

Auxiliary Material for

**Do *Trichodesmium* spp. populations in the North Atlantic export most of the nitrogen they fix?**

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## **Introduction**

This document provides supplementary information describing the model used in the main article, as well as comparisons with a prior solution described in Anderson et al. [2011].

## **Contents**

The table and all figures are included in the file “Tricho\_model\_aux\_revised2.pdf”.

Figure S1 describes the BEC model.

Figures S2 and S3 document near-surface diazotrophic biomass and nitrogen fixation for the Anderson et al. [2011] solution and new biological model.

Figure S4 shows vertically integrated diazotrophic biomass anomalies, expressed as percent anomaly from the large-scale mean, binned according to SLA and *in situ* density anomaly at 97 m.

Table S1 lists selected parameters of the ecosystem model.

## **Reference**

Anderson, L. A., D. J. McGillicuddy, M. E. Maltrud, I. D. Lima, and S. C. Doney (2011), Impact of eddy–wind interaction on eddy demographics and phytoplankton community structure in a model of the North Atlantic Ocean, *Dynamics of Atmospheres and Oceans*, 52(1-2), 80-94, doi:10.1016/j.dynatmoce.2011.01.003.