



Fisheries Management in Canada and Future Priorities.

By

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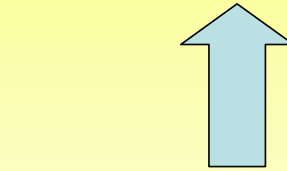
Moving from Traditional Approaches

with a generally agreed upon and focused objective and process

- Based on:
 - Single species
 - Stock productivity
 - e.g. MSY (Maximum Sustainable Yield)
 - Incorporated in generally accepted and standard population models

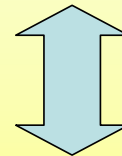
Traditional Decision Process

MINISTER Decision



FISHERIES MANAGEMENT
Recommendations
Consultation

Fishers



SCIENCE
Advice - Information

..... *To New Realities*

To a dynamic set of objectives

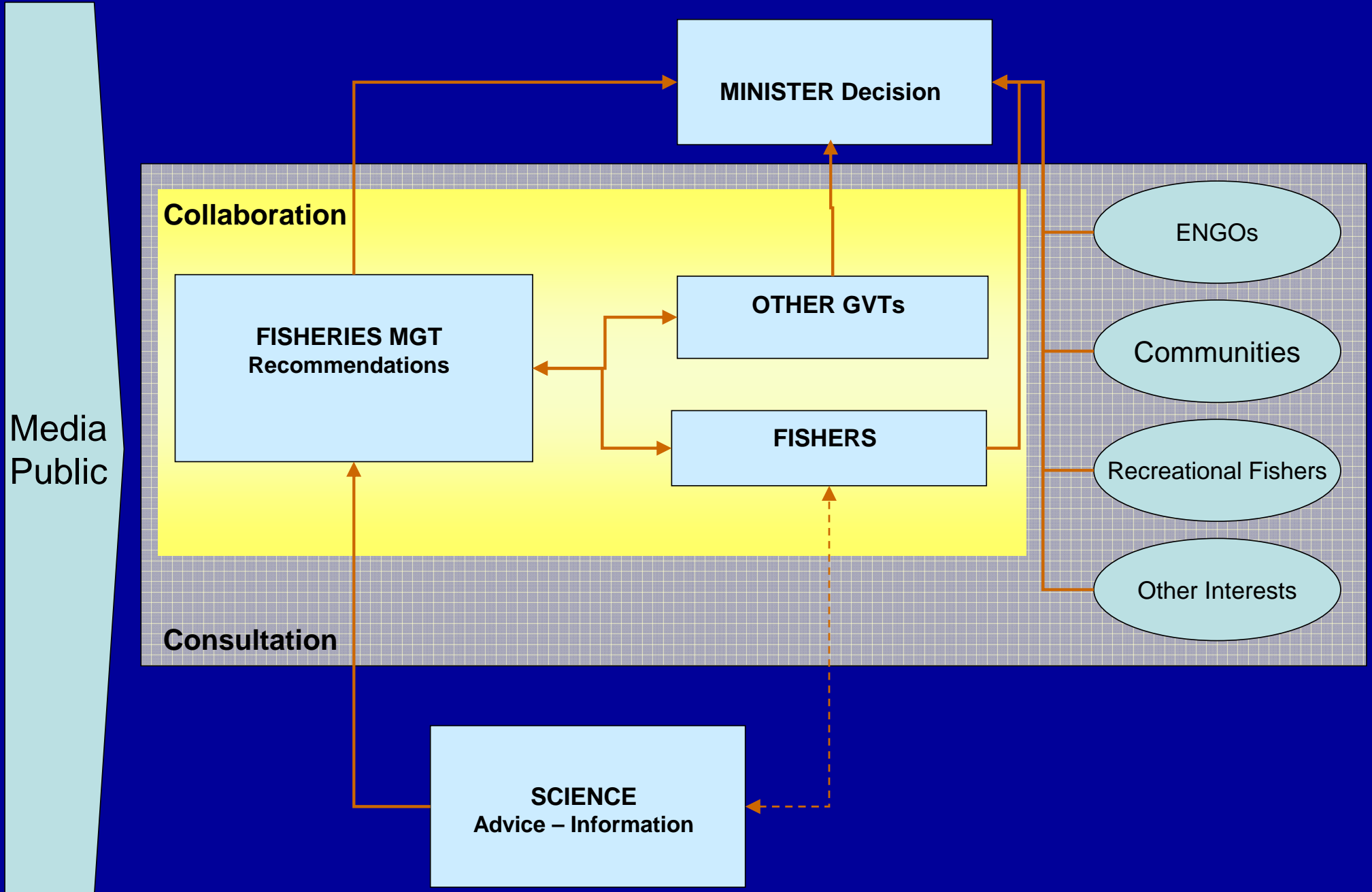
Policy Frameworks

- Precautionary Approach
- Ecosystem-based Fisheries Management
- Ocean to Plate Approach – Economic Viability
- Objective-based Fisheries Management

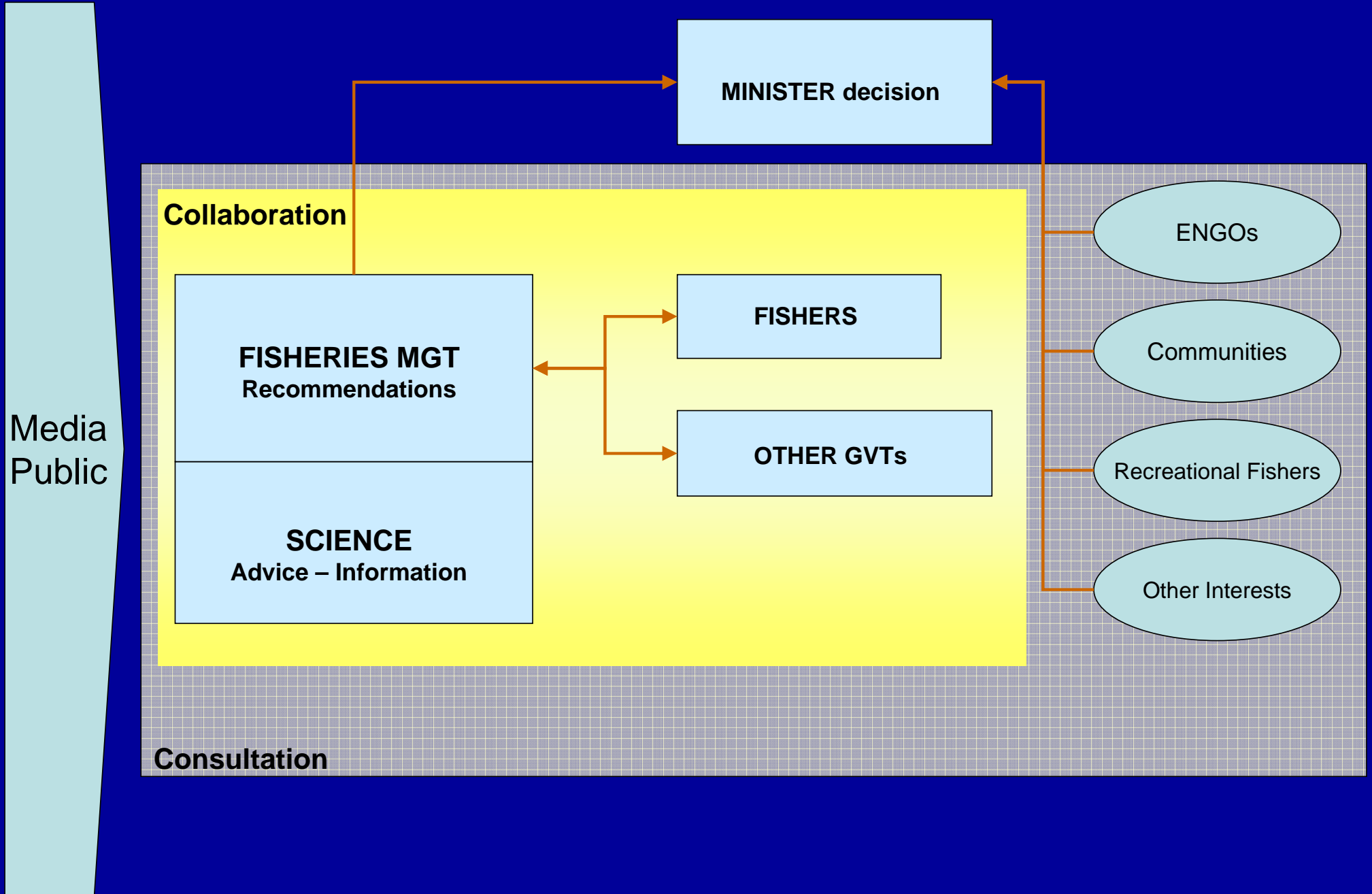
Legal Frameworks

- Domestic Legislation
 - Fisheries Act
 - Species at Risk Act
 - Oceans Act
 - Others
- International Agreements
- Aboriginal Rights and Land Claims Agreements
- Court Decisions

And a complex set of Decision Processes



Emerging Decision Process



Reflections on Ways Forward!

What is the new model to support all of this?

There isn't one.

**But there does need to be a Governance
Framework**

**..... Along with strategic repositioning and
adaptation by Science and Fisheries
Management.**

Resource Management Sustainable Development Framework

Legal Framework

- New *Fisheries Act*
- Other Legislation
- Court Decisions
- International Agreements

Policy Framework

- Ecosystem-based Management
- PA
- OBFM
- Economic Viability

Process Framework

- Prov's / Terr's
- Industry
- ENGOS
- First Nations
- Communities

Supporting Policies – To Provide Guidance to Managers

- Licencing Policies
 - Commercial, Recreational, Aboriginal
- Ecosystem Policies –
 - Sensitive Benthic Areas, Forage Species, By-Catch, etc.
- Specific Species Policies
 - eg - Wild Salmon Policy
- Others – Conservation, Socio-Economic, Regional, etc.

Decision Making Approach

- A fishery decision-making framework incorporating the PA

Integrated Fisheries Management Plans and Decision Rules

Monitoring and Reporting, Fishery Sustainability Reports

Communications

Implications for Science

The Fisheries Management Questions are getting more complex

- Limit Reference Points
- Management Strategies
- Advice on Harvest Rules
- Ecosystem Considerations -- predation studies, etc.
- Bottom Impact and Gear Issues
- More rigorous and sophisticated monitoring and reporting

... In addition to everything that you have been doing

- Still need stock assessments
- Biomass and Mortality Advice

... And at the same time that there is growing competition for marine science resources:

- Oceans Integrated Management
- New Developing non-fisheries interests
 - Aquaculture
- Invasive Species
- Species at Risk

Implications for Science

The Result is that the Science Research Agenda is getting crowded:

- Sustainability of Fisheries
- Habitat and Population Linkages
- Climate Change / Viability
- Ecosystem Assessment and Management Strategies
- Aquatic Invasive Species
- Aquatic Animal Health
- Sustainability of Aquaculture
- Ecosystem Effects of Energy Production
- Operational Oceanography
- Emerging and Enabling Technologies for Regulatory and Policy Responsibilities

Implications for Science

Both Science and Fisheries Management have to Reposition to be able to adapt to address the new realities:

Science:

- More comprehensive analyses using “greater” set of data
- Work and analysis has to be integrated / streamlined across research and data sets – more focus on multi-species surveys, climate change work applied to specific species and management plans.
- Less advice on tactical questions (e.g. annual TAC) but more advice on management strategies and robust harvest rules
- Science personnel have to become teachers both for fisheries managers and for Industry.

Fishery Managers:

- Managers have to engage more effectively – to develop a better understanding of the increasingly complex advice we receive – can’t just look for a number to come out of a model.
- We need to know the right questions to ask
- We have to become better at interpreting complex analysis
- We have to become better partners and champions of Science at the table.