On the direction of bifurcations in metapopulations

I will discuss some work with a student (Iman Soliman) concerning bifurcations in metapopulation models for the spread of infectious diseases. This work arises from considerations on a model for the spread of tuberculosis, which I will briefly describe. The underlying mathematical issue here is the possibility of extending knowledge of the bifurcation behaviour at the level of a single population to that at the level of ensembles of populations.