

Bonne  
Bay  
marine station

CURRA



**Community - University Research for Recovery Alliance**

**[www.curra.ca](http://www.curra.ca)**



# About us

The CURRA is a 5-year research program of innovative, interdisciplinary research projects related to helping communities and organizations along Newfoundland's west coast develop strategies for the recovery of fish stocks and fishery communities.



Centered at the Bonne Bay Marine Station in Norris Point, NL, the CURRA brings together researchers from the social and natural sciences and fine arts at Memorial University in St. John's and Sir Wilfred Grenfell College in Corner Brook in working partnerships with numerous stakeholders and community organizations.



# Objectives

The long-term objectives of the CURRA include:

- promoting community engagement with the Station
- promoting and diversifying the research community affiliated with the Station, and
- training researchers in collaborative, community-based research approaches.

# Research Area



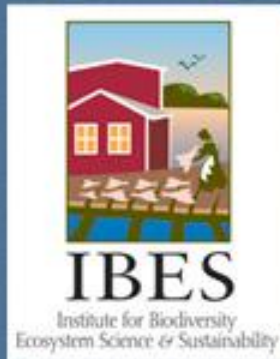


# Funders



Social Sciences and Humanities  
Research Council of Canada

Conseil de recherches en  
sciences humaines du Canada



Parks Canada  
Parcs Canada



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada



# Partners

**Atlantic Coastal Action Program (ACAP) Humber Arm; Bonne Bay Marine Station; Center of Environmental Excellence; Conservation Corp of Newfoundland and Labrador; Community Education Network, Southwestern Newfoundland; Community Youth Network, Southwestern Newfoundland; Distance Education and Learning Technologies, Memorial University; Department of Education - Western Newfoundland and Labrador School District; Department of Fisheries and Oceans, Mont Joli and Corner Brook; Fish Food and Allied Workers Union (FFAW); Gros Morne Cooperating Association; Harris Center, Memorial University; Institute for Biodiversity Ecosystem Science and Sustainability (IBES); Integrated Coastal Zonal Management Board (ICZM); Intervale Associates; Marine Institute, Memorial University; Marine and Mountain Zone Corporation (MMZC); Memorial University of Newfoundland; Municipalities Newfoundland and Labrador; Parks Canada; Professional Fish Harvesters Certification Board; Red Ochre Regional Board Inc.; SafetyNet Centre for Occupational Health and Safety Research; Sir Wilfred Grenfell College; St. Anthony Basin Resources Inc.; Theatre Newfoundland Labrador; Town of Burnt Islands**



# What New Insights can a Global Value Chain Analysis Give us into the Crisis in Newfoundland and Labrador's Northern Shrimp Industry?

Charles Mather  
Jóhan Joensen





# Overview

- 1. Introduction
- 2. Global Value Chain Framework
- 3. Fish Value Chains
- 4. Global Shrimp Context
- 5. Domestic Chain(s)
- 6. Way Forward



# Introduction

- Building on the previous value chain workshop
- Insights into Northern shrimp using value chain analysis.
- Recap, global value chains, GVCc in fisheries research



# Global value chain (GVC) framework

- 1990s – associated with the work of Garry Gereffi.
  - Helps to understand global economic networks between firms in distant places – especially associated with East Asian economic growth - clothing and electronics
  - Asks key questions:
    - how are the firms coordinated, who does this?
    - how is value distributed along the chain?
    - who determines this distribution?
  - Provides a way of grounding globalisation in real production systems



# GVCs continued

- Has an immediate impact:
  - It is based on the firm as an active agent; concrete empirical studies following commodity production
  - It's easy to 'put in practice'
  - It has real policy implications/policy relevance
  - The result is an explosion of global commodity chain studies that tell us much about how the global economy works
  - Initially in manufacturing especially clothing and electronics, but later right across the economy – agriculture, services, tourism etc.



# What insights?

- Particular interest in **‘chain governance’**
- Chain governance asks the question: how are global production systems managed and organised?
- Chain governance is about the exercise of power in chains between ‘independent’ agents in the chain
- Value chain case studies trace changes in power, often away from producers and in the direction of buyers
- Many cases see the rise of a chain driver (lead firm) – determines distribution of wealth, sets standards for quality, and coordinates the chain. ‘Calls the shots’



# More insights on governance

- Governance also helps us understand the role and place of subordinate suppliers closer to production
  - Does the form of governance lead to inclusion or marginalisation?
  - Does it facilitate upgrading? Learning by doing? Moving up the chain?
  - Does it create sustainable enterprises and secure jobs?
- Much of the material comes from global food chains – lead firms are supermarkets



# Fish value chains

- Understudied – by this tradition of research.
- Key intervention – John Wilkinson, “Fish: a global value chain driven onto the rocks”
- His argument: governance in fish value chains is different.



# Fish value chains

- Wilkinson: retailer/buyer driven chains have become paradigmatic – seen to apply to all food chains.
- Fish is more complex: retailers have become ‘locked in’ to certain supply options, esp. farmed shrimp and salmon.
- Capture fisheries remain somewhat independent of retailer power.





