

## Supplementary Information

### The influence of 2015-16 El Niño on the record-breaking mangrove dieback along northern Australia coast

**S. Abhik<sup>1</sup>, Pandora Hope<sup>1</sup>, Harry H. Hendon<sup>1</sup>, Lindsay B. Hutley<sup>2</sup>, Stephanie Johnson<sup>3</sup>, Wasyl Drosowsky<sup>1</sup>, & Josephine Brown<sup>4,5</sup>**

<sup>1</sup> Bureau of Meteorology, Melbourne, Australia

<sup>2</sup> Research Institute for the Environment and Livelihoods, Charles Darwin University, Darwin, Australia.

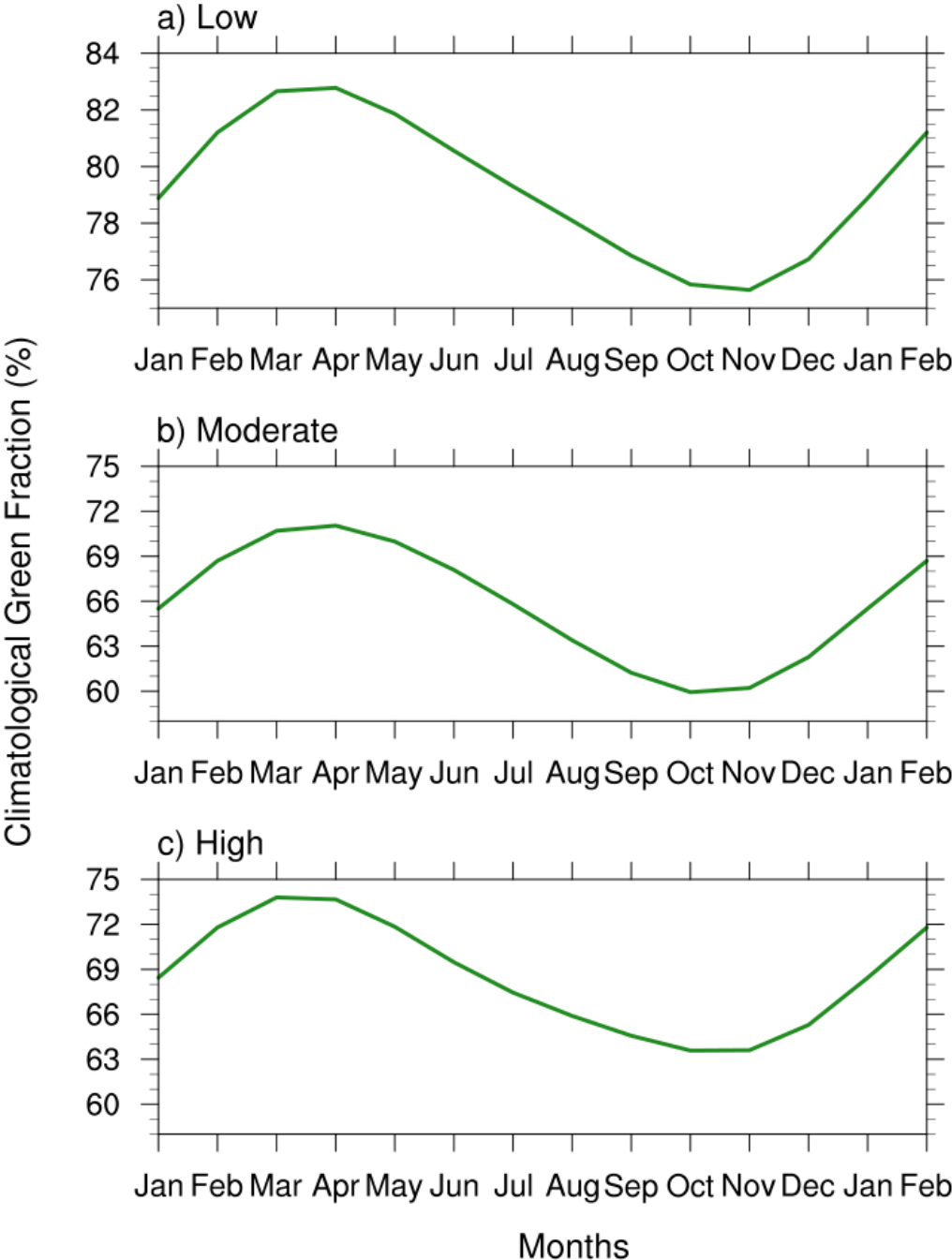
<sup>3</sup>Department of Ecology, Environment and Evolution, La Trobe University, Bundoora, Australia.

<sup>4</sup>School of Geography, Earth and Atmospheric Sciences, University of Melbourne, Melbourne, Australia.

