Vegetation modelling tools

Model	Description	Status	Contact
Delft3D flow	1DV module – rigid plants affect flow and turbulence in 3D	Available, documented	Adri Mourits
Delft3D flow	Trachytope formula, 2D flow	Available, documented	Bert Jagers
D-FM	Trachytope formula, 2D flow	Available, not tested	Herman Kernkamp
D-FM	1DV module – rigid plants affect flow and turbulence in 3D	Available not documented. Detailing of input required.	Herman Kernkamp
D-FM	dynamic vegetation development via Python	Under development	Peter Herman, Arthur van Dam
SWAN-VEG	Additional effect of vegetation in formula, based on work of Suzuki	Available, documented	Jacco Groeneweg
XBeach	Short and long wave attenuation by rigid vegetation (e.g. mangroves)	Available, documented	Arnold van Rooijen
Delwaq	SAV; Macrophyte module with biomass development linked to nutrients, light etc.	Available, under development	Ellis Penning
Delwaq	Vegmod; Emergent vegetation development linked to nutrients; no flow feedback	Available, documented	Johannes Smits
Delwaq	Vegetation dynamics for flow without link to nutrients, dedicated for feedback to flow	Available, undocumented, special version?	Qinghua Ye
Delft3D-Part	Particle tracking; dispersal of seeds	Available, documented	Michelle Jeuken
Dynveg	Flexible vegetation – flow interactions. Via Matlab link with D3Dflow (patchwork)	Available, undocumented, not linked formally with standard Deltares software	Jasper Dijkstra
HABITAT	Potential habitat for various plants and animals via knowledge rules, static GIS overlay procedures	Available, documented	Clara Chzranowski
OpenFoam	?	Unknown	
SOBEK	?	Unclear if/how Sobek-users implement vegetation. Delwaq as a potential tool	
Matlab modules	Interaction of different vegetation types and life stages with hydromorphology (REFORM project)	Includes interactive coupling procedure with Delft3D-FLOW - undocumented	Mijke van Oorschot
Matlab modules	Interaction of flexible vegetation with flow (and sediment)	Unofficial, undocumented	Jasper Dijkstra