# Fish value chains

“long established food chains, where multiple actors, both public and private, have cumulatively defined and redefined policies and strategies through complex procedures of conflict and compromise, may often assume a more systemic dynamic that is less amenable than such sectors as fresh fruit and vegetables to clear governance, whether by supply or demand”. 139-140.

In lay terms: the capture sector is not likely to be governed in the same way as fresh fruits and vegetables. This is because of longer histories of conflict and compromise (as in shrimp...).



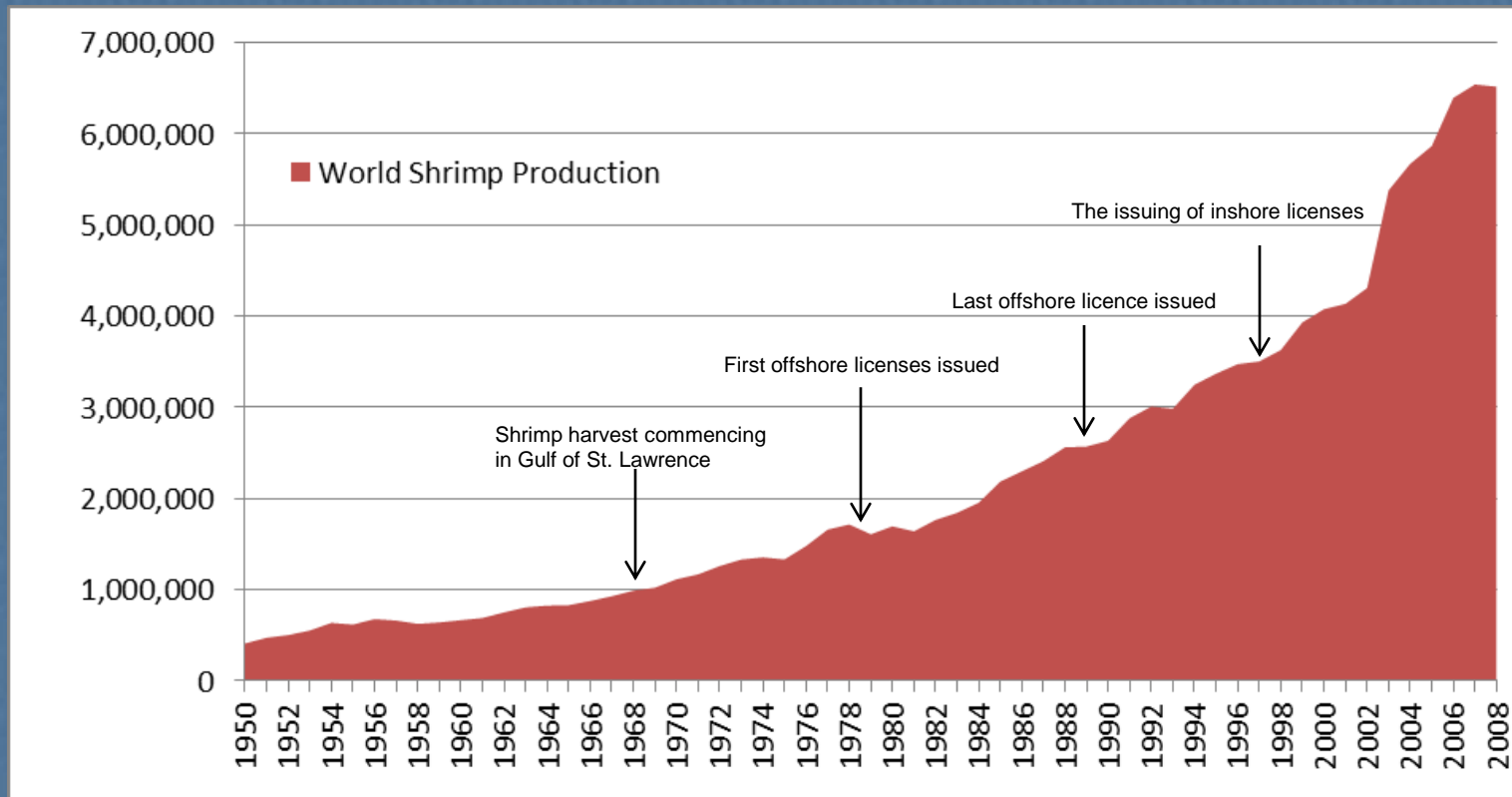
# Global Shrimp Production and Consumption

## Descriptive features

- Global Production has reached 6.5 million Metric Ton
- Shrimp is the most traded fish commodity – 16% of the value of internationally traded fish products (2006)
- Major Markets for Shrimp – US, Europe, Japan
- Over 50% from Aquaculture and growing
- Most aquaculture from developing countries – supported by a range of development institutions (e.g. World Bank, etc).
- Environmental, social controversies

