

Supporting Information for
Improving representation of tropical wetland methane emissions
with CYGNSS inundation maps

Cynthia Gerlein-Safdi, A. Anthony Bloom, Genevieve Plant, Eric Kort, Christopher S. Ruf

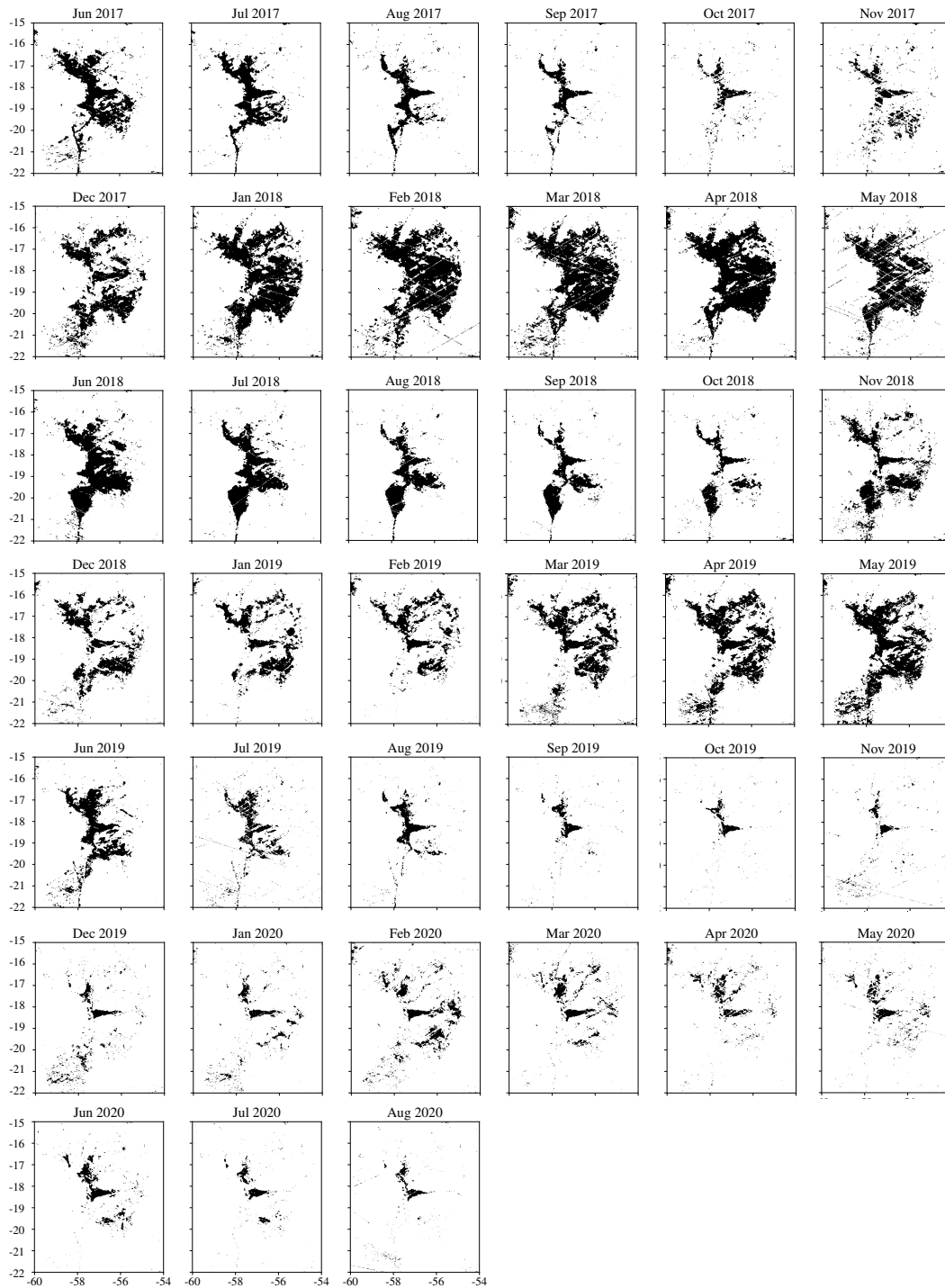


Figure S1: Monthly CYGNSS-based watermarks at $0.01^\circ \times 0.01^\circ$ resolution over the Pantanal wetland in Brazil.

