



The final cod war

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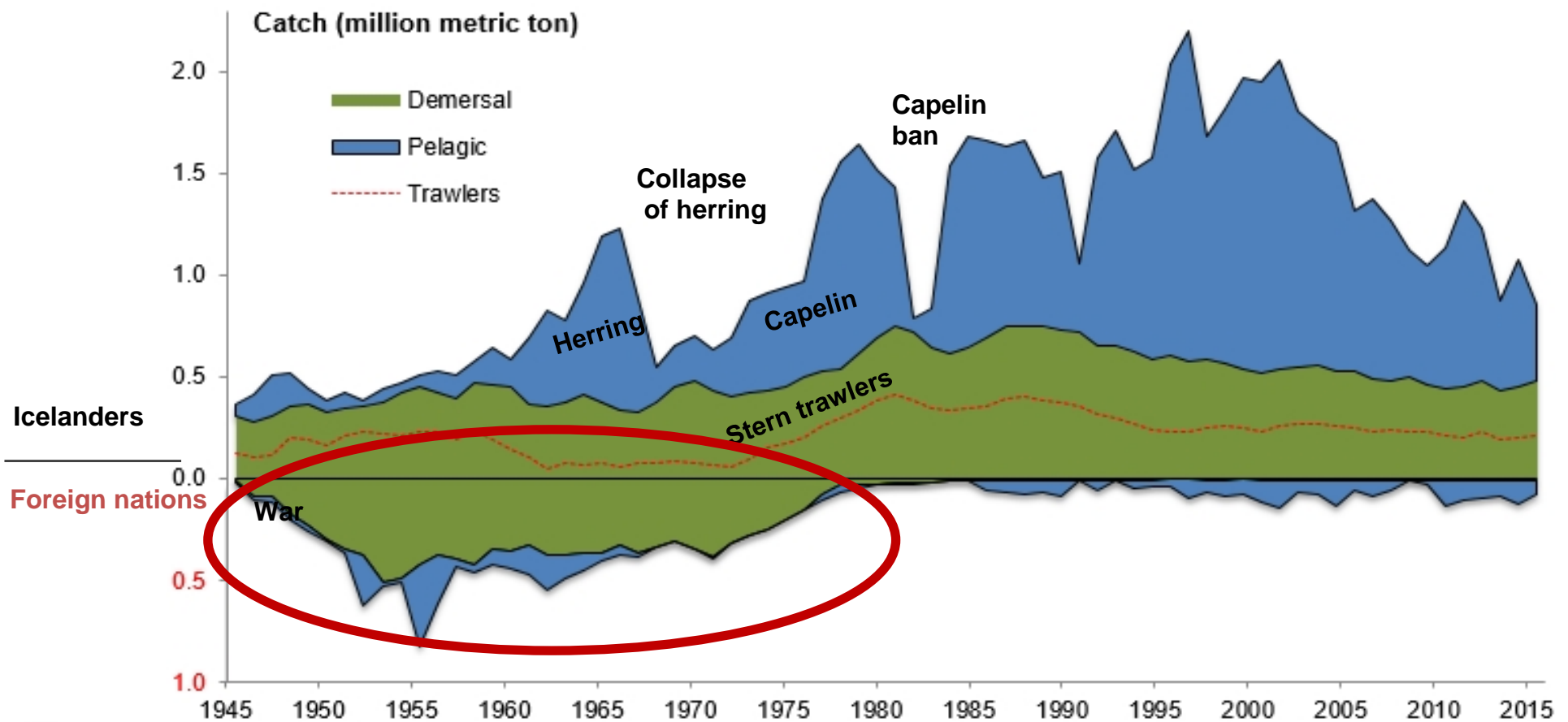


