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RESEARCH REPORT

**An Evaluation of the  
Effectiveness of the  
International Joint Commission**

1995

**AN EVALUATION OF THE EFFECTIVENESS OF  
THE INTERNATIONAL JOINT COMMISSION**

**Environmental Law Institute  
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## EXECUTIVE SUMMARY

ELI has examined the legal structure and actual operations of the International Joint Commission (IJC) in order to identify its major strengths and weaknesses in preventing pollution and restoring degraded conditions of watersheds along the border of the United States and Canada. This report recommends a number of options for enabling the IJC to operate more effectively, directed both at the IJC and at the Parties. A draft report was circulated to key IJC stakeholders for comment at a roundtable discussion held at the Joyce Foundation which funded this project. ELI's recommendations are summarized below.

### ELI RECOMMENDATIONS

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- ◆ The Parties should authorize the IJC to create standing Boards responsible for recommending standards and monitoring water quality for all boundary watersheds ..... 59
- ◆ The Parties should establish a fixed number of years for terms of IJC Commissioners, and should stagger the dates of their appointments to prevent wholesale turnovers of Commissioners ..... 60
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# CHAPTER I

## INTRODUCTION

### **A. Purpose of this Study**

The International Joint Commission (IJC) is a bilateral institution established by the United States and Canada under the Boundary Waters Treaty of 1909. Since that time, it has acted as both an arbiter and a catalyst, resolving disputes as well as helping launch numerous initiatives to develop the environmental policies and programs of the United States and Canada (the Parties), as well as those of provincial and state governments. These initiatives have dealt with contentious issues of water allocation and levels, and the clean up of pollution in the Great Lakes and other boundary waters. Accordingly, the IJC has been referred to as the "watchdog of the Great Lakes" and has received wide recognition as a leading example of how nations can jointly manage and protect shared environmental resources.\*\*

In recent years, however, questions have arisen about whether the structure and functions of the IJC are truly effective for dealing with increasingly complex environmental problems. The IJC's tasks related to preventing pollution and restoring deteriorated conditions in the boundary water ecosystems within its jurisdiction all require major commitments by the Parties, as well as the states and provinces. Yet the IJC has no enforcement functions nor authority to ensure that the various levels of government are vigorously implementing its recommendations and enforcing environmental laws which are passed in response to IJC initiatives.

Instead, much of the progress in controlling transboundary pollution has been the result of increased public awareness of environmental problems, industry's increased use of pollution prevention, and the growth of citizen group activities in both countries. These nongovernmental organizations (NGOs) have pressured their national, provincial and state governments, as well as industry, to implement the IJC's recommendations. But the Commission itself has been relatively ineffective in monitoring the Parties' actions and pushing the Parties to produce specific and concrete results. Moreover, the IJC has resisted efforts by NGOs and industry to be able to participate on a consistent basis in either its own formulation of recommendations to the Parties or its processes for dispute resolution.

In light of these concerns, ELI has undertaken to examine the IJC's existing approaches to protecting shared boundary water resources and to evaluate its effectiveness in doing so, as well as to identify specific, practical proposals for strengthening its capacity to achieve environmental protection. This analysis of the IJC's past performance and future potential is particularly important at the current time due to the increased interest among a number of nations in establishing mechanisms to manage and protect shared natural resources. From the long experience of the IJC, these new multilateral efforts to cooperate on environmental protection can learn how to establish structures and mechanisms that will be truly effective in preventing and controlling pollution of other shared ecosystems.

## **B. Methodology and Scope of Research**

During the first phase of this study, ELI conducted background research into the IJC's legal authorities, institutional structures, and actual operations. Through this research, ELI was able to identify significant laws, policies, IJC decisions, submissions by the Parties, and other documents that illustrated the IJC's role in environmental protection, both for the Great Lakes basin and other boundary water ecosystems.

For the second phase, ELI conducted interviews with selected officials in U.S. and Canadian state and provincial agencies; with leaders of NGOs and local community groups in both the U.S. and Canada; with representatives of industry; and with scholars, all of whom have worked directly on a variety of transboundary pollution problems. These interviews were "off-the-record" in order to elicit candid assessments from those being interviewed. Accordingly, their views will not be attributed by name in this report. The purpose of these interviews was to learn from experienced observers of the IJC whether, and to what extent, the IJC's legal authorities and institutional structures have hampered its ability to be more effective in achieving implementation of its recommendations and in protecting the quality of the environmental resources shared by the Parties.

In the third phase, ELI prepared three case studies involving waters shared by the U.S. and Canada, in order to conduct in-depth analysis of current, real-world problems relating to environmental conditions in boundary water ecosystems. Those case studies are described in detail in Appendices A, B and C; but the examples, observations and lessons learned from them are woven into the body of this report. The case studies were selected on the basis of ELI's earlier research and interviews in the first two phases of this project. Two of the case studies relate to the IJC's on-going programs for addressing significant environmental problems in the Great Lakes basin: one concerns the program for Remedial Action Plans and the other relates to Lake Superior Initiative. The third focuses on problems in the Pacific Northwest which were never brought before the IJC. All three cases were selected in order to illustrate both notable strengths and possible weaknesses in the IJC's ability to implement solutions to problems in shared watersheds.

The fourth phase of ELI's study involved analyzing the results from our research, interviews, and case studies in order to develop recommendations for legal, institutional or structural reforms that will improve the IJC's effectiveness in protecting the Parties' shared waters. ELI's recommendations were contained in a draft of this report, which was circulated for review and comment by key government officials and leaders of environmental groups and industry from both the U.S. and Canada. Some of those who reviewed the draft participated in a roundtable discussion at the Joyce Foundation in Chicago to provide ELI with their reactions to the analysis and recommendations of the draft report. In the final phase of this project, ELI revised the draft report in response to comments from these reviewers and prepared this final report to be disseminated to individuals, business leaders, citizen groups, academic institutions, and federal, provincial, and state agencies in the U.S. and Canada.

## CHAPTER II

### ENVIRONMENTAL CONDITIONS IN BOUNDARY ECOSYSTEMS

#### A. The Great Lakes Basin

The Great Lakes basin is home to approximately 32.4 million people and represents nearly 20% of manufacturing employment in North America. This basin is the world's largest fresh water system and contains one-fifth of all the fresh surface water resources on Earth. The larger Great Lakes are deep and have a long water retention time; water or pollutants take from several years to several decades to be flushed out of the system. For example, Lake Superior, the largest fresh water lake in the world by surface area, and holds over half of the water in the Great Lakes system and has a water retention time of 173 years. Lake Michigan has a water retention time of 62 years and Lake Huron, of 31 years. Lake Erie has the smallest water volume of the Great Lakes and the shortest water retention time, 2.7 years, which makes it the most responsive both to environmental abuse and to cleanup.<sup>1</sup>

During the first half of the 20th century, excessive loading of nutrients as well as habitat destruction, sedimentation, and over-fishing contributed to a major decline in the Lake Erie fishery. Excessive nutrient loading led to a proliferation of algae, the breakdown of which used up much of the oxygen of the bottom waters in the lake's Central Basin, leaving little for other aquatic life. As concern over the eutrophication of Lake Erie spread in the 1960s and 70s, a concerted effort was made to reduce phosphorous loadings to all of the Great Lakes. These have succeeded and, by 1991, the objectives for total phosphorous concentrations in open water were achieved for all of the Lakes. Oxygen levels in the bottom of Lake Erie are now significantly better than they were twenty years ago, but there are still periods of anoxia (low oxygen) in some areas of the Lake during the late summer.<sup>2</sup>

A major threat to the Great Lakes today is pollution from persistent toxic contaminants, which reach the Lakes both from surface runoff and by deposition from air pollution.<sup>3</sup> The Great Lakes food web remains contaminated by bioaccumulative toxins, causing

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<sup>1</sup> U.S. Environmental Protection Agency. A Report to Congress on The Great Lakes Ecosystem (February

<sup>2</sup> However, intermittent anoxia may be a natural occurrence in Lake Erie's Central Basin. SOLEC Integratio (Discussion Draft, September 1994) EPA 905-D-94-002, p. 16.

<sup>3</sup> See U.S. Environmental Protection Agency, Deposition of Air Pollutants to the Great Waters, first Report Congress (May 1994).

unacceptable levels in some fish and wildlife.<sup>4</sup> Contaminated bottom sediments and bioaccumulative toxic substances pose special threats to those predators high in the food web, such as lake trout, mink and bald eagles, and to humans (especially women and children) who eat contaminated fish. Nevertheless, the overall contaminant picture for the Great Lakes has improved greatly since the mid-70s,<sup>5</sup> with levels of persistent toxic contaminants in fish and gulls declining significantly from the 1970s to the mid-1980s. But the rate of decline has recently slowed, with levels in some fish species still remaining high enough to require restrictions on human consumption. Persistent toxic chemicals in some fish still exceed several water quality objectives and fish tissue criteria for the protection of human health.

A serious problem related to persistent toxic contaminants is reproductive impairment. In the 1950s and 1960s, exposure to environmental stresses such as organochlorine compounds had led to severe reproductive problems in Great Lakes wildlife, and the populations of several species declined. Since then, reductions in loadings of PCBs and other organochlorine compounds have allowed populations of double-crested cormorants, black-crowned night herons, Caspian terns, and herring gulls to become re-established in the

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<sup>4</sup> In the fall of 1994, the governments held a conference on the State of the Great Lakes Ecosystem (SOLEC) of the papers prepared for this meeting, the SOLEC Steering Committee listed its findings using a rating system. SOLEC Steering Committee members are representatives of Environment Canada, U.S. EPA, U.S. Fish and Wildlife Service, Ontario Ministry of Environment and Energy, National Wildlife Federation, and the Council of Great Lakes Industries. Overall environmental contaminant stress from the Great Lakes on human health as measured using levels of contaminants in the ambient environment, in fish and wildlife, and in human exposure was measured using levels of contaminants in the ambient environment, in fish and wildlife, and in human exposure. The major route of human exposure to contaminants in the Great Lakes is through fish consumption, and concentrations of persistent toxic substances have been declining in fish throughout the Great Lakes. Lakes Michigan and Ontario generally have the highest contaminant levels, but these lakes have also had the greatest declines in contaminants in the past 20 years. Fish trend monitoring programs and dated sediment cores have shown significant drops in total loadings and environmental concentrations of mercury and lead since the mid-70s. In some locations, the levels of contaminants in gulls increased in 1991-1992. PCB concentrations in fish across much of the basin exceed the applicable criteria for the protection of biological resources resulting in fish consumption advisories for each of the Great Lakes. "Regulators Should Rethink Protection of Complex Lake Ecosystems, Report Says," International Environment (November 16, 1994).

<sup>5</sup> Polychlorinated biphenyls (PCBs) in Lake Superior declined from 1.73 micrograms per liter in 1978 to 0.2 between 1980 and 1993. PCB concentrations in Southern Lake Michigan declined from 1.8 micrograms per liter to 0.2 between 1980 and 1993. PCB concentrations in Michigan trout declined from 22.9 micrograms per gram to 2.77 between 1974 and 1990. DDT and 2,3,7,8-TCDF showed similar declines across the basin.

Great Lakes, although several of these birds still show low rates of developmental abnormalities.<sup>6</sup> In 1991, Environment Canada pointed to the return of the bald eagle to the western shores of Lake Erie as proof of the restoration of the Great Lakes, but in that same year wildlife specialists found that eight of twelve eaglets hatched on the Lake Erie shoreline in 1991 had died within four weeks. Furthermore, in 1993, bald eagles were born near Lake Erie with twisted beaks and deformed talons. Scientists believe that these reproductive problems are being caused by persistent toxic substances.<sup>7</sup> SOLEC rated all of the Great Lakes as mixed/improving for reproductive impairment.

Another threat to the health of the Great Lakes basin is the loss of wetlands. Wetlands provide essential habitat to birds, fish, and wildlife and also help to purify the water of the Lakes. Since the 1780s, states in the Great Lakes basin have lost 60 percent of their original wetlands, while Ontario has lost almost 80 percent of its wetlands south of the Precambrian Shield. Up to 100 percent of coastal wetlands in some areas of Lakes Ontario, Erie, Michigan and St. Clair have been lost to development. The rate of wetlands destruction is no longer as great as it was in the past, but development pressures continue to threaten the area's remaining wetlands. Accordingly, SOLEC rated the indicators for loss of habitat (both in terms of quality and quantity) and for encroachment and development of wetlands as poor. While SOLEC rated the indicator for loss of brook trout stream habitat in the Upper Lakes as good/restored, it rated the net effort of protection, enhancement and restoration of habitat and wetlands as poor because these programs are not keeping up with habitat losses.<sup>8</sup>

Exotic species pose another very serious threat to the Great Lakes ecosystem. Since the 1880s, 139 non-native species have made the Great Lakes their home, many transported there by ships.<sup>9</sup> Exotic species have severely disrupted the natural ecosystem by competing with native species for food and creating shortages all the way up the food chain.<sup>10</sup> Some

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<sup>6</sup> SOLEC Integration Paper, supra, p. 14.

<sup>7</sup> Paul Muldoon and John Jackson, "Keeping the Zero in Zero Discharge," Alternatives, Vol. 20, No. 4 (1992).

<sup>8</sup> SOLEC Integration Paper, supra, p. 15.

<sup>9</sup> Ibid., p. 13.

<sup>10</sup> Cootes Paradise, a marshland in Hamilton Harbour beside Lake Ontario, is an example of how an exotic can disrupt native populations. Cootes Paradise has become overrun with carp. Carp now represent 80 percent of the fish population by weight, and have become so contaminated after ingesting harbour mud during their 20-year stay that officials who are determined to remove them from the harbour as part of a restoration plan are not sure what to do with their bodies because it would be illegal to dump them in landfill sites. The mating habits of the carp, which release large amounts of silt, have increased the turbidity of the water and prevented sunlight from reaching the bottom of the water, killing plants that supported a greater variety of fish, and reducing the number of other predators that kept the carp population in check.

(continued...)

exotic species, such as the sea lamprey, prey directly on native species such as lake trout. Other recent invaders into the Great Lakes include the zebra mussel, river ruffe, spiny water flea, tubenose goby, and round goby.

Predation by exotic species, habitat loss, and food chain disruptions have depleted several native fish populations. Alewives have displaced lake herring, and sturgeon that once grew to six feet in length are severely threatened. Lake trout and Pacific salmon must be stocked in order to help maintain ecological balance and to sustain commercial and sport fishing. There has been complete extirpation of lake trout from Lakes Michigan, Erie, and Ontario, and only one or two stocks remain in Lake Huron. All river-spawning lake trout have even been extirpated from Lake Superior.<sup>11</sup>

Attempts to reintroduce depleted species of native fish have been partially successful. SOLEC rated Lake Superior as good/restored for the number of native species lost and the other lakes were rated as mixed/improving. Using another indicator, the Lake Trout Dichotomous Key, to measure the ecological balance of each aquatic ecosystem, Lake Superior was rated as good/restored; Lakes Huron and Erie was rated as mixed/improving; but Lakes Michigan and Ontario were rated poor because they have the most disturbed aquatic communities.<sup>12</sup>

In conclusion, while the lakes lack sight of recovery from some of the most serious environmental problems of the past, other problems have intensified or are stubbornly resistant to change. These include contaminated sediment continued deposition of air-borne toxics, introduced species, and habitat loss.

## **B. Eastern Boundary Watersheds**

Environmental problems in the Parties' shared river basins east of the Great Lakes are caused primarily by pollution from industrial sources and municipal waste. Effluents from poultry production, food processors, pulp and paper mills and municipal sewage have been the main sources of environmental degradation. These processes have resulted in the degradation of water quality, increased water temperatures, and decreased aesthetic and habitat values for rivers along the eastern borders. In addition, hydroelectric dams, poor

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<sup>10</sup>(...continued)  
check. Brian Christmas, "The War on Toxic Carp," The Globe and Mail Science & Conservation (June 11, 19

<sup>11</sup> SOLEC Integration paper, supra, p. 21.

<sup>12</sup> Ibid.

water quality, and lack of spawning habitat have resulted in reduced anadromous fish populations. One-quarter to one-third of the depleted salmon stocks returning to many of the rivers on the Atlantic coast are escapees from aquaculture.<sup>13</sup>

The St. Croix River basin is representative of the kinds of problems that exist in many of the boundary watersheds east of the Great Lakes. Government agencies and local organizations are attempting to address the problem of bacterial contamination of shellfish growing areas, which have been closed to harvesting. Sources of bacteria include wastewater treatment plants, sewage disposal, wildlife, farm animals, and wood fiber production.<sup>14</sup> Salmon populations are low; only 181 salmon were counted returning to the river in 1994, and 53 percent of them were aquaculture escapees. In addition, dissolved oxygen levels in the river may be insufficient to support healthy anadromous fish populations, especially salmon.<sup>15</sup> Mercury deposition is also a problem in the St. Croix basin, a result of long range atmospheric transport of air pollutants from sources along the eastern seaboard.<sup>16</sup>

Acid rain, or acid deposition, is another environmental problem in this eastern boundary region. Acid rain is the result of emissions of sulfur and nitrogen compounds from utilities and a variety of industrial sources.<sup>17</sup> The increasing acidity of rain in the region has led to striking changes in aquatic ecosystems.<sup>18</sup> A dramatic impact on fish, frog, toad, and salamander populations has been documented.<sup>19</sup> Acid rain is also damaging forests, buildings, and structures on both sides of the border.

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<sup>13</sup> International Advisory Board on Pollution Control for the St. Croix River, Fifty-Second Progress Report to the International Joint Commission (1994), p. 6.

<sup>14</sup> Ibid., p. 4.

<sup>15</sup> Ibid., p. 2.

<sup>16</sup> Ibid., p. 8.

<sup>17</sup> See National Acid Precipitation Assessment Program (NAPAP), 1992 Report to Congress, pp. 21-26.

<sup>18</sup> Ibid., pp. 76-86; See also N.D. Bankes and J.O. Saunders, "Acid Rain: Multilateral and Bilateral Approaches to Transboundary Pollution Under International Law," 33 U. of New Brunswick L. J. 155 (1984), p. 158, citing U.S.-Canada, Memorandum of Intent on Transboundary Air Pollution, Executive Summary, Work Group 1 (1983), p. I-4.

<sup>19</sup> Bankes and Saunders, supra, p. I-5.

### **C. Western Boundary Watersheds**

In the Parties' shared river basins west of the Great Lakes, there have been problems with both water quality and water quantity. Pollution from sewage and toxic chemicals poses such a threat to the marine life of the Northwest Straits that Washington State, the U.S. National Oceanic Atmospheric Administration (NOAA), and citizens in both the U.S. and Canada are pushing to have these waters designated a national marine sanctuary.<sup>20</sup> In 1993, fish harvests in Puget Sound were at their lowest levels in 50 years, and harvests from nearly half of commercial shellfish beds in the Sound are prohibited.<sup>21</sup> The serious decline of the western salmon fishery in both the U.S. and Canada is well known. During 1991 and 1992, three runs of Snake River salmon were listed under the U.S. Endangered Species Act,<sup>22</sup> and half of the Columbia River's anadromous fish runs are designated as "at risk" by the American Fisheries Society. A quarter of those runs are already extinct.<sup>23</sup> The public debate about the fate of native salmon fisheries has elevated salmon to the status of an indicator species for the health of western rivers in both the U.S. and Canada.<sup>24</sup>

### **D. Summaries of Case Studies**

#### **1. The IJC's Role in the Binational Program for Lake Superior (Appendix A)**

The IJC's 1989 biennial meeting demonstrated how members of the public can participate in the IJC's agenda-setting process. During the meeting, Canadian businessman Bruce Hyer suggested that the IJC recommend to the Parties that Lake Superior be designated a pilot project for programs to address the Great Lakes Water Quality

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<sup>20</sup> "The Northwest Straits Marine Sanctuary," Sound & Straits, Vol. 4, No. 3 (August 1994), p. 4.

<sup>21</sup> People for Puget Sound, Annual Report (1993), p. 6.

<sup>22</sup> 16 U.S.C.A. §§ 1531-1544.

<sup>23</sup> Agnus Duncan, A Proposal for a Columbia Basin Watershed Planning Council (August, 1994), p. 5.

<sup>24</sup> Many of the gravest problems faced by western salmon are believed to be due to dams, timber practices, overfishing. Some juvenile fish get caught in dam turbines and die on their way downstream to the ocean. Those that escape through the turbines face other dangers. Dams have reduced the natural flow of Western transboundary rivers like the Columbia, the Snake, and the Skagit during the spring runoff, increasing the length of time it takes for salmon to get to the ocean, and thereby exposing them to increased risks of predation from other fish or birds. Dams also increase water temperature which makes young salmon more susceptible to disease. Dams without ladders also impede salmon's ability to swim back upstream to their spawning beds. Northwest Power Planning Strategy for Salmon, Volume II, p. 23.



Agreement (GLWQA)<sup>25</sup> requirements for virtual elimination of toxic discharges. In 1990, the IJC responded by recommending in its Fifth Biennial Report that the Parties designate Lake Superior "as a demonstration area where no point source discharge of any persistent toxic substance be permitted."<sup>26</sup> The various jurisdictions responsible for managing the Lake Superior basin began immediately to implement the recommendation. On September 30, 1991, the U.S. Environmental Protection Agency (EPA), Environment Canada, the states of Michigan, Minnesota, and Wisconsin, and the province of Ontario announced the "Binational Program to Restore and Protect the Lake Superior Basin."<sup>27</sup> The premise underlying the Binational Program is that a successful pilot project on Lake Superior could be used as a model to reach these goals throughout the Great Lakes basin.<sup>28</sup>

After playing a major role in initiating the Lake Superior Binational Program, the IJC has played only a minor role in the implementation of measures to restore water quality in Lake Superior, as it is not a formal part of the Binational Program's management structure. Rather, the structure of the Binational Program and progress in its implementation is attributable primarily to the federal, state, and provincial governments. However, the IJC does have a limited role in facilitating the implementation of the program, that of reviewing the Lakewide Management Plans (LAMPs) developed pursuant to GLWQA, which are discussed below.

The Binational Program contains two major commitments. The first is a zero discharge demonstration program devoted to the goal of achieving zero discharge and zero emission of nine designated persistent toxic substances. The second is a broader program of identifying beneficial use impairments, and restoring and protecting the Lake Superior Basin ecosystem. This goal addresses larger ecosystem problems such as wildlife habitat and wetlands destruction. Under GLWQA, a LAMP is created to coordinate all the activities directed toward these two goals. Four years have passed since the Parties agreed to the Binational Program, yet there has been only modest progress toward achieving the goal of zero discharge. The governments have not yet designated any area of Lake Superior as an Outstanding International Resource Water (OIRW) or Outstanding National Resource Water (ONRW) as contemplated by the program. Also, the Parties have not moved beyond the first stage of fulfilling the LAMP requirements under GLWQA.

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<sup>25</sup> Great Lakes Water Quality Agreement of 1978, November 22, 1978, 30 U.S.T. 1383, as amended by the dated November 18, 1987, Annex 2(2).

<sup>26</sup> International Joint Commission, Fifth Biennial Report on Great Lakes Water Quality, p. 23 (1990).

<sup>27</sup> A Binational Program to Restore and Protect the Lake Superior Basin (Sept. 1991).

<sup>28</sup> International Joint Commission, Sixth Biennial Report on Great Lakes Water Quality, (1992), p. 34.

This case study demonstrates how the IJC can initiate significant conservation initiatives. Yet, the IJC's authority in the implementation of the Binational Program is limited to reviewing each stage of the Lake Superior LAMP. However, the IJC is frequently characterized as having moral authority in the Great Lakes region, and its recommendations are perceived as credible and fair. Thus, citizen coalitions have productively used IJC information and recommendations to hold the governments accountable in demonstrating progress toward the goals of GLWQA and the Binational Program.

## 2. The IJC's Role in the Remedial Action Plan Process (Appendix B)

The remedial action plan (RAP) process was recommended by the IJC's Water Quality Board in 1985, and was formalized in Annex 2 of the 1987 Protocol amending GLWQA. It requires the eight Great Lakes states and the province of Ontario to cooperate with the Parties in the development and implementation of remedial action plans for areas of concern (AOCs) in the Great Lakes Basin. An AOC is defined as a "geographic area that fails to meet the General or Specific Objectives of the GLWQA were such failure has caused or is likely to cause impairment of beneficial use or of the area's ability to support aquatic life."<sup>29</sup> Each state or province is responsible for producing RAPs for AOCs within its jurisdiction, with shared AOCs being the responsibility of the bordering jurisdictions. The state or provincial government must work with local governments and citizens in designing and implementing a RAP. The RAP process is intended to result in the cooperative management of AOC cleanup efforts by federal, state, provincial, and local governments, and local stakeholders.<sup>30</sup>

In general, the development and implementation of RAPs has been frustratingly slow. Many jurisdictions are behind in their reporting to the IJC. Although 43 AOCs were designated, by 1991, only 19 Stage 1 RAPs had been reviewed by the IJC, and only six of them were determined to be complete.<sup>31</sup> As of January 1995, 42 Stage 1 RAPs had been reviewed,<sup>32</sup> but many of these RAPs have been judged by the IJC to be incomplete. Only three Stage 2 RAPs and one Stage 3 RAP have been reviewed by the IJC.<sup>33</sup> The

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<sup>29</sup> GLWQA, Annex 2(1)(a). Impairment of beneficial use is defined as a "change in chemical, physical, or integrity of the Great Lakes System" sufficient to cause any of fourteen impaired uses. *Ibid.*, Annex 2(1)(c).

<sup>30</sup> In contrast, lakewide pollution problems are addressed in a LAMP, rather than by designating the entire AOC.

<sup>31</sup> Great Lakes Water Quality Board, Review and Evaluation of the Great Lakes Remedial Action Plan Progress (1991), p. 18.

<sup>32</sup> Remedial Action Plan Progress Summary, compiled by IJC's Windsor Office (January 5, 1995).

<sup>33</sup> *Ibid.*

implementation of remedial measures has begun, in most cases to a very limited extent, in 34 AOCs; but the restoration of impaired uses has begun in only ten AOCs.<sup>34</sup>

The IJC has a number of roles in the development and implementation of RAPs. It is responsible for recommending the designation of new AOCs as necessary, and has developed Guidelines for Recommending the Listing and Delisting of Great Lakes Areas of Concern.<sup>35</sup> When considering a local area for listing as an AOC, the Parties and the affected state and provincial jurisdictions must reach an agreement in writing based upon the IJC's guidelines. The IJC also appoints a coordinator from its staff to identify technical experts to conduct a review of RAP, and provides a criteria for the review of RAPs to ensure their adequacy in defining problems, completeness in identifying remedial and regulatory measures, and effectiveness in involving stakeholders. The IJC also provides technical assistance and coordination to jurisdictions that need assistance, such as producing documents on technical remediation issues facing many RAP teams. The coordinator then convenes a meeting including the reviewers, one or two Commissioners or representatives of the IJC, a senior official and the RAP team of the implementing jurisdiction, and representatives of interested stakeholders.

