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L'INSTITUT CANADIEN DU DROIT ET DE LA POLITIQUE DE L'ENVIRONNEMENT

**Choice of Policy Instruments for CEPA 'Toxic' Substances
and Other 'Substance of Concern'**

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Table of Contents

Introduction	1
Part I. An Inventory and Characterisations of Available Policy Instruments for CEPA	
Toxic Substances and other 'Substances of Concern'	1
1. Instrument Classification	1
i. Regulatory Instruments.	1
ii. Economic Instruments.	2
iii. Planning Instruments.	2
iv. Informational Instruments	2
v. Suasive/Voluntary Instruments.	2
2. Requirements for Instrument Use	3
i. Ministerial Approval.	3
ii. Governor in Council Approval.	3
iii. Requirements for Consultation with Provinces and Aboriginal Members of the Advisory Committee.	3
vi. Requirements for Establishment of Guidelines before the use of an Instrument.	4
v. Applicability of the Government of Canada Regulatory Policy. . .	4
vi. Requirements that the Aspects of a Substance or Activity not be Adequately Regulated under other Acts of Parliament.	4
vii. Provisions Regarding Boards of Review.	4
3. Instrument Strengths and Weaknesses	4
i. Effectiveness.	5
ii. Efficiency.	5
iii. Fairness.	5
iv. Political/Policy Acceptability.	5
Part II. Instrument Choice with Respect to Specific Substances	6
1. Introduction	6
2. Situational Analysis With Respect to Substance	6
i. Substance Status under CEPA	6
ii. International and Domestic Commitments in Relation to the Substance	7
iii. Substance Use, Generation and Fates	8
iv. Substance Characteristics	9
3. Decision-Making Steps for Instrument Choice.	10
i. Identification of Available and Relevant Instruments	10
ii. Instrument Evaluation and Weighting	10
iii. Instrument Choice Matrix	14
Conclusions and Implications	15

Endnotes 17

Choice of Policy Instruments for CEPA 'Toxic' Substances and Other 'Substance of Concern'

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Introduction

This discussion paper is intended to provide policy options and criteria for the selection of policy management instruments for substances declared "toxic" for the purposes of the *Canadian Environmental Protection Act, 1999* (CEPA) and other substances identified to be "of concern" for the purposes of the Act. Specifically, the paper seeks to address the issue of the optimal mix of control/management instruments for CEPA toxic substances and substances of concern, and the circumstance under which each should be considered.

The discussion paper is divided into two major parts. Part one provides an inventory of the instruments available under CEPA with respect to "toxic" substances and "substances of concern." This inventory also provides a brief assessment of the principal strengths and weaknesses of each instrument, in terms of the requirements for its application, and its potential effectiveness, efficiency, fairness and policy/political acceptability.

Part two to the discussion paper outlines policy options and criteria for the selection of an optimal mix of policy instruments in relation to CEPA toxic substances and other substances of concern.

Part I. An Inventory and Characterisations of Available Policy Instruments for CEPA Toxic Substances and other 'Substances of Concern'

1. Instrument Classification

The instruments available under CEPA for the management and control of toxic and other substances of concern may be divided into five broad categories:

- i. **Regulatory Instruments.** This includes legally enforceable requirements adopted in relation to the use, generation, release, sale, import, export or disposal of a substance. Examples would include regulations made under section 93 of the Act with respect to substances determined to be "toxic;"

controls imposed on sources of international air or water pollution within Canada (ss.167 and 177); controls on nutrients (s.118), disposal at sea (s.135); content of fuels (s.140); vehicle, engine and equipment emissions (s.153); transboundary movements of waste (ss.185 & 189); emergency prevention, preparedness and response (s.200) and federal government operations and sources on federal or aboriginal lands (s.209).

- ii. **Economic Instruments.** These are instruments intended to provide economic incentives to modify or engage in particular practices with respect to a substance. This would include the application of deposits and refunds to substances under section 325 of the Act, and tradeable units under section 326.
- iii. **Planning Instruments.** These are instruments which require that producers, users, generators, releasers or disposers of substances develop plans to reduce their generation, use, generation or disposal of the substance in question. This includes pollution prevention (s.56), virtual elimination (s.79), emergency (s.199), waste export reduction (s.188) and ocean disposal reduction (s.127-129, schedule 6) planning requirements which may be applied to specific substances. Pollution prevention and emergency plans are required to be implemented.
- iv. **Informational Instruments.** These are instruments which require the provision of specific information to the Minister in relation to the generation, production, use, release or disposal of a substance, or its impacts on human health or the environment. Such information may be made available to the public. The purpose these requirements can be to both raise awareness among users, generators and releasers of a substance of its presence in their activities, and potential means to reduce its use, generation or release, and put place public pressure on such actors to take such steps. Examples of such instruments include the application of requirements for reporting to the National Pollutant Release Inventory (NPRI) (ss.48-50), and the Minister's general information gathering powers under section 46 of the Act.
- v. **Suasive/Voluntary Instruments.** These are non-binding instruments intended to provide moral or other incentives to the users, generators, producers, releasers or disposers of a substance to change their behaviour with respect to that substance. Included in this category are the development of Guidelines, Objectives and Codes of Practice under sections 54 and 208 of CEPA, the adoption of "Challenge" programs such as the Accelerated Reduction/Emissions of Toxics (ARET) program, various forms of Memoranda of Understanding (MOU) with producers, users, generators and/or releases of specific substances, and more formal 'covenants' or civil contracts with such actors.

The availability of specific instruments under CEPA is a function of whether a substance is classified as being "toxic" for the purposes of the Act. Certain instruments, such as the making of regulations under section 93 of the Act, are only available in relation to "toxic" substances, while other instruments, such as information gathering, may be applied to all substances.

A summary of the available instruments with respect to substances declared "toxic" for the purposes of the Act and added to the List of Toxic Substances (TSL) is provided in **Table 1**. A summary of the available instruments in relation to other substances of concern, is provided in **Table 2**.

Within each table, the instruments available under the Act are identified and classified into one of the five preceding categories. The section of CEPA providing authority for the use of each instrument is also identified.

2. Requirements for Instrument Use

The requirements for the application of each instrument are provided in the tables as well. This is significant as more complex requirements can imply substantial delays in their use, or the possibility of its blockage in relation to a particular substance. The requirements considered include:

- i. **Ministerial Approval.** Instruments of this type can be implemented through the publication of a Ministerial Order in the *Canada Gazette*, or the attachment of a condition to an approval granted by the Minister. These are the simplest forms of instrument approval and do not require consultations with other departments, other governments or the approval of other Ministers, and do not trigger the requirements of the Government of Canada's Regulatory Policy (see below).
- ii. **Governor in Council Approval.** Instruments of this type, which typically include regulatory instruments, require the approval of the Governor-in-Council (i.e. cabinet). This may require negotiations with other government departments and ministers, which may result in delays in the application of an instrument, significant changes to its character, or a decision not to adopt the instrument. Instruments subject to Governor-in-Council approval are also usually subject to the government's Regulatory Policy.
- iii. **Requirements for Consultation with Provinces and Aboriginal Members of the Advisory Committee.** CEPA contains requirements for "offers to consult" with provincial governments and aboriginal representatives on the National Advisory Committee before the use of many of the instruments available under it. Some interpretations of these clauses may even suggest that the Minister should

not act if such "offers to consult" are accepted, until consultation processes are completed. This may engender significant delays in the application of an instrument, and demands for changes in its content/structure.

- vi. **Requirements for Establishment of Guidelines before the use of an Instrument.** The use of certain instruments under CEPA, such as the Act's general information gathering powers, is subject to requirements for the publication of guidelines regarding the use of these powers. Such guidelines may themselves be subject to requirements for consultations with other governments or departments, which may again result in delays in their adoption or changes to their content.
- v. **Applicability of the Government of Canada Regulatory Policy.** Regulatory instruments requiring Governor-in-Council approval are generally subject to the Government of Canada's Regulatory Policy, administered by the Privy Council Office. This policy includes requirements for consultation, cost/benefit analyses which shows benefits outweigh costs to Canadians, minimization of adverse impacts on the economy, and that alternative means to conform with regulatory requirements be given full consideration, prior to the adoption of regulatory instruments.
- vi. **Requirements that the Aspects of a Substance or Activity not be Adequately Regulated under other Acts of Parliament.** Certain instruments under CEPA are subject to requirements that the cabinet not make regulations where the aspect of a substance in question is adequately regulated under another Act of Parliament with respect to the protection of human health, the environment and biodiversity. These requirements may engender conflicts with other government departments which also have regulatory authority with respect to a substance. These conflicts may be time-consuming and difficult to resolve.
- vii. **Provisions Regarding Boards of Review.** Certain instruments under CEPA are subject to requirements for the establishment of a Board of Review where their use is proposed, and a notice of objection is filed. The Board can inquire into the nature and extent of the danger posed by a substance in respect of which the instrument is proposed. This again can introduce significant delays in the adoption of an instrument.

3. Instrument Strengths and Weaknesses

Finally, a brief discussion of the principle strengths and weaknesses of each instrument is provided. This discussion is focussed on the following four criteria.

- i. **Effectiveness.** This is defined as the capacity of the instrument to achieve the desired outcomes with respect to a substance or activity. This is considered in terms of such factors as enforceability and previous experience with the use of the instrument.
- ii. **Efficiency.** This criteria considers the costs and benefits associated with the use of the instrument to all actors, including the regulated entities, government, and society as a whole. Factors such as the degree to which an instrument can build on existing activities and programs are considered.
- iii. **Fairness.** This is defined as the fairness of the distribution of the costs and benefits associated with the use of an instrument within society. This considers such factors as: the degree to which costs are internalized by those who benefit from an activity (the polluter pays principle)¹ the avoidance of free riders, who do not modify their behaviour positively, while others do and potentially incur costs in doing so; the provision of consistent levels of environmental and health protection to all Canadians;² and the prevention of disproportionate costs on specific communities or sectors.
- iv. **Political/Policy Acceptability.** This includes such factors as: the degree to which the use of an instrument is consistent with current government policy; the potential to support or conflict with other levels of government or agencies of the federal government; the potential for support or adverse reactions from non-governmental interests; and the degree to which it may raise concerns regarding trade or other international commitments.

An inventory and characterization of the instruments available with respect to CEPA toxic substances is presented in **Table 1**. An inventory and characterization of the instruments available under CEPA with respect to other substances of concern is provided in **Table 2**.

