

Bitlar í sjónum

- *bitlasporing sum amboð*

Birgitta Andreassen

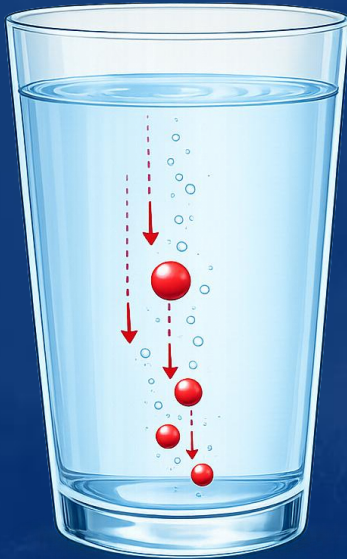
birgitta@firum.fo



vitan til varandi aling

Slæg av bitlum - *heilt einkult!*

søkka



suspenderaðir

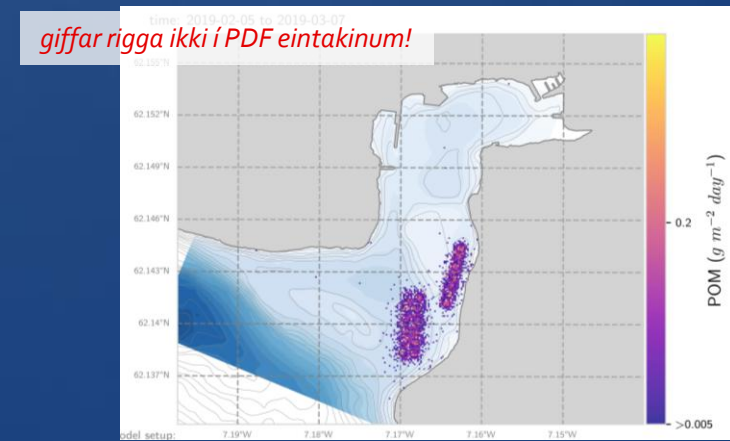
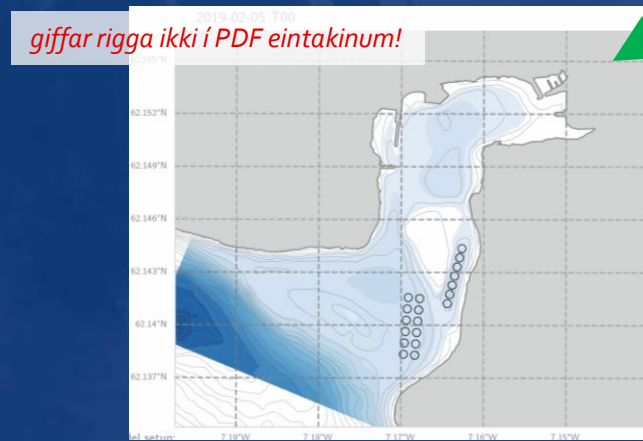
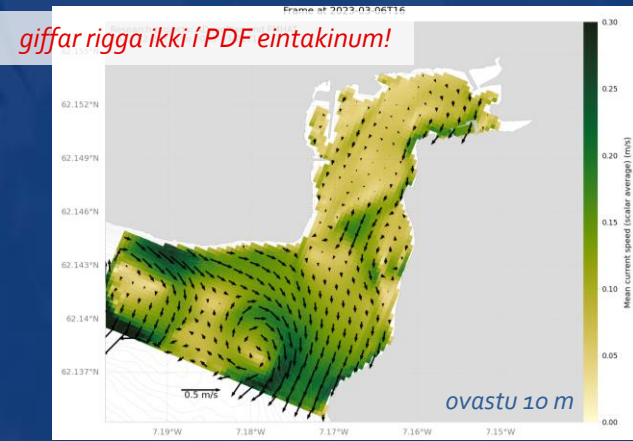


flóta



Bitlasporing - heilt einkult!

Vit brúka m.a. LADiM



Havmyndil

+

Bitlasporing

Lagrangian

→

Hvat fer hvar?

Connectivity matrix/
networks/concentrations

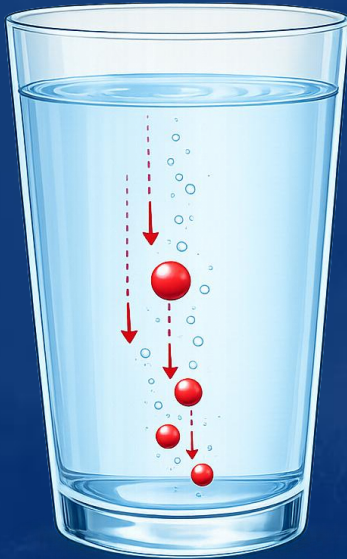
Næsta position = fyrra position + flutningur ± atburður ± sökiferð ± random walk

Velocity (m/s) · tíðarskritt (s)