The RAP process has been heralded as an innovative approach to ecosystem management because it involves the coordinated efforts of local stakeholders and all levels of government, has brought increased attention to AOCs, and has produced tangible results in several of these areas. However, the development and implementation of RAPs has generally been slow, and many jurisdictions are behind in their reporting to the IJC. Thus, the RAP process illustrates the IJC's problems in ensuring that water quality goals are achieved. Reasons include difficulty on the part of the jurisdictions in collaborative planning efforts with the public, slow review and comment by the IJC, and inadequate funding. This case study demonstrates that the IJC has been productive as a catalyst helping create in the RAP process, but has been less effective in producing progress in RAP implementation.

### 3. The IJC's Role in Western Boundary Watersheds (Appendix C)

The boundary watersheds west of the Great Lakes include the Northwest Straits, shared by the state of Washington and the province of British Columbia, which are polluted by sewage and industrial discharge. These and other environmental problems -- such as over-harvesting, reduced river flows, and dams that obstruct migration -- contribute to the decline of the shellfish and salmon populations in these western waters.

The IJC's role in cleanup activities in western watersheds is limited to its application and reference authorities under the Boundary Waters Treaty of 1909, because these waters are

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U.S. EPA and Environment Canada, Progress in Great Lakes Remedial Action Plans: Implementing the Ecos Approach in Great Lakes Areas of Concern (September 1994).

<sup>35</sup> Great Lakes Water Quality Board, Review and Evaluation of the Great Lakes Remedial Action Plan Prog 1991), p. 10.

not governed by GLWQA, and few of the western Boards of Control created under the Treaty have authority to monitor water quality or address water quality issues. Also, Washington and British Columbia have preferred to resolve boundary water issues between themselves without involving the IJC or federal agencies. Nevertheless, the IJC has played a notable role in resolving some western boundary water disputes.

The IJC's most recent significant involvement with a western dam dispute was its successful negotiation of the High Ross Dam controversy in 1983. The roots of the dispute extended back to 1942, when the City of Seattle received IJC approval to raise the height of the Ross Dam and flood the Skagit River back into Canada. British Columbia agreed to receive a small amount of monetary compensation for the loss of the land to be flooded. Seattle waited decades to begin raising the dam, when British Columbia complained about the environmental damage that would ensue and the inadequacy of the compensation it would receive. In 1971, a joint reference by the Parties to the IJC asked it to examine the environmental consequences of the flooding, and in 1974 and 1980, British Columbia submitted two applications to the IJC requesting it to rescind its 1942 order approving the higher dam. The IJC denied the applications, but ordered Seattle in 1982 to postpone raising the dam for one year.

A joint consultative group was formed by the IJC to negotiate a settlement between Washington and British Columbia. The two jurisdictions ultimately agreed that Seattle would not raise the dam, and would instead pay British Columbia what the project would have cost in exchange for British Columbia guaranteeing to provide Seattle with the electricity the higher dam would have generated. A 1984 treaty between the U.S. and Canada relating to the Skagit River, Ross Lake, and the Seven Mile Reservoir on the Pend D'Oreille River formalized this agreement.

In the absence of significant IJC involvement in western watersheds, Washington and British Columbia have created their own binational body to address environmental concerns. The British Columbia/Washington Environmental Cooperation Council was established by the 1992 Environmental Cooperation Agreement of the two jurisdictions.<sup>36</sup> This Commission sets binational cooperation and regional water quality goals, and has formed several task forces to address high priority areas identified in its preliminary action plans. Several areas of cooperation between the state and province are established under the Council, which also provides a focus for binational environmental activists.

In the future, the IJC will likely have a limited role in the western watersheds. Nongovernmental organizations and citizens have considered involving the IJC in western water quality issues, but believe that local cooperation is more effective. However, activists have found that the threat of raising an issue with the IJC helps to motivate state and provincial enforcement actions. The state and province also do not want the IJC to become involved in local water quality issues, as IJC involvement generally brings increased public

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<sup>36</sup> Environmental Cooperative Agreement Between the Province of British Columbia and the State of Wash May 7, 1992.

awareness which could result in embarrassment or administrative difficulties. However, the state and province have found the IJC to be a useful source of technical information.

As discussed in greater detail in Appendices A, B and C, these three case studies illustrate how the IJC has dealt with various specific environmental problems that have arisen in the Parties' shared watersheds. Chapter III next explains the IJC's authority over those watersheds, Chapter IV analyzes its effectiveness in ensuring that the Parties implement solutions to these problems, and Chapter V suggests how the Parties can enhance its effectiveness.

## CHAPTER III

### THE IJC's AUTHORITY OVER BOUNDARY WATERSHEDS

#### A. Creation and Structure of the IJC

For many years, Canada and the U.S. have manifested concern about the diversion and use of the transboundary waters between the two countries, as well as the quality of those waters, especially the Great Lakes. Most of the early problems concerned issues of navigation and water utilization.<sup>37</sup> In the late 19th century, disputes centered around industrial and population conflicts over waters being diverted and used for irrigation, recreation, power generation and sanitation. In 1902, the U.S. Congress authorized the President to ask the British government of Canada to help form an international waterways commission to investigate and report on the use of Canadian-US boundary waters.

Accordingly, in 1905, the International Waterways Commission was established but was hindered by "the lack of principles relating to the non-navigable uses of the waters."<sup>38</sup> The six Commissioners, three each from Canada and the U.S., recommended that the two countries enter into a "treaty setting forth rules and principles to resolve problems of water utilization between Canada and the US."<sup>39</sup> Thus, the 1909 Boundary Waters Treaty<sup>40</sup> was negotiated and entered into force to help prevent and resolve disputes over water quantity and water quality along the boundary between Canada and the United States. The IJC was established under the Article VII of the Treaty.

The IJC consists of six members, three appointed by the President of the United States and three by Canada's Governor-in-Council. The IJC acts as a single body in making decisions. Votes are tallied individually, not by country sections. The Treaty does not establish any requirements for the qualifications or training of the Commissioners, and the process of selecting Commissioners has become increasingly political in both countries. Canadian Commissioners, formerly appointed for life by the Minister of Foreign Affairs, are now appointed directly by the Governor-in-Council, generally for terms of three years, which may be renewed. U.S. Commissioners have always served at the President's pleasure but, in the past, only the appointment of the U.S. Chairman was regularly changed by a newly elected President. In its early history, the other two U.S. Commissioners were usually

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Carl E. Esterhay, "Restoring the Water Quality of the Great Lakes: The Joint Commitment of Canada and the U.S.," 4 CAN-US L. J. 208 (1981).

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.

<sup>40</sup> Boundary Waters Treaty, Jan. 11, 1909, United States-Great Britain, 36 Stat. 2448.

experienced officials from the Army Corps of Engineers and the Federal Power Commission and served for terms as long as twenty-five years. Since 1981, however, all U.S. Commissioners have been replaced at the beginning of each new administration, and they have been typically political appointees without prior involvement in IJC or boundary waters activities.

The IJC's budget is funded by both the U.S. and Canada. In the early part of this century, IJC staff consisted only of a secretary, an engineer, and a part-time lawyer from the U.S. State Department. Today, a budget of almost \$7 million supports the Commissioners and a permanent staff of fifty-two people.<sup>41</sup> The IJC has headquarters in both Washington and Ottawa, and the Great Lakes Water Quality Agreement of 1972 (GLWQA) added a regional IJC office in Windsor, Ontario staffed by personnel from both countries. Many of the IJC's activities are conducted by its various boards and task forces,<sup>42</sup> whose members generally work for the U.S. Environmental Protection Agency (EPA), Environment Canada (EC), state and provincial agencies, or academic institutions. They are appointed by the IJC and provide most of the Commission's technical expertise.

Public participation in the IJC has strengthened significantly in recent years. The BWT itself provides for public involvement in the IJC's decisionmaking processes, under Article XII providing a right for all interested parties to be given a convenient opportunity to be heard.<sup>43</sup> The IJC's Rules of Procedure, adopted in 1912 and revised in 1964, outline the requirements for public notice when the IJC is considering a matter, for the public to submit comments, for holding public hearings, and for public access to IJC reports and other documents.<sup>44</sup> In particular, the IJC's Biennial meeting under GLWQA has, for most of a decade now, had significant public participation.

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<sup>41</sup> This consists of a U.S. section contribution of U.S. \$3.55 million for fiscal year 95 and a Canadian section of Canadian \$4.438 million for fiscal year 96.

<sup>42</sup> There are currently 22 IJC boards, councils, and task forces. Ten of these are Boards of Control which govern use of water in specific areas. The others are: Accredited Officers for the Apportionment of Waters of the St. Lawrence River, Advisory Board on Pollution Control-St. Croix River, Air Quality Advisory Board, Council of Great Lakes Research Managers, Flathead River International Study Board (inactive), Great Lakes Levels Reference Study (inactive), Great Lakes Science Advisory Board, Great Lakes Water Quality Board, Rainy River Water Pollution Control Board, Souris-Red Rivers Engineering Board, and Virtual Elimination Task Force (inactive).

<sup>43</sup> Boundary Waters Treaty, Article XII.

<sup>44</sup> All the IJC's records of hearings, arguments, applications, references, and statements in response and reply public documents, as well as any decisions, orders, and formal opinions of the IJC.

More recently, the IJC has made an effort to open up its board meetings and task forces for public participation. The Commission's Public Information Policy and Procedures of February 12, 1992, also direct "Boards, councils and task forces...to convene, at least once a year, a public meeting to report on their work and to receive the views of the public."<sup>45</sup> As of January 23, 1995, however, only five or six of 19 active boards were holding annual public meetings.<sup>46</sup> During 1995, the IJC is gathering information about which boards, councils, and task forces have held public meetings, the results of the meetings that have been held, and the reasons why not all boards, councils, and task forces have held public meetings.

## **B. Powers of the IJC under the Boundary Waters Treaty**

The IJC has three main powers under the Treaty. Article VIII gives the IJC the power to adjudicate applications for the use, obstruction, or diversion of waters that flow along or across the boundary, if such uses affect the natural levels and flows on the other side. Under Article IX the Parties may refer "questions or matters of difference" to the IJC, which is to examine them and report its conclusions on the matters referred. Article X confers a third power on the IJC to conduct binding arbitration on matters of difference submitted by the Parties, but no matters for arbitration have ever been submitted by the Parties.

Before 1950, references under Article IX made up only one-third of the IJC's 60 cases; the remainder of its work was on Article VIII applications. As shared water bodies became fully utilized, the number of applications waned, and references grew to approximately one-half of the IJC's caseload during the 1950s and 1960s; during the 1970s, the IJC received fifteen references and only four applications. GLWQA and its 1978 Amendments were both references to the IJC. Since that time, however, only three references have been brought to the IJC: the Flathead River Reference in 1985, the Great Lake Levels Reference in 1986, and a provision in the Canada/United States Air Quality Agreement of 1991 dealing with public hearings. Although new applications have not been filed recently, several existing orders of approval are being reviewed by the Boards of Control for possible re-allocation of water use rights.

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<sup>45</sup> International Joint Commission, Guidance on Annual Board Public Meetings, January 23, 1995. The Draft Statement "Special Meetings of Boards with the Public" was produced by the IJC in 1990. Some boards are exempt from the requirement, including inactive Boards, boards which are appointed by the Parties rather than the IJC Air Quality Advisory board due to the geographic scope of its mandate and the broad nature of the issues that addresses.

<sup>46</sup> IJC Memorandum from E.A. Bailey to Commissioners, "Guidance for Annual Board Public Meetings," 23, 1995.



## 1. Applications

Article VIII of the Treaty provides for the Parties or other members of the affected public to submit applications to the IJC for obstructions, uses, or diversions of water that affect the natural level or flow of water across the U.S.-Canada border, and empowers the IJC to approve or deny such applications. The Commission may make its approval conditional upon the construction of protective or remedial works to mitigate or compensate for negative impacts of the project. The Commission may also require that provision be made for indemnity against injury of interest on either side of the border.

Upon receipt of an application, the IJC generally creates a Board of Control for the geographic region involved, or refers the application to an existing Board of Control.<sup>47</sup> The Board studying the application makes recommendations to the Commissioners, who make the final decision whether to approve or deny the application. Boards of Control are typically created in perpetuity to monitor the project. Final IJC orders of approval on applications usually include conditions which must be met by the applicant, such as minimum water levels and flows that must be maintained.

Members of the Boards of Control are chosen by the IJC based, in large part, on their access to data needed to monitor the approved uses.<sup>48</sup> If any Board member, in reviewing data, finds that the applicant is failing to meet a condition of approval, that member alerts other members of the Board about the problem.

The Board may inform the applicant and/or advise the IJC as it deems necessary. The process for dealing with failure to meet conditions of approval or other problems is informal, and there is open, on-going communication among applicants, Boards of Control,

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<sup>47</sup> Currently, there are Boards of Control created by applications for the following regions: St. Croix River, Lake, St. Lawrence River, Niagara, Lake Superior, Kootenay Lake, Columbia River, and Osoyoos Lake. In addition to these Boards of Control created because of applications, the Souris River Board of Control was created by a treaty and the International Lake of the Woods Board of Control was established by the Lake of the Woods Convention between U.S. and Canada. Although the latter Board is appointed directly by the U.S. and Canadian governments, it reports to the IJC.

<sup>48</sup> All Boards of Control have members representing the U.S. Army Corps of Engineers and Environment Canada. Additional members are affiliated with other government agencies, including the U.S. Geological Survey, New York Power Authority, the New York Department of Environmental Conservation, Washington State Parks and Recreation Commission, Transport Canada, the Quebec Ministry of Environment, Ontario Hydro, the British Columbia Ministry of Environment and Parks, and the St. Lawrence/Eastern Ontario Commission. Only the International St. Lawrence Board includes a citizen appointed to represent the public.

and the IJC. The failure of an applicant to meet conditions of approval has sometimes led to supplementary orders or temporary modifications of the existing orders. Boards may initiate their own reviews of approved applications upon learning about policy changes or events that may change the adequacy of the conditions for approval.

Notice of an application is published in the Canada Gazette and the U.S. Federal Register and in a newspaper of each country, once each week for three successive weeks. Any interested person, except the applicant, may present a statement in response to the IJC. The applicant and/or the government which transmitted the application may respond to such statements with statements in reply.

A hearing must also be held by the IJC for each application. The Chairs of the Commission set the time and place of the hearing or hearings on an application. Information on the hearing is published in the same manner as the notice of the application. All hearings are open to the public. All interested governments and persons are entitled to be heard in person or by counsel at any hearing on the application held by the IJC. However, participants in these proceedings are responsible for paying their own expenses.

Any person can write to the IJC and request a review of an application and the conditions of its approval. The process of handling such requests is informal. The IJC may consult with the appropriate Board of Control and/or the applicant and may decide whether to hold a public hearing. The Commissioners can choose to modify the conditions of approval in response to such a request if they deem such modifications appropriate.

## 2. References

Under Article IX of the Treaty, the IJC's other primary function is to "examine into and report upon the facts and circumstances of the particular questions and matters referred" to it by the U.S. and Canadian governments.<sup>49</sup> This reference authority has been broadly used by the Parties throughout this century to authorize the IJC to investigate water quality and other environmental issues.

In conducting investigations under a reference, the IJC generally appoints a board of experts consisting of an equal number of people from each country to investigate the question and make recommendations to the IJC and the Parties. These expert investigators then submit a report of their findings and recommendations to the IJC; the report is then published and released to the public.

Once the investigative reports are made public, the IJC holds public hearings in which interested citizens and governments may participate. Notice of the reference is published in the Canada Gazette and U.S. Federal Register, and a newspaper in each country. After

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<sup>49</sup> Boundary Waters Treaty, Article IX.

the public hearing is completed, the IJC collates all of the evidence and data and prepares its own conclusions and recommendations to present to the two Parties, who are then free to adopt or ignore any of the IJC's recommendations. On the other hand, while the Investigating Board's report pursuant to a reference is almost automatically made public, the IJC's final report of its recommendations regarding the reference is only made public at the discretion of the Parties to whom the report is presented.<sup>50</sup>

### 3. The Great Lakes Water Quality Agreement

The Great Lakes Water Quality Agreement of 1972, itself a reference to the IJC,<sup>51</sup> creates significant ongoing responsibilities for the IJC that require separate discussion. Indeed, activities under GLWQA dealing with the Great Lakes now make up the preponderance of IJC functions. The Agreement was signed by the U.S. and Canada in 1972, and assigned significant responsibilities to the IJC with regard to assisting the Parties in research on the Great Lakes, as well as monitoring and assessing the Parties' progress towards achieving water quality objectives. It established the Great Lakes Water Quality Board and the Great Lakes Science Advisory Board to advise the IJC, as well as an IJC office in Windsor, Ontario. GLWQA was significantly amended in 1978 to place a greater emphasis on reducing toxic air and water pollution and on adopting an ecosystem approach to managing the Great Lakes basin. In 1987, GLWQA was modified again by a Protocol which did not change many substantive aspects but resulted in the transfer of many of the roles previously assigned to the IJC and its Boards back to the Parties and their federal, state, and provincial agencies.

A major component of the 1987 Protocol is its Annex II, which requires that the Parties and local jurisdictions adopt Remedial Action Plans (RAPs) and Lakewide Management Plans (LAMPs). RAPs are designed to address problems in degraded local areas of the Great Lakes designated as Areas of Concern (AOCs). There are 23 AOCs where beneficial water uses have been impaired due to changes in the chemical, physical, or biological integrity of the Great Lakes system. LAMPs for each of the Great Lakes are designed to reduce loadings of critical pollutants and prevent degradation of relatively clean areas. The IJC reviews and comments on all RAPs and LAMPs and recommends additional critical pollutants, as well as additional AOCs for designation by the Parties. Also central to Annex II are mandates that the federal, state and provincial jurisdictions all take a "systematic and comprehensive ecosystem approach" to protection of the Great Lakes and "ensure that the public is consulted in all actions undertaken pursuant to this Annex."<sup>52</sup>

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<sup>50</sup> Boundary Waters Treaty, Rules of Procedure, Rule 11. The IJC's reference powers are described infra, S III.B.

<sup>51</sup> GLWQA, Article VII.

<sup>52</sup> GLWQA, Annex 2 (2)(a).

GLWQA requires the Parties to report biennially to the IJC on their progress in developing and implementing RAPs and LAMPs.<sup>53</sup> The IJC is to use that information in producing its biennial reports, required under Article VII of GLWQA. IJC's biennial reports must include an analysis of the Parties' progress toward the achievement of GLWQA objectives, an assessment of the effectiveness of the Parties' programs and other measures undertaken pursuant to the Agreement, as well as the IJC's advice and recommendations. Article VII of GLWQA also gives the IJC the power to conduct public hearings whenever it deems necessary. It has become standard practice of the IJC to hold biennial meetings, open to the public, to receive public comment before producing its biennial reports. The biennial report and its associated public meetings have assumed considerable importance.

Article VII further gives the IJC broad powers to assist the Parties and the state and provincial jurisdictions in implementing GLWQA. The IJC may collate, analyze, and disseminate data and information relating to water quality and the effectiveness of the Parties' programs and other measures pursuant to GLWQA; make recommendations concerning standard-setting and other regulatory requirements; assist the Parties in coordinating their activities; advise the Parties on research needs; verify independently the data and information submitted by the Parties, states and province;<sup>54</sup> and provide technical assistance and public information.

GLWQA created the Water Quality Board (WQB) and the Science Advisory Board (SAB) to help the IJC carry out its responsibilities under the Agreement. At the direction of the IJC, the WQB is authorized to gather and evaluate information derived from programs developed by the Parties to achieve the purposes of the Agreement, identify deficiencies in the scope and funding of such programs, evaluate the adequacy and compatibility of results, examine the appropriateness of such programs in light of present and future socio-economic imperatives, advise the Commission on the progress and effectiveness of such programs, and submit appropriate recommendations. The WQB is responsible for coordination between the institutions established under GLWQA and other agencies which address concerns relevant to the Great Lakes basin to ensure a comprehensive and coordinated approach to planning for, and resolving, current and anticipated problems.<sup>55</sup>

The SAB provides assistance in, and advice on, IJC matters related to research in the Great Lakes. Its responsibilities include identifying objectives for research activities, making

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<sup>53</sup> GLWQA, Annex 2 (2)(e).

<sup>54</sup> The IJC's ability to verify data independently is potentially quite powerful, yet the IJC has never used it. authority can be especially important for the IJC to become more effective in monitoring the Parties' progress achieving the goals of GLWQA.

<sup>55</sup> GLWQA, Terms of Reference for the Joint Institutions and the Great Lakes Regional Office, 1(b) and 1(c)

recommendations to the IJC, the Parties, and the state and provincial jurisdictions concerning research needed, and disseminating information on relevant research to interested persons and agencies. The SAB currently is divided into three subcommittees corresponding to its three priorities: Parties' Implementation, Ecosystem Health, and Emerging Issues.

In 1984, the IJC also created the Council of Great Lakes Research Managers (the Council) to monitor Great Lakes-related research, leaving the SAB to focus more on technical and scientific issues and developing recommendations to the IJC for policy changes. The Council originally reported to the Commission through the Co-chairs of the SAB; but it now reports directly to the IJC, just like the SAB and WQB.

Members of the WQB, the SAB, and the Council are all appointed by the IJC after being recommended by the Parties. Few requirements have been established for selecting members of the two Boards and the Council. The WQB is "composed of an equal number of members from Canada and the United States, including representatives from the Parties and each of the State and Provincial Governments."<sup>56</sup> The SAB is made up of "managers of Great Lakes research programs and recognized experts on Great Lakes water quality problems and related fields."<sup>57</sup> The Council is composed of "persons responsible for research programs related to the implementation of the GLWQA, and in addition, two members of the SAB."<sup>58</sup>

The public is not represented on the WQB or the Council, and it is unevenly represented on the other IJC boards. The IJC has never appointed a citizen representative to the WQB. Although public members would be permitted under GLWQA, only representatives of governmental agencies have been appointed to the WQB. The SAB has traditionally been drawn from university scientists, but it currently also has members from industry and from the public, including both an environmental activist from the Canadian Environmental Law Association and the only Native American appointed to an IJC Board. The IJC has chosen Council members from technical institutions such as the Great Lakes Protection Fund, the Great Lakes Research Managers Consortium, the Great Lakes Institute of the University of Windsor, Sea Grant College Programs, the Wastewater Technology Center, and government officials.

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<sup>56</sup> GLWQA, Article VIII(1)(a).

<sup>57</sup> GLWQA, Article VIII(1)(b).

<sup>58</sup> International Joint Commission, "Council of Great Lakes Research Managers Terms of Reference," Draft Lakes Water Quality Agreement Directory for Agreement Institutions (March 1993).

### C. Evolution of the IJC's Activities

GLWQA and its 1978 Amendments gave the IJC significant responsibilities to develop and coordinate assessments of Great Lakes cleanup efforts. The IJC initially formed many technical subgroups of the WQB to address specific basinwide issues, and the WQB's annual report formerly provided an authoritative statement of the state of conditions in the lakes.

In recent years, however, the structure and focus of the IJC's work under the GLWQA has changed significantly. The 1987 Protocol set out detailed requirements for direct action by the Parties themselves and relegated to the IJC primarily the role of reviewing and reporting on the Parties' programs. The Protocol also had the result of transferring directly to the Parties many IJC roles and responsibilities formerly carried out by the WQB, including coordination of data collection, reporting on annual loadings and sources of pollutants, and collecting long-term data on contaminants. Since the early 1970s, the WQB had performed this work through an elaborate structure of technical subgroups, which involved scientists and managers from water quality agencies in both countries.<sup>59</sup>

Elimination of these WQB's subgroups and its annual reports on the state of the lakes has eroded both the information base for the IJC to recommend standards, and the opportunity for it to serve as a convening body. The subgroups had provided coordination among the state, provincial, and federal agencies on specific basinwide issues. As a practical matter, the loss of the subgroups lessens the contact between the IJC and these agencies, leaving the various institutions to go their own ways with less coordination of their activities.<sup>60</sup>

In late 1990 and early 1991, the IJC convened a roles and priorities task force to evaluate its reviewing and reporting functions. The task force included the chairs of the IJC's Boards, the Director of IJC's Regional Office, and the IJC's Secretaries, as well as others. The federal agencies believed that the IJC's work was product-oriented instead of advisory in nature and was duplicative of federal-state functions. In addition, the IJC had received complaints that the subgroups of the WQB responsible for evaluating government programs were staffed by the same government officials who were responsible for implementing the programs; therefore, they were unlikely to evaluate critically their own programs and expose their own agencies' shortcomings. As a result of this task force's review, together with

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<sup>59</sup> Michael Gilbertson, "New Commission Priorities for the Great Lakes Water Quality Board," Focus on In Joint Commission Activities, Vol. 17, Issue 2 (July/August 1992), p. 3.

<sup>60</sup> But see National Research Council of the U.S. and the Royal Society of Canada, The Great Lakes Water Agreement: An Evolving Instrument for Ecosystem Management (1985) concluding that IJC was too closely i coordination between the Parties resulting in a decrease in its independence.

decisions of EPA and Environment Canada to remove their representatives from the WQB subgroups, the structure of technical subgroups was dissolved.

The WQB's yearly evaluation of the state of the Great Lakes through its annual reports to the Commission was another responsibility transferred to the Parties in 1991. While most observers agree that the WQB's state of the lakes reports were not as comprehensive as they should have been, the Parties did not produce their first report until they held the State of the Lakes Ecosystem Conference (SOLEC) in 1994. Participation in the conference was by invitation from the SOLEC Steering Committee; and attendees were primarily officials from EPA and Environment Canada, plus representatives of government agencies, IJC, the Great Lakes Commission, the Council of Great Lakes Governors, industries, and universities. The Parties plan for SOLEC to be a biennial technical conference. Although originally intended to overlap with the IJC biennial meeting, SOLEC will now be held on alternate years to the IJC biennial meetings, which are open to the public. Some observers believe that SOLEC may reduce the importance of the IJC's biennial meetings, which will become less technical and will primarily serve as a forum for expressing public opinion.

In 1990, the U.S. Congress passed the Great Lakes Critical Programs Act (GLCPA),<sup>61</sup> which amended section 118 of the Clean Water Act. The purpose of the GLCPA is to "achieve the goals embodied in the [GLWQA]...through improved organization and definition of mission on the part of the [EPA], funding of State grants for pollution control in the Great Lakes area, and improved accountability for implementation."<sup>62</sup> The GLCPA provides statutory authority for the Great Lakes National Program Office of the EPA, sets deadlines for RAPs and LAMPs, requires EPA to produce a yearly report on the status of U.S. programs relating to the Great Lakes, establishes a Great Lakes Research Office within NOAA, and authorizes federal funding for the programs of the Great Lakes.<sup>63</sup> GLCPA also establishes the Great Lakes Initiative, which seeks to create minimum water quality standards for the Lake states to control bioaccumulative toxins in the Great Lakes. This initiative has produced extensive debate on these standards, which were finalized by EPA in March 1995.<sup>64</sup>

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<sup>61</sup> 33 U.S.C.A. §1268.

