

Fisheries and Oceans Canada (DFO)

Science and Sustainable Aquaculture

Dr. Wendy Watson-Wright
Assistant Deputy Minister - Science
International Aquaculture Workshop
March 2006, Puerto Montt, Chile

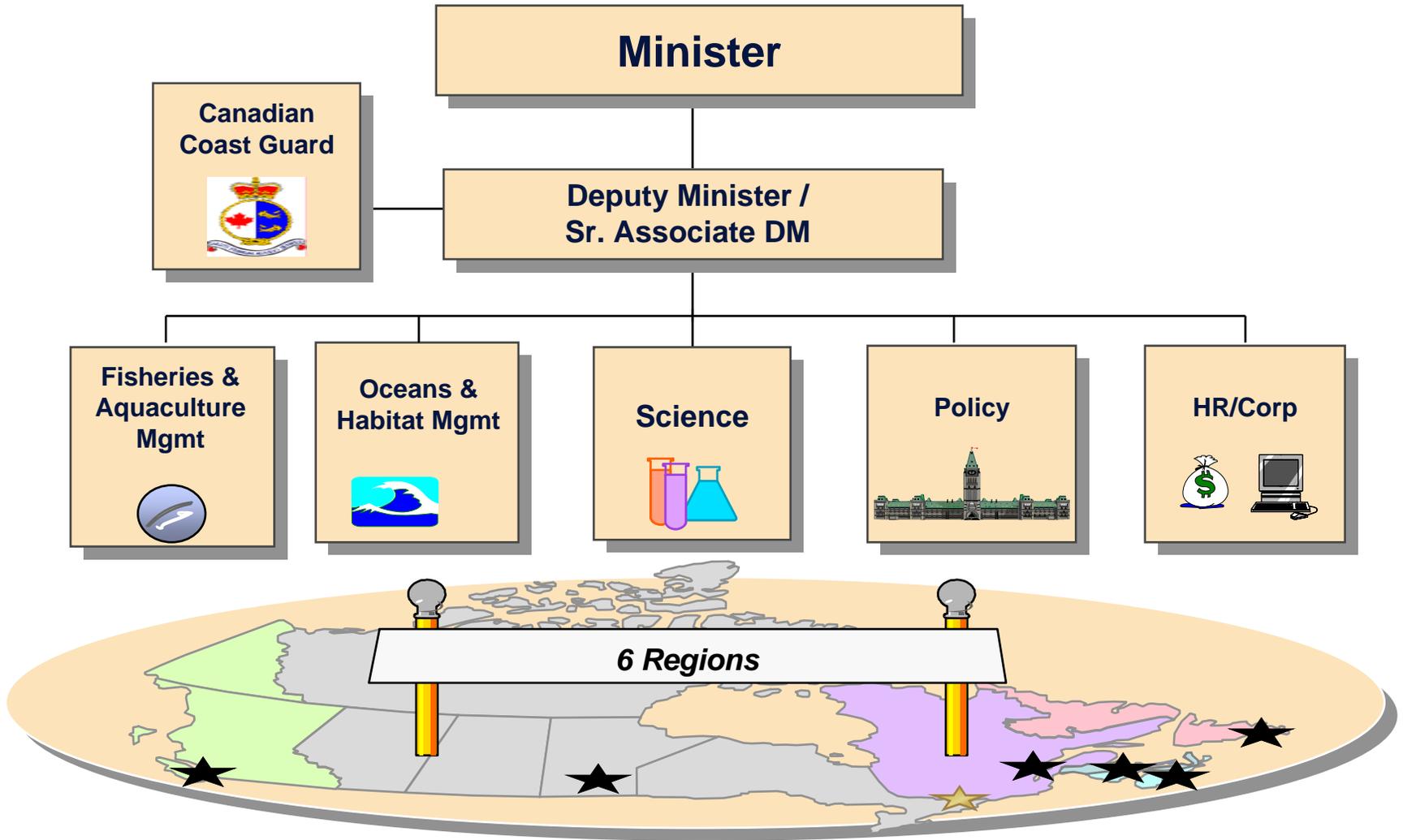


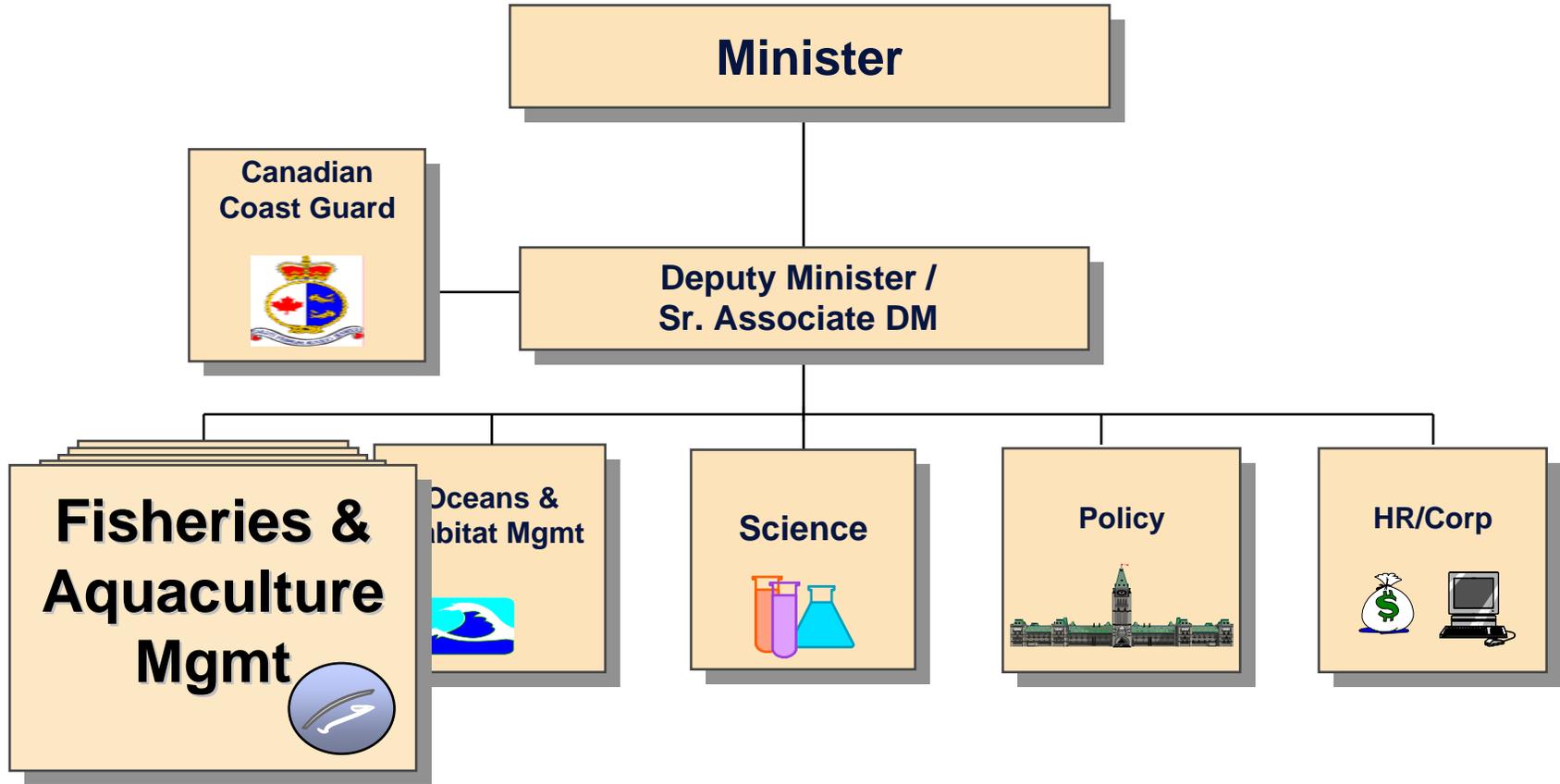
DFO Vision

