**Supporting Information**

1. *Sensitivity testing for parameters res\_consume and tend\_crop\_yield*

The two parameters *res\_consume* and *tend\_crop\_yield* are important because they influence the decision making of the users. *Res\_consume* governs the quantity of crops each resource consumes on a given landscape cell at a given time step, thus reducing the users yield on that cell by a certain amount. *Tend\_crop\_yield* governs the amount a user can increase their yield on a given cell by tending their crops, as opposed to taking another action such as felling.

Chart, scatter chart

Description automatically generated

**Figure S1a. Parameter values for *res\_consume* and *tend\_crop\_yield* that were tested prior to the final simulations.**

Chart

Description automatically generated

**Figure S1b. The number of trees remaining at each time step for each of the simulations from plot S1a above.**

N1a results in the fewest trees being lost, which was expected as N1a has no incentive to fell trees (equal parameter values). N1 and N1b:f are all similar in their loss of trees. Interestingly, the simulation with the highest *res\_consume* (N1c) does not end up with the fewest trees, and that is because *tend\_crop\_yield* is higher than some of the others and so users will be more likely to choose to tend crops when costs of felling are very high. The simulation with the most trees lost is N1d, where *tend\_crop\_yield* is very low (0.01) and *res\_consume* is quite high (0.08). This is closely followed by N1f which although has a lower *res\_consume* value than N1b and N1c, it also has a lower *tend\_crop\_yield* value. This quite nicely shows the interaction between the two parameters. This further demonstrates that small incremental changes in *tend\_crop\_yield* are more influential than similar increases in *res\_consume*.

Chart, line chart

Description automatically generated

**Figure S1c. The total yield for each user at each time step, as a percentage of the total available yield, for each of the simulations from plot S1a.**

Yield is lowest in N1c, as this simulation has the highest value for *res\_consume* (0.1), followed by N1b and N1d (0.08). N1f is on its own in the middle (0.06). The highest yields are for N1, N1a, and N1e, where *res\_consume* is 0.05 for all. For this last group, we see that N1e is increasing slightly faster, as *tend\_crop\_yld* is set lower than N1 and N1a, and so users are more likely to fell trees as tending crops has less value.