

#### This time its different

Economic outcome of Iceland's experiment with Olympic coastal fishing

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# Some background

- Industrial fishery in Iceland quota regulated since mid 1980's
- Small scale fishery (originally <10 gt, then <15 gt and <30 gt since 2013)</li>
  - Regulated by effort restrictions from seventies
  - Quota regulated from 1990 for >6 gt and choice of system for <6 gt. Some additional changes in 1996</li>
  - Quota regulated since 2000 (fully implemented 2006)
- Economic outcome of quota systems very positive but the system is highly controversial





## The coastal fishery

- Introduced in 2009 and made permanent in 2010
- Goal:
  - To facilitate recruitment
  - To support rural development
- Limited to small vessels during summer months
- TAC split between 4 months in 5 areas
- Daily limit of 650 kg and 14 hours fishing per vessel
- Only hand line (no more then 4 per vessel)
- No fishing Friday to Sunday
- Only owner operated and locally registered



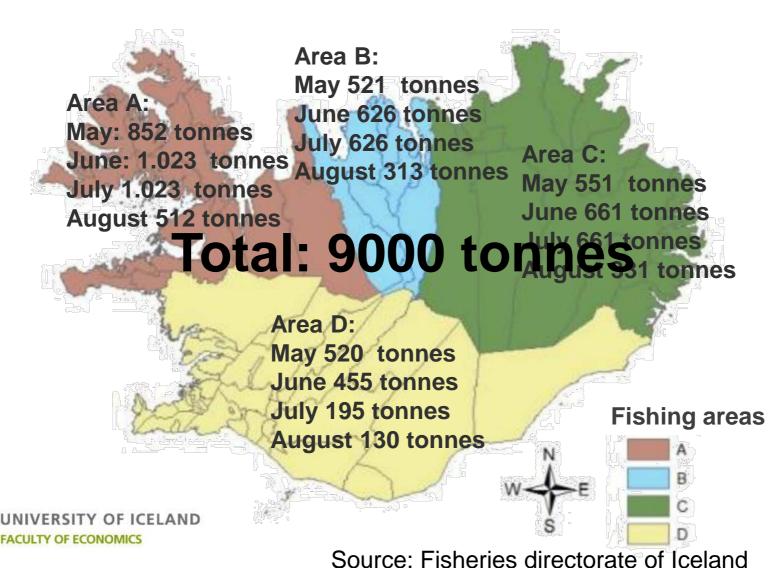


# One triumphant minister





# Fishing areas and monthly limits 2016

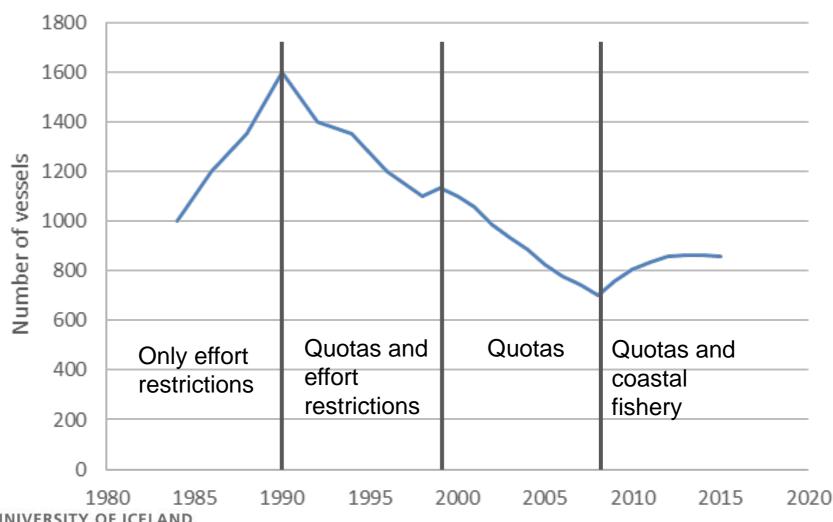


# Hypothesis (by the pessimistic economist)

- Competition between fishermen leads overcapacity and higher cost
- Focus on quantity leads to poor quality and low prices
- Overall poor profitability
- Quantity restrictions per day may encourage discards
- Gold rush' mentality increases risk of injury



