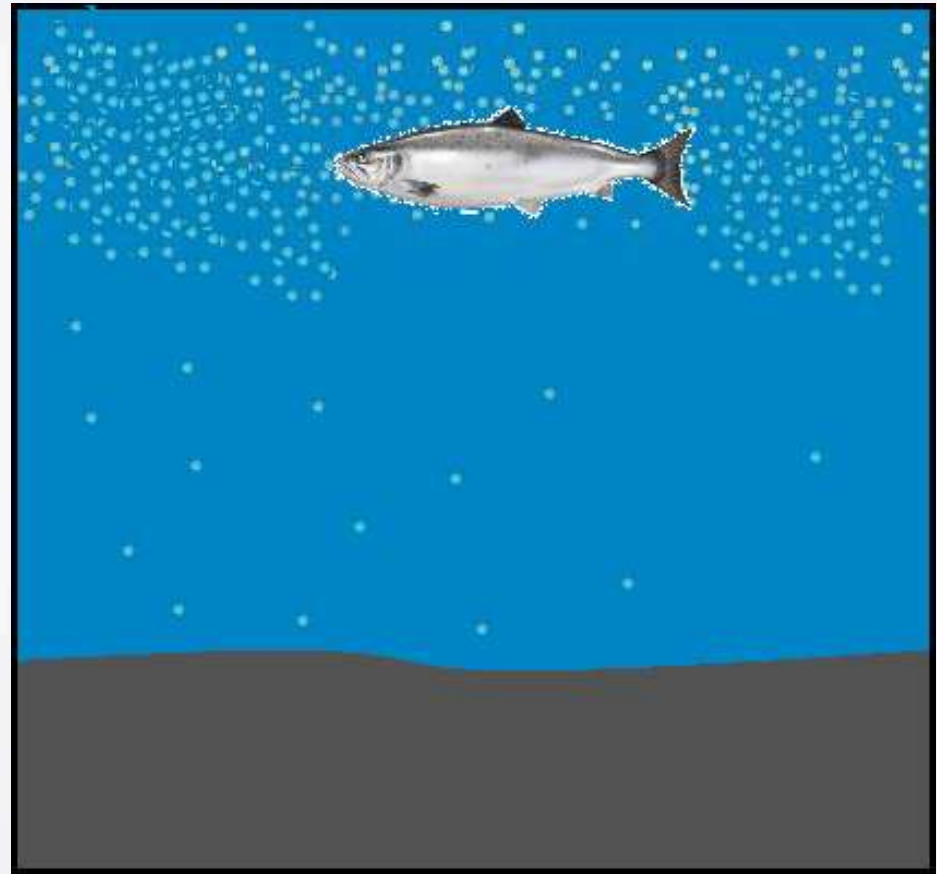


Hvat ger aling við umhvørvið????

Gunnvør á Norði

Lívrunnið tilfar frá aling

- Fóður og skarn, sum søkkur á botn undir alibrúkinum, ger at umstøðurnar versna
- Tøðevni, sum fiskurin útskilur í sjógvin, kunnu økja um gróðurin



PhD verkætlan um Kaldbaksfjørð

- **Hvussu nógv lívrunnið tilfar kemur frá alingini, og hvar endar tað?**
- **Vistfrøðin í Kaldbaksfirði**
- **Broytir alingin fjørðin ella ikki?**

Mátningar aðru hvørja viku í 1 ár



Hvar endar lívrunna tilfari sum er í fóðrinum?