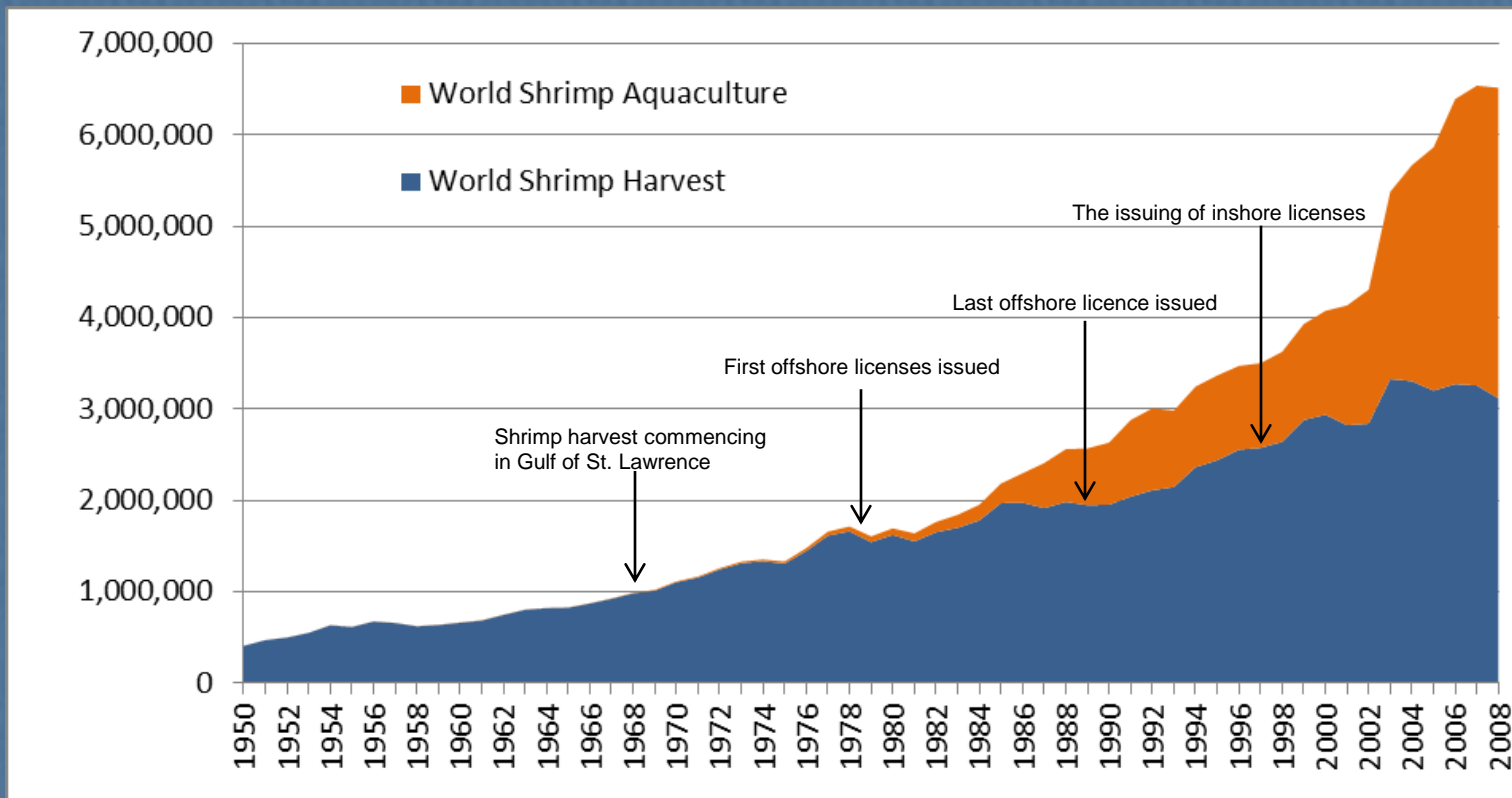


# Global shrimp production



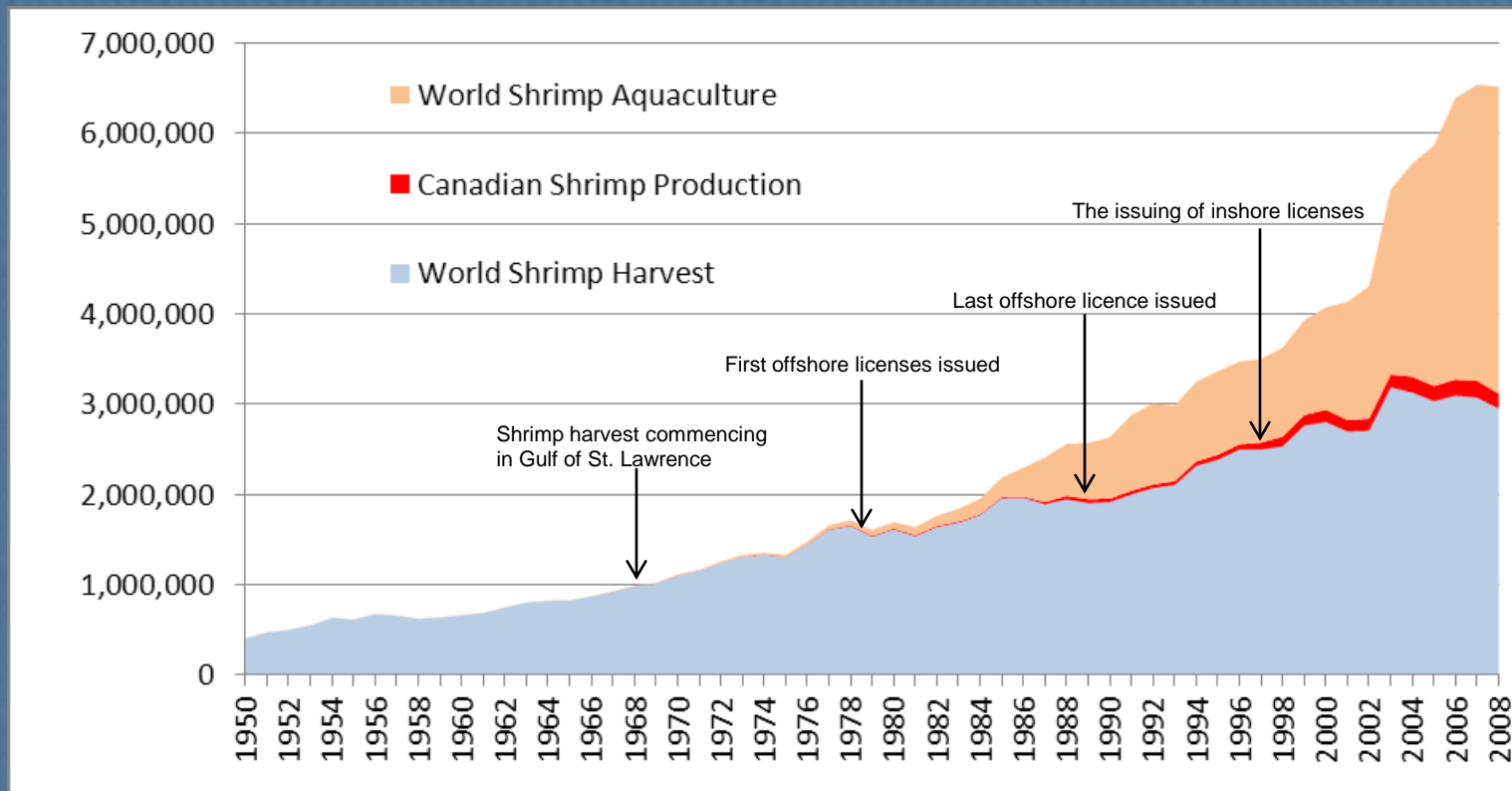


# Aquaculture's impact



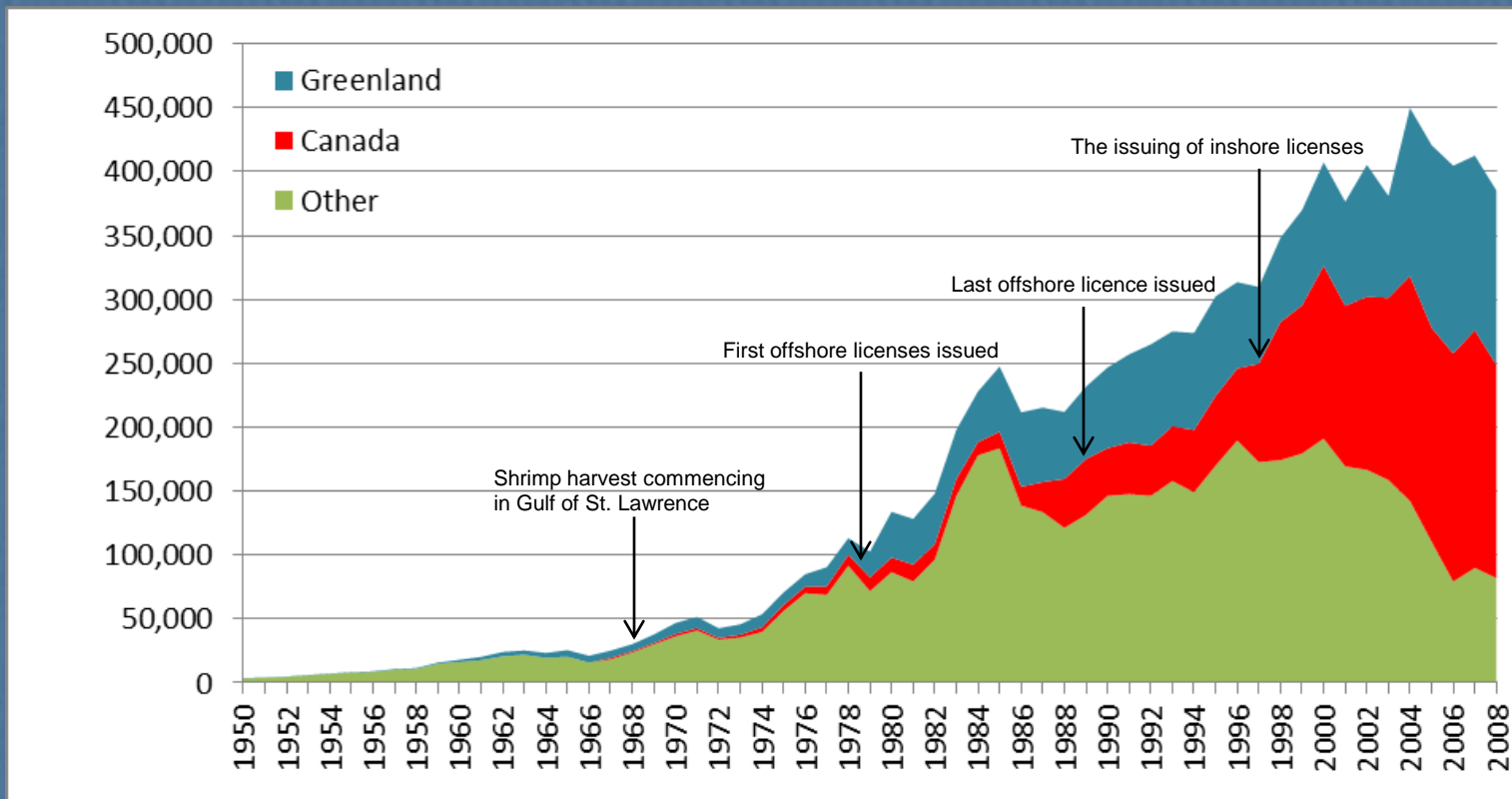


# Canada in global shrimp production





# Cold water shrimp harvest



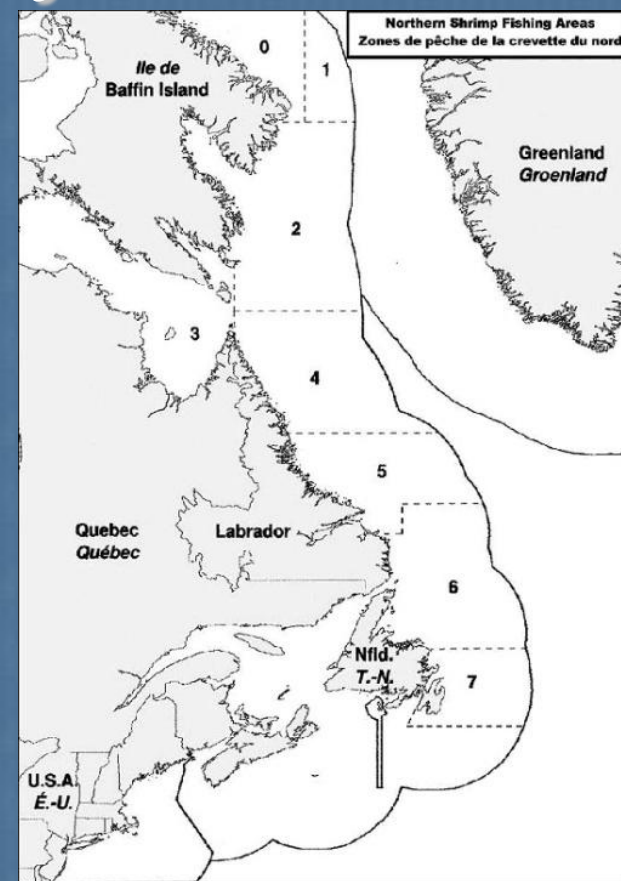


