

iMOD Testbanken - NHI dag 2022 -

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Testen is misschien saai maar

... essentieel

- Wat testen we nu?
- Huidige ontwikkelingen



Aanleiding

- NHI opdracht: testbank uitbreiden
- Deltares / WenR: software + infrastructuur
- Marktpartijen: uitbesteding tests

- Startpunt 2021: testen met Modflow2005 + MetaSWAP (testrapporten handmatig)
- Ontwikkeling: testen met MODFLOW 6 + MetaSWAP (automatisch)

iMOD Software

iMOD 5 (sinds 2014)

- iMOD5.3 (GUI)
- iMODFLOW-MetaSWAP
- iMOD-WQ
- *MODFLOW6*
- MODFLOW6-MetaSWAP

iMOD Suite (sinds 2021)

- iMOD Python
- iMOD Viewer (QGIS Plugin + 3D Viewer)

Wat testen we niet: Modflow6

Kwaliteit geborgd bij USGS

Testomgeving:

- <https://github.com/MODFLOW-USGS/modflow6>

Testfrequentie:

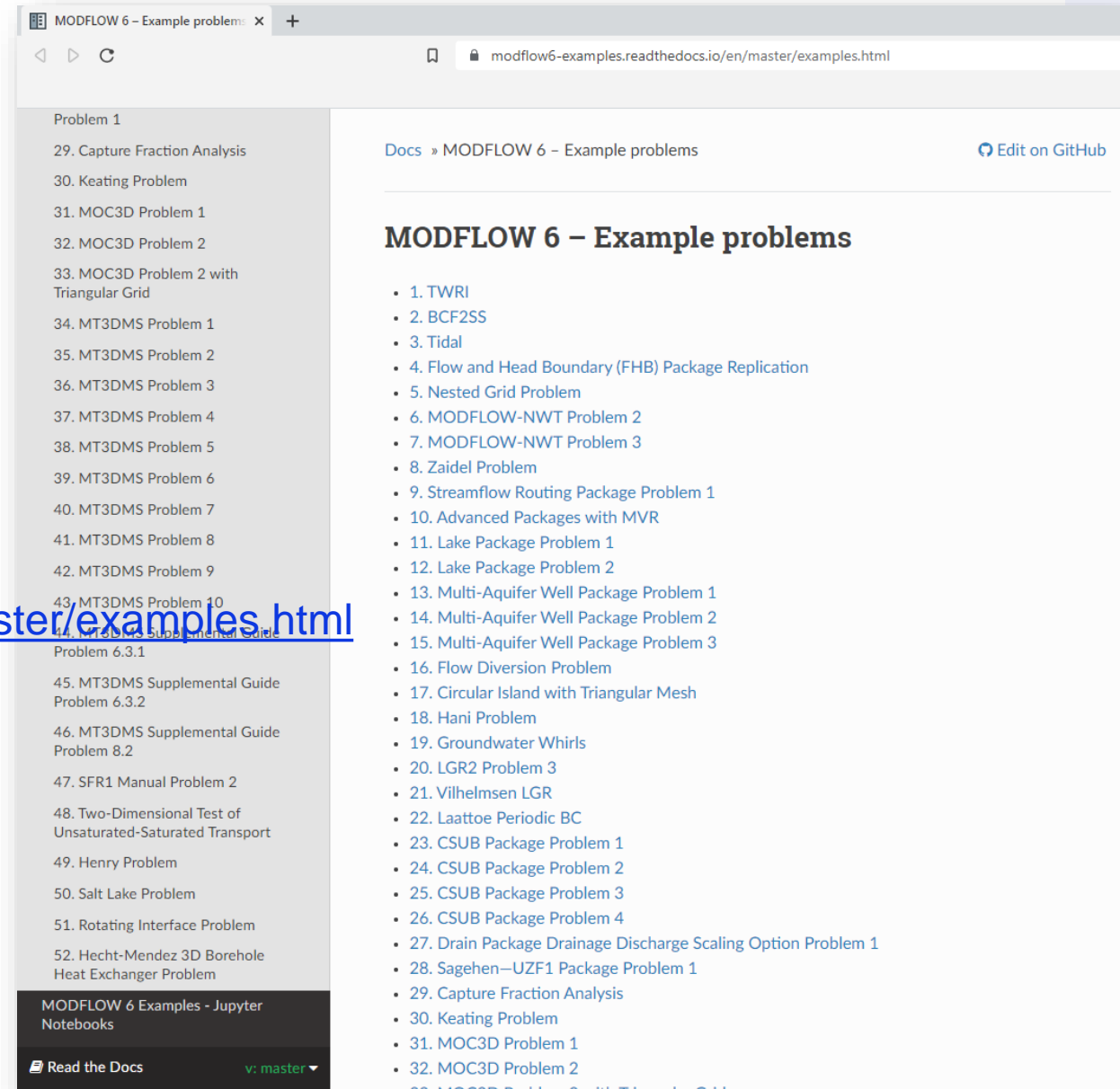
- continu

Test cases (> 500):

- <https://modflow6-examples.readthedocs.io/en/master/examples.html>

Rapportage:

- Logfiles online beschikbaar



The screenshot shows a web browser window with the URL `modflow6-examples.readthedocs.io/en/master/examples.html`. The page title is "MODFLOW 6 – Example problems". A sidebar on the left lists 52 example problems, including "Problem 1", "29. Capture Fraction Analysis", "30. Keating Problem", "31. MOC3D Problem 1", "32. MOC3D Problem 2", "33. MOC3D Problem 2 with Triangular Grid", "34. MT3DMS Problem 1", "35. MT3DMS Problem 2", "36. MT3DMS Problem 3", "37. MT3DMS Problem 4", "38. MT3DMS Problem 5", "39. MT3DMS Problem 6", "40. MT3DMS Problem 7", "41. MT3DMS Problem 8", "42. MT3DMS Problem 9", "43. MT3DMS Problem 10", "44. MT3DMS Supplemental Guide Problem 6.3.1", "45. MT3DMS Supplemental Guide Problem 6.3.2", "46. MT3DMS