Fóður 100%
FCR 1,2 **2,2**

Vækstur 32% **21%**

CO₂
58%

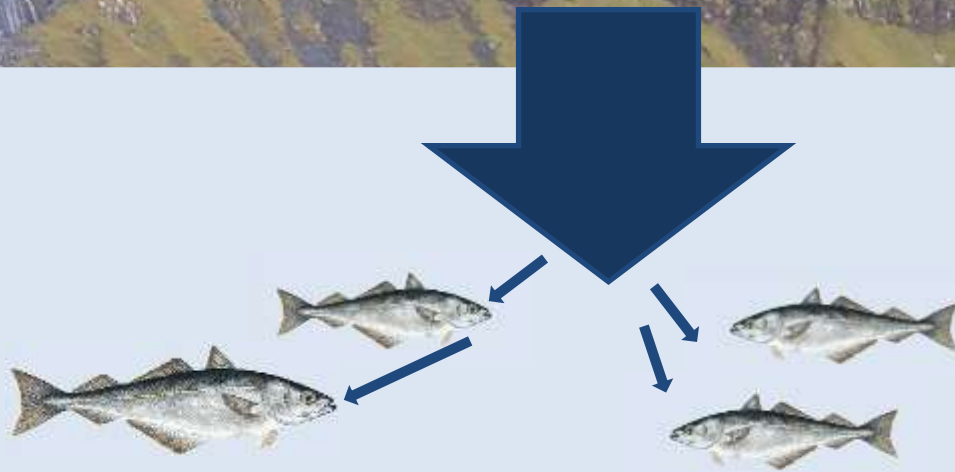
49%

Lívrunnið

10% **29%**

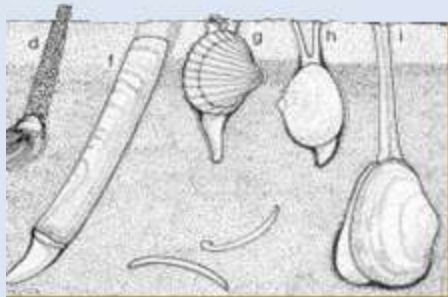
Hall et al. 1990

Lívrunnið (10%) Fóður og skarn



6%

3% CO₂



**23% (112 kg C)
FCR 2,2
Hall et al 1990**

3%

(15 kg C)

Botnur

Tøðevni frá alingini

Fóður 100%
FCR 1,2

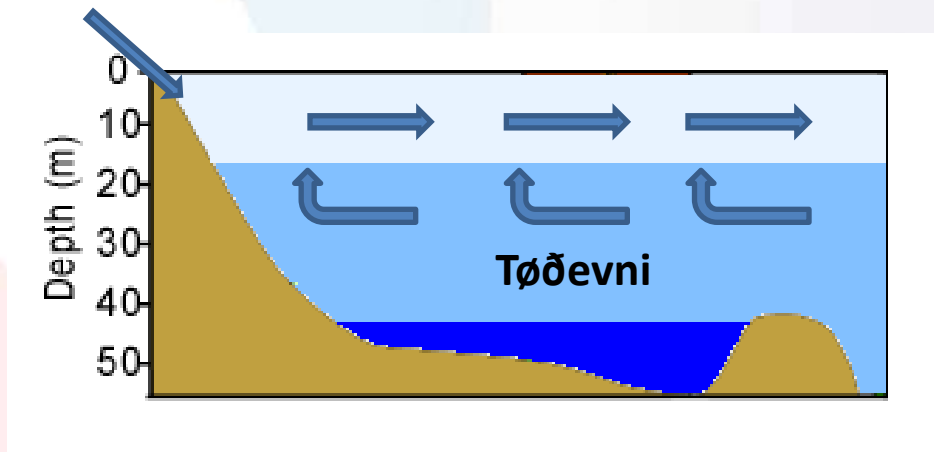
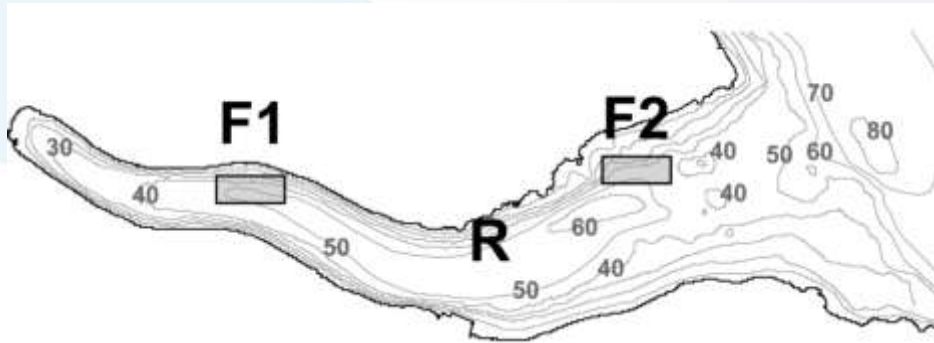
Alingin kann geva ein gróður uppá
 $104 \text{ g C m}^{-2} \text{ ár}^{-1}$

Ógvuliga nógvur gróður í Kaldbaksfirði
 $335 \text{ g C m}^{-2} \text{ ár}^{-1}$

Er tað alingin sum ger at gróðurin er so
nógvur????