Eginleikar hjá bitlinum

Slæg av bitlum - *heilt einkult!*

søkka



suspenderaðir

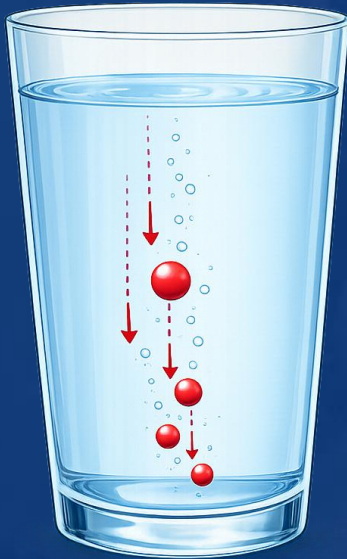


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Slæg av bitlum - *heilt einkult!*

søkka



suspenderaðir



flóta



Eitt afturat *lívfrøði*



FarCoast → 3D havmyndil fyri Føroyar

- V₂

- Resolutions: 2 km, 650 m, 130 m og 26 m
- Forcing:
 - Lateral: GLORYS12V1 and Operational Mercator
 - Tidal: TPXO7.1
 - Atmospheric: ERA
 - River runoff: hydrological model FarRiv (Erenbjerg, in prep)
- Validerað fyri 2 km (Erenbjerg et al., in prep)
- Validering fyri rest er ávegis í ymiskum verkætlanum



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Bitlarnir eru:



ADepoPlan: *Accessible deposition modelling tools for improved environmental planning*

*Birgitta Andreassen**, Sissal V. Erenbjerg, Gunnvør á Norði, Pål N. Sævik, Esbern J. Patursson, and Jan H. Egholm

Project partners:

Funding:

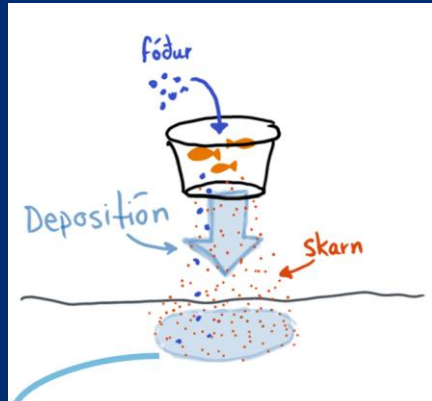


Vikmar

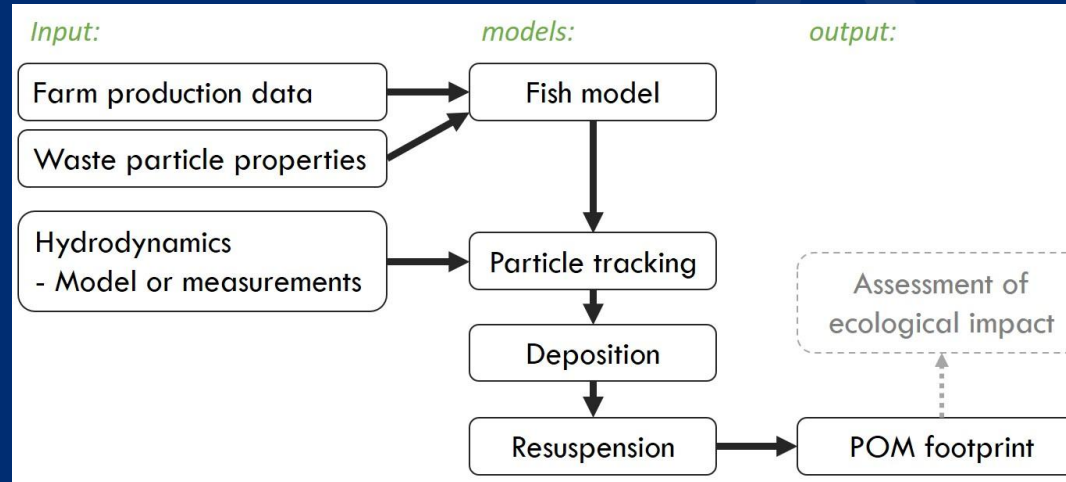


ADepoPlan → modelling, validation and accessibility

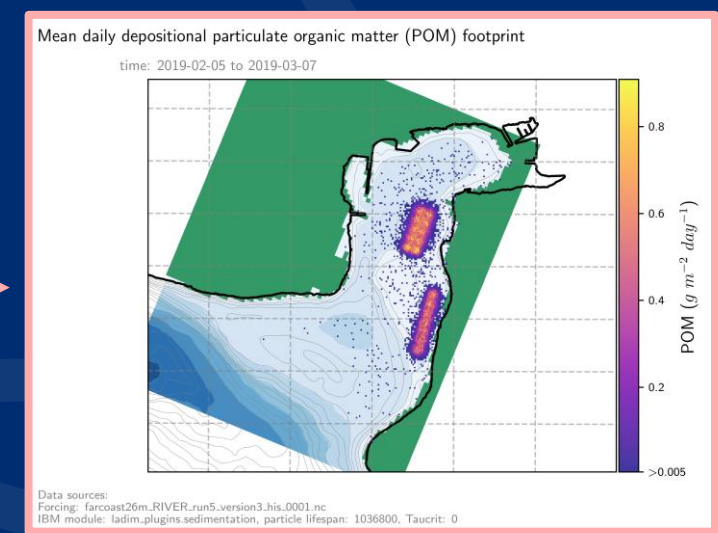
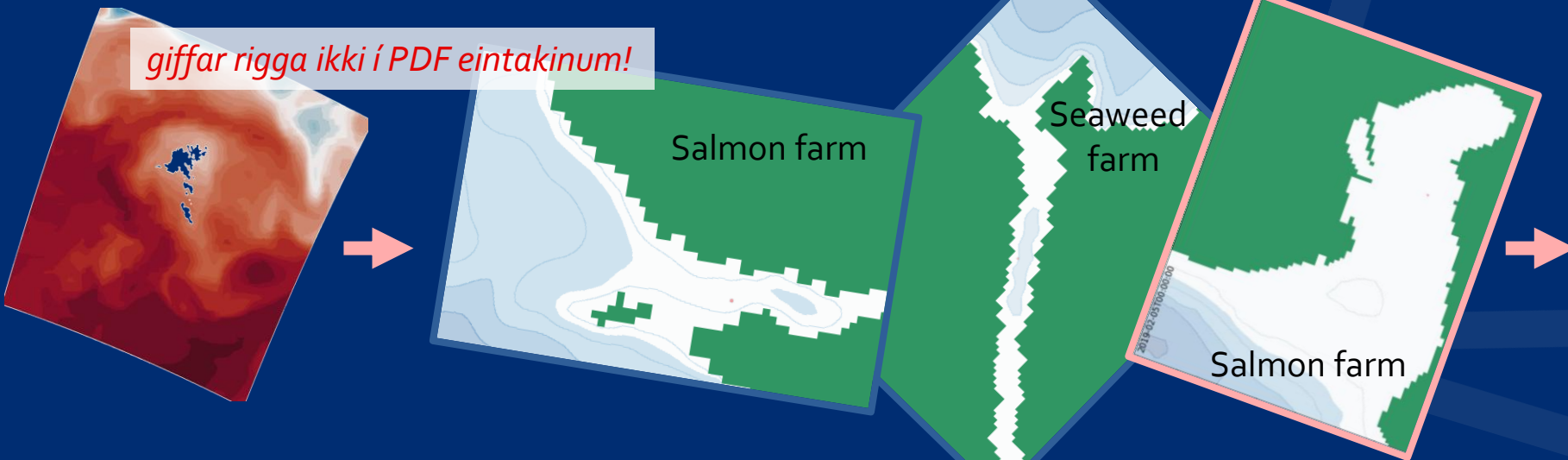
Accessible deposition modelling tools for improved environmental planning



Particulate Organic Matter (POM) footprint



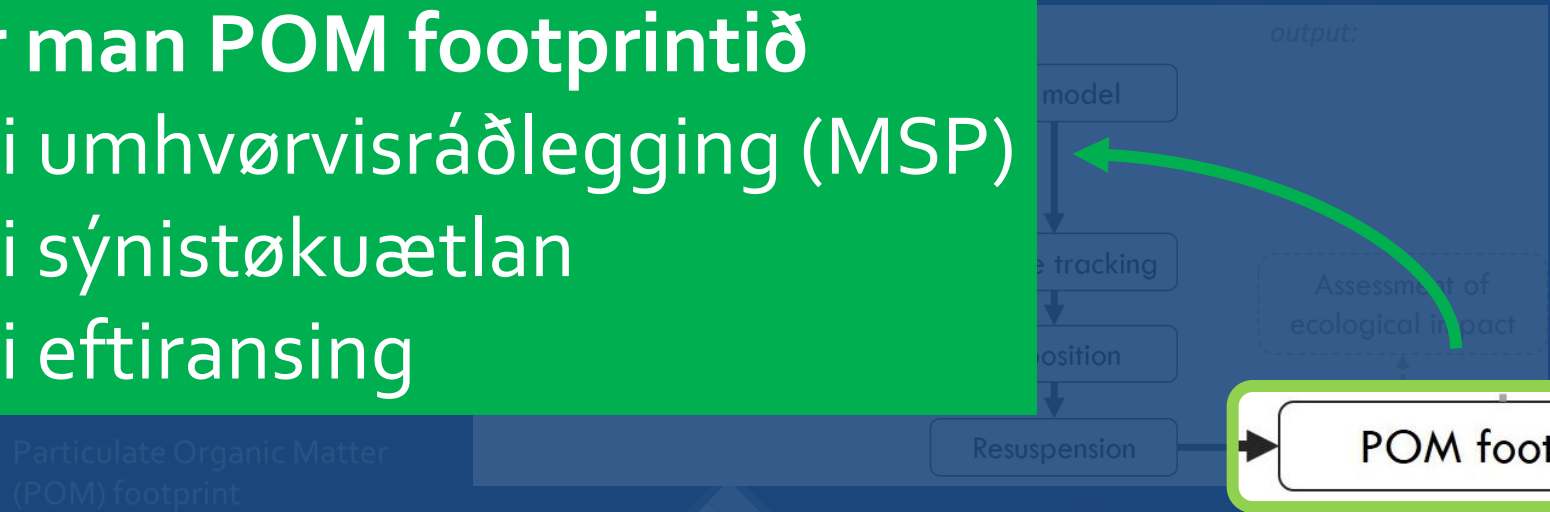
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ADepoPlan → modelling, validation and accessibility