# Area covered in this study

- Looking at the Newfoundland and Labrador Shrimp Industry
- Stretching from Baffin Island to the St. Lawrence Estuary

## Northern Shrimp in Global Context

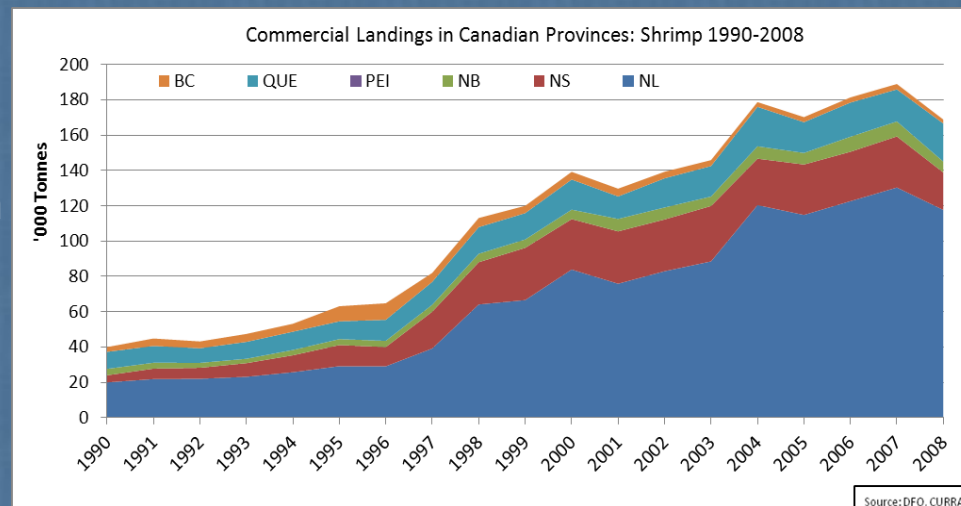
- *pandalus borealis* harvest production 389,000 MT
- Canadian harvest production ~165,000 MT
  - 118,000 MT landed in Newfoundland and Labrador





# Northern Shrimp in Domestic Context

- A relatively new industry
- Never more than 20,000 MT nationally until 1987
  - Newfoundland and Labrador alone harvested 20,000 MT in 1991
- Two chains: inshore and offshore