Part II. Instrument Choice with Respect to Specific Substances

1. Introduction

Part two to this discussion paper outlines policy options and criteria for the selection of an optimal mix of policy instruments in relation to CEPA toxic substances and other "substances of concern."

The process of instrument selection is divided into two parts: the development of a situational analysis with respect to the substance in question; and the selection of particular policy instruments in relation to a substance on the basis of their availability and relevance, and criteria of effectiveness; fairness; efficiency; and policy/political acceptability in the context of the situational analysis.

2. Situational Analysis With Respect to Substance

A situational assessment with respect to a substance would be established through the development of responses to the following questions:

i. Substance Status under CEPA

- a). *Is substance on CEPA Schedule 1 (the List of Toxic Substances or TSL), proposed for addition to the TSL, or a non-TSL "substance of concern"?*

This question flows from the consideration that the available instruments under CEPA are a function of a substance's status under the Act.

- b). *Are any actions or the use of a particular instrument mandatory under the Act in relation to the substance?*

In the case of CEPA Toxic substances a proposal for regulation or instrument respecting preventative or control actions must be published in the *Canada Gazette* within two years of Minister recommending addition to the TSL,³ and the regulation or instrument finalized 18 months later.⁴

In case the case of toxic substances which meet the criteria for persistence and bioaccumulation, and are therefore subject to virtual elimination (VE), the proposed regulation or instrument must include a limit on releases of the substance.

ii. **International and Domestic Commitments in Relation to the Substance**

c). *What domestic or International commitments or policies exist in relation to the substance?*

Examples commitments or policies might include commitments to actions or outcomes with respect to specific substances, potentially within specific timeframe would include the following:

International Commitments:

- * *Great Lakes Water Quality Agreement and Annexes, and associated commitments, such as the Binational Toxics Strategy;*
- * *United Nations Economic Commission for Europe Convention on Long Range Transport of Air Pollutants and Protocols on Sulphur, Persistent Organic Pollutants and Heavy Metals;*
- * *Canada/US Air Quality Agreement and Annexes;*
- * *Montreal Protocol on Substances that Deplete the Ozone Layer;*
- * *Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal, and related agreements, such as the Canada-US Agreement on the Transboundary Movement of Hazardous Waste;*
- * *London Convention on Ocean Dumping.*
- * *United Nations Convention on Prior Informed Consent; and*
- * *the proposed United Nations Convention on Persistent Organic Pollutants*
- * *Commitments made through the Sound Management of Chemicals Program of the North American Commission for Environmental Cooperation, under the North American Agreement on Environmental Cooperation.*

Domestic Commitments/Policies:

Intergovernmental Agreements:

- * *Canadian Council of Ministers of the Environment (CCME) Canada Wide Standards Implementation Commitments;*
- * *CCME Policy on Toxic Substances;*
- * *CCME Pollution Prevention Policy*
- * *Canada-Ontario Agreement on Great Lakes Basin Ecosystem, or similar bilateral agreements*

Federal Policies:

- * *Toxic Substances Management Policy*
- * *Pollution Prevention Strategic Framework*
- * *Recommendations from Strategic Options Process (SOP) issue tables.*

Consideration should also be given to any commitments which may constrain the Government of Canada's scope of action with respect to a substance. These might include:

- * commitments to deal with substances through the CCME Canada-Wide Standards Process;
- * provisions of the *Agreement on Internal Trade*;
- * provisions of the *North American Free Trade Agreement*;
- * provisions of the World Trade Organization Agreements.

iii. Substance Use, Generation and Fates

- d). *Are the significant uses and sources of the generation and fates (release/transfer/disposal) of the substance known?*

In the case of CEPA toxic substance it would be presumed that some information regarding use, generation, release and disposal of a substance would be generated through the Priority Assessment List (PSL) assessment process. In the case of "substances of concern" informational instruments may need to be employed to determine the locations and levels of substance use, generation, release and disposal.

- e). *What are these uses and fates? Are they generalized throughout the economy, or are they specific to particular sectors or even individual firms or facilities?*

This information is essential to the targeting of efforts with respect a substance, and instrument choice in relation to those sources. The largest sources of use, generation, releases or transfers of a substance are the most obvious targets for early action.

In cases where use, generation, releases or disposal occurs in relation to a single facility or very small number of facilities the use of Suasive instruments, backed by a credible threat of the use of more coercive instruments, and meaningful monitoring, evaluation and accountability mechanisms, may be a potentially effective option.

With larger numbers of users or generators, issues of providing consistent levels of protection in different parts of Canada, and 'free rider' problems become more significant. This may make the use of unenforceable instruments, such as Suasive instruments inappropriate as they are less likely to be fully effective. The transaction costs associated with the use of a Suasive instrument may also rise

significantly with larger numbers of users and generators, to a point where they are comparable to those associated with more coercive, but potentially more effective measures. It is important to note that even when suasive instruments have been combined with mandatory reporting requirements, such as through the USEPA's 33/50 program, the impact on industry behaviour has been ambiguous at best.⁵

Different instrument mixes may be appropriate depending on whether the substance is a by-product of other activities (i.e. dioxins), or is a deliberately manufactured product in commerce. In the case of products, consideration should be given to whether the substance is used for industrial/commercial purposes or whether it is a consumer product.

The use of informational instruments, particularly NPRI may be appropriate in the case of all toxic substances and substances of concern, regardless of other instrument choices in order to gather information to provide a basis for the evaluation of instrument performance.

- f). *Are there any significant trends in evidence regarding the use, sources, generation, release, transfer, storage or disposal of the substance?*

Considerations of whether substance use, generation, release or disposal is rising or declining may have implications for the nature of the instrument used and the urgency and stringency of the action required. Less aggressive measures may be required if use or generation is declining, although steps may be necessary to ensure and confirm the phase-out of the use or generation of a substance, and that it does not re-enter commerce or the environment in the future.

Trends in the use and generation of a substance may also indicate the need to focus efforts on particular sectors or actors where use or generation is rising.

Informational instruments may need to be employed to determine answers to each of these questions.

iv. **Substance Characteristics**

- g). *What is the character of the hazard that they pose to human health, the environment and biodiversity? ('toxic' substances may be assumed to pose an existing or imminent threat). Does this threat arise from specific stages in the substance's life cycle (use, release, processing, storage and/or disposal), or*

throughout its life cycle? Is the threat acute or chronic?

These factors have implications in terms of the immediacy and strength of the required actions. Informational instruments may be required to address information gaps.

3. **Decision-Making Steps for Instrument Choice.**

The proposed Decision-Making Model for Instrument Choice under CEPA, would proceed in two steps.

i. **Identification of Available and Relevant Instruments**

a) *Assess instrument availability.*

Which Instruments are available under CEPA 1999 with respect to a particular substance?

Refer to **Table 1** and **Table 2**. Different instruments are available in relation to substances on the TSL, substances proposed for addition to the TSL and "other substances of concern." All instruments are available for toxic substances. Availability varies for substances of concern

b) *Assess Instrument Relevance.*

Which of the available instruments are relevant to the substance given the nature of the substance's use, generation, release, storage or disposal?

Refer to **Table 1** and **Table 2** regarding instrument relevance

Note that instruments under Parts 7 and 9 may be available regarding substances of concern under particular circumstances.

The application of informational instruments to fill information gaps may be required if complete or reliable information is not available on a voluntary basis.

ii. **Instrument Evaluation and Weighting**

a) *Evaluative Criteria*

Available and relevant Instruments are assessed in terms of four major criteria: effectiveness; fairness; efficiency and political policy/acceptability in the context of the situational analysis relevant to the substance in question. These criteria were defined in terms of the following factors:

Effectiveness

Effectiveness is considered in terms of two factors:

1. Certainty of achieving the required outcome; and
2. Speed with which the Instrument can be used and achieve the required outcome.

Assessments of effectiveness require the identification of a desired outcome for the substance. Requirements for specific substantive outcomes within specific timeframes may arise from international or domestic commitments or policies (e.g. virtual elimination for persistent, bioaccumulative and toxic substances) or the more general goal of protection of human health, environment and in order to contribute to sustainable development. Desired outcomes should reflect CEPA's pollution prevention definition (i.e. focus on source reduction (use and generation) rather than releases).

Speed of application is included as a criteria for instrument selection, to reflect the need for results in the short term to protect human health, safety and the environment. Instruments with fewer and less complex process requirements for application (e.g. approval on basis of Ministerial Order) may be favoured over those with more extensive requirements (e.g. Cabinet Approval and/or provincial/aboriginal consultation) for these reasons

The application of informational instruments on a general basis, to provide a baseline for the assessment/evaluation of instrument effectiveness should be considered. This implies policy of routine application of NPRI reporting requirements to CEPA toxic substances and other substances identified as being of concern.

Fairness

Fairness is considered in terms of four factors:

1. Consistency with the principles of polluter pays/cost internalization.
2. Degree to which 'free rider' problems are minimized.
3. The degree to which an instrument can provide a 'consistent' level of protection for all Canadians.

4. The degree to which an instrument may have disproportionate impacts on particular communities or sectors, particularly disadvantaged communities, such as aboriginal peoples.

Efficiency

Efficiency is considered in terms of four factors:

1. Benefits to society as a whole (environmental, economic and social).
2. Benefits to affected/regulated firms/facilities/sectors.
3. Costs to affected/regulated firms/facilities/sectors.
4. Costs to government/society.

Political Acceptability

Political acceptability is considered in terms of five factors:

1. Consistency with existing government policy, such as the Government of Canada Regulatory Policy.
2. Likely responses from other government departments, and potential to affect instrument design/implementation.
3. Likely response from provincial/territorial governments, and potential to affect instrument design/implementation.
4. Likely responses from non-governmental stakeholders, particularly affected economic sectors/facilities, and environmental non-governmental organizations.
5. Potential for the use of an instrument to raise trade concerns/issues.

b) Factor Weighting

For the purposes of instrument selection, each factor was assigned a specific weighting in terms of total available points. The actual value (total points given out of total potential points) assigned to each factor will vary with the particular circumstances surrounding a specific substance.