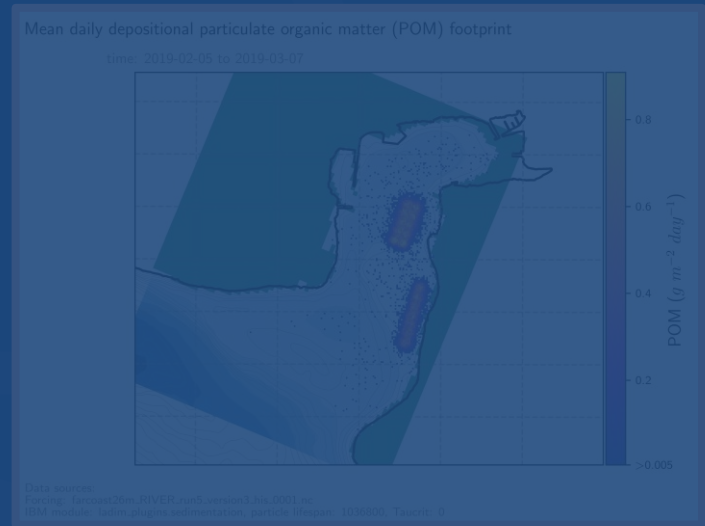
Accessible deposition modelling tools for improved environmental planning

- Kennir man POM footprintið**
- Betri umhverfisráðlegging (MSP)
- Betri sýnistøkuætlan
- Betri eftiransing



Particulate Organic Matter (POM) footprint

POM footprint



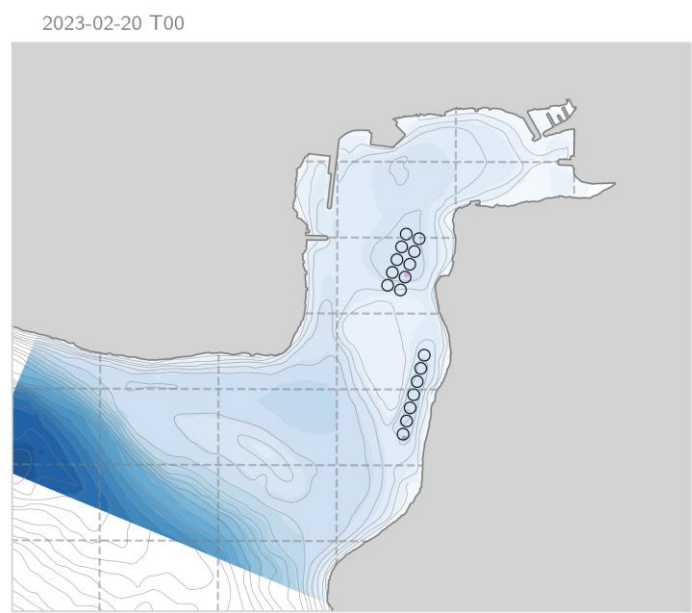
Resuspensión

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eingin

"standard"

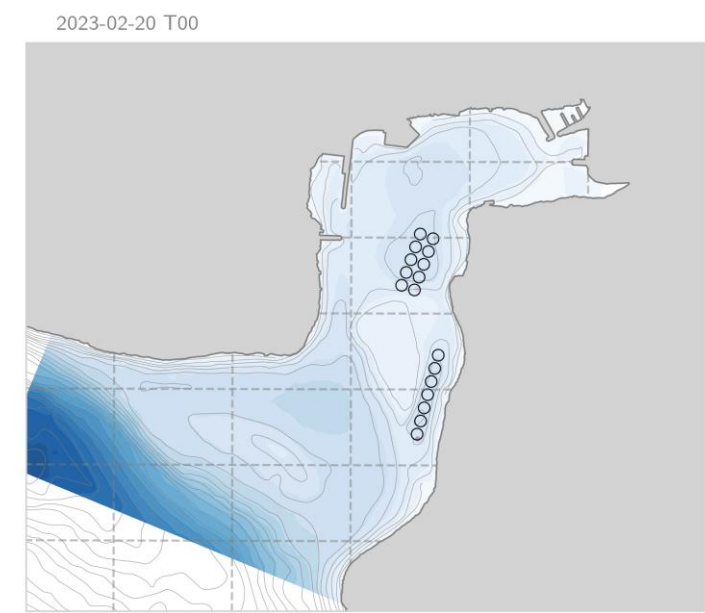
alt



Model setup:
Forcing: farcoast26m_bjsj_run5_version3_his_0001.nc
IBM module: ladim_plugins.sedimentation, particle lifespan: 14.0 days, Taucrit: 1000
Model timestep: 60 s, output: 24 h

