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**Zhisheng Shuai\*** ([shuai@ucf.edu](mailto:shuai@ucf.edu)), Department of Mathematics, University of Central Florida, Orlando, FL 32816. *Target Reproduction Numbers: A General Framework for Threshold Parameters in Population Dynamics*. Preliminary report.

A general framework for threshold parameters in population dynamics is developed using the concept of target reproduction numbers. This framework identifies reproduction numbers and other threshold parameters in the literature in terms of their roles in population control. The framework is applied to the analysis of several common control strategies in ecology and epidemiology, which provides new biological insights. (Received September 25, 2018)