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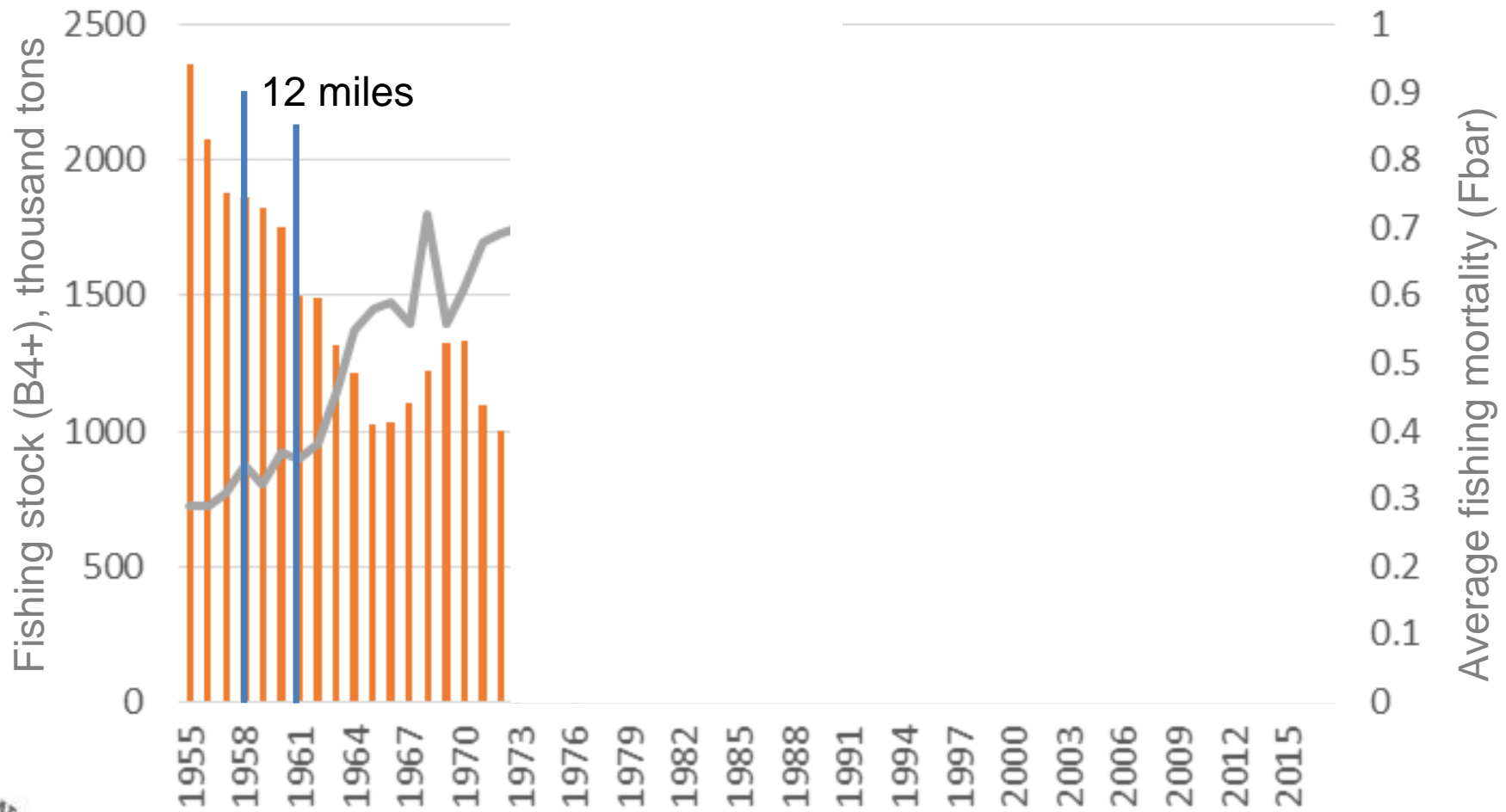


The struggle for fishing rights





Cod wars





A classic problem

- Overharvesting – due to
 - poor management
 - political TAC decisions
- No success in limiting catches until the quotas (yes we tried everything else first)





Conditions prior to the first harvest rule

- Domestic
 - Quota system in 1984
 - Understanding and acceptance of the problem
 - Willingness in industry to invest in the stock
- International
 - Law of the sea
 - Bruntland report
 - Rio accord...

Resource management
Sustainability
Precautionary principle...





