Havið á teldu

- hvat teldur læra okkum um aldu og streym við Føroyar

FRÓÐSKAPARSETUR FØROYA

VITAN ER PALLURIN FORVITNI ER DRÍVMEGIN

Vísindavøkan 2012

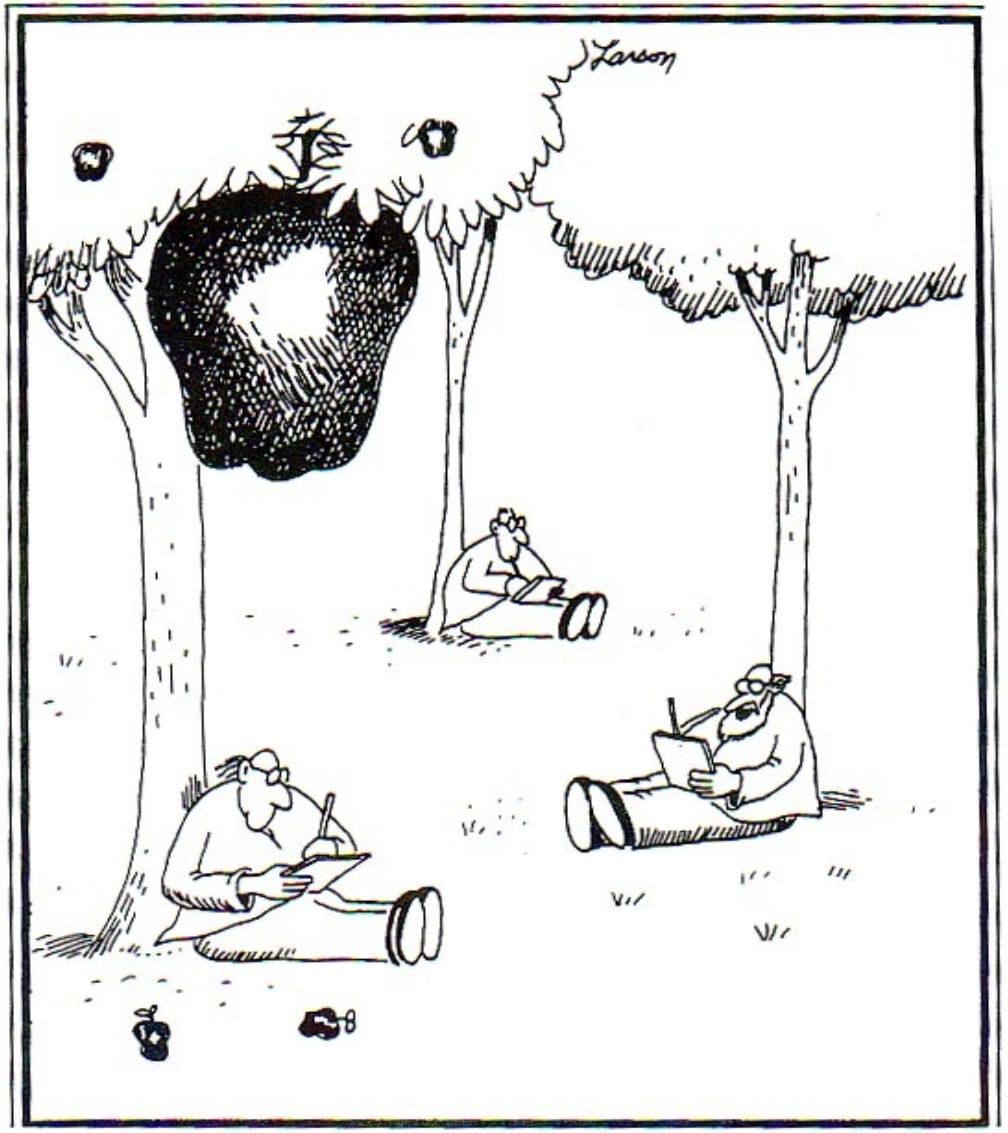
Öström 27/9 10:00

Bárður A. Niclasen

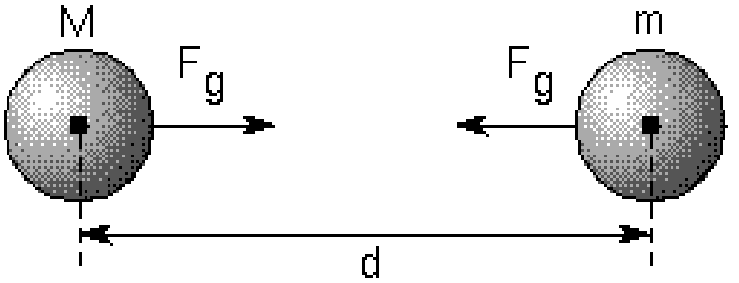
Fari at tosa um:

- Nakað um fysik og teldur
- Sjóvarfallið við Føroyar
- Alda við Føroyar

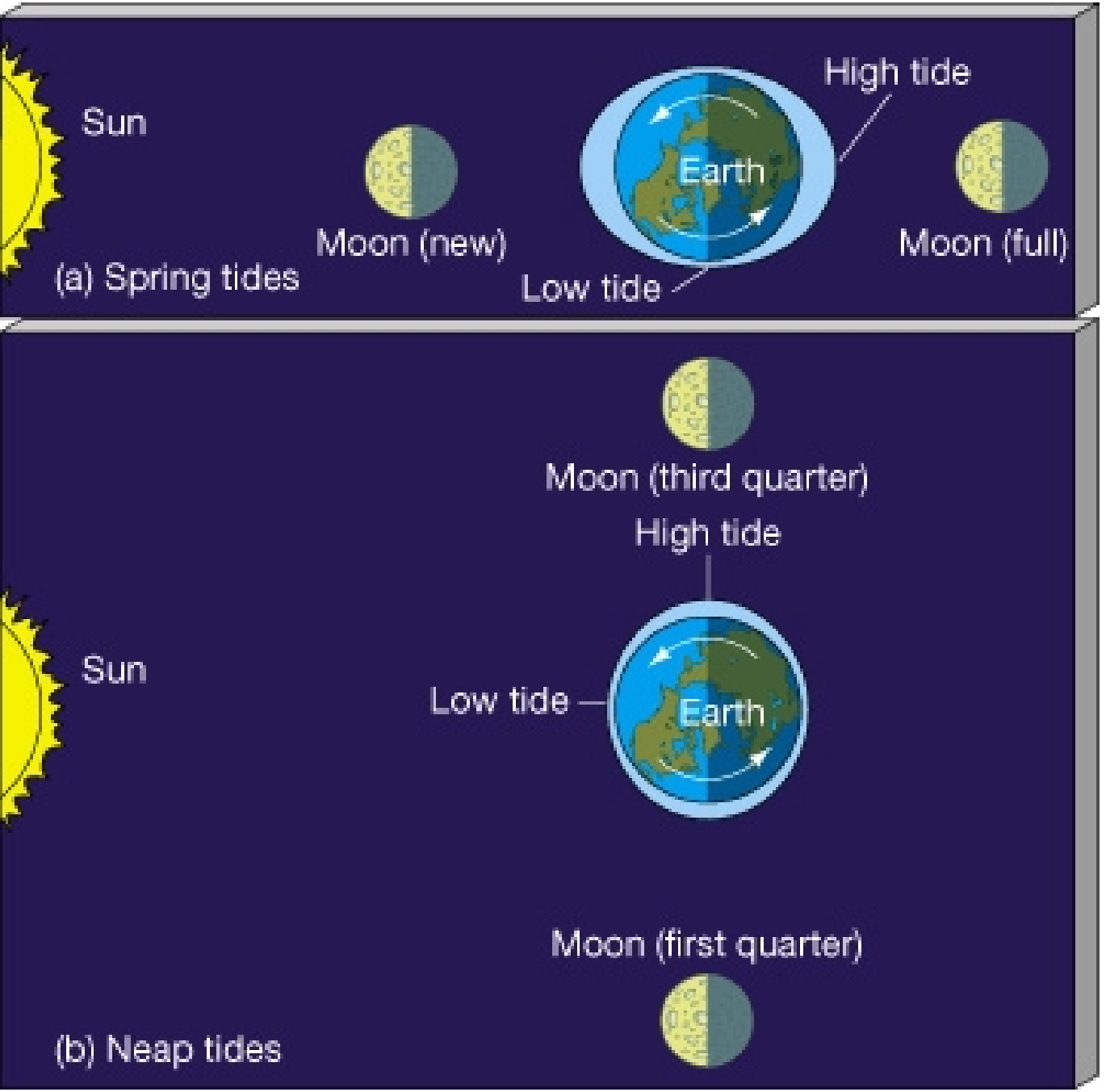
Newton og súreplið



"Nothing yet. ... How about you, Newton?"



