



# Modeling PET microfibres dynamics in the Salish Sea.

Jose Valentí Muelas, Susan E. Allen.

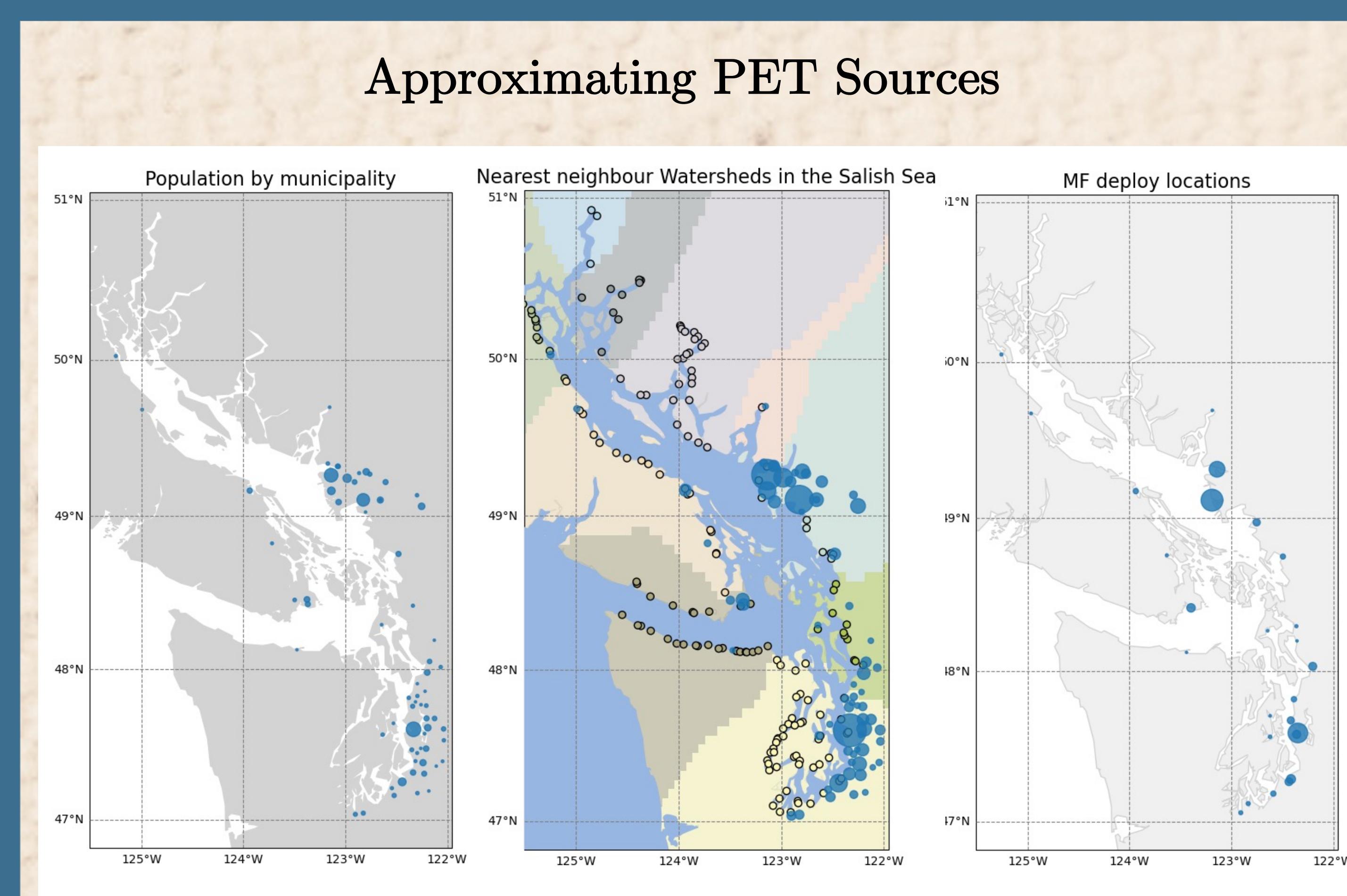
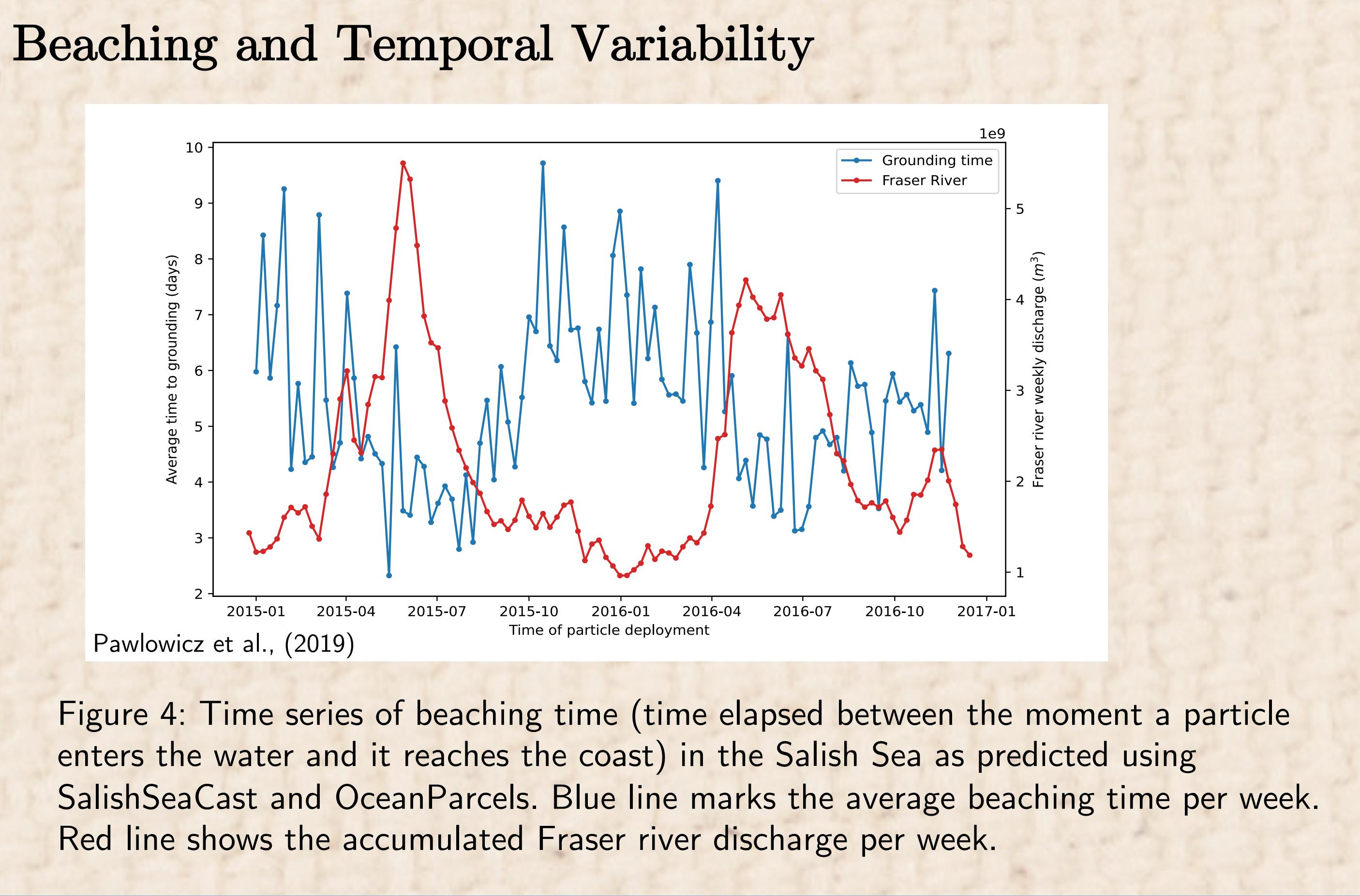
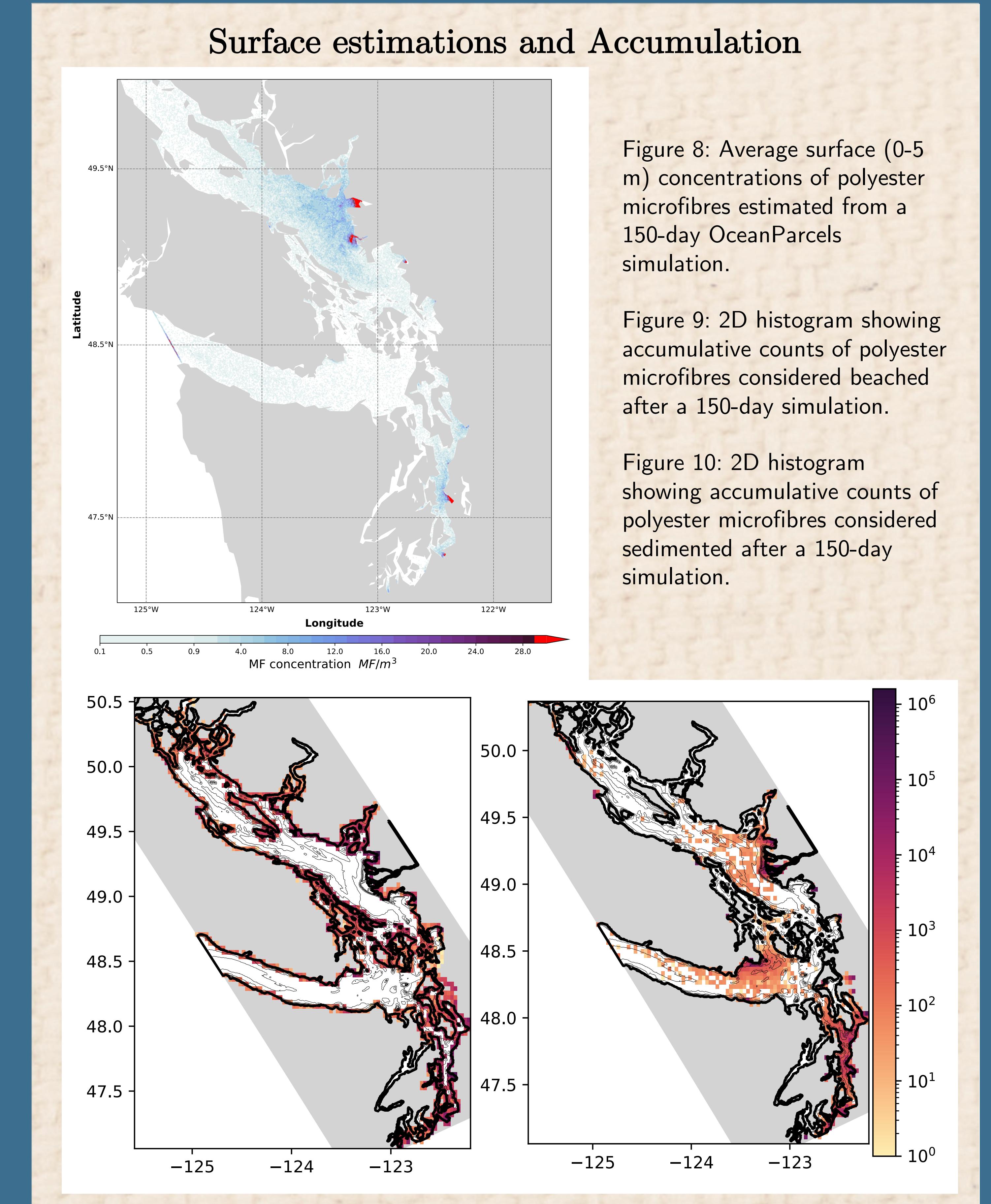
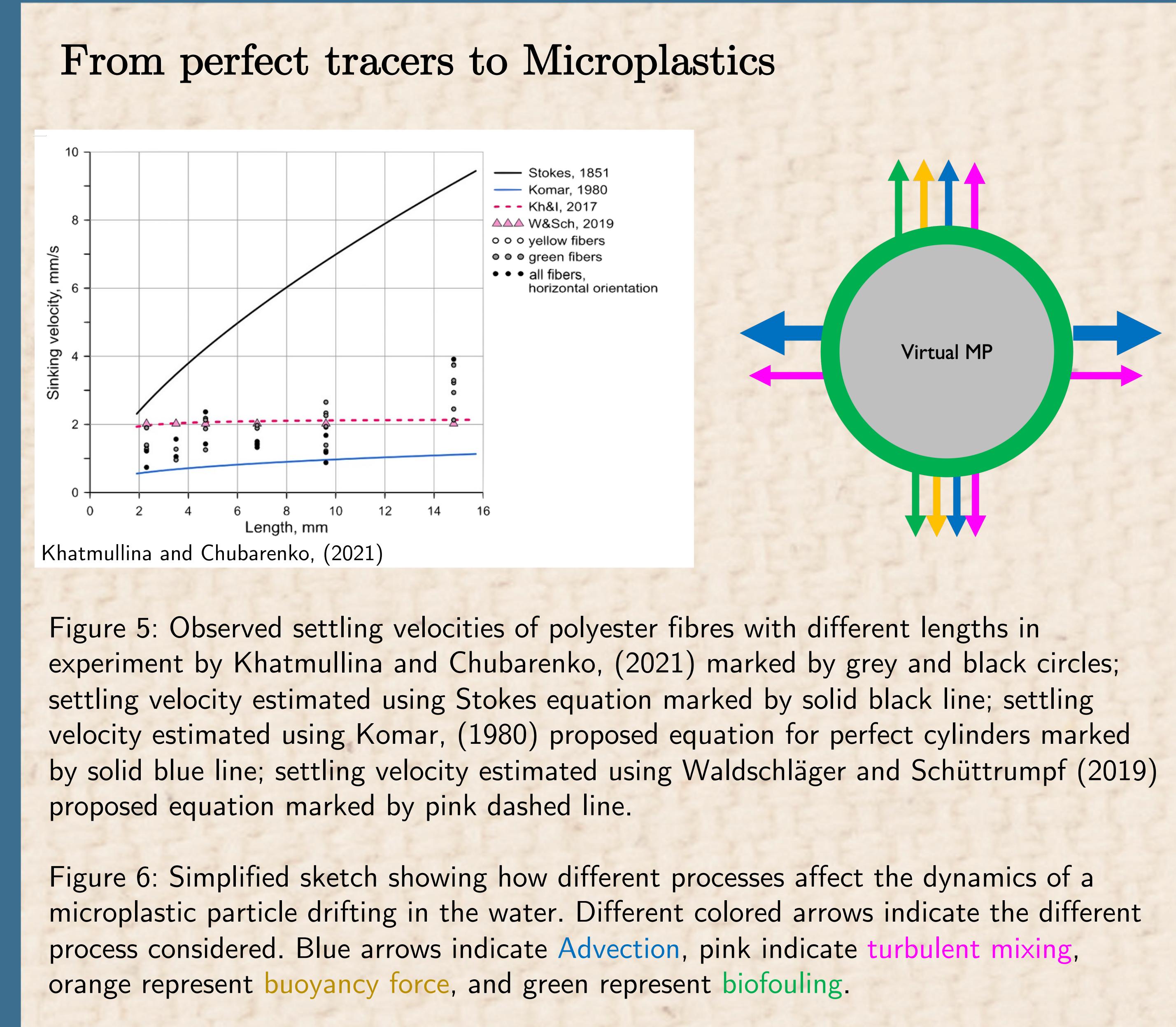
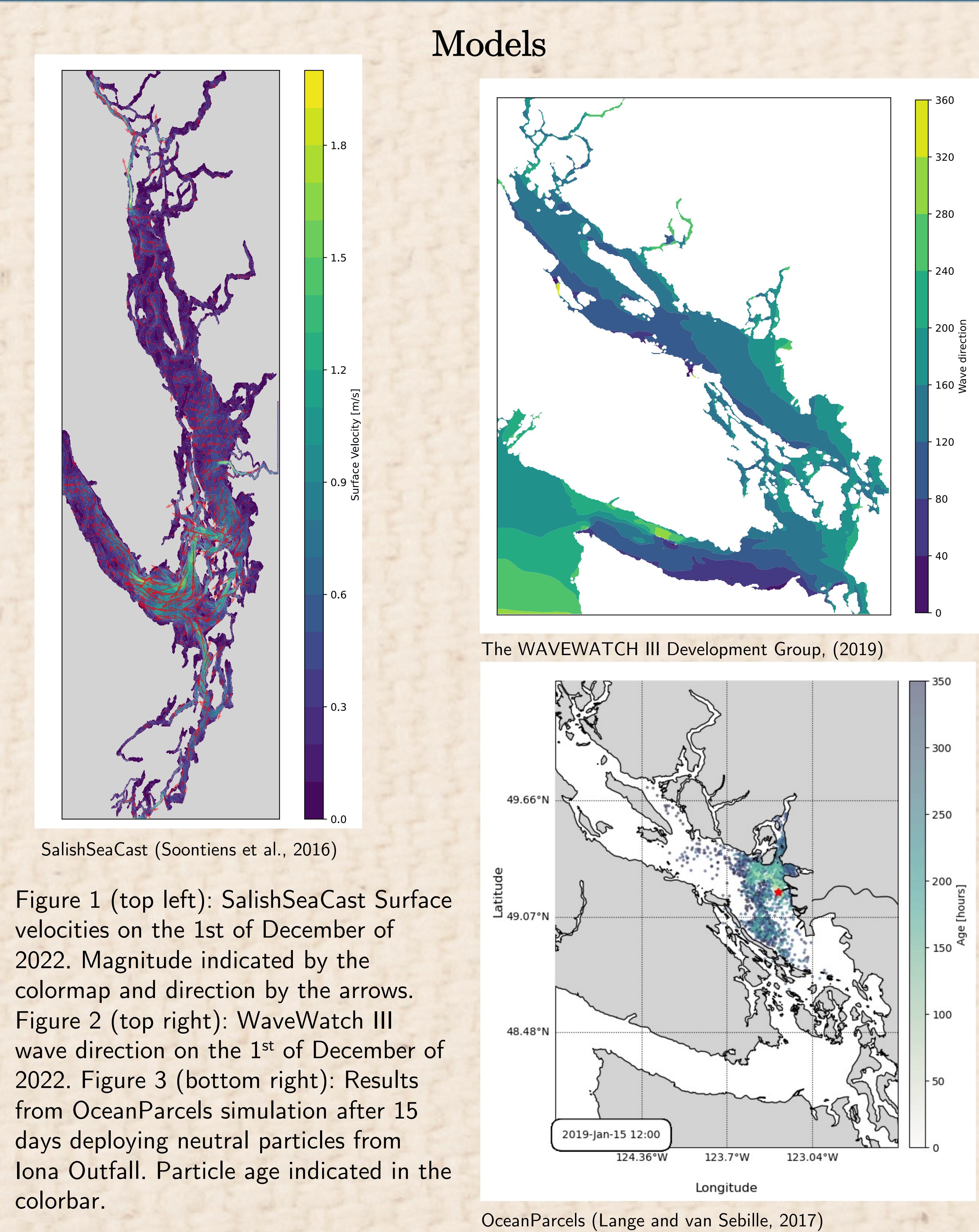


Figure 7: Sources of polyester microfibres from household laundry in the Salish Sea. (a) Municipalities with more than 20000 people inside Salish Sea watersheds. Size of the circles is proportional to the population