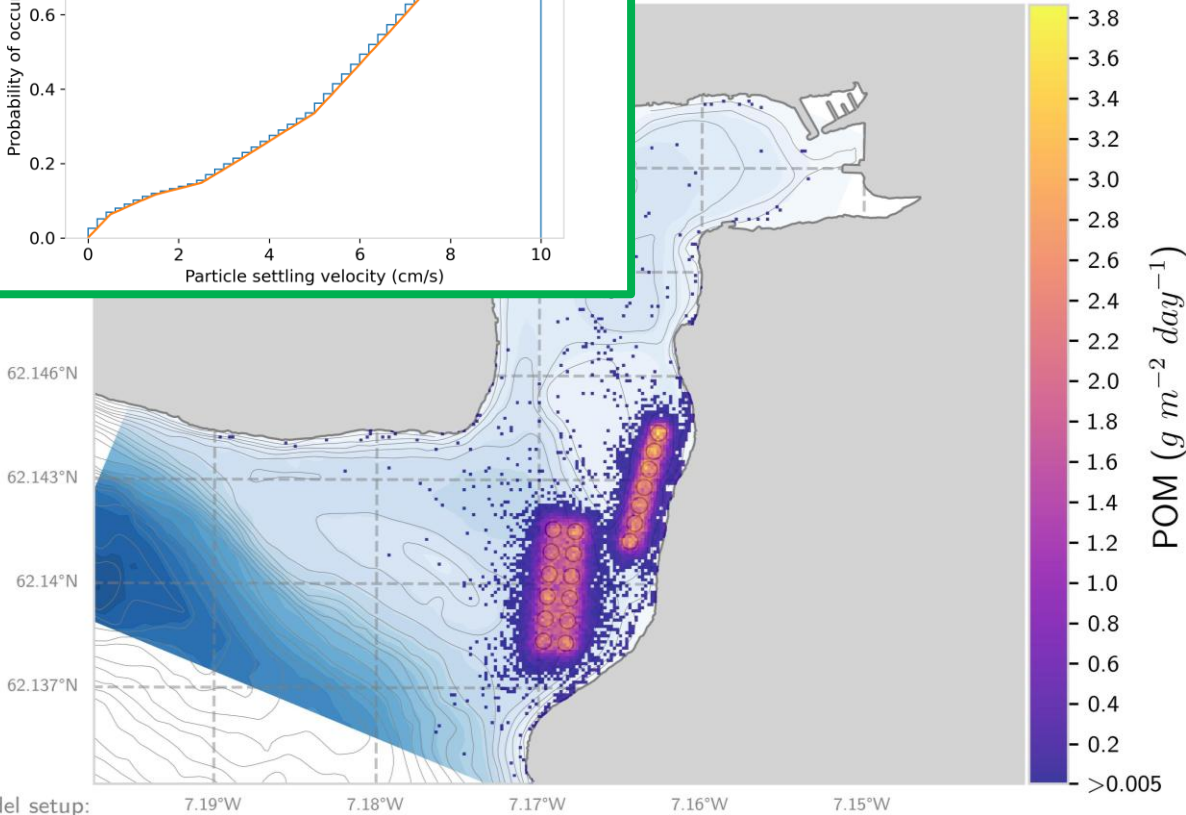
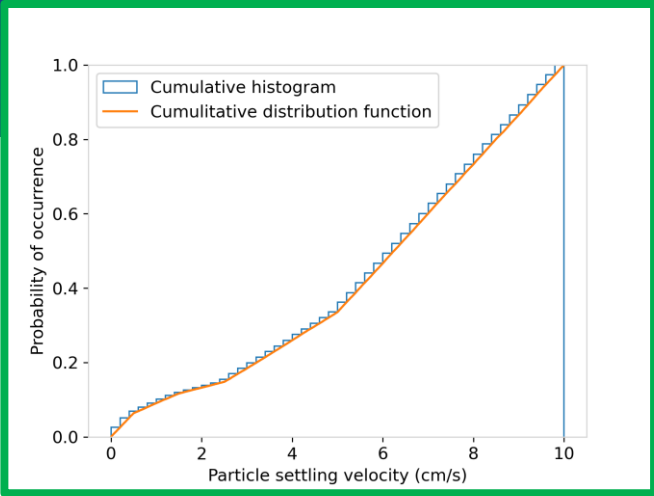


