



Model Language (.sel files)

# Dynamic Model (.sel files)

- Specifies landscape events to include
- Links variables in landscape events to global variables and rasters
- Sets up output of raster layers
- First line: **Seles Model**

# General

- **Declarative: defines structural configuration**
- **Each block (subsection) can appear in any order**
- **Case insensitive**

# Setting Time Unit

**Set “meaning” of a single time unit and a meta-unit**

**Examples:**

**Time Units: Day Year 365.25 136525**

**Time Units: Year Century 100 250**

# Including Landscape Events

## Example:

Landscape Events:

Succession.lse

Logging.lse DEBUG

Fire.lse OFF

# Global Constants and Variables

- Can be single values, vectors, arrays
- Initial state can be specified directly or read from a text file
- Single-value variables automatically show on user interface

## Example:

Global Constants:

CellWidth = 1

HaPerCell = (CellWidth\*CellWidth)/10000

MaxStandAge = 540

# Global Constants and Variables

## Example:

Global Variables:

`nInitial = 10`

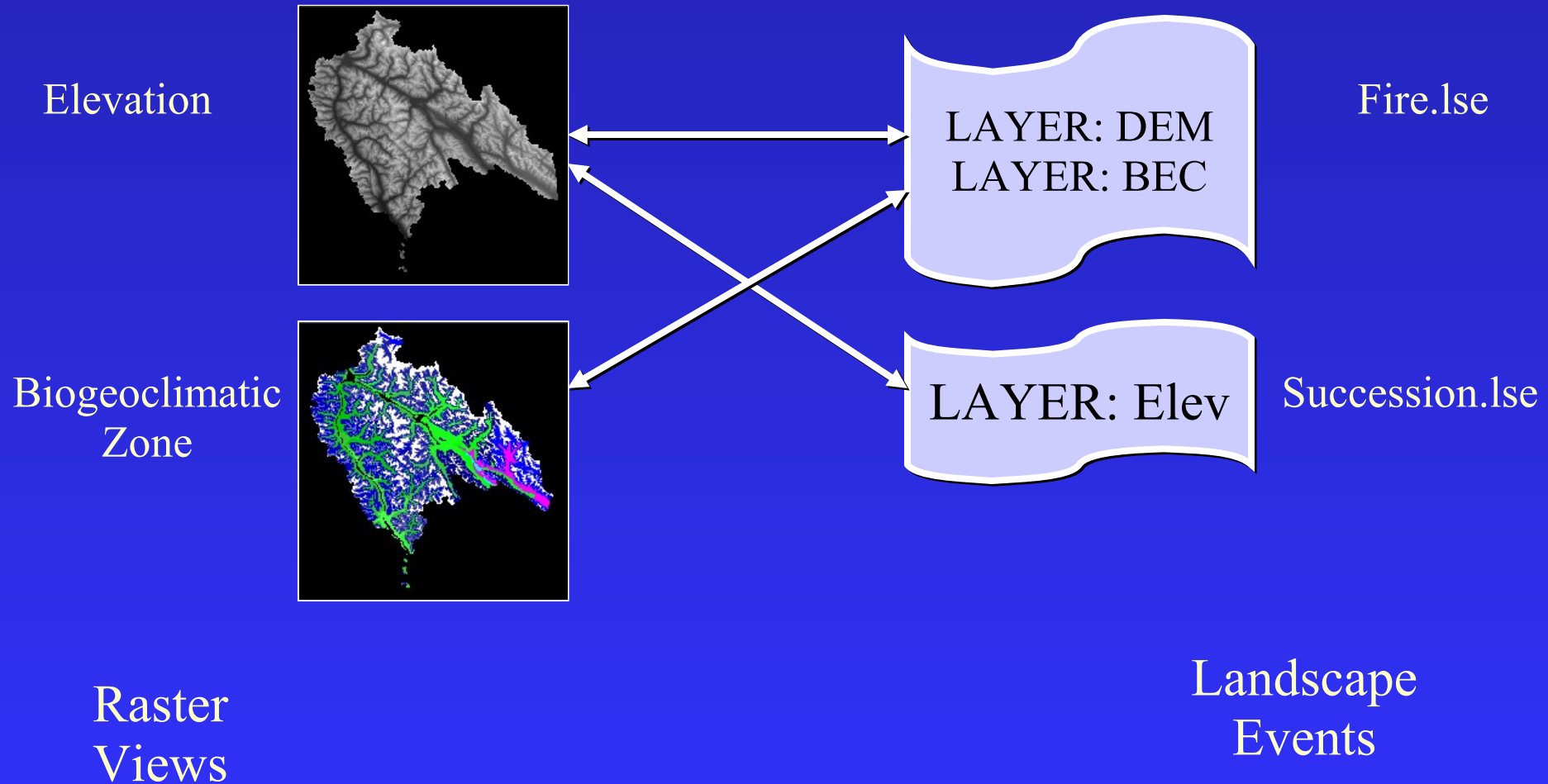
`REAConstraints= ".\REAConstraints.txt"`

