

# The Minamata Convention on Mercury and the Future of Multilateral Environmental Agreements

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## Summary

The 2013 Minamata Convention on Mercury is a wide-ranging treaty posed to address the serious threat of mercury pollution. The United States adopted it as an executive agreement, breaking a decades-long stretch of failure to adopt multilateral environmental agreements, largely because no domestic legislation is needed to enact the convention's requirements. The convention itself is notable for its scope and coverage, as it offers significant implementation parameters, similar to traditional legislative requirements. The Minamata Convention is an important, positive milestone in the evolution of modern environmental treaties that offers critical progress on key problems.

## I. Introduction

In October 2013, the Minamata Convention on Mercury (Convention)<sup>1</sup> became the world's newest and most ambitious multilateral environmental agreement (MEA) to date.<sup>2</sup> Its objective is to defeat a serious global environmental and public health threat: mercury pollution. Mercury's adverse environmental and health effects first gained worldwide public attention in the 1950s and 1960s when a rash of mercury poisonings around Minamata, Japan, came to be known as Minamata disease—a disease unprecedented in terms of environmental pollution-caused health impacts.<sup>3</sup>

In addition to its ambitious purpose, the Convention distinguishes itself for two further reasons. First, the United States joined the treaty unusually fast, possibly a new record in its MEA practice. When the United States deposited its instrument of signature and acceptance on November 11, 2013, it became the first country to join the Convention.<sup>4</sup> What enabled expeditious membership was the atypical domestic approval process—skipping the U.S. Senate advice-and-consent process that has often slowed down MEA ratification.

Second, the Convention's scope and coverage is wide-ranging and impressively ambitious. The Convention not only articulates overarching objectives, values, and principles, but also offers practical implementation guidance and options based on practices and norms widely recognized and accepted. Its approach to managing anthropogenic sources of mercury, especially with respect to potential interactions with humans and the environment, resembles regulatory schemes traditionally found only at the national and sub-national level. For example, Article 8.4 mandates that for “new sources, each Party shall require the use of best available techniques and best environmental practices to control and, where feasible, reduce emissions, as

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1. Minamata Convention on Mercury, Oct. 10, 2013, available at [http://www.mercuryconvention.org/Portals/11/documents/conventionText/Minamata%20Convention%20on%20Mercury\\_e.pdf](http://www.mercuryconvention.org/Portals/11/documents/conventionText/Minamata%20Convention%20on%20Mercury_e.pdf).
2. See United Nations Environment Program (UNEP), Conference of Plenipotentiaries on the Minamata Convention on Mercury, <http://www.mercuryconvention.org/Negotiations/ConferenceofPlenipotentiaries/tabid/3441/Default.aspx>.
3. See JAPAN MINISTRY OF THE ENV'T, LESSONS FROM MINAMATA DISEASE & MERCURY MANAGEMENT IN JAPAN 1 [hereinafter MINAMATA LESSONS], available at [http://www.env.go.jp/chemi/tmms/pr-m/mat01/en\\_full.pdf](http://www.env.go.jp/chemi/tmms/pr-m/mat01/en_full.pdf).
4. Press Release, U.S. Dep't of State, United States Joins Minamata Convention on Mercury (Nov. 6, 2013), <http://www.state.gov/r/pa/prs/ps/2013/11/217295.htm>.



the burning of fossil fuels, gold mining, and the discarding of products containing mercury or mercury compounds.<sup>12</sup> Mercury spreads through atmospheric and oceanic transport as well as by the movement of fish and wildlife. It is now found virtually everywhere on the globe, including in the Arctic, because of its ready persistence in the environment. Bioaccumulation of mercury in the food chain is a primary contributor to human exposure through the consumption of contaminated wildlife and fish.

Acute effects from significant mercury exposure include a variety of neurological and behavioral disorders such as cognitive and motor dysfunction. Extreme cases of mercury poisoning can result in paralysis, coma, and death. Other documented effects include harm to the development of fetuses and young children through damage to the central nervous system, thyroid, kidneys, lungs, immune system, and other parts of the body.<sup>13</sup>

The difficulties of controlling mercury pollution are compounded by the multiple pathways through which mercury and mercury compounds enter the environment and food chain.<sup>14</sup> As mentioned, anthropogenic mercury pollution finds its way into the environment through a large variety of sources, including artisanal and small-scale gold mining, coal combustion, cement production, and disposal of waste from mercury-containing products. The two largest sources, artisanal and small-scale gold mining and fossil-fuel combustion, make up almost three-quarters of atmospheric emissions.<sup>15</sup> A variety of other sources associated with industrial processes and related activities generate mercury waste and pollution that are moderate but not de minimis contributions.<sup>16</sup>

With such a diversity of sources and pathways, achieving the Minamata Convention's objective of protecting human health and the environment from anthropogenic mercury pollution requires a comprehensive and wide-ranging strategy.<sup>17</sup> Its cradle-to-grave approach reflects that perspective. The Convention attempts to reach virtually all kinds of mercury, whether in elemental form, as a chemical compound, or within products and waste. Treaty interventions occur at key points in the pathways through which mercury enters the environment. Such pathways include mercury-generating processes and their marketplace products,<sup>18</sup> use and unintentional release of

mercury into the environment, and even mercury disposal and remediation.

