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Najat Ziyadi* (najat.ziyadi@morgan.edu), Department of Mathematics, Morgan State University, 1700 East Cold Spring Lane, Baltimore, MD 21251, and **Abdul-Aziz Yakubu**. *A Discrete-Time Nutrients-Phytoplankton-Oysters Model of a Bay Ecosystem*. Preliminary report.

In this talk, we will introduce a discrete-time NPO model that describes the interactions of nutrients (N), phytoplankton (P) and oysters (O) in a bay ecosystem. The NPO model is based on the Nicholson-Bailey model with constant recruitment for the nutrients and constant survival rates phytoplankton and oysters. Using the NPO model, we will derive verifiable conditions for the persistence and extinction of phytoplankton and oysters in a bay ecosystem. (Received September 18, 2016)