Supplemental Guide Problem 8.2", "47. SFR1 Manual Problem 2", "48. Two-Dimensional Test of Unsaturated-Saturated Transport", "49. Henry Problem", "50. Salt Lake Problem", "51. Rotating Interface Problem", "52. Hecht-Mendez 3D Borehole Heat Exchanger Problem". The main content area displays a list of 32 example problems, including "1. TWRI", "2. BCF2SS", "3. Tidal", "4. Flow and Head Boundary (FHB) Package Replication", "5. Nested Grid Problem", "6. MODFLOW-NWT Problem 2", "7. MODFLOW-NWT Problem 3", "8. Zaidel Problem", "9. Streamflow Routing Package Problem 1", "10. Advanced Packages with MVR", "11. Lake Package Problem 1", "12. Lake Package Problem 2", "13. Multi-Aquifer Well Package Problem 1", "14. Multi-Aquifer Well Package Problem 2", "15. Multi-Aquifer Well Package Problem 3", "16. Flow Diversion Problem", "17. Circular Island with Triangular Mesh", "18. Hani Problem", "19. Groundwater Whirls", "20. LGR2 Problem 3", "21. Vilhelmsen LGR", "22. Laattoe Periodic BC", "23. CSUB Package Problem 1", "24. CSUB Package Problem 2", "25. CSUB Package Problem 3", "26. CSUB Package Problem 4", "27. Drain Package Drainage Discharge Scaling Option Problem 1", "28. Sagehen—UZF1 Package Problem 1", "29. Capture Fraction Analysis", "30. Keating Problem", "31. MOC3D Problem 1", "32. MOC3D Problem 2". At the bottom of the page, there is a "Read the Docs" button and a version selector set to "v: master".

Testbank iMODFLOW

iModflow2005-MetaSWAP

- Testomgeving: Python
- Testfrequentie: Release + tussenversies
- Testcases:
 - Deelmodellen: Ibrahym (18) – Moria (3) – Mipwa (6) – Azure (3) – LHM MF (3)
 - Syntetische tests (16)
 - Syntetische tests pre-processing Modflow2005 (+/-100)
- Rapportage.....