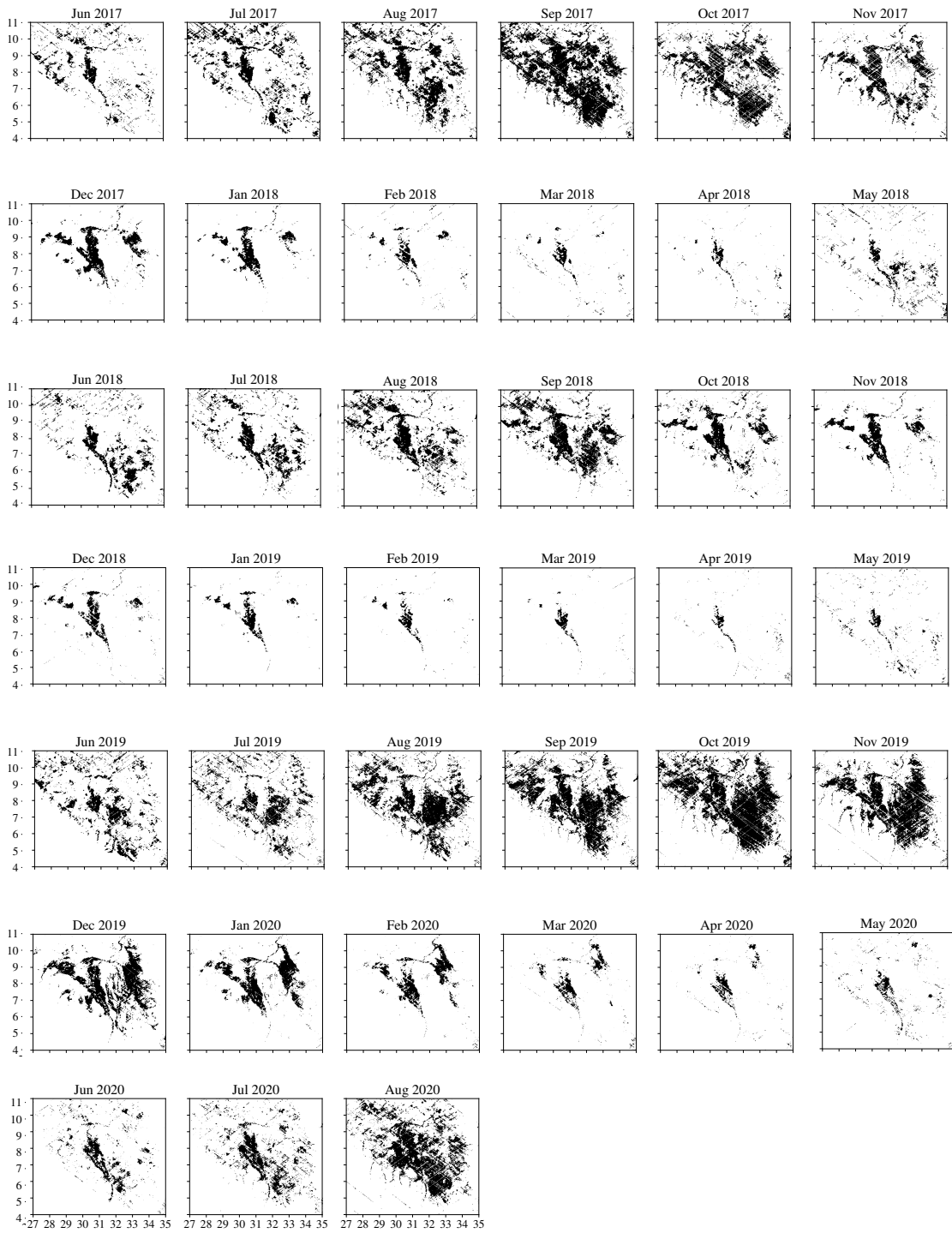


Figure S2: Monthly CYGNSS-based watermarks at $0.01^\circ \times 0.01^\circ$ resolution over the Sudd wetland in South Sudan.