Harvest rule 1.0

- Scientific committee (biologists and economists) suggested the following harvest rule in 1994

$$TAC_t = \frac{(0.22B4^+ + TAC_{t-1})}{2}$$

- After a political process the rule became in 1996

$$TAC_t = 0.25B4^+$$





Poor results from H-1.0

- Too high fishing pressure
 $(0.25-0.22)/0.22=0.136$
- Harvest exceeded TAC on average 7%
- Systematic overestimation of stock size

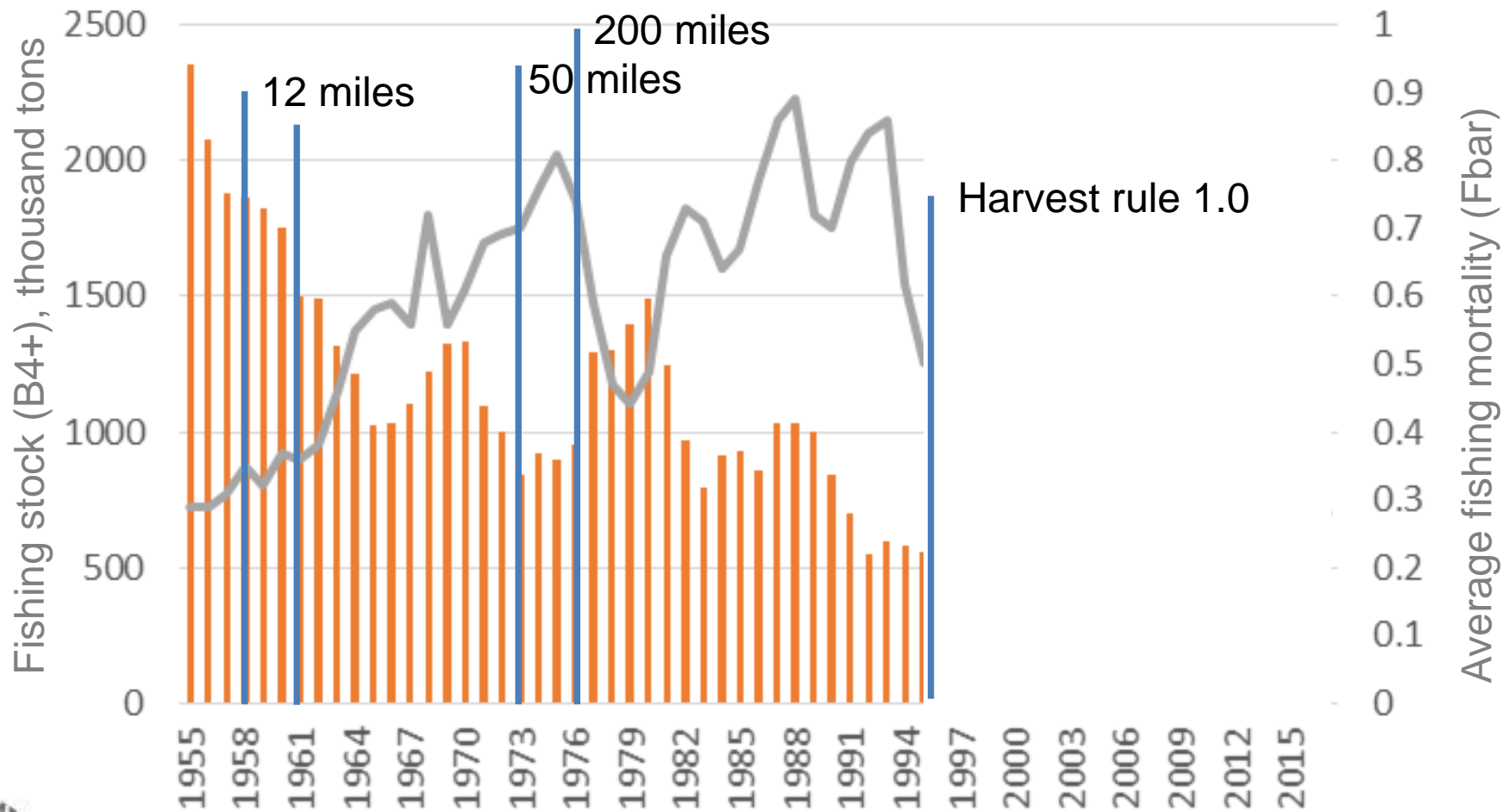
