



The Decision Making and Western Knowledge Systems in Canadian Fisheries Management

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Inspiring Minds

Fish-WIKS



- **Fisheries – Western and Indigenous Knowledge Systems**
- Knowledge Systems: the process of how we know what we know (acquire, value, control, share)

“Understanding how Western and Indigenous Knowledge Systems can improve the sustainability of Canadian fisheries”

Question: How are fisheries managed in Canada?

- Department of Fisheries and Oceans Canada
- Minister of Fisheries
- 3 key pieces of Federal legislation
 - *Fisheries Act* (1985)- fisheries regulation
 - *Oceans Act* (1996)- framework for modern ocean management
 - *Species at Risk Act* (2002)- protect threatened/endangered organisms and habitat

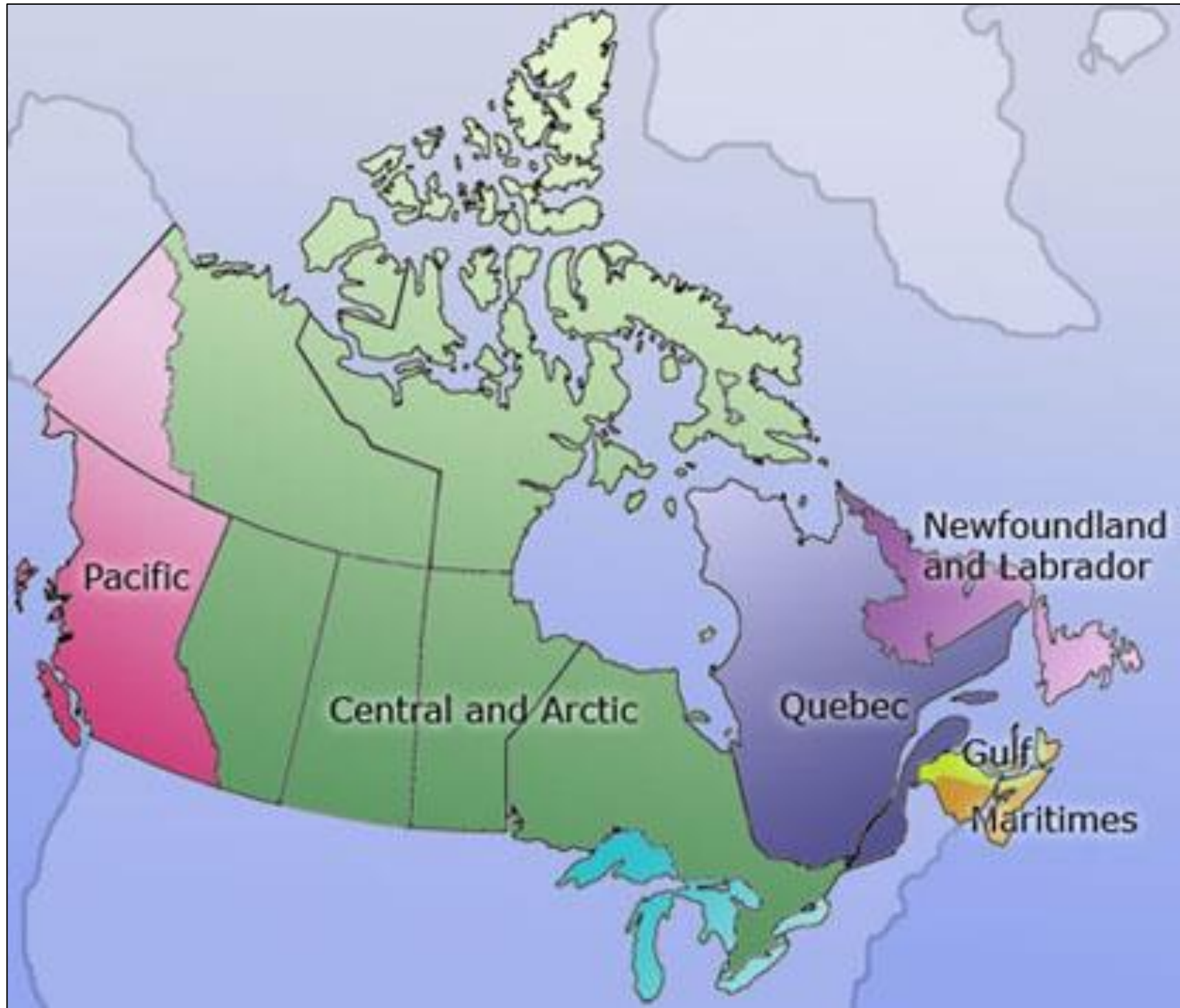
DFO Mandate

Mission:

Through sound science, forward-looking policy, and operational and service excellence, DFO works toward three strategic outcomes:

1. Economically Prosperous Maritime Sectors and Fisheries;
2. Sustainable Aquatic Ecosystems;
3. Safe and Secure Waters.

6 DFO regions, each headed by a Regional Director General



Source: DFO

National Sectors and Fisheries

National Sectors headed by Assistant Deputy Ministers:

- Ecosystems and Fisheries Management
 - Commercial
 - Recreational
 - Aboriginal
- Transformation,
- Human Resources and Corporate Services,
- Strategic Policy,
- Program Policy, and
- Ecosystems and Oceans Science

Western Knowledge System(s)



What do you know about the management of fisheries

How did you come to learn these things?

- Science-based = scientific method
 - Sustainable Fisheries Framework (2009)
 - A Framework for the Application of Precaution in Science-based Decision Making about Risk (2009)
 - Science at Fisheries and Oceans Canada: A Framework for the Future (2008)

Scientific Method

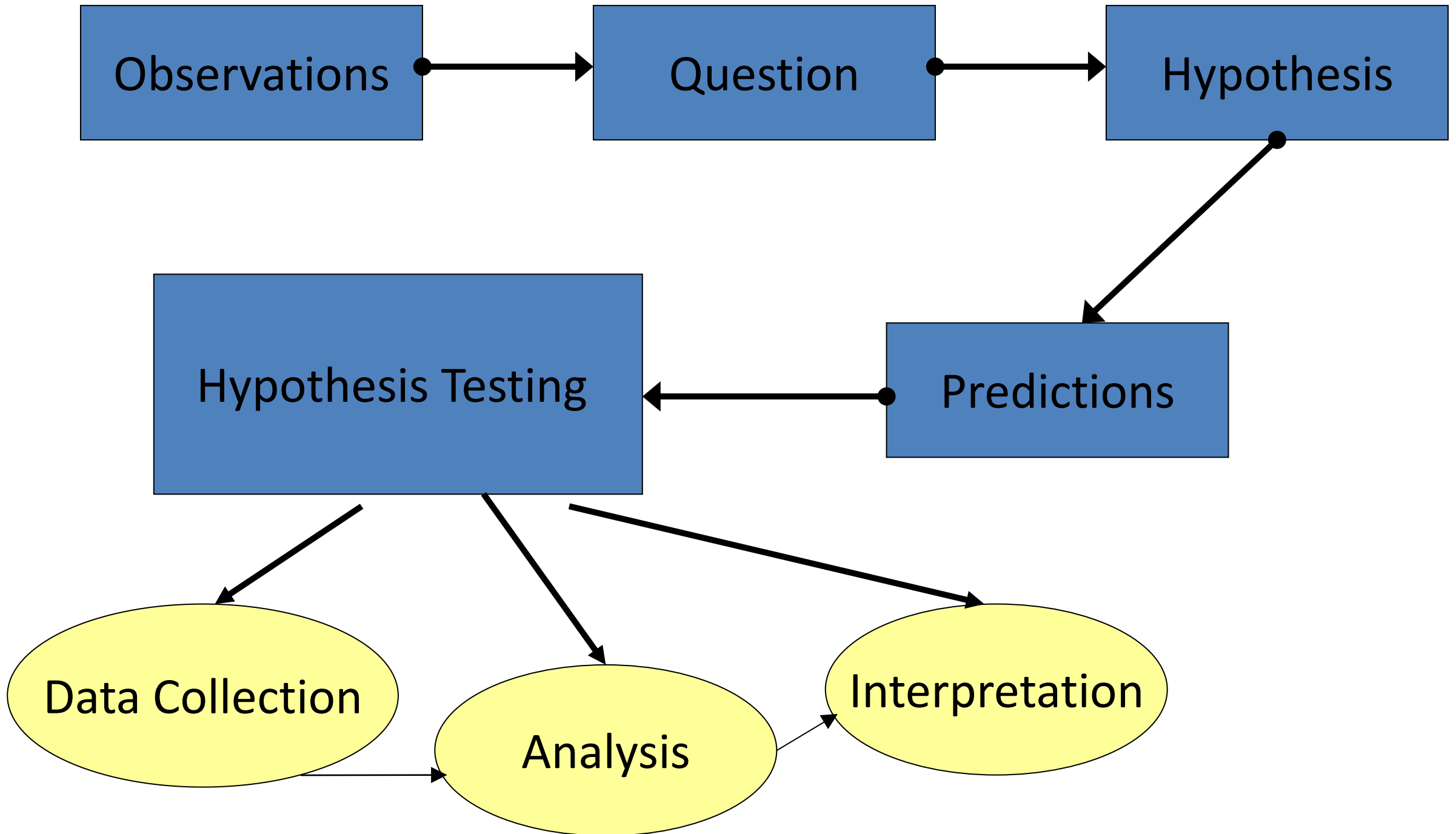


Fig 1.4: Smith & Smith (2009) Benjamin Cummings, San Francisco, CA, p 6-7

The Canadian Science Advisory Secretariat coordinates the peer review of DFO scientific issues

Oversees scientific advice required for DFO sectors

Canadian Science Advisory Secretariat (CSAS)