<sup>62</sup> 33 U.S.C.A. §1268(a)(2).

<sup>63</sup> "There are authorized to be appropriated to the Administrator to carry out this section not exceed \$11,000 fiscal year for the fiscal years 1987, 1988, 1989, and 1990, and \$25,000,000 for fiscal year 1991." 33 U.S.C.A.

<sup>64</sup> The final GLCPA regulations are a mix of guidelines and mandatory requirements. 60 Fed. Reg. 15366 (1995). U.S. EPA estimates the annual costs of compliance at \$500 million annually. "Great Lakes Guidance on List of Regulations Congressman Wants Stopped," Environment Reporter (March 24, 1995), p. 2243. The regulations again set off storm of complaints from industry and state groups who indicated the initiative's increased requirements could cost up to \$2.7 billion in a year, far exceeding EPA's estimate. An earlier report prepared by municipalities in response to EPA's proposed initiative in April 1993, found that the overall costs of the propo

(continued...)

Since passage of the 1987 Protocol and the GLCPA, the EPA has played an increasing role in Great Lakes matters, especially in setting pollution standards under the Great Lakes Initiative. Although U.S. Commissioners of the IJC testified before Congress in support of the Great Lakes Initiative, the IJC did not play a major role in the ensuing debate over priorities and legal standards. By such inaction, the IJC is becoming increasingly irrelevant to the major issues and statutes dealing with pollution control in the Great Lakes.<sup>65</sup> The IJC could assert a more proactive stance and lend its prestige to the debate on these major issues.<sup>66</sup>

In Canada, the 1994 Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem sets out the respective duties of the Canadian federal and Ontario provincial governments with respect to the Great Lakes. Due to Canada's constitutional division of powers over the environment, Environment Canada is not able to fulfill all of its responsibilities under the BWT without the assistance of Ontario's provincial agencies. Within Environment Canada, the Ontario Region is charged with Great Lakes responsibilities for Canada. This agreement reflects some of the IJC's recommendations.<sup>67</sup>

The IJC's role in public information is also changing. The IJC has handled thousands of information requests each year and has compiled a Directory of Great Lakes Information Materials, which identifies information from a variety of sources. A Great Lakes

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<sup>64</sup>(...continued)

Great Lakes region could exceed \$5 billion. "Report Cites Excessive Costs for EPA Great Lakes Initiative," IJC (January 13, 1995), p. 5. In July of this year, businesses and municipalities filed lawsuits in federal court opposing GLI. "Walikons file suit over Great Lakes Water Quality Initiative," EHS Management (July 17, 1995), p. 4. They argue GLI should consist of guidance rather than regulations.

<sup>65</sup> It should be noted, however, that a number of policy initiatives have been adopted during the last few years by the province of Ontario and the Canadian federal government in response to the IJC's recommendations regarding toxic substances and the phase-out of chlorine. For example, in October of 1993 the Ministry of Environment and Energy in Ontario published a list of Candidate Substances for Bans, Phase-Outs or Reductions, which provided the basic list of substances targeted in the 1994 Canada-Ontario Agreement. Also, the Canadian federal government announced a "Chlorine Action Plan" in October of 1994 in response to the IJC's recommendations. This plan proposes to place priority and bioaccumulative substances on a "fast track" for virtual elimination.

<sup>66</sup> See Chapter IV, infra, for a discussion of this recommendation.

<sup>67</sup> International Joint Commission, Sixth Biennial Report on Great Lakes Water Quality (1992), pp. 57-58.



Information Clearinghouse is now being set up in Buffalo, to be run with private funding. This organization will take over some of the public information responsibilities of the IJC.

#### **D. Conclusion**

IJC has significant continuing responsibilities under GLWQA although its role is shifting from hands-on research and coordination to an evaluation and monitoring role. Outside the Great Lakes, numerous references and applications have resulted in ongoing duties for the IJC in specific areas. Boards of Control continue to report on compliance with IJC orders approving applications, and a number of water pollution boards created in response to references continue to be responsible for conducting monitoring and surveillance duties. For example, as a result of a 1961 reference and request that the IJC maintain surveillance over water quality, the IJC formed the International Advisory Board on Pollution Control for the St. Croix River. Similarly, the International Rainy River Water Pollution Board and the International Red River Pollution Board were established to carry out surveillance activities and to monitor compliance with water quality objectives. Finally, the IJC established the International Air Quality Advisory Board in 1966 in response to a reference requesting it to monitor potential air pollution problems in boundary areas.<sup>68</sup>

Nevertheless, the IJC's authority over boundary watersheds and its responsibility for protecting shared environmental resources have changed significantly with the passage of time. Its ability to set its own priorities is greatly restricted by its dependence upon the Parties to bring references or applications. And even when the IJC has been assigned more comprehensive tasks, like those provided under GLWQA, it remains subject to the Parties' control as evidenced when the 1987 Protocol reassigned many of the IJC's roles directly to the federal agencies. Thus, it has been very difficult for the IJC to continue to be effective in the management and protection of border ecosystems and protecting shared water resources. As detailed in Chapter IV the effectiveness of the IJC can only be restored if it is able to integrate these on-going duties into an overall framework of responsibility for monitoring conditions in all the boundary watersheds, for evaluating the Parties' actions to protect those shared resources, and for reporting on their progress. For the IJC to succeed in these missions, the Parties must also decide to give greater authority and credence to the IJC, as outlined in Chapter V.

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<sup>68</sup> International Joint Commission, International Joint Commission Activities 1987-1988.

## CHAPTER IV

### RECOMMENDATIONS FOR IMPROVING THE EFFECTIVENESS OF THE IJC

#### A. Introduction

The IJC's roles under the Boundary Waters Treaty and GLWQA have evolved in significant ways. These changes reflect more than the shifts in the IJC's relationship with the Parties. They also reflect changes within both countries, in relationships between the Parties, and in the social and environmental conditions of the Great Lakes basin and other boundary ecosystems. In order for the IJC to continue to be effective in carrying out its responsibilities under both the Boundary Waters Treaty and GLWQA, and to prevent the further erosion of its responsibilities, the IJC needs to adapt to these changes and to reassess its priorities.

Above all of these considerations, however, the IJC can only reflect the Parties' will. The IJC operates within the limited authorities provided to it by the Parties under the Treaty and GLWQA. It is dependent upon the Parties for both funding and jurisdiction, and the Parties must implement its recommendations because the IJC lacks any enforcement authority over water quality problems. The Parties considered and rejected that option in 1920. Although some still argue for a greater IJC role in enforcement, most observers today agree that the IJC can be most effective instead by exercising leadership to define goals for the protection of shared water resources, and to monitor and evaluate the Parties' progress towards these goals. Under GLWQA, the IJC may also facilitate cooperation and promote dialogue on boundary water issues, operating as a neutral, objective body. Even in these roles, the IJC remains a creature of the Parties' will. The Parties control the IJC's budget and, as their reliance on the IJC has declined, their combined funding has decreased.<sup>69</sup> In addition, they donate the time of their federal agencies' personnel who make up the bulk of the IJC's boards.

ELI finds that the IJC's effectiveness requires a delicate balance of gaining and keeping the Parties' confidence, while at the same time pushing them to take the actions that are necessary to protect shared watersheds. Thus, in order to be effective, the IJC must act within the framework of its expertise and the authorities given to it by the Parties. At the same time, it needs to exert its moral authority by maintaining its reputation for independence and technical expertise and by engaging in much-needed monitoring, evaluation, and outreach activities which will enable it to achieve the goals of both the Treaty and GLWQA. ELI also finds that the IJC may have overstepped the bounds to which it can productively push the Parties to greater action, and as a consequence is suffering a serious lack of engagement and productive use by the Parties.

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<sup>69</sup> Funding for the IJC decreased in 1993 and 1994, then remained constant in 1995. But another decrease in 1996. "International Joint Commission Budget," charts provided by the IJC's office in Washington, D.C.

As one commentator has accurately observed:

When one or both governments do not want to do something to fix a perceived problem along the boundary, it will not get fixed. International commissions can do nothing to alter that basic fact, and any attempts by them to force action outside the limits set by government consensus will fail and likely damage the credibility and thus the usefulness of the organization.<sup>70</sup>

In the U.S., there has been relatively little connection between the major EPA programs to limit pollution in boundary waters under the Clean Air and Clean Water Acts, and actions by the IJC. Canada's failure to support the IJC is reflected in several recent policies issued by Environment Canada. For example, the Environment Canada is going in the opposite direction of the IJC in the phaseout of specific chemicals, and has adopted the industry position of voluntary agreements and limiting pollution prevention to stopping releases and reducing use. The trend seems to be worsening. Environment Canada recently "quietly shelved" Canada's Green Plan Program, resulting in the delay of Great Lakes pollution targets and reductions in persistent toxic pollutants, and the deferral of several studies planned for the Great Lakes Region.<sup>71</sup>

It is important to note that the IJC is not constituted to be a hands-on resource management agency, but is structured more like an impartial, quasi-adjudicatory body designed to address specific cases and discrete issues. Indeed, many of the IJC's most visible successes have been achieved when it has taken on defined tasks pursuant to specific references or directives. Some of these tasks include conducting impartial research, such as the review of land-based pollution sources<sup>72</sup> and lake levels studies.<sup>73</sup> It has also succeeded in helping to resolve contentious water diversion cases such as the High Ross Dam and the Garrison Diversion. Consequently, the IJC encounters difficulties both in exercising ongoing managerial responsibilities, such as the quarterly meetings of the WQB or the SAB which observers have thought poorly organized and lacking in focus, and in integrating their meetings and work products into a coherent program for action.

Ironically, it is precisely in the IJC's ongoing responsibilities under GLWQA that many, especially the environmental community, most value it. The IJC is the only intergovernmental body empowered to articulate goals beyond compliance with current laws,

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<sup>70</sup> David Lemarquand, "The International Joint Commission and Changing Canada-United States Boundary Relations," 61 Nat. Res. J. 59 (Winter 1993), p. 80.

<sup>71</sup> "Canada's Green Plan for Environment Quietly Shelved, Programs Redistributed," International Environ Reporter (May 3, 1995), p. 327.

<sup>72</sup> The International Reference Group on Great Lakes Pollution from Land Use Activities (PLUARG). See IV. C.1, infra.

<sup>73</sup> See Section IV. F, infra.

whereas the Parties' federal agencies themselves cannot easily set goals beyond what they are funded to accomplish. This tension drives an uncomfortable relationship between the IJC and the Parties, especially when the federal agencies must provide most of the support for the IJC's technical expertise. Most observers agree, however, that the IJC's vision in articulating goals for pollution abatement in the Great Lakes has been its greatest contribution in promoting improved environmental conditions.

In the following discussion, ELI presents its recommendations for increasing the effectiveness of the IJC. ELI finds that the IJC should focus on its proactive role in recommending high standards and innovative activities for cleaning up boundary watersheds, together with its role in monitoring the Parties' progress toward meeting those goals. These priorities fit well with its structure and mission in the Great Lakes following the 1987 Protocol, although they may also lead to decreased emphasis on the IJC's coordination activities.

These recommendations are designed, in combination, to address various aspects of the more fundamental difficulties that the IJC faces, which include decreasing interest by the Parties in its activities, a perceived decline in its technical expertise, and a growing politicization of the process for appointing Commissioners.<sup>74</sup> All of ELI's recommendations in this chapter are focused on actions which can be taken by the IJC; the next chapter discusses actions which can be taken by the Parties.

Many of these recommendations may be controversial, and some may be politically impossible to achieve. Nevertheless, ELI's research has shown that changes are definitely needed in order to revitalize the IJC. The increasing complexity of issues confronting the IJC has made it all the more difficult for the IJC to achieve concrete results. In order for the IJC to make progress towards reducing pollution in boundary watersheds, its staff need authority and funding to work proactively with the Parties and their federal, state, and provincial agencies. In addition, the Commissioners themselves need to articulate a coherent, forceful vision for the IJC in managing water resources and protecting environmental quality in both the Great Lakes and other boundary watersheds.

**Recommendation: The IJC should re-evaluate its role and develop a more meaningful approach to its responsibilities through a strategic planning process which involves the public.**

The IJC should undertake a strategic planning process to determine how it can use its authorities under the Boundary Water Treaty and GLWQA to produce more meaningful, concrete results in protecting the environment. All interested stakeholders, including individual citizens, should be involved in this effort, perhaps through a series of meetings in both the Great Lakes basin and the other major boundary ecosystems in the east and

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<sup>74</sup> Other criticisms of the IJC include its failure to address nonpoint sources of pollution, airborne transport pollutants, and biological threats to the Great Lakes (such as intrusions of exotic species).

west. The purpose of this strategic plan would be for the IJC to examine the effectiveness of its current activities and determine whether and how to revise its institutional structure and roles so that it can become increasingly involved with current and future environmental problems in the border area. The need for such a reevaluation of the IJC's roles is all the more apparent since the passage of NAFTA and the establishment of North American Council on Environmental Cooperation (NACEC).<sup>75</sup>

The IJC has attempted to set goals every two years and has required its Boards and staff to make reports and allocate funds based on priorities set by the Planning Priorities Group (PPG). This PPG process has worked poorly, with Commissioners controlling the Boards in setting priorities, which is a departure from the prior process of the Boards making recommendations to the Commissioners. The IJC needs to reevaluate this approach to priority-setting and find a more effective way to focus its staff, funding, and other resources on its two most important roles: recommending goals for cleaning up boundary watersheds and monitoring the Parties' progress toward those goals.

The IJC's new strategic planning process should examine many of the items mentioned in ELI's other recommendations in this report. It should consider whether to involve the public in the process for selecting Commissioners, how to manage and allocate its staff and resources so that they are focused on priority issues, and how to improve the structure and content of the biennial meeting. It should also evaluate whether the IJC can be more actively involved with government agencies at all levels (federal, state, provincial and municipal as well as possibly tribal), whether to adopt mechanisms for improving the breadth and substance of public participation, and possible changes in the membership and mandates of the WQB, SAB, and Boards of Control.

## **B. Institutional Issues**

### **1. Perceived Decrease in the IJC's Expertise**

Given the increasing complexity of environmental problems, the IJC must take steps to shore up its technical expertise in order to be more effective in carrying out all of its responsibilities. The IJC needs to regain its independent technical capacity so that its recommendations will be taken seriously by government agencies, the business community, and environmental groups, all of which have considerable technical expertise themselves.

The IJC's ability to make recommendations and thereby influence the Parties' development of pollution standards depends greatly on its status as a body whose conclusions and recommendations are backed up by substantial technical expertise. Perhaps the most serious factor undermining the IJC's current effectiveness in its principal role, that of recommending standards and monitoring water quality, has been the perceived diminution of its technical expertise. Observers believe that the IJC's expertise has been decreasing for several reasons. First, the IJC has fewer human resources. It can no longer call on the

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<sup>75</sup> See section V.A, infra.

subgroups of the WQB, which had previously given it bottom-up expertise. Second, because the IJC's own budget has been flat-lined, the IJC has less ability to conduct and coordinate research using its own independent staff.<sup>76</sup>

In the eyes of many people, the disbanding of the WQB subgroups was a serious blow to the IJC's technical expertise. Although perceived as a waste of time and diversion of staff resources by U.S. EPA and Environment Canada, the subgroups were widely appreciated by the technical staffs working on Great Lakes water quality problems, especially at state and provincial levels. State and provincial agency representatives preferred the more neutral WQB subgroups to similar working groups now convened directly by U.S. EPA and Environment Canada. Elimination of these technical subgroups was perhaps an inevitable consequence of the 1987 Protocol. However, the loss of the groups' expertise and their work product, such as their annual reports on the state of the lakes, has left a void which still has not been filled.

Another factor which leads indirectly to the IJC's perceived loss of technical expertise is the increasingly political process of selecting Commissioners in both countries. Although capable people may be chosen, Commissioners often lack technical experience or substantive standing in the Great Lakes community and spend the first years of their tenure developing their credibility. As a result, they also tend to delegate more work to IJC staff, which is less and less able to conduct independent research and, in turn, contributes further to the perceived decline of the IJC's own technical competence.

Perhaps the single most important recent action of the IJC relating to perception of its technical expertise was its decision to recommend the phaseout of organochlorides. Building on the Science Advisory Board's recommendation to eliminate certain classes of these substances, the IJC took the further step in its sixth biennial report of recommending the elimination of all organochlorides. This recommendation was based in part on studies linking such chemicals to human reproductive failure and the negative health effects caused by virtually all organochlorides.<sup>77</sup>

The IJC's recommendation to phase out organochlorides has been intensely criticized by the business community as being expensive and impractical given the pervasive use of chlorine in modern industrial processes. On the other hand, environmental leaders, who are frustrated by the Parties' failure to achieve virtual elimination of any priority chemicals listed under the GLWQA, have welcomed the recommendation.

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<sup>76</sup> At the time of this writing, the U.S. and Canadian staff of the IJC expect that both of the Parties' budgets will decline by several hundred thousand dollars for the 1996 fiscal year.

<sup>77</sup> IJC Commissioners argued that "ecosystems have no acceptable assimilative capacity for persistent bioaccumulative. Toxic substances . . . and should not be released into the environment at any levels." Corpo Environmental Strategy (Autumn 1994), p. 30.

The IJC's recommendation firmly placed it in an advocacy role because it calls for a change that goes beyond current pollution control standards and any consensus in the technical literature. The IJC must carefully examine its role in this instance. On one hand, its chlorine statement is quite visionary; certain studies, which originated in the Great Lakes, now link organochlorides, and particularly DDT, to a sharp global decline in male fertility.<sup>78</sup> On the other hand, the recommendation would require such significant changes in the water quality standards in both countries that it has been strongly criticized by some government regulators and the business community. Yet both groups are necessary partners of the IJC in protecting the region's shared ecosystems and in reaching the goals of the GLWQA. The IJC's effectiveness depends on their continued willingness to help implement its recommendations.

**Recommendation: Strengthen the technical capacity of IJC Staff and Boards.**

This change will involve both strengthening the technical capabilities of the IJC's independent staff and improving working relationships with the Parties, states and provinces so that the work of IJC boards gains a higher profile and importance. Strengthening the technical expertise of the IJC's own staff is important because, during the past decade and a half, the Parties have had a tendency to appoint Commissioners who do not have technical training or substantive expertise related to the problems facing the IJC.

Many of the IJC's staff have served in their positions for a decade or more, which creates both valuable institutional knowledge, but also leads to a lack of changing perspectives. The IJC should adopt programs, such as temporary assignments of industry or environmental experts, to inject fresh attitudes and expertise into its own staff. Also, the IJC might work cooperatively with industry and environmental group experts to conduct research projects, thereby increasing its credibility with both groups.

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<sup>78</sup> The Clinton Administration has followed the IJC's lead and called for a study of ways to substitute, reduce or prohibit the use of chlorine and chlorinated compounds; and a bill has been introduced into Congress to amend the Clean Water Act to achieve zero discharge of organochlorine compounds. Chlorine Zero Discharge Act of 1995, H.R. 104th Congress. A mandatory review of Canadian federal law that regulates toxic substances produced It's All About Health! Towards Pollution Prevention. There, the House of Commons Standing Committee on Environment and Sustainable Development recommended to Parliament in June 1995 that the Canadian Environmental Protection Act (CEPA) should ban or sunset all persistent, bioaccumulative and toxic substances. "Review of Environmental Protection Act Urges Tougher Rules on Toxic Substances," International Environment Reporter (June 28, 1995), p. 505. There have also been international calls for the phase out of organochlorine compounds. See "Group Petitions to Nations for Phase-out of Organochlorines," International Environment Reporter (June 14, 1995), p. 452.

By appointing stronger staff and establishing a better system of performance appraisals that are targeted at measuring the success of the IJC's staff in carrying out the highest priority responsibilities of the Commission, the IJC may be able to create a more effective staff.<sup>79</sup> Some observers have mentioned that the IJC's staff formerly included more scientists who were well-known in their particular areas of expertise. The IJC should continue to use its international prestige as a selling point to attract additional, experienced staff, perhaps on details or secondments from other agencies, environmental groups or industry.

As described below, the IJC also can build its technical capacity by better integrating the work of the WQB with the Commission's overall programs and recommendations so that the WQB is more focused on monitoring the Parties' progress in achieving the goals of the GLWQA. The activities of the SAB then need to be reevaluated if the WQB serves new functions. For example, the SAB now has a subcommittee to review the Parties' progress, which may overlap new monitoring functions of the WQB. The functions both Boards also should be integrated with those of the Great Lakes Board of Research Managers, which has already taken over some of the SAB's functions under GLWQA.

## 2. The IJC's Prestige and Binational Character

Two factors that contribute greatly to the IJC's effectiveness in all of its roles under the Boundary Waters Treaty and GLWQA are its prestige and binational character. IJC Commissioners are appointed by the President in the U.S. and the Governor-in-Council in Canada and are under the jurisdiction of the U.S. Secretary of State and Canada's Minister of Foreign Affairs, not the two federal pollution control agencies.<sup>80</sup> These political connections give the IJC a certain prestige and independence when dealing with the Parties' federal, state, and provincial agencies.

### **Recommendation: The IJC should endeavor to strengthen its binational character.**

The IJC's prestige and binational nature add to its ability to exercise moral authority in recommending standards and actions needed by the Parties. Because it is a neutral body, the IJC can act on the facts and not be pushed to adopt a lowest common denominator. Also, because it is independent, it is not necessarily constrained by budget realities which otherwise make it difficult for government agencies to set goals for controlling pollution

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<sup>79</sup> One obstacle to the IJC exercising more control over its staff is the constraint that the civil service system countries place upon its ability to obtain changes in the staff who are assigned to the Commission. Thus, some have noted the possibility that the Parties may have assigned less effective staff to IJC boards, which it can do to prevent.

<sup>80</sup> Boundary Waters Treaty, Article VII.



beyond levels that they are funded to accomplish. The IJC's independence from both countries enables it to look at the "big picture," one of its greatest assets in protecting all of the boundary ecosystems. Such independence also allows the IJC to establish a vision for the Parties to work toward integrated and sustainable development in the future.

The IJC's ability to act as a unified, binational body, however, has eroded in recent years. Until the 1980s, Commissioners would not formally meet without both countries being represented. But now the national sections of the IJC meet separately, which has produced an inevitable politicization of the IJC's agenda into separate viewpoints for the two countries. One of its chief strengths in the past has been its binational character, and the IJC should take greater efforts to ensure that the presidents of both countries publicly recognize value. The IJC also should take steps to preserve or increase its binational character, and prevent the continued politicization of its agenda.<sup>81</sup>

### **C. Water Quality Issues**

#### **1. History of the IJC's Role**

Over the years, the IJC has dealt with a number of important references regarding pollution in the Great Lakes and other boundary waters under Article VIII of the Boundary Waters Treaty.<sup>82</sup> As early as 1912, the IJC received its first reference regarding pollution. As a result, in 1918 the IJC recommended that it be given the power to "regulate and prohibit" the pollution of boundary waters. The Parties apparently accepted this recommendation because they requested that the IJC prepare a draft treaty that would give them such powers.<sup>83</sup>

In 1920 the IJC presented to Canada and the U.S. its draft treaty, which would have conferred jurisdiction upon the IJC independently to "investigate and determine whether any party was responsible for the pollution of the boundary waters."<sup>84</sup> The draft treaty provided that if any violations were discovered by the IJC, the governments of Canada and the U.S.

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<sup>81</sup> See Chapter V, section B, infra, for additional recommendations for actions by the Parties to enhance the prestige and binational character.

<sup>82</sup> See section III.B.2., supra, for a description of the IJC's reference authority under Article IX of the Boundary Waters Treaty.

<sup>83</sup> Carl E. Esterhay, "Restoring the Water Quality of the Great Lakes: The Joint Commitment of Canada and U.S.," 4 CAN-US L.J. 208 (1981), p. 217, citing IJC Files Docket No. 4-5-1:1 (1918).

<sup>84</sup> Ibid.

would have been obliged to prosecute.<sup>85</sup> This IJC control over the prosecutorial discretion of the Parties was, not surprisingly, rejected by the Parties.<sup>86</sup> Indeed, the Parties have never given the IJC enforcement authority over boundary water pollution matters, leaving those a matters to be handled by the pollution control agencies of the two countries.

In 1946 and 1948, the Parties submitted pollution references to the IJC focusing on the connecting channels of Lakes Superior, Huron, Erie and Ontario.<sup>87</sup> In its 1950 report, the IJC stated that the water quality of the Detroit and Niagara rivers was deteriorating due to the continuing discharge of domestic sewage and industrial waste. The IJC recommended that the Parties adopt minimum water quality objectives for the connecting channels of the Great Lakes and further recommended that it be given the power to continue to supervise the water quality of these boundary waters. The same report recommended a preparation of minimum standards designed to protect the water quality in the connecting channels. The Parties adopted the IJC's recommendations, and recommending water quality standards has continued to be one of the IJC's major functions.<sup>88</sup>

The IJC has also performed a monitoring role under these references by establishing two Advisory Boards to survey and monitor water quality in the Great Lakes' connecting channels. This monitoring power is enhanced by the IJC's power to notify offending polluters of any contravention of the minimum water quality standards for the channels. If the responsible party does not correct any transgressions, the IJC is empowered to recommend enforcement action to the appropriate government.<sup>89</sup>

During the mid-1960s, the public became increasingly concerned about the water quality of the Great Lakes, particularly the eutrophication of Lake Erie. Influenced by this concern, the Parties filed a reference in 1964 focusing on the water quality of the lower Great Lakes, Erie and Ontario, and the international section of the St. Lawrence River.<sup>90</sup> The IJC devoted considerable resources to this reference, spending several million dollars over the

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<sup>85</sup> The United States took particular exception to a provision that would have made the IJC's finding of fact conclusive." See Edith Weiss Brown, "New Directions for the Great Lakes Water Quality Agreement: A Con 65 Chicago-Kent L.Rev. 375 (1989), p. 383, fn. 23, citing Draft Convention (October 6, 1920).

<sup>86</sup> Easterhay, supra, p. 217.

<sup>87</sup> International Joint Commission, Docket Nos. 54-55 (1946, 1948).

<sup>88</sup> Esterhay, supra, p. 217.

<sup>89</sup> Ibid., p. 218, citing International Joint Commission, Safeguarding Water Quality (1961).