$$F_g = \frac{GMm}{d^2}$$

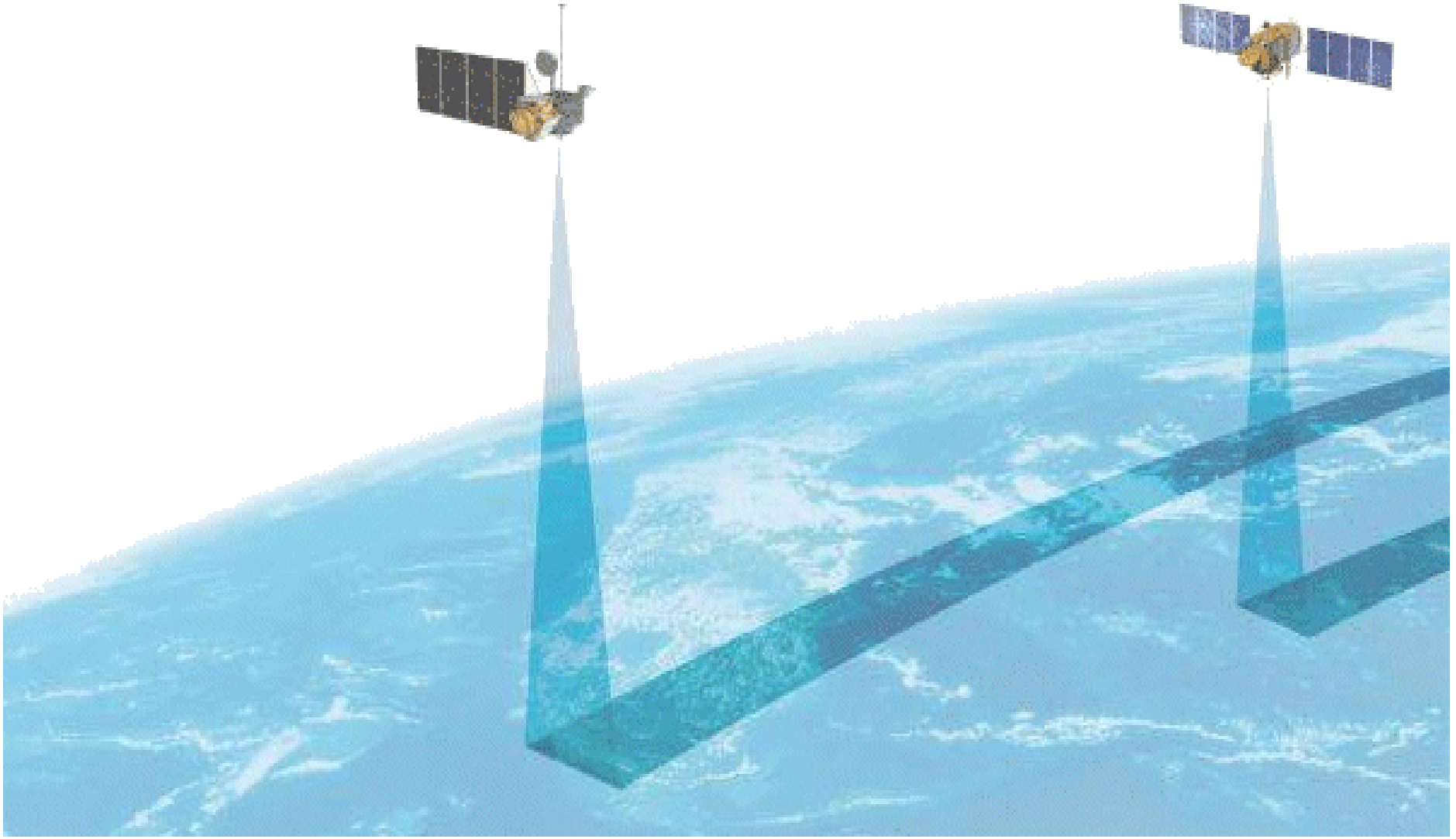


Sjóvarfall

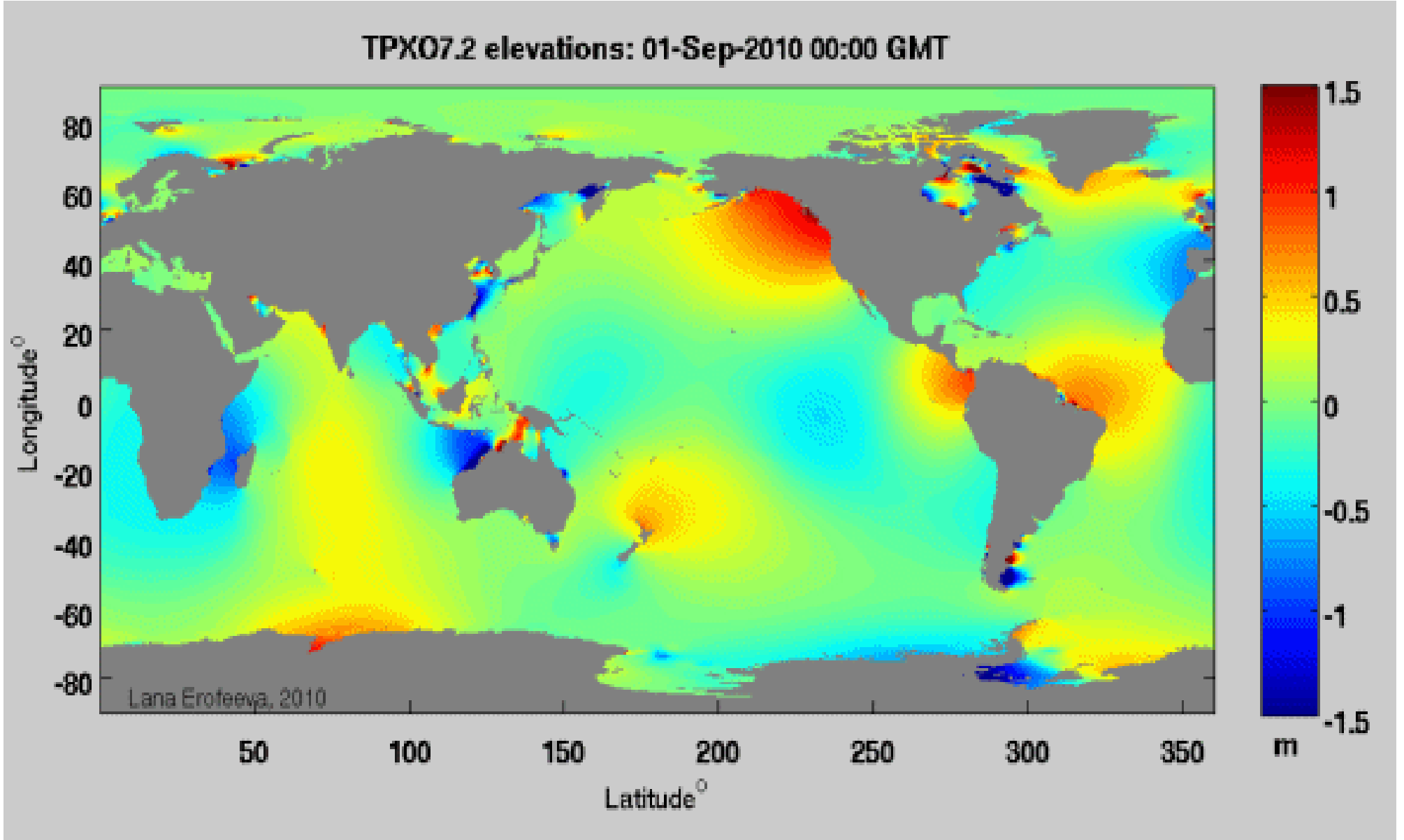
Bunga vegna atdráttarkraft frá mána og sól

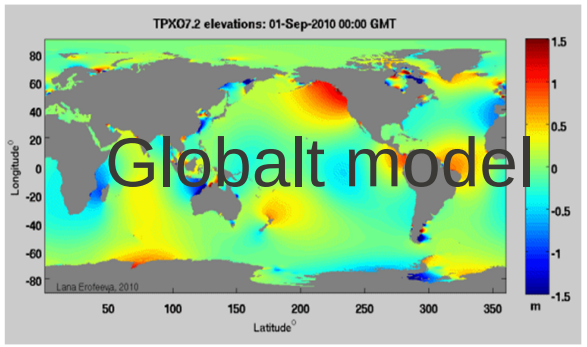
Streym vegna rotatión av jørðini

Satelittar máta hadd á sjónum (eisini sjóvarfalsalduna)

