

# Session 3— Model Calibration or Localization

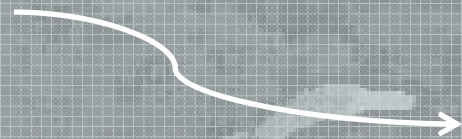
## Slide 1

Overview

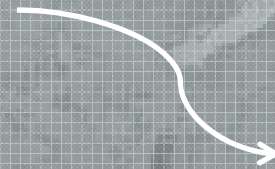
Approaches

Summary

Model Selection



Localize



Calibration

## *Localization and Calibration*

### Model Selection

- geographic area

- What models are even available for the area?

- species

- Does the model grow the species you need?

## *Localization and Calibration*

### Localize

- Include variables the model uses (check the documentation!)
- Location (Latitude, Longitude, National Forest, Library)
- Site index or Habitat Type
- Slope, aspect, and elevation
- Climactic Variables



## Reasons to Calibrate

- Evaluation shows model doesn't follow biological principals
- Model being used outside geographic area intended
- You want to "dial-it-in" as much as possible

## Calibration Options

- Estimate new parameters for some equations
- Estimate new parameters for all equations
- Simply Scale

## *Localization and Calibration*

Scale:

### “Self-Calibration”

- Internally calculated by the model
- Different G&Y models have different methods for doing this

### External Calibration

- User calculates scale factor externally
- But applies it internally

### Fudge Factor...last but not least

## *Localization and Calibration: Evaluation vs Calibration*

### Evaluation vs Calibration

- Evaluation tests to see if the growth model makes biological sense.
- Calibration uses data to refit or scale the model
- If the model doesn't make biological sense, scaling isn't likely going to help. You will have to re-fit the model parameters.

The background of the slide is a composite image. On the left side, there is a vertical strip showing a dense forest of tall, thin trees. The rest of the background is a grayscale image of a mountainous landscape with a winding road or path through the hills. A dark green horizontal bar is positioned at the top, containing the title text.

*Localization and Calibration: Take home Message...*

Models depict regional averages for the geographic area. To ensure the best results, know what input data is needed to help localize the equations. And calibrate if necessary.