<sup>90</sup> Ibid., p. 219, citing IJC Files, Docket No. 83 (1964).

course of the five-year investigation. Consultations involved several hundred experts and many different agencies from both countries.<sup>91</sup> After conducting numerous public hearings and submitting three interim reports, the IJC submitted its final report in 1970. This report became the basis for the Parties' signing GLWQA in 1972. The importance of GLWQA in shaping the IJC's current activities is so significant that it is discussed in a separate section of this chapter.<sup>92</sup>

In 1972, the Parties submitted a reference for the IJC to report pollution of the Great Lakes from agricultural, forestry, and other land use activities. In response, the IJC created the International Reference Group on Great Lakes Pollution from Land Use Activities (PLUARG) to study the problem of nonpoint sources of pollution and their effects on the water quality of the Great Lakes, as well as the sediment and biota in the entire basin. PLUARG had extensive public involvement from its inception, resulting in the creation of seventeen formal public consultation panels.<sup>93</sup> In 1976 PLUARG began an extensive public information/participation program that continued until the submission of its final report in 1978. PLUARG and its task forces were partially responsible for developing the new ecosystem approach to managing Great Lakes resources that the IJC endorsed and the Parties incorporated in the 1978 Amendments of GLWQA.

## 2. IJC Involvement in Water Issues Outside the Great Lakes

Unlike the reference that led to GLWQA, the Parties have not given the IJC a general reference to recommend or monitor water quality standards or coordinate research activities for boundary waters outside the Great Lakes. In some cases, however, the Parties have given the IJC the elements of such a role pursuant to a specific reference. Because no new references outside the Great Lakes have been submitted to the IJC since 1985, this IJC role is confined to regions where previous references have created standing IJC boards that are entrusted with the continuing surveillance of water quality standards and cleanup actions by the two countries. Such boards exist for the Rainy River, Red River, St. Croix River, and Niagara Falls.

Where standing boards exist, participants believe that they serve useful functions in coordinating and improving the Parties' pollution abatement efforts for these shared water

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<sup>91</sup> Ibid.

<sup>92</sup> See Section IV.C.3, infra.

<sup>93</sup> The panelists were nominated by the states and provinces and included individuals representing industry, business, farmers, labor, educators, environmentalists, womens' groups, sportsmen and fishermen associations, federations, extension agents, and elected and appointed officials. Mimi Larsen Becker, "The International Joint Commission and Public Participation: Past Experiences, Present Challenges, Future Tasks," 33 Nat. Res. J. 23 p. 247.

bodies. For specific watersheds, Boards of Control have produced dramatic improvements in water quality. Cooperation among governments at all levels has enabled the Boards to push for stricter water quality standards, better monitoring, and other environmental protection goals. The Boards have only recently provided for industry and citizen participation; but it has been very important, especially for smaller watersheds.

For example, the International Rainy River Water Pollution Board, created pursuant to a reference concerning pollution in the 1960's, continues to serve a useful function for restoring water quality in this watershed. The Rainy River flows from Rainy Lake to Lake of the Woods, and thence to Hudson Bay. Two towns, one U.S. and one Canadian on either side of the border, each produced polluted effluents from a major paper pulp plant and sewage treatment facilities. In its report to the Parties in 1965, the IJC recommended the adoption of certain water quality objectives and the creation of an IJC board to maintain surveillance over the river's water quality and to report upon compliance with the objectives. The Parties approved the IJC's recommendations, and the International Rainy River Water Pollution Board was established.

Since the 1970s, the water quality of the Rainy River has dramatically improved, although a many of the changes probably derive from passage of national water quality legislation in both countries.<sup>94</sup> The Board, however, has been a valuable mechanism in the clean-up process, allowing public participation, improving the timing and coordination of actions, and allowing the Parties' actions to be more comprehensive. Because each country's pollution control agency shared tasks and performed them on both sides of the border according to their areas of expertise, they were able to produce real improvements with greater efficiency and at lower cost. The Board also created pressures on local jurisdictions to raise the funds necessary for implementing remedial actions. In Chapter 5, ELI recommends that such Boards be created for all boundary watersheds.

### 3. IJC Roles under GLWQA

The IJC's responsibility under GLWQA for promoting water quality and environmental protection has been its most prominent role in recent years. Leaders of non-governmental groups and federal agencies recognize that the IJC has exerted its moral authority in pushing the Parties and other government agencies towards greater efforts to clean up the Great Lakes.<sup>95</sup> For example, the estimated \$2.5 billion (Canadian dollars) that will be needed

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<sup>94</sup> These are the Federal Water Pollution Control Act ("Clean Water Act") in the U.S. and, in Canada, the Environmental Protection Act and the Federal Fisheries Act.

<sup>95</sup> See Don Munton, The Informal Roles of International Environmental Commissions: Experience of the IJC (1994), pp. 7-9.

to implement the Canada-Ontario Agreement<sup>96</sup> is the result in part, of concern and publicity about pollution in the Great Lakes fostered by the IJC. The powers given to the IJC under GLWQA demonstrate how the Parties can authorize the IJC to undertake wide-ranging, constructive actions by using their Article IX reference authority under the Treaty.

Although the Parties have not given the IJC similar authority in other boundary watersheds, it is important to analyze the IJC's roles and its effectiveness under GLWQA because most of its resources have been devoted to implementing that agreement. This section discusses these roles: Recommending water quality goals and standards based on GLWQA, monitoring the Parties' progress toward these goals, coordinating and implementing activities, and conducting public outreach. ELI recommends that the IJC focus much more of its resources and efforts on its standard-setting and monitoring functions.

Under GLWQA, the U.S. and Canada gave the IJC a powerful role in standard-setting by granting it responsibility to make: "Specific recommendations concerning the General and Specific Objectives [of the Agreement], legislation, standards and other regulatory requirements, programs and other measures, and intergovernmental agreements relating to the quality of these waters."<sup>97</sup> The IJC must also report biennially to the parties concerning their own progress toward meeting GLWQA's rigorous objectives for pollution control.<sup>98</sup> The IJC has acted forcefully to exercise this authority by calling for virtual elimination of water toxics and a ban on all discharges of organochlorides.

GLWQA gave the IJC another important role: To monitor the Parties' progress toward achieving the objectives of the Agreement. This role was given renewed emphasis in the 1987 Protocol to GLWQA, which lessened the IJC's direct involvement in research and coordination, ostensibly in order to allow it to play a greater role in monitoring and evaluating the Parties' performance in reaching the objectives of GLWQA. This monitoring role is one of the principal means for the IJC to exercise real authority over the implementation of GLWQA and to achieve greater accountability by the Parties.

Effective monitoring by the IJC supports and strengthens its role in the standard-setting process by both publicly rewarding the Parties' progress and by bringing attention to their failures in meeting the standards of GLWQA. Even though the IJC has no power to enforce water quality standards, no company, municipality, or other potential source of water pollution wants to be singled out by the IJC as causing particular problems. By monitoring the Parties' progress, evaluating their achievements in meeting these standards, and

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<sup>96</sup> Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem, April 1, 1994.

<sup>97</sup> GLWQA, Article VII.

<sup>98</sup> Ibid.

publicizing its conclusions, the IJC can exercise substantial power and use its moral authority to produce very beneficial results.

The strength of the IJC's monitoring power can be recognized when it is compared with another multinational commission recently established to deal with environmental problems. As a result of the Earth Summit held in Rio de Janeiro in 1992, the U.N. formed the Commission of Sustainable Development (CSD) in order to monitor progress towards sustainable development by all the nations that signed Agenda 21, an extensive document of non-binding environmental resolutions. However, when negotiating the specific powers of the newly formed Commission, nations were unable to agree on language authorizing the CSD to monitor their progress. In addition, the opposition of a few countries blocked any requirement that nations even prepare their own reports on their progress to the Commission. Instead, progress reports are merely voluntary, leaving the CSD without any factual background for monitoring progress towards the goals of Agenda 21 and making it a toothless tiger.<sup>99</sup>

In comparison to the CSD, the IJC has strong powers related to monitoring the Parties' progress under GLWQA. It has access to detailed factual reports prepared by the states and province; it can call upon the Parties to prepare further reports;<sup>100</sup> and it has technical staff of its own, as well as expert boards, to analyze and appraise these reports. Moreover, the IJC has additional powers to publicize its recommendations and funds to distribute its findings. Taken together, these powers allow the IJC to monitor quite effectively the Parties' progress on meeting the goals of GLWQA.

In addition, the underlying strength of GLWQA increases the IJC's effectiveness in recommending and monitoring water quality standards. GLWQA requires that the Parties "eliminate or reduce to the maximum extent practicable the discharge of pollutants", and that "the discharge of any or all persistent toxic substances be virtually eliminated."<sup>101</sup> These standards are more strict than those currently in effect for the rest of the waters in both countries under federal or provincial statutes and regulations.<sup>102</sup> The strength of

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<sup>99</sup> See generally S. Jacob Scherr and Jared Blumenfeld, "Implementing UNCED," pp. 227-242, in Philippe (ed.), Greening International Law (1994).

<sup>100</sup> The IJC's power to request specific reports is subject to the Parties' will, however, as exemplified by the request that the Parties prepare annual reports on the state of the lakes, replacing the WQB's reports. It took th seven years to respond to that request by convening SOLEC in 1994.

<sup>101</sup> GLWQA, Article II.

<sup>102</sup> In the U.S., these standards are established under the Federal Water Pollution Control Act. Although the objectives section of the Act states that its goal is to eliminate water pollution (33 U.S.C. § 1251(a)(1)), operat still allow discharges up to stated limits. In Canada, federal effluent standards are set through the Canadian Environmental Protection Act and the Federal Fisheries Act. However, the most important source of discharg  
(continued...)

GLWQA makes the role of the IJC quite powerful, even though it does not itself have authority to adopt and enforce water quality standards. Because the standards are clear and aim for virtual elimination of toxic substances, the IJC can readily and effectively monitor the results and publicize its findings if the Parties have failed to reach these goals.

**Recommendation: The IJC should emphasize its monitoring function and use the Water Quality Board to monitor and evaluate the Parties' progress toward achieving the objectives of GLWQA.**

ELI agrees with other observers who believe that the IJC should emphasize its monitoring role to evaluate the Parties' initiatives, as well as actions taken by state, provincial and local agencies, towards achieving the many goals set by GLWQA. In this manner, the IJC would be focusing on the adequacy of the various governments' actions in producing concrete results to implement the standards of the Agreement.

To perform this task fully, the WQB would need to be reconstituted into a multi-stakeholder body<sup>103</sup> which could gather data and objectively appraise the performance and progress of the Parties, industry, and various levels of government in achieving the goals of GLWQA. This work requires significant technical expertise and access to information from a number of government agencies, but the members of the WQB have the authority and experience necessary to fulfill this mission.

As the WQB changes its efforts to focus on monitoring and evaluation of the Parties' progress, it will probably be necessary to form new or different subgroups of the Board. Effective monitoring and evaluation by the WQB could combine the views of environmental groups, industry and government agencies and would carry with it the force of the Commission's prestige and moral authority. The IJC should also devote some of its technical resources and outreach efforts to this mission and should conduct more vigorous public outreach to disseminate the results of its monitoring efforts. In this manner, the IJC could also build consensus among all the interested stakeholders to support its conclusions about whether progress is being made by the Parties.

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<sup>102</sup>(...continued)

in Canada are the nine industrial sector regulations under Ontario's Municipal Industrial Strategy for Abatement MISA was originally intended to meet the IJC's virtual elimination standard for persistent toxics, but the regul generally fail to meet this goal.

<sup>103</sup> See Section IV.D.2, *infra*.

**Recommendation: The IJC should devote more effort to working with the Parties, Provinces, and States on implementing its recommendations.**

As a corollary to emphasizing monitoring of the Parties' progress under GLWQA, the IJC should also devote more effort to encouraging them to adopt its recommendations through changes in the laws or pollution control and land use programs of both countries. The IJC needs to explain to all potentially affected interest groups the practical implications of its recommendations, and to build consensus on the specific actions that are needed to implement them. The IJC should be careful not to shut out alternative points of view, which in the past has occurred and contributed to industry's recent opposition to some of the IJC's recommendations.

ELI believes that the IJC should take a more proactive role in improving the basic air and water pollution control laws in both countries, pursuant to its mandate to review legislation under GLWQA. For this purpose, the IJC could be more active in reviewing and commenting on proposed legislation at federal, state or provincial levels and could play a more active role in working with organizations such as the Council of Great Lakes Governors and the Environmental Commissioners of the States (ECOS). The IJC must seek a balance between articulating the highest standards under GLWQA and working to make steady progress under existing, less visionary laws in both countries. Otherwise, over time its inability to do so can lead, and perhaps already has led, to loss of the IJC's credibility.

One area that the IJC should emphasize in reviewing legislation is the need for public involvement. For example, the ability of an environmental group, the National Wildlife Federation, to win a \$205 million settlement<sup>104</sup> and require the largest discharger of mercury into Lake Superior to clean up its toxic emissions through a citizen suit under the U.S. Clean Air Act (CAA)<sup>105</sup> and the Michigan Natural Resources and Environmental Protection Act<sup>106</sup> testifies to the importance of the role of citizen suit provisions in domestic legislation. Yet the IJC has done little to advocate such changes in Canada, where there is no authority for citizen suits against polluters. In the same way, the IJC could focus its recommendations more closely on improving enforcement of the Clean Water Act in the United States, and could devote greater effort supporting major EPA programs, such as the Great Lakes Initiative. The IJC could also sponsor binational workshops for government officials, business leaders and NGOs to build consensus on how to improve pollution cleanup and work toward more sustainable development. Finally, the IJC could commend the states, provinces, and local governments for initiatives that implement IJC recommendations, as well as highlight other initiatives that are counter-productive.

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<sup>104</sup> \$200 million of the settlement represents the cost for construction of a new, non-polluting plant.

<sup>105</sup> 42 U.S.C. § 7604.

<sup>106</sup> Natural Resources and Environmental Protection Act, Public Act No. 451 of 1994, Michigan Compiled Annotated, Section 324.



#### 4. Coordinating the Parties' Implementation Activities

The IJC's coordination role under GLWQA has waxed and now waned. For many years after the passage of GLWQA, the IJC coordinated the Parties' joint responses to Great Lakes water quality issues through the technical working groups of the WQB and the SAB. These working groups have now been disbanded, and many coordination activities are handled directly by the Parties with state and provincial participation. Although some observers believe that the IJC can coordinate these activities more effectively than the Parties in some areas, ELI recommends that the IJC give more emphasis instead to its monitoring and assessment role rather than coordination.

The former technical groups of the WQB provided opportunities for staffs from the two federal agencies, the states and province to exchange information and share ideas, without the obligation of representing the political agendas of their respective governments. However, after the 1987 Protocol to GLWQA and the passage of the Great Lakes Critical Program Act,<sup>107</sup> the IJC and the Parties decided to eliminate the WQB subgroups, ostensibly because they duplicated functions performed by the Parties' domestic agencies. Accordingly, the IJC's newsletter reported at the time:

The Protocol transferred many former roles and responsibilities of the Board to the Parties to the Agreement (Canada and the United States), including the coordination of data collection, reporting on loadings and sources of pollutants, and long-term data on contaminants. This work had been undertaken by an elaborate committee structure under the Board since the early 1970s, which included scientists and managers from water quality agencies in both countries. The Protocol reflected the view that these functions more properly belonged to the Parties, especially since Board members were responsible for the control programs that they also were being asked to evaluate.<sup>108</sup>

Because of these changes, the WQB working groups no longer perform a coordinating function. Instead, U.S. EPA and Environment Canada organize coordination activities, more on a lake- or site-specific basis under LAMPs or through RAPs, although it is not clear yet whether these new coordination structures are truly effective. In addition, U.S. EPA and Environment Canada directly convene Basinwide groups on other issues such as the deposition of airborne toxics. Within the United States, a Policy Committee organized by U.S. EPA provides a forum for U.S. EPA and the states to discuss and coordinate their actions on Great Lakes water quality issues, taking the place of the old WQB working groups. Some observers regret the decline of the IJC's coordination. They point out that

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<sup>107</sup> See Section III.C, supra.

<sup>108</sup> Michael Gilbertson, "New Commission Priorities for the Great Lakes Water Quality Board," Focus on International Joint Commission Activities, Vol. 17, Issue 2 (July/August 1992), p. 3.

the new groups have not been as strongly binational as the former WQB working groups and that they tend to focus on the federal agencies' separate agendas, rather than shared, binational activities.

Previously, when the IJC's Windsor office had a larger technical staff, that office also provided a focal point for binational coordination. Although the Windsor staff has been reduced, one area of continuing IJC coordination is the Remedial Action Plan (RAP) process, as described in detail in Appendix B. Two IJC staff in the Windsor office are points of contact for all RAP coordinators and a principal means of sharing knowledge and successful techniques among and between RAPs in both countries. Although one of the staff positions has recently been reduced to part-time, their activities have been widely appreciated among RAP coordinators and the involved public.

**Recommendation: The IJC's staff should continue to provide technical assistance and guidelines for public participation in the RAP process.**

The RAP process described in Appendix B is extremely important for cleaning up pollution in the Great Lakes, and there the IJC has demonstrated its usefulness in providing technical assistance and coordination for all the implementing jurisdictions. Groups of technical experts and RAP practitioners should be convened regularly to address specific topics such as toxic sediment remediation, habitat remediation and conservation, fundraising, and public participation. The IJC should prepare guidelines for uniform public participation in the RAP process, and provide the agencies' technical experts and RAP practitioners with opportunities to discuss their experiences and assist other AOCs. For this purpose, the IJC could be a more active partner in the Great Lakes Information Network, helping RAP practitioners and technical experts connect with each other and providing answers or referrals to questions online.

The IJC could also assist in raising funds for AOC cleanups, and convene meetings among RAP practitioners to demonstrate how to build flexibility into the RAP process. Flexible approaches to RAPs can utilize tools such as total quality management, risk assessment and management, weight-of-evidence approach, and adaptive planning and management in multi-stakeholder RAP institutional structures.<sup>109</sup> IJC roundtables could explain the tools available for applying these flexible approaches. The IJC's ability to convene groups should also be used to help practitioners of multi-jurisdictional RAPs cooperate with each other. The IJC has a very successful history of resolving the Parties' transboundary disputes. Its expertise in this area could be invaluable to the implementing jurisdictions that are having difficulty working together to produce RAPs for shared AOCs. In this manner, the IJC's coordination role can be refocused to assist the Parties in accomplishing very real progress to implement RAPs and clean up Great Lakes pollution.

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<sup>109</sup> U.S. EPA and Environment Canada, Progress in Great Lakes Remedial Action Plans: Implementing the Ecosystem Approach in Great Lakes Areas of Concern (September 1994), p. 6.

## **D. Public Participation and Outreach**

### **1. Public Participation Under GLWQA**

Public outreach is a key ingredient for ensuring that the IJC's recommendations will be implemented effectively. In addition to involving the public in implementing GLWQA, there are two phases when the IJC needs to involve the public. First, the IJC needs to develop its decisions through a process that is open to the public. Second, it needs to publicize its recommendations widely once they are final so that all affected interest groups and levels of government will understand their practical implications.

GLWQA specifically authorizes the IJC to develop a public information program. Article VIII of GLWQA creates the Great Lakes Regional Office of the IJC to, among other things, provide administrative support and technical assistance to the WQB and SAB and "to provide a public information service for the programs."<sup>110</sup> Participation of the public in the IJC's activities under GLWQA has been evolving. Following the adoption of the 1987 Protocol, the IJC reevaluated how it was going to operate under the new requirements. The problems that it identified included issues best addressed through public involvement, such as land use management and public information needs. Following this evaluation, the IJC has placed greater emphasis on public involvement.

The first and possibly most important element of the IJC's public outreach and dissemination of its work occurs through its biennial meeting and subsequent biennial reports. Beginning in 1988, these meetings have been heavily attended by all segments of the Great Lakes community; and events at those meetings, as well as the resulting recommendations in the biennial reports, are publicized by many government and non-government groups. This reporting by other groups, the non-governmental organizations in particular, gains considerable public attention for the IJC's findings and recommendations.

A second successful public outreach effort by the IJC has involved placing public members on special task forces and committees established pursuant to specific references. The IJC has appointed public members for the PLUARG,<sup>111</sup> Lake Levels Reference Study Board,<sup>112</sup> and the Virtual Elimination Task Force.

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<sup>110</sup> GLWQA, Article VIII(3).

<sup>111</sup> See Mimi Larsen Becker, "The International Joint Commission and Public Participation: Past Experiences, Present Challenges, Future Tasks," 33 Nat. Res. J. 235 (1993), pp. 246-249.

<sup>112</sup> International Joint Commission, Methods of Alleviating the Adverse Consequences of Fluctuating Water Levels in the Great Lakes (December 1993).

Third, recognizing the great need for public education at all levels, in the late 1989 the IJC helped to create the Great Lakes Educators Advisory Council, made up of environmental education experts from all of the Great Lakes states and the province of Ontario. Between July 1990 and May 1993, Council members sponsored 33 workshops throughout the Great Lakes region.<sup>113</sup> In its Special Report on Great Lakes Environmental Education, the IJC recommended that the Parties support the development of an environmental clearinghouse to collect and distribute a variety of materials and curricula about the Great Lakes-St. Lawrence ecosystem.<sup>114</sup> The Great Lakes Educators Advisory Council noted in its final report to the IJC that the "Commission will be expected to continue its networking and coordinating role in educational and community awareness until another resource can be identified or created."<sup>115</sup>

## 2. Improved Outreach and Publicity by the IJC

An increasingly important role for the IJC involves keeping the public informed and educated about boundary waters issues. In the IJC's fifth biennial report, the Commission recommended that the Parties develop a comprehensive public information and education program to "raise the level of knowledge among the general public about the importance of a clean environment and what individuals can do to prevent, avoid and remediate degradation of the ecosystem."<sup>116</sup>

These activities have traditionally suffered from under-investment by the IJC. Instead, like most technically oriented bodies, the Commission has focused more on producing reports than making sure that its conclusions are disseminated and understood by the various stakeholders and the general public who potentially will be affected by and involved in the implementation of its recommendations.

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<sup>113</sup> The Council members developed one-day workshops and week-long institutes in their respective jurisdictions to "encourage educators to develop the knowledge, skills and confidence to incorporate Great Lakes environmental education into their teaching practices." Final Report of the Great Lakes Educators Advisory Council to the International Joint Commission (September 1993).

<sup>114</sup> International Joint Commission, Special Report on Great Lakes Environmental Education (May 1991), 1

<sup>115</sup> Final Report of the Great Lakes Educators Advisory Council, *supra*, p. 19.

<sup>116</sup> Fifth Biennial Report on Great Lakes Water Quality, Part II, p. 32. In that report the IJC also recommended a coordinated program for each Area of Concern like that of the Rogue River Integrated Monitoring Project in Michigan which "helps students become aware of their surrounding environment and take steps to clean up the river, while at the same time learn about the effects human actions have on the local, regional and global environment." *Ibid.*, p.

In recent years, the IJC has begun to conduct more public outreach activities but, unfortunately, it has not invested sufficient resources in this effort. Although the IJC has an extensive mailing list and prepares useful publications, it does little to distribute them or to help stakeholders and the public in translating the results of its research into practical solutions. Instead, the primary means for the IJC's recommendations to be publicized is through environmental organizations and government agencies in both countries.

One way that the IJC keeps the public informed about its activities is through its newsletter, FOCUS, which is published three times a year and reaches 14,000 people. Although FOCUS covers IJC activities and issues of interest concerning the entire boundary area, it is published and distributed by the IJC's Great Lakes Regional Office and has a strong Great Lakes focus. Along with publishing FOCUS, the Great Lakes Regional Office responds to public requests for information, receiving an estimated 20,000 inquiries and information calls each year.<sup>117</sup>

Interested groups hold differing opinions about the effectiveness of these IJC reporting and outreach efforts. In particular, the business community has been alienated by the advocacy tone of some recent biennial reports.<sup>118</sup> Due to its skepticism about the science supporting some IJC recommendations, such as the phaseout of organochlorides, the business community is becoming less supportive of the IJC.

**Recommendation: The IJC should add public members to represent all stakeholders on the Water Quality Board, Science Advisory Board, Boards of Control and Pollution Advisory Boards.**

As recommended previously,<sup>119</sup> if the WQB is given primarily a monitoring and evaluation role, it should be reconstituted to retain its strong governmental membership but to add representation of all major stakeholder groups. In the eyes of many observers, the WQB has become inherently biased because its members are all managers from the same government agencies whose programs are being evaluated by the WQB. By adding to the WQB members from the public who represent various Great Lakes stakeholders, the IJC can reach out to environmental groups, riparian landowners, and industry, as well as constituencies not adequately involved in the past, such as municipalities and Native American tribes or First Nations.

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<sup>117</sup> Beverly Croft and Sally Cole-Misch, "Teaching Today's Youth to Make Tomorrow's Decisions for the C Lakes Ecosystem," Focus on International Joint Commission Activities, Vol. 16, Issue 1 (March/April 1991),

<sup>118</sup> The Fifth Biennial Report, for instance, says on its cover, "The child that I am carrying right now has pr is currently receiving the heaviest loadings of toxic chemicals that it will receive in its lifetime - Eminent Scie Fifth Biennial Report on Great Lakes Water Quality, Part II (1990).

<sup>119</sup> See Section IV.C.3., supra.

Like the WQB, the IJC's Boards of Control and Pollution Advisory Boards have traditionally been government-only boards, although a citizen representative has recently been appointed to the Niagara Board of Control. Members of the Boards of Control typically represent U.S. EPA, Environment Canada and the U.S. Army Corps of Engineers, but there is no reason why they could not also include representatives of other interested groups, especially from the local areas most affected by the Boards' decisions.

Similarly, the membership of the SAB needs to be broadened to include more scientists drawn from environmental groups, industry and other significant stakeholders. Until now, the SAB has been composed of government scientists and university researchers who are part of a close-knit Great Lakes network. Involvement of members drawn from the affected public who also have scientific qualifications will enable the SAB to incorporate a wide range of views into its deliberations and to develop broader support for its conclusions and recommendations. In this manner, the public will be more engaged in the IJC's decisions, and the Commission and its Boards can gain greater relevance for their reports while maintaining a high level of scientific credibility.

**Recommendation: The IJC should structure its biennial meetings to provide more technical content and more coherent public participation in IJC activities; greater integration is also required with the SOLEC Conference.**

Many observers currently regard the IJC's biennial meetings as having become too unstructured and as undermining the IJC's credibility. It is valuable to have an open forum to discuss Great Lakes issues, and this aspect should be retained. But the current free-form dialogue at the biennial meetings too often degenerates into the polarization of views among various stake holders. While these meetings provide a valuable function, they could be improved by a more structured format that promotes more focused discussion and constructive dialogue on issues among the IJC's various stakeholders and constituencies. These meetings could focus more on evaluations of the Parties' effectiveness, rather than more abstract issues, such as progress on Annexes. Government leaders should attend these meetings to hear the public's concerns.

Currently, the biennial meetings give groups an opportunity to make public statements, but the IJC does not provide a format for the meetings which would give those with different interests the opportunity to coalesce their views around issues of common concern. Few mechanisms exist to follow up on potentially valuable ideas in a meaningful way. By giving the biennial meetings more structure, the IJC should be able to gain practical results from them, and thereby make the meetings more productive.