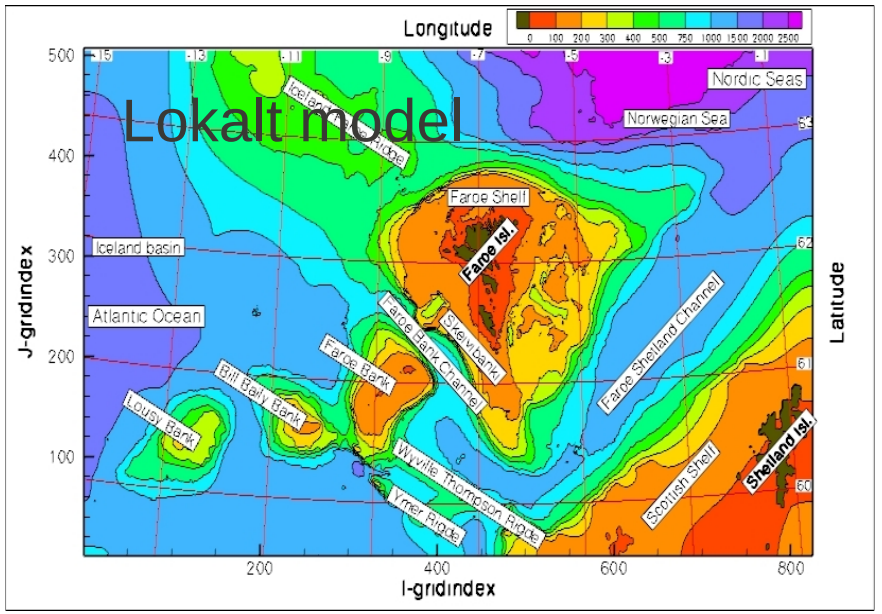


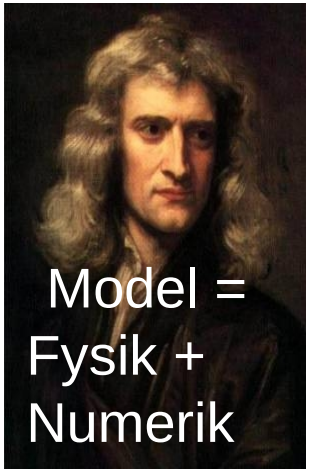
Globalt model av sjóvarfalli



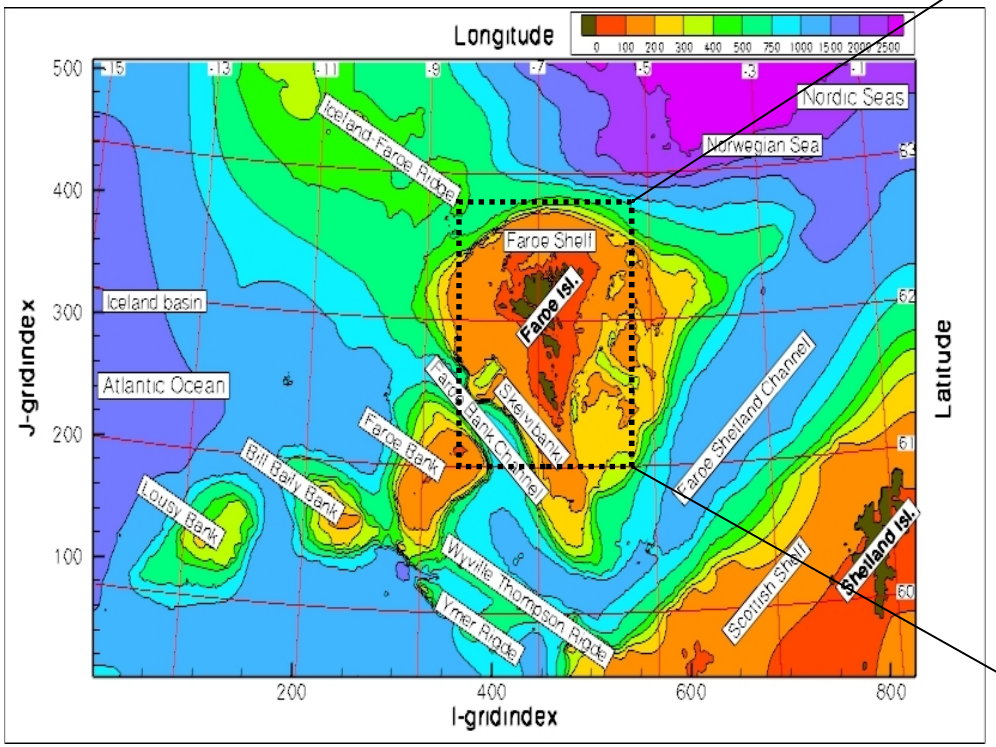


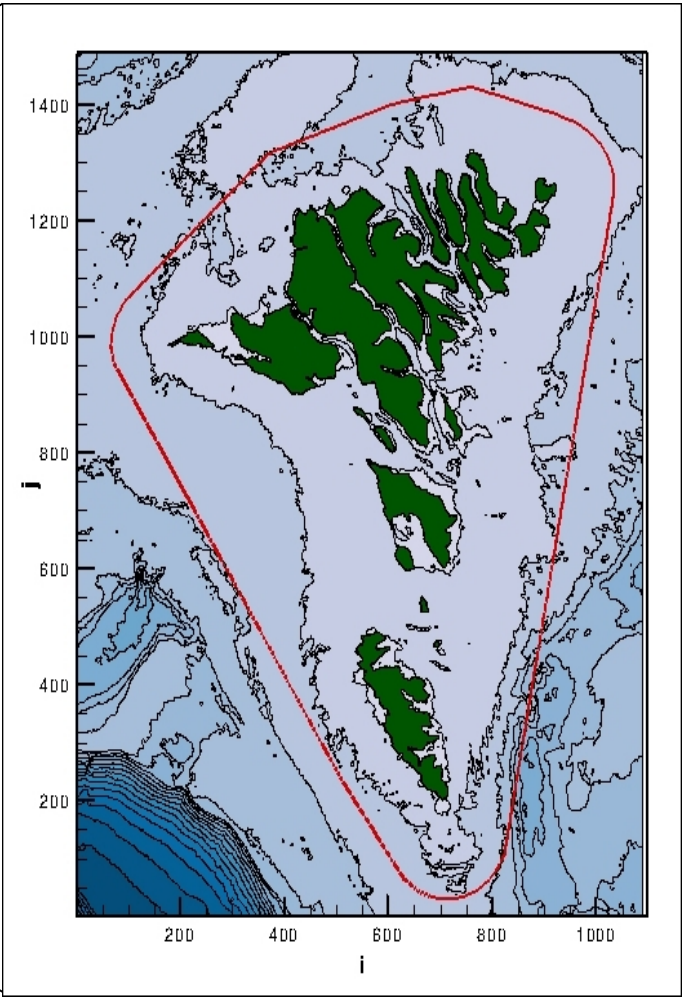
Kanna um úrslit líkist veruleika



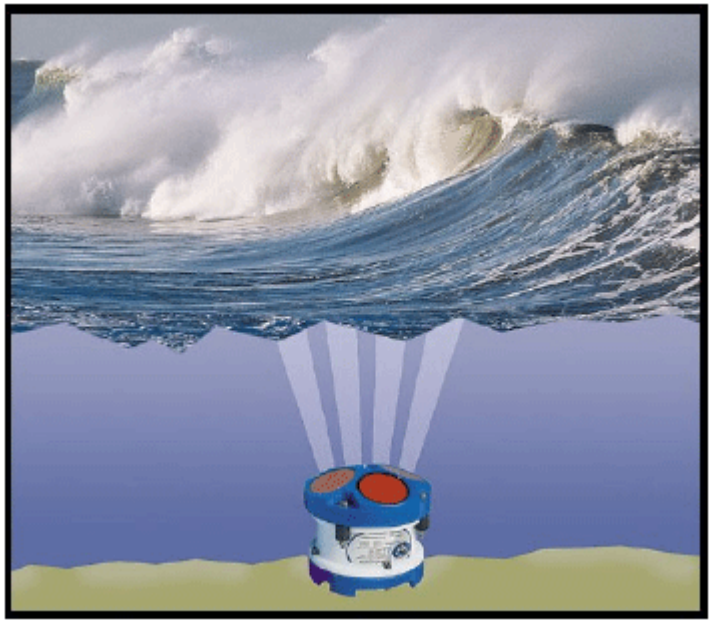


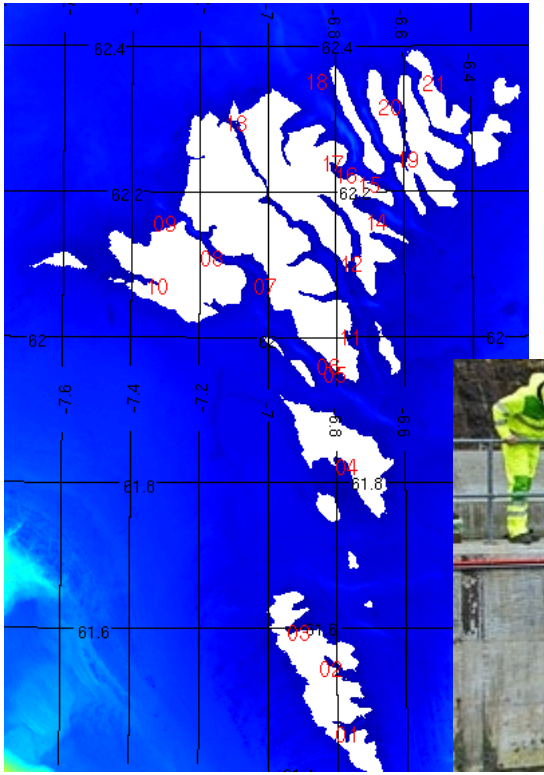
Koyra model við betur upploysn

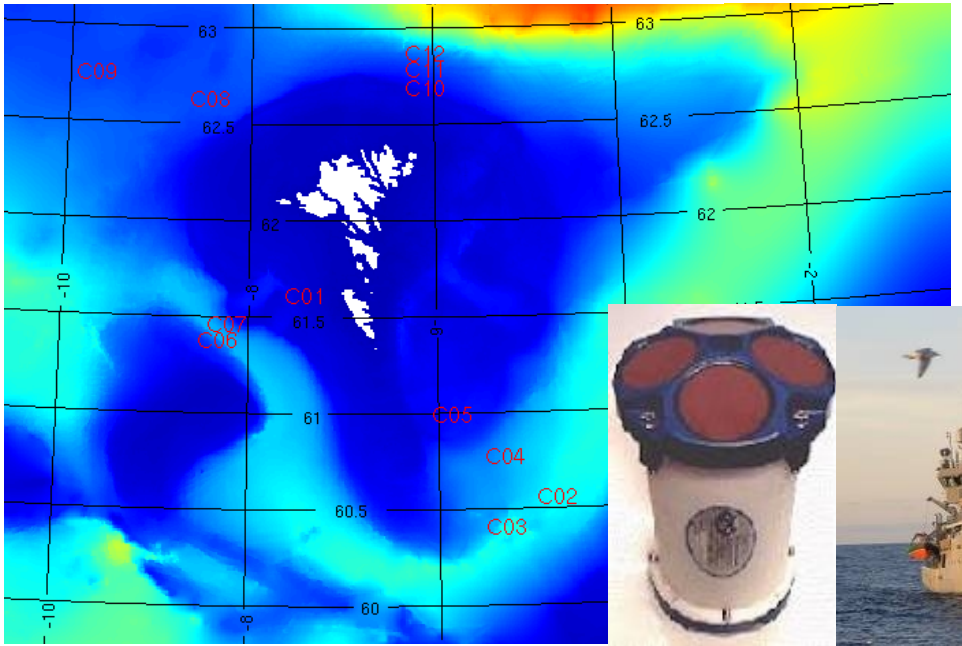




Hvussu er veruleikin?