Effectiveness

Certainty of Outcome: Low:1-3/10; moderate:4-7/10; high:8-10/10

Speed of Use: Low:1-2/5; moderate:3/5; high:4-5/5

Total effectiveness factors: x/15

Note: Effectiveness factors are weighted heavier than other factors to reflect their importance (i.e. no point in pursuing instruments that can't achieve the required outcome)

Efficiency

Benefits to Society:	Low 0/2; moderate 1/2; high 2/2
Benefits to firm:	Low 0/2; moderate 1/2; high 2/2
Costs to firm:	Low 2/2; moderate 1/2; high 0/2
Costs to Government/Public:	Low 2/2; moderate 1/2; high 0/2

Total efficiency factors: (x/8)

Fairness

Polluter Pays/Cost Internalization:	Low 0/2; moderate 1/2; high 2/2
Free Rider potential:	Low 2/2; moderate 1/2; high 0/2
Consistency of Protection:	Low 0/2; moderate 1/2; high 2/2
Disproportionate impacts:	Low 0/2; moderate 1/2; high 2/2

Total fairness factors: (x/8)

Policy/Political

Consistency with gov't policy:	Low 0/2; moderate 1/2; high 2/2
Positive OGD Response:	Low 0/2; moderate 1/2; high 2/2
Positive Provincial Response:	Low 0/2; moderate 1/2; high 2/2
Positive Non-Governmental Stakeholder Response (industry/NGO):	Low 0/2; moderate 1/2; high 2/2
Trade issues/concerns:	Low 2/2; moderate 1/2; high 0/2

Total political factors: (x/10)

Note: political factors and weightings reflect judgements re: current government policy regarding regulation, federal-provincial relations, and role of other government departments, as opposed to an "ideal" situation.

Total factors (x/41)

iii. Instrument Choice Matrix

The weighted factors can be presented in a matrix as follows:

Instrument	Effectiveness	Fairness	Efficiency	Policy/ political
Instrument name and type.	Certainty of outcome: (x/10)	Cost internalization: (x/2)	Benefits to society: (x/2)	Policy: (x/2) OGDs: (x/2)
	Speed of use: (x/5)	Free Riders: (x/2)	Benefits to facilities: (x/2)	Provinces: (x/2)
		Consistency of Protection: (x/2)	Costs to facilities: (x/2)	Non-governmental stakeholders: (x/2)
		Dis-proportionate impacts: (x/2)	Costs to government: (x/2)	Trade issues: (x/2)
Total x/41	x/15	x/8	x/8	x/10

An example of the application of the instrument choice matrix to a particular circumstance is provided in Appendix 1.

The matrix is not intended to provide a definitive outcome in instrument choice, but to highlight the strengths and weaknesses of particular instruments in particular situations. It is recognized that instrument choice will ultimately be a political decision. Instruments may also be used in combination, rather than isolation to produce an optimal mix in terms of effectiveness, fairness, efficiency and political/policy acceptability.

Conclusions and Implications

The new CEPA provides an expanded range of tools for the management and control of toxic substances and substances of concern. However, the Act also introduced new constraints of the use of instruments that existed under the original legislation, and many of these new tools are subject to the same limitations. The selection of an optimal mix of instruments presents a number of challenges, and the means adopted to achieve the Act's goals have to be both effective, and have a reasonable chance of actually being implemented.

Regulatory instruments have strongest record of effectiveness with respect to the prevention and control of adverse impacts of toxic substances and substances of concern under CEPA. However, under the new Act, the use of regulatory instruments is limited to particular classes of substances and circumstances. In addition, their use is subject to significant constraints in addition to the need for cabinet approval, including: requirements for consultation with provincial governments and aboriginal representatives; the application of the Government of Canada Regulatory Policy; limitations where substances may be regulated under other Acts of Parliament; and, under certain circumstances, mandatory Boards of Review where notices of objection are filed. Consequently, the use of regulatory instruments under the new CEPA will be difficult and subject to significant delays, potentially even in relation to CEPA toxic substances.

There is little or no experience with the use of environmental economic policy instruments under CEPA, although they may have considerable potential in the prevention or control of the impacts of toxic substances and other substances of concern. However, economic instruments exist as a sub-set of regulatory instruments under the new CEPA, and are subject to the same constraints as regulations. In addition, tradeable units raise significant concerns over fairness, in addition to questions regarding their effectiveness and potential administrative costs.

Voluntary instruments are subject to least constraints on their use by the Department of the Environment. They are also available with respect to all classes of substances and situations. However, in so far as it has been able to be measured in the absence of consistent monitoring and reporting requirements, they also have very weak record of effectiveness. The results of suasive instruments, even when combined with mandatory reporting requirements have been, at best, ambiguous. Concerns have been raised over the cost-effectiveness and fairness of these instruments as well.

The planning and informational instruments introduced through the new CEPA may be where the most potential for action lies with respect to both toxic substances and other substances of concern. These instruments are subject to relatively few procedural

requirements for their use. At the same time, there is a growing body of evidence regarding the effectiveness of pollution prevention and emergency planning requirements and pollutant release inventories in reductions in the use, generation, release and disposal of toxic substances. Unfortunately, planning instruments under the Act are generally limited to "toxic" substances, except with respect to ocean dumping and waste exports.

Informational instruments, particularly the NPRI, can be applied to all substances of concern, and can be used to assess the effectiveness of other programs including regulations and economic instruments, voluntary initiatives and planning requirements.

An immediate implication of these considerations is that the Department of the Environment should adopt a policy of making NPRI listing, and the application of pollution prevention and emergency planning requirements automatic for all substances found to be "toxic" for the purposes of the Act. Common reporting/planning triggering thresholds might be employed for these purposes. Aggressive use should also be made of the reduction planning instruments in relation to waste exports and ocean dumping

It is doubtful, however, that planning and informational instruments alone will be sufficient to protect Canadians' health, environment and biological diversity from the threat of toxic substances and other substances of concern. The well-being of Canadians will continue to be threatened if means are not found for the employment of regulatory and economic instruments in relation to toxic substances and other substances of concern.

Endnotes

1.This is expressed in the Preamble of CEPA 1999.

2.See CEPA 1999, s.2(1)(g).

3.CEPA 1999, s.91.

4.CEPA 1999, s.92.

5.See B.F.Bass, et.al, *Toxics Watch 1995* (New York: INFORM, 1995), ch.11.

TABLE 2: Available Instruments Non-CEPA Toxic Substances of Concern

Instrument	Legal Authority	Requirements for Instrument Application	Strengthens and Weaknesses
<p>Regulation</p> <ul style="list-style-type: none"> - controls on nutrients (not limited to CEPA toxics) - controls on disposal at sea (not limited to CEPA toxics) - controls on content of fuels (not limited to CEPA toxics) - controls on vehicle, engine and equipment emissions (not limited to CEPA toxics) - controls on transboundary movement as hazardous waste (not limited to CEPA toxics) 	<p>CEPA s.118</p> <p>CEPA s.135</p> <p>CEPA s.140</p> <p>CEPA s.160</p> <p>CEPA s.191</p>	<p>Governor in Council Approval</p> <p>Treasury Board Regulatory Policy applies.</p> <p>Prohibition on regulation where subject is regulated under another Act of Parliament providing sufficient protection of the environment (nutrients)</p> <p>Requirement to offer to consult with government of a province and members of the committee before recommending regulation (fuels).</p> <p>Mandatory Board of Review if requested regarding proposed regulation regarding nutrients.</p>	<p>Effectiveness: Regulatory authority in each section limited to specific uses/circumstances re: a substance. Certainty of Outcome. Enforceable. Proven record of effectiveness (sulphur in fuels).¹</p> <p>Efficiency: Industry concern over cost and 'inflexibility' although claims not supported with respect to existing regulations through Regulatory Review.²</p> <p>Fairness: No free rider problems.</p> <p>Political/Policy Acceptability: Potential conflicts with OGDs (DFO, Agriculture, CFIA) over nutrients, specific industries over nutrients, content of fuels, vehicle emissions, ocean dumping and hazardous waste.</p> <p>Treasury Board Regulatory Policy strongly structured against use of regulation.</p> <p>Controls/prohibitions on imports/exports of substances or products may raise trade issues.</p>