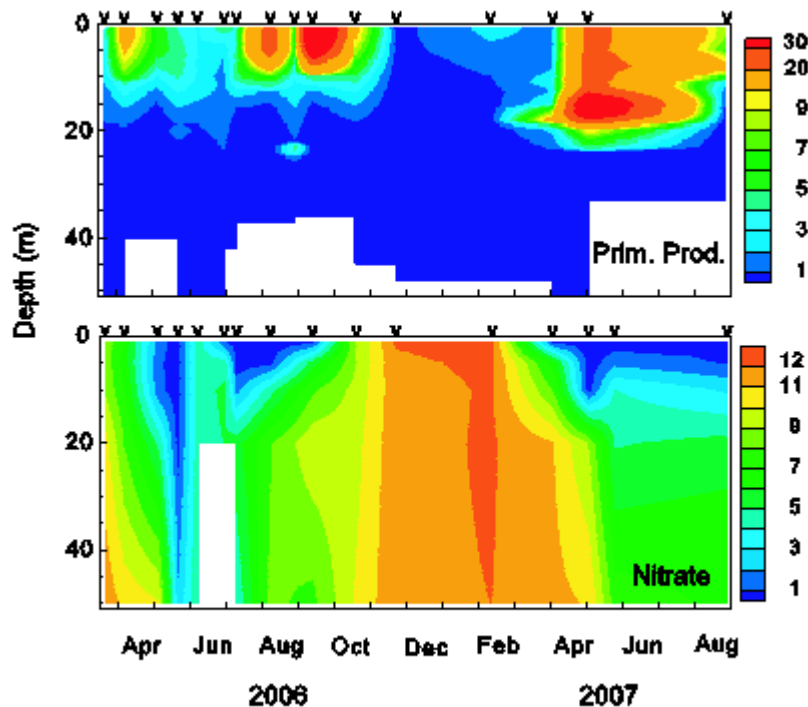
Tøðevni
(Ammonium)
60%

Kaldbaksfjørður



- Ósarák
- Miðal útskiptingartíð:
10 dagar
- Gátt => Avlæst
botnlag um summarið
- Sera ávirkaður av vindi
og regni
- Stórar broytingar yvir
stutta tíð