LADiM model setup:
Forcing: farcoast26m_bjsj_run5_version3_his_0001.nc
IBM module: ladim_plugins.sedimentation, particle lifespan: 14.0 days, Taucrit: 0.018
Model timestep: 60 s, output: 24 h

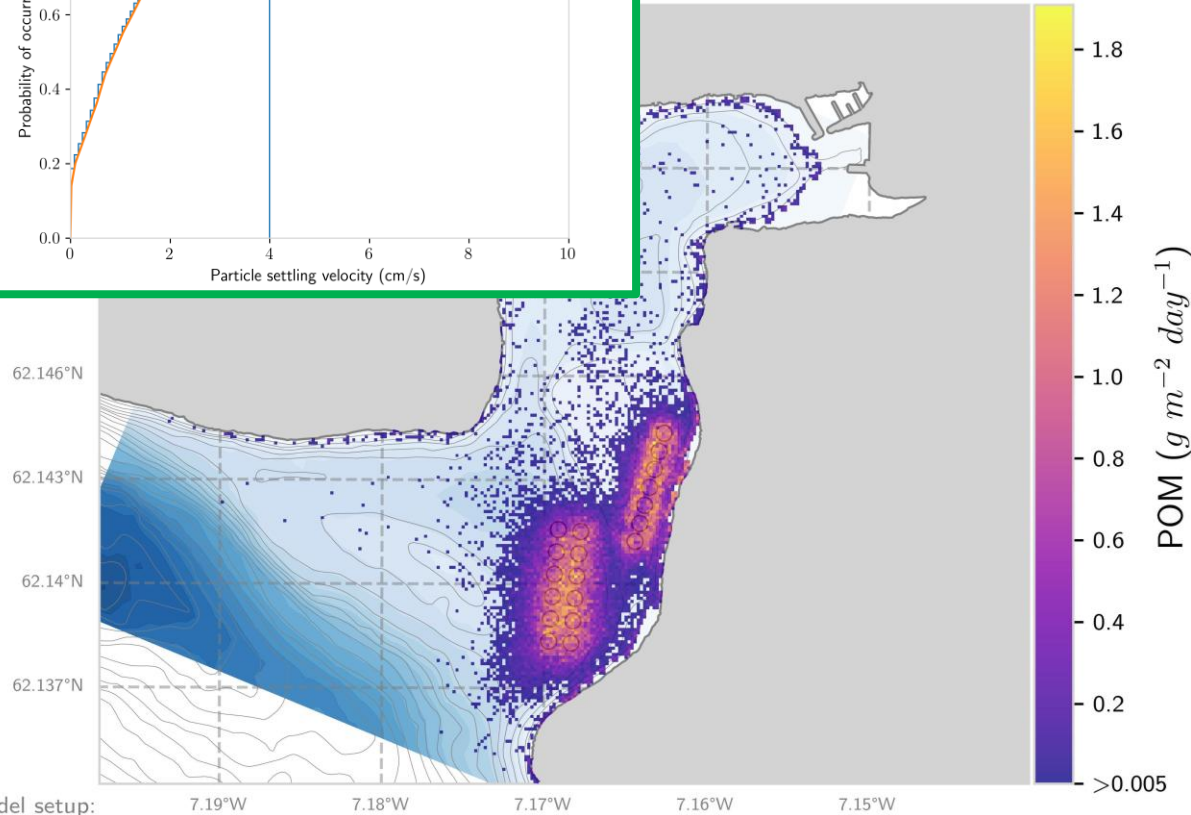
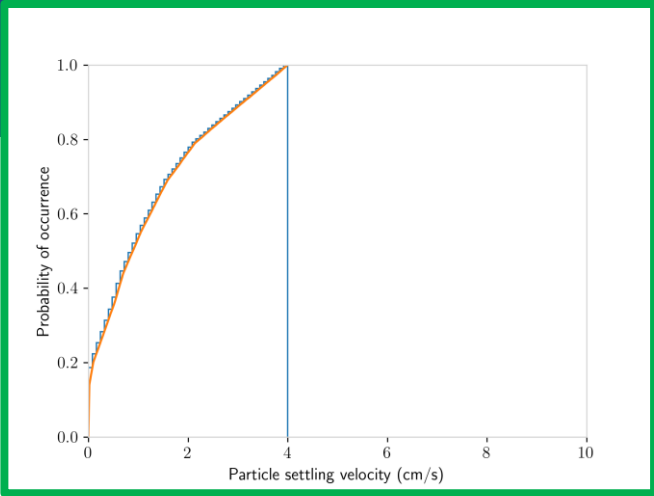


LADiM model setup:
Forcing: farcoast26m_bjsj_run5_version3_his_0001.nc
IBM module: ladim_plugins.sedimentation, particle lifespan: 14.0 days, Taucrit: 0
Model timestep: 60 s, output: 24 h

Bitlabýti - søkkiferð (cm s⁻¹) - *mean daily deposition*



Bannister et al., 2016



Naudé et al., 2024

ADepoPlan – til börn 🤗

Bitlarnir eru:



Bitlaspaðing Dunna Lortur Info

Dunna

- gvagg gvagg! eg bara flóti...