Nine areas are specifically addressed by the Convention: (1) mercury supply sources and trade<sup>19</sup>; (2) mercury-added products<sup>20</sup>; (3) manufacturing processes in which mercury or mercury compounds are used<sup>21</sup>; (4) artisanal and small-scale gold mining<sup>22</sup>; (5) air emissions<sup>23</sup>; (6) releases to land and water<sup>24</sup>; (7) interim storage of mercury<sup>25</sup>; (8) mercury wastes<sup>26</sup>; and (9) contaminated sites.<sup>27</sup> Paralleling the comprehensive coverage of release pathways, the treaty creates a correspondingly comprehensive set of commitments for control and management, prohibition of new mining, restrictions on trade, and elimination or restrictions on its use in manufacturing and other processes.

## B. Convention Articles

Like other international agreements, the treaty preamble recites the agreement's precursors, concerns, values, and processes leading up to its conclusion.<sup>28</sup> Other contextual material is contained in Articles 1 and 2. Article 1 is a concise yet broad statement of the Convention's objective, which "is to protect the human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds."<sup>29</sup> Article 2 sets out defined terms.<sup>30</sup>

Articles 3 through 12 contain the primary substantive commitments. Article 3 on mercury supply sources and mercury trade attempts to control the pathways by which mercury becomes part of the pool of raw material for various industrial and manufacturing uses. Specifically, it imposes an absolute prohibition on new mercury mining activities and phases out existing mining within 15 years of entry into force.<sup>31</sup> In addition, Article 3 obligates parties to make efforts to identify significant existing stocks of mercury and mercury compounds. Excess mercury from the decommissioning of chlor-alkali facilities is to be disposed of in environmentally sound ways that do not lead to re-introduction into the stream of commerce.<sup>32</sup>

Like other modern environmental agreements, Article 3 imposes controls not only on mercury trade among Convention parties, but also between Convention parties and nonparties.<sup>33</sup> Exporters are required to obtain the importing party's informed consent and to limit subsequent use,

12. UNEP, GLOBAL MERCURY ASSESSMENT 2013: SOURCES, EMISSIONS, RELEASES AND ENVIRONMENTAL TRANSPORT 4-7 (2013), available at <http://www.unep.org/PDF/PressReleases/GlobalMercuryAssessment2013.pdf>.

13. UNEP, MERCURY: TIME TO ACT 23 (2013), available at [http://www.unep.org/PDF/PressReleases/Mercury\\_TimeToAct\\_hires.pdf](http://www.unep.org/PDF/PressReleases/Mercury_TimeToAct_hires.pdf).

14. Releases of mercury to the aquatic environment are less explored, but the major sources overlap with those for atmospheric emissions. See UNEP, GLOBAL MERCURY ASSESSMENT 2013, *supra* note 12, at 24.

15. UNEP, MERCURY: TIME TO ACT, *supra* note 13, at 27.

16. UNEP, GLOBAL MERCURY ASSESSMENT 2013, *supra* note 12, diagram at 9.

17. Minamata Convention, *supra* note 1, art. 1.

18. There are four pathways by which mercury enters the global marketplace: (1) "virgin" mercury from primary mercury mining; (2) "by-product" mercury that is generated by other mining or industrial processes; (3) "recovered/recycled" mercury from waste and used products; and (4) "inventory mercury" from preexisting stockpiles. See Natural Res. Def. Council, *Mercury Pollution: An End in Sight?*, <http://www.nrdc.org/international/toxic.asp> (last visited June 5, 2014).

19. Minamata Convention, *supra* note 1, art. 3.

20. *Id.* art. 4.

21. *Id.* art. 5.

22. *Id.* art. 7.

23. *Id.* art. 8.

24. *Id.* art. 9.

25. *Id.* art. 10.

26. *Id.* art. 11.

27. *Id.* art. 12.

28. *Id.* pmbli.

29. *Id.* art. 1.

30. *Id.* art. 2.

31. *Id.* arts. 3.3-3.4.