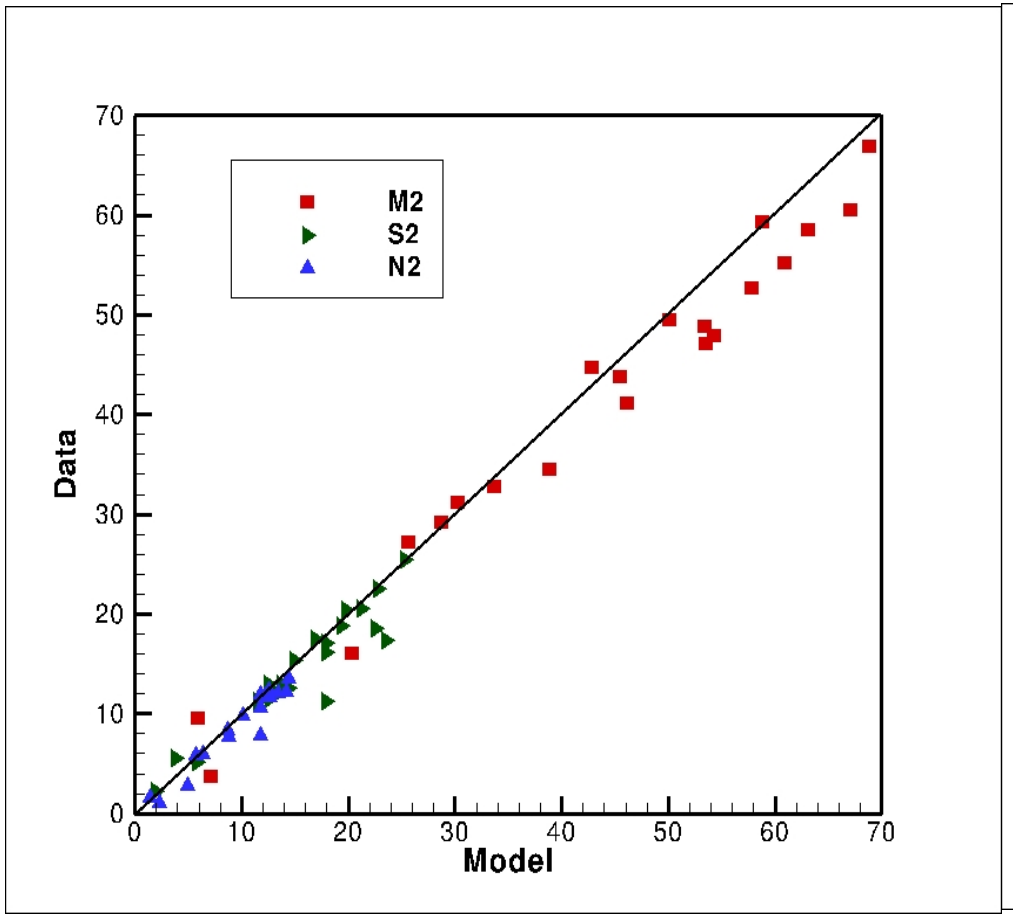


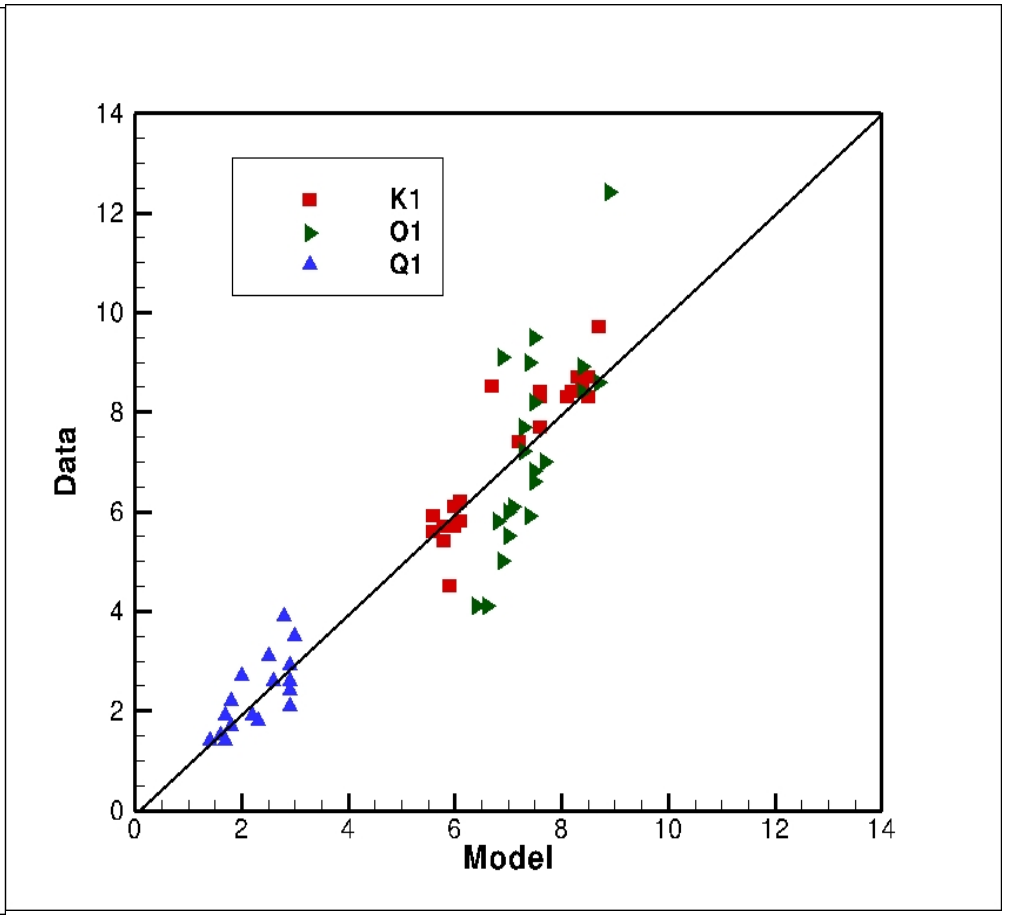


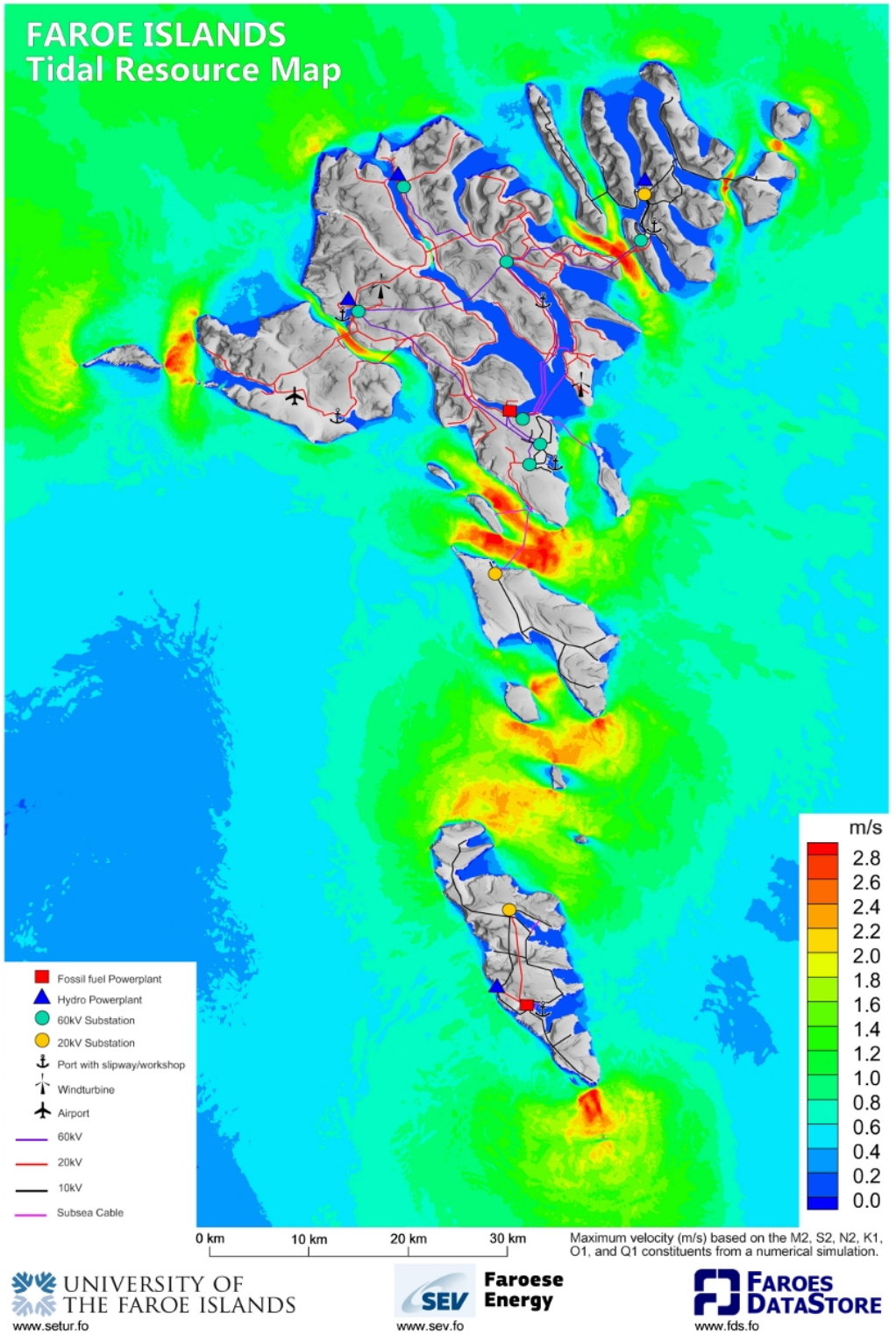


Model og mátingar

21 coastal stations







Harðasta sjóvarfalsrák

Project supported by

SEV

FVE
FISKIVEIDIEFTIRLITIÐ
The Faroe Islands Fisheries Inspection

granskingarráðið THE FAROESE RESEARCH COUNCIL

Tidal Resource Map

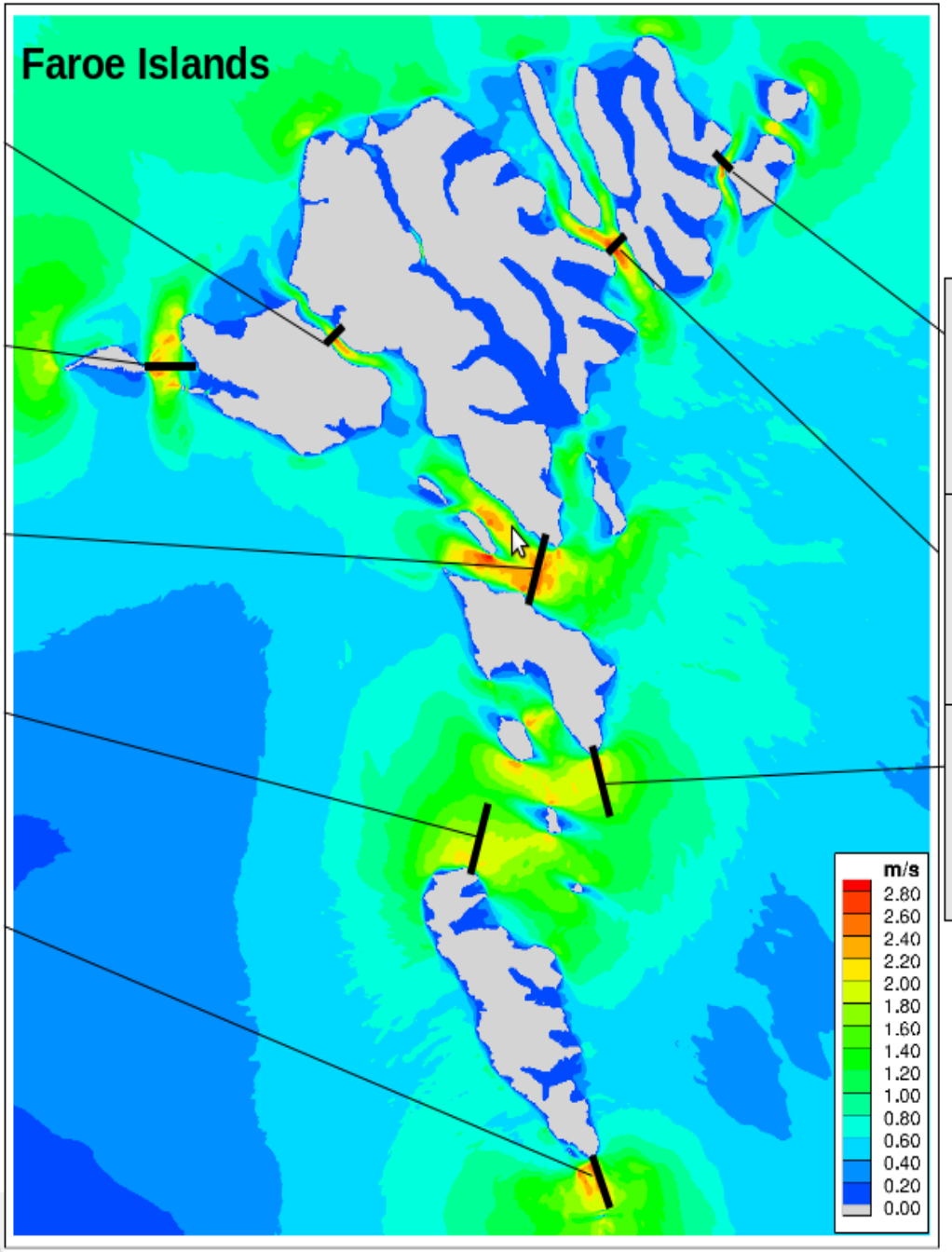
Avail.	69
D>40	58
v>2.5	58

Avail.	205
D>40	55
v>2.5	0

Avail.	509
D>40	506
v>2.5	446

Avail	331
D>40	331
v>2.5	0

Avail	564
D>40	432
v>2.5	111



- based on numerical simulations
