

## **EGU 24-1748 Presentation Supplementary Material: Reference list**

**Title:** The potential impact of floating wind turbines on the deepwater oxygen deficit in seasonally stratified shelf seas

**Authors:** Tom Rippeth, Ben Lincoln, Sijing Shen, Brian Scannell (Bangor University)

Jo Hopkins (National Oceanography Centre)

Xin Meng, Jonathan Sharples (Liverpool University)

### **Main Paper:**

Rippeth, T., Shen, S., Lincoln, B., Scannell, B., Meng, X., Hopkins, J. & Sharples, J. (2024). The deepwater oxygen deficit in stratified shallow seas is mediated by diapycnal mixing. *Nature Communications*. 15, 3136, 15:3136. <https://www.nature.com/articles/s41467-024-47548-2>

### **Link to Floating offshore wind:**

Dorrell, R., Lloyd, C., Lincoln, B., Rippeth, T., Taylor, J., Caulfield, C-C., Sharples, J., Polton, J., Scannell, B., Greaves, D., Hall, R. & Simpson, J. (2022). Anthropogenic Mixing in Seasonally Stratified Shelf Seas by Offshore Wind Farm Infrastructure. *Frontiers in Marine Science*. 9, 830927. <https://www.frontiersin.org/articles/10.3389/fmars.2022.830927/full>

### **Calculation of biogeochemical fluxes:**

Shultz, K., Lincoln, B., Povazhny, V., Rippeth, T., Lenn, Y-D., Janout, M., Alkire, M., Scannell, B. & Torres-Valdes, S. (2022). Increasing nutrient fluxes and mixing regime changes in the eastern Arctic Ocean. *Geophysical Research Letters*. 49, 5, e2021GL096152.

<https://doi.org/10.1029/2021GL096152>

Rippeth, T. P., Lincoln, B. J., Kennedy, H. A., Palmer, M., Sharples, J. & Williams, C. A. (2014). Impact of vertical mixing on sea surface pCO<sub>2</sub> in temperate seasonally stratified shelf seas. *Journal of Geophysical Research: Oceans*. 119, 6, p. 3868-3882.

<https://doi.org/10.1002/2014JC010089>

Williams, C., Sharples, J., Mahaffey, C. & Rippeth, T. (2013). Wind-driven nutrient pulses to the subsurface chlorophyll maximum in seasonally stratified shelf seas. *Geophysical Research Letters*. 40, 20, p. 5467-5472.

<https://agupubs.onlinelibrary.wiley.com/doi/10.1002/2013GL058171>

### **Method for calculating turbulence ( $\epsilon$ ) time series:**

Scannell, B., Lenn, Y-D. & Rippeth, T. (2022). Impact of acoustic Doppler current profiler (ADCP) motion on structure function estimates of turbulent kinetic energy dissipation rate. *Ocean Science*. 18, 1, p. 169–192. <https://os.copernicus.org/articles/18/169/2022/>

Scannell, B., Rippeth, T., Simpson, J., Polton, J. & Hopkins, J. (2017). Correcting surface wave bias in structure function estimates of turbulent kinetic energy dissipation rate. *Journal of Atmospheric and Oceanic Technology*. 34, 10, p. 2257-2273.

<https://doi.org/10.1029/2021GL096152>

Lucas, N. S., Simpson, J. H. & Rippeth, T. P. (2014). Measuring Turbulent Dissipation Using a Tethered ADCP. *Journal of Atmospheric and Oceanic Technology*. 31, 8, p. 1826-1837.

<https://doi.org/10.1175/JTECH-D-13-00198.1>

### **General Seasonally Stratified Shelf Sea Oceanography:**

Lincoln, B., Rippeth, T. & Simpson, J. (2016). Surface mixed layer deepening through wind shear alignment in a seasonally stratified shallow sea *Journal of Geophysical Research: Oceans*. 121, 8, p. 6021-6034. <https://doi.org/10.1002/2015JC011382>

Rippeth, T. P. (2005). Mixing in seasonally stratified shelf seas: a shifting paradigm. *Philosophical Transactions of The Royal Society A Mathematical Physical and Engineering Sciences*. 363, 1837, p. 2837-2854. <https://doi.org/10.1098/rsta.2005.1662>

Rippeth, T. P., Wiles, P. J., Palmer, M. R., Sharples, J. & Tweddle, J. (2009). The diapycnal nutrient flux and shear-induced diapycnal mixing in the seasonally stratified western Irish Sea. *Continental Shelf Research*. 29, 13, p. 1580-1587. <https://doi.org/10.1016/j.csr.2009.04.009>