The biennial meetings should also be an opportunity for the technical boards of the IJC, especially the WQB and SAB, to receive public participation on their activities and programs. This change would require that Boards be more involved in the overall work of the IJC Secretariat. Instead, planning for the biennial meeting in Duluth almost eliminated any opportunity for reports from these two Boards.

The Parties and the IJC together should also endeavor to better integrate the purposes of the IJC biennial meeting with the State of the Lakes Ecosystem Conference (SOLEC), a major technical conference convened by EPA and Environment Canada. The recent SOLEC duplicated many themes that might have been covered by a reformulated IJC biennial meeting. The decision of U.S. EPA and Environment Canada to convene SOLEC indicates both their lack of support of the IJC and the lack of usefulness of the IJC biennial meetings for technical discussion. Both SOLEC and the biennial meeting require intensive organizational efforts and a significant expenditure of staff time and funding. It is a poor use of limited resources to duplicate these efforts by holding a biennial IJC meeting with broad public participation but inadequate substantive results, followed by SOLEC which produced good technical papers but had only limited public participation, SOLEC did little to evaluate the Parties' progress. Both the Parties and the IJC should make a great effort to ensure a coordinated and synergistic agenda for these two events.

**Recommendation: The IJC should convene multi-stakeholder meetings to review the Parties' progress in implementing water quality goals.**

The IJC could enhance its effectiveness by convening multi-stakeholder meetings to discuss in very practical terms how the Parties can achieve progress toward the Commission's recommended water quality goals. These meetings would need to be carefully structured and have a solid technical basis, so that stakeholders can focus on achieving development of broad-based agreement about ways to implement the IJC's recommendations.

Multi-stakeholder meetings could also be a vehicle for the IJC to achieve wider distribution of its reports and to foster greater understanding of how and why government agencies, industry and the general public need to change their activities to protect and restore environmental quality.<sup>120</sup> Not only has the IJC made inadequate efforts to interpret the results of its research for its stakeholders, but also the IJC has not endeavored to assist the Parties' agencies or the private sector in developing and implementing policy options and programs designed to respond to the environmental problems identified by IJC studies. These multi-stakeholder meetings would provide a forum for improving the IJC's relationships with all of these groups and focusing their combined efforts on achieving tangible results.<sup>121</sup>

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<sup>120</sup> This need is especially great with regard to lake levels issues. Stakeholders need to develop and implement use strategies compatible with cyclical lake levels.

<sup>121</sup> One example is the Ann Arbor Pollution Prevention Conference.

## **E. Air Quality Issues**

The Parties have not given the IJC the same authority over air pollution that it has for water pollution under GLWQA, other than its indirect authority over air-borne toxics that are eventually deposited in the lake water. Although the IJC's reference authority has been used to combat air pollution, it has been used only in a limited way. As early as 1928, the landmark Trail Smelter case was brought before the IJC by a reference concerning sulphur dioxide fumes emitted by a zinc and lead smelter in Trail, British Columbia. The IJC reported that Canada was at fault for transboundary air pollution affecting Washington state and fixed damages in the amount of \$350,000.<sup>122</sup> This recommendation was not accepted by the Parties, who referred the matter instead for arbitration but, interestingly, did not seek arbitration by the IJC under Article X of the Boundary Water Treaty.

The IJC also has various supervisory roles under several air quality references along the border.<sup>123</sup> For example, it submitted its recommendations stemming from a 1975 reference on air quality in the Detroit-Windsor and Port Huron-Sarnia areas in 1984. Although the Parties did not respond until 1988, their response contained a further reference for the IJC to recommence its work under the 1975 reference "to examine and report upon actual and potential hazards to human health and the environment from airborne emissions in the Windsor-Detroit area."<sup>124</sup> In its next report, submitted in 1992, the IJC recommended the implementation of pollution prevention programs to phase out and eventually eliminate the emission of air toxics in the region and named fifteen known carcinogens for priority action.

Article IX of the Canada-U.S. Air Quality Agreement, signed in 1991, contains a reference to the IJC giving it the responsibility for receiving public comments on progress reports prepared by the Parties' Air Quality Committee and preparing and distributing a

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<sup>122</sup> IJC Docket No. 25, summarized in Bloomfield and Fitzgerald, Boundary Waters Problems of Canada and United States: The International Joint Commission 1912-1958, (1958), p. 137.

<sup>123</sup> See International Joint Commission, Docket 61, Reference on Air Pollution Detroit-Windsor; Report of the Pollution of the Atmosphere in the Detroit River Area (June 27, 1960). Also see Maxwell Cohen, The Reference on Boundary Waters - The Canadian-United States Experience (1977), p. 278, fn. 158, citing Docket 85, Reference on Air Pollution, Port Huron-Sarnia and Detroit-Windsor; Report by the IJC on Transboundary Air Pollution, Detroit and Clair River Areas (1972); Docket 99, 1975 Reference on Air Quality, Detroit-Windsor, Port Huron-Sarnia.

<sup>124</sup> James G. Chandler and Michael J. Vechler, "The Great Lakes-St. Lawrence River Basin from an IJC Perspective," 18 CAN-US L.J. (1992), p. 275. The IJC was also asked in this Reference to report upon the implementation of the 1974 Michigan-Ontario Memorandum of Understanding.



summary of those views.<sup>125</sup> This minor administrative role to gather public opinion does not take advantage of the IJC's technical and advisory competence, and it is notable that the Parties did not request the IJC to render its own opinion on air quality matters.

The IJC's diminished role under the 1991 Air Agreement is all the more noteworthy because it is the Parties' most recent reference to the IJC. Even though Canada's early drafts had provided a more significant role for the IJC, U.S. negotiators were not receptive. Under the final agreement, the IJC was given a very limited role, and almost all of its functions under the draft were given to U.S. EPA and Environment Canada.

**Recommendation: The IJC should use GLWQA's standard-setting authority to recommend ways to reduce air-borne toxics.**

Notwithstanding its limited role under the 1991 Air Agreement, the IJC could possibly exert a stronger role in addressing air quality, at least for the Great Lakes basin, through its authority under GLWQA to recommend standards for water quality.<sup>126</sup> While the IJC has actively exercised its role in recommending water quality standards under GLWQA, it has not asserted its authority to recommend standards for emissions of air-borne toxics. Because air deposition is now the primary source of the Great Lakes' toxic pollution as traditional point sources of water pollution are being cleaned up,<sup>127</sup> the IJC should use this authority to recommend emission standards and pollution prevention measures for the Parties to decrease or eliminate air-borne toxics.

**F. Studies of Water Levels in the Great Lakes**

The contentious issue of lake levels has consumed a great deal of the IJC's attention and resources, although it is arguably not the highest priority for the IJC or the Great Lakes population as a whole. Fluctuations in the Great Lakes can severely affect riparian landowners, who only represent less than one percent of the Great Lakes basin's population, but are organized and vocal. In both the U.S. and Canada they have proven to be effective in pressuring state and national legislators to make their case for more dams and other structural approaches to regulating lake levels.

This political pressure has twice led the Parties in 1964 and 1986 to make major references to the IJC to study the problem, which has since taken up a great percentage of

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<sup>125</sup> United States/Canada Air Quality Agreement of March 13, 1991. This agreement gives the IJC discretion to hold public meetings, but it has not done so.

<sup>126</sup> GLWQA, Article VII.

<sup>127</sup> David De Vault et al., "Toxic Contaminants in the Great Lakes," State of the Great Lakes Ecosystem (October 1994).

the Commission's time and resources.<sup>128</sup> When water levels are high, the IJC staff can spend most of their time on this issue; the \$13 million spent on the lake levels reference from 1986-1993, for example, is more than the total spent by the IJC on all water quality issues during this time.

The IJC's final report for the first study, which was completed in 1976 after 12 years, concluded that "the natural regulation effect of the lakes is very efficient and only limited further improvements can be achieved at acceptable environmental and financial costs."<sup>129</sup> The final report of the Lake Levels Reference Study Board in 1993 reached a conclusion strikingly similar to the IJC's first lake level study, *i.e.*, that very little could practically be done.<sup>130</sup> As the IJC's final 1993 report on lake levels notes, "The most outspoken of the riparians voiced the long-standing belief that governments are not being fully open about ... activities that affect lake levels."<sup>131</sup> These people believe somehow that the Parties should be able to do more. Their concern ignores the fact that the quantity of water in the lakes is naturally well regulated, with water fluctuations averaging only a meter above and below normal, considerably less than tidal activity on coastlines.

It is not surprising that the IJC has again concluded that human structures could do little to regulate a system that contains one-fifth of the earth's fresh surface water. With the exception of Lake Ontario, where existing control structures can regulate water levels by two meters, there is little that the IJC or the Parties can do when the water levels naturally rise. All that the Army Corps of Engineers can do with the existing structures in Lake Superior, for example, is to raise or lower the lake's level by less than the width of a pencil.

After all these studies, the answer has remained the same. Almost all changes in lake levels are due to precipitation, and it is too expensive to build the structures that would be needed to contain excess precipitation. Furthermore, "for all their cost, these works would not permit full control of lake levels."<sup>132</sup> They would also cause major loss of biological

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<sup>128</sup> The second lake level study was the result of a political rather than technical decision by the U.S. Congress to avoid the highly contentious lake levels issue and any accountability for the results of the study.

<sup>129</sup> Edith Brown Weiss, "New Directions for the Great Lakes Water Quality Agreement: A Commentary," 6 *Chicago-Kent L. Rev.* 375 (1989), p. 378, citing International Joint Commission, Further Regulation of the Great Lakes (1976).

<sup>130</sup> International Joint Commission, Methods of Alleviating the Adverse Consequences of Fluctuating Water Levels in the Great Lakes-St. Lawrence River Basin - A Report to the Governments of Canada and the United States (D-1993).

<sup>131</sup> Ibid., p. 4.

<sup>132</sup> Ibid., p. 9.

diversity because lakeside ecosystems have evolved with, and adapted to, the fluctuating water table.

**Recommendation: The IJC should devote greater efforts to influencing the Parties to implement its recommendations for better land use planning, floodplain mapping and forecasting, and set-back requirements for construction along shorelines.**

The IJC has recommended improved land-use planning and forecasting of flooding and required set-backs for shoreline construction instead of trying to control lake levels. Another more long-term solution might be for the Parties to work on restoring some of the wetlands and forests in the Great Lakes basin because their losses have exacerbated the flooding. Building continues to take place within the flood zones of the lakes, however, and it is too early to tell whether the IJC's most recent lake levels report will have any real impact on the Parties' activities. Meanwhile, IJC resources continue to be diverted to deal with lake level issues rather than focusing on water pollution or other, more pressing ecosystem problems.

**Recommendation: The IJC should delegate studies of lake levels and flows to existing Boards of Control and should devote more time and effort to promoting sound land use planning by the Parties.**

Because high water levels are caused by excessive precipitation and cannot be controlled by construction of additional structures, there seems to be little justification for devoting such a great amount of the IJC's staff time and resources to a problem that is so difficult to resolve completely. If the IJC were delegate to any remaining issues related to lake levels to the Boards of Control, its saved time and resources could be allocated with greater effect to other environmental problems, and it could develop recommendations for the Parties about how to improve land-use planning, conduct floodplain mapping and adopt set-back requirements along shorelines.

### **G. Applications for Water Uses and Diversions**

Observers agree that the IJC has done a good job of approving and monitoring uses and diversions of transboundary waters through the application process. In all, sixty-one applications have been submitted to the Commission since 1909, and only one has been denied.<sup>133</sup> No applications have been submitted since 1982; apparently, all major diversion projects that could be undertaken on transboundary waterways between the United States and Canada have been completed. Thus, applications to the IJC for new projects are unlikely in the foreseeable future.

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<sup>133</sup> The IJC approved eight of those applications without establishing a board of control.

Since the early 1980s, the IJC's main work related to applications has been to review existing orders of approval and their regulatory plans. Some of these reviews -- in the Osoyoos River, Skagit River, and Souris River basin -- were the result of technical matters such as the building of new water projects or the need to replace a dam structure.

More recent IJC applications to review orders of approval have reflected society's changing priorities for water use, including the need to allocate passive uses of water for wetlands or wildlife. Such reviews of application orders are now in process in the St. Croix River basin, Rainy Lake watershed, and the St. Lawrence River. There are also a number of smaller reviews that have occurred or are occurring, such as in the Kootenay River, where the IJC is reviewing its order of approval because the sturgeon has just been declared an endangered species. Similar cases with major conflicts are looming, such as those involving the Pacific salmon fishery and the Columbia River water levels.

Salmon have made a comeback in recent years in the St. Croix River, which flows between Maine and New Brunswick. Increasing the water levels necessary to support this improved fishery conflicts, however, with recreational uses and bass fishing that have developed upstream due to river levels established under previously approved applications. The St. Croix Board of Control and the Advisory Board on Pollution Control are reviewing the St. Croix order of approval in an effort to balance these competing interests.<sup>134</sup> To assist them in reviewing the order, the two Boards have established a Policy Group, a Working Committee, and a Stakeholders Group. The Working Committee is studying economic and other values in a model showing the effects of different regulatory and water use strategies, and the Stakeholders Group is facilitating public discussion and advising the Working Committee.

In the Rainy Lake watershed of Minnesota and Ontario, a two-year study and consultation process by the Minnesota and Ontario departments of environment ended with the submission of a report to the IJC recommending that it consider changing the regulated levels in Rainy Lake. Waters are too low in the spring for fish spawning areas and too high in the late summer, causing adverse effects on fish and wildlife, and other concerns. The Rainy Lake Board of Control has held public hearings involving the paper company located there, Native American groups, recreational users, and other stakeholders. It was to report by June 1995 whether water level changes would increase the risk of flooding, and whether there is reason to believe that the changes would improve the fishery.

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<sup>134</sup> Two boards deal with St. Croix issues, the St. Croix Board of Control and the St. Croix Advisory Board on Pollution Control, which was created pursuant to a 1961 reference. In its original report on the St. Croix River, the IJC recommended water quality objectives, and the Parties requested that the IJC maintain surveillance over St. Croix River pollution through a technical advisory board.

In Lake Ontario and the St. Lawrence River, the St. Lawrence Board of Control is investigating two alternatives to current regulation. Stable water levels there due to a power project have led to the development of a huge recreation and marina industry, and have created environmental concerns, such as the impact on wetlands affected by the water levels.

In other examples, the IJC has used a combination of its reference and application authorities to review and resolve water quantity issues. As described in Appendix C, this approach was effective in resolving the High Ross Dam dispute, a long-standing issue on water rights between the City of Seattle and British Columbia. This conflict arose when Seattle began to raise the Ross Dam pursuant to an IJC order of approval granted several decades earlier. British Columbia complained that the dam would cause environmental damage and also about the inadequacy of its monetary compensation under the order. The IJC formed a consultative group that negotiated a settlement, which is embodied in a treaty between the U.S. and Canada. Seattle agreed not to raise the dam and to pay British Columbia additional money in exchange for the electricity that a higher dam would have generated.

**Recommendation: The IJC should use its application authorities under the Treaty to achieve sustainability of water uses in other boundary water ecosystems.**

The IJC needs to be more proactive in dealing with environmental problems that arise due to water use allocations and diversions. The Boundary Waters Treaty authorizes the IJC to make its decisions on water use "conditional upon the construction of remedial or protective works" (Article VIII) and to report on references "such conclusions and recommendations as may be appropriate" (Article IX). These very broad powers would allow the IJC, acting through its Boards of Control for areas outside the Great Lakes, to recommend a wide array of actions that would protect environmental quality.

For example, issues concerning water flows and quantities have arisen in most boundary watersheds, and they are likely to become increasingly important because they may limit future development all along the border. One of the reasons for maintaining certain water levels is to serve consumption needs, as opposed to navigation and hydropower. Consequently, the IJC's Boards of Control should examine whether water uses under existing orders of approval will be sustainable in the future, and what levels of water are needed for conservation of fish, wildlife, wetlands and other passive uses that contribute to environmental quality. Consideration of these issues may also require greater public participation in the IJC's application reviews, including adding public members to Control Board panels.

## **H. Conclusion**

All of ELI's recommendations in this chapter are designed to improve the effectiveness of the IJC by enabling it to promote the goals of the Boundary Waters Treaty and GLWQA. A key aspect of these recommendations is the need for the IJC to emphasize its role of

monitoring and evaluating the Parties' progress toward those goals, to hold them accountable by publicizing the results of its evaluations, and to involve the public more in that process. These recommendations will require the IJC make its own changes, such as using the Water Quality Board to monitor the Parties' progress, increasing public participation in its activities, and strengthening the technical capacity of its staff.

However, in addition to all of these recommended changes which the IJC can implement on its own initiative, it may be necessary for the Parties to take additional actions that will enable the IJC to be more effective in protecting the shared water resources and ecosystems. ELI's recommendation which require action by the Parties are described in Chapter V.

## CHAPTER V

### RECOMMENDATIONS FOR ACTIONS BY THE PARTIES TO MAKE THE IJC MORE EFFECTIVE

Chapter IV makes a series of recommendations for improving the effectiveness of the IJC. In order for the IJC to maintain a dynamic and influential position in protecting the environment of boundary watersheds, however, the Parties also must take a number of actions authorizing the IJC to play a more constructive role. The IJC depends on the Parties not only for its budget, but also for its jurisdiction. Yet the Parties have not given the IJC any new references outside the Great Lakes since 1985, and they have filed few recent references for the Great Lakes. The most recent reference gave the IJC only a minor role to collect public comments under the U.S.-Canada Air Quality Agreement.

ELI's recommendations to the Parties in this chapter are based on our finding that the IJC has two clear strengths. One is to act as an independent advisor and fact-finder for resolving concrete problems that require binational cooperation. The second is to exercise moral authority as an environmental conscience, working to strengthen the protection of boundary watersheds and to prevent pollution there. The IJC is the most prominent institution that can monitor the actions of the Parties and other governments, advocate environmental protection measures, and create links among the public, government agencies, industry, and scientists.

The IJC cannot perform these roles effectively, however, without authority and support from the Parties. The following recommendations address what the Parties need to do to make the IJC more effective. They take into account the new realities and complexities of the Great Lakes basin and other boundary watersheds, and they recognize the reduced importance of the IJC's role in coordinating Great Lakes activities.

#### **A. Enhancing the IJC's Ability to Address Boundary Water Issues**

If the Parties were to file a reference authorizing the IJC to adopt a public petition process, they could do much to reverse the current trend toward reducing the IJC's relevance. An impartial, fact-finding body such as the IJC is an excellent mechanism for addressing certain boundary water problems. The reluctance of the Parties to expose themselves to the IJC's review does not mean that it is not useful; on the contrary, their reluctance may suggest that they are wary of how effective the IJC might be if it were asked to resolve more of these problems. Allowing citizens to initiate petitions, either directly to the IJC or by petitioning the Parties' federal governments to refer matters to the IJC, would be an important step toward improving environmental conditions in boundary ecosystems.

**Recommendation: The Parties should authorize the IJC to accept and review public petitions for IJC action on boundary water issues.**

Under Article VIII of the Boundary Waters Treaty, members of the public have the right to initiate applications to the IJC, but Article IX reserves the right to initiate references exclusively for the Parties. Although it is probably unrealistic to undertake an amendment to the Treaty, the Parties could craft an effective public petition process through use of their reference power under Article IX, much as they did in creating GLWQA.

The Parties have several options for implementing this recommendation. The most direct would be filing a reference to the IJC which authorizes the Commission to accept from members of the public petitions requesting it "to examine into and report on the facts and circumstances of a particular matter or question" concerning the quality of the boundary waters, as Article IX allows the Parties to do. The reference would then authorize the IJC to review public petitions and to make recommendations to the Parties about how to resolve the issues raised by those petitions. The same result probably could also be accomplished by federal legislation in both countries or by the Parties' adopting a new protocol amending GLWQA, but the latter approach would only establish a petition process for the Great Lakes basin and not for other boundary watersheds.

Alternatively, the Parties could use their reference authority to establish a right of the public to petition the Parties and present evidence to them that they need to initiate a reference to the IJC concerning a particular boundary environmental problem. Such a right to petition the Parties for a specific reference to the IJC would be similar to the right to file citizen petitions provided in a number of U.S. environmental laws<sup>135</sup> and in the Environmental Side agreement. This approach may be more likely to be adopted by the Parties because it would not obligate the IJC to spend resources on investigating a problem raised by citizens unless the Parties specifically agree that it should do so.

The newly concluded Environmental Side Agreement for NAFTA allows the public to submit a petition to the North American Council on Environmental Cooperation (NACEC) alleging that one of the three governments is not "effectively enforcing" its environmental regulations.<sup>136</sup> Once filed, a citizen petition triggers a factual investigation by NACEC. After reviewing the results of this investigation, and if the NACEC governing council decides by a two-thirds vote that the charges are true, the report on the investigation will be made public. Thus, if the IJC believes it is unable to entertain public petitions, it might find that

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<sup>135</sup> For example, the Endangered Species Act establishes a process whereby a citizen can file a petition with Department of the Interior to list a species as threatened or endangered. Within a certain time limit, the agency on the petition and proceed with the listing if it determines credible evidence is presented. 16 U.S.C. §1533(b)

<sup>136</sup> The North American Agreement on Environmental Cooperation, Article XIV.



it will be bypassed by concerned citizens who will use the NACEC petition process for U.S.-Canadian boundary waters issues instead.<sup>137</sup>

**Recommendation: The Parties should authorize the IJC to create standing Boards responsible for recommending standards and monitoring water quality for all boundary watersheds.**

In order to protect the environment across the entire U.S.-Canadian border, the IJC should be given authority to review the quality of all boundary waters. It has this authority broadly for the Great Lakes under GLWQA, but only by historical accident does it have similar responsibility for other boundary watersheds, where some boards have been created to deal with water pollution under specific prior references.

As discussed in Chapter IV,<sup>138</sup> these boards, such as the Rainy River Water Pollution Board, create useful avenues for coordination among governments on both sides of the border. They allow the Parties, states, and provinces to find ways to jointly manage shared resources, to share technical expertise, to monitor and control pollution more efficiently, and to involve the public in the boards' activities. Standing IJC boards should be created by the Parties' filing references with the IJC for all areas not already served by similar institutions.

**B. Changing the IJC's Institutional Structure and Procedures**

In 1989, a study of the IJC by the U.S. General Accounting Office found that "[t]o be effective, the IJC needs to have proper organization, sufficient resources to carry out its mission, and qualified leadership."<sup>139</sup> ELI finds that there are a number of possible institutional changes which would enable the IJC to improve how it performs its current functions and would ensure that future responsibilities assigned to the Commission by the Parties are handled in a timely and effective manner. The following recommendations suggest various institutional improvements that could be adopted by the Parties in order to enhance IJC's effectiveness.

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<sup>137</sup> U.S. and Mexican environmental groups recently filed the first public petition to NACEC to study the deaths of around 40,000 North American migratory birds at the Silva reservoir near Leon, Mexico. Rather than their petition under the more cumbersome process of Article XIV, the groups chose to bring their petition under confrontational procedures of Article XIII, which empowers NACEC to study an issue in any of the three countries, come up with its own conclusions, and offer possible solutions. Anthony dePalma, "Treaty Partners Study Fa at Polluted Mexican Lake," New York Times (August 1, 1995), p. C-4.

<sup>138</sup> See section IV.C.2., supra.

<sup>139</sup> General Accounting Office, Need to Reassess U.S. Participation in the International Joint Commission (6.

**Recommendation: The Parties should establish a fixed number of years for the terms of IJC Commissioners, and should stagger the dates of their appointments to prevent wholesale turnovers of Commissioners.**

ELI believes that the frequent turnover in recent years of Commissioners appointed by both countries has undermined the IJC's institutional continuity, making it all the more difficult for the IJC to be effective in carrying out its various roles under the Boundary Waters Treaty and GLWQA. As described in Chapter III,<sup>140</sup> the process of appointing Commissioners has also become increasingly political and has been reduced to an exercise of patronage in appointments by the heads of state in both countries. Since 1980, a slate of new Commissioners has been appointed by every new administration in the United States, resulting in significant turnover on the IJC. High turnover has likewise been a problem for Canada, where Commissioners are also political appointees. In mid-1995, there were no Canadian Commissioners on the IJC.<sup>141</sup>

Staggering the terms of Commissioners is a change that is essential for the IJC to regain its credibility as a technically expert, non-partisan body. It would also reduce the temptation for the Parties to use IJC appointments as political rewards and would preserve the IJC's institutional continuity. Without some carryover of Commissioners from one administration to the next in both countries, the IJC essentially dissolves after each election and loses much of its institutional memory. It also loses the institutional loyalty that characterized previous Commissions whose members served much longer terms.

The Parties have wide latitude to decide how long their Commissioners should serve their terms of office and when their terms should expire. Article VII of the Boundary Waters Treaty allows the Parties complete discretion in deciding the length of Commissioners' terms. Nothing in the IJC's Rules of Procedure appears to restrict the length of their appointments or to prevent them from serving staggered terms to provide for some overlap between newly appointed Commissioners and those who are currently in office.

Using staggered and fixed terms to prevent turnover of high-ranking officials all at the same time is a common practice with most regulatory commissions in the United States, such as the Interstate Commerce Commission and the Securities and Exchange Commission, as well as with United Nations commissions. Staggered terms for IJC Commissioners would maintain continuity and somewhat limit the influence of politics when there is a change of parties controlling the federal governments in either the U.S. or Canada. IJC Commissioners could all serve terms of three years, renewable one or more times as the

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<sup>140</sup> See section III.A., *supra*.

<sup>141</sup> The terms of two Canadian Commissioners expired at the same time, and the third Canadian Commissioner resigned and not yet been replaced.

Parties see fit; but their appointments could be timed so that one Commissioner's term expires every year. In this manner, their resignations would be staggered, and wholesale turnovers of Commissioners would be eliminated.

**Recommendation: The Parties should allow the public to participate in the process of selecting Commissioners.**

ELI recognizes that the process of appointing Commissioners is, and will always be, largely political; but it should still be possible for the IJC to involve the public in recommending some general criteria that the Parties could adopt for the selection of qualified Commissioners. These might include knowledge of the substantive issues, relevant past experience, and commitment to achieving the goals of both the Boundary Waters Treaty and GLWQA. Also, the process of choosing IJC Commissioners in both countries should be open to the public, at least to the extent that names of potential Commissioners can be nominated by organizations outside the two federal governments.<sup>142</sup>

By adopting these qualifications and involving the public both in preparing them and in selecting Commissioners, the Parties and the IJC will be able to take maximum advantage of the political nature of these appointments. Commissioners chosen in this fashion will gain valuable public support, and they will make decisions armed with better information about what can realistically be accomplished.