<p>Regulation: Controls on sources of international air and water pollution (not limited to CEPA toxics)</p>	<p>CEPA ss. 167 and 177</p>	<p>Governor in Council Approval</p> <p>Treasury Board Regulatory Policy applies.</p> <p>Requirement to consult with government responsible for area in which source is located; offer opportunity to control or correct problem. Can only act if government responsible cannot or does not correct the problem.</p> <p>Notice to any country or person affected by or would benefit from regulation.</p> <p>Mandatory Board of Review if requested regarding proposed regulation.</p>	<p>Effectiveness: Regulatory authority in sections limited to specific circumstances re: a substance. Certainty of outcome if applied. Enforceable. Proven record of effectiveness (e.g. Secondary Lead Smelter Release Regs.)</p> <p>Efficiency: Industry concern over cost and 'inflexibility' although claims not supported with respect to existing regulations through Regulatory Review.</p> <p>Fairness: May imply more aggressive response to sources of international air and water pollution than sources with only domestic impacts, although consistent with both conventional and customary international law obligations.</p> <p>Political/Policy Acceptability: Potential conflict with provinces over regulation of industrial facilities and implication that province has failed to control/correct problem.</p> <p>Treasury Board Regulatory Policy strongly structured against use of regulation.</p>
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<p>Regulation: Emergency prevention, preparedness, response and recovery. (Not limited to CEPA toxic substances, Minister may establish list of substances to which regulations made under this section apply).</p>	<p>CEPA s.200</p>	<p>Governor in Council Approval</p> <p>Prohibition on regulation where subject is regulated under another Act of Parliament providing sufficient protection of human health, the environment and biological diversity.</p> <p>Treasury Board Regulatory Policy Applies.</p>	<p>Effectiveness No record of use of emergency preparedness regulations. Emergency planning requirements under <i>Emergency Preparedness and Community Right to Know Act, Clean Air Act</i>, successfully applied by USEPA.</p> <p>Efficiency Sound be able to build on and focus existing facility emergency prevention, preparedness, response and recovery activities.</p> <p>Fairness Would require facilities without emergency prevention, preparedness, response and recovery activities to establish such programs.</p> <p>Policy/Political Acceptability Potential adverse response from industries/facilities without emergency programs, provinces. Potential positive response from emergency response agencies, affected communities.</p>
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<p>Regulation: Controls on government operations or sources or federal or aboriginal lands</p>	<p>CEPA s.209</p>	<p>Governor in Council Approval</p> <p>Treasury Board Regulatory Policy Applies.</p> <p>Prohibition on regulation where subject is regulated under another Act of Parliament providing sufficient protection of the environment.</p> <p>Requirement to offer to consult with government of a province and members of the committee before recommending regulation.</p> <p>Mandatory Board of Review if requested regarding proposed regulation.</p>	<p>Effectiveness Record of application to federal government limited to PCB destruction. Application of environmental protection requirements to non-environment agencies at provincial level has had positive impact on agency behaviour. Enforceable. Commissioner for Environment and Sustainable Development³ and Auditor General⁴ have highlighted poor environmental management within federal government.</p> <p>Efficiency Potential concerns from OGDs re: costs, although Auditor General has also highlighted concerns over unaddressed environmental liabilities within federal government.⁵</p> <p>Fairness Strong support from industry and NGOs for application of environmental protection requirements to federal agencies for reasons of both fairness and environmental protection.</p> <p>Policy/Political Acceptability: There is a history of resistance from other government departments to the use of this authority. Industry and NGOs strongly support application of environmental protection requirements to federal activities for reasons of fairness and environmental protection.</p>
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<p>Economic Instruments: Deposit/Refund Requirements Application limited to section 118 (nutrients) and 209 (federal operations and lands) regulations</p>	<p>CEPA s.325</p>	<p>Governor in Council Approval</p> <p>Minister "shall offer to consult" with provinces and aboriginal representatives of the Committee.</p> <p>Treasury Board Regulatory Policy applies</p>	<p>Effectiveness: High levels of return with beverage containers.⁶ No record of use with respect to substances under CEPA. Utility limited to specific circumstances. Likely relevant to the establishment of producer responsibility requirement with respect to the sale or use of a substance and return to point of sale or manufacturer. Application limited to section 118 (nutrients) and 209 (federal operations) regulations.</p> <p>Efficiency: Industry concerns over costs of deposit return vs. voluntary return/recycling programs.</p> <p>Fairness: Provides level playing field among product suppliers. No free riders.</p> <p>Political/Policy Acceptability: Treasury Board Regulatory Policy Applies.</p>
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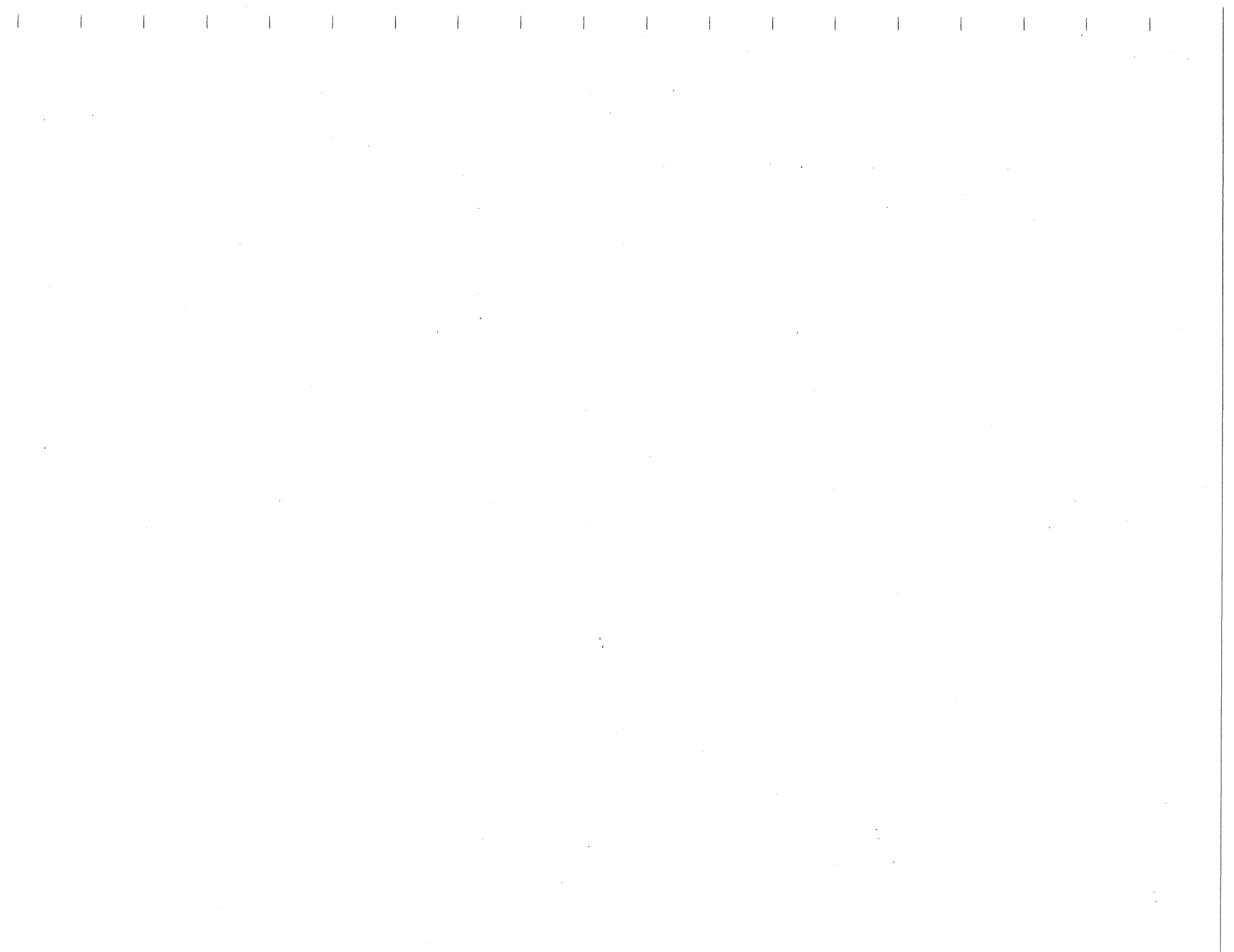
<p>Economic Instruments: Tradeable units (Utilization limited to ss.118 (nutrients), 140 (fuels), 167 (international air pollution), 177 (international water pollution) or 209 (federal operations and lands).</p>	<p>CEPA s.326</p>	<p>Governor in Council Approval</p> <p>Minister "shall offer to consult" with provinces and aboriginal representatives of the Committee.</p> <p>Treasury Board Regulatory Policy applies</p>	<p>Effectiveness: Unproven. Extremely limited record of application domestically or internationally. Utilization limited to ss.118, 140, 167, 177 or 209 regulations Administrative and enforcement challenges are potentially significant.⁷ Has taken form of both production/use quotas (CFCs in Canada) and emissions (SO₂ in the U.S.)</p> <p>Efficiency: Theoretical claims of greater efficiency. Unproven to date.</p> <p>Fairness: Major concerns re: environmental justice with respect to potential for local loading increases with emissions trading (i.e. overall emissions may decline, but particular communities may experience a net increase in loading as a result of trading). Concern is especially high with substances with high local impacts (i.e. toxics)</p> <p>Political/Policy Acceptability: TBS Guidelines apply. Emission trading likely to be highly controversial, due to potential for uneven impacts on affected communities. Use for phase-out or production/use of a substance likely less controversial.</p>
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<p>Planning Instruments Pollution Prevention Planning (application limited to substances involved in international air or water pollution).</p>	<p>CEPA s.166 and 176</p>	<p>Ministerial order subject to Governor in Council Approval</p> <p>Requirement to consult with government responsible for area in which source is located; offer opportunity to control or correct problem. Can only act if government responsible cannot or does not correct the problem.</p>	<p>Effectiveness: No record of mandatory application in Canada. Voluntary Ontario program has produced uncertain results, although significant claims of wastes reduction are made.⁸ Results of pollution prevention planning requirements in U.S. very positive (e.g. Massachusetts, New Jersey).⁹</p> <p>Efficiency: Savings to firms from application of planning requirements in U.S. states have exceeded full program costs.¹⁰ Can be built on existing facility environmental management systems (EMS).</p> <p>Fairness: Effectively requires facilities without EMS to establish one. Ensures existing EMSs identify use, generation, release and reduction opportunities for toxic substances. Provisions for consideration of existing plans.</p> <p>Potential conflict with provinces over application to industrial facilities with implication that province has failed to control/correct problem.</p>
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<p>Planning Instruments: Emergency Planning (application limited to substances proposed by Ministers for addition to TSL)</p>	CEPA s.199	Ministerial order.	<p>Effectiveness: U.S. experience with emergency planning/on-site storage reporting requirements under EPCRA positive with public and emergency responders. Requirements may have impact of encouraging elimination of substance use in facilities.</p> <p>Efficiency: Should build on existing facility EMS/MIACC emergency planning activities.</p> <p>Fairness: Will require development of facility EMS/emergency planning activities where not already in place. Recognizes existing plans.</p> <p>Political/Policy Acceptability: Depends on character of requirements. On-site storage reporting now routine in U.S. Worst case scenario planning has been controversial in U.S.</p>
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<p>Planning Instruments: Hazardous waste reduction for export for final disposal (not limited to CEPA toxics)</p>	<p>CEPA s.188</p>	<p>Ministerial order. (Note: plans must be consistent with regulations respecting plans made by Governor in Council).</p> <p>Regulatory Policy applies to regulations regarding plans.</p>	<p>Effectiveness: Similar to pollution prevention planning. Limited by focus on reduction for export for disposal, as opposed to reduction of generation. May present challenges to facilities that are handlers/processors/recyclers rather than primary generators.</p> <p>Efficiency: Should build on and focus existing facility EMS.</p> <p>Fairness: Will require development of EMS where none present.</p> <p>Political/Policy Acceptability: May present challenges May present challenges to facilities that are handlers/processors/recyclers rather than primary generators.</p> <p>Regulatory policy applies to regulations regarding plans.</p>
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<p>Planning Instruments: Assessment of alternatives to disposal at sea. (Limited to consideration of ocean disposal)</p>	<p>CEPA ss.127(2) & (3); 128(3); 129(3); and 135; Schedule 6.</p>	<p>Condition of ministerial permit.</p>	<p>Effectiveness: Similar to other pollution prevention planning requirements. Similar to waste audit regulations in Ontario.¹¹</p> <p>Efficiency: Can build on, or prompt establishment of EMS. May present challenges for SMEs.</p> <p>Fairness: Consistent application of planning requirement necessary for fairness.</p> <p>Political/Policy Acceptability. Likely to prompt negative response from constituencies used to use of ocean disposal as cheap disposal method.</p>
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<p>Informational Instruments: National Pollutant Release Inventory</p>	<p>CEPA ss.48-50</p>	<p>Ministerial Order</p> <p>Release of information may be subject to confidentiality claims.</p>	<p>Effectiveness: Strong incentives to reduce releases/transfers of substances due to public reporting. May result in reduced/eliminated use to avoid triggering of reporting. Note recent literature on impacts on TRI.¹² Current reporting thresholds limit impacts on micropollutants, although change in this area is underway.¹³ Confidentiality claims may limit impact of public reporting, although this has not emerged as a significant problem to date.</p> <p>Efficiency: Should build on and focus existing facility EMS. Should be documenting use, release or transfer of substances of concern.</p> <p>Fairness: Requires reporting by all facilities meeting thresholds. Will move facilities without EMS towards one.</p> <p>Political/Policy Acceptability: Some evidence of industry resistance to reporting as public awareness/use of data increases.</p>
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<p>Informational Instruments: General Information Gathering</p>	<p>CEPA s.46</p>	<p>Ministerial Order</p> <p>Guidelines required to be issued regarding use of s.46 powers.</p> <p>Guidelines are subject to requirement to "offer to consult" with provinces and aboriginal representatives on the committee.</p> <p>Release of information to the public by Minister may be constrained by confidentiality claims.</p>	<p>Effectiveness: Scope of information gathering powers unclear re: substance use or generation. Information gathering may prompt initiatives to move away from use or generation to avoid triggering requirement to respond to Minister. Effectiveness may be limited by confidentiality claims re: release of information to the public.</p> <p>Efficiency: Should be possible to draw required information from facility EMS. Will focus EMS on substances of concern.</p> <p>Fairness: May require development of EMS where none present.</p> <p>Political/Policy Acceptability. Some industry resistance re: reporting burden and confidential information. Industry concern re: gathering and use of information appears to be growing.</p>
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<p>Voluntary Instruments: Guidelines, Codes of Practice and Objectives - General</p>	CEPA s.54	<p>Issued by Minister</p> <p>Guidelines, Codes of Practice and Objectives are subject to requirement to "offer to consult" with provinces and aboriginal representatives on the committee.</p>	<p>Effectiveness: Limited as adoption is voluntary. Most effective if adopted by Provinces for incorporation into approvals and thereby made mandatory. Effectiveness of existing Codes etc. has not been subject to formal evaluation to date.</p> <p>Efficiency: Reach is function of voluntary adoption. Likely only to be adopted where cost impacts are low or where adoption will avoid the application of regulatory or mandatory planning or informational requirements.</p> <p>Fairness: Potential free-rider problems as adoption is voluntary. Affected communities where Guidelines, Codes, Objectives not adopted may continue to be impacted by substance.</p> <p>Political Acceptability: Higher with provinces and industry as instrument is non-mandatory. Communities adversely affected by substances may regard the application of such instruments as an inadequate response by federal government.</p>
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<p>Voluntary Instruments Objectives, Guidelines and Codes of Practice - Government Operations and Federal and Aboriginal Lands</p>	<p>CEPA s.208</p>	<p>Issued by Minister</p> <p>Guidelines, Codes of Practice and Objectives are subject to requirement to "offer to consult" with provinces where they will apply and aboriginal representatives on the committee.</p>	<p>Effectiveness Impact of existing guidelines for federal operations not subject to formal evaluation to date. Consistent negative commentary by Auditor General and Commissioner for Sustainable Development regarding poor environmental management within federal government. Impact of guidelines likely limited, but adoption as formal federal policies may have greater impact on federal agencies than s.56 guidelines on non-governmental actors.</p> <p>Efficiency Reach is function of voluntary adoption. Likely only to be adopted where cost impacts are low or where adoption will avoid the application of regulatory or mandatory planning or informational requirements.</p> <p>Fairness Potential free rider problems as adoption is voluntary.</p> <p>Political/Policy Acceptability History of conflict with other government departments over environmental management within federal government. Potential support from industry, other levels of government and environmental groups, although they may prefer stronger measures than guidelines.</p>
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<p>Voluntary Instruments: Memoranda of Agreement</p>	<p>Department of the Environment Act, s.5.</p>	<p>Ministerial Approval</p>	<p>Effectiveness: Effectiveness of existing programs a matter of significant debate. Described as not "sufficient" to deal with priority toxics by Commissioner for Environment and Sustainable Development.¹⁴ Lack of rigorous reporting/evaluation frameworks a significant problem highlighted by Commissioner.¹⁵ Lack of enforceability.</p> <p>Efficiency: Programs can involve significant transaction/negotiation costs, possibility approaching those associated with regulation. Potential costs/inefficiencies of facility by facility arrangements have been highlighted.¹⁶</p> <p>Fairness: Significant potential for free-riders, even with sectoral agreements. Concerns have been raised re: community acceptability with facility specific MOUs.¹⁷ Also concern over exclusion of non-industry stakeholders from negotiation process.¹⁸</p> <p>Political/Policy Acceptability: Have been preferred instrument in environment hostile to regulatory/mandatory requirements. Major doubts about effectiveness, efficiency and fairness from independent observers and non-industry stakeholders.¹⁹</p>
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<p>Voluntary Instruments: Challenge Programs</p>	<p>Department of the Environment Act, s.5.</p>	<p>Ministerial Approval</p>	<p>Effectiveness: Impact of existing challenge program (ARET) on industry behaviour appears to be limited.²⁰ Existing program (ARET) described as not "sufficient" to deal with priority toxic substances by Commissioner for Environment and Sustainable Development.²¹ Performance of similar challenge program in U.S., even when combined with mandatory reporting requirements (33/50), is ambiguous.²²</p> <p>Efficiency: Low cost to government, but effectiveness limited.</p> <p>Fairness: Significant free-rider problems associated with ARET program due to non-mandatory and inconsistent reporting.</p> <p>Policy/Political Acceptability: Industry support remains high, although other stakeholders (environment, labour, health organizations) find approach unsatisfactory. Main appeal is non-regulatory character, but lack of effectiveness in absence of regulatory threat a major concern.²³</p>
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<p>Voluntary Agreements: Covenants/civil contracts</p>	<p>Department of the Environment Act (s.5?) (Note: unclear if authority to enter into agreements in the Act contemplated this type of agreement/contract</p>	<p>Ministerial Approval</p>	<p>Effectiveness: Unknown. No history of use in Canada. Unclear what incentive facilities would have to enter into civil contracts with EC. 'Promises' by EC not to regulate or take other action could raise issues of fettering of Ministerial discretion. Note that Dutch 'Covenants' tied to approvals process and operate in a different cultural context. EC gives no approvals except for ocean dumping. U.S. 'consent agreements' exist in context of enforcement action.</p> <p>Efficiency: Unknown. Negotiation of a formal civil contract potentially very complex and time-consuming. Costs would become very significant if pursued widely on a facility by facility basis.</p> <p>Fairness: Potentially significant problems. Obligations a function of outcome of negotiations rather than consistently applied standards. Means different facilities in same sector may be subject to different requirements, different communities receive different levels of protection. Community participation in negotiation of formal contract would be difficult to provide, and would require significant support for legal assistance etc.</p> <p>Political/Policy Consistent with government policy of non-regulatory approach. Industry response unknown. Potential adverse response from provinces if they perceive as interference with their primary role in facility approvals/oversight. Potential for adverse</p>
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			response for ENGOs, communities strong in light of Dofasco experience. ²⁴ Ultimately comes down to question of where does EC's bargaining leverage come from.
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Endnotes to Table