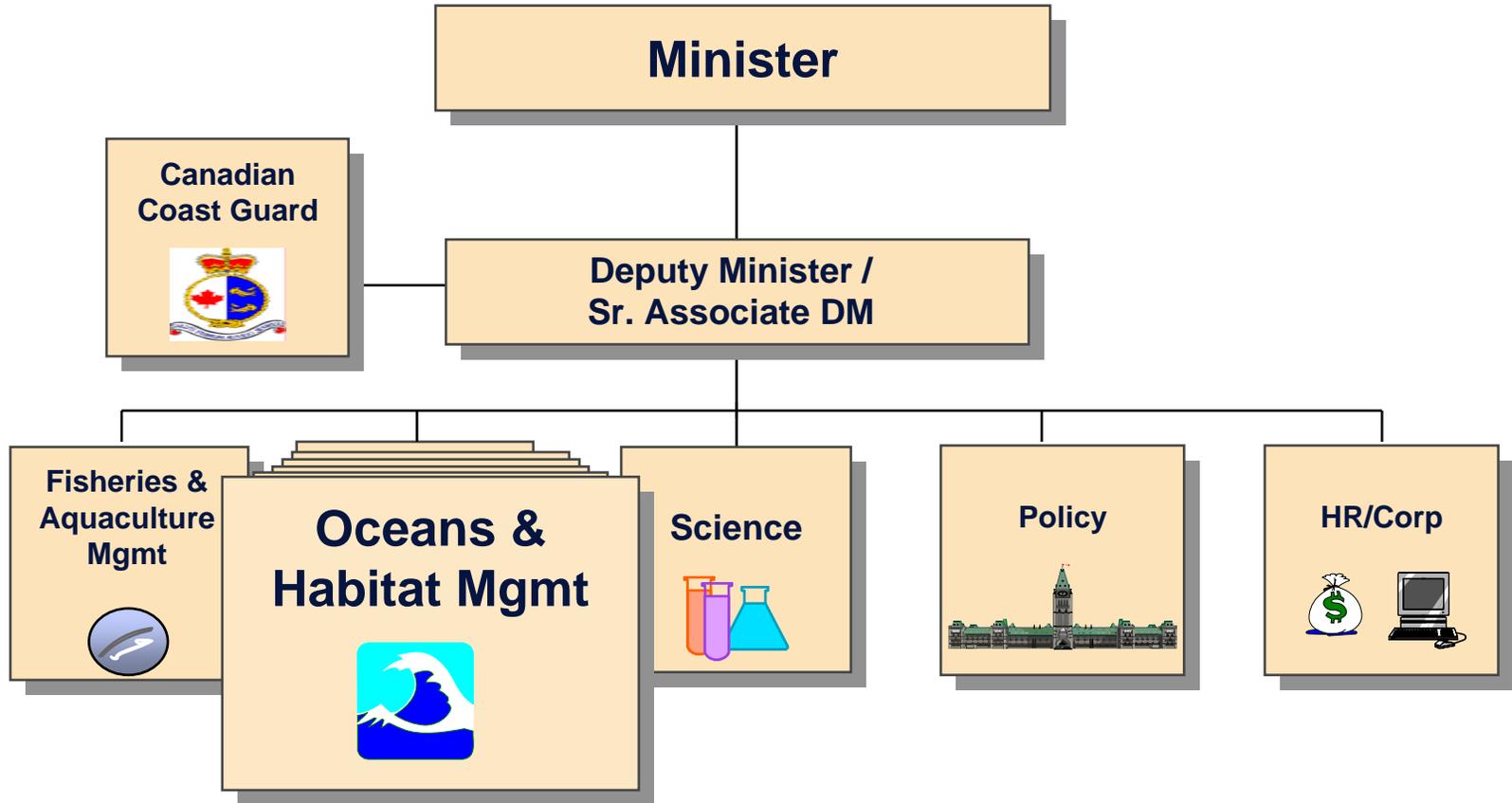
- Excellence in service to Canadians to ensure the sustainable development and safe use of Canadian waters.

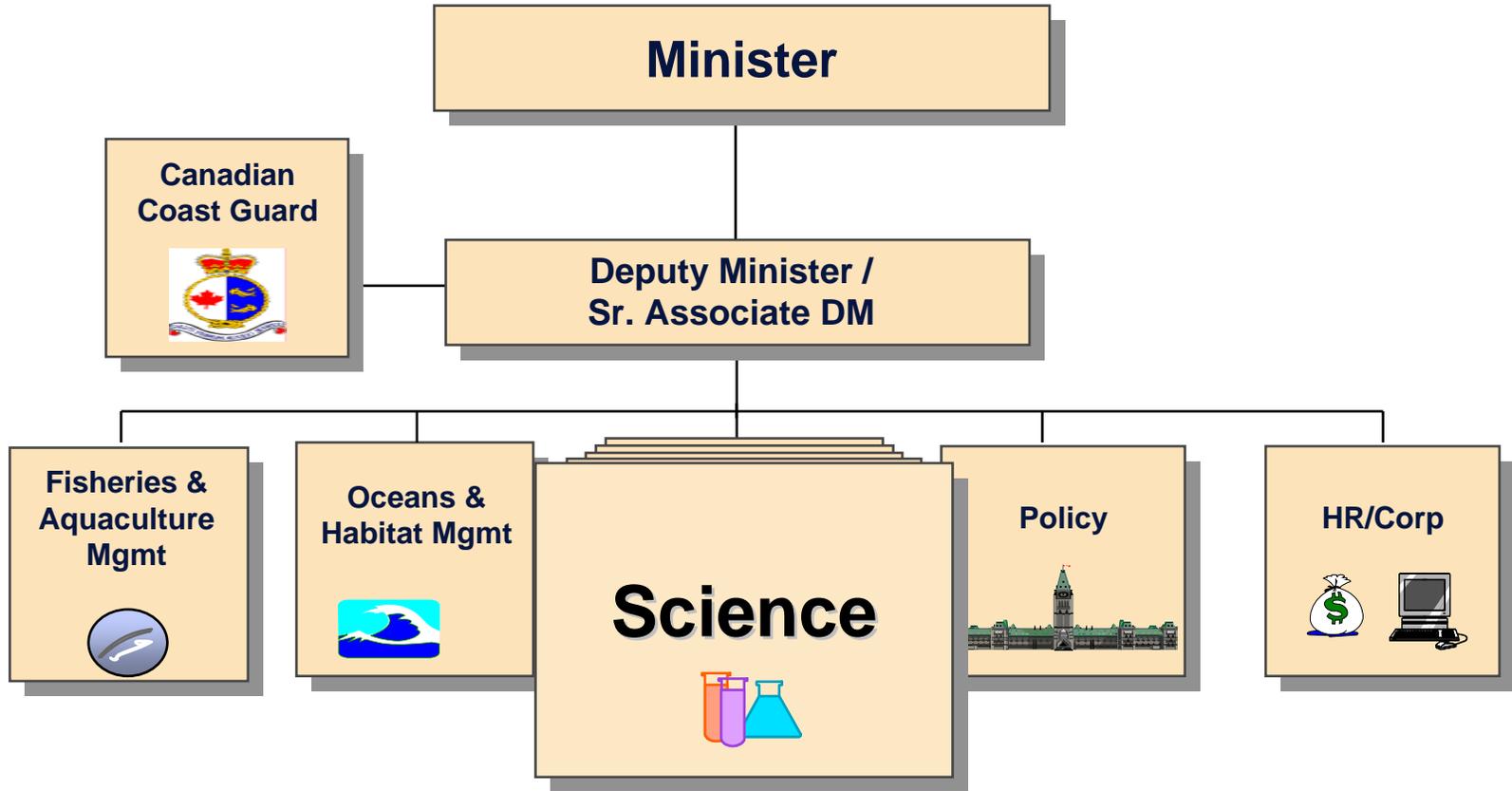
Our Mission

- Deliver to Canadians:
 - Safe and Accessible Waterways
 - Healthy and Productive Aquatic Ecosystems
 - Sustainable Fisheries and Aquaculture





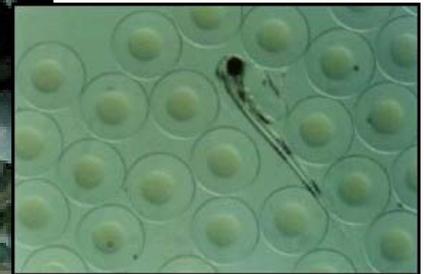






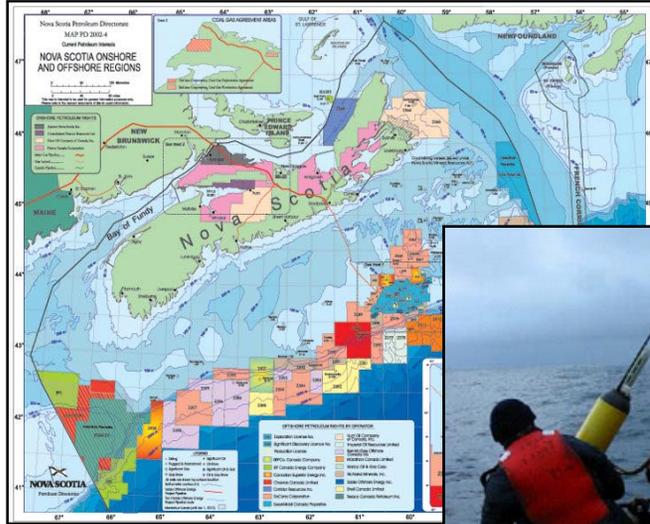
3 National Science Themes

1. Understanding and describing the state of aquatic ecosystems, including identifying sensitive habitats.
2. Assessing and mitigating the impacts of human activities.
3. Supporting maritime safety, security and sovereignty





5 core science functions



- Monitoring
- Management of Data and Information
- Targeted Research
- Products and Services
- Advisory Process



Science Institutes



Ctr Aqua Env Res



Exptl Lakes Area



Inst M Lamontagne



Gulf Fish Center



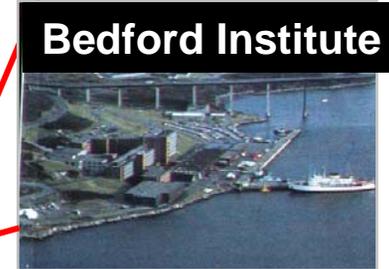
Pac Biol Station



NW Atl Fish Ctr



Inst of Ocean Sci



Bedford Institute



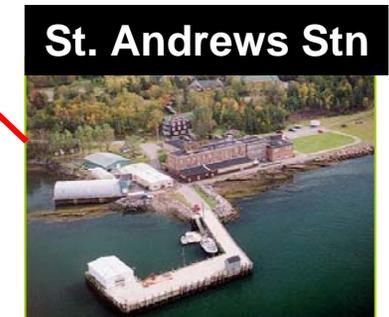
Freshwater Institute



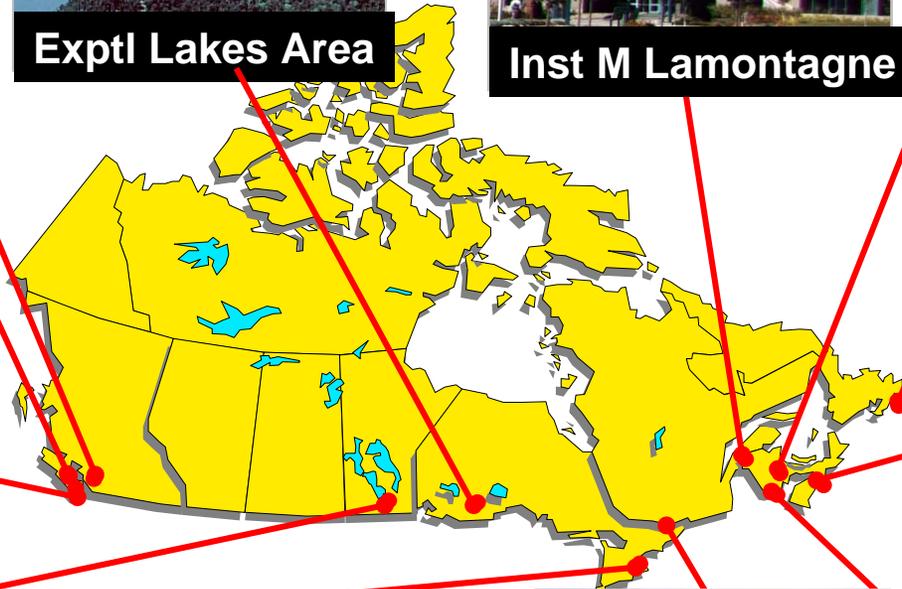
Bayfield Institute



615 Booth Street



St. Andrews Stn





Program for Sustainable Aquaculture

- Launched in 2000
- \$75 million over 5 years, \$15 million each year thereafter
 - Enhance application of legislation, regulations and policies
 - Canadian Shellfish Sanitation Program
 - Environmental science – interactions and impacts on aquatic ecosystems
 - Aquaculture Collaborative Research and Development Program (ACRDP)



Environmental Science

- Research and advice on aquaculture impacts and aquatic ecosystem interactions
- State of Knowledge initiative
 - Current status of scientific information
 - Identify knowledge gaps and research needs
- Environmental Science research priorities
 - Near and far field effects of finfish aquaculture
 - Impacts of nutrients, organic wastes, chemicals
 - Carrying capacity
 - Shellfish aquaculture-environment interactions
 - Farm/wild species interactions





Aquaculture Collaborative Research and Development Program (ACRDP)

- Increase collaborative research and development activity between the department and industry
- Improve the competitiveness of the Canadian aquaculture industry
- Address industry research priorities
- Jointly funded by DFO and industry partners
- Research and development priorities
 - Best Performance in Fish Production
 - Optimal Fish Health
 - Industry Environmental Performance





Other Science Activities

- There are many other science activities that provide support to our aquaculture program, but are not part of the Program for Sustainable Aquaculture
 - Aquatic Invasive Species (AIS)
 - National Aquatic Animal Health Program (NAAHP)
 - Aquaculture, Biotechnology and Genomics



Aquatic Invasive Species (AIS)

- Establishment of Centre of Expertise related to AIS
- Research on ships' ballast and fouling as vectors for introducing AIS
- Research on mitigating impacts and reducing spread of invasive tunicates
- Monitoring programs

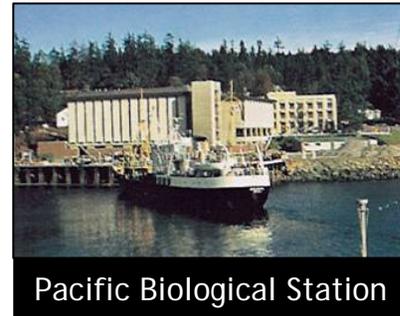




National Aquatic Animal Health Program

National Aquatic Animal Health Laboratory System

- aquatic animal health advisory responsibilities
- Competent Authority for aquatic animal diseases to be listed for federal control





Aquaculture, Biotechnology and Genomics



Center for Aquaculture &
Environmental Research



Bedford Institute of
Oceanography



St. Andrews Biological Station

- **Biotechnology and Aquaculture Resource Management**
- **Sustainable Aquaculture**
- **Biotechnology Tools for Aquatic Animal Health**
- **Novel Aquatic Animal Regulatory Science**



