## Flume

Length =25000 m, width= 5000m

H=10m

Sloping bed (Zf=-0.5 m at the exit, Zf=0.5 entrance)

Uniform Steady flow

* Umean= 1m/s
* Q=UhW=10\*5000
* Ks= 0.01 m/s
* Q imposed at the entrance (4 5 5)
* Zs imposed at the exit (-0.5 m)

Sediment

* C=0 (t=0) – C=0.3 g/l (x=0)
* Ws= 0.01 m/s
* Cohesif sediment
* M= 0 (no erosion)
* Tcd=0 (no deposition)
* Prandtl =1

Numerical model

* Mixing length model (3) – Use option 1 + logarithmic velocity derivative
* Dt =100s
* Nit=800
* Nplanes= 21

Analytical solution (programmed in preres\_telemac3d) – comparison with velocity and concentration profiles (X=2 400m)

* Log velocity profile

U\*=4.31 cm/s

* Rouse concentration profile (Rouse number=0.58)

Cref = C(j=2)