**Salt marsh establishment in poorly consolidated muddy systems: effects of surface drainage, elevation and plant age**

Description of the dataset per column:

**#Sheet1\_Seedling survival 2016#**

**Seedling age**

Seedling age (when transplanting): 1=1-year seedlings; 2=3-month seedlings; 3=1-week seedlings;

**Treatments**

Treatments: 1=Surface drainage; 2=Untreated;

**Elevation**

Elevation: 1=0 cm NAP; 2=30 cm NAP; 3= 60 cm NAP; 4=90 cm NAP;

**Replicates**

Replicates: three replicate mega-marsh organs for seedling establishment, i.e., 1, 2, 3;

**No. of survived seedlings**

No. of survived seedlings: number of survived seedling in each mega-marsh organ;

**Survival (rate)**

Survival (rate): percentage of number of survived seedlings divided by initial seedling numbers (at week 0);

**Week**

Week: 0 to 6: time (week) after seedling transplanting;

Note that the species is *Spartina anglica*; we used 6 initial transplants for the 1-year seedlings, 6 initial transplants for the 3-month seedlings and 12 replicates for the 1-week seedlings within every experimental treatment group (24 seedlings in total each mega-marsh organ).

**#Sheet2\_Tussock traits 2018#**

**Treatments**

Treatments: 1=Surface drainage; 2=Untreated;

**Elevation**

Elevation: 1=0 cm NAP; 2=30 cm NAP; 3= 60 cm NAP; 4=90 cm NAP;

**Replicates**

Replicates: three replicate mega-marsh organs for seedling establishment, i.e., 1, 2, 3;

**Survival rate**

Survival rate: percentage of survived tussocks in each mega-marsh organ;

**Aboveground dry biomass**

Aboveground dry biomass (g): quantified by clipping all above ground vegetation in each mega-marsh organ as close to the sediment surface as possible at harvest in October 2018;

**Shoot numbers**

Shoot numbers: shoot numbers of each mega-marsh organ;

**Plant height**

Plant height (cm): measurements of 5 randomly shoots in each mega-marsh organ;

Note that the species is *Spartina anglica*;

**# Sheet3\_Sediment 2016 & 2018#**

**Year**

Year: sediment samples were taken in both experiment years, i.e., 2016 and 2018;

**Treatments**

Treatments: 1=Surface drainage; 2=Untreated;

**Elevation**

Elevation: 1=0 cm NAP (Normal Amsterdam Peil, which is Dutch Ordance Level that approximately equal to mean high water level in the Scheldet estuary); 2=30 cm NAP; 3= 60 cm NAP; 4=90 cm NAP;

**Replicates**

Replicates: soil samples were taken in threethree replicate mega-marsh organs for seedling establishment, i.e., 1, 2, 3;

**Wet sample weight**

Weight sample weight (g): sample weight before freeze dried;

**Dry sample weight**

Dry sample weight (g): sample weight after freeze dried;

**Water weight**

Water weight (g)= Wet sample weight (g)-Dry sample weight (g);

**Water content**

Water content=Water weight (g)/Wet sample weight (g);

**Bulk density (g/cm3)**

Bulk density=Dry sample weight (g)/sample volume (cm3)

Note that the size of the sampler with an inner diameter of 2.8 cm and a depth of 3 cm, i.e. sample volume=18.4632cm3