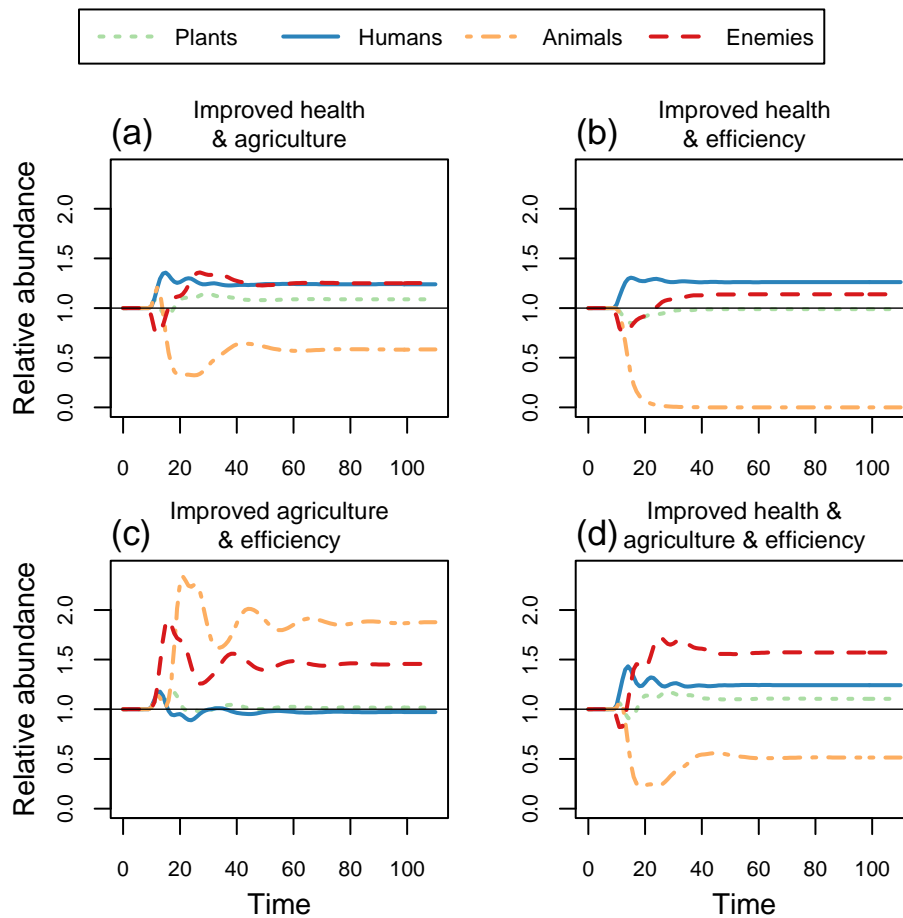


## Appendix 1. Sustainability of human ecological niche construction.

Supplementary figures considering human niche construction with zoonotic infections.

**Figure A1.1.** Effects of improvements in health, agriculture, and/or resource use efficiency on the abundances of humans, plant and animal resources, and shared natural enemies (e.g., zoonotic infections). As in Figure 2, except that the term  $c_{ae}f_{ae}AE$  was added to equation 4 and the term  $c_{ae}AE$  was subtracted from equation 3. Here we assume that humans were less able to resist the shared natural enemies ( $c_{ae} = 1 < c_{he} = 2$ ).



**Figure A1.2.** Effects of improvements in health, agriculture, and/or resource use efficiency on the abundances of humans, plant and animal resources, and shared natural enemies (e.g., zoonotic infections). As in Figure 2, except that the term  $c_{ae}f_{ae}AE$  was added to equation 4 and the term  $c_{ae}AE$  was subtracted from equation 3. Here we assume that humans were superior at resisting the shared natural enemies ( $c_{ae} = 3 > c_{he} = 2$ ).