- one month average
- unit: MW

Avail.	101
D>40	100
v>2.5	89

Avail.	213
D>40	201
v>2.5	164

Avail.	317
D>40	276
v>2.5	30

Exploitable:
15-20% of available

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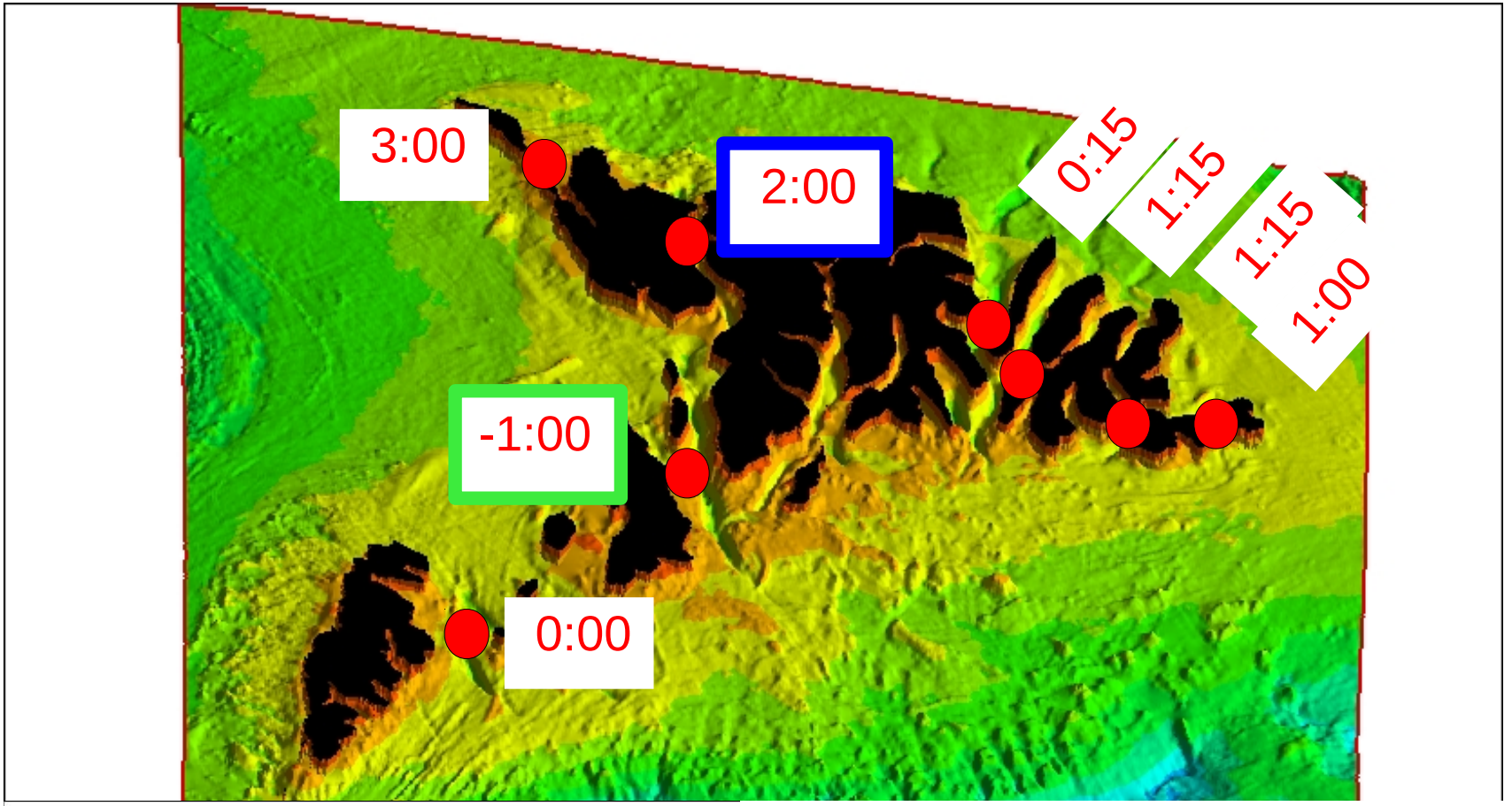
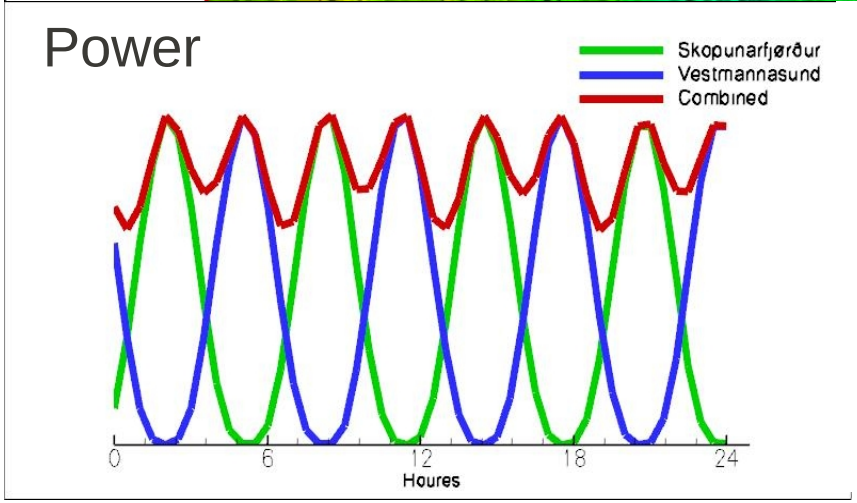
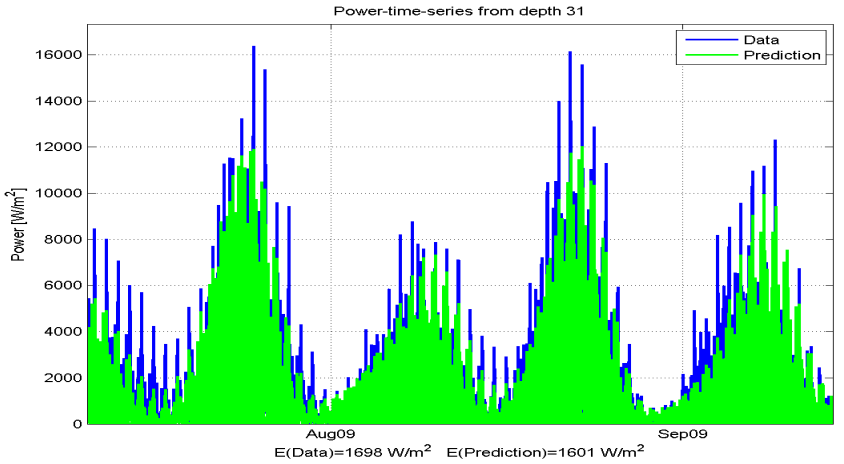
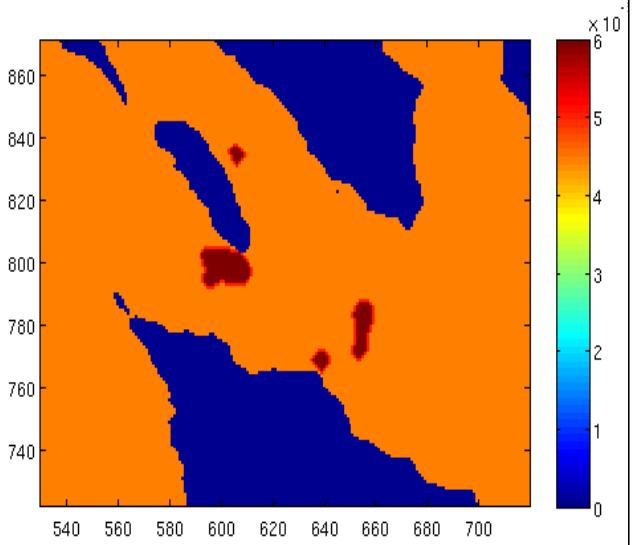
Nær er hart rák?



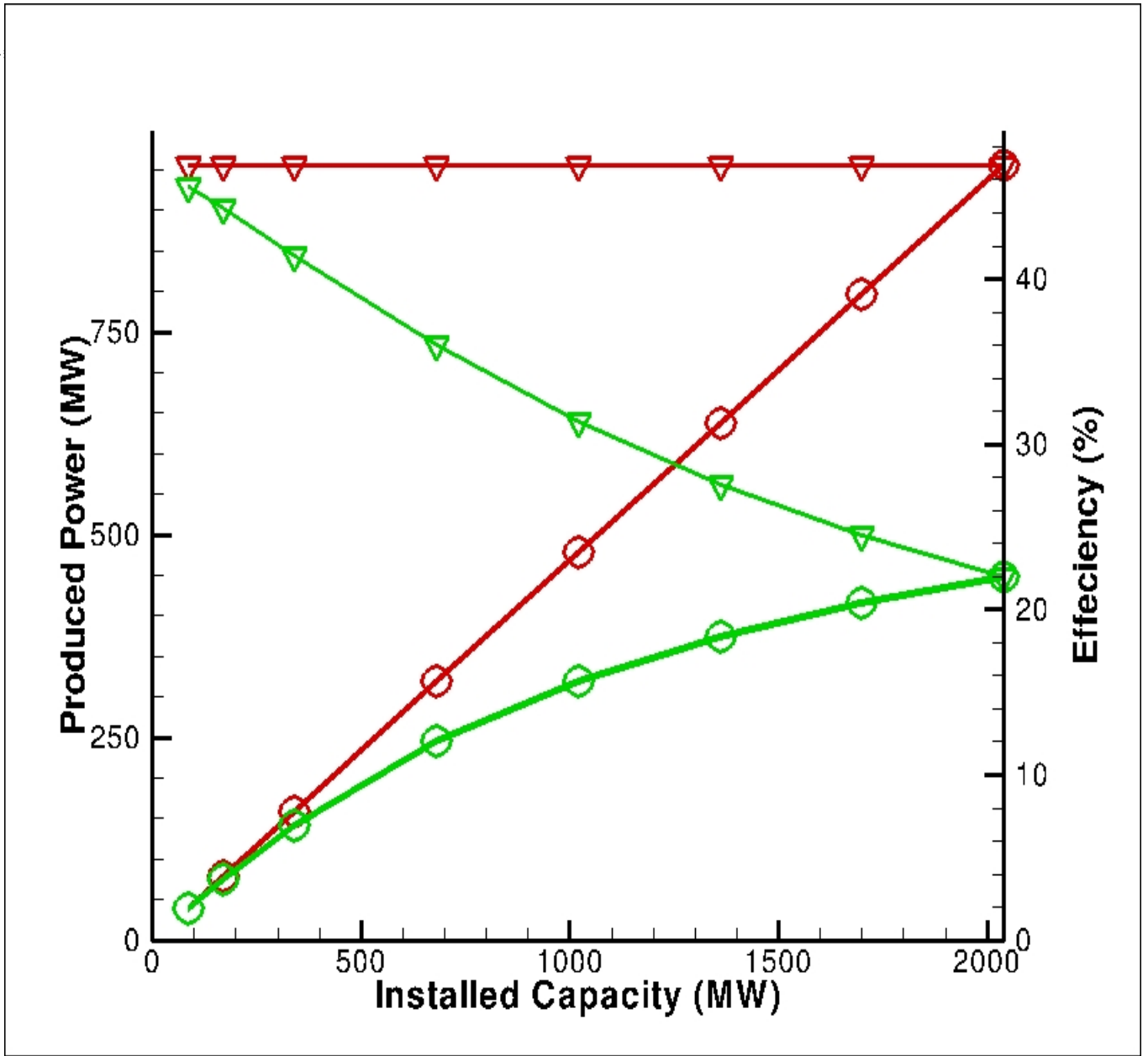




Tappa orku í Skopunarfjørði

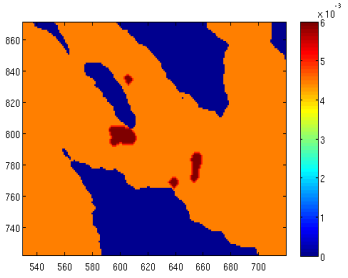


Turbines:
Rated speed:2.5 m/s.
Cut inline: 1.0 m/s
Turb. Eff.: 40%
Max Prod: Variable