**Recommendation: The Parties should form a single IJC Secretariat located in the Great Lakes region.**

The lack of institutional continuity is further aggravated because the IJC does not follow the modern structure of central secretariats that house the staffs for most international commissions. Instead, it maintains separate offices in Washington and Ottawa, with the joint office in Windsor. The IJC staff are federal employees of both countries, while both are equally represented among the staff at the Windsor office. This arrangement may have been appropriate to the Parties' needs early in this century when the IJC had to borrow staff from each of the federal governments; but it now seems outmoded, inefficient, and possibly counterproductive.

Article XII of the Boundary Waters Treaty provides for both the U.S. and Canada to appoint secretaries who serve jointly and for the Parties to share equally in the expenses of the IJC. But nothing in that article precludes the Parties from structuring the IJC so that these joint secretaries are housed in a single Secretariat and function as a unified, integrated body, rather than having two separate offices and a third joint office. Not only would a single IJC Secretariat eliminate duplications of staff expertise and operating expenses, but

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<sup>142</sup> In the U.S., environmental groups have had some input on nominations for Commissioners, while the C process has been much more closed.

it would also enhance the IJC's opportunities for binational coordination among the Parties' federal agencies and facilitate more integrated activities on both sides of the border by the IJC's own, consolidated staff. Combined with recent decreases in funding, the binational character of the IJC's staff adds to the problem of managing their work and achieving accountability for results.

### **C. Conclusion**

ELI's recommendations in Chapter IV demonstrate that the IJC can initiate its own actions to strengthen its ability to protect boundary watersheds. But our additional recommendations in this chapter require action by the Parties in order to overcome some fundamental barriers to improving the effectiveness of the IJC.

The multiple of roles assigned to the Commission by the Boundary Waters Treaty have generated many of the IJC's current difficulties. As the IJC's activities have evolved since the Treaty was signed, many stakeholders -- as well as perhaps the Parties and the Commissioners themselves -- have not been clear about what are the IJC's proper roles and how it can contribute most constructively to protection of boundary watersheds.

Traditionally, the IJC's chief strength has been in responding to the Parties' references and acting as an independent fact-finder and technical advisor on water issues. The reference leading to GLWQA represented the high water mark in the scope of the IJC's authority. Yet in recent years the Parties seem to have consciously avoided filing references with the IJC and have relegated it to less substantive tasks, such as compiling public comments. As the Parties have tended to make the IJC marginal, their levels of funding and other in-kind contributions of staff services and technical resources have also declined, thereby reducing the IJC's ability to maintain its technical expertise for dealing with boundary water problems.

Nevertheless, we believe that the IJC still has a very important role to play in monitoring environmental conditions in ecosystems shared by the U.S. and Canada, in recommending standards for protecting those watersheds, and in evaluating the Parties' progress toward meeting those standards. By focusing its efforts on these activities, the IJC can possibly demonstrate to the Parties and other interested stakeholders that it still can achieve positive results in reducing pollution across all of the boundary watersheds during the years to come as it approaches its 100th anniversary.

## APPENDIX A

### THE IJC'S ROLE IN THE BINATIONAL PROGRAM FOR LAKE SUPERIOR

#### 1. Introduction

In an effort to spur progress towards the goals of virtual elimination of bioaccumulative toxic substances,<sup>143</sup> the IJC in 1990 proposed the designation of Lake Superior as a pilot project for programs to address the Agreement's requirements for virtual elimination and zero discharge of persistent toxic substances.<sup>144</sup> Lake Superior, by far the most pristine of the Great Lakes, would be a laboratory where zero-discharge could be attempted and proved. The governments of the United States, Canada, Michigan, Wisconsin, Minnesota, and Ontario joined in establishing a "Binational Program" designed to reach the virtual elimination and zero discharge goals of the Great Lakes Water Quality Agreement (GLWQA).<sup>145</sup>

The premise underlying the Binational Program is that a successful pilot project in Lake Superior could be used as a model to reach the goals of the GLWQA throughout the Great Lakes basin.<sup>146</sup> Five years have lapsed since the Lake Superior proposal, and while the Parties have taken some significant steps, real progress towards restoring water quality in the least polluted Great Lake remains elusive.<sup>147</sup>

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<sup>143</sup> The Great Lakes Water Quality Agreement states that "the discharge of toxic substances in toxic amount be prohibited and the discharge of any or all persistent toxic substances [is to] be virtually eliminated." Persistent substances, defined as "any toxic substance with a half-life in water of greater than eight weeks," become widely dispersed, and bioaccumulate, or concentrate in the tissues of, plants and animals, including humans. See Sixth Report, p. 15 (1994). The IJC has recommended that the Parties begin the virtual elimination process by eliminating releases of the worst persistent toxic compounds or "Critical Pollutants." The IJC also recommends the elimination of organochlorines (such as dioxin) as a class of pollutants "due to their large number and the egregious character of many of them." See Seventh Biennial Report, p. 8 (1994).

<sup>144</sup> International Joint Commission, Fifth Biennial Report on Great Lakes Water Quality (1990).

<sup>145</sup> A Binational Program to Restore and Protect the Lake Superior Basin (Sept. 1991) ["Binational Program"]

<sup>146</sup> International Joint Commission, Sixth Biennial Report on Great Lakes Water Quality (1992), p. 34.

<sup>147</sup> International Joint Commission, Seventh Biennial Report on Great Lakes Water Quality (1994), p. 26. For example, the governments have taken steps toward the clean up of Lake Superior through the Lakewide Management Plan process, but have progressed little beyond the planning stage. Few concrete measures that actually reduce pollution have been implemented. A notable exception to this lack of progress is a voluntary effort by the West Lake Superior Sanitary District (WLSSD) to implement a zero discharge program for persistent toxics. The WLSSD covers about 500 square miles, including Duluth, Minnesota, and serves a population of approximately 120,000. Because treatment of wastes is prohibitively expensive, the WLSSD has chosen to focus on pollution prevention. It has begun working with hospitals, educational institutions, and industries to identify and find ways to eliminate sources of toxic pollution. It has received a total of about \$550,000 from the Great Lakes Protection Fund, the USEPA C

(continued...)

A principal reason for this lack of progress is that toxic contaminants reach Lake Superior primarily through atmospheric deposition and tributary loadings. Deposition of airborne toxics is by far the largest source of pollutants entering the Lake from a basin wide perspective, accounting for over ninety percent of most major pollutants.<sup>148</sup> A large percentage of atmospheric deposition arrives from sources far afield, carried by wind often over significant distances.<sup>149</sup> Cleaning up such long-range transport requires solutions that go beyond merely reducing discharges from point sources<sup>150</sup> around the Lake.

This appendix focuses on the process for implementing the virtual elimination program for Lake Superior and how the IJC might make the process more effective. Part 1 provides the background for the issue of toxic deposition in Lake Superior, Part 2 relates the structure of the Binational Program, and Part 3 examines the IJC's role in initiating and carrying out the Binational Program and asks whether the IJC will be able to facilitate better the effort to clean up Lake Superior.

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<sup>147</sup>(...continued)

National Program Office, and USEPA Region V to implement the program over the next two years.

<sup>148</sup> Lake Superior Binational Program, Volume II: Draft Stage 1 Lakewide Management Plan 28 (October 1994). See also David De Vault et al., Toxic Contaminants in the Great Lakes, State of Lakes Ecosystem Conference (1994).

<sup>149</sup> David M. Dolan, et al., Source Investigation for Lake Superior, Report to the Virtual Elimination Task Force, International Joint Commission (December 1993), p. 8. Sources 500 km to 1000 km to the south of Lake Superior contribute more than 33 percent of the total deposition to the Lake.

<sup>150</sup> A "point source" generally refers to a discrete conveyance such as a stack or pipe, while "non-point source" refers to more diffuse, less confined conveyances such as agricultural stormwater discharges or vehicle emissions. See Clean Water Act, 33 U.S.C.A. §1363(14).

## 2. The Binational Program

### a. Background

The IJC's 1989 biennial meeting is an example of how members of the public can participate in the IJC's agenda-setting process. During the meeting, a Canadian businessman, Bruce Hyer, suggested that the IJC recommend to the Parties that Lake Superior be designated a pilot project for programs to address the GLWQA requirements for zero discharge.

Lake Superior was an interesting choice for such a pilot project because the political, economic, and technological obstacles to virtual elimination in Lake Superior would be the easiest to overcome compared to other Great Lakes. Lake Superior had relatively good water quality and indicators of ecosystem health, and the industries located in the Lake Superior basin made a relatively small contribution to the industrial base of any of the states or province having jurisdiction over the Lake.<sup>151</sup> The choice was also interesting because of the bias in pollution laws in both countries towards cleanup of the worst sites, instead of preserving the integrity of relatively pristine sites such as Lake Superior.

In 1990, the IJC responded to Mr. Hyer's suggestion by recommending in its Fifth Biennial Report that the Parties designate Lake Superior "as a demonstration area where no point source discharge of any persistent toxic substance be permitted."<sup>152</sup> The various jurisdictions responsible for managing the Lake Superior basin began immediately to implement the recommendation and, on September 30, 1991, the U.S. EPA, Environment Canada, the states of Michigan, Minnesota, and Wisconsin, and the Province of Ontario announced the "Binational Program to Restore and Protect the Lake Superior Basin."<sup>153</sup>

### b. Structure of the Binational Program

The Binational Program contains two major commitments. The first is a zero discharge demonstration program devoted to the goal of achieving zero discharge and zero emission of nine designated persistent toxic substances.<sup>154</sup> The second is a broader program to

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<sup>151</sup> Superior Vision, Newsletter for the Lake Superior Bioregion, The Lake Superior Alliance (November, 1

<sup>152</sup> Fifth Biennial Report, p. 23.

<sup>153</sup> Binational Program.

<sup>154</sup> The nine chemicals of concern are:

Chlordane: a pesticide prohibited for agricultural use the U.S. since 1983 but still used in the control of underground termites.

DDT (dichlorodiphenyltrichloroethane): A pesticide banned in 1973.

Dieldrin: A pesticide used to control soil insects that was banned in the early 1970s.

(continued...)

identify beneficial use impairments, and restore and protect the Lake Superior Basin ecosystem.<sup>155</sup> This goal addresses larger ecosystem problems such as wildlife habitat and wetlands destruction.<sup>156</sup> The Binational Program establishes three principal organizational entities: The Lake Superior Task Force, the Lake Superior Work Group, and the Lake Superior Binational Forum.<sup>157</sup> The Task Force is comprised of upper level managers from the various governments' natural resource and environmental protection agencies. The Task Force members have the authority to set policies and give overall direction to the

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<sup>154</sup>(...continued)

Dioxins: A class of compounds formed during the chlorination of pulp and paper and emitted by municipal incinerators. Dioxins and related compounds are among the most toxic substances known, having been shown to have acute fetotoxic, teratogenic, mutagenic, carcinogenic, and immunotoxic effects.

Hexachlorobenzene (HCB): Used as a pesticide in the U.S. until 1976, HCB is still produced as a by-product of the manufacture of chlorine, perchloroethylene, pentachlorophenol, carbon tetrachloride, atrazine, and other chlorinated hydrocarbons. It is also a by-product of the chlorine bleaching process in some pulp and paper mills. Industry uses it as a plasticizer for polyvinyl chloride as well as a flame retardant.

Mercury: Used in a wide variety of products and processes including barometers, thermometers, hydrometers, arc lamps, fluorescent bulbs, switches, mirrors, stains and inks, marine paint, slimicides, golf course pesticides, preservatives, porcelain pigment, coloring for plastics, sealing wax and colored paper, extracting gold and silver ores, making amalgams (e.g. dental fillings), and hide preservation among others. It is also emitted by municipal incinerators and released when fuels such as coal or wood are burned.

Octachlorostyrene (OCS): An accidental by-product of high-temperature industrial processes involving chlorine and aluminum smelting and chlorine gas production).

PCBs (polychlorinated biphenyls): Used in plasticizers, heat transfer and hydraulic fluids, lubricants and waxes and fluids in vacuum pumps and compressors.

Toxaphene: A complex mixture of polychlorinated camphenes and bornanes used as a pesticide until 1989. It is acutely toxic to fish that it was also used for rough fish control.

Lake Superior Pollution Prevention Strategy, Lake Superior Binational Program, Appendix 4 (Oct. 1993).

<sup>155</sup> Binational Program, p. 8.

<sup>156</sup> Mark Van Putten & Gayle Coyer, "Saving Lake Superior," The Environmental Forum (July/August 1993).

<sup>157</sup> Ibid., p. 1.



Program.<sup>158</sup> The Work Group consists of representatives from a variety of agencies in each of the six governments,<sup>159</sup> and is responsible for the day-to-day implementation of the Binational Program.<sup>160</sup>

The Forum is a public advisory committee to the governments, composed of twenty-two members known as "stakeholders", eleven each from the U.S. and Canada. These members represent industry, environmental organizations, and municipalities from around the Lake Superior basin. No government agencies are represented on the Forum, although some staff attend the meetings regularly as liaisons. The Forum's task is to develop specific policy recommendations for implementing the Binational Program acceptable to all the represented interests. The governments need not follow the recommendations, but are likely to do so.<sup>161</sup>

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<sup>158</sup> Task Force members are: Christopher Grundler, Director, Environmental Protection Agency Great Lakes National Program Office; Eleanor Kulin, Director, Environment Canada Great Lakes Office; Gerald Rees, On Ministry of Environment & Energy; Dale Bryson, Director, EPA Region 5 Water Division; Bruce Baker, Director, Wisconsin Department of Natural Resources; Patty Burke, Director, Water Division, Minnesota Pollution Control Agency; Tracy Mehan, Director, Michigan Department of Natural Resources, Office of the Great Lakes

<sup>159</sup> Work Group Member Agencies include: Wisconsin Department of Natural Resources, EPA Region 5, Great Lakes National Program Office, Minnesota Pollution Control Agency, National Park Service, Michigan Department of Natural Resources, U.S. Fish and Wildlife Service, Environment Canada, Ontario Ministry of the Environment, Department of Fisheries and Oceans, Ontario Department of Natural Resources, Health and Welfare Canada.

<sup>160</sup> Gayle Coyer, "A Binational Program Primer," Superior Vision (November 1993), p. 4.

<sup>161</sup> The Forum meets bi-monthly for two days and receives funding entirely from the EPA and Environment Canada. The Canadian and U.S. teams each elect a co-chair who presides when the meeting is held in his or her country. The group forms committees to work on specific tasks. Currently the Forum has five main committees: (1) A "zero discharge" committee working on reduction targets and timelines for specific chemicals; (2) A "chemical list" committee designing a screening methodology for adding chemicals to the zero discharge list; (3) A "transition economic committee exploring alternatives to current industrial processes; and (4) A "charter" committee drafting a Forum to govern Forum proceedings more efficiently; (5) A "Communications and Outreach" committee to seek input from citizens outside the Forum. When the Forum achieves consensus on a particular recommendation, for example to schedule to phase out use of a particular chemical, it reports the recommendation to the government agencies. Currently, the Forum could send only one report, representing group consensus. New rules adopted in January require the Forum to send majority and minority recommendations.

The IJC is not formally part of the Binational Program's management structure. It does, however, have a limited role in facilitating the implementation of the Program, that of reviewing the Lakewide Management Plan developed pursuant to the GLWQA.

c. Implementation

The Binational Program identifies a variety of actions to be taken by the Parties and implemented through the Work Group's member agencies. A Lakewide Management Plan ("LAMP")<sup>162</sup> is to coordinate all the activities directed toward its goals of zero discharge and ecosystem restoration.<sup>163</sup> There are three principal components to the implementation strategy outlined in the Binational Program.<sup>164</sup> The first emphasizes pollution prevention, and directs the Parties to seek voluntary reductions of toxic emissions. The Forum is identified as the primary vehicle for considering ways to achieve voluntary reductions.

The second component requires that the governments designate Lake Superior basin waters as a special resource, applying anti-degradation approaches which require best technology<sup>165</sup> for any proposed new or increased discharge of certain toxics.<sup>166</sup> It also requires the parties to designate certain sensitive portions of the Lake basin as areas where no new or increased point source discharge will be permitted. In the United States, the Bi-National Program commits the State governments of Michigan, Minnesota, and Wisconsin to designate all areas of the Lake Superior Basin as "Outstanding International Resource Waters" (OIRW). It also commits the state governors to designate special areas such as national parks, refuges, state parks, and recreational areas as "Outstanding National Resource Waters" (ONRW). The Program directs Canada to pursue a similar federal-provincial designation under the Canada Water Act.

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<sup>162</sup> GLWQA obligates the Parties to create LAMPs for each of the Great Lakes. GLWQA, Annex 2.

<sup>163</sup> Binational Program, p. 11.

<sup>164</sup> Ibid., p. 3.

<sup>165</sup> "Best technology" usually refers to a level of emissions control achievable by the application of certain processes or techniques. See, e.g., Clean Air Act, 42 U.S.C.A. §7479(2)(b)(3). The specific meaning of best in the Binational Program is never defined.

<sup>166</sup> Binational Program, p. 5.

Under the OIRW designation, increased discharges of designated persistent bioaccumulative toxic pollutants will not be allowed without an adequate antidegradation demonstration that includes application of best technology for process and treatment.<sup>167</sup> Under the ONRW designation, any new or increased discharges of designated pollutants from point sources will be prohibited.<sup>168</sup> Both designations apply only to point sources.<sup>169</sup> ONRW and OIRW do not purport to reduce existing discharges into the Lake. Rather, they are anti-degradation measures intended to protect the Lake from increased discharges while the governments develop other zero-discharge measures.

The third principal component of the Binational Program emphasizes certain regulatory strategies. It commits the governments to develop common water quality standards and establish common interim water quality goals on the Great Lakes Water Quality Initiative in the United States. The new or revised standards for Lake Superior are to be administered through existing enforcement mechanisms such as state-issued National Pollutant Discharge Elimination System (NPDES) permits.

The Binational Program addresses air deposition by directing the governments to complete an inventory of toxic air emissions and an assessment of toxic air deposition in the Lake Superior basin. The Parties are to promulgate any necessary emission standards or control measures under existing programs, such as the U.S. Clean Air Act.

The Binational Program itself does not contain any specific timetables for implementing these measures. The Stage One LAMP document, however, presumably will include implementation timetables when it is available. The LAMP document is intended to embody the goals of the Binational Program and is the means by which it will be implemented and enforced. The IJC's role in the implementation of the Program consists of reviewing the LAMP documents in four stages.

d. Progress Toward Goals

Four years have passed since the Parties agreed to the Binational Program, yet the governments have made very little progress toward implementing the zero discharge commitment. The following subsections examine the governments' progress toward putting in place a special anti-degradation designation, and establishing controls under a Lakewide Management Plan for Lake Superior, and the Forum's progress to date in its role as citizen advisory body.

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<sup>167</sup> Environmental Protection Agency, Review of Lake Superior Lakewide Management Plan, 59 Fed. Reg. (1994).

<sup>168</sup> Ibid.

<sup>169</sup> Binational Program, p. 4.

It is interesting to note that two recent developments leading to the cleanup of toxic emissions in Lake Superior have to do mostly with mechanisms under the Clean Water Act. The first is the finalization of the Great Lakes Initiative by EPA, which further reduces the standards for discharge of toxic emissions from point sources. A second is the settlement of a citizen suit brought by the National Wildlife Federation against the Copper Range Company, which discharged ten times more mercury into Lake Superior than any other point source. The \$205 million settlement, the largest ever under the CWA, requires the construction of a new plant that will eliminate the discharges.<sup>170</sup>

(1) Special Designations

To date, the governments have not taken steps to implement the OIRW designation, nor have they designated any area of the Lake ONRW as contemplated under the Binational Program.<sup>171</sup> The lack of progress toward this goal is due to opposition from both environmental organizations and industry.

Industry opposed the OIRW/ONRW designation because it appeared to impose new technology requirements for increased discharges, potentially limiting economic growth. Environmental groups oppose the special designations strategy set out in the Binational Program for a number of reasons. First, the OIRW designation allows for increases in the discharge of persistent toxics provided the polluter uses "best technology."<sup>172</sup> Second, the ONRW designation set out in the Binational Program applies only to certain portions of the Lake and does not prevent degradation if the source of the pollution lies outside the boundaries of those special areas. Finally, the Binational Program limits the OIRW/ONRW designation to point sources while non-point sources such as atmospheric inputs account for the largest portion of persistent toxic pollution. Consequently, environmental groups believe that the Binational Program's anti-degradation measures will not be effective.

As an alternative, in October 1994, environmental groups petitioned the governments of Wisconsin, Minnesota, and Michigan to designate all of Lake Superior as an ONRW under the Federal Clean Water Act.<sup>173</sup> They have also made a parallel request that Lake

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<sup>170</sup> See Office of the Great Lakes Activity Report, Michigan Department of Natural Resources (April 1995)

<sup>171</sup> National Wildlife Federation, Petition to Classify Lake Superior as an Outstanding National Resource Water Persistent Bioaccumulative Toxic Substances (October 25, 1994).

<sup>172</sup> NWF Petition, p. 8.

<sup>173</sup> The National Wildlife Federation and Great Lakes United, a consortium of about 200 local and regional environmental and civic groups, signed onto the petition.

Superior be made a special management area under the Canada Water Act.<sup>174</sup> Under the U.S. Clean Water Act, an ONRW designation would prohibit increased loadings of persistent toxic substances from all sources.<sup>175</sup> To date, the governments have not responded to the petition.

(2) Lake Superior Lakewide Management Plan

Section 118 of the Clean Water Act (also known as the Great Lakes Critical Programs Act)<sup>176</sup> defines "Lakewide Management Plan" as "a written document which embodies a systematic and comprehensive ecosystem approach to restoring and protecting the beneficial uses of the open waters of each of the Great Lakes, in accordance with Article VI and Annex 2 of the Great Lakes Water Quality Agreement." Under GLWQA, the Parties are required to designate a list of "Critical Pollutants" to be addressed by the LAMP.<sup>177</sup> GLWQA requires that the IJC review the Parties' progress under LAMPs in addressing Critical Pollutants and recommend additional pollutants for designation.<sup>178</sup>

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<sup>174</sup> NWF Petition.

<sup>175</sup> 40 C.F.R. 131.12(a)(1).

<sup>176</sup> Clean Water Act, 33 U.S.C.A. §1268. The purpose of Section 118 is to "achieve the goals embodied in Lakes Water Quality Agreement of 1978, as amended by the Water Quality Agreement of 1987 and any other agreements and amendments, through improved organization and definition of mission on the part of the Agency; to provide for the funding of State grants for pollution control in the Great Lakes area, and improved accountability for implementation of such agreement." 33 U.S.C.A. §1268(2), 3(I).

<sup>177</sup> GLWQA 1978, Annex 2(5).

<sup>178</sup> Specific requirements of each LAMP include the following:

- (i) a definition of the threat to human health or aquatic life posed by Critical Pollutants, singly or in synergistic or additive combinations with another substance, including their contribution to the impairment of beneficial uses;
- (ii) an evaluation of information available on concentration, sources, and pathways of the Critical Pollutants in the Great Lakes System, including all information on loadings of the Critical Pollutants from all sources and an estimation of total loadings of the Critical Pollutants by modelling or other identified methods;
- (iii) steps to be taken pursuant to Article VI of this agreement to develop the information necessary to determine the schedule of load reduction of Critical Pollutants that would result in meeting Agreement Objective including steps to develop the necessary standard approached and agreed procedures;
- (iv) a determination of load reduction of Critical Pollutants necessary to meet Agreement Objectives;
- (v) an evaluation of remedial measures presently in place, and alternative additional measures that could be applied to decrease loadings of Critical Pollutants;
- (vi) identification of the additional remedial measures that are needed to achieve the reduction of loadings to eliminate the contribution to impairment of beneficial uses from Critical Pollutants, including an implementation schedule;

(continued...)

The Parties are to carry out their LAMP obligations in four separate stages. Stage One is a definition of the problem. In Stage Two the parties establish a schedule of toxic load reductions. In Stage Three they select remedial measures, and in Stage Four monitoring demonstrates that the problems have been eliminated.<sup>179</sup> The Parties must submit LAMP documents at each stage to the IJC for review and comment.<sup>180</sup>

In the eight years since the 1987 Protocol amended GLWQA, the Parties have not moved beyond the Stage One definition requirement for the Lake Superior LAMP.<sup>181</sup> Furthermore, the Draft Stage One LAMP appears to fall short of satisfying GLWQA requirements. For example, the Agreement provides that the Parties must designate "Critical Pollutants," meaning any substance that persists at levels that adversely affect the Lakes due to its ability to either bioaccumulate or "cause or contribute to a failure to meet Agreement objectives through their recognized threat to human health and aquatic life."<sup>182</sup>

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<sup>178</sup>(...continued)

- (vii) identification of the persons or agencies responsible for implementation of the remedial measures in question;
  - (viii) a process for evaluating remedial measure implementation and effectiveness;
  - (ix) a description of surveillance and monitoring to track the effectiveness of the remedial measures and the eventual elimination of the contribution to impairments of beneficial uses from the Critical Pollutants;
  - (x) a process for recognizing the absence of a Critical Pollutant in open lake waters.
- Ibid.

<sup>179</sup> Ibid., Annex 2(6)(c).

<sup>180</sup> Ibid., Annex 2(6)(c).

<sup>181</sup> Review of Lake Superior Lakewide Management Plan, 59 Fed. Reg. 7252 (1994). EPA is currently in the process of incorporating comments into the Stage One LAMP.

<sup>182</sup> GLWQA 1978, Annex 2(1)(b).

The Stage One LAMP, however, lists only the nine zero discharge chemicals in the Binational Program as Critical Pollutants.<sup>183</sup> Appendix Four of the Stage One LAMP lists fifty chemicals that are highly bioaccumulative.<sup>184</sup>

### (3) Progress in the Binational Forum

In September 1991 the Binational Forum held its first meeting.<sup>185</sup> In January 1992, the Forum produced a single-page "Vision Statement" setting out broadly its intended mission.<sup>186</sup>

After agreeing on the principles outlined in the Vision Statement, Forum members began discussing the formation of committees to develop recommendations regarding specific goals of the Binational Program. By late 1992 the Forum had formed committees to discuss the Lake Superior Lakewide Management Plan document, recommendations for limiting discharge of the nine "critical pollutants" listed in the Binational Agreement, and criteria for adding other toxic compounds to the list.

None of these discussions led to concrete recommendations to the Parties until September 1994, three years after meetings began, when the Forum issued a recommendation on controlling the discharge of mercury.<sup>187</sup> Forum stakeholders, in fact, would have achieved consensus on the mercury recommendation eight months earlier, had a single industry representative not opposed it. Due to the consensus requirement, however, the Forum could not issue the recommendation.

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<sup>183</sup> 59 Fed. Reg. 7255 (1994).

<sup>184</sup> Lake Superior Binational Program, Lakewide Management Plan, Appendix 4 (1993).

<sup>185</sup> Ibid.