Testbank iMODFLOW

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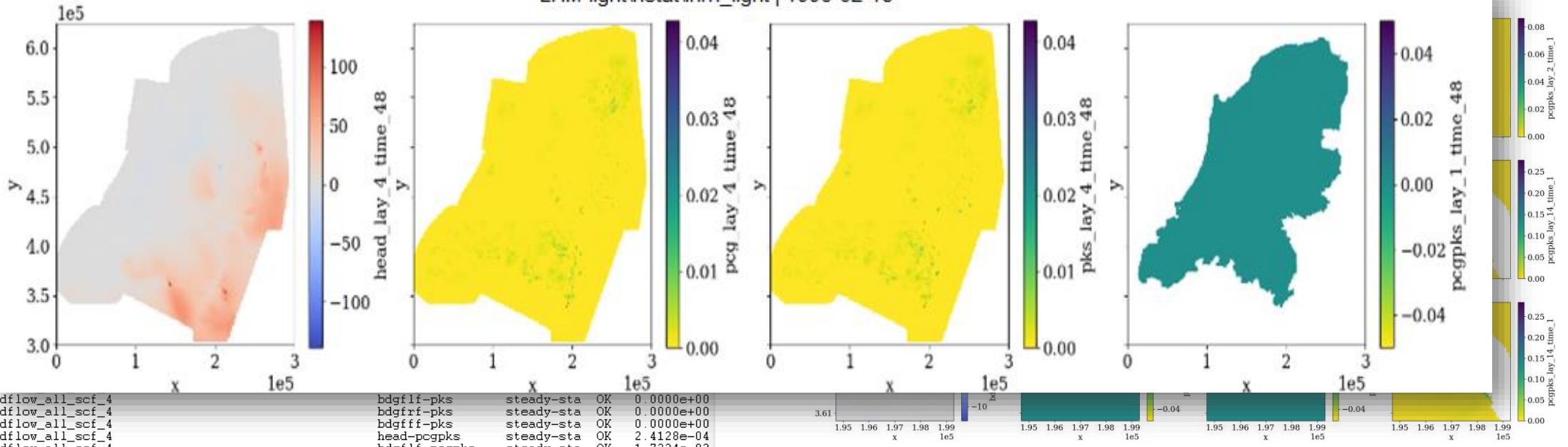
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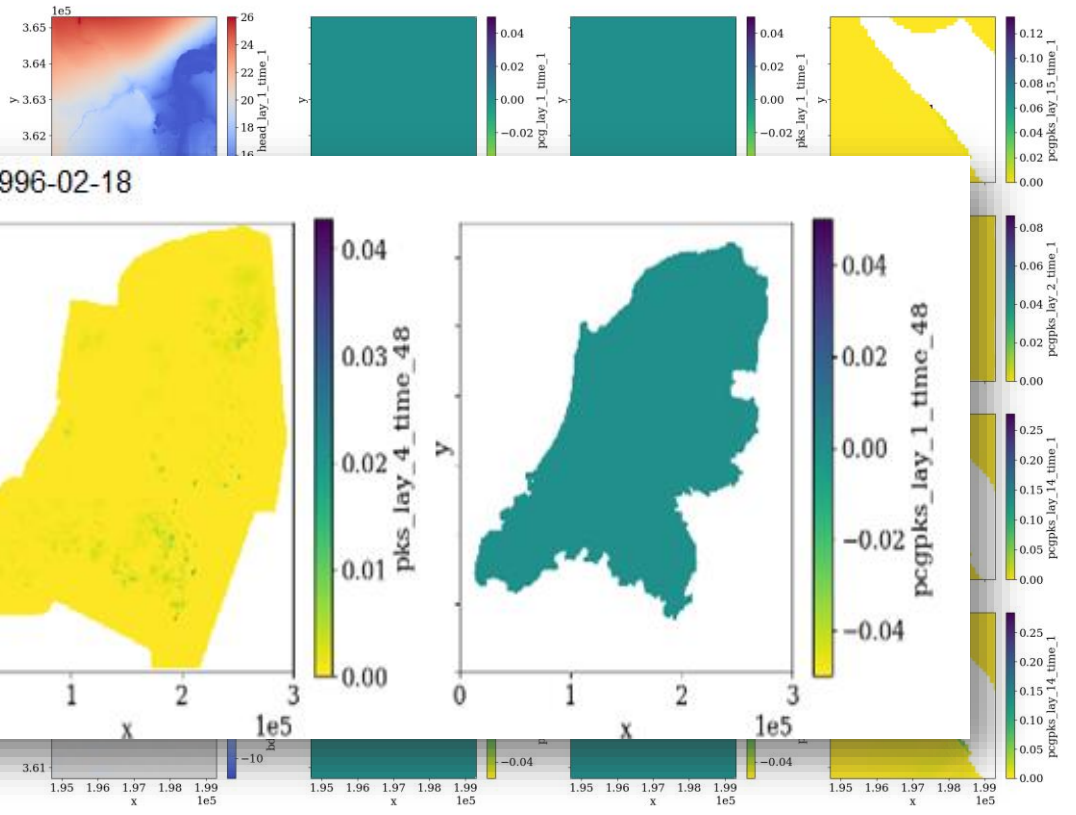
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iMOD5 - TeamCity (*Deltares*)

