

Closest Research Paper to eDNA + Dataset Angle

Paper: Abiotic and biotic controls on coral recovery 16 years after mass bleaching

Journal: Coral Reefs (2019)

Authors: Robinson et al.

Article Link: [View Article]

Dataset: Public code & dataset available — [GitHub Repository]

Why This Is Closest to eDNA Work

- Public dataset available (code + data for recovery trajectories).
- Focus on recovery dynamics influenced by abiotic (nutrients, wave exposure, depth) and biotic (juvenile density, coral cover) factors.
- Conceptual relevance to eDNA: recovery trajectories reflect community survival and resilience, the same processes eDNA monitoring can capture.

Key Findings

- Coral recovery after the 1998 bleaching varied widely (7–29 years) across Seychelles reefs.
- Faster recovery occurred where juvenile coral density was high and nutrient levels were lower.
- Slower recovery occurred on deeper or wave-exposed reefs.
- Data and models show the importance of both environmental and biological factors in predicting coral resilience.

Simple Version

This study tracked reefs for 16 years and found that some reefs bounced back quickly while others took decades. The difference depended on environment (nutrients, depth, waves) and biology (baby corals settling). The authors released their full dataset and code, making it ideal for reuse — and its focus on community recovery and resilience makes it conceptually very close to what eDNA studies aim to measure.