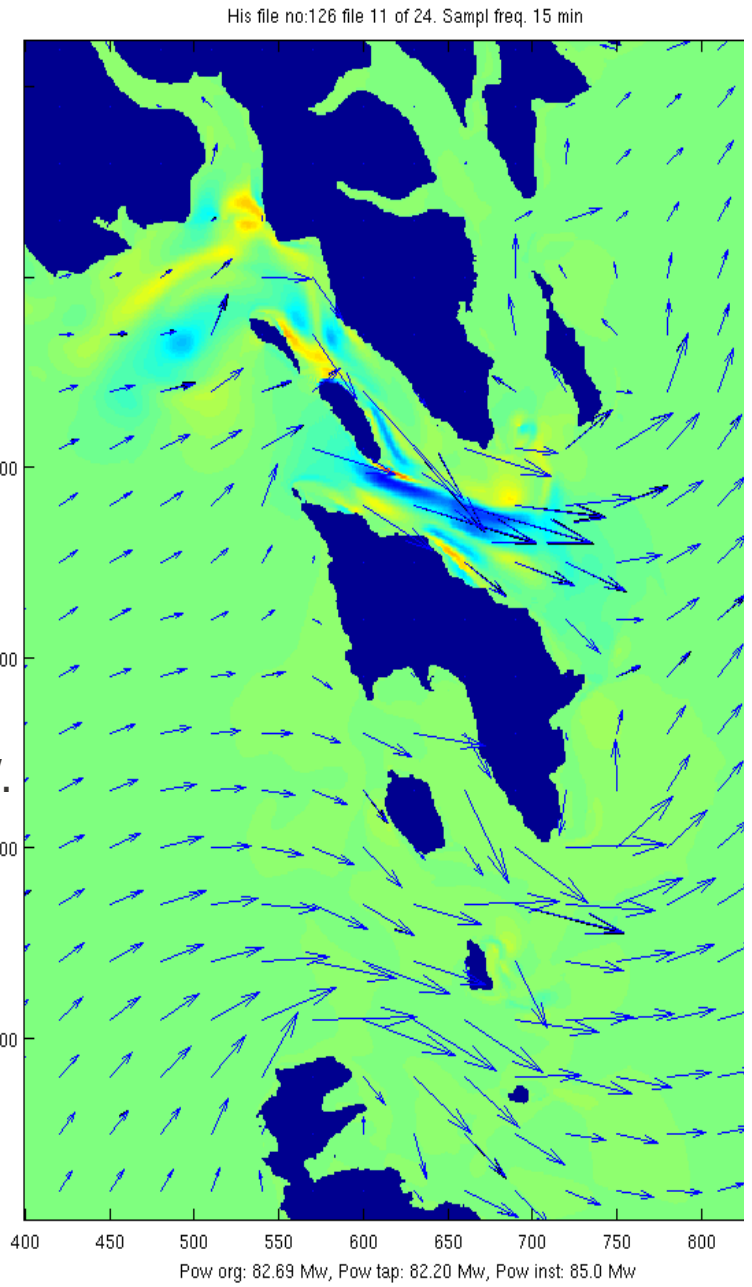


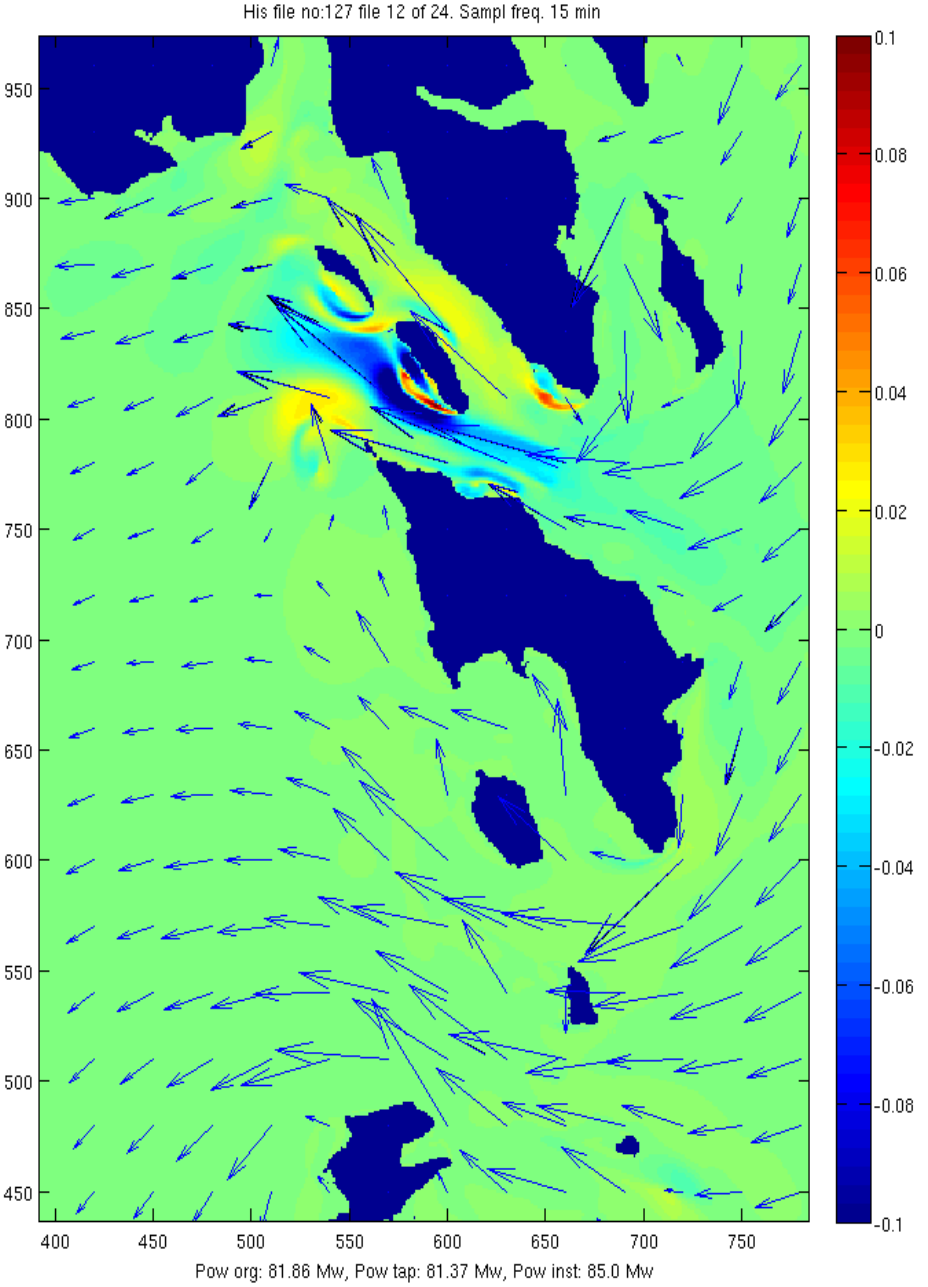
Àvirkan á rákið

- løtumyndir av ávirkanini við størstu orkuframleiðslu

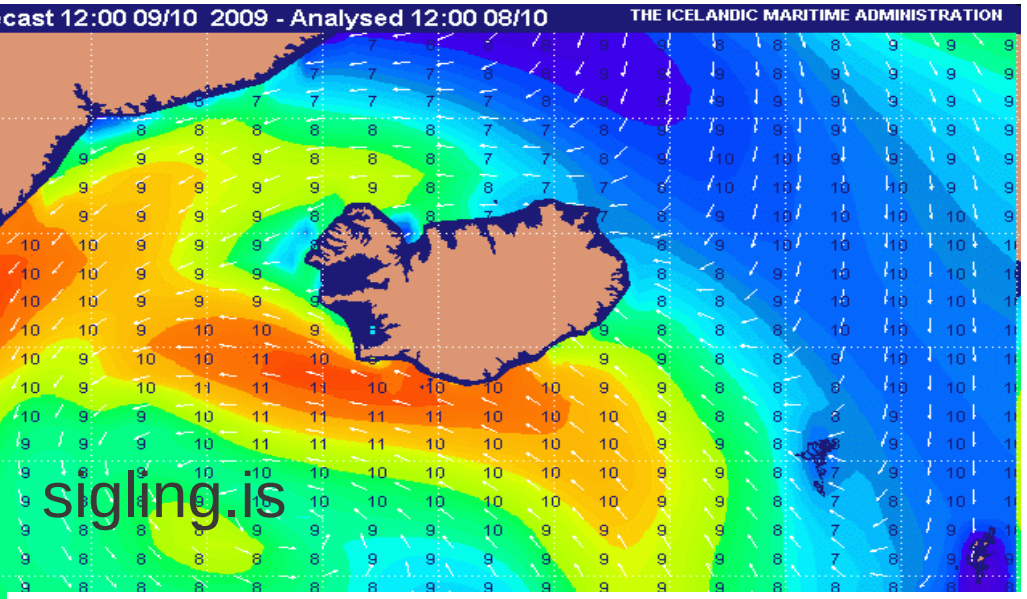


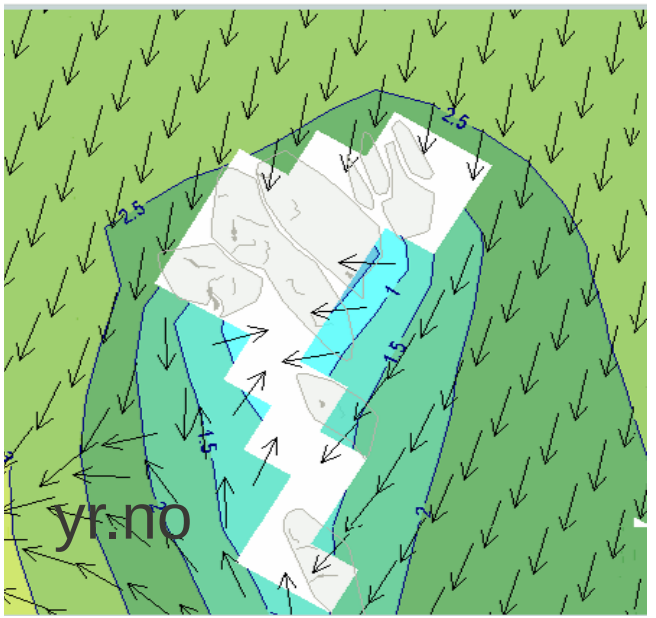
Instalera: 85 MW.
Orka: 82 MW

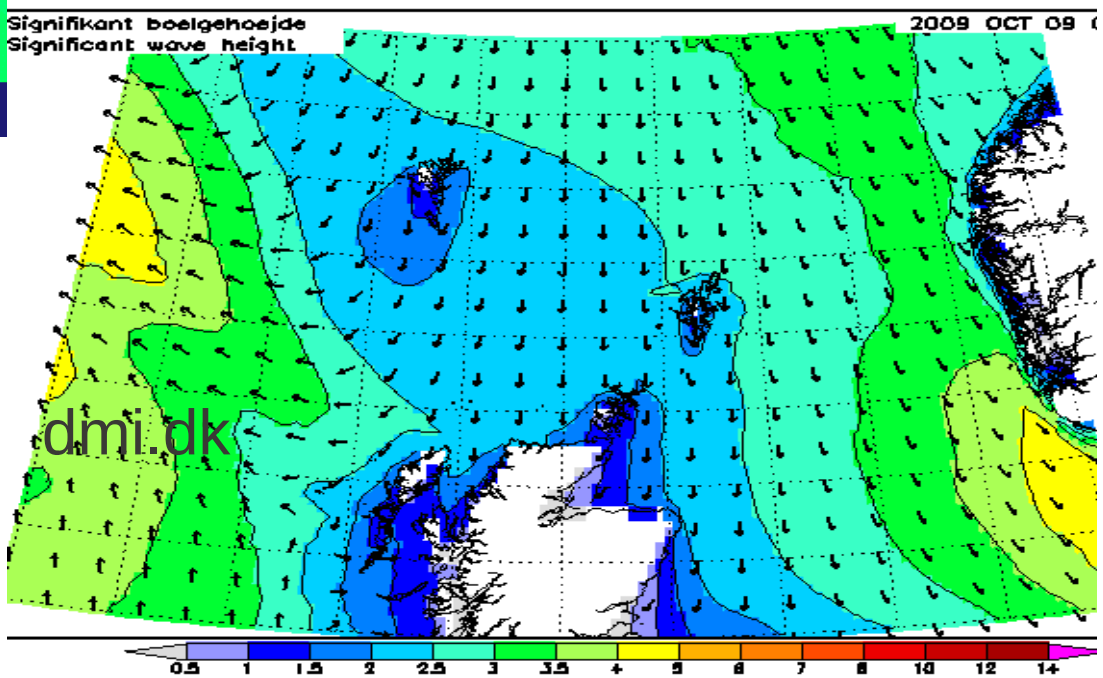


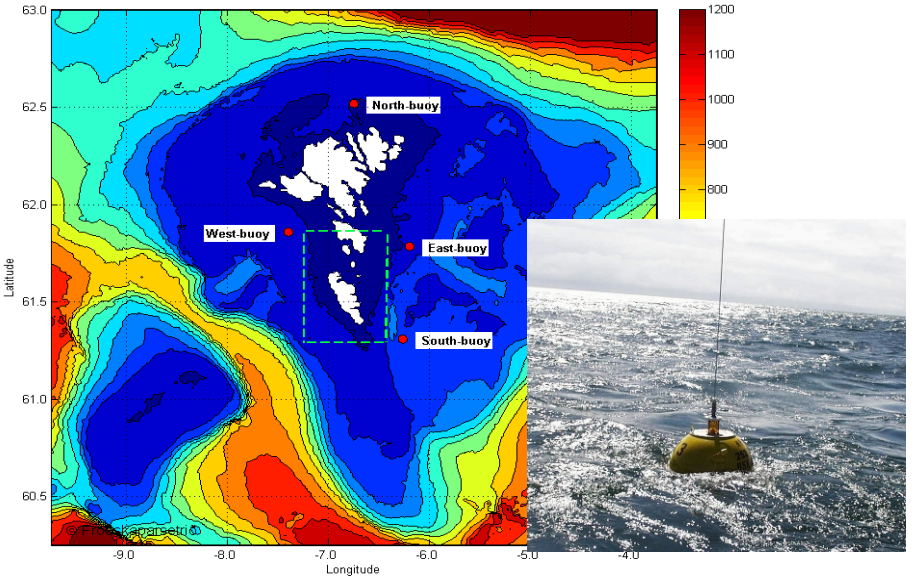


Aldu forsagnir fyri okkara leiðir









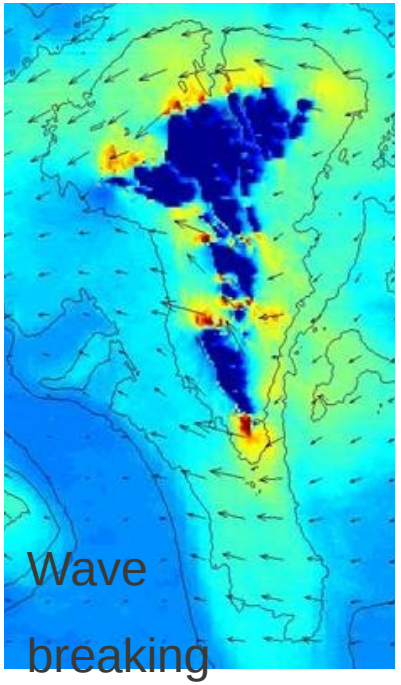
Ávirkan av streymi á alduna

Einfaldar forsagnir

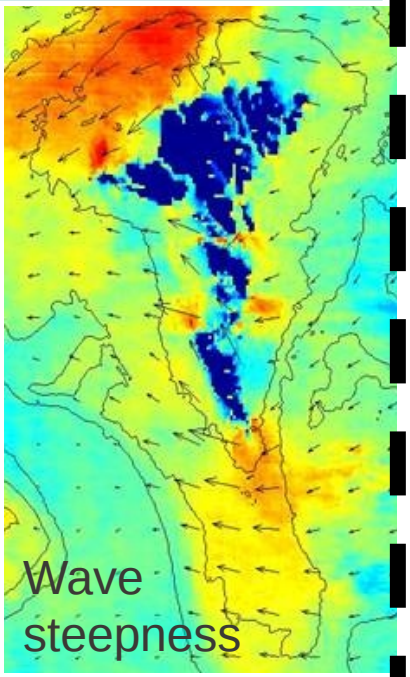
Wave

H_{m0}=2.5m

Wind 10 m/s



Wave breaking



Wave steepness

Wave direction is given in the first column and significant wave height in the first row.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
N	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
NNE	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