- Demonstratie
- <https://dpcbuild.deltares.nl/project/iMOD6?mode=builds>

TC iMOD6 — TeamCity x +

dpcbuild.deltares.nl/project/iMOD6?mode=builds

TC Projects Changes Agents 37 Queue 0 Administration ? FR

New build configuration... New subproject... Edit project... ▾

iMOD ★

The new iMOD coupled components with MODFLOW6

2 info items ▾ Configure favorites...

Overview Investigations Change Log Statistics Current Problems Muted Problems Build Chains Flaky Tests 0

Builds Trends

- > Coupler Python scripts coupling components 3 ■ +
- > MODFLOW 3 ■ +
- > MetaSWAP 4 ■ +
- > Mozart-DM 1 ■ +
- ▼ iMOD5 2 ■ +
 - ▼ ■ Build iMOD5 GUI

#511	✔ Success	No changes	c-teamcity01526	about 16 hours ago 10m 50s	Run ...
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 - ▼ ■ Automated tests

#736	✔ Tests passed: 3	No changes	c-teamcity01508	about 2 hours ago 2m 58s	Run ...
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- > iMod-GUI 1 ■ 1 ■ +

Q — search

S — show sidebar

Automated tests — TeamCity

dpcbuild.deltares.nl/buildConfiguration/iMOD6_iMOD5_AutomatedTests

Projects Changes Agents 37 Queue 0 Administration ? FR

iMOD6 / iMOD5

Automated tests ★

Actions ▾

Overview Pending Changes Change Log Issue Log Statistics Compatible Agents 23 Settings

All ⏸️ 🔄 ✅ ⚠️ 🚫 ⌘ ⭐ Filter by agent name

Build number	Status	Changes	Agent	Started	Duration	
#736	✅ Tests passed: 3	No changes	c-teamcity01508	19 Jan 22 14:50	2m 58s	⋮
#735	✅ Tests passed: 3	FR Frans Roelofsen: 1 ▾	c-teamcity01535	19 Jan 22 14:43	2m 56s	⋮
#734	✅ Tests passed: 2	FR Frans Roelofsen: 1 ▾	c-teamcity01508	19 Jan 22 11:14	2m 05s	⋮
#733	❌ Tests failed: 2, passed: 0	No changes	c-teamcity01511	19 Jan 22 04:00	2m 06s	⋮
#732	❌ Tests failed: 2, passed: 0	FR Frans Roelofsen: 1 ▾	c-teamcity01531	19 Jan 22 01:23	2m 14s	⋮
#731	❌ Tests failed: 2 (1 new), passed: 0	FR 2 changes ▾	c-teamcity01531	19 Jan 22 01:07	2m 35s	⋮
#730	❌ Tests failed: 1, passed: 0	FR Frans Roelofsen: 1 ▾	c-teamcity01508	18 Jan 22 14:53	1m 21s	⋮
#729	❌ Tests failed: 1, passed: 0	FR Frans Roelofsen: 1 ▾	c-teamcity01508	18 Jan 22 14:28	1m 20s	⋮
#728	⊗ Canceled (Exit code 1 (Step: Run tests (Command Line)))	No changes	c-teamcity01508	18 Jan 22 13:59	29m 21s	⋮
#727	❌ Tests failed: 1, passed: 0	No changes	c-teamcity01508	18 Jan 22 13:42	1m 26s	⋮
#726	❌ Tests failed: 1, passed: 0	FR Frans Roelofsen: 1 ▾	c-teamcity01508	18 Jan 22 13:40	1m 38s	⋮
#725	❌ Tests failed: 1, passed: 0	No changes	c-teamcity01535	18 Jan 22 13:33	1m 35s	⋮
#724	❌ Tests failed: 1, passed: 0	1 artifact dependency change ▾	c-teamcity01528	18 Jan 22 04:00	1m 35s	⋮
#723	❌ Tests failed: 1 (1 new), passed: 0	FR Frans Roelofsen: 1 ▾	c-teamcity01508	18 Jan 22 00:06	1m 18s	⋮
#722	✅ Tests passed: 1	FR 4 changes ▾	c-teamcity01508	17 Jan 22 23:02	1m 39s	⋮
#721	⚠️ Failed to resolve artifact dependency	FR 4 changes ▾	c-teamcity01531	17 Jan 22 23:00	13s	⋮
#720	⚠️ Failed to resolve artifact dependency	FR 4 changes ▾	c-teamcity01535	17 Jan 22 22:57	9s	⋮
#719	⚠️ Failed to resolve artifact dependency	FR 4 changes ▾	c-teamcity01535	17 Jan 22 22:56	10s	⋮