of the municipalities. (b) River mouth locations and their watersheds in SalishSeaCast. Color indicates the different watersheds; blue circles shows the municipalities in the same way as in 7(a); and the circles indicate de location of the river mouths inside the model. (c) Polyester microfibers sources defined for our simulations. Size indicates the strength of the sources.

- ### References
- Delandmeter, P., & Van Sebille, E. (2019). The Parcels v2. 0 Lagrangian framework: new field interpolation schemes. *Geoscientific Model Development*, 12(8), 3571–3584. <https://doi.org/10.5194/gmd-12-3571-2019>
  - Khatmullina, L., & Chubarenko, I. (2021). Thin synthetic fibers sinking in still and convectively mixing water: laboratory experiments and projection to oceanic environment. *Environmental Pollution*, 288, 117714. <https://doi.org/10.1016/j.envpol.2021.117714>
  - Pawlowicz, R., Hannah, C., & Rosenberger, A. (2019). Lagrangian observations of estuarine residence times, dispersion, and trapping in the Salish Sea. *Estuarine, Coastal and Shelf Science*, 225, 106246. <https://doi.org/10.1016/j.ecss.2019.106246>
  - Soontiens, N., Allen, S. E., Latornell, D., Le Souëf, K., Machuca, I., Paquin, J.-P., Lu, Y., Thompson, K., & Korabel, V. (2016). Storm surges in the Strait of Georgia simulated with a regional model. *Atmosphere-Ocean*, 54(1), 1–21. <https://doi.org/10.1080/07055900.2015.1108899>
  - The WAVEWATCH III Development Group. (2019). User manual and system documentation of WAVEWATCH III. Version 6.07. Tech. Note 333, NOAA/NWS/NCEP/MMAB, College Park, MD. <https://polar.ncep.noaa.gov/waves/wavewatch/manual/v5.16.pdf>

### Special Thanks to...

University of British Columbia, Maite Maldonado, Lori-jon Waugh, all the members of Plastics-SoG (NSERC Microplastics group), Ocean Wise, and the MOAD research group: Becca Beutel, Birgit Rogalla, Camryn Stang, Cassidy Donaldson, Doug Latornell, Karyn Suchy and Raisha Lovinleader.



Email: [jvalenti@eoas.ubc.ca](mailto:jvalenti@eoas.ubc.ca)  
Github: [JoseEOAS](https://github.com/JoseEOAS)