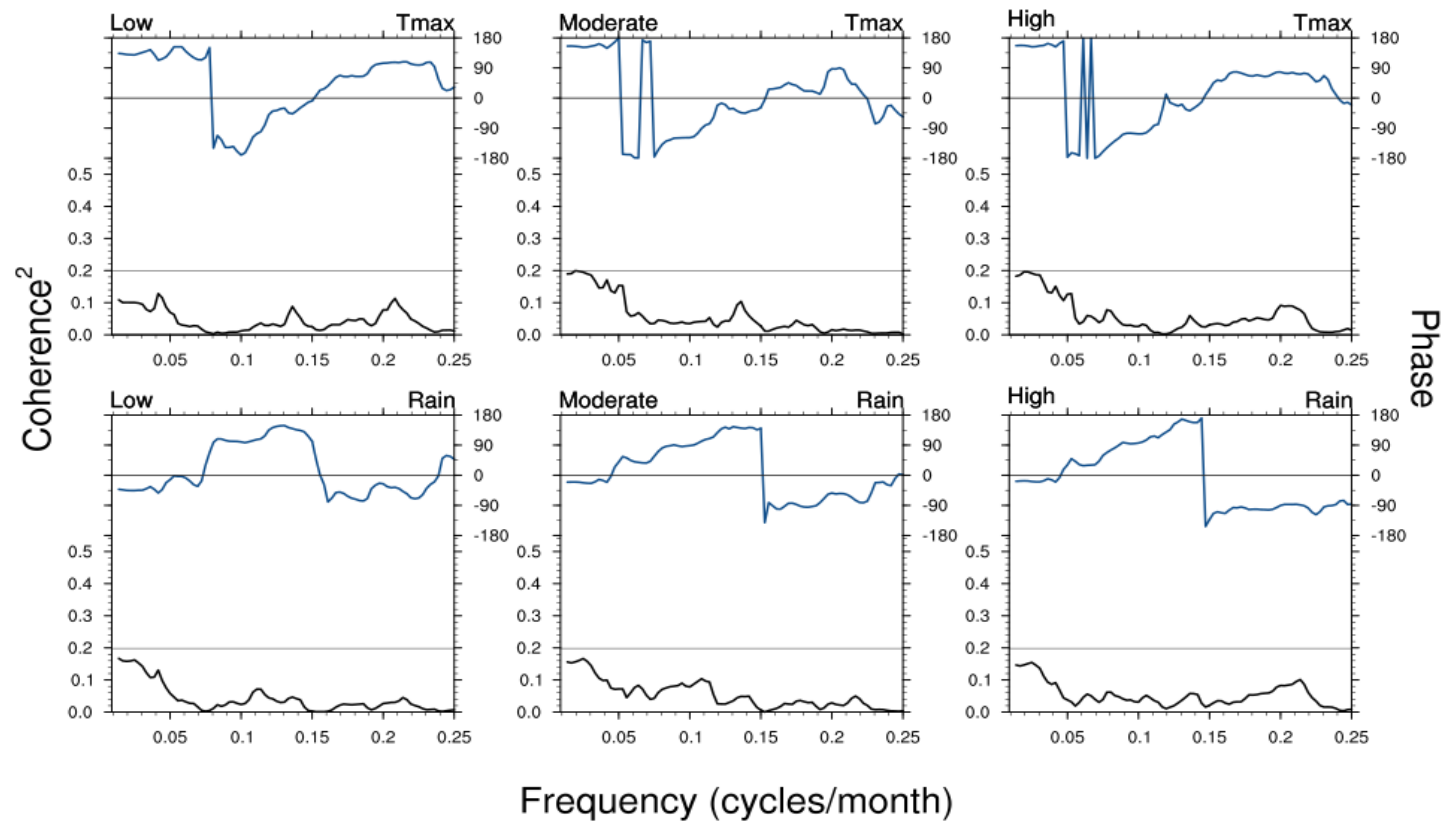
<sup>5</sup>ARC Centre of Excellence for Climate Extremes, University of Melbourne, Melbourne, Australia

E-mail: [abhik.climate@gmail.com](mailto:abhik.climate@gmail.com)

**Content: Fig.S1, Fig.S2**



**Figure S1.** Climatological seasonal cycle of green-fractions for the three dieback categories: Low, Moderate, and High.



**Figure S2.** The coherence-squared spectrum (black curve, below) and phase (blue curve, top) between coastal Gulf area averaged  $T_{max}$  and mangrove green-fractions for the three dieback categories of Low, moderate and High (top panel). The same with coastal Gulf area averaged rainfall is shown at the bottom panels. The gray-line shows a 5% level of significance for coherence-squared values. Phase lags are shown in red where the coherence squared is significant at 5% level.