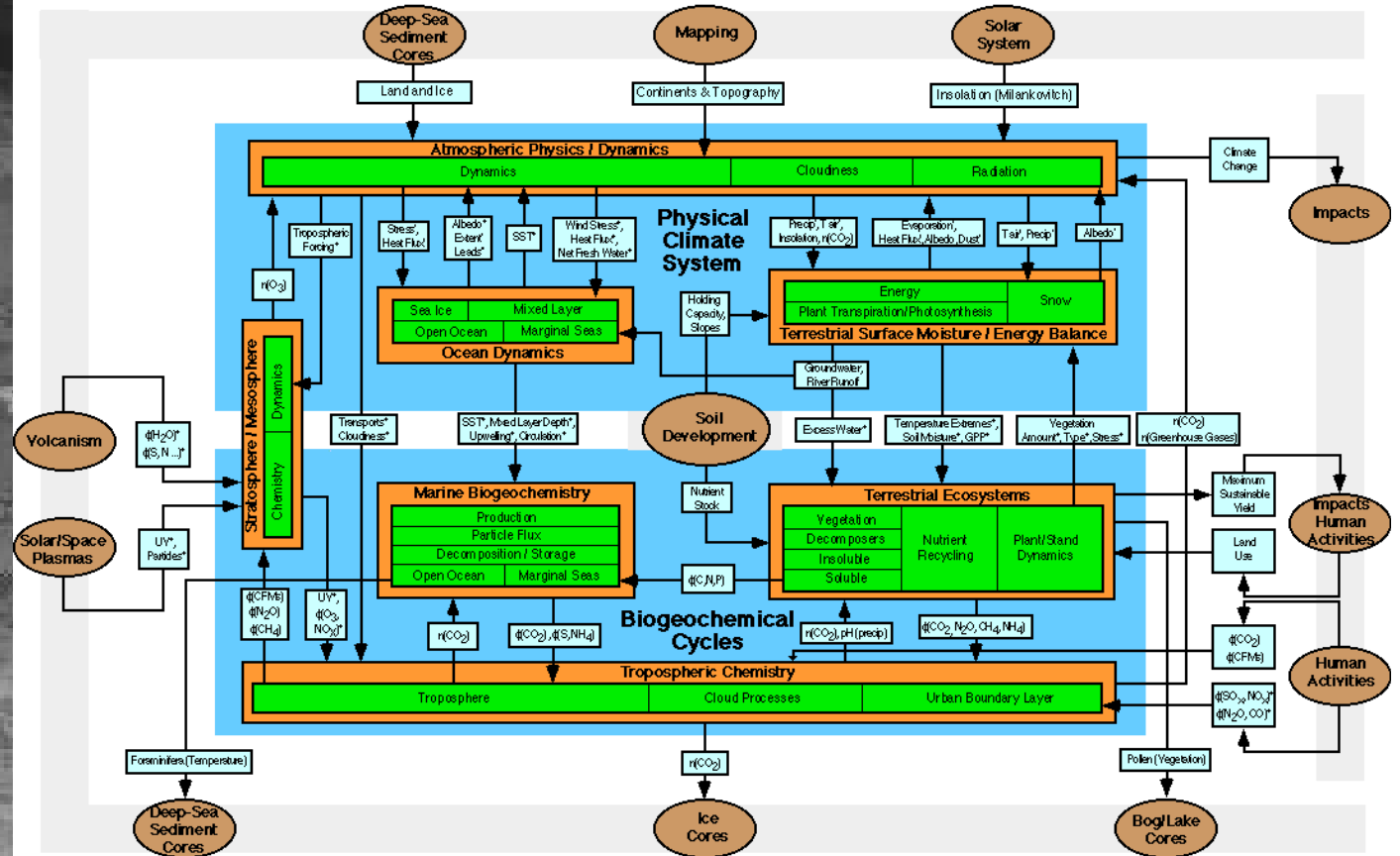


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- Summary

CONCEPTUAL MODEL of Earth System process operating on timescales of decades to centuries



* = on timescale of hours to days * = on timescale of months to seasons ϕ = flux n = concentration

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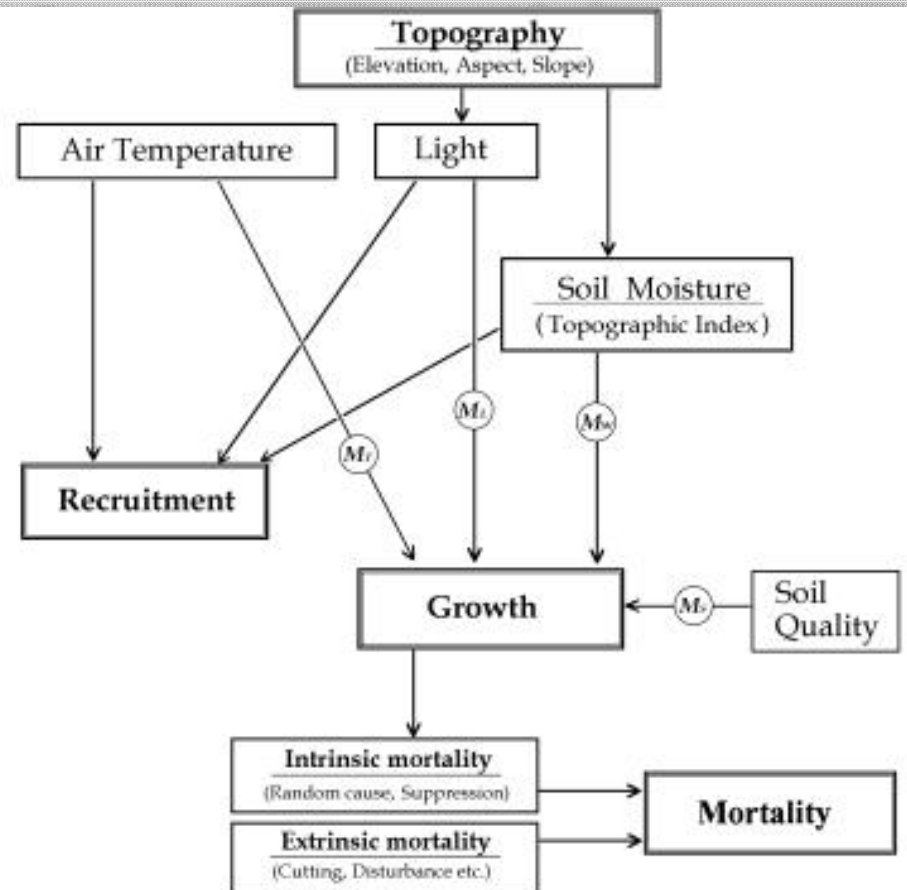
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Other Models

$$V = a * S * B * f(A)$$

$$V = a * S * f(A)$$

$$V = a * f(A)$$



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Data – Two Primary “Types”

- Single Point in time
- Multiple Points in time

Analogy to Model Building

- Guide Curves
- Difference Equations