<sup>186</sup> Binational Forum, A Vision for Lake Superior (January 31, 1992). The statement includes the following objectives: "We seek a Lake Superior watershed...that is a clean, safe environment where diverse life forms exist in harmony; where the environment can support and sustain economic development and where citizens are committed to regional cooperation and a personal philosophy of stewardship; that is free of toxic substances at levels that threaten wildlife and human health; where people can drink the water or eat the fish anywhere in the lake without restriction; where wild shorelines and islands are maintained and where development is well planned, visually pleasing, beautiful, and sound and conducted in an environmentally benign manner; which recognizes that environmental integrity provides the foundation for a healthy economy and that the ingenuity which results from clean, innovative and preventive management and technology can provide economic transformation for the region."

<sup>187</sup> Superior Vision (October 1994).

In June 1994, after months of frustration with the lack of progress, environmental groups suspended work in Forum committees and threatened to pull out of the Forum entirely unless certain demands were met.<sup>188</sup> Although environmental representatives account for only four of the 22 stakeholders, suspension of their membership would effectively mean an end to the usefulness of the Forum as a public advisory body.<sup>189</sup> Governments will not take seriously Forum recommendations lacking input from a major group of stakeholders.<sup>190</sup>

The environmental groups' threat to pull out of the Forum sparked considerable movement on a number of formerly deadlocked issues. After August of 1994, the Forum issued a recommendation on mercury,<sup>191</sup> as described above, and the consensus requirement for issuing recommendations was altered to allow issuance of both majority and minority reports in the case that all stakeholders fail to reach agreement. Stakeholders have

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<sup>188</sup> The environmental groups drafted a letter demanding that the Forum consider and take action on eight issues. They demanded that the Forum:

1. Make recommendations and provide implementation plans achieving zero discharge for dioxin, mercury, PCBs, and Hexachlorobenzene;
2. Formally endorse all IJC recommendations;
3. Recommend a demonstration project for habitat and biodiversity to implement the Broader Program of the Binational Program;
4. Engage experts to determine the necessary course of economic transition for the basin to switch to a toxic free economy and ecosystem;
5. Limit its membership to those committed to achieving the goal of zero discharge;
6. Reform its decision-making procedures to ensure that consensus is not blocked by a single member's interest;
7. Institute a comprehensive public outreach and participation program;
8. Keep all six governments apprised of its technical needs, and the governments must respond with the necessary resources.

Letter to Charles Ledin, Jake VanderWal, Kurt Soderberg, Bruce Hansen signed by Great Lakes United, Friends of the Land of Keweenaw, Association Working Against Keweenaw Exploitation, Lake Superior Green Cliff Tribe Environmental Protection Office, Upper Peninsula Environmental Coalition, National Wildlife Federation, Sierra Club Midwest (September 6, 1994). See also, Superior Vision, "Alliance Groups Move To Reform the Forum" (September 1994).

<sup>189</sup> Jake Vander Wal, Canadian Government Liaison to the Forum, Superior Vision (October 1994).

<sup>190</sup> Ibid.

<sup>191</sup> The Forum settled on a 60 percent reduction in discharges of mercury by the year 2000, 80 percent by 2010, and 100 percent (zero discharge) by 2020. Superior Vision (October 1994).



signed a new charter that incorporates a number of the environmentalists' critiques.<sup>192</sup> Three workshops covering PCBs, pesticides, and chlorinated organics have been held and recommendations are forthcoming.

The goal of "zero discharge," however, continues to be a divisive issue, and industry groups have strenuously opposed any reference to zero discharge in the charter document. Instead, the charter uses the term "virtual elimination" as a compromise.

### **3. The IJC'S Role**

#### **a. IJC Interventions**

Having initiated the Binational Program through its recommendation in the Fifth Biennial Report, the IJC has limited its role in Binational Program initiatives to evaluating the Parties' progress toward the Program's goals, which it publishes in the Biennial Reports.

In its Sixth Biennial Report, the IJC criticized the Binational Program for appearing to limit its objectives to pollution reduction and management, rather than the elimination of, point source discharges of persistent toxics. It recommended that:

The Parties, in cooperation with Lake Superior states and provinces, establish a specific date at which no point source release of any persistent toxic substances will be permitted into Lake Superior or its tributaries...[and] that the Parties...agree to prohibit new or increased sources of point source discharges of persistent toxic substances; and establish a coordinated phaseout of existing sources.<sup>193</sup>

In its Seventh Biennial Report, the IJC observed that the Parties had failed to declare timetables for eliminating all point sources discharges of persistent toxics. It noted that both Parties had stated that they prefer to wait for more investigation, including more information on atmospheric deposition, before making a commitment on timing.<sup>194</sup> Nevertheless, the IJC has generally not undertaken detailed evaluations of the Parties' legislative or regulatory measures affecting Great Lakes water quality, such as the EPA's Great Lakes Initiative.

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<sup>192</sup> Forum Charter (January 1995).

<sup>193</sup> Sixth Biennial Report, p. 33.

<sup>194</sup> Seventh Biennial Report, p. 31.

b. Effectiveness of IJC

Although some significant steps under the Binational Program have occurred, progress has been slow. The IJC has observed, and environmental groups have complained, that water quality in Lake Superior has continued to decline because the governments have failed to implement any concrete pollution control measures since the Lake Superior pilot project was proposed more than five years ago.<sup>195</sup>

Many environmental activists working on Lake Superior issues believe that the positive steps toward toxic pollution control in the Lake that have been achieved so far never would have occurred had the IJC not been present in its current role.<sup>196</sup> The Lake Superior pilot project, for example, never would have materialized without IJC recommendations.<sup>197</sup> The effectiveness of its recommendations depends to a large extent on its status as an independent, impartial, and technically competent advisory body. The IJC is frequently characterized as the moral authority in the Great Lakes. IJC recommendations are perceived as credible and fair and, as in the case of the Binational Program, can serve as a catalyst for devising joint programs or regulations.

The Lake Superior Binational Program is an example of how IJC recommendations can pressure the Parties to take new actions or to speed up implementation of common objectives. Citizen coalitions have productively used IJC information and recommendations to hold the governments accountable in demonstrating progress on the goals of the Great Lakes Water Quality Agreement.<sup>198</sup> In this way, through its evaluations and recommendations, the IJC has helped to expand the scope of government consensus.

Without disrupting its fragile advisory role or going beyond its current legal authority, the IJC could move beyond the general critiques contained in the Biennial Reports and its role in the evaluation of LAMPs to conduct detailed assessments of the adequacy (consistency with Agreement goals) of the Parties' legislation and regulations. Indeed, the 1987 GLWQA Protocol authorizes such action: "The Commission may at any time make special reports to the Parties, to the State and Provincial Governments and to the public concerning any problem of water quality in the Great Lakes System."<sup>199</sup> Such assessments could, for example, extend to strategic intervention regarding the Clean Water Act, the Clean Air Act, the Great Lakes Initiative, the Great Waters Program, and state and provincial legislation.

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<sup>195</sup> Seventh Biennial Report, p. 31.

<sup>196</sup> VanPutten & Coyer, supra, p. 14.

<sup>197</sup> Ibid.

<sup>198</sup> VanPutten & Coyer, supra, p. 14.

<sup>199</sup> GLWQA 1987, Article VII(3).

In addition, the IJC could expand its role in the area of public education and outreach. The likely effect of such programs would be to rally citizen support for the IJC's own recommendations, thereby placing political pressure on the Parties to act more swiftly. The IJC does not play a role in the Forum's deliberations. It has, however, encouraged progress in the Forum in its Seventh Biennial Report.<sup>200</sup> In expanding its role as objective evaluator and educator, the IJC would not foist new or unexpected obligations on the governments. Rather, it would nudge them in the direction of greater political accountability to citizens in fulfilling objectives already signed into agreement.

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<sup>200</sup>Seventh Biennial Report, p. 31.

## APPENDIX B

### THE IJC's ROLE IN THE REMEDIAL ACTION PLAN PROCESS

#### 1. Introduction

Annex 2 of the 1987 Protocol amending the Great Lakes Water Quality Agreement (GLWQA) requires the eight Great Lakes states and Ontario to cooperate with the Parties in the development and implementation of remedial action plans (RAPs) for areas of concern (AOCs) in the Great Lakes basin. The RAP process was recommended in 1985 by the IJC's Water Quality Board (WQB) and was formalized in the 1987 Protocol amending GLWQA.<sup>201</sup> RAPs have had the effect of focusing efforts to clean up Great Lakes pollution in the specific areas designated as AOCs. The RAP process is intended to result in the cooperative management of AOC clean-up decisions and activities by federal, state, provincial, and local governments and local stakeholders. Some state observers believe that the RAP process has resulted in a much-needed prioritization of cleanup resources and focused them on concrete, area-specific goals.

An AOC is defined as a "geographic area that fails to meet the General or Specific Objectives of the GLWQA where such failure has caused or is likely to cause impairment of beneficial use or of the area's ability to support aquatic life."<sup>202</sup> Impairment of beneficial use is defined as a "change in chemical, physical, or biological integrity of the Great Lakes System"<sup>203</sup> sufficient to cause any of fourteen impaired uses.<sup>204</sup> AOCs are designed to focus remedial action on use impairments that are local in their geographical extent and causes. By contrast, if pollution affecting fish in a local area also requires a

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<sup>201</sup> Great Lakes Water Quality Agreement of 1978, November 22, 1978, United States-Can., 30 U.S.T. 138; amended by the Protocol dated November 18, 1987, Annex 2(2).

<sup>202</sup> GLWQA, Annex 2(1)(a).

<sup>203</sup> GLWQA, Annex 2(1)(c).

<sup>204</sup> Fourteen impaired beneficial uses are defined in Annex 2(1)(c): Restrictions on fish and wildlife consumption; tainting of fish and wildlife flavour; degradation of fish and wildlife populations; fish tumors or other deformities; animal deformities or reproduction problems; degradation of benthos; restrictions of dredging activities; eutrophication or undesirable algae; restrictions on drinking water consumption, or taste and odor problems; beach closings; restrictions of aesthetics; added costs to agriculture or industry; degradation of phytoplankton and zooplankton populations; and degradation of fish and wildlife habitat.

health advisory for the whole lake, this problem should then be addressed in a Lakewide Management Plan (LAMP) rather than designating that local area as an AOC.<sup>205</sup>

## **2. Designation of AOCs**

The Parties, in cooperation with the states, Ontario, and the IJC, designate AOCs based on the existence of use impairments. The IJC is responsible for recommending the designation of new AOCs as necessary when more impaired uses are discovered. Delisting occurs when all impaired uses have been restored. The IJC has established its Guidelines for Recommending the Listing and Delisting of Great Lakes Areas of Concern to provide indicators of use impairments.<sup>206</sup> When a local area is being considered for listing as an AOC, the Parties and the involved state and provincial jurisdictions must reach an agreement, in writing, to assess and document use impairments based on the IJC's listing/delisting guidelines.

Each state or province is responsible for producing RAPs for the AOCs within its jurisdiction. Twelve AOCs are located in Ontario; 26 are located in boundary areas shared by Great Lakes states of the U.S., and five cover boundary areas between Ontario and Michigan or Ontario and New York. Shared AOCs are the responsibility of both jurisdictions bordering the AOC. For each AOC, the state or provincial government, generally through its department of environment, must work with local governments and citizens on all steps of designing and implementing a RAP.

Only one AOC - Collingwood Harbor - has been officially delisted since 1987, and Presque Isle Bay is the only AOC that has been added to the list of 42 AOCs designated by the Parties at the time of the 1987 Protocol. Its AOC designation occurred as a result of public pressure by the people in the local area of Presque Isle Bay. The Science Advisory Board (SAB) advised the IJC to recommend Presque Isle Bay for designation by the U.S. Department of State.<sup>207</sup> In 1991, the U.S. Department of State officially designated Presque Isle Bay as an AOC.

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<sup>205</sup> Great Lakes Water Quality Board, Review and Evaluation of the Great Lakes Remedial Action Plan Pro (June 1991), p. 10.

<sup>206</sup> Ibid.

<sup>207</sup> At the time, the SAB was holding its regular meetings in different areas around the Great Lakes basin in make them accessible to people in the entire region and to increase its own awareness of local issues. The SA made aware of the public's interest in designating Presque Isle Bay as an AOC during one of these meetings.

### 3. Preparation of RAPs

The states and Ontario are required to submit RAPs in three stages to the IJC for each of the AOCs in their respective jurisdictions. Stage 1 requires the identification of impaired beneficial uses and their causes or sources. Stage 2 requires the evaluation and selection of remedial and regulatory measures to be implemented, a schedule for planned remedial actions, and identification of the persons or agencies responsible for implementation. Stage 3 must outline the process that will be used to evaluate the effectiveness of remedial actions for eventual determination that impaired uses have been restored.<sup>208</sup>

The IJC is charged with the task of evaluating the RAPs for adequacy in defining problems, completeness in identifying remedial and regulatory measures, and effectiveness in involving the stakeholders. Prior to 1991, the Water Quality Board (WQB) coordinated the process of RAP review and comment, and both the WQB and the SAB reviewed each of the RAPs submitted by the jurisdictions. The WQB was primarily responsible for RAP review and reported semi-annually to the IJC on the status of RAP implementation and development.

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<sup>208</sup> Each plan must include:

- (i) Definition and detailed description of the environmental problem in the Area of Concern, including a definition of the beneficial uses that are impaired, the degree of impairment, and the geographic extent of such impairment;
- (ii) Definition of the causes of the use impairment, including a description of all known sources of pollution involved and an evaluation of other possible sources;
- (iii) Evaluation of remedial measures in place;
- (iv) Selection of additional remedial measures to restore beneficial uses and a schedule for their implementation;
- (v) Selection of additional remedial measures to restore beneficial uses and a schedule for their implementation;
- (vi) Identification of the persons or agencies responsible for implementation of remedial measures;
- (vii) Process for evaluation remedial measure implementation and effectiveness; and
- (viii) Description of surveillance and monitoring processes to track the effectiveness of remedial measures and the eventual confirmation of the restoration uses.

GLWQA, Annex 2(4)(a).

These plans must be submitted to the IJC for review and comment at three stages: Upon completion of problem definition required under sub-paragraphs 4 (a)(i) and(ii); upon selection of remedial and regulatory measures under sub-paragraphs 4 (a)(iii), (iv), (v) and (vi); and upon indication that identified beneficial uses have been restored under sub-paragraphs 4(a)(vii) and (viii). GLWQA, Annex 2 (4)(d).

Both Boards established review criteria in an attempt to ensure consistent and impartial review of RAPs.<sup>209</sup> First, technical reviews were obtained from individuals affiliated with the WQB and the SAB, the Great Lakes Fishery Commission, and other interested organizations. Reviewers' comments were then collated in a summary review by the Restoration Subcommittee of the WQB. The Subcommittee's report was reviewed by the Water Quality Programs Committee and the WQB. Finally, the IJC reviewed the RAP and the final summary review of the WQB and provided its formal comments to the Parties and responsible jurisdiction. This process, while thorough, was very slow. The time taken for RAP reviews prior to 1991 ranged from 7 to 26 months.<sup>210</sup>

In late 1990 and early 1991, the IJC's role review task force decided to replace the Boards' RAP review process with a new, streamlined peer review process, which was instituted in February 1992. The process is designed to be complete within 6 months. New criteria for review of the RAPs at all three stages, based on the criteria previously developed by the WQB and SAB and comments solicited from jurisdictional representatives at a Stage 2 RAP workshop, were also approved by the IJC.<sup>211</sup>

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<sup>209</sup> International Joint Commission, Fourth Biennial Report under the Great Lakes Water Quality Agreement (1989). Appendix B: "Agreement Board Review Criteria for Remedial Action Plans" contains both "Water Quality Board RAP Review Process" and "Science Advisory Board Guidelines for Review of Remedial Action Plans."

<sup>210</sup> Great Lakes Water Quality Board, Review and Evaluation of the Great Lakes Remedial Action Plan Process (June 1991), p. 42.

<sup>211</sup> "Commission Approves RAP Review Process," Focus on International Joint Commission Activities, Volume 1 Issue 1 (March/April 1992), p. 6. The criteria for the three stages are:

Stage 1: Have the environmental problems in the AOCs been adequately described, including identifying beneficial uses that are impaired, the degree of impairment and the geographic extent of such impairment? Has there been identification of specific objectives of the Agreement that are not met to the extent that such failure has caused or is likely to cause impairment of beneficial uses, including the area's ability to support aquatic life? Have the causes of the use impairment been identified, including a description of all known sources of pollutants involved and an evaluation of other sources? Have societal causes such as demographics, economic forces, private and public sector activities, and technological changes been described and their contribution to use impairments investigated? Does the plan employ a systematic and comprehensive ecosystems approach? Have problems, sources and causes been examined with an interdisciplinary framework? To what extent are relevant human health issues addressed in the RAP? Have sources of impairment been identified? Have they been involved in defining problems and causes? Has the broader community been informed about the RAP? Are there regular opportunities for public input? Is there a detailed plan for public participation? If data or information are missing, is there a mechanism to fill these gaps?

Stage 2: Have Stage 1 data and information gaps been filled? Are the RAP goals and objectives clear and precise? Are they consistent with the general and specific objectives of the GLWQA? Do the RAP goals reflect the aspirations of the community? Is there a mechanism for acknowledging and resolving differences of opinion? Have existing remedial and preventive programs and legislation been assessed, alternative remedial and preventive measures evaluated, and

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The peer review process for each RAP is organized by a RAP review coordinator. A coordinator from the IJC's own staff is appointed to identify six to twelve technical experts from government agencies and from outside the government to review each RAP. The WQB and SAB receive a copy of the RAP and an invitation to provide review comments. Reviewers each write individual evaluations of the RAP. The coordinator then convenes the reviewers, one or two Commissioners or representatives of the Commission, a senior official of the implementing jurisdiction and Party, the RAP team from the jurisdiction, and representatives of the involved stakeholder groups.

RAP review meetings provide an opportunity for the officials from the implementing jurisdictions to respond to the comments of the reviewers, discuss issues identified by the reviewers, and clarify any parts of the RAP that are unclear to the reviewers. Any interested person who requests to attend the review meeting may attend and observe, but is not invited to participate in the discussions. The sessions are considered technical review meetings rather than public hearings for receiving broader comment. Generally, the public is involved in developing or approving the RAP before it is submitted to the IJC for review, and no other meetings related to RAP review are held by the IJC to involve the public.

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<sup>211</sup>(...continued)

additional remedial and preventive actions to restore beneficial uses been identified, including a schedule for implementation? Has this been done within a systematic and comprehensive ecosystem approach? What beneficial uses (if any) will not be restored? Does the RAP indicate why? Have work plans and resource commitments been identified? If not, is there a process in place to obtain them? Have stakeholders and beneficiaries been identified? Have they been involved in the RAP planning process? Is there a mechanism for their involvement in implementation and coordination of problem solving? Has the public participation process been documented? Have there been regular opportunities for the community at large to be involved in planning? Will there be mechanisms to involve them in implementation and provision for periodic public review and updating of the RAP by the jurisdictions and Parties? Has a surveillance monitoring program to track effectiveness of remedial actions and confirm beneficial uses been adequately developed? To what extent, and in what ways, does the RAP ensure the protection of beneficial uses in the AOC once they are restored?

Stage 3: Have all remedial measures to restore all beneficial uses been implemented? If not, why? Do surveillance monitoring data confirm restoration of beneficial uses? If not, why? Is there a pollution prevention program in place incorporating a philosophy of zero discharge of persistent toxic substances?



Following the meeting, the IJC prepares a formal review which it submits to the Parties and the jurisdictions.

The IJC has made stakeholder groups responsible for informing the public about the RAP review meetings. In 1995, an Annex 2 Steering Committee was created with Board members and IJC staff to review RAP and LAMP policy issues. The Committee is currently evaluating its practices for informing the public about and involving the public in the RAP review meetings.

The 1987 Protocol directed each jurisdiction to set its own deadlines for developing RAPs and submitting them, at the three stages of their development, to the IJC. The Parties are required by GLWQA to report biennially to the IJC on the progress in developing and implementing RAPs. The IJC then includes this information in its biennial reports.<sup>212</sup>

In 1990, Congress' passage of the Great Lakes Critical Programs Act (GLCPA) mandated each Great Lakes state to submit its RAPs to the EPA's Great Lakes National Program Office of the EPA by June 20, 1991; submit its RAPs to the IJC by January 1, 1992; and include its RAPs in its state water quality plan by January 1, 1993.<sup>213</sup> The GLCPA further required the EPA to comment on the RAPs and to compile formal comments on the RAPs made by the IJC.<sup>214</sup> The Great Lakes National Program Office is directed by the Act to work with Canada to assure the submission of its RAPs by June 30, 1991, and the finalization of such plans by January 1, 1993.<sup>215</sup>

Canada also has legislation setting deadlines for implementing GLWQA. On August 13, 1971, Canada and Ontario first entered into the Canada-Ontario Agreement (COA) to deal with Great Lakes Pollution, and COA has been amended a number of times to implement provisions of GLWQA, most recently in 1994. COA now requires that all RAP Stage 2 reports be completed and submitted to the Ontario and Canadian governments by the end of 1996, and to the IJC by the end of 1997. The COA also lists a number of target goals for AOCs to be reached by Canada and Ontario. For example, the COA aims to "by 1995, establish cooperative mechanisms, including environmental surveillance and monitoring, to track progress towards delisting on all 17 Areas of Concern" and "develop long-term strategies for remediation of areas of intermediate sediment contamination at ten locations in the Great Lakes Basin Ecosystem by the year 2000."<sup>216</sup>

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<sup>212</sup> GLWQA, Annex 2(7).

<sup>213</sup> 33 U.S.C.A. §1268(c)(3)(A).

<sup>214</sup> 33 U.S.C.A. §1268(c)(3)(D).

<sup>215</sup> 33 U.S.C.A. §1268(c)(3)(B).

<sup>216</sup> Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem (1994), §4.

#### 4. Development and Implementation of RAPs

In general, the development and implementation of RAPs has been frustratingly slow. Many jurisdictions are behind in their reporting to the IJC. Although 43 AOCs were designated, by 1991, only 19 Stage 1 RAPs had been reviewed by the IJC, and only six of them were determined to be complete.<sup>217</sup> As of January 1995, 42 Stage 1 RAPs had been reviewed,<sup>218</sup> but many of these RAPs have been judged by the IJC to be incomplete. Only three Stage 2 RAPs and one Stage 3 RAP have been reviewed by the IJC.<sup>219</sup> The implementation of remedial measures has begun, in most cases to a very limited extent, in 34 AOCs; but the restoration of impaired uses has begun in only ten AOCs.<sup>220</sup>

The delay in RAP development and implementation of remedial actions has been attributed to a number of causes, including difficulty on the part of the jurisdictions in embracing a process of collaborative planning with the public, a slow process of review and comment by the IJC, and inadequate funding for RAP development and implementation. Also, the development of RAPs for review in three stages has been difficult in practice. Each of the stages can be complex and very lengthy due to the diversity and severity of some use impairments, and resolving all of these problems in the same timeframe is impossible in many cases.<sup>221</sup>

Examples of agency actions that must be taken to clean up AOCs include the following major types of projects: Remediation of thousands of cubic meters of contaminated sediment in a single AOC, expansion and redesigning of wastewater and stormwater collection and treatment systems, improvements of industrial pretreatment plans, programs for nonpoint source pollution abatement, control of air pollution, cleanup of leaking underground storage tanks and chemical spills, erosion control measures, wetland and other shoreline habitat restoration, and removal of exotic species. The costs for these projects can add up to billions of dollars for just one AOC. Restoration of dissolved oxygen levels for a 30-mile stretch of the Cuyahoga River AOC cost over \$1.5 billion.<sup>222</sup> Michigan estimates that the cost of all improvements for combined sewer overflow system improvements to improve

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<sup>217</sup> Great Lakes Water Quality Board, Review and Evaluation of the Great Lakes Remedial Action Plan Progress (June 1991), p. 18.

<sup>218</sup> Remedial Action Plan Progress Summary, chart compiled by IJC's Windsor Office (January 5, 1995).

<sup>219</sup> Ibid.

<sup>220</sup> U.S. EPA and Environment Canada, Progress in Great Lakes Remedial Action Plans: Implementing the Ecosystem Approach in Great Lakes Areas of Concern (September 1994).

<sup>221</sup> Ibid., p. 6.

<sup>222</sup> U.S. Environmental Protection Agency, A Report to Congress on the Great Lakes Ecosystem, EPA 905- (February 1994), p. 39.

water quality in the Rouge River AOC to be \$1 billion and in the Detroit River AOC to be \$2.6 billion.<sup>223</sup> The removal of 39,000 cubic meters of PCB-contaminated sediment at the St. Lawrence River AOC has been estimated to cost \$36.7 million.<sup>224</sup> Funding for these projects must be sought from industries, private individuals and foundations, and federal, state, and local governments under a variety of programs.

The six multi-jurisdiction RAPs have encountered additional problems due to the different regulatory regimes and philosophies in the implementing government agencies. In some cases, a lack of cooperation and communication has been a barrier to RAP development. For example, one state may reduce its level of funding for a RAP, disrupting the RAP process and reducing morale among those working on the RAP in another jurisdiction; or on a binational RAP working may have difficulty agreeing on the sources of use impairments which must be listed in Stage 1 RAPs.

U.S. EPA and Environment Canada have noted that the following elements are present in successful RAPs: A mission-driven, rather than a rule-driven, process; empowerment of RAP institutions; a focus on watersheds or other naturally-defined boundaries to address upstream causes and sources; procurement of commitments from within the watershed for implementation; an inclusive decision-making process; clear responsibilities and sufficient authorities to pursue the mission; an ability to secure resources using non-profit organizations and other creative mechanisms; flexibility and continuity to achieve an agreed-upon track to use restoration; broad-based education and public outreach; and an open and iterative RAP process which strives for continuous improvement.<sup>225</sup>

These elements for a successful RAP process often depend on the ability of the responsible jurisdiction to work with the local AOC stakeholders. Public involvement in the RAP process serves to raise public awareness of Great Lakes issues, improve the quality of decision-making, increase confidence and trust between the governments and the public, and create accountability for remedial and preventive actions. The ability of government agencies to make the transition from narrow, fragmented, and reactive pollution control initiatives to a comprehensive ecosystem approach is significantly strengthened through involvement of the public in development of RAP initiatives.<sup>226</sup> The active involvement of the public from the start of the RAP process also ensures that consensus is reached step by step, as RAP development and implementation proceeds, thus avoiding unexpected rejection of the plan by particular stakeholders after significant investment of time and money.

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<sup>223</sup> Ibid., p. 43.

<sup>224</sup> Progress in Great Lakes Remedial Action Plans, *supra*, p. 204.

<sup>225</sup> Ibid., p. 8.

<sup>226</sup> Mimi Larsen Becker, "The International Joint Commission and Public Participation: Past Experiences, I Challenges, Future Tasks," 33 Nat. Res. J., Vol. 235 (1993), p. 254.