# Inshore

- Harvesting seen steady increase 1968 to 1997
- Gulf of St. Lawrence had a fleet of 11 vessels in 1970
- By 1977 this number had reached 42
  - Remain approximately the same until 1997
- 1997 – 45
  - 1999 there were 412, continuing to increase reaching 450 in 2005
- NL has  $\frac{3}{4}$  of all shrimp licences in Atlantic Canada
- Gulf of St. Lawrence restricted to 2 plants 1979-1999
- 2001 – 11 plants
  - Since 2 more plants
- Processing output slowly increasing over the years
- Purchase all the harvest from the inshore vessels



# Inshore

**Domestic**  
Harvesting: Regulated by Federal Government  
Processing: Regulated by Provincial Government

Harvesting  
- 100% to Onshore  
Processing

Onshore Processing  
(Primary/Secondary)

Regulated by  
International Market  
Limited by Trade  
Agreements

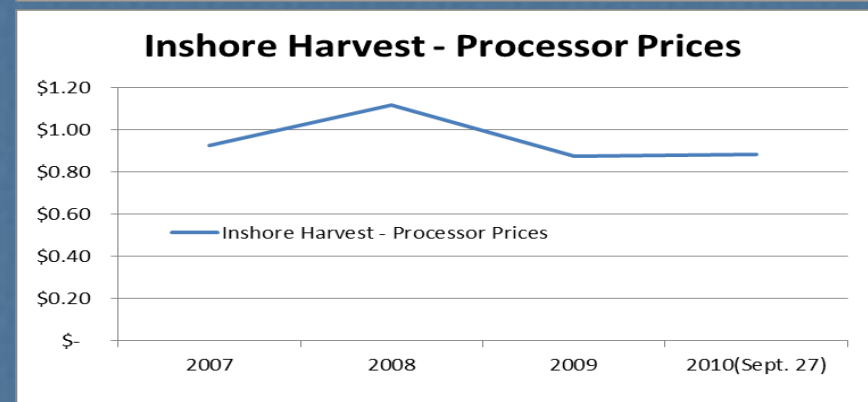
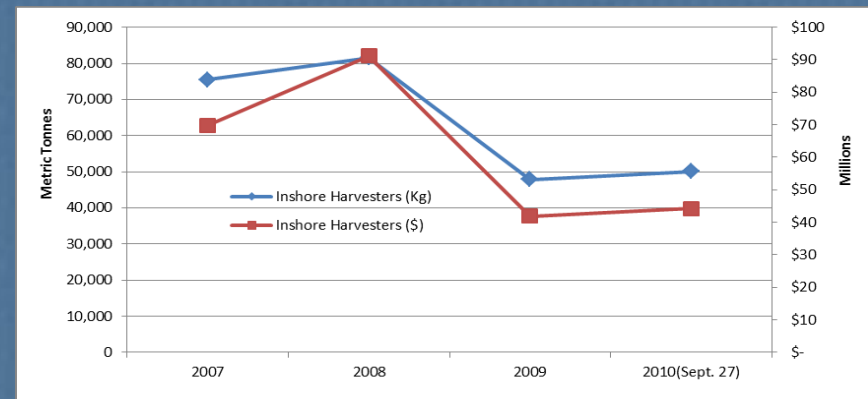
Secondary  
Processing

Direct to Retailer



# Inshore

- A fish chain on the rocks?
- Hard seasons recently – delays in start of season
- 2009 season sees diminishing volumes, much lower value; and prices lower
- Prices for 2010 the same as in 2009
- The per kilo price for vessels less than 100ft has seen a dip compared to the record year of 2008





# Inshore Market

- Shrimp in 2008 accounted for 34% of landed value in the province
- More than 50% goes to the European market
  - Mainly northern European countries, i.e. UK, Germany and Scandinavian countries

