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Roadmap discussion

enabling delta life

24-11-2022

Today's program

9:00 - 9:10	**Welcome and introduction to the program** (Timo Kroon)
9.10 - 9.40	**Overview of iMOD, and what is new?** (Tess Davids)
9.40 - 9.55	Example of a groundwater case in iMOD Suite (Frans Roelofsen)
9.55 - 10.15	iMOD Python update (Joeri van Engelen)
10:15 - 10:30	Parallel iMOD WQ (Gijs Janssen)

Break

10:35 - 12:10	**Carousel of presentations** (Tess Davids)
	iPest (Peter Vemeulen)
	Toolbox unstructured (Huite Bootsma)
	Example XMI: fast calculations within MODFLOW 6 (Hendrik Kok)
	Example iMOD5: flexible drainage (Hugo van Hintum)
	Development of a new surface water module (Martijn Visser)
	Development of analytical elements (Huite Bootsma)

Lunch

13.00 – 14.00	**Roadmap discussion** (Tess Davids)
14.00 – 16.00	**Hands-on training iMOD Suite** (Joeri van Engelen, Frans Roelofsen)
16.00 - 17.30	Closure and drinks

iMOD developments roadmap '23

iMOD 5

- New developments will be part of the iMOD Suite

- Maintenance (bug fixes)

iMOD Suite

iMOD-python

- MF6 package checks

- Unstructured regridder

- Continue making iMOD-python more approachable for non-python users
  - Create replacement PRJ (TOML)
  - Loading in PRJ-files and native MODFLOW models

- Multi-model support
  - Needed for parallel support

- Expand support MF6 packages
  - Lake package

iMOD Coupler

- Coupling MetaSWAP – MF6 – D-HYDRO (DFLOW-FM)

QGIS plugin and 3D viewer

- Combine it with plugin for Wflow and RIBASIM.

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Themes to discuss

- iMOD-python

- MODFLOW6

- QGIS plugin + 3D viewer

- Coupling with surface water

- Unsaturated zone

iMOD International User Day 2022

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MODFLOW6

- Do you actively use MODFLOW6?
  - If so, how do you create MODFLOW6 models?

- What prevents you from using it?
  - Which support do we need to expand on for you to use it?

- What are key components that are still missing?

- Use MODFLOW6 and freeze iMODFLOW-2005 (December release)
  - Will this cause any problems?

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iMOD-python

- What do you like about it?

- What prevents you from using it?

- What do we need to add to iMOD-python to replace iMOD-Batch?

- What are key components that are still missing?
  - Is there something you would like to do with iMOD-python which you currently do not manage

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QGIS pluging + 3D viewer

- What prevents you from using it?

- What are key components that are still missing?
  - Present focus was on 3D Viewer, cross-sections and timeseries

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QGIS plugin and 3D viewer

- Combine it with plugin for Wflow and RIBASIM.

Coupling with surface water

- What is your opinion on our plan and priority to focus on coupled groundwater- and surface water modelling?

- Which type of coupled model do you see most benefit in?
  - RIBASUM / WFLOW and MODFLOW
  - D-Hydro and MODFLOW

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Unsaturated zone

Various developments

- Future MetaSWAP and SWAP is considered -> new software is expected in the coming years

- Application UZF-package MetaSWAP is investigated

- 2 student researches in the past year (1 NL, 1 Argentina). They concluded that WFLOW and MODFLOW-UZF are more applicable than SWAP and MetaSWAP in data sparse areas

Preliminary conclusion: new unsaturated zone software is to be expected in the coming years, in cooperation with Wageningen University and possibly USGS

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