Gróður og tøðevni

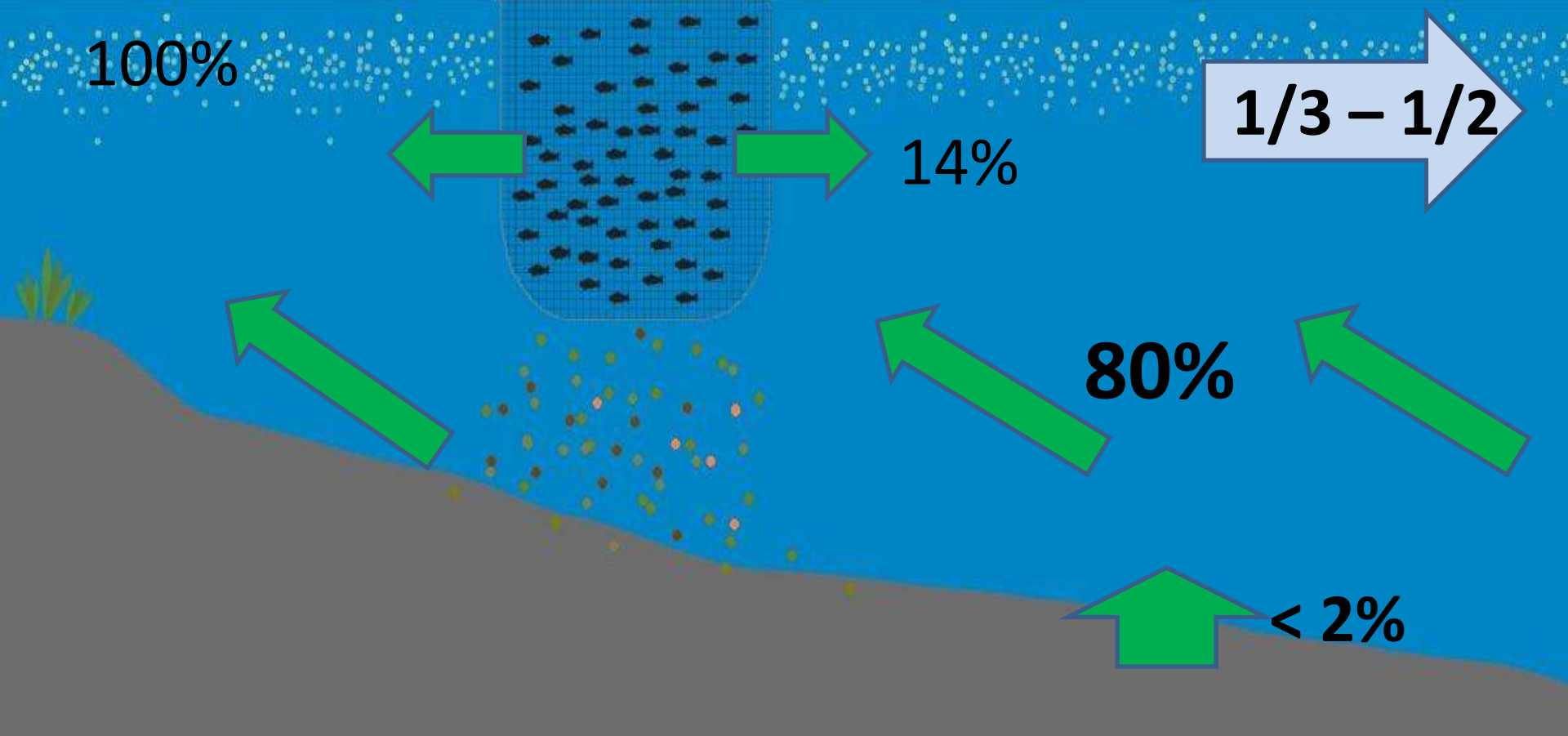


- Gróður frá mars/apríl til september mánaða
- Nógv tøðevni koma í tað ovara lagið, har tað eisini er nokk av ljósi
- Sera nógvur gróður: 335 g
- Kaldbaksfjørður alt annað enn eitt skúladømi

Hvar koma tǫðevni frá?



< 5%

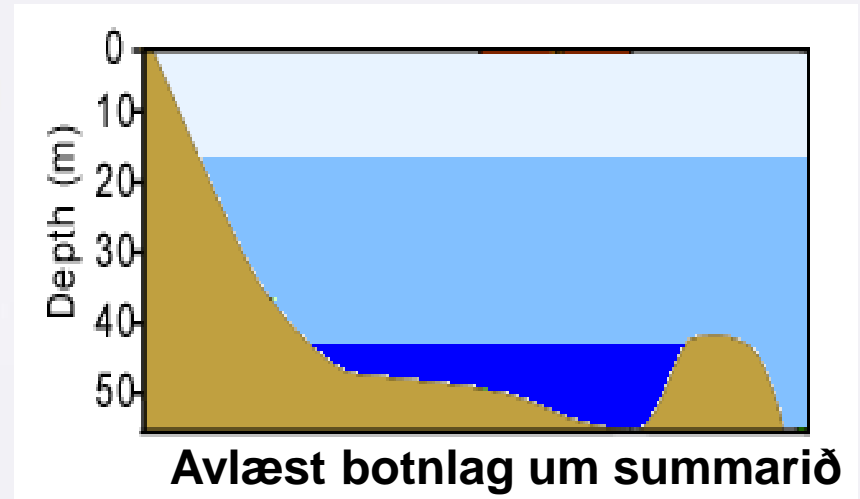


Lívrunnið tilfar

Framleiðsla í gróðuri
335 g C/m²/ár

**1/3 til 1/2 av gróðurinum
søkkur á botn**

**~1/2 av tilfarinum sum
endar á botni verður
niðurbrotið, og harvið
verður oxygen brúkt**



Oxygen nýtsla í avlæsta botnlagnum



Avlæst botnlag:

Max 47 dagar í 2006

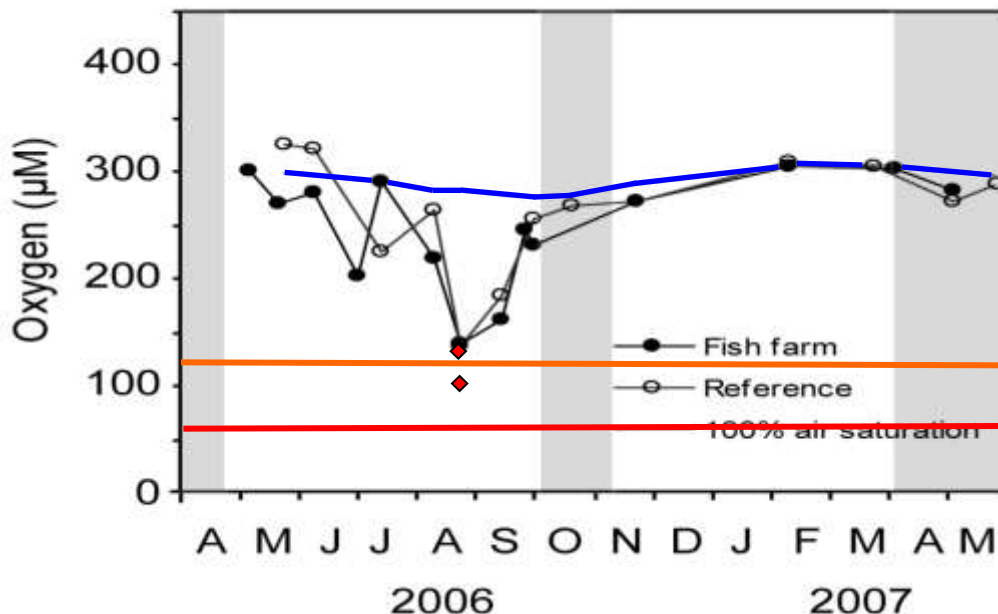
Oxygen nýtsla:

$\sim 34 \text{ mmol O}_2 \text{ m}^{-2} \text{ d}^{-1}$

Eftir 82 døgum einki oxygen í botnvatninum

F1: Økti O_2 nýtsluna við 1%

F2: Um alt tilfarið frá alingini endaði í avlæsta botnlagnum, hevði O_2 nýtslan verið 20% hægri.





Environmental impacts carbon and nitrogen bu in Kaldbaksfjørðu

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³Southern Danish University, Institute of Biology and Nordic I

⁴Greenland Climate Research C

⁵University of the Faroe Islands, Faculty of Science

ABSTRACT: Flow of organic carbon (OC) and nitro
the basis of detailed studies of the farming operato
recycling processes in sediment. A third of the OC a
into fish biomass, which is more than has been fou
by the fish (52 to 70 %), and ~63 % of the associat
(DIN), potentially stimulating pelagic primary produ
rived from fish food settled on the seabed, where it
ment. Based on transect measurements of diageneti
area ~10 times the farm area. OC mineralization in th
input; the divergence between carbon efflux and oxy
creasing food input, reflecting an increasing level o
dissolved organic carbon (DOC) efflux was high (on
indicating that DOC efflux is an important pathway f
Overall, microbial processes removed 56 and 38 % o
seabed. During a 39 d break in farming activity, due
pension of surface sediment, sediment conditions in

KEY WORDS: Fish farming · Sediment · Organic enrichment · Nutrient enrichment ·
Organic matter mineralization · Carbon budget · Sedimentation · Benthic recovery

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NEWS

Fish farms less harmful than thought

7 September 2011, by Tom Marshall

Coastal fish farms seem to do less harm to nearby plants and animals than previously believed, a new study reveals. And marine ecosystems can recover from this damage surprisingly fast.

But the analysis of a single trout farm in a Faroe Islands fjord over nearly a year also shows that these facilities need to be placed carefully, and that there's a limit to how many can operate in a particular area before its biodiversity suffers lasting harm.



Fish farm in the Faeroe Islands.

Takk fyri



Fíggjarligur stuðul: Statoil Faroes A/S, Chevron Føroyar APS. Geysir Petroleum, Granskingarráðið, Havstovan og Fiskaaling Serlig tøkk til P/F Týggjará