32. *Id.* art. 3.5.

33. *Id.* arts. 3.6-3.8.

interim storage, and disposal.<sup>34</sup> Conversely, imports from nonparties must be certified as not coming from sources prohibited by the Convention, such as primary mercury mining or the decommissioning of chlor-alkali facilities.<sup>35</sup> A temporary exemption is available.<sup>36</sup>

Articles 4 and 5 seek to reduce the ubiquity of mercury in products and its use in industrial processes. Article 4 requires parties to take measures that will lead to the phase-out of the manufacture and international trade of mercury-added products, absent an exemption.<sup>37</sup> Products subject to this phaseout requirement, including phaseout dates, are listed in Annex A.<sup>38</sup> Similarly, Article 5 requires parties to take measures that will lead to the phaseout of mercury and mercury compounds in manufacturing processes that are listed in Annex B.<sup>39</sup> The Annex A and B lists are to be reviewed and possibly amended by the Conference of the Parties (COP) within five years of entry into force.<sup>40</sup> Upon a nation's becoming a party to the Convention, Article 6 allows for five-year exemptions from Article 4 and Article 5 requirements.<sup>41</sup>

Article 7 addresses mercury in artisanal and small-scale gold mining. Parties are required to "take steps to reduce, and where feasible eliminate, the use of mercury and mercury compounds in, and the emissions and releases to the environment of mercury from, such mining and processing."<sup>42</sup> Article 7 also requires notification of "artisanal and small-scale gold mining and processing in [a party's] territory [that] is more than insignificant"<sup>43</sup> and submission, within three years, of a national action plan to reduce or eliminate mercury use in such activities.<sup>44</sup>

Articles 8 and 9 require the control, and where feasible also the reduction, of point source releases of mercury into the environment.<sup>45</sup> Both provisions share a parallel structure, with Article 8 addressing emissions into the atmosphere and Article 9 focusing on releases onto land and into water. Parties may prepare national plans for submission to the COP, setting out relevant measures to accomplish the control requirements.<sup>46</sup> Parties are also required under both articles to establish and maintain an inventory of mercury releases from relevant sources.<sup>47</sup>

Article 8's atmospheric emission provisions focus on the most significant sources, ranging from coal-fired power plants and industrial boilers to waste incinerators, cement

clinkers, and nonferrous metal production processes.<sup>48</sup> The control obligations distinguish between existing sources and new sources.<sup>49</sup> New sources are defined to include not only newly constructed facilities, but also existing sources that have undergone a substantial modification resulting in a significant increase in emissions.<sup>50</sup>

For new sources, Article 8 mandates that "each Party shall require the use of best available techniques and best environmental practices to control and, where feasible, reduce emissions, as soon as practicable but no later than five years after the date of entry into force of the Convention for that Party."<sup>51</sup> Existing sources are required to implement one or more of a list of control measures "as soon as practicable but no more than ten years"<sup>52</sup> after the Convention's entry into force, "taking into account [the party's] national circumstances, and the economic and technical feasibility and affordability of the measures."<sup>53</sup> Such measures include quantified goals, emission-limit values, best available techniques or best environmental practices, multi-pollutant control strategies, or alternative measures.<sup>54</sup> At its first meeting, the COP is to "adopt guidance on . . . [b]est available techniques and on best environmental practices."<sup>55</sup>

Article 9's provisions address mercury discharges "to land and water from . . . point sources not addressed in other provisions of this Convention,"<sup>56</sup> effectively a broad catchall that complements Article 8's scope. It adopts parallel definitions distinguishing between existing and new sources; new sources include existing sources that have been the subject of substantial modifications.<sup>57</sup> While Article 9 requires the application of one or more of a list of measures, mirroring those listed in Article 8, it does not explicitly require the application of different control measures based on whether they are new or existing sources.<sup>58</sup>

Articles 10, 11, and 12 concern interim storage of mercury, disposal, and risk-reduction activities at mercury-contaminated sites. These provisions require all covered actions to be taken in an environmentally sound manner. For example, interim storage of mercury, intended for permissible uses later on,<sup>59</sup> and mercury waste are all to be "[m]anaged in an environmentally sound manner."<sup>60</sup>

34. *Id.* art. 3.7.

35. *Id.* art. 3.8.

36. *Id.* arts. 3.7-3.9.

37. *Id.* arts. 4.1-4.2. A country may also "implement different measures or strategies . . . if it can demonstrate that it has already reduced to a de minimis level the manufacture, import, and export of the large majority of" Annex A-listed products. *Id.* art. 4.2.

38. *Id.* Annex A.

39. *Id.* Annex B.

40. *Id.* arts. 4.8 & 5.10.