FarCoast domain

Release time

Release Depth

Model minutes pr. real second

Click the map to launch a particle. Each click adds another moving particle and keeps the trail.



https://shiny.firum.fo/visindavoka2025_particles/



https://github.com/BgAndreasen/visindavoka2025_particles

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ADepoPlan – *prototype 1*

Bitlarnir eru:



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ADepoPlan Explorer Detailed About

Info

Particles released

Feed conversion to POM

0 0.24 1

0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1

Total feed 2000

Unit kg / period

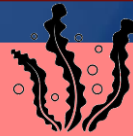
boundary selection deposition draw

Vestmanna

Leaflet | © OpenStreetMap contributors © CARTO

Taraaling Gøtuvík – bitlalagna, hvar enda teir

Bitlarnir eru:

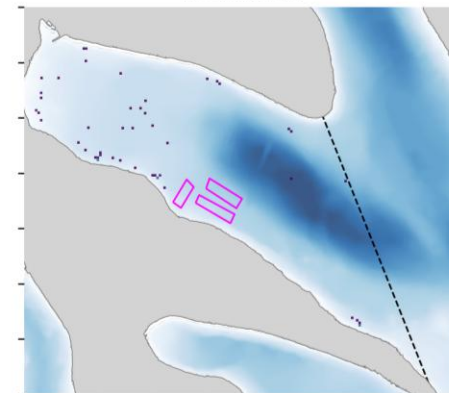
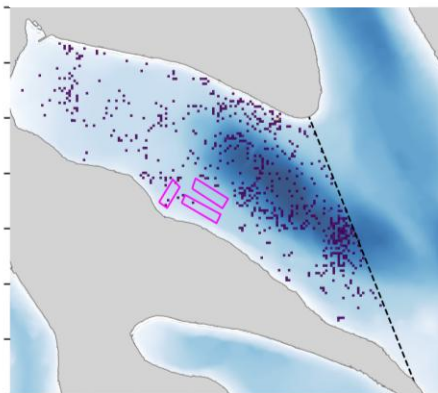
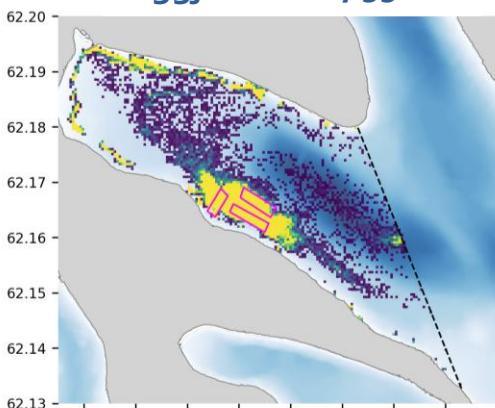


innanfyri

Liggja á botni, 55.1%

Resuspendaraðir, 1.0%

Enn í vatnsúluni, 0.1%



1e-8



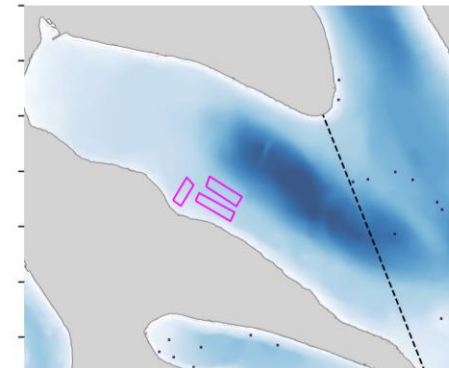
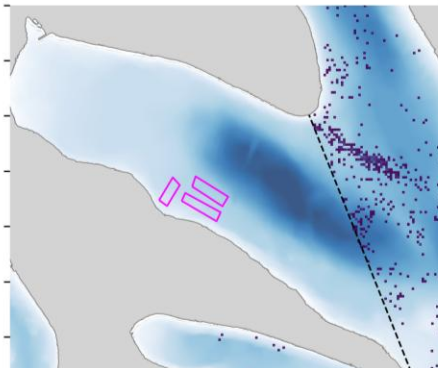
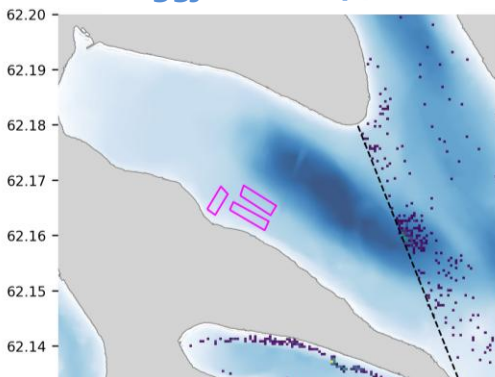
Normalised deposition density (m^{-2})

uttanfyri

Liggja á botni, 7.0%

Resuspendaraðir, 14.7%

Enn í vatnsúluni, 22.2%



The modelling framework from **ADepoPlan** will be further developed here



CS3



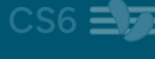
Faroe Islands
S3. Sea lice decision support tool