NE	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
ENE	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
E	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
ESE	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
SE	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
SSE	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
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SSW	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
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WSW	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
W	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
WNW	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
NW	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link	link
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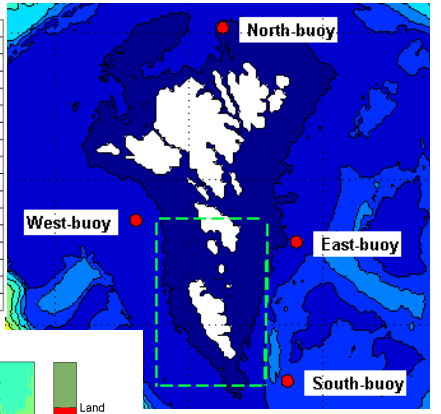
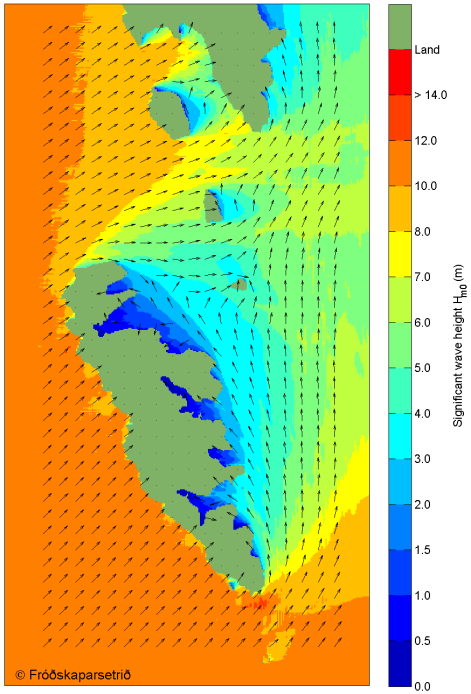