`NRL = 24700, 8500, 5300`

`HarvestProfile[NumSppCodes]=`

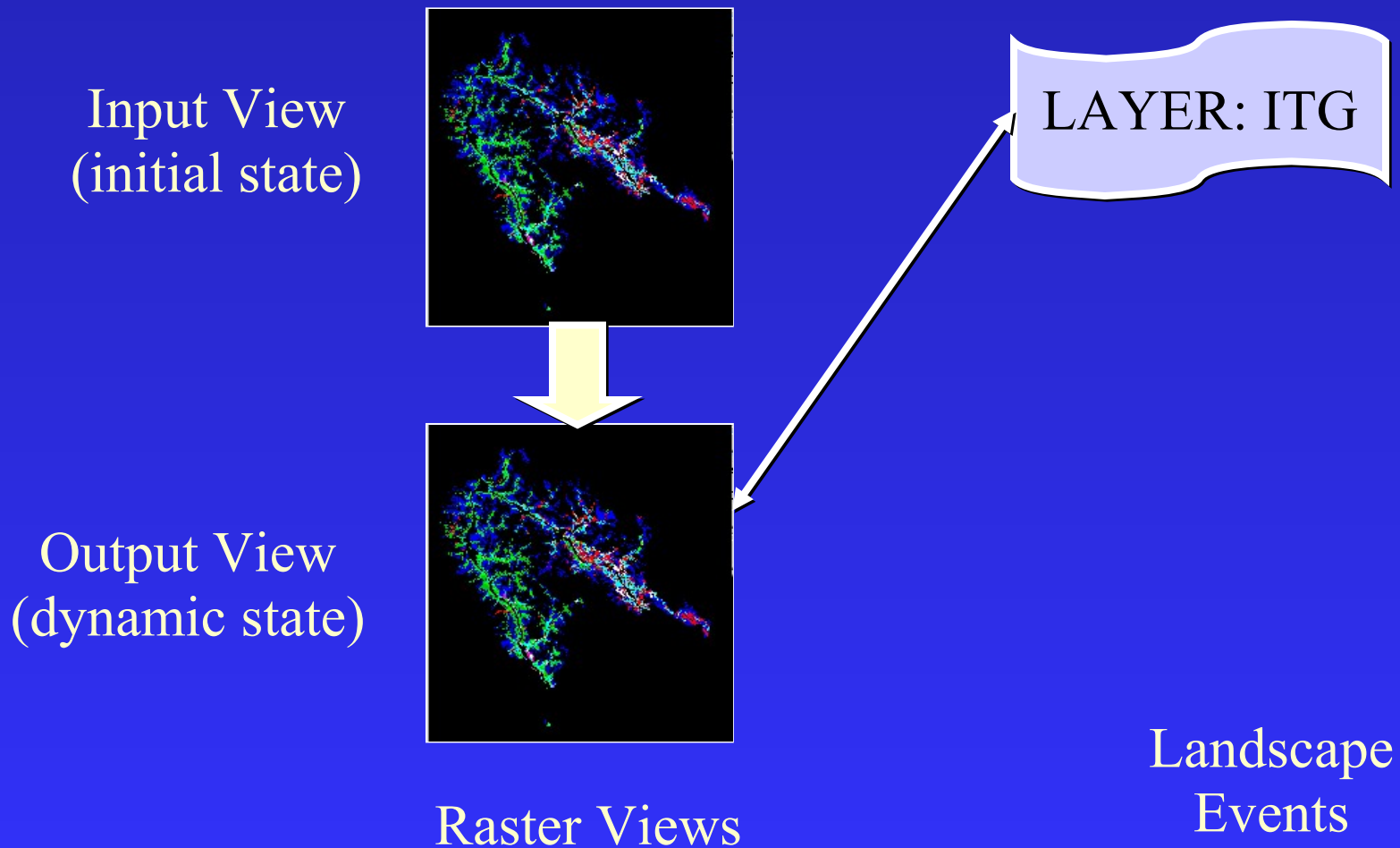
`ApplyPlanting = TRUE OFF`

# Variable-View 1-to-Many Mapping





# Layer Variables: Initial and Dynamic States



# Variable-View Mappings

## Example:

Variable-Input View Maps:

BEC = Bec

Elevation

ITG = initialITG

Variable-Output View Maps:

ITG = ITG

# Variable-View Mappings

- Input views *must* exist
- If output views do not exist, they will be created
- A layer variable should appear only once in a map

# Variable-View Mappings

*Input View* NOT specified

*Input View* specified

*Output View*  
NOT specified

Internal spatial layer

Static layer or  
inter-simulation variable

*Output View*  
specified

Initial state is all zeros

Input view copied to  
output view at  
Simulation start

# Output View Bounds

- Bounds need to optimize memory and for display
- Default: bounds of input view
- Layer values are signed

## Example:

Output Model Bounds:

ButterflyColor: 10

VolPerCell:  $\text{MaxVolPerHa} * \text{HaPerCell} + 1$

SusceptibilityIndex: 0, 100

# Output View Refresh Frequency

- **Currently: can only specify for all views**
- **Can change on user interface**

**Example:**

**Output Frequency: 365.25**

# A note on constants

- Can appear in input files