

Supplementary Information, “Interconnections accelerate collapse in a socio-ecological metapopulation”, Dockstader et al.

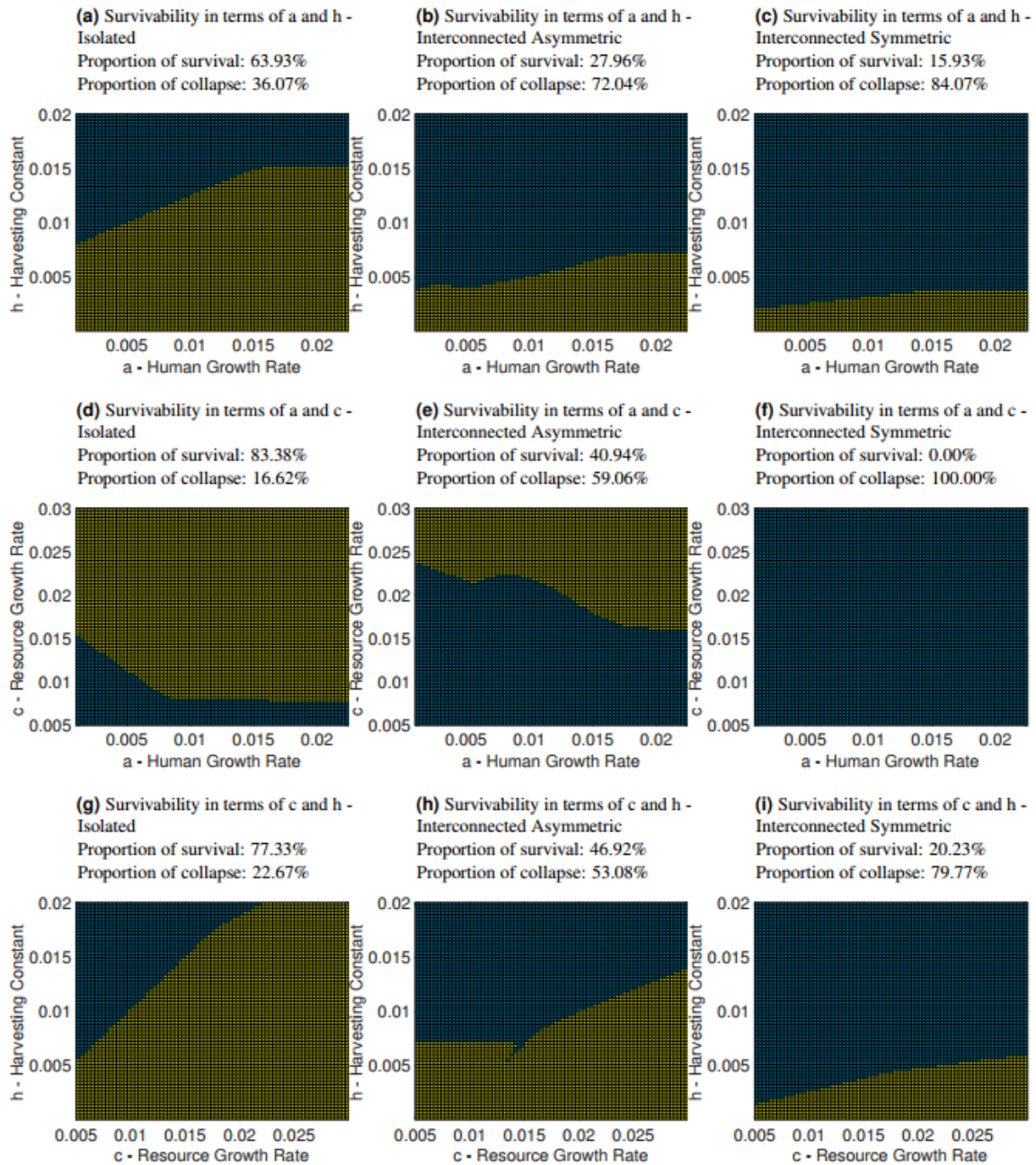


Figure S1: Parameter planes showing how outcomes depend on parameter combinations for (a, d, g) isolated scenarios, (b, e, h) interconnected asymmetric scenario, and (c, f, i) interconnected symmetric scenario. Yellow indicates survival of the populations and blue represents collapse.