CS4
Iceland
S4. Pyrolysis process for sludge



CS5
Scotland (Shetland)
S5. HAB risk assessment predictive tool



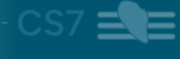
CS6
Spain
S6. Carbon footprint for bivalves tool



CS2
Spain
S2A. Selective breeding of rainbow trout
S2B. Transition from fresh to brackish water



CS9
Netherlands
S9. Low emission pens and nets



CS7
Sweden
S7. Change deployment for oysters



CS8
Sweden
S8A. Ulva culture material and seeding
S8B. Change deployment for kelp



CS1
Poland
S1A. Water self-assessment methodology
S1B. Upcycling of sediments



[OCCAM_Project](#)



www.occamproject.eu



contact@occamproject.eu

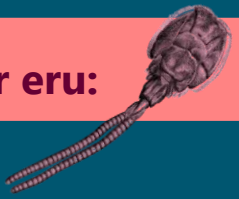


Co-funded by the European Union

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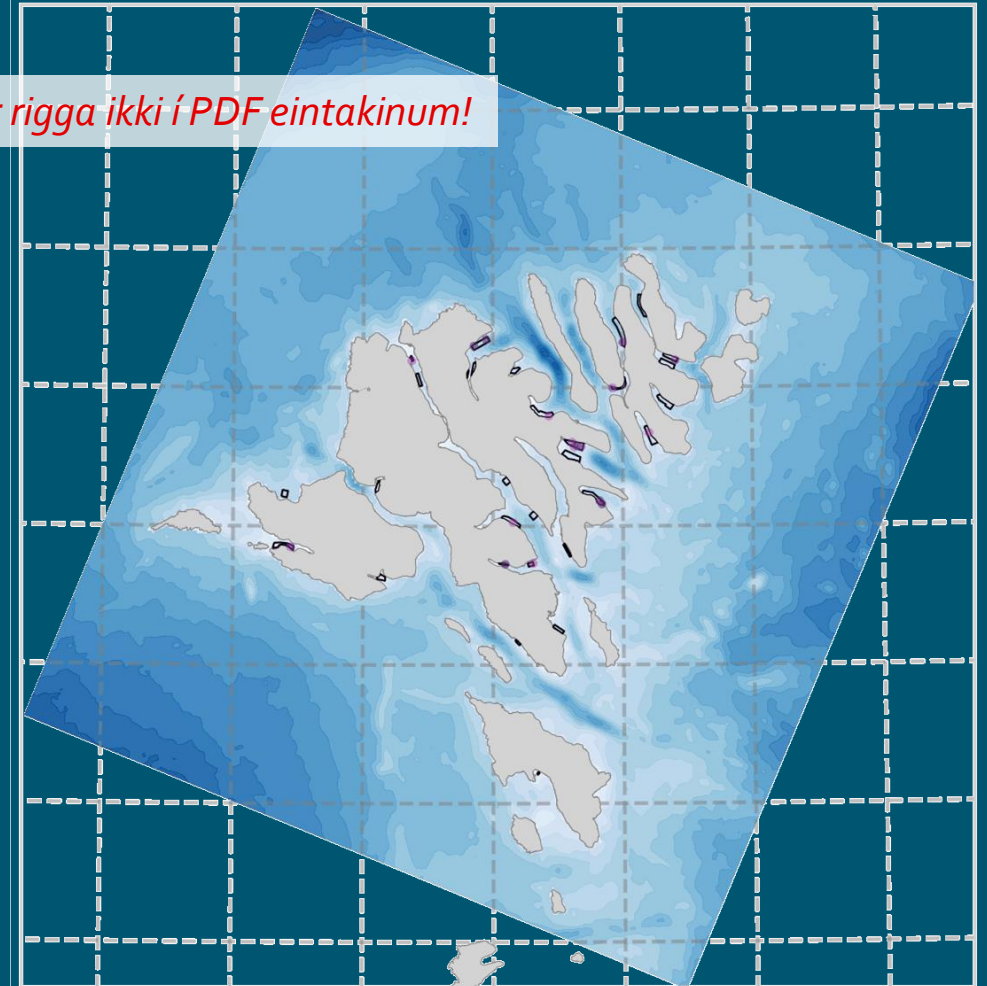
Bitlarnir eru:



- Sea lice decision support tool (DST)
- Bitlasporing -> *víðarimening*
 - Fleiri ættarlið av laksalús
 - Innan og utan smitta upployst lokalt
 - ...
- Status í dag?
- Veðurlagsbroytingar?
 - FarCoast drivin av CMIP !!

2023-12-11 T02

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Takk fyri meg 😊