Management of DFO Region science advisory processes

Centre for Science Advice

DFO sectors requiring scientific advice

Fisheries Management

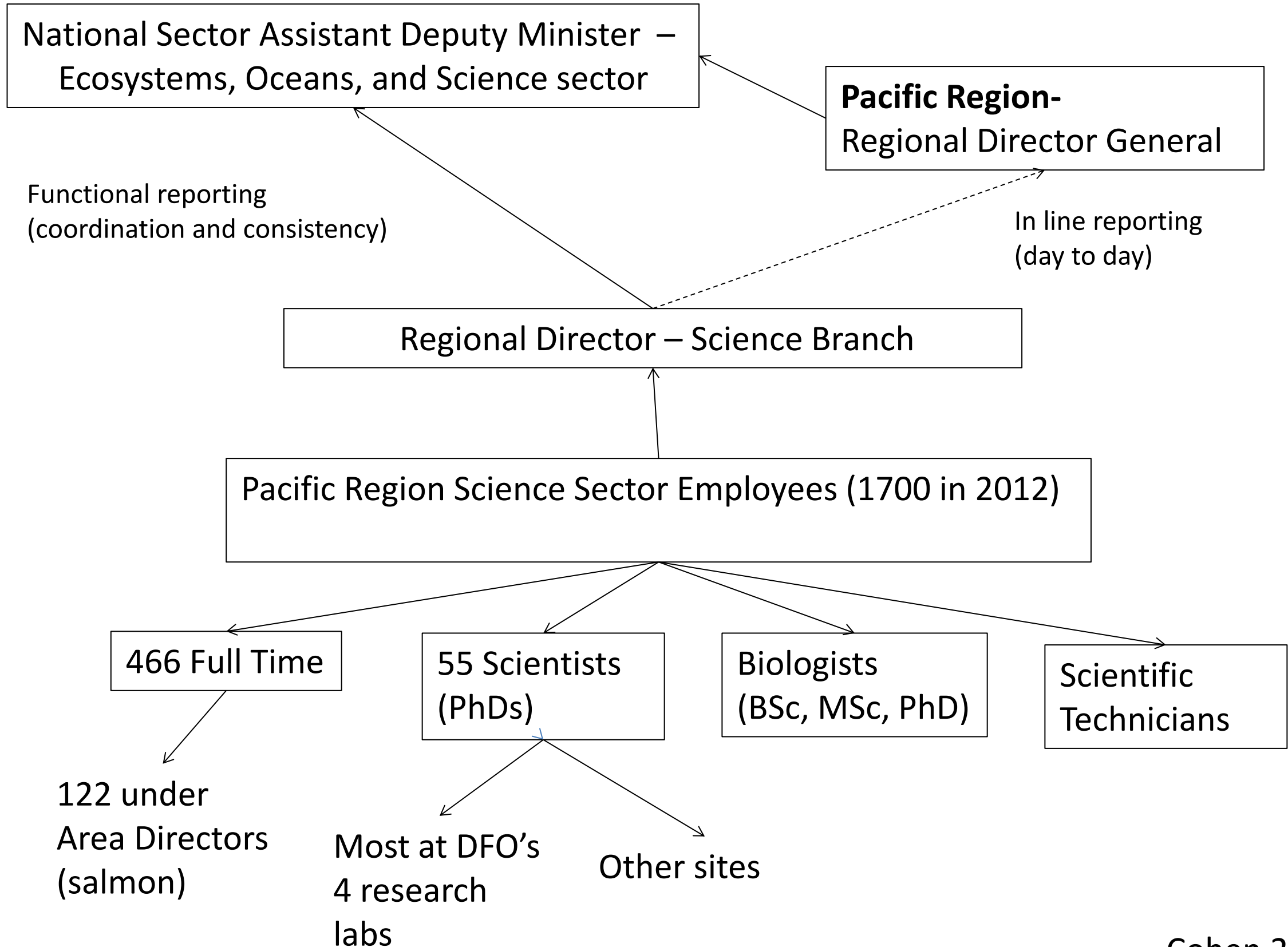
Policy

Oceans and Habitat Management

Scientific assessments and advice

Regional Peer Review Meetings

Organisation of DFO Science





British Columbia Pacific Salmon Management



Fisheries Act (1985)
Species at Risk Act (2002)
Pacific Salmon Treaty (Canada-United States), 1985
Convention on the Conservation of Anadromous Stocks of the North Pacific Ocean
(Canada-Japan-Russian Federation-Republic of Korea-United States), 1993

Laws/Agreements

Fishery (General) Regulations, SOR/93-53
Pacific Fishery Regulations, 1993, SOR/93-54
Pacific Fishery Management Area Regulations, 2007, SOR/2007-77
British Columbia Sport Fishing Regulations, 1996, SOR/96-137
Aboriginal Communal Fishing Licences Regulations, SOR/93-332
Management of Contaminated Fisheries Regulations, SOR/90-351
Pacific Aquaculture Regulations, SOR/2010-270

Regulations

Aboriginal Fisheries Strategy (1992)