Q - search

S - show sidebar

iMOD Python (*public*)

- Demonstratie
- <https://gitlab.com/deltares/imod/imod-python>
- <https://gitlab.com/deltares/imod/imod-python/-/tree/master/tests>

- imod-python
- Project information
- Repository
- Issues 64
- Merge requests 3
- CI/CD
- Deployments
- Monitor
- Packages & Registries
- Analytics
- Wiki
- Snippets




Deltares > iMOD > imod-python

 **imod-python** 
Project ID: 4588050 
imod modflow groundwater + 1 more

1,760 Commits 8 Branches 16 Tags 2.4 MB Files 178.7 MB Storage 7 Releases

  Make massive MODFLOW models - <https://imod.xyz/>

master imod-python History Find file  Clone

 **Version 0.11.3 (finally pip installable!)**  e13107b1 
Huite Bootsma authored 3 weeks ago

- README
- MIT License
- CI/CD configuration

Name	Last commit	Last update
docs	cytoolsz to optional	3 weeks ago
examples	Work on User Guide	3 weeks ago
imod	Final fixes on optional dependencies	3 weeks ago
tests	Add copy notices for declxml	3 weeks ago
.gitignore	Add prepare example of laplace interpolatio...	4 weeks ago
.gitlab-ci.yml	Update .gitlab-ci.yml with modflow6.2.2	2 months ago
LICENSE	prepare 0.6.1 release	2 years ago

imod-python

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Deltares > iMOD > imod-python

master imod-python / tests / test_mf6 History Find file Clone

Vendor declxml as: Huite Bootsma authored 3 weeks ago c53ef408

Name	Last commit	Last update
..		
test_circle.py	Assorted changes:	4 weeks ago
test_ex01_twri.py	Assorted changes:	4 weeks ago
test_ex01_twri_disv.py	Separate well into:	4 weeks ago
test_ex32_periodicbc.py	Update mf6 solver keywords	2 months ago
test_mf6_chd.py	Merge branch 'master' into documentation	2 months ago
test_mf6_dis.py	Support for ASCII input, next to binary input	2 months ago
test_mf6_drn.py	Fixes #210	4 weeks ago
test_mf6_ic.py	Support for ASCII input, next to binary input	2 months ago
test_mf6_ims.py	Update mf6 solver keywords	2 months ago
test_mf6_npf.py	Support for ASCII input, next to binary input	2 months ago
test_mf6_oc.py	Support for ASCII input, next to binary input	2 months ago

Conclusie & verwachting

- Nieuwe ontwikkelingen maken het nog makkelijker om fouten op te sporen
- **TeamCity**: nieuwe testomgeving ingericht voor iMOD 5
- Migratie bestaande iMOD 5 testcases naar MODFLOW6 gestart
- MODFLOW6 preprocessing toegevoegd aan testomgeving TeamCity
- LHM light (niet stationair) toegevoegd aan testbank iMODFLOW

Planning 2022

- Toevoegen case Brabantse Delta (MODFLOW6 –MetaSWAP) aan TeamCity
- Testcases omzetten: MODFLOW2005 naar MODFLOW 6
- Niet-Stationair Modflow 6 – MetaSWAP – WOFOST

Issues?
iMOD Support via
imod.support@deltares.nl