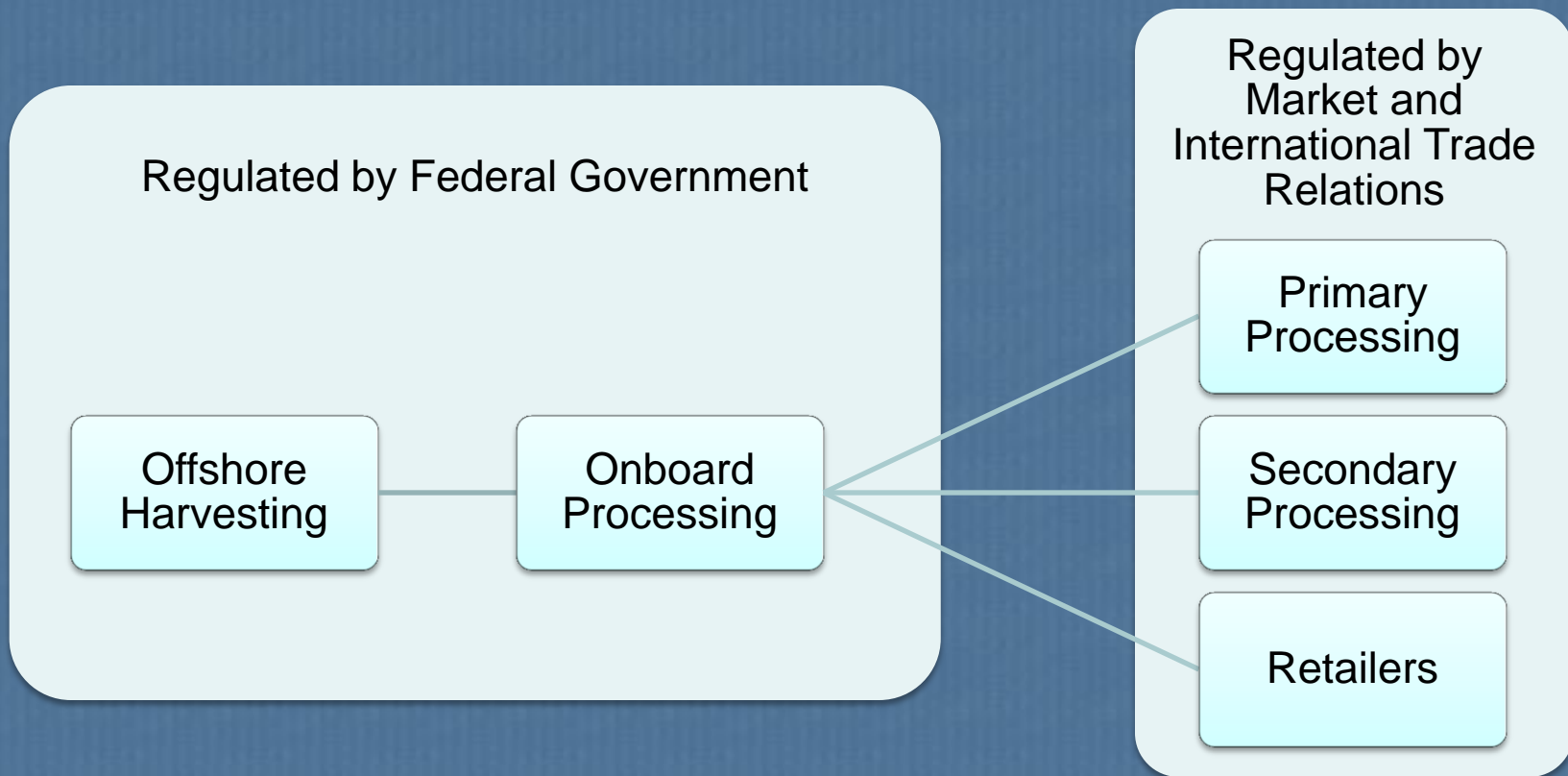


# Offshore

- Commenced in 1978
  - 1978-1989 17 Licenses issued
- Annual harvest approximately 40,000 Metric Tonnes
- Pricing and marketing dynamics
  - Price dependent on market conditions



# Offshore





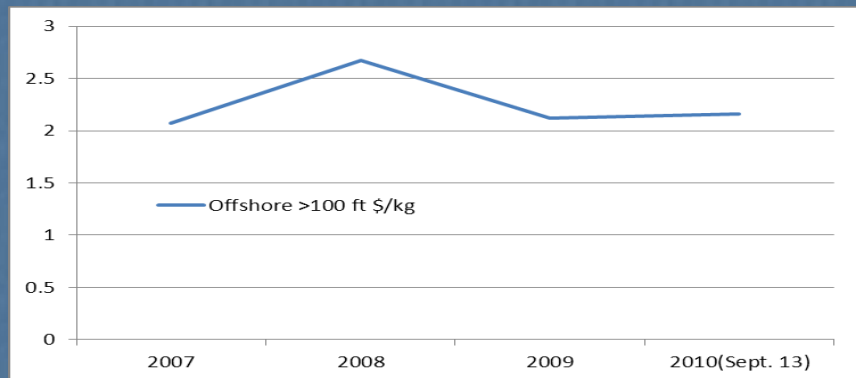
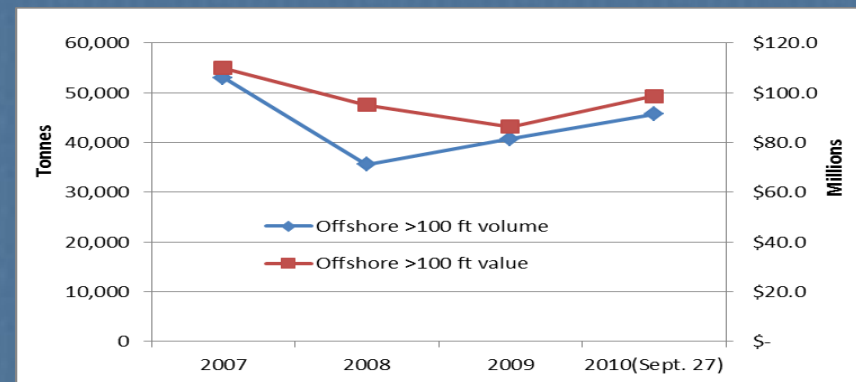
# Offshore Production

- All production being shell-on
- Raw 'glazed' – Japanese, high quality market
  - One kilo packaging, with potentially 2-3 size categorizations
- Cooked – variety of size combinations
- Raw frozen – industrial (small shrimp)