Allocation Policy for Pacific Salmon (1999)
Policy for Selective Fishing in Canada's Pacific Fisheries (1999)
Pacific Region Fishery Monitoring and Reporting Framework (2002)
Wild Salmon Policy (2005)
Pacific Fisheries Reform (2005)
Pacific Integrated Commercial Fisheries Initiative (2007)
Vision for Recreational Fisheries in British Columbia (2010)

Policies

Integrated Fisheries Management Plan (annual, involving stakeholders)

Planning

Ministerial Discretion (as authorized by the *Fisheries Act*)

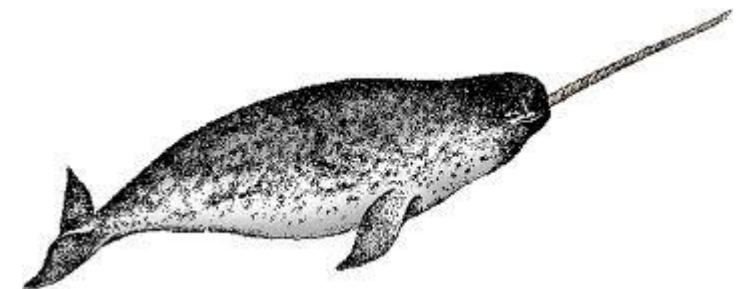
Decision-Making

Fisheries Managers (regional)

Arctic/Northern: Nunavut



- *Nunavut Land Claims Agreement* in 1993
- Territory of Nunavut in 1999
- NLCA created the Nunavut Wildlife Management Board
 - Co-management framework
 - Decision making body
- Proposals to modify must contain best science, Inuit and community knowledge, consultations
- Goes to a hearing
- NWMB makes decision based on best available information, submits it to the Fisheries Minister
- Minister accepts, rejects, modifies
- Char and marine mammals



