Idealised morphodynamic modelling: Western Scheldt and mouth area

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Idealised modelling

- Focus on longterm trends (decadal – centennial)
  - Reduction of input, only main forcing terms and processes

- Understanding of fundamental mechanisms

- Sensitivity analysis
Methodology

- Spin up the model from a flat bottom till “equilibrium” is reached (here: 300-400 years)

- Does this autonomous generated bottom represent main features of the system?

- The generated bottom is used as initial state of the system for scenario analyses
Model description: Delft3D (2DH)

- **Tidal Wave** south ➔ north (M2, M4 and M6)
- **Initial bottom**: flat bottom based on width averaged measured bottom
Example: Long term effect of embankments
Migration channels towards bank of the estuary where former secondary basins were located.
• **Migration of the channels:**

a) Sloe

b) Braakman

• **Mean depth of the channels and height of the shoals:**
Model run with and without “Sloe”