# Offshore

- Diminishing returns on investment
- Sharp drop in volume in 2008
  - May relate to the increase in price happening this year?
- Less short term fluctuation than inshore industry
- The prices for the products reached a short-term peak in 2008





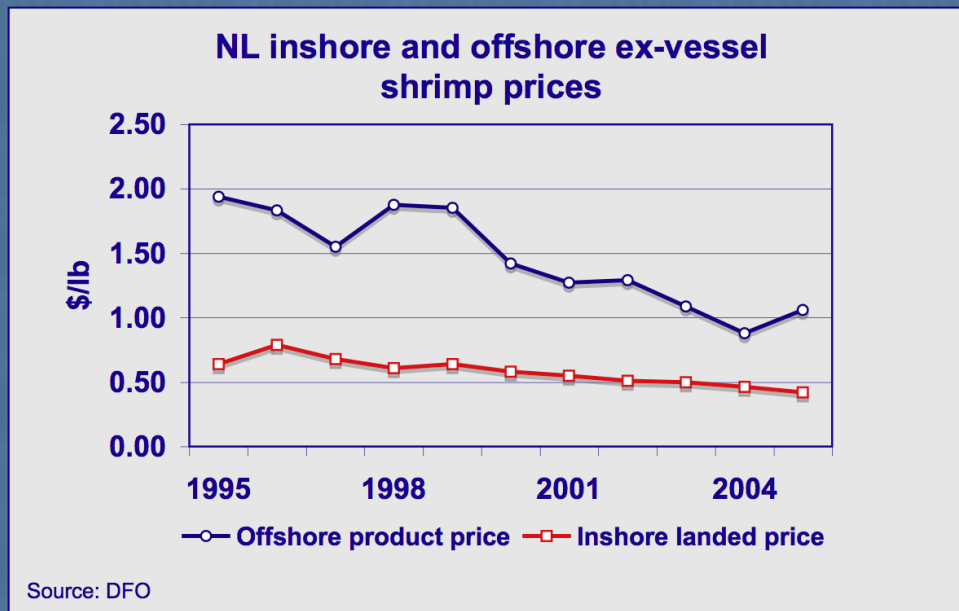


# Offshore Market

- Much of the offshore production traditionally exported to/through Denmark
  - One entity harvesting more than 22% of TAC selling all harvest through Denmark
- Russia has developed as a major market in recent years
  - Traditionally sold through agents in other countries, but now increasingly sold directly from Canada to Russia



# Offshore vs Inshore





# Shrimp value chain

- Confirms Wilkinson's analysis – conflict and compromise: price setting, regulations on sales, collective agreements, memoranda of understanding, etc.
- This isn't the 'typical' global food chain



# Producer to buyer drivenness in food

- Pre-1980s: producer cooperatives, coordinated marketing, joint marketing efforts, consolidated supply (producer driven to some extent)
- After 1980s: producer boards were dissolved – seen as inefficient and wasteful of resources.
- Production fragments and power shifts decisively to retailers.



# Buyer driven food chains cont

- New demands: quality, variety, pass down functions (e.g. packaging), pass down costs.
- Marginalisation of groups of producers
- For those who remain, treadmill of new requirements – not upgrading, but to stay on the chain.
- Significant disruption at production level and job loss/restructuring
- Is this happening in shrimp? ‘buyer power’; ‘hard discounting’



# Two lessons for shrimp?

1. Forms of regulation haven't given shrimp harvesters/processors leverage in global markets – volume, consolidated supply, joint marketing efforts etc.
2. If the chain becomes more buyer driven likely to see more disruption, marginalisation, dislocation (around quality, certification, process).



# Other options?

Develop new markets:

- Value chain terms – find a lead firm, join a global chain.
- Gereffi's early work: this is the key to success in global markets; need to find lead firms that will allow supply and then learning, upgrading, improving quality etc.



# Other options?

- Upgrading:
  - Move up the chain, closer to markets (e.g. FPI).
  - Improve quality, get into niche markets
  - Convince consumers on the difference between farmed and wild shrimp (FG)
  - Certification – e.g. MSC





# Other options?

- Upgrading:
  - The literature on upgrading in value chains is interesting, changing
  - Early studies – upgrading = improved quality, niche markets, etc.
  - More recently: upgrading is about being more stable, consistent, getting a better deal. This isn't always achieved through niche markets
  - Participation in global markets also needs to happen in a way that is not destructive of livelihoods



# Way forward

- Value chain analysis asks a different set of questions – around governance right through the chain, and about power, coordination, and options for subordinate suppliers – these have direct policy relevance
- Work on fish is limited, but there is a wealth of material for comparative analysis (and to assess options for change) – in land based food chains
- At the same time, fish chains can add to our understanding economic globalisation (this is the implication of Wilkinson's argument).



# Acknowledgements

Photo of Trout River courtesy of Michael Burzynski.

Summer photo of Bonne Bay Marine Station courtesy of Pierre LaBlanc.

Winter photo of Bonne Bay Marine Station courtesy of Bob Hooper.

Bonne  
Bay  
marine station



[www.bonnebay.ca](http://www.bonnebay.ca)



**Community - University Research for Recovery Alliance**

**[www.curra.ca](http://www.curra.ca)**