In 40 of the 43 AOCs, a stakeholder group, coordinating committee, citizen advisory committee, or comparable institutional structure which represents local economic and environmental interests has been established.<sup>227</sup> Seventy-five percent of the RAPs use citizen advisory committees (CACs) to serve this function. The committees are made up of representatives from government, industry, environmental groups, and citizens residing near the area of concern. CACs can be involved in the RAP process in a variety of ways. They may conduct technical reviews, assist in writing the RAP, survey public opinion, design and/or implement the public information and participation process, and assist in the development of RAP goals and the selection of remedial measures.<sup>228</sup> The CACs help build constituencies for RAP implementation. These constituencies are essential to fulfilling RAP goals, because the public helps create the political will to demand that the necessary staff and monetary resources are made available to implement them.<sup>229</sup> In a number of cases, CACs have also created non-profit institutions for raising money to implement RAPs.

Some RAPs have been much more successful than others in collaborating with the public, local stakeholders, and other institutions to develop and implement RAPs. Green Bay, Hamilton Harbor, Rouge River, and Collingwood Harbor RAPs are commonly cited as examples of successful public participation in remedial planning, and all of these RAPs have resulted in extensive implementation of remedial measures and the beginning of impaired use restoration. In fact, Collingwood Harbor is the first and only AOC to be delisted.

The Lower Green Bay RAP was developed by the Wisconsin Department of Natural Resources in cooperation with other state agencies, local governments, and stakeholders. For two years, over 75 people participated on four technical advisory committees and a CAC for development of the Stage 1 RAP. The technical advisory committees identified the problems, goals, and objectives for management, and technical solutions to restore the AOC. The CAC identified the ten most pressing problems to be addressed in the RAP, defined a desired future state for the AOC, and advised on recommended remedial actions. Three committees, a Green Bay RAP Public Advisory Committee, a Science and Technical Advisory Committee, and a Public Education and Participation Advisory Committee are now involved in implementation and regular updating of the RAP. Two nonprofit organizations have also been established. The Great Lakes Nonpoint Abatement Coalition is promoting the implementation of nonpoint source pollution controls, and the Northeast Wisconsin Waters for Tomorrow, Inc. is determining the most cost-effective actions to meet RAP goals. The Stage 1 RAP for Lower Green Bay was completed in 1987 and adopted as part of

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<sup>227</sup> Progress in Great Lakes Remedial Action Plans, *supra*, p. 6.

<sup>228</sup> Mimi Larsen Becker, *supra*, p. 255.

<sup>229</sup> John Jackson, "The Citizens' Perspective on Public Participation in RAPs: A Paper Presented to IJC's R Coordinators Forum," (November 1987), contained in Report of the Societal Committee of the Great Lakes Science Advisory Board, Public Participation and Remedial Action Plans: An Overview of Approaches, Activities and Arising from RAP Coordinator's Forums (January 1990), p. 9.

Wisconsin's Water Quality Management Plan in 1988. Nearly two-thirds of the 120 recommended actions in the RAP have been initiated.<sup>230</sup>

The stakeholder group that developed the Stage 2 RAP for Hamilton Harbor was made up of 43 members representing a broad range of interests and produced a statement of visions, principles, and goals to guide the RAP process. To handle effectively the implementation phase of the RAP process, the stakeholder group created a new organizational structure comprised of two groups, the Bay Area Implementation Team (BAIT) and the Bay Area Restoration Council (BARC). BAIT is a management team of implementing agency officials. BARC, which has been incorporated as a nonprofit agency, helps ensure accountability for remedial actions by providing public oversight and consultation. Since 1987, over \$126 million has been spent on RAP-related activities for Hamilton Harbor, and \$19 million has been identified for habitat improvements. The Hamilton Harbor Stage 1 RAP was submitted to the IJC in 1987 and judged by the IJC to be complete in 1989. The Stage 2 RAP has been submitted to the provincial government and the Parties.<sup>231</sup>

The Rouge River RAP process is a basin-wide effort led by the Michigan Department of Natural Resource in partnership with the Southeastern Michigan Council of Governments and other stakeholders. The institutional structure for implementation and continual updating of the RAP includes: a RAP Team responsible for RAP updates; a Rouge Program Office created for the Rouge River National Wet Weather Demonstration Project (NWWDP); technical advisory groups; a Rouge River Implementation Steering Committee to direct implementation activities; and a CAC to provide advice on implementation and updating. A nonprofit organization called Friends of the Rouge provides public outreach activities. Among its accomplishments, the Rouge River RAP process has been able to obtain commitments for considerable funding of remediation activities. Federal funds of \$46 million in 1993 and \$86 million in 1994 have been dedicated to Wayne County's Rouge River NWWDP to demonstrate and compare the benefits of CSO reduction technologies. State and local funding sources augment federal funds, in sums ranging from \$10 million to \$100 million per project. Over \$1 million in federal and local funds is devoted to Wayne County's Urban Nonpoint Pollution Control Demonstration Project. In addition, since 1988, over \$500 million have been invested in improvements of the community sewer system; and Detroit has begun a \$15.5 million project to construct structures for improved stormwater storage.<sup>232</sup>

In the Collingwood Harbor AOC, the CAC was established in 1988 and has played an integral role in the success of the RAP by forming partnerships to implement remedial actions, raising public awareness about the RAP, and recruiting thousands of local volunteers to participate in activities ranging from watershed rehabilitation to a pollution

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<sup>230</sup> Supra, pp. 42-47.

<sup>231</sup> Ibid., pp.171-177.

<sup>232</sup> Ibid., pp. 96-103.

prevention program. A storefront operation, the Environmental Network of Collingwood, was established to provide public information and to support community-based RAP activities. Over 35 funding partners and many more "in-kind" donations have resulted in sewage treatment projects, a stormwater management plan, water conservation, habitat rehabilitation, sediment remediation, and an informed RAP constituency. As mentioned above, Collingwood Harbor RAP was delisted in early 1995.<sup>233</sup>

## **5. The IJC's Role in the RAP Process**

### **a. Public Participation**

The IJC has recognized the importance of public participation in RAPs, and its publications repeatedly encourage implementing jurisdictions to involve the public in a meaningful way. However, the IJC could take additional, concrete steps to help jurisdictions that are having difficulty developing an effective public participation regime. In a report on IJC-sponsored meetings held in 1986 and 1987 to discuss public participation in RAPs, a committee of the SAB noted that a major barrier to learning from past successes and failures in public participation is the lack of objective evaluation of effectiveness, perhaps caused by lack of evaluative tools or initial goal-setting from which achievements can be assessed.<sup>234</sup> The committee recommended that ongoing, formal review and evaluation mechanisms be developed by the jurisdictions implementing RAPs to address problems and improve their RAP public participation processes.<sup>235</sup>

The same SAB report recommended that the IJC set guidelines for effective public participation in the RAP process and provide detailed examples of different methods for public participation, pointing out their relative merits and pitfalls. The guidelines could be used by agencies in their preliminary consultations with the public to develop an effective program for public involvement.<sup>236</sup>

While the IJC uses its biennial reports and its newsletter, FOCUS, to highlight some examples of public participation that have worked, no official guidelines or suggestions for public participation or evaluation mechanisms have been produced by the IJC. In addition to its current role of reviewing public participation as outlined in each RAP, the IJC should produce guidelines to help jurisdictions that are having difficulty in devising an effective public participation regime necessary to produce successful RAPs. The IJC should also help jurisdictions develop review and evaluation mechanisms by providing models of different

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<sup>233</sup> Ibid., pp. 80-83.

<sup>234</sup> Report of the Societal Committee of the Great Lakes Science Advisory Board, Public Participation and Action Plans: An Overview of Approaches, Activities and Issues Arising from RAP Coordinators Forums (Jan 1990), p. 2.

<sup>235</sup> Ibid., p. 4.

<sup>236</sup> Ibid., p. 10.

evaluation schemes and examples of how they have worked in practice. IJC training workshops on methods for public involvement, tools for evaluating participation, goal-setting, and ways to inform and educate the public should be conducted for the RAP coordinators, planning staff, and local participants of particular AOCs that would benefit from such training.

The IJC needs to improve its process for recommending new AOCs, in part by creating and publicizing avenues for the public to express their interest in designating an area as an AOC. As described above, Presque Isle Bay was brought to the attention of the SAB by concerned citizens attending one of its meetings held near the Presque Isle Bay area. The SAB now holds its meetings in Windsor and Toronto due to budgetary constraints, making public participation in these meetings more difficult. EPA and existing AOC jurisdictions in the U.S. are monitoring a number of potential AOCs through the Great Lakes surveillance program, but the IJC has not played a role in this process. In order to ensure the identification of new AOCs where such a designation is warranted, the IJC should establish a formal process for reviewing water quality conditions in undesignated local areas of the Great Lakes basin and develop formal procedures for the public to request the designation of new AOCs.

#### b. RAP Review and Evaluation

The change from the Boards' RAP review process to the streamlined peer review process damaged the credibility of the RAP review process for a time. Initially, interested parties found that the reviewers did not have sufficient knowledge or experience related to the problems of AOCs to enable them to evaluate RAPs effectively. The new process is improving, however, and implementing jurisdictions acknowledge the importance of IJC evaluations in their development and implementation of RAPs. A sixth-month timeline for RAP review has been established, and the peer reviews of most RAPs have been completed within that period since it was set.

The IJC's new peer review process should continue to be refined to improve the quality of RAP evaluation and to reduce delay in returning IJC's comments to the jurisdictions. The usefulness of IJC reviews increases as they become more specific and timely. IJC's credibility will continue to be strengthened as it works on these improvements.

As mentioned earlier, the IJC has not developed any regular procedure for informing the public of its RAP review meetings and, in some cases, public notice has been quite limited. The IJC recently received a complaint from the citizens of Niagara that they did not know the Niagara River RAP review meeting was taking place. The IJC's Annex 2 Steering Committee needs to establish a regular procedure for prior public notice of all RAP review meetings, and for the public to submit comments during the RAP review meetings.

#### c. Technical Assistance and Coordination

Many implementing jurisdictions need technical assistance in all stages of their RAPs. This assistance can be provided, in part, by the IJC through coordinating information exchanges among RAP practitioners in the different jurisdictions and experts in specific

issues and through producing documents on technical remediation issues facing many RAP teams, such as examinations of the relative merits of different toxic sediment remediation methods.

Through a two-person staff in its Windsor office, the IJC has provided some coordination for the exchange of RAP-related information. The IJC has held RAP forums at each of its biennial meetings since 1987, has issued reports on these forums, has reviewed RAP progress in its biennial reports, and is currently producing a survey of RAPs. In 1986 and 1987, the IJC held four meetings on public participation in RAPs. In 1991, the WQB, in cooperation with EPA and Environment Canada, held a workshop on Stage 2 RAPs; and in 1994, IJC held a roundtable on binational RAPs. The IJC is also a partner in the Great Lakes Information Network, a computer network set up by the Great Lakes Commission in order to facilitate the exchange of information among people working on different RAPs.

The IJC also publishes reports that can assist the jurisdictions in implementing the more technical aspects of RAPs. The IJC is working on publications describing practical steps to implement ecosystem management, as well as habitat rehabilitation and conservation techniques. The IJC should continue to expand its efforts on these types of projects.

IJC Commissioners can also play a more significant role in helping the implementing jurisdictions to obtain funds for remediation projects, especially from the Parties at the federal level. The Parties have agreed to support the implementing jurisdictions in their efforts to delist AOCs, and are therefore ultimately responsible for providing the necessary resources to clean up AOCs.

#### d. Conclusion

The RAP process has been heralded as an innovative approach to ecosystem management because it is a place-specific, locally designed planning process involving cooperation and coordination of local stakeholders and all levels of government. The RAP process has drawn increased attention to environmental degradation in AOCs and produced tangible results in a number of areas. The IJC has served as a catalyst for the development of the RAP process and as an evaluator of the RAPs themselves.

However, the IJC could be doing more to increase its effectiveness in the RAP process and to help the implementing jurisdictions overcome barriers to the restoration of impaired uses. Opportunities for action by the IJC include helping jurisdictions develop effective public participation regimes and evaluation mechanisms where necessary, establishing a more formal process for recommending new AOCs, enhancing cooperation between the implementing agencies for multi-jurisdictional RAPs, and providing more in-depth technical assistance both through the production of reports and through convening RAP practitioners and technical experts.



## APPENDIX C

### IJC'S ROLE IN WESTERN BOUNDARY WATERSHEDS

#### 1. Introduction

The waters of the Northwest Straits shared by Washington state and British Columbia are polluted by sewage and industrial discharges. Populations of both shellfish and salmon are dangerously depleted due to a combination of over-harvesting, pollution, reduced river flows, and dams that obstruct migration. Although the public has only focused on some of these problems in recent years, there have been a few western boundary water disputes in the past which the IJC has handled with some success. Nevertheless, the Parties have declined to give the IJC authority in the west equal to its powers in the Great Lakes basin.

#### 2. The High Ross Dam Controversy

The IJC's last high profile involvement with a Western dam was in 1983, when it successfully negotiated a settlement of a longstanding controversy over the High Ross Dam on the Skagit River in Washington state. In 1942, when war justified an increased need for electricity, the City of Seattle received approval of its application to the IJC to raise the height of Ross Dam and flood the Skagit River back into Canada. British Columbia was willing to receive small monetary compensation from Seattle for the loss of land in Canada. The dam was not raised at that time, however. Decades later, when Seattle started to raise the dam, British Columbia complained about the environmental damage that would be done to the Skagit Valley and about how little compensation they would receive.

In 1971, the Canadian government convinced the U.S. to send a joint reference to the IJC to examine the environmental consequences of the flooding of the Skagit Valley and ways to protect the ecology which would be "not inconsistent with the Commission's order of approval dated January 27, 1942." This reference gave the IJC an opportunity to comment on environmental damage that would result from raising the dam. In 1974 and again in 1980, British Columbia asked the IJC, through a Request in the Application, to rescind its approval of the 1941 order. The IJC refused both of those requests; but in 1982, it ordered Seattle to delay raising the dam for one year.

The IJC then formed a Joint Consultative Group led by both a U.S. and a Canadian Commissioner. It also included the Deputy Mayor of Seattle, the Deputy Minister of the Environment for British Columbia, and consultants from the Power Authority of New York State and Ontario Hydro. The Joint Consultative Group met during 1982 and negotiated a settlement between Seattle and British Columbia. British Columbia and Seattle eventually agreed that Seattle would not raise the dam, but would pay British Columbia the amount

that the project would have cost in return for British Columbia guaranteeing to provide Seattle with the power that the higher dam would have generated.<sup>237</sup>

The details of this exchange of money and electricity were written into a 1984 treaty between the U.S. and Canada relating to the Skagit River, Ross Lake, and the Seven Mile Reservoir on the Pend D'Oreille River. While the 1984 treaty is in force, until January 1, 2065, a clause provides for binding arbitration between the Parties but specifies that the powers of the IJC do not apply to these bodies of water.

The settlement of the High Ross Dam dispute ended favorably for all the parties involved. Both Seattle and British Columbia were satisfied with the terms of the agreement. They also gained decision making power over the use of boundary waters that had been partially subject to the jurisdiction of the IJC. Meanwhile the IJC received credit for doing what it does best, negotiating a resolution to an international dispute, and was relieved from responsibility for managing the terms of the Treaty, which the IJC is not well equipped to do.

### **3. Limits to the IJC's Authority Outside of the Great Lakes**

While the IJC was given much deserved credit for its role in settling the longstanding High Ross Dam dispute, it was in the unusual position of having real power over the outcome because of its role in implementing the 1942 Order of Approval.<sup>238</sup> In some cases, the Parties have given the IJC water quality monitoring duties when a Board of Control has been established to handle an application. However, none of the western Boards of Control have explicit authority to monitor water quality or otherwise to address issues relating to water pollution. This is one reason why the IJC has not been more active in the West. The Parties have signed separate treaties such as the Columbia River Treaty in 1961, the Skagit River Treaty in 1984, and the Pacific Salmon Treaty in 1985.<sup>239</sup> As a result, they have avoided giving the IJC any authority to control water pollution in western watersheds. Instead, the IJC remains dependent on the Parties to bring it references concerning specific western water problems which they have not done in recent years. Moreover, Washington state and British Columbia share more than boundary waters and electricity; they share a distaste for the intrusion of their respective federal governments. As a result, they have had no interest in the Parties; or the IJC becoming involved in western water issues.

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<sup>237</sup> Alan M. Schwarz, "The Paper Dam: The Role of the International Joint Commission in the Resolution of Skagit River - High Ross Dam Controversy," The Environmental Professional, Vol. 8, Issue 3 (1986) p. 237.

<sup>238</sup> Ibid.

<sup>239</sup> Differences arising between the Parties under the Columbia River Treaty may be referred to the IJC, but has no powers under the Skagit River Treaty and is not mentioned in the Pacific Salmon Treaty.

#### **4. The West's Alternative to the IJC**

In the absence of the IJC's authority to focus the attention of local governments, researchers and environmental activists on western water issues in Washington state and British Columbia have formed their own binational body to address environmental concerns. The British Columbia/Washington Environmental Cooperation Council was formed when the Governor of Washington and the Premier of British Columbia signed the Environmental Cooperation Agreement in May, 1992. Like the Great Lakes Water Quality Agreement (GLWQA), the British Columbia/Washington Agreement sets binational cooperation and specific regional water quality goals.

The Council's only members are the Director of the Washington Department of Ecology and the Deputy Minister of the British Columbia Ministry of Environment, Lands and Parks, but the Regional Director General of Environment Canada's Pacific and Yukon Region and the Administrator of EPA's Region 10 may attend the meetings as observers. Interested NGOs and citizens may also attend the semiannual Council meetings, which they hear about through the Council's newsletter, Borderline News. The Council does not have any separate appropriations. In contrast to the IJC's bureaucracy, the Council is run informally by one part-time staff person in the Washington Department of Ecology and one person in British Columbia's Ministry of Environment, Lands and Parks.

Like the IJC, the Council has formed several task forces to work on areas identified as high priorities in its preliminary action plan. The five priority areas include:

- (1) Georgia Basin/Puget Sound Water Quality Initiative;
- (2) Columbia River/Lake Roosevelt water quality where these watersheds suffer contamination mostly from the Celgar Kraft pulp mill and the Cominco lead and zinc smelter just north of the border;
- (3) Nooksack River flooding, where flooding of the Nooksack River in 1990 caused over \$7 million of damage on both sides of the border and great concern in British Columbia over the potential for even worse future floods because an accumulation of gravel could be reducing the river channel's carrying capacity;
- (4) Regional air quality management; and
- (5) Coordinated groundwater management for the Sumas-Abbotsford aquifer.

The 1992 agreement identified several other emerging issues that might be addressed by the Council later, such as cooperation on the disposal of solid, hazardous and biomedical waste, and water resource management. The Council also identified wetlands protection as an issue of ongoing interest to both Parties.

The Council's task forces, comprised of staff from state and provincial agencies, write progress reports and research funding opportunities for specific projects. Membership on most of the task forces is evenly divided among U.S. and Canadian officials, although members of the Lake Roosevelt and Columbia River Task Force are almost entirely from the U.S. There is one representative from the British Columbia Ministry of Environment and one from Environment Canada, but the rest are from Washington State. The

Sumas/Abbotsford Task Force is the only one that has an official NGO representative from a farming organization.

In 1993, the Council created a Marine Science Panel to advise it "regarding existing transboundary marine water quality issues and trends for the waters of British Columbia and Washington."<sup>240</sup> That Panel is comprised of three scientific experts from Canada and three from the U.S. It has been asked to look at existing information on the status of shared waters and present a state of the environment report to the Council.

The 1993-1994 Annual Report of the Council states that one "outgrowth of the Environmental Cooperation Agreement is a smooth working relationship that allows effective interaction on issues beyond the scope of the Agreement itself." In fact, there are a number of examples of this expanded cooperation. First, the Washington Department of Ecology has been working with British Columbia's Ministry of Environment, Lands and Parks, Environment Canada, and its Department of Fisheries and Oceans in evaluating environmental impacts from the proposed Crown Jewel gold mine project near Chesaw, Washington, which is four kilometers south of the border. Second, the Washington Energy Office and British Columbia's Ministry of Energy, Mines and Petroleum Resources are mandated under a separate Energy Cooperation Agreement to meet regularly to ensure that bilateral energy concerns are dealt with before they become problems.

Third, British Columbia and Washington also signed a Memorandum of Understanding on Air Quality, which requires them to notify each other of any plans to build new large sources within 100 kilometers of the border. The MOU provides for the exchange of draft permits and permit applications at least 30 days before decision-making, and assures that the issuing agency will take the other parties' comments into account and send final documents within 30 days of issuance. The Cominco Lead-Zinc Smelter, one of the biggest sources of air pollution in the Northport, Washington area<sup>241</sup>, is currently applying for amendments to its air permit. The Ministry of the Environment is handling the permit under the new MOU, giving the Washington Department of Ecology a full opportunity to comment. The public in both Washington and British Columbia are being notified and invited to attend any public meetings held about the permit.

While all of this binational activity is occurring as an extension of the Council, the Council has helped the staff of agencies in both the state and province to become acquainted with their counterparts, and has enabled them to work together on a variety of projects. In some ways, the Environmental Cooperation Agreement and the Council have had an effect on the communities in British Columbia and Washington state similar to that of GLWQA and the IJC on the communities in the Great Lakes basin. Their reports and meetings attract attention and provide a focus for citizens and interested parties on both

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<sup>240</sup> British Columbia/Washington Environmental Cooperation Council, 1992-93 Annual Report (July 1993)

<sup>241</sup> Washington State Department of Health, Air Monitoring Data and Evaluation of Health Concerns in Ar  
Northeast Tri-County (April 1994).

sides of the border. In the Great Lakes basin, community activists in the U.S. and Canada organize their research and activities to take advantage of the public forum at the IJC's biennial meetings, and they base their reports on the information provided by the IJC as a respected, objective institution.

Similarly, the British Columbia/Washington Environmental Cooperation Council provides a focus for binational environmental activists in the west. For example, the same year that the Environmental Cooperation Agreement was signed, citizen groups formed the Sound & Straits Coalition. The Coalition is a binational group of citizens involved with Washington state's People for Puget Sound and British Columbia's transboundary waters. The Council gives these groups a way to voice their concerns and offer solutions to the state and provincial agencies. In the founding agreement, the Coalition committed its members to holding the governments of Canada, the United States, British Columbia, and Washington state accountable for, among other things, "[i]nitiating an International Joint Commission investigation and actions to restore and maintain native salmon throughout the region."<sup>242</sup> It remains to be seen whether this commitment will be carried out and might eventually give the IJC some authority over this shared resource problem.

## **5. The IJC's Future Role in the West**

Other NGOs and citizens around Lake Roosevelt have also considered involving the IJC in their local water quality issues, but they believe that local cooperation is more effective than federal coercion. As a result, they are giving Washington state and British Columbia a chance to follow through on the promises that they have made in the Council before involving the IJC or the federal governments. Citizen activists have found that the mere threat of involving the IJC in western water issues helps to motivate state and provincial enforcement actions.

Both Washington and British Columbia do not want the IJC to become involved in their affairs. The state and the province believe that their informal way of operating is much more effective for dealing with local problems than trying to resolve a problem through bureaucracies such as the U.S. State Department, Canada's Department of External Affairs, and the IJC. Although the IJC has no enforcement capabilities, Washington State and British Columbia are concerned that, if it becomes involved with a boundary water issue, it is likely to raise public awareness of the issue, and create embarrassment and increased administrative difficulties for the state or province. However, Washington state and British Columbia do find the IJC to be a useful source of objective information on water pollutants and their sources, such as dioxin and pulp mills, because the technical basis for the IJC's reports is well respected.

The last reference that the IJC received about a non-Great Lakes boundary water was to study the effects of a proposed coal mine in British Columbia on water quality of the Flathead River in Montana. In 1982, the Sage Creek Coal Limited Company received conditional Stage II approval-in-principle from the British Columbia Environmental and

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<sup>242</sup> Sound & Straits 1992 Agreement.

Land Use Committee for two proposed open-pit coal mines along Cabin Creek, a tributary of the transboundary Flathead River. Meanwhile, in response to the concerns of citizens and government officials in Montana, the U.S. and Canada submitted a reference to the IJC, requesting that it study the effects of the proposed coal mine on the quantity and quality of water in the Flathead River. The IJC created the Flathead River International Study Board. This Board's report on the detrimental effects of the coal mine on water quality led the IJC to recommend in 1988 that British Columbia not approve the mine. After the IJC report was released, Sage Creek Limited allowed its permit approval from British Columbia to lapse, and the province stated that it was satisfied with the IJC's findings.<sup>243</sup> Essentially, the IJC report gave concerned citizens the ammunition that they needed to stop the mine.

The success of the IJC in the 1980s in involving the public may be one reason why the Parties hesitate to refer western issues to the Commission. Once an issue is brought before the IJC, it tends to be elevated to a higher level of public awareness and political sensitivity. The Parties' reluctance to involve the IJC in western water issues could also be due in part to the fact that the IJC takes so long to prepare its reports. The Flathead River International Study Board took over three years to submit its findings to the IJC.<sup>244</sup> In the view of some westerners, the IJC brings to local issues all of the problems of a big bureaucracy. While the IJC, and GLWQA in particular, help to focus international attention on water quality issues in the Great Lakes basin, Washington state and British Columbia have preferred to solve their boundary watershed problems themselves through binational cooperation under the auspices of the Washington/British Columbia Environmental Cooperation Council.

The attitudes of officials in Washington and British Columbia toward the IJC demonstrate the weaknesses of the IJC and its strengths. It is viewed as slow and bureaucratic, but also high profile, objective and prestigious. These perceptions of the IJC have allowed western citizen groups to use the IJC to motivate state and provincial governments to improve the enforcement of their environmental laws. At the same time, the IJC's weaknesses have prompted Washington state and British Columbia to bypass it and deal directly with their most pressing water quality and other environmental issues, thus making the IJC largely irrelevant to solving those problems.

The IJC has the potential for a limited, but valuable future role in western boundary watersheds. People have confidence in the IJC's ability to be a neutral arbiter and to perform independent research. However, westerners seem most likely to continue using the IJC only as a last resort or a source of information. Therefore, the IJC should make an effort to disseminate its reports on relevant boundary water quality issues to government agencies and the public outside of the Great Lakes basin. Much the IJC's work in the Great Lakes on environmental education and water quality issues in general is applicable to other

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<sup>243</sup> Dino Ross, "International Management of the Flathead River Basin," 1 Colo. J. Int'l Env'tl. L. & Policy 1

<sup>244</sup> Ibid.

boundary watersheds, and the IJC could make this type of information more easily available to a much wider audience. The IJC is in danger of becoming so closely associated with the Great Lakes that it could become increasingly irrelevant to other border ecosystems, and could lose its credibility as a source of information and expertise on water issues in all border areas.

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