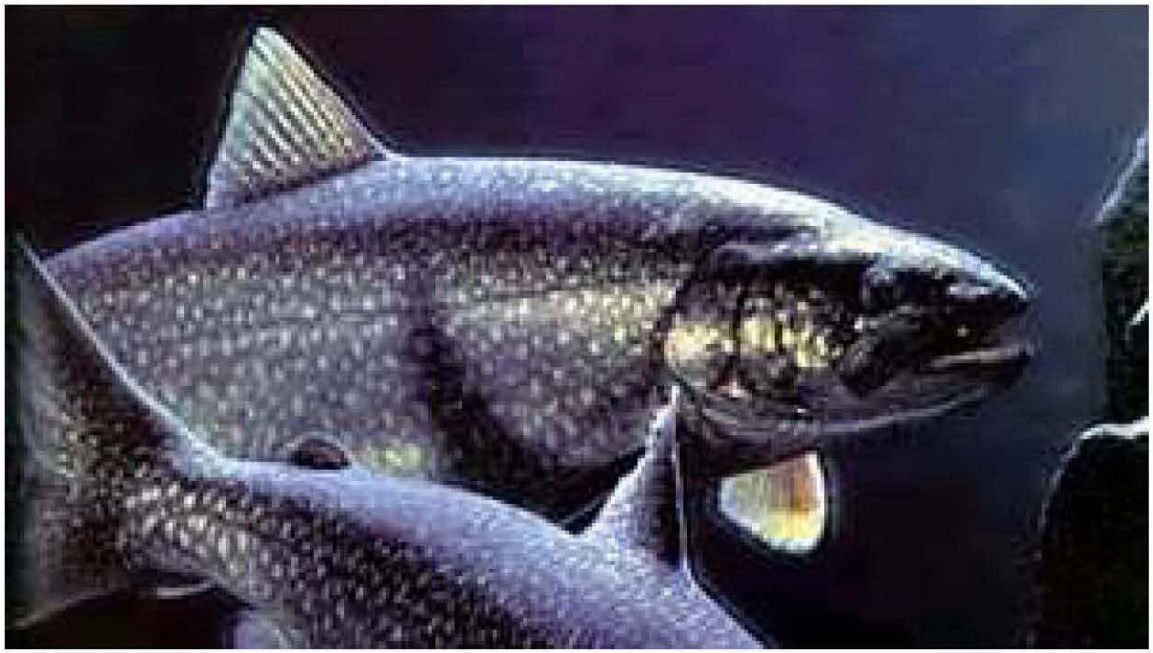
Strategic Review of Toxic Chemicals Research



Presentation to NSDC

17 June 2003

Review of Toxics Research

As a follow-up to the Science Assessment, the National Science Directors Committee (NSDC) directed that a review of toxic chemicals research be undertaken

Goal

Assess the relevance, success, effectiveness and the future direction of the Department's research on toxic chemicals for the period 1997/98 to 2001/02

Chronology

Nov 2002	First workshop with NCC-ESP
Nov 2002	Information from ES managers requested
Mar 2003	First draft of report distributed to NCC-ESP
Apr 2003	Second workshop with NCC-ESP
Apr 2003	Additional information from ES managers requested
Apr 2003	Two teleconferences with ES managers
May 2003	Second draft of report distributed to NCC-ESP
Jun 2003	Comments received from NCC-ESP, not included in report
Jun 2003	Final Report submitted to NSDC
Jun 2003	Third workshop with ES managers
Jun 2003	ES managers' Companion Document submitted to NSDC

Resources Allocated to Toxic Chemicals Research

FTEs, Salaries and O&M (1997/98 - 2001/02)

	FTEs	A-base [K]			B-base and other [K]	Total [K]
		Salaries	O&M	TCRP ESSRF		
1997-1998	**86**	5054	365	2679	2436	**10533**
1998-1999	**80**	4629	356	2300	1857	**9141**
1999-2000	**85**	5184	355	2156	3012	**10707**
2000-2001	**82**	4904	346	1549	4214	**11013**
2001-2002	**81**	4848	403	1795	3666	**10712**
Total [K]		**24619**	**1826**	**10477**	**15184**	**52106**

2002/03: 70 FTEs, $6.8 M (salaries, A-based O&M)

Significant Outcomes

- Toxic chemicals research is relevant to DFO's mandate and to addressing client needs
- Toxics research effort was allocated to:

  biological effects (51% of projects)

  chemical fate and transport (42% of projects)

  human use of fish (7% of projects)

Significant Outcomes (continued)

- Toxics research addressed 5 high-level objectives

Objective	# of Projects	% of Projects
Regulatory Decision-making – DFO	38	33
Regulatory Decision-making – OGD	25	22
Integrated Management Plan	12	10
Policy, Guidelines, Agreements, Codes	25	22
Remediation, Recovery	13	11
Public Awareness, Action	3	3

- Cooperation with OGDs needs to be strengthened to avoid duplication (especially with EC in Arctic and freshwater environments)

Significant Outcomes (continued)

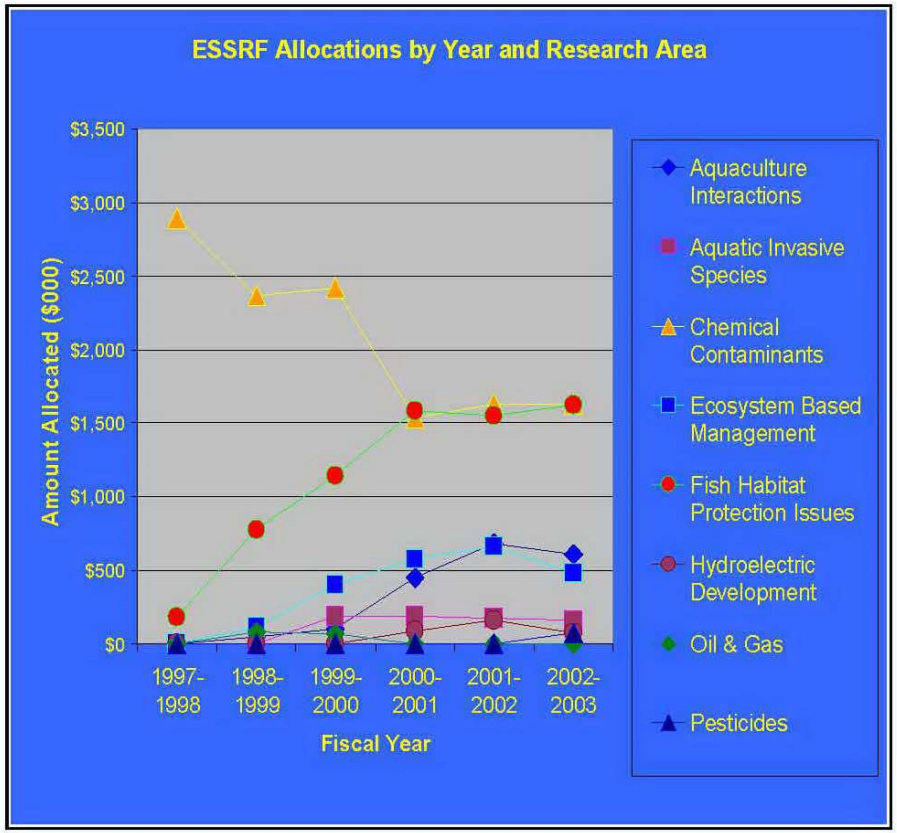
- Toxics research was successful in leveraging funds
  - $11.7 M A-based O&M vs $14.3 M O&M in leveraged funds over 5 years
  - but this can lead to mission drift
- Potential loss of almost $2 M in ESSRF funds could have serious consequences to toxics research
  - ~82% of A-based O&M is from ESSRF

Realignment of Toxics Research

1997/98 to 2000/01
total toxic chemical funding reduced from $11.6M to $7M to address other pressures

2001/02
total funding increased to $8.9M in response to client concerns on new chemicals

1997/98 to 2001/02
ESSRF funding decreased due to realignment to other priority areas (e.g., habitat, aquaculture, ecosystem based management)



New Directions

- Maintain adequate in-house expertise for toxic chemicals research
- Allocate higher priority to studies on biological effects of toxic chemicals on fishery resources and habitat (and lower priority to stand-alone studies on fate or residues not linked to effects)
- Focus on solving practical problems that are essential to DFO's mandate/obligations and needs of clients
- Develop Risk-based Priority Setting process to determine funding allocation

New Directions (continued)

- Develop alternative delivery for science functions that can be done outside DFO
- Investigate strengthening relationship between DFO, EC and universities through virtual centres (especially in freshwater toxicology)
- Clarify science role/responsibilities of DFO and EC and strengthen cooperation
- Enhance partnering with universities, OGDs, industry
  - e.g., expand DFO's Academic Subvention Program

Summary

- DFO's toxic chemicals research has played an important role in decision-making
- Maintaining in-house capability would ensure DFO continues to receive research and advice for the conservation and protection of fish and fish habitat
- Future efficiencies could be realized by:
  - allocating higher priority to biological effects
  - employing a Risk-based Priority Setting process
  - exploring alternative delivery strategies (e.g., partnering with universities, OGDs, industry)
- Oceans and Habitat Management support document and suggested approach

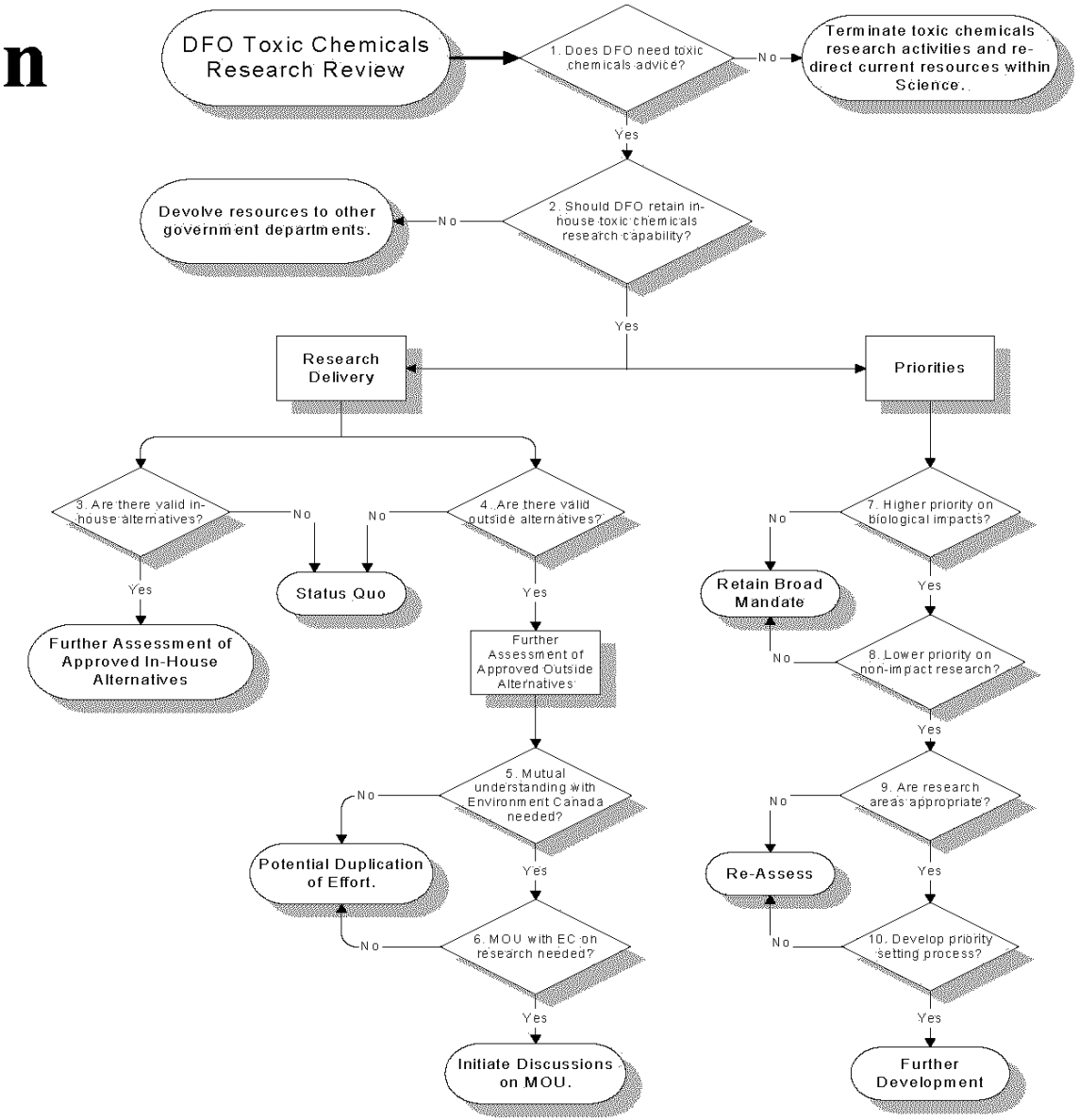
NSDC Input Required

Key issues requiring NSDC consideration:

- clarification of need and core capacity for toxic chemicals research in DFO
- determination of how science advice can be delivered
- identification of research priorities

Decision Tree will assist NSDC in answering 10 questions

Decision Tree



ES Managers' Companion Document

- Committed to engage with NSDC in process of change
- Expect DAAP and Science Assessment will clarify DFO priorities

- Toxics research within DFO has evolved and decreased over time (as part of ongoing re-alignment of priorities)
- Toxics research is an integrated component of Science
- Toxics Report is first step for moving forward
- Concerned that Toxics Report presents only one option (i.e., to decrease toxics research)

Companion Document: Future Directions

- DFO needs in-house toxic chemicals science capacity
- Priority setting is necessary:
  - process based on risk that includes client needs within context of DFO priorities
  - priority to research leading to DFO policy/regulatory action
  - toxics research to focus on impacts on health and productivity of resource; supported with research investigating presence and concentration in environment
  - biological and chemical monitoring is intrinsic activity in priority setting

Companion Document: Future Directions (continued)

- Based on DFO priorities, delivery options could be explored
- Partnering is essential
  - but requires seed money to influence direction of research
- Discussions needed with EC on Section 36 (roles and responsibility)

Conclusion

Several areas of agreement between Toxics Report and ES Managers' Companion Document

- maintain in-house toxic chemicals research capacity
- develop Risk-based Priority Setting process
- focus on biological effects (impacts on health/productivity)
- priority given to research leading to DFO policy/regulatory action
- continue partnering
- clarify roles/responsibilities with Environment Canada