1. *Reducing Sulphur In Gasoline and Diesel Fuel - Case Study* (Ottawa: National Round Table on Environment and Economy, January 2000).

2. *Environmental Protection Regulatory Review: Discussion Document* (Ottawa: Environment Canada, November 1993).

3. See, for example, *Report of the Commissioner of the Environment and Sustainable Development to the House of Commons 1999* (Ottawa: Minister of Public Works and Government Services, 1999), ch.8.

4. See, for example, *Report of the Auditor General of Canada to the House of Commons - November 1996* (Ottawa: Minister of Public Works and Government Services, 1996), ch.22.

5. *Ibid.*

6. See, for example, CM Consulting, *Beverage Container Deposit Systems in Canada*, January 2000.

7. See for example, C.Rolfe, *Emission Trading* (Vancouver: West Coast Environmental Law Association,

8. Ontario Ministry of Environment and Energy, *Ontario's Progress Towards Pollution Prevention* (Toronto: MoEE, 1997).

9. See for example, M.Becker and K.Geiser, *Evaluating Progress: A Report on Findings of the Massachusetts Toxic Use Regulation Program Evaluation* (Lowell, MA: Toxics Use Reduction Institute, March 1997).

10. *Ibid.*

11. *Ontario Regulation 102/94 - Waste Audits and waste Reduction Workplans.*

12. See, for example, A.Fung and D.O'Rourke, "Reinventing Environmental Regulation from the Grassroots up: Explaining and Expanding the Success of the Toxics Release Inventory," *Environmental Management*, Vol.25, No.2, pp.115-127.

13. See National Pollutant Release Inventory Ad Hoc Working Group on Substances *Third (September 1999) and Fourth (December 1999) Reports* (Ottawa: Environment Canada, 1999).
14. Commissioner of the Environment and Sustainable Development, *Report to the House of Commons - 1999* (Ottawa: Minister of Public Works and Government Services, 1999) para 4.98.
15. *Ibid.*, para.4.99.
16. See, for example, J.Castrilli and M.Winfield, *The Ontario Regulation and Policy-Making Process in a Comparative Context: An Exploration of the Possibilities for Reform* (Toronto: Environmental Commissioner for Ontario, 1996), pg.31.
17. See, for example, L.Lukasik, "The Dofasco Deal," in Gibson, ed., *Voluntary Initiatives* ,pp.141-148.
18. See, for example, P.Muldoon and R.Nadarajah, "A Sober Second Look," in Gibson, ed., *Voluntary Initiatives.*, pp.57-58.
19. See, generally, Gibson, ed., *Voluntary Initiatives*.
20. *Evaluation of the Accelerated Reduction and Elimination of Toxics Initiative (ARET) - Draft Report* (Ottawa: Environment Canada, November 1999).
21. Commissioner of the Environment and Sustainable Development, *Report to the House of Commons - 1999* (Ottawa: Minister of Public Works and Government Services, 1999) para 4.98.
22. B.F.Bass et. al., *Toxics Watch 1995* (New York: INFORM, 1995), ch.11.
23. See generally, R.B. Gibson, *Voluntary Initiatives: The New Politics of Corporate Greening* (Peterborough: Broadview Press, 1999), ch.19.
24. See, for example, L.Lukasik, "The Dofasco Deal," in Gibson, ed., *Voluntary Initiatives* ,pp.141-148.