Result

Harvest close to 30% of fishing stock





Cod wars





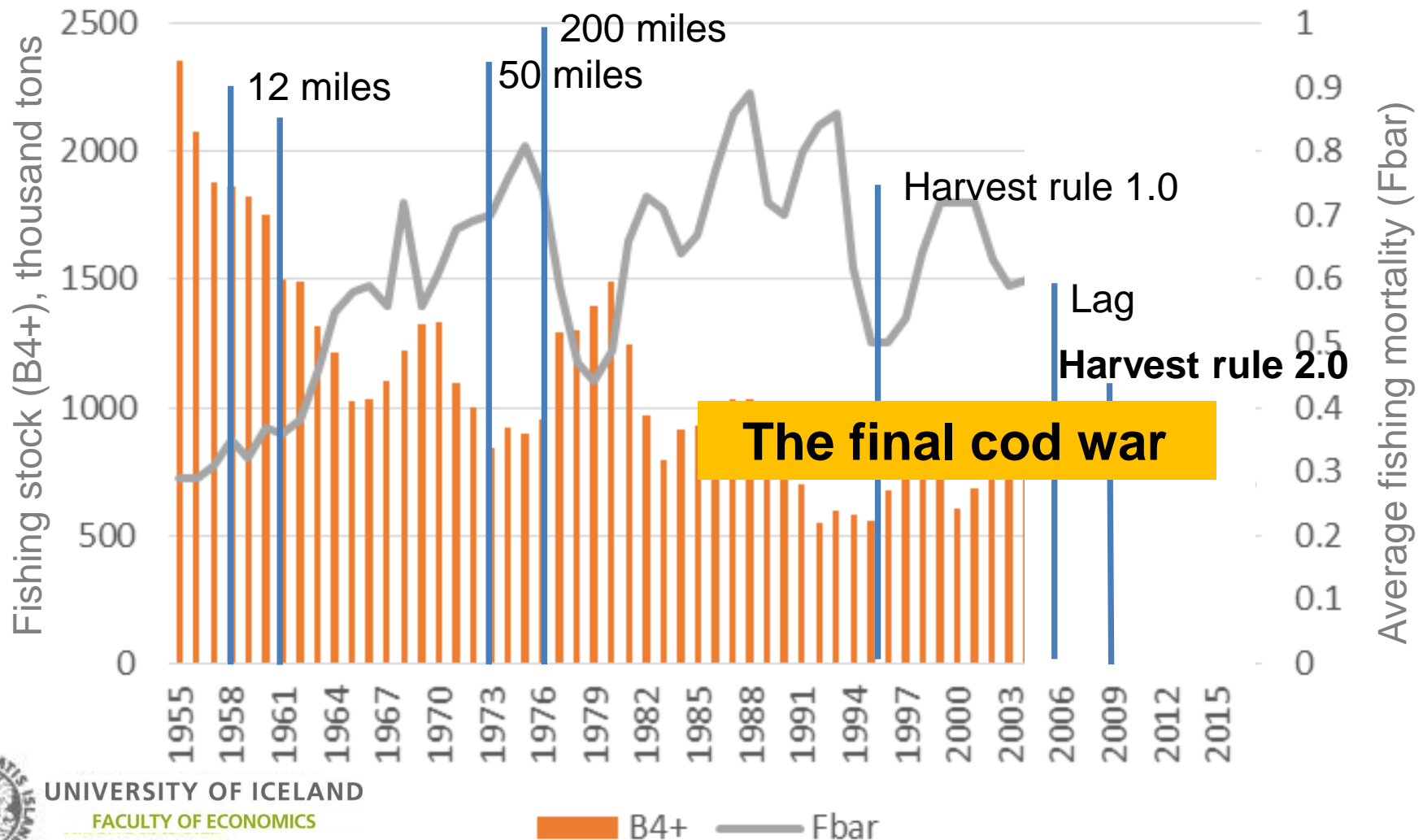
Slow political progress

- Problems repeatedly discussed but political will lacking
- Stabilization introduced in 2004 and the original form of the rule in 2006
- Harvest rate finally lowered in 2007
- New harvest rule in 2009 with 20% fishing mortality and lag
- B_{lim} and $B_{trigger}$ introduced in 2010