Incoming wave field: H_{m0} = 11.0 m from southwest

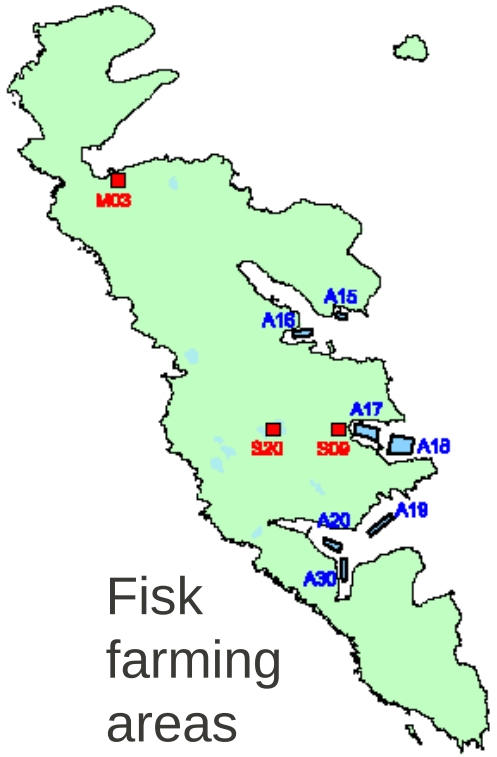


STATOIL -bólkurin

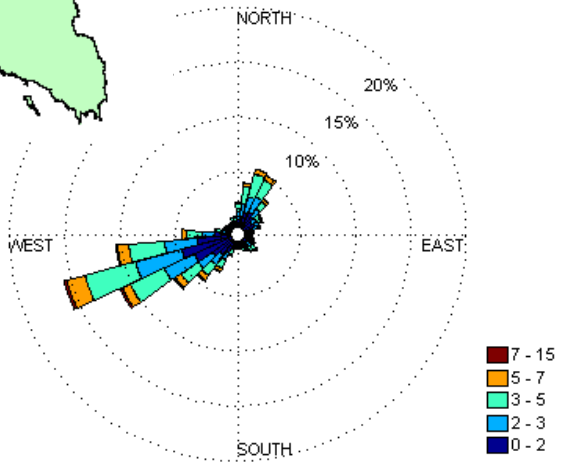
granskingarráðið

FISKIVINNU GRANSKING

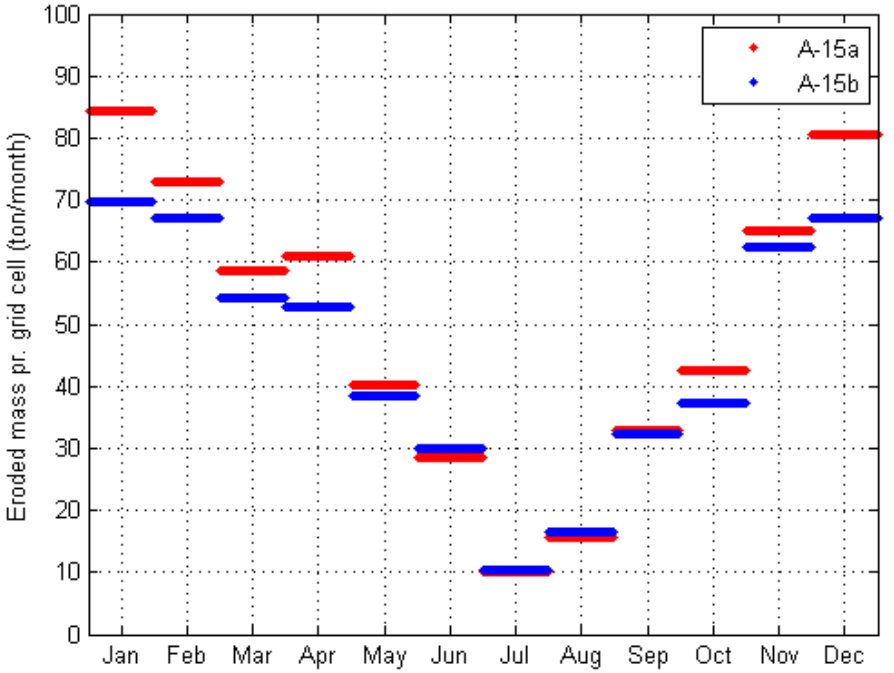
Aldu reinsan av aliøkjum



Fisk farming areas

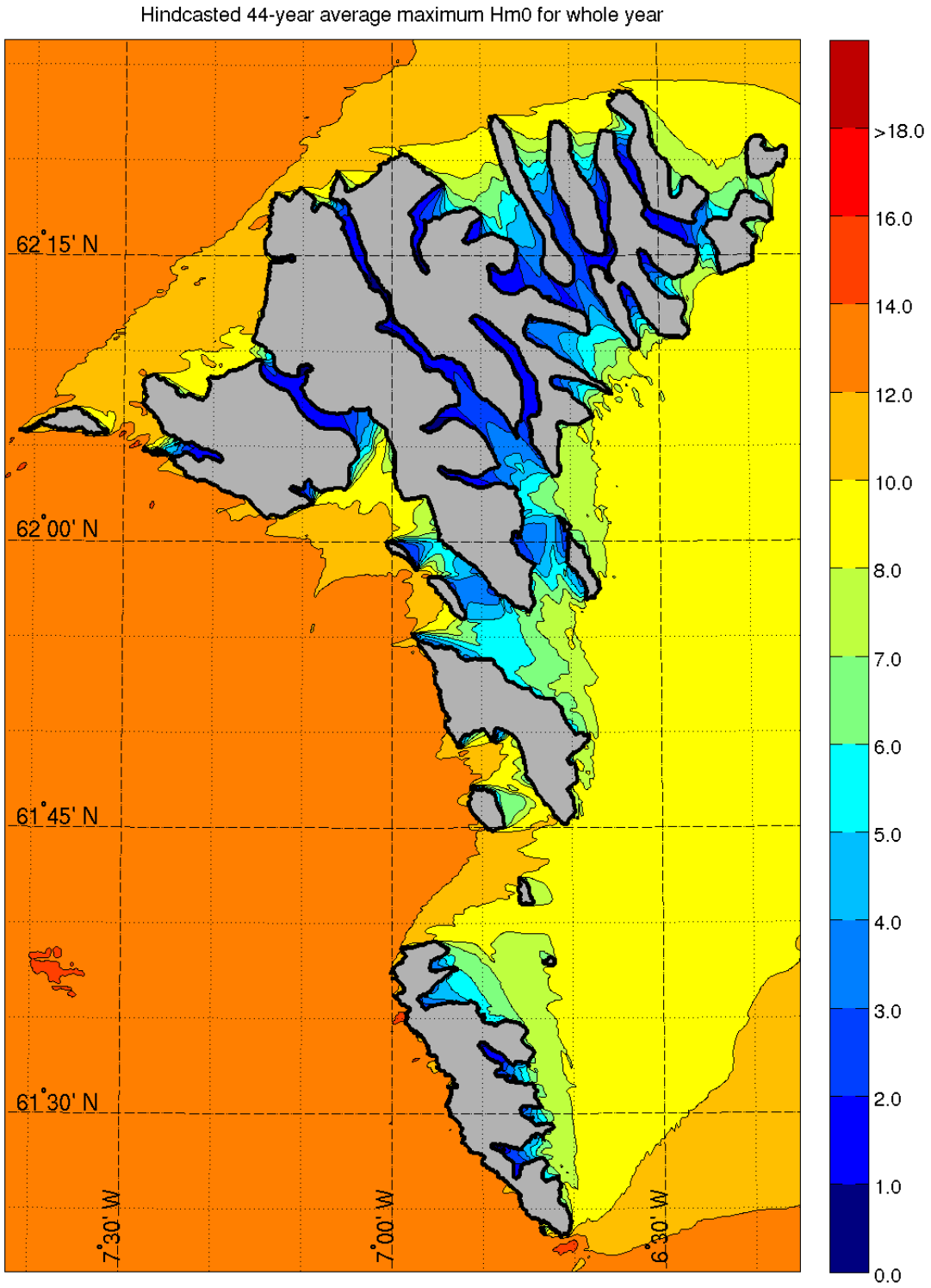


Wave climate south buoy



Niðurstøða A15:

According to the assumptions and calculations made here, accumulation of wastes should not be a serious problem as long as there are more than 8m of free height beneath the fish cages.

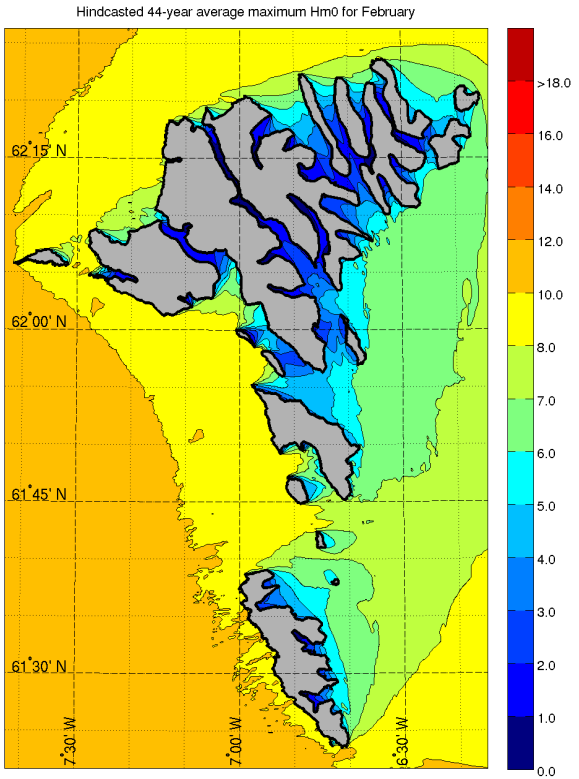


Aldu atlas útfrá forsagnum hjá DMI

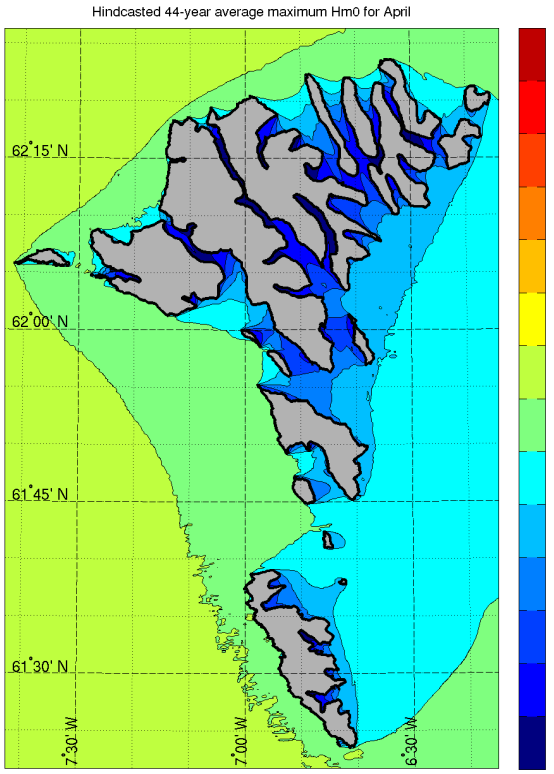
Her: Hægsta alda eitt miðal ár

Hægsta alda

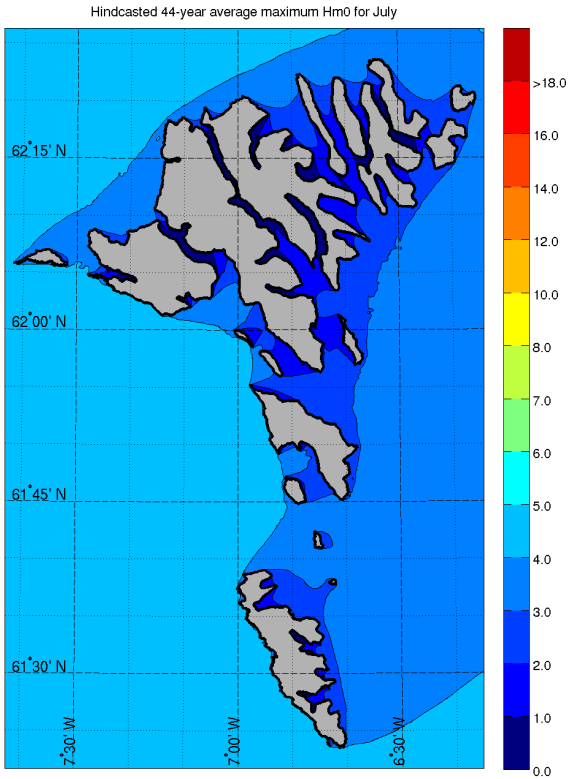
Feb.

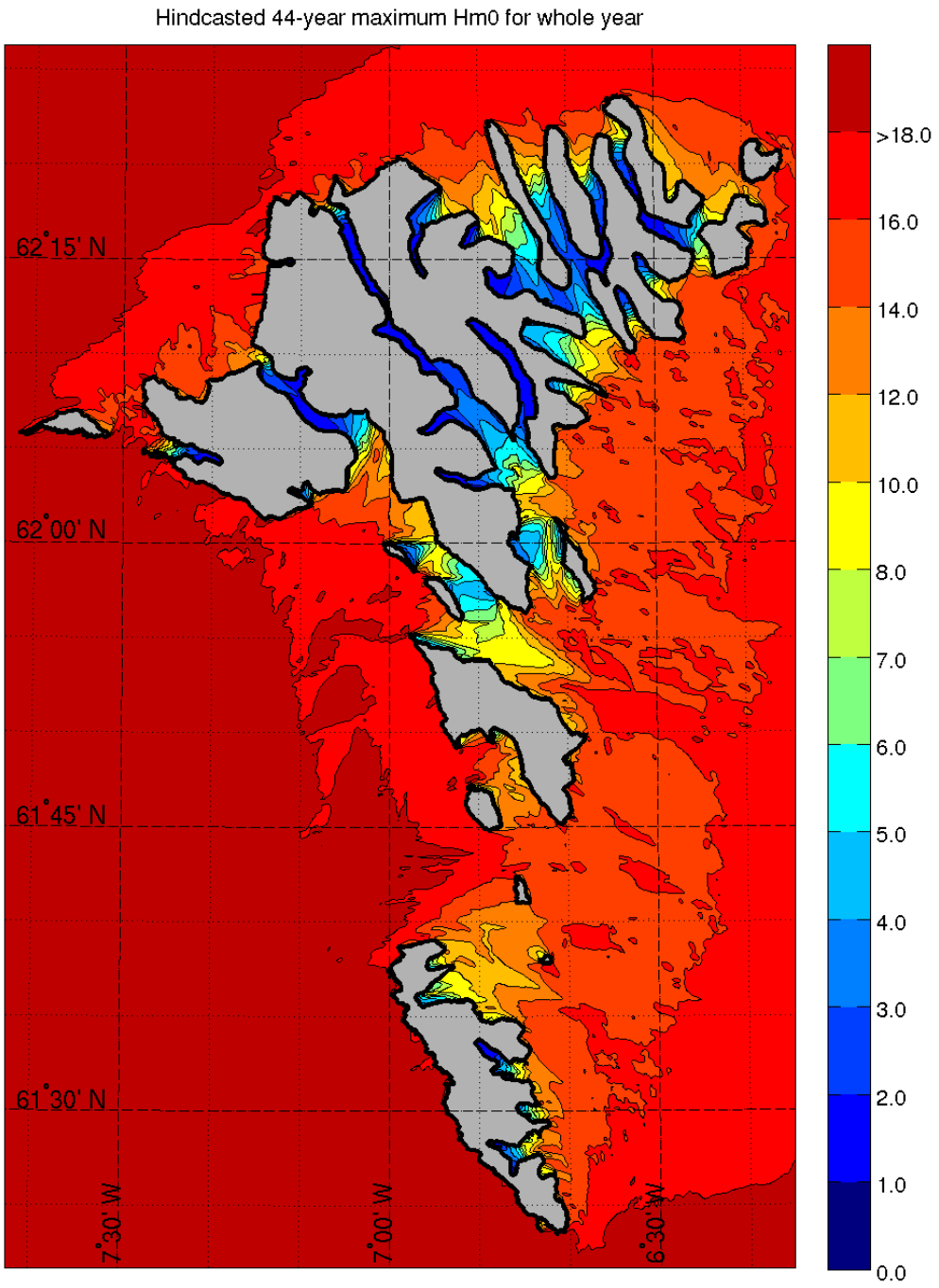


Apr.



July





Hægsta alda í 44 ár

Takk fyri

Mykines Gallary