

Data underlying the publication: “Migrating subaqueous dunes capture clay flocs”

Sjoukje I. de Lange¹, Anne van der Wilk¹, Claire Chassagne², Waqas Ali², Antonius J.F. Hoitink¹, Maximilian P. Born³, Kristian Brodersen³, Kryss Waldschläger¹

1: Environmental Sciences, Wageningen University, Wageningen, the Netherlands.

2: Faculty of Civil Engineering and Geosciences, Delft University of Technology, Delft, the Netherlands.

3: Institute of Hydraulic Engineering and Water Resources Management, RWTH-Aachen University, Aachen, Germany

Corresponding author: Sjoukje.delange@wur.nl

Contents of this dataset:

- Experiment_labsheet.xlsx: lab sheet with all experimental conditions (incl naming convention as used in other folders)
- Flocs
 - o Raw_data_floccam (uploaded as individual zip-files): videos taken with the floc cam
 - o SAFAS: output from the SAFAS software which analyses the floc cam videos. It records the floc number (track_idx), velocity in y and x direction (vel_y_mean, vel_x_mean), the diameter of the floc over the minor and major axis (major_axis_mean, minor_axis_mean), the area of the floc (area_mean), and the amount of frames (N_frames).
Full_output.csv is every datapoint for every floc. Summary_output.csv averages the data for each floc.
- Sediment:
 - o Data sheets for the clay, sand, and flocculant
 - o Sedimentsize.xlsx: the particle size distribution curves of the clay and sand
- StreamPro
 - o Raw: raw output from the StreamPro for each experiment
 - o Profiles: visualized output from the raw StreamPro data
 - o BTT: detrended dune information as obtained with the Bedform Tracking Tool.
 - Figures show how the detrending is performed per profile per experiment.
 - Stats.mat give the statistics (height, length, leeside angle, stoss side angle) of the observed dunes and ripples in a matlab file.
 - Scripts: Bedform Tracking Tool from van der Mark & Blom (2007)
 - o Read_data_streampro.m: matlab script to read in the raw StreamPro output
- Kolmogorov.xlsx: equations for calculating the Kolmogorov length scale.