Stríðið um þorskinn





Harvest rule 2.0

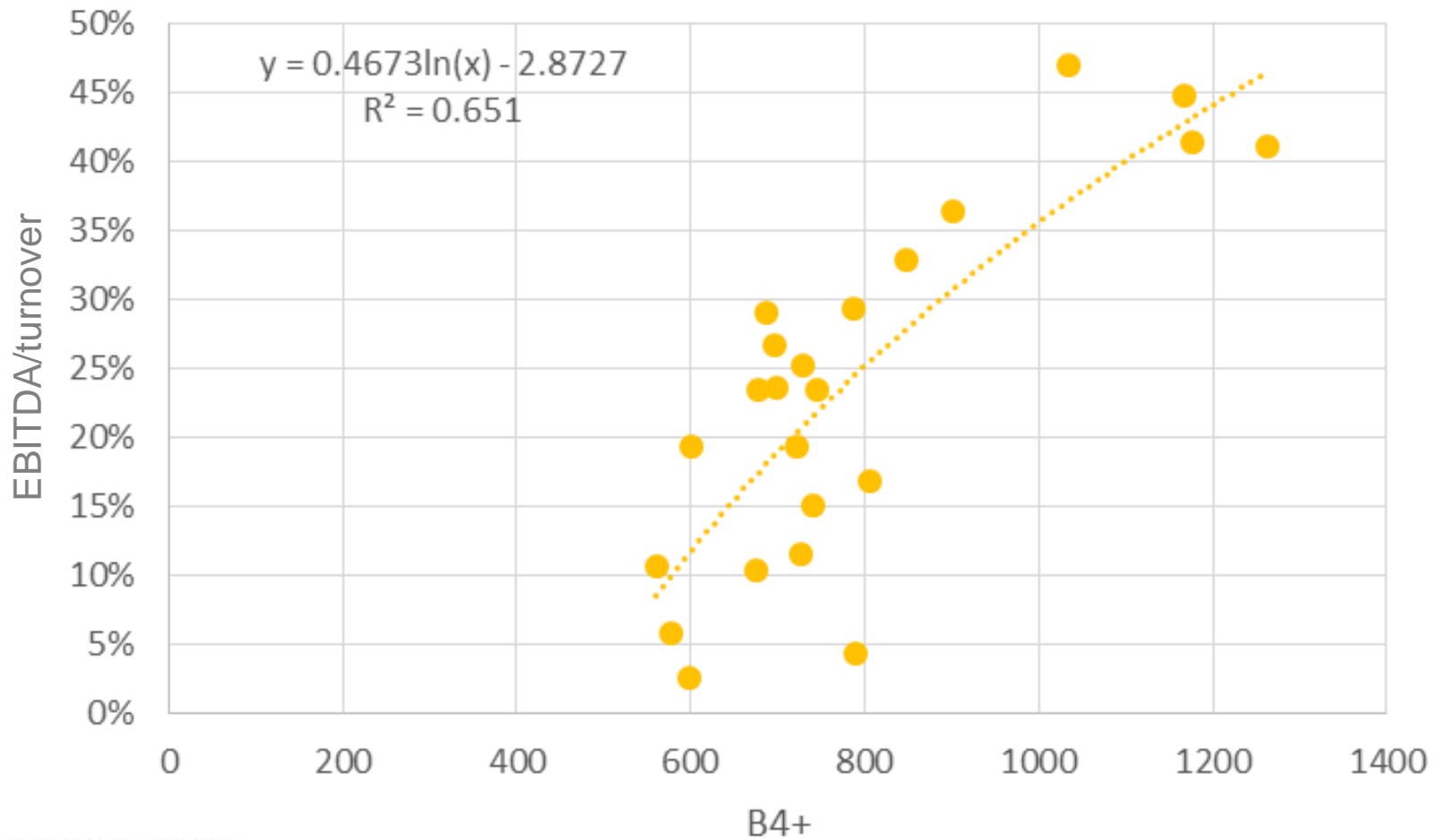
$$TAC_t = \frac{(0.2B4^+ + TAC_{t-1})}{2}$$

- B_{trigger} at spawnings stock size of 220 thousand tons
- B_{lim} at spawnings stock size of 125 thousand tons





Abundance and profitability





Comments

- The struggle to impose good management of the cod stock in Iceland was long and difficult
- Sovereign rights, science and improved management paved the way but politics proved difficult
- The civil cod war proved the longest cod war





Thank you!



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