TABLE 1: Available Instruments CEPA Toxic Substances

Instrument	Legal Authority	Requirements for Instrument Application	Strengthens and Weaknesses
<p>Regulation: Controls/prohibition on use, generation, release, import, export, processing or sale of toxic substance</p>	<p>CEPA s.93</p>	<p>Governor in Council Approval</p> <p>Consultation through FPAC</p> <p>Treasury Board Regulatory Policy applies</p> <p>May not regulate aspect of substance adequately regulated through another Act of Parliament.</p> <p>60 day prepublication period re: actions regarding toxic substances, with possibility of Board of Review, if requested, at discretion of Minister.</p> <p>Requirement for proposed instrument or regulation within two years of recommendation to add substance to TSL.</p> <p>Regulation or instrument to be made within 18 months of publication of proposed instrument or regulation.</p> <p>Requirement to propose Virtual Elimination for PBT substances.</p>	<p>Effectiveness: Certainty of Outcome Enforceable Proven record of effectiveness (e.g.: pulp and paper mill discharge improvements¹).</p> <p>Efficiency Industry concern over cost and 'inflexibility' although claims not supported with respect to existing regulations through Regulatory Review.²</p> <p>Fairness: No free rider problems assuming general or sectoral application.</p> <p>Political/Policy Acceptability: Potential conflict with provinces over regulation of industrial facilities.</p> <p>Treasury Board Regulatory Policy strongly structured against use of regulation.</p> <p>Controls/prohibitions on imports/exports may raise trade issues.</p>

Regulation		Governor in Council Approval	Effectiveness:
- controls on nutrients (not limited to CEPA toxics)	CEPA s.118	Treasury Board Regulatory Policy applies.	Regulatory authority in each section limited to specific uses/circumstances re: a substance. Certainty of Outcome.
- controls on disposal at sea (not limited to CEPA toxics)	CEPA s.135	Prohibition on regulation where subject is regulated under another Act of Parliament providing sufficient protection of the environment (nutrients)	Enforceability. Proven record of effectiveness (e.g. lead, benzene and sulphur reductions in fuels) ³
- controls on content of fuels (not limited to CEPA toxics)	CEPA s.140	Requirement to offer to consult with government of a province and members of the committee before recommending regulation (fuels)	Efficiency: Industry concern over cost and 'inflexibility' although claims not supported with respect to existing regulations through Regulatory Review. ⁴
- controls on vehicle, engine and equipment emissions (not limited to CEPA toxics)	CEPA s.160	Mandatory Board of Review if requested regarding proposed regulation regarding nutrients.	Fairness: No free rider problems.
- controls on transboundary movement as hazardous waste (not limited to CEPA toxics)	CEPA ss.191		Political/Policy Acceptability: Potential conflicts with OGDs (DFO, Agriculture, CFIA) over nutrients, specific industries over nutrients, content of fuels, vehicle emissions, ocean dumping and hazardous waste. Treasury Board Regulatory Policy strongly structured against use of regulation. Controls/prohibitions on imports/exports of substances or products may raise trade issues.