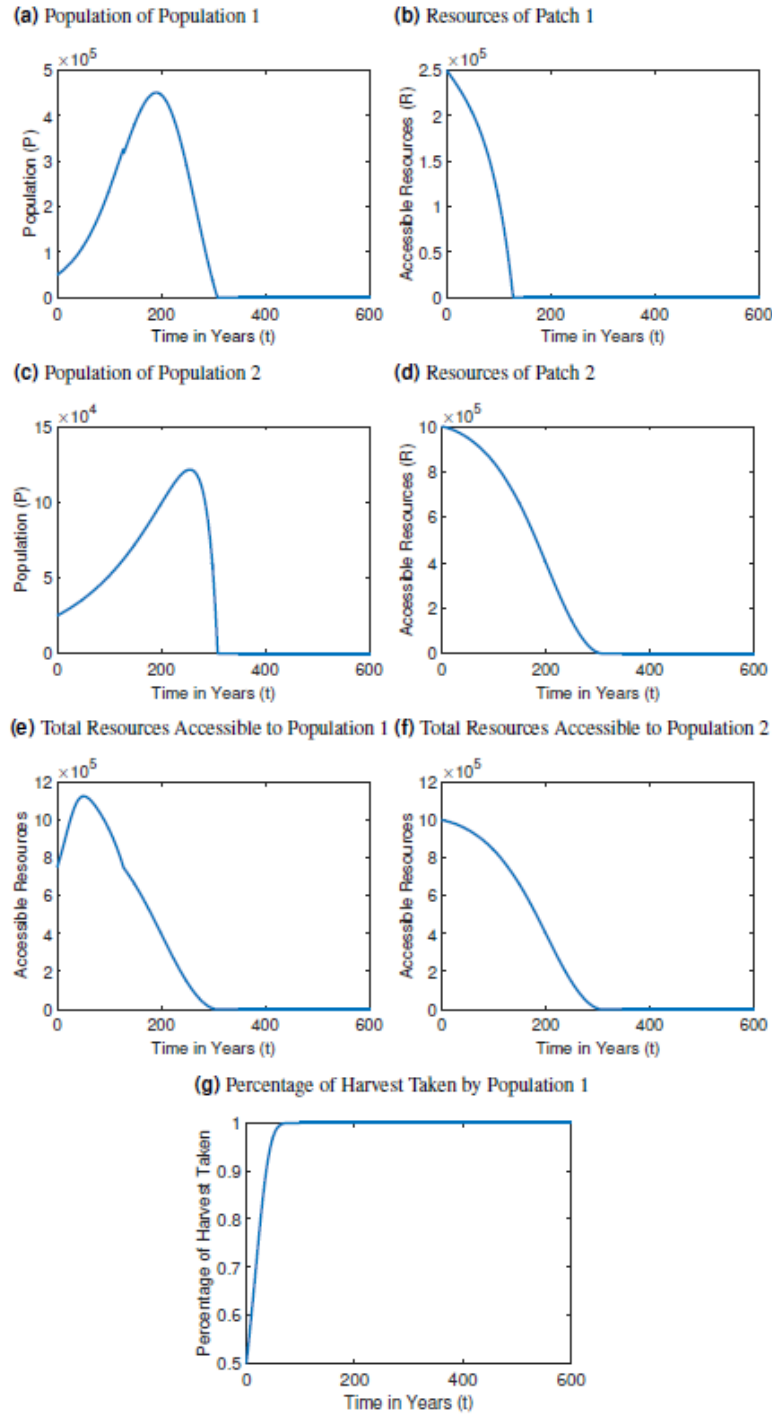


Figure S2: Results from a scenario of inequality between two populations for the interconnected case. Population 1 is significantly more industrialized and more prone to take resources from population 2. Subpanels show (a) patch 1 population size, (b) patch 1 resources, (c) patch 2 population size, (d) patch 2 resources, (e) total resources available to population 1, (f) total resources available to population 2, (g) percentage of population 2 resources taken by population 1.

