

Agent i of N_{Agents}

Variable
Process ("?" = conditional process)
Global Parameter (or Additional Info)

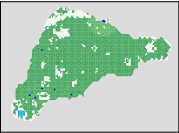
Human Environment Interaction
Variable Dependency

Agent Properties


Resource Acquisition

Update Agent Properties


Location (t)



Population Size
 $pop_i(t)$



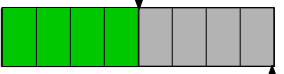
Tree Preference
 $T_{Pref, i}(t-1)$



$T_{Req, pP}$

Tree Harvest

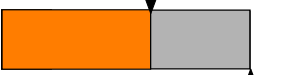
Trees cut $T_i(t)$



Required $T_{Req, i}(t)$

Farming

Produce $F_i(t)$

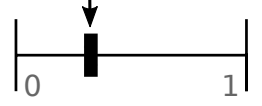


Required $F_{Req, i}(t)$

Effective Happiness $H_i(t)$

Happiness $h_i(t-1)$

Happiness $h_i(t)$



Local Environment

Search Radii r_T, r_F

Environment

Cell c of N_c

Geographic Properties

Trees

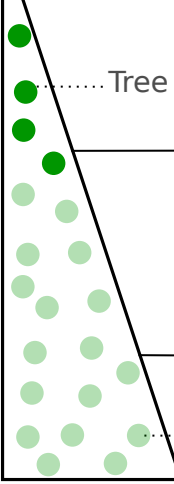
Farming

Area $A(c)$
Midpoint (c_x, c_y)
Elevation $el(c)$
Slope $sl(c)$

**Current
Nr of Trees
 $T(c, t)$**

**Tree
Carrying
Capacity
 $T(c, t=t_{arrival})$**

Example Cell



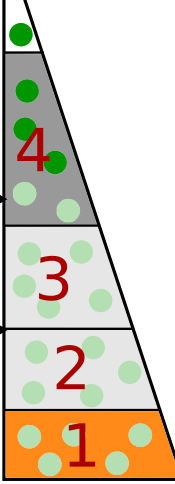
..... Tree

..... Cut or Burnt Tree

**Productivity
index $F_{pi}(c, t)$**

- ⊗ Well-suited
- Eroded
- Poorly suited
- 0 (not suited)

Example Cell



**Nr of Acres
 $A_{acres}(c) =$**

+ Uncleared Acres

**+ Unoccupied,
Cleared Acres**

**+ Occupied Acres
 $A_F(c, t)$**