Central/Inland: Ontario

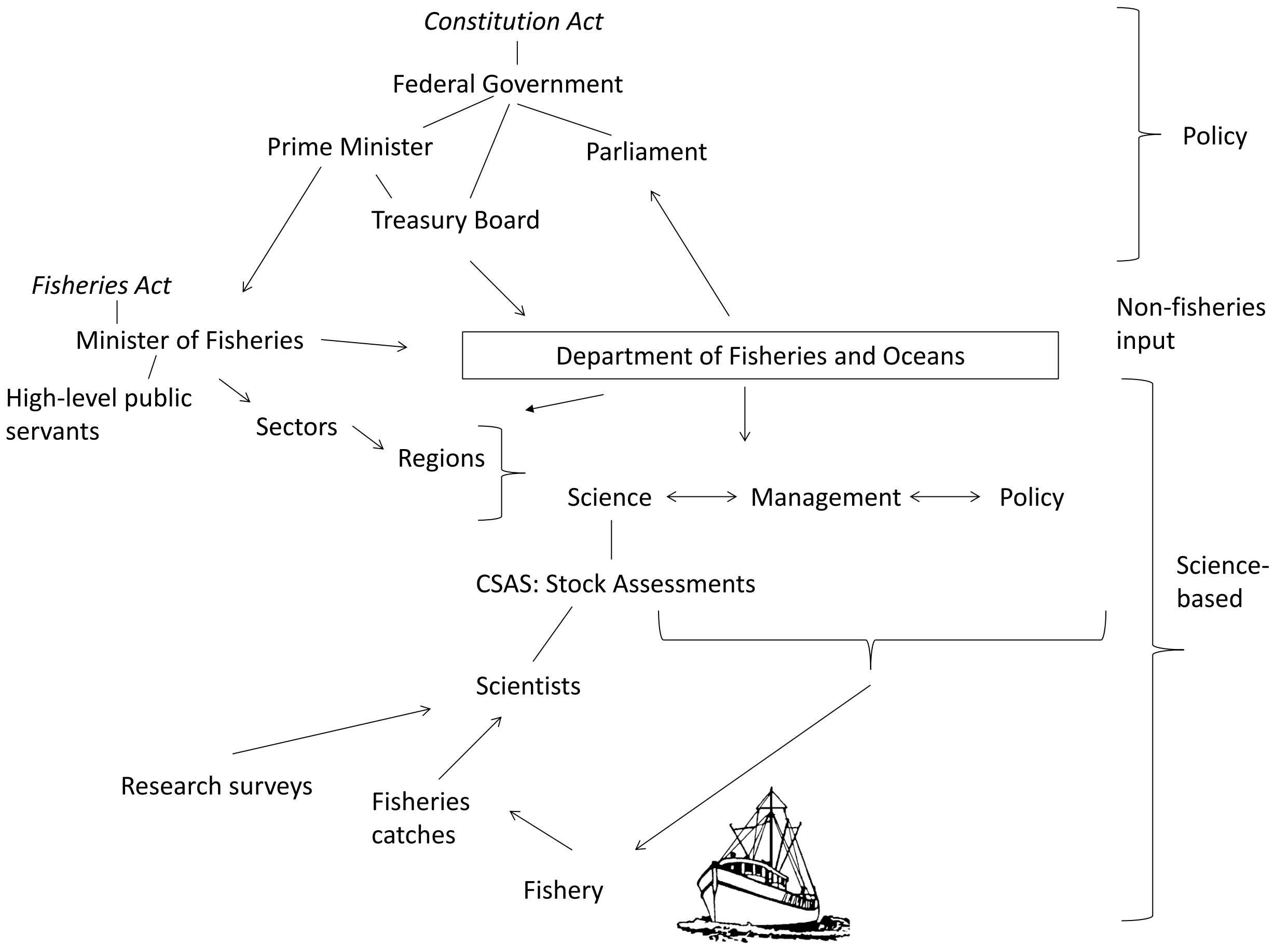
- 1989 Ministry of Natural Resources was established as the lead enforcer of the *Fisheries Act*
- Freshwater inland fisheries
- Many anthropogenic challenges
- Ontario's Provincial Fish Strategy 2014
 - Embrace ecological sustainability
 - Sustainable economic development & growth
 - Societal and cultural values
- Opportunity to provide comments on the strategy



Maritime/Atlantic: Nova Scotia

- Similar framework as Pacific, smaller/more regions
- Invertebrates are the most valuable
- Lobster fishery=Input controls, no quota
- Difficult to make changes
- Fishers input: advisory boards via their port representatives, majority votes





Summary

- 3 key pieces of legislation, common National policies/strategies
- Different in each region, diverse fisheries
- Opportunities and mechanisms for harvesters to provide input
 - Taken into account for decision-making?
- Scientific process/knowledge valued by Scientists, but by Policy-Makers? Other sectors?
- Understanding all of these components contributes to Fish-WIKS' goal

Thank You!

- Fish-WIKS research partners and collaborators
- Janelle Kennedy, Sarah Arnold, Anna Magera, Wayne Lynch, Christopher Lewis, Lucy Tegumiar, Amie Ivany, Clint Couchie, Stephen Crawford, Jeji Varghese, Laura Addicott
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