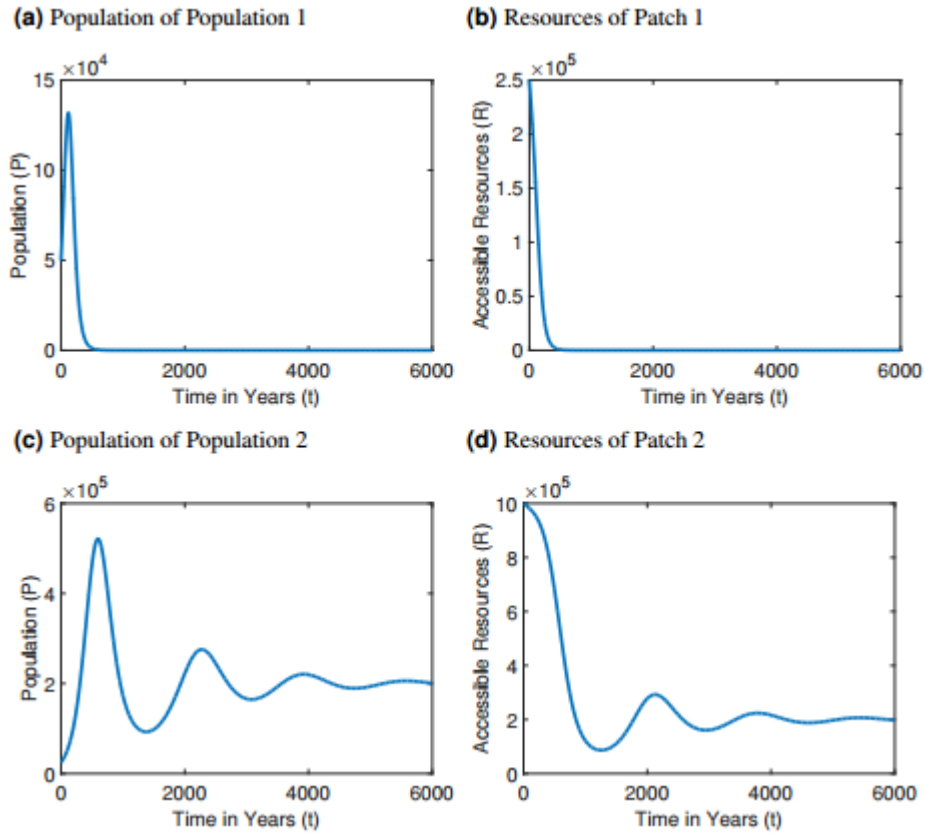


Figure S3: Results from an inequality scenario identical to Figure S2, except without interconnection of the populations.

Symbol	Definition	Value	Source
a_1	Population Growth Rate	0.0177/year	Calibrated
c_1	Resource Growth Rate	0.015/year	Calibrated
h_1	Harvesting Efficiency	0.016/year	Calibrated
K_1	Carrying Capacity of Resources	250,000	Calibrated
β_1	Mid-point location control parameter for sigmoid function	2	Calibrated
γ_1	Steepness control parameter for sigmoid function	10	Calibrated
a_2	Population Growth Rate	0.0075/year	Calibrated
c_2	Resource Growth Rate	0.01/year	Calibrated
h_2	Harvesting Efficiency	0.008/year	Calibrated
K_2	Carrying Capacity of Resources	1,000,000	Calibrated
β_2	Controls location of the mid-point of the sigmoid	10	Calibrated
γ_2	Controls steepness of the sigmoid	1	Calibrated

Table S1: Parameter values used for the inequality scenario.