41. *Id.* art. 6.

42. *Id.* art. 7.2.

43. *Id.* art. 7.3

44. *Id.* art. 7.3(b).

45. *Id.* arts. 8.1, 8.3, 9.1 & 9.4.

46. *Id.* arts. 8.3 & 9.4.

47. *Id.* arts. 8.7 & 9.6.

48. *Id.* art. 8.2. & Annex D.

49. The Convention defines new sources as any sources "the construction or substantial modification of which is commenced at least one year after the date of" the Convention's entry into force for that particular party, including effectiveness of any amendments to Annex D. *Id.* art. 8.2(c).

50. *Id.* art. 8.2(d). However, the Convention also states that "it shall be a matter for the Party to decide whether a modification is substantial or not." *Id.*

51. *Id.* art. 8.4.

52. *Id.* art. 8.5.

53. *Id.*

54. *Id.*

55. *Id.* art. 8.8(a).

56. *Id.* art. 9.

57. *Id.* art. 9.2(c).

58. *Id.* art. 9.5.

59. *Id.* art. 10.2.

60. *Id.* art. 11.3. Recovery, recycling, reclamation, and direct reuse of mercury wastes are only to occur for uses allowed under the Convention. *Id.* International transport of mercury wastes is prohibited unless for the purpose of environmentally sound disposal and in conformity with requirements of

Likewise, parties are to perform risk-reduction activities at contaminated sites in an environmentally sound manner, appropriately incorporating human health and environmental risk assessments.<sup>61</sup>

The Convention also features articles exhorting the parties to address the public health aspects of mercury and to educate and disseminate information to the public.<sup>62</sup> Further provisions supporting implementation and compliance with the treaty's environmental objectives, now standard in modern MEAs, address funding, technical assistance and cooperation, and monitoring and evaluating of the Convention's effectiveness. Articles 13 and 14 call for international financial support, capacity-building, and other technical assistance to enable effective implementation of the Convention in developing countries.<sup>63</sup> Further international cooperation is called for through the exchange of information, including scientific, technical, economic, and legal, as well as through research and monitoring of mercury and its role and effect in the environment.<sup>64</sup>

To track effectiveness, each party is encouraged to develop and submit national implementation plans<sup>65</sup> as well as to report on the effectiveness of domestic implementation measures.<sup>66</sup> An Implementation and Compliance Committee, modeled on similar mechanisms in other MEAs, is created by Article 15. The Committee's function is "facilitative in nature,"<sup>67</sup> acting primarily when assistance from the Convention or other parties would be helpful to the party at issue. Thus, its primary focus will be on capacity issues and noncompliance due to inability to comply, rather than willful noncompliance. Consistent with that perspective, committee attention is to be directed to issues raised by the written submissions of any party with respect to its own compliance, national reports submitted under Article 21, and requests from the COP.<sup>68</sup>

As in other MEAs, the Committee is not the ultimate arbiter of noncompliance, but rather makes recommendations to the COP about the resolution of compliance issues. The Committee may adopt recommendations with a three-fourths majority.<sup>69</sup> Unlike other MEAs, however, Article 15 articulates the structure and operation of the Compliance Committee in unprecedented detail. As a result, the Minamata Convention's Implementation and Compliance Committee will be able to begin operation relatively quickly. In contrast, other treaty systems have had to await significant further COP action to articulate structure and operation of similar compliance committees.<sup>70</sup>

Ultimate oversight over the Convention's operation is vested, as in other environmental agreements, in the COP.<sup>71</sup> No later than six years after the Convention's entry into force, the COP is called upon to evaluate the Convention's overall effectiveness.<sup>72</sup> The COP is provided with residual governance authority to "undertake any additional action that may be required for the achievement of the objectives of this Convention."<sup>73</sup> Dispute settlement is governed by Article 25.<sup>74</sup>

Other standard provisions and closing articles include amendment of the agreement and entry into force, which is triggered once 50 states have joined the agreement.<sup>75</sup> As is also now common in modern MEAs, reservations are not permitted.<sup>76</sup>

Finally, the Convention includes five annexes. They set out lists of mercury-added products (Annex A),<sup>77</sup> as well as industrial processes utilizing mercury that are subject to control under the Convention (Annex B),<sup>78</sup> the elements of national action plans required for parties with significant artisanal and small-scale gold mining activities (Annex C),<sup>79</sup> and point sources of mercury emissions into the atmosphere subject to the air emission control requirements (Annex D).<sup>80</sup> Annex E specifies the arbitration and conciliation process that may be triggered under the Convention's Article 25 dispute settlement provision.<sup>81</sup>

### III. Advancing Effectiveness: Treaty Design and Scope of Participation

Successful conclusion of the Minamata Convention is in itself a substantial step toward solving the problem of mercury pollution and thus a significant triumph for those concerned with public health and environmental quality. The Convention's actual implementation and effectiveness will not be discernible, however, until it has entered into force, a threshold requiring 50 parties.<sup>82</sup> Nevertheless, implementation-facilitating design of important treaty provisions and U.S. participation in the agreement bode well for the Convention.

Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, art. 17, Sept. 11, 1998, U.N. Doc. UNEP/FAO/PIC/CONF/2, reprinted in 38 I.L.M. 1 (1999); and Stockholm Convention on Persistent Organic Pollutants, art. 17, May 22, 2001, 40 I.L.M. 532 (2001), available at [http://www.pops.int/documents/convtext/convtext\\_en.pdf](http://www.pops.int/documents/convtext/convtext_en.pdf).

71. Minamata Convention, *supra* note 1, art. 23. A secretariat is also created to provide support services to the COP.

72. *Id.* art. 22.

73. *Id.* art. 23.5(e).

74. *Id.* art. 25.

75. *Id.* art. 31.

76. *Id.* art. 32.

77. *Id.* Annex A.

78. *Id.* Annex B.

79. *Id.* Annex C.

80. *Id.* Annex D. See also art. 8.

81. *Id.* Annex E. See also art. 25.

82. As of Oct. 2014, one year after the Convention was opened for signature, six states had joined, including the United States.

the 1989 Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal (Basel Convention). *Id.*

61. *Id.* art. 12.2.

62. *Id.* arts. 16 & 18.

63. *Id.* arts. 13 & 14.

64. *Id.* arts. 17 & 19.

65. *Id.* art. 20.

66. *Id.* art. 21.

67. *Id.* art. 15.1.

68. *Id.* art. 15.4.

69. *Id.* art. 15.6.

70. Compare with Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC), Conference of the Parties, 3d Sess., art. 18, U.N. Doc. FCCC/CP/1997/L.7/Add.1 (1997); 1998 Rotterdam

### A. “Design for Implementation”

The Minamata Convention adopts a comprehensive regulatory approach to the problem of mercury pollution. Its coverage reaches almost all significant sectors and pathways by which mercury enters commerce and is released into the environment. Its comprehensive scope includes measures addressing the industrial use of mercury in products and production processes, the release of mercury as a byproduct of industrial operations and production, power generation, mining processes, and the storage, disposal, and remediation issues associated with mercury and mercury wastes.

In addition to its exceptionally broad scope, the Convention follows a growing trend: designing key treaty provisions with implementation in mind. In particular, its obligations not only articulate desired actions and outcomes, but in many instances also identify key intervention points, regulatory approaches, and tools. In doing so, the Convention channels implementation activities into well-established regulatory mechanisms that have a positive track record in international and national environmental governance systems. These mechanisms include mandates and exhortations for prior informed consent, information disclosure, and other tools. Among the most significant is Article 8.4, which states that “[f]or its new sources, each Party shall require the use of *best available techniques* and *best environmental practices* to control and, where feasible, reduce emissions, as soon as practicable . . . .”<sup>83</sup>

Even though Article 8.4 imposes a binding requirement to control emissions with best available techniques (BAT) and best environmental practices (BEP), the Convention preserves significant flexibility and the choice of nationally appropriate mechanisms. Article 8.4’s mandate to reduce emissions is subject to “feasible” and “as soon as practicable” qualifications.<sup>84</sup> More importantly, inherent in BAT and BEP is their adaptability to specific circumstances. As the definitions of the phrases themselves indicate, “best” and “available,” in the regulatory context of a particular industry, may vary by country and conditions.<sup>85</sup>

Yet, there are limits to the variability of these concepts. The substantive content and meaning of BAT and BEP are bounded not only by the terms of the agreement itself,<sup>86</sup> but also through their common usage by environmental regulators, engineers, lawyers, and other professionals. The terms have appeared, in a variety of permutations, in other international environmental agreements. For example, they were used as early as 1992 in two regional European agreements—the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic<sup>87</sup> and the United Nations Economic Commission for

Europe (UNECE) Convention on the Protection and Use of Transboundary Watercourses and International Lakes.<sup>88</sup> Similarly, the concepts are alluded to in the 2001 Stockholm Persistent Organic Pollutants Convention.<sup>89</sup> In U.S. environmental law, the terms also reference a set of tools that have been utilized to ensure the effective management of pollution since the 1970s, as these concepts have been deeply embedded in the U.S. regulatory system, including in the CAA and the Clean Water Act (CWