1113-39-289   **Harold M Hastings***, hhastings@simons-rock.edu, and **Michael Radin** and **Tamas Wiandt**.
Induced Allee effect, generalized Ornstein-Uhlenbeck dynamics and scaling, and sustainability in a stochastic environment.

We consider the problem of planning for sustainable harvesting of a fishery in a fluctuating environment, We find that harvesting policies can cause an induced Allee effect in logistic and similar fishery growth models. As a result, fluctuations then yield underlying generalized Onstein-Uhlenbeck dynamics, under which expected survival time (first-passage time to extinction) can depend sensitively upon key model parameters, especially harvest rates. (Received August 25, 2015)