# Small scale fleet size development

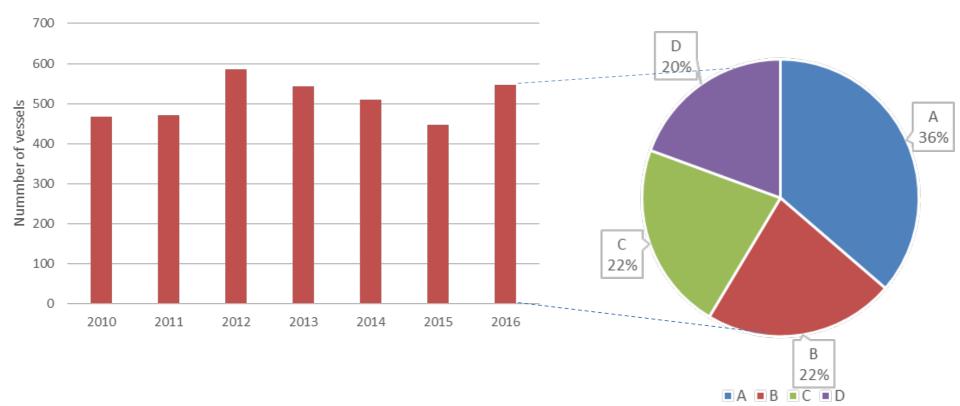




Source: Statistics Iceland, Þórðarson (2015)



# Participation and area distribution

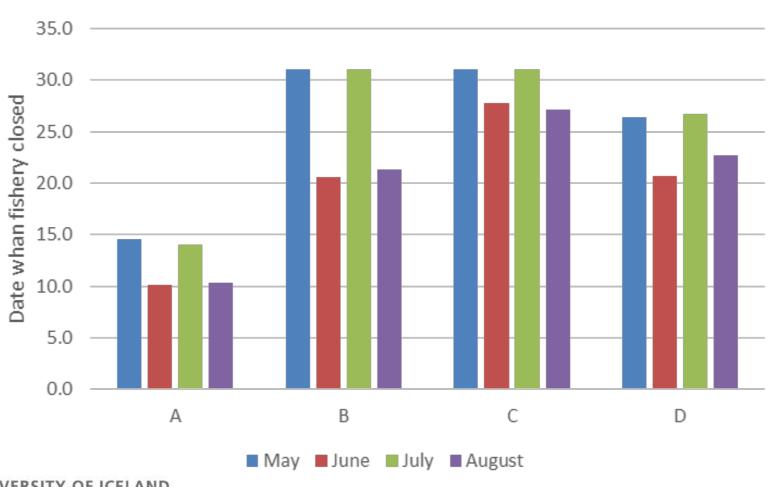




Source: Small scale fisheries association



# Monthly season (average 2010-2015)

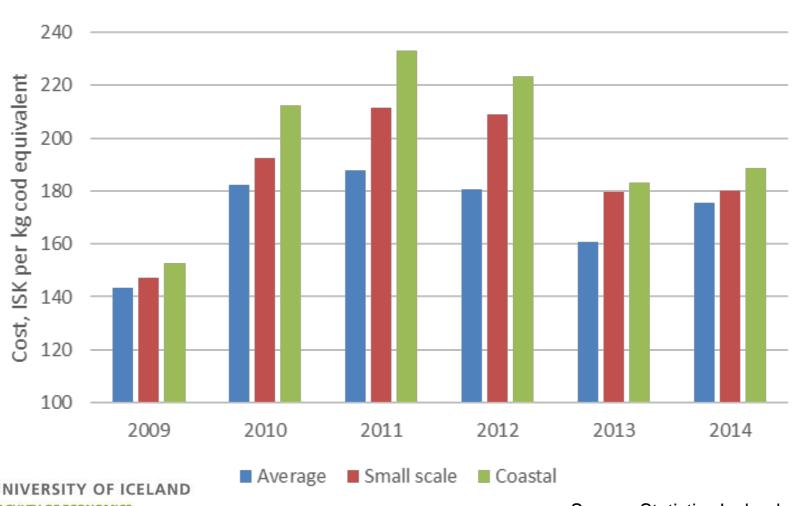




Source: Ministry of the interior



# Cost per kg cod equivalent







#### The fleet



VS







#### The fleet



VS







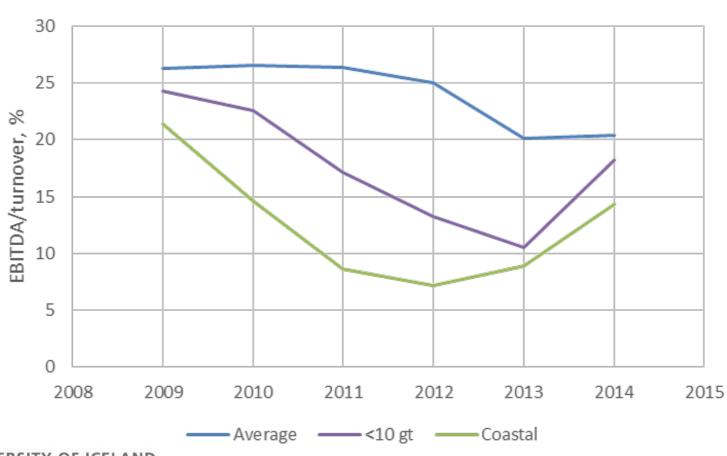
### **Quality issues**

- Initial complaints (2009 to 2011)
  - 2010 survey by Matís Itd. Icelandic Food and Biotech R&D showed varying quality and problems with cooling, ringworm, bruising and skin discoloring
  - 2011 survey of buyers confirmed varying quality
- Data on landing prices does not show a significantly lower price of coastal fish





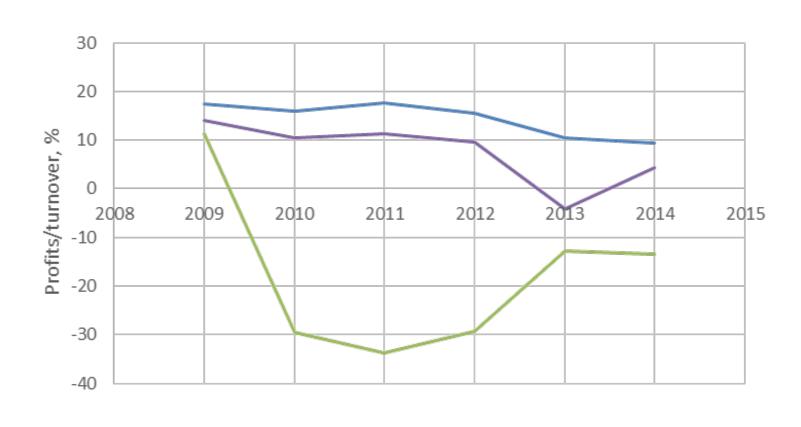
#### **EBITDA** ratio







# **Profit ratio**

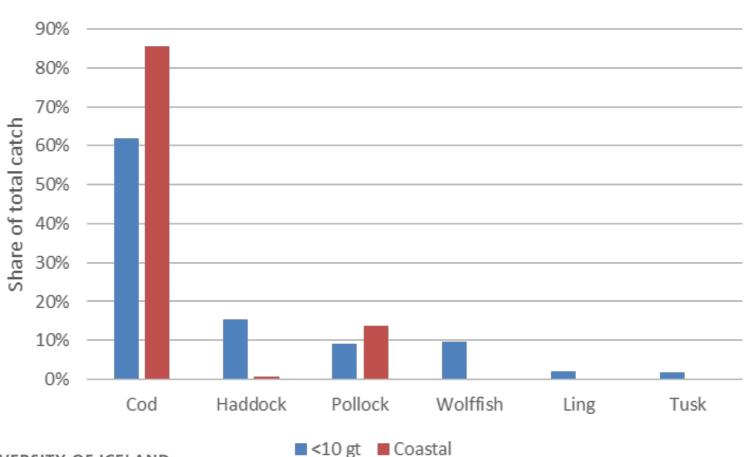


- Average ——<10 gt ——Coastal





# **Catch composition**







# Fishermen safety

	Accidents			Catch*		
	Coastal fleet	Total		Coastal fleet	Total	Share
2010	23	169	13.6%	6000	254.687	2.4%
2011	. 17	154	11.0%	8499	270.373	3.1%
2012	. 17	137	12.4%	8600	281.248	3.1%
2013	42	169	24.9%	8600	331.168	2.6%
2014	10	98	10.2%	8600	381.431	2.3%

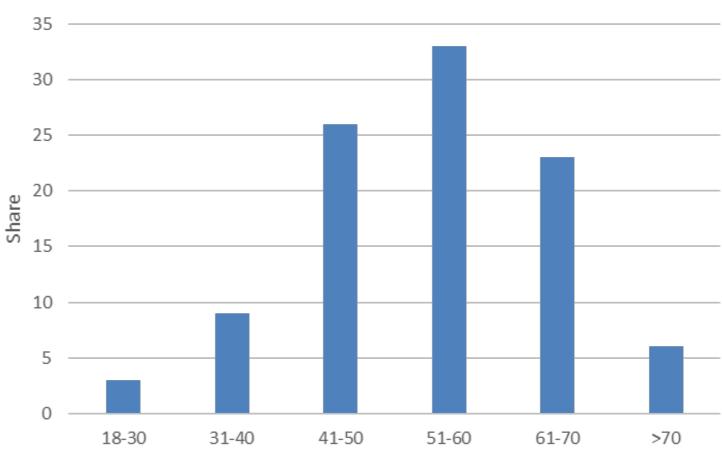
<sup>\*</sup> Cod equvalents

Source: Hermannsson (2015)





#### **Recruitment 2009**





Source: Vestfjord University Center (2010)



# Rural development

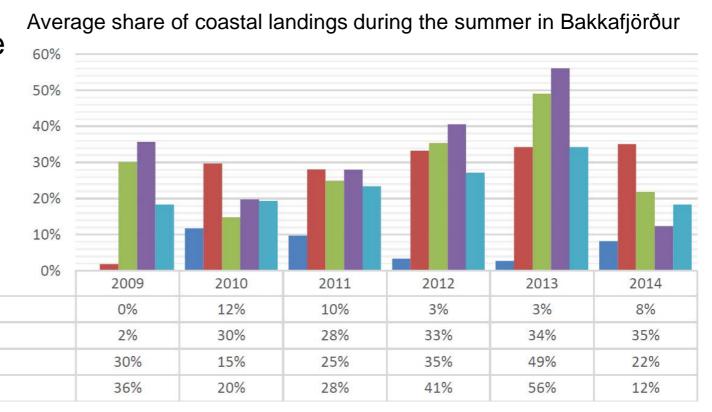
 Measurably more activity in small rural villages in summer with positive effect on local supporting industries

■ maí

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iúlí 🔳

■ ágúst



(Source: Hjartardóttir 2016)





#### Conclusion

- Icelandic politicians have managed to verify everything economists think is wrong with Olympic fishing (thank you for that!)
- The losses are in the range of 10 to 40% of catch value
- The social benefits must be very large to justify this as a management policy