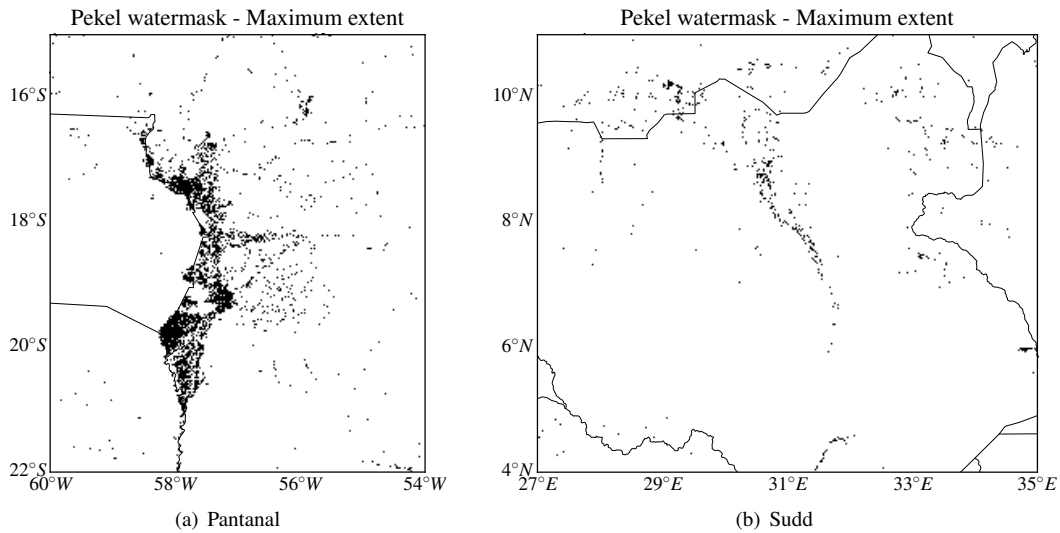


Figure S3: Maximum water extent between 1984 and 2019 from the Landsat-based Global Surface Water data product [Pekel et al., 2016] for (a) the Pantanal and (b) the Sudd wetlands. Source: EC JRC/Google

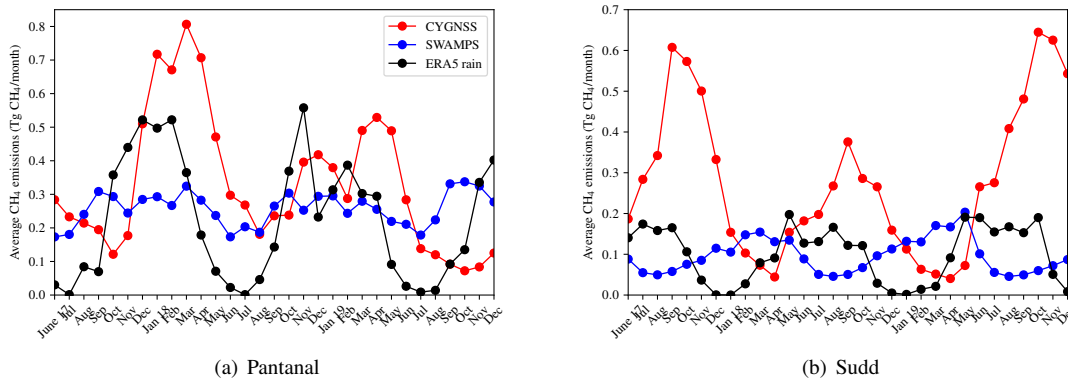


Figure S4: Average monthly emissions converted to Tg of CH_4 /months over the whole area for (a) the Pantanal and (b) the Sudd wetlands based on CYGNSS watermasks (red), SWAMPS maps (blue), and ERA5 rainfall (black). The lines show the average of all 18 models.

Movie S1: This video is available as a separate file. It shows the average monthly emissions for the Pantanal wetland based on CYGNSS inundation maps (left), SWAMPS inundation maps (center), and ERA5 rainfall (right) from June 2017 to December 2019.

Movie S2: This video is available as a separate file. It shows the average monthly emissions for the Sudd wetland based on CYGNSS inundation maps (left), SWAMPS inundation maps (center), and ERA5 rainfall (right) from June 2017 to December 2019.