<p>Regulation: Controls on sources of international air and water pollution (not limited to CEPA toxics)</p>	<p>CEPA ss.167 & 177</p>	<p>Governor in Council Approval</p> <p>Treasury Board Regulatory Policy applies.</p> <p>Requirement to consult with government responsible for area in which source is located; offer opportunity to control or correct problem. Can only act if government responsible cannot or does not correct the problem.</p> <p>Notice to any country or person affected by or would benefit from regulation.</p> <p>Mandatory Board of Review if requested re: proposed regulations.</p>	<p>Effectiveness: Regulatory authority in sections limited to specific uses/circumstances re: a substance. Certainty of outcome if applied Enforceable. Proven record of effectiveness (e.g. Secondary Lead Smelter Release Regs.)</p> <p>Efficiency: Industry concern over cost and 'inflexibility' although claims not supported with respect to existing regulations through Regulatory Review.</p> <p>Fairness: May imply more aggressive response to sources of international air and water pollution than sources with only domestic impacts, although consistent with both conventional and customary international law obligations.</p> <p>Political/Policy Acceptability: Potential conflict with provinces over regulation of industrial facilities and implication that province has failed to control/correct problem.</p> <p>Treasury Board Regulatory Policy strongly structured against use of regulation.</p>
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<p>Regulation: Emergency prevention, preparedness, response and recovery. (Not limited to CEPA toxic substances).</p>	<p>CEPA s.200</p>	<p>Governor in Council Approval</p> <p>Prohibition on regulation where subject is regulated under another Act of Parliament providing sufficient protection of human health, the environment and biological diversity.</p> <p>Treasury Board Regulatory Policy Applies.</p>	<p>Effectiveness No record of use of emergency preparedness regulations. Emergency planning requirements under <i>Emergency Preparedness and Community Right to Know Act, Clean Air Act</i>, successfully applied by USEPA.</p> <p>Efficiency Sound be able to build on and focus existing facility emergency prevention, preparedness, response and recovery activities.</p> <p>Fairness Would require facilities without emergency prevention, preparedness, response and recovery activities to establish such programs.</p> <p>Policy/Political Acceptability Potential adverse response from industries/facilities without emergency programs, provinces. Potential positive response from emergency response agencies, affected communities.</p>
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<p>Regulation: Controls on government operations or sources or federal or aboriginal lands</p>	<p>CEPA s.209</p>	<p>Governor in Council Approval</p> <p>Treasury Board Regulatory Policy Applies.</p> <p>Prohibition on regulation where subject is regulated under another Act of Parliament providing sufficient protection of the environment.</p> <p>Requirement to offer to consult with government of a province and members of the committee before recommending regulation.</p> <p>Mandatory Board of Review if requested regarding proposed regulation.</p>	<p>Effectiveness Record of application to federal government limited to PCB destruction. Application of environmental protection requirements to non-environment agencies at provincial level has had positive impact on agency behaviour. Enforceable. Commissioner for Environment and Sustainable Development⁵ and Auditor General⁶ have highlighted poor environmental management within federal government.</p> <p>Efficiency Potential concerns from OGDs re: costs, although Auditor General has also highlighted concerns over unaddressed environmental liabilities within federal government.⁷</p> <p>Fairness Strong support from industry and NGOs for application of environmental protection requirements to federal agencies for reasons of both fairness and environmental protection.</p> <p>Policy/Political Acceptability There is a history of resistance from Other government departments to the use of this authority.</p>
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<p>Economic Instruments: Deposit/Refund Requirements</p>	<p>CEPA s.325</p>	<p>Governor in Council Approval</p> <p>Minister "shall offer to consult" with provinces and aboriginal representatives of the Committee.</p> <p>Treasury Board Regulatory Policy applies</p>	<p>Effectiveness: High levels of return with beverage containers.⁹ No record of use with respect to toxic substances under CEPA. Utility limited to specific circumstances. Likely relevant to the establishment of producer responsibility requirement with respect to the sale or use of a substance and return to point of sale or manufacturer. Application limited to section 93, 118 and 209 regulations.</p> <p>Efficiency: Industry concerns over costs of deposit return vs. voluntary return/recycling programs.</p> <p>Fairness: Provides level playing field among product suppliers. No free riders.</p> <p>Political/Policy Acceptability: Treasury Board Regulatory Policy Applies.</p>
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<p>Economic Instruments: Tradeable units</p>	<p>CEPA s.326</p>	<p>Governor in Council Approval</p> <p>Minister "shall offer to consult" with provinces and aboriginal representatives of the Committee.</p> <p>Treasury Board Regulatory Policy applies</p>	<p>Effectiveness: Unproven. Extremely limited record of application domestically or internationally. Utilization limited to ss.93, 118, 140, 167, 177 or 209. Administrative and enforcement challenges are potentially significant.⁹ Has taken form of both production/use quotas (CFCs in Canada) and emissions (SO₂ in the U.S.)</p> <p>Efficiency: Theoretical claims of greater efficiency. Unproven to date.</p> <p>Fairness: Major concerns re: environmental justice with respect to potential for local loading increases with emissions trading (i.e. overall emissions may decline, but particular communities may experience a net increase in loading as a result of trading). Concern is especially high with substances with high local impacts (e.g. toxics)</p> <p>Political/Policy Acceptability: TBS Guidelines apply. Emission trading involving toxics likely to be highly controversial.</p>
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<p>Planning Instruments: Pollution Prevention Planning (Note may also be applied in relation to non-toxic substances identified in relation to international air and water pollution, although subject to requirements consultation with province, and inability or failure to control or correct problem, and Governor in Council approval under such circumstances.)</p>	<p>CEPA s.56</p>	<p>Ministerial Approval.</p> <p>Requirement to offer to consult with provinces and members of committee who are aboriginal representatives on guidelines.</p>	<p>Effectiveness: No record of mandatory application in Canada. Voluntary Ontario program has produced uncertain results, although significant claims of wastes reduction are made.¹⁰ Results of pollution prevention planning requirements in U.S. very positive (e.g. Massachusetts, New Jersey).¹¹</p> <p>Efficiency: Savings to firms from application of planning requirements in U.S. states have exceeded full program costs.¹² Can be built on existing facility environmental management systems (EMS).</p> <p>Fairness: Effectively requires facilities without EMS to establish one. Ensures existing EMSs identify use, generation, release and reduction opportunities for toxic substances. Provisions for consideration of existing plans.</p> <p>Policy/Political Acceptability: Some resistance from industry may be anticipated, although should not impose significant new burden on facilities with good EMSs in place.</p>
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<p>Planning Instruments: Virtual Elimination Planning</p>	<p>CEPA s.79</p>	<p>Ministerial order, quasi-mandatory on proposal of virtual elimination.</p>	<p>Effectiveness: Unknown, although likely to have significant impact in raising facility awareness re: use, generation or release of VE substances. May prompt early action in anticipation of regulatory measures.</p> <p>Efficiency: Can/should be built on existing facility EMS.</p> <p>Fairness: Ensures all facilities that are significant sources/users identify and consider VE opportunities.</p> <p>Political/Policy Acceptability: Hard for industry to argue against identification of use, generation, release of VE (i.e. most toxic) substances and identification of opportunities for reduction/elimination.</p>
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<p>Planning Instruments: Emergency Planning (applies to substances proposed by Ministers for addition to TSL as well as those already on TSL)</p>	CEPA s.199	Ministerial order.	<p>Effectiveness: U.S. experience with emergency planning requirements under EPCRA positive. Requirements may have impact of encouraging elimination of substance use in facilities to avoid triggering planning requirements.</p> <p>Efficiency: Should build on existing facility EMS/MIACC emergency planning activities.</p> <p>Fairness: Will require development of facility EMS/emergency planning activities where they are not already in place.</p> <p>Political/Policy Acceptability: Depends on character of requirements. On-site storage reporting now routine in U.S. Worst case scenario planning has been controversial in U.S.</p>
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<p>Planning Instruments: Hazardous waste reduction for export for final disposal (not limited to CEPA toxics)</p>	<p>CEPA s.188</p>	<p>Ministerial order. (Note: plans must be consistent with regulations respecting plans made by Governor in Council).</p> <p>Regulatory Policy applies to regulations regarding plans.</p>	<p>Effectiveness: Similar to pollution prevention planning. Limited by focus on reduction for export for disposal, as opposed to reduction of generation. May present challenges to facilities that are handlers/processors/recyclers rather than primary generators.</p> <p>Efficiency: Should build on and focus existing facility EMS.</p> <p>Fairness: Will require development of EMS where none present.</p> <p>Political/Policy Acceptability: May present challenges to facilities that are handlers/processors/recyclers rather than primary generators.</p> <p>Regulatory policy applies to regulations regarding plans.</p>
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<p>Planning Instruments: Assessment of alternatives to disposal at sea. (Not limited to CEPA Toxics)</p>	<p>CEPA ss.127(2) & (3); 128(3); 129(3); and 135; Schedule 6.</p>	<p>Condition of ministerial permit.</p>	<p>Effectiveness: Similar to other pollution prevention planning requirements. Similar to waste audit regulations in Ontario,¹³ which have resulted in waste reduction activities.</p> <p>Efficiency: Can build on, or prompt establishment of EMS. May present challenges for SMEs.</p> <p>Fairness: Consistent application of planning requirement necessary for fairness.</p> <p>Political/Policy Acceptability. Likely to prompt negative response from constituencies used to use of ocean disposal as cheap disposal method.</p>
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<p>Informational Instruments: National Pollutant Release Inventory</p>	<p>CEPA ss.48-50</p>	<p>Ministerial Order.</p> <p>Release of information may be subject to confidentiality claims.</p>	<p>Effectiveness: Strong incentives to reduce releases/transfers of substances due to public reporting. May result in reduced/eliminated use to avoid triggering of reporting. Note recent literature on impacts on TRI.¹⁴ Current reporting thresholds limit impacts on micropollutants, including CEPA toxics, although change in this area is underway.¹⁵ Confidentiality claims may limit impact of public reporting, although this has not emerged as a significant problem to date.</p> <p>Efficiency: Should build on existing facility EMS. Should be documenting use, release or transfer of CEPA toxic substances.</p> <p>Fairness: Requires reporting by all facilities meeting thresholds. Will move facilities without EMS towards one.</p> <p>Political/Policy Acceptability: CEPA toxics not added to NPRI on routine basis. Some evidence of industry resistance to reporting as public awareness/use of data increases.</p>
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<p>Informational Instruments: General Information Gathering</p>	<p>CEPA s.46</p>	<p>Ministerial Order</p> <p>Guidelines required to be issued regarding use of s.46 powers.</p> <p>Guidelines are subject to requirement to "offer to consult" with provinces and aboriginal representatives on the committee.</p> <p>Release of information to the public by Minister may be constrained by confidentiality claims.</p>	<p>Effectiveness: Scope of information gathering powers unclear re: substance use or generation. Information gathering may prompt initiatives to move away from use or generation to avoid triggering requirement to respond to Minister. Effectiveness may be limited by confidentiality claims re: release of information to the public.</p> <p>Efficiency: Should be possible to draw required information from facility EMS.</p> <p>Fairness: May require development of EMS where none present.</p> <p>Political/Policy Acceptability. Some industry resistance re: reporting burden and confidential information. Industry concern re: gathering and use of information appears to be growing.</p>
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<p>Voluntary Instruments: Guidelines, Codes of Practice and Objectives (not limited to CEPA toxics)</p>	CEPA s.54	<p>Issued by Minister</p> <p>Guidelines, Codes of Practice and Objectives are subject to requirement to "offer to consult" with provinces and aboriginal representatives on the committee.</p>	<p>Effectiveness: Limited as adoption/implementation is voluntary. Most effective if adopted by Provinces for incorporation into approvals and thereby made mandatory. Effectiveness of existing Codes etc. has not been subject to a formal evaluation to date.</p> <p>Efficiency: Reach is function of voluntary adoption. Likely only to be adopted with cost impacts are low or where adoption will avoid application of regulatory or mandatory planning or informational requirements.</p> <p>Fairness: Potential free-rider problems as adoption is voluntary. Affected communities where Guidelines, Codes, Objectives not adopted may continue to be impacted by substance.</p> <p>Political/Policy Acceptability: Higher with provinces and industry as instrument is non-mandatory. Communities adversely affected by substances may regard the application of such instruments as an inadequate response by federal government.</p>
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<p>Voluntary Instruments: Objectives, Guidelines and Codes of Practice - Government Operations and Federal and Aboriginal Lands</p>	<p>CEPA s.208</p>	<p>Issued by Minister</p> <p>Guidelines, Codes of Practice and Objectives are subject to requirement to "offer to consult" with provinces where they will apply and aboriginal representatives on the committee.</p>	<p>Effectiveness Impact of existing guidelines for federal operations not subject to formal evaluation to date. Consistent negative commentary by Auditor General and Commissioner for Sustainable Development regarding poor environmental management within federal government. Impact of guidelines likely limited, but adoption as formal federal policies may have greater impact on federal agencies than s.56 guidelines on non-governmental actors.</p> <p>Efficiency Reach is function of voluntary adoption. Likely only to be adopted where cost impacts are low or where adoption will avoid the application of regulatory or mandatory planning or informational requirements.</p> <p>Fairness Potential free rider problems as adoption is voluntary.</p> <p>Political/Policy Acceptability History of conflict with other government departments over environmental management within federal government. Potential support from industry, other levels of government and environmental groups, although they may prefer stronger measures than guidelines.</p>
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<p>Voluntary Instruments: Challenge Programs</p>	<p>Department of the Environment Act s.5.</p>	<p>Ministerial Approval</p>	<p>Effectiveness: Impact of existing challenge program (ARET) on industry behaviour appears to be limited.¹⁶ Program described as not "sufficient" to be used as only tool for achieving and measuring reductions of priority toxic substances by Commissioner for Environment and Sustainable Development.¹⁷ Performance of similar challenge program in U.S., even when combined with mandatory reporting requirements (33/50), is ambiguous.¹⁸</p> <p>Efficiency: Low cost to government, but effectiveness limited.</p> <p>Fairness: Significant free-rider problems associated with ARET program due to non-mandatory and inconsistent reporting.</p> <p>Policy/Political Acceptability: Industry support remains high, although other stakeholders (environment, labour, health organizations) find approach unsatisfactory. Main appeal is non-regulatory character, but lack of effectiveness in absence of regulatory threat a major concern.¹⁹</p>
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<p>Voluntary Instruments: Memoranda of Agreement</p>	<p>Department of the Environment Act, s.5.</p>	<p>Ministerial Approval</p>	<p>Effectiveness: Effectiveness of existing programs a matter of significant debate. As with ARET described by Commissioner as not "sufficient" to deal with priority toxics.²⁰ Lack of rigorous reporting/evaluation frameworks a significant problem highlighted by Commissioner.²¹ Lack of enforceability.</p> <p>Efficiency: Programs can involve significant transaction/negotiation costs, possibility approaching those associated with regulation. Potential costs/inefficiencies of facility by facility arrangements have been highlighted.²²</p> <p>Fairness: Significant potential for free-riders, even with sectoral agreements. Concerns have been raised re: community acceptability with facility specific MOUs.²³ Also concern over exclusion of non-industry stakeholders from negotiation process.²⁴</p> <p>Political/Policy Acceptability: Have been preferred instrument in environment hostile to regulatory/mandatory requirements. Major doubts about effectiveness, efficiency and fairness from independent observers and non-industry stakeholders.²⁵</p>
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<p>Voluntary Agreements: Covenants/civil contracts</p>	<p>Department of the Environment Act (s.5?) (Note: unclear if authority to enter into agreements in the Act contemplated this type of agreement/contract)</p>	<p>Ministerial Approval</p>	<p>Effectiveness: Unknown. No history of use in Canada. Unclear what incentive facilities would have to enter into civil contracts with EC. 'Promises' by EC not to regulate or take other action could raise issues of fettering of Ministerial discretion. Note that Dutch 'Covenants' tied to approvals process and operate in a different cultural context. EC gives no approvals except for ocean dumping. U.S. 'consent agreements' exist in context of enforcement action.</p> <p>Efficiency: Unknown. Negotiation of a formal civil contract potentially very complex and time-consuming. Costs would become very significant if pursued widely on a facility by facility basis.</p> <p>Fairness: Potentially significant problems. Obligations a function of outcome of negotiations rather than consistently applied standards. Means different facilities in same sector may be subject to different requirements, different communities receive different levels of protection. Community participation in negotiation of formal contract would be difficult to provide, and would require significant support for legal assistance etc.</p> <p>Political/Policy Consistent with government policy of non-regulatory approach. Industry response unknown. Potential adverse response from provinces if they perceive as interference with their primary role in facility approvals/oversight. Potential for adverse</p>
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			response for ENGOs, communities strong in light of Dofasco experience. ²⁶ Ultimately comes down to question of where does EC's bargaining leverage come from.
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Notes to Table 1

1. See, for example, *Taking Stock: North American Pollutant Releases and Transfers, 1995* (Montreal: North American Commission for Environmental Cooperation, 1998), ch.8)
2. *Environmental Protection Regulatory Review: Discussion Document* (Ottawa: Environment Canada, November 1993).
3. See, for example, Ontario Ministry of the Environment, *1992 Status Report on Ontario's Air, Water and Waste* (Toronto: unpublished, released 1997), Figure 3.2 (average annual concentrations of lead in TSP in Ontario, 1971-1992).
4. *Environmental Protection Regulatory Review: Discussion Document* (Ottawa: Environment Canada, November 1993).
5. See, for example, *Report of the Commissioner of the Environment and Sustainable Development to the House of Commons 1999* (Ottawa: Minister of Public Works and Government Services, 1999), ch.8.
6. See, for example, *Report of the Auditor General of Canada to the House of Commons - November 1996* (Ottawa: Minister of Public Works and Government Services, 1996), ch.22.
7. *Ibid.*
8. See, for example, CM Consulting, *Beverage Container Deposit Systems in Canada*, January 2000.
9. See for example, C.Rolfe, *Emission Trading* (Vancouver: West Coast Environmental Law Association,
10. Ontario Ministry of Environment and Energy, *Ontario's Progress Towards Pollution Prevention* (Toronto: MoEE, 1997).
11. See for example, M.Becker and K.Geiser, *Evaluating Progress: A Report on Findings of the Massachusetts Toxic Use Regulation Program Evaluation* (Lowell, MA: Toxics Use Reduction Institute, March 1997).
12. *Ibid.*
13. *Ontario Regulation 102/94 - Waste Audits and waste Reduction Workplans.*

14. See, for example, A. Fung and D. O'Rourke, "Reinventing Environmental Regulation from the Grassroots up: Explaining and Expanding the Success of the Toxics Release Inventory," *Environmental Management*, Vol. 25, No. 2, pp. 115-127.

15. See National Pollutant Release Inventory Ad Hoc Working Group on Substances *Third (September 1999) and Fourth (December 1999) Reports* (Ottawa: Environment Canada, 1999).

16. *Evaluation of the Accelerated Reduction and Elimination of Toxics Initiative (ARET) - Draft Report* (Ottawa: Environment Canada, November 1999).

17. Commissioner of the Environment and Sustainable Development, *Report to the House of Commons - 1999* (Ottawa: Minister of Public Works and Government Services, 1999) para 4.98.

18. B. F. Bass et. al., *Toxics Watch 1995* (New York: INFORM, 1995), ch. 11.

19. See generally, R. B. Gibson, *Voluntary Initiatives: The New Politics of Corporate Greening* (Peterborough: Broadview Press, 1999), ch. 19.

20. Commissioner of the Environment and Sustainable Development, *Report to the House of Commons - 1999* (Ottawa: Minister of Public Works and Government Services, 1999) para 4.98.

21. *Ibid.*, para. 4.99.

22. See, for example, J. Castrilli and M. Winfield, *The Ontario Regulation and Policy-Making Process in a Comparative Context: An Exploration of the Possibilities for Reform* (Toronto: Environmental Commissioner for Ontario, 1996), pg. 31.

23. See, for example, L. Lukasik, "The Dofasco Deal," in Gibson, ed., *Voluntary Initiatives*, pp. 141-148.

24. See, for example, P. Muldoon and R. Nadarajah, "A Sober Second Look," in Gibson, ed., *Voluntary Initiatives*, pp. 57-58.

25. See, generally, Gibson, ed., *Voluntary Initiatives*.

26. See, for example, L. Lukasik, "The Dofasco Deal," in Gibson, ed., *Voluntary Initiatives*, pp. 141-148.

Appendix 1: Application of Instrument Choice Matrix.

Four tables are presented, providing assessments of a major instrument in each of the four major instrument classes (Regulatory/Planning/Informational/Voluntary). The assessments consider a hypothetical toxic substance in extensive industrial use.

Note that assessments are within context of provisions and requirements of CEPA 1999, not generic assessments of instrument characteristics. The assessments and weightings also reflect judgements re: current government policy regarding regulation, federal-provincial relations, and role of other government departments, as opposed to an "ideal" situation.

Instrument Strength Ratings

The strengths of each instrument were weighted as follows:

Efficiency, Fairness, Policy/Political Criteria

Efficiency

Benefits to Society:	Low 0/2; moderate 1/2; high 2/2
Benefits to firm:	Low 0/2; moderate 1/2; high 2/2
Costs to firm:	Low 2/2; moderate 1/2; high 0/2
Costs to Government/Public:	Low 2/2; moderate 1/2; high 0/2

Fairness

Polluter Pays/Cost Internalization:	Low 0/2; moderate 1/2; high 2/2
Free Rider potential:	Low 2/2; moderate 1/2; high 0/2
Consistency of Protection:	Low 0/2; moderate 1/2; high 2/2
Disproportionate impacts:	Low 0/2; moderate 1/2; high 2/2

Policy/Political

Consistency with gov't policy:	Low 0/2; moderate 1/2; high 2/2
Positive OGD Response:	Low 0/2; moderate 1/2; high 2/2
Positive Provincial Response:	Low 0/2; moderate 1/2; high 2/2
Positive Non-Governmental Stakeholder Response (industry/NGO):	Low 0/2; moderate 1/2; high 2/2
Trade issues/concerns:	Low 2/2; moderate 1/2; high 0/2

Effectiveness Criteria

Certainty of Outcome: Low 1-3/10; moderate: 4-7/10; high: 8-10/10

Speed of Use: Low: 1-2/5; moderate: 3/5; high: 4-5/5

Effectiveness criteria are weighted heavier than other criteria to reflect their importance (i.e. no point in pursuing instruments that can't achieve the required outcome)

Instrument	Effectiveness	Fairness	Efficiency	Policy/ political
<p>Planning Pollution Prevention</p>	<p>Certainty of outcome: moderate (implementation may fail) (5/10)</p> <p>Speed of use: high (Ministerial approval) (4/5)</p>	<p>Cost internalization: High (2/2) (plans developed by facilities)</p> <p>Free Riders: low (2/2) (requires EMS where none in place)</p> <p>Consistency of Protection: Moderate (0.5/2) (plan implementation may vary)</p> <p>Disproportionate impacts: moderate (0.5/2) (planning may present challenges to SMEs w/o active support).</p>	<p>Benefits to society: high (2/2)</p> <p>Benefits to facilities: high (2/2)</p> <p>Costs to facilities: moderate if built on existing EMS (1/2)</p> <p>Costs to government: moderate (1/2) (once methodology defined, some inspection/enforcement costs) (1/2)</p>	<p>Policy: Moderate (1/2) (consistent with PP framework vs. reluctance to regulate)</p> <p>OGDs: high (2/2) (no direct role)</p> <p>Provinces: Moderate (1/2) (no direct role, although possible adverse reaction)</p> <p>Non-governmental stakeholders: moderate (1/2) some potential for industry opposition/ NGO support</p> <p>Trade: low. Does not raise trade concerns (2/2)</p>
<p>Instrument (30/41)</p>	<p>Effectiveness (10/15 - pass)</p>	<p>Fairness (5/8 - pass)</p>	<p>Efficiency (6/8 - pass)</p>	<p>Policy/political (7/10 - pass)</p>

Instrument	Effectiveness	Fairness	Efficiency	Policy/ political
Regulation	<p>Certainty of outcome: High (9/10)</p> <p>Speed of use: low (significant barriers (1/5))</p>	<p>Cost internalization: High (2/2)</p> <p>Free Riders: low (2/2)</p> <p>Consistency of Protection: High (2/2)</p> <p>Disproportionate impacts: moderate (1/2) (may present challenges to SMEs w/o active support).</p>	<p>Benefits to society: high (2/2)</p> <p>Benefits to facilities: moderate (may prompt innovation) (1/2)</p> <p>Costs to facilities: moderate (1/2)</p> <p>Costs to government: high (transaction costs, some inspection/enforcement costs. (0/2))</p>	<p>Policy: low (0/2) (conflicts with regulatory policy)</p> <p>OGDs: low (0/2) (potential for conflict)</p> <p>Provinces: low (0/2) (potential for conflict)</p> <p>Non-governmental stakeholders: moderate (1/2) (industry opposition/ NGO support)</p> <p>Trade: moderate (1/2) (may raise trade concerns)</p>
Instrument (22/41)	Effectiveness (10/15 - pass)	Fairness (7/8 - pass)	Efficiency (4/8 - marginal)	Policy/political (2/10 - fail)

Instrument	Effectiveness	Fairness	Efficiency	Policy/ political
<p>Challenge Program (ARET)</p>	<p>Certainty of outcome: low (2/10)</p> <p>Speed of use: high (few barriers) (4/5)</p>	<p>Cost internalization: low (0/2) (voluntary cost internalization unlikely)</p> <p>Free Riders: high (0/2) (major concern)</p> <p>Consistency of Protection: low (0/2) (major concern)</p> <p>Disproportionate impacts: moderate (1/2) (less challenge to SMEs but potential for disproportionate impacts on communities)</p>	<p>Benefits to society: low/moderate at best: (0/2)</p> <p>Benefits to facilities: moderate (may prompt innovation) (1/2)</p> <p>Costs to facilities: low (2/2)</p> <p>Costs to government: low (2/2) (some transaction costs, little inspection/enforcement costs)</p>	<p>Policy: high (2/2) (consistent regulatory policy)</p> <p>OGDs: high (2/2) (little potential for conflict)</p> <p>Provinces: high (2/2) (little potential for conflict)</p> <p>Non-governmental stakeholders: moderate (1/2) (industry support/ NGO opposition)</p> <p>Trade: Low (2/2) (no trade concerns)</p>
<p>Instrument (21/41)</p>	<p>Effectiveness (6/15 - fail)</p>	<p>Fairness (1/8 - fail)</p>	<p>Efficiency (5/8 - pass)</p>	<p>Policy/ political (9/10 - pass)</p>

Instrument	Effectiveness	Fairness	Efficiency	Policy/ political
Informational Instrument (NPRI)	<p>Certainty of outcome: moderate (4/10)</p> <p>Speed of use: high (4/5) (few barriers)</p>	<p>Cost internalization: high (2/2) (reporting by facilities)</p> <p>Free Riders: low (2/2) (few free rider opportunities)</p> <p>Consistency of Protection: moderate (1/2) (impacts on facility behaviour may vary)</p> <p>Disproportionate impacts: moderate (1/2) (potential challenge to SMEs, communities were facilities not captured by NPRI.</p>	<p>Benefits to society: high (2/2)</p> <p>Benefits to facilities: moderate (1/2)</p> <p>Costs to facilities: moderate (1/2) builds on existing EMS</p> <p>Costs to government: moderate (1/2) (some transaction and inspection/administration costs)</p>	<p>Policy: moderate/high (1/2) (no clear policy/strong political appeal)</p> <p>OGDs: high (2/2) (no role)</p> <p>Provinces: moderate (1/2) (some potential for conflict)</p> <p>Non-governmental stakeholders: moderate/high (1/2) (limited industry opposition/high NGO support)</p> <p>Trade: high (2/2) (no trade concerns)</p>
Instrument (26/41)	Effectiveness (8/15 - pass)	Fairness (6/8 - pass)	Efficiency (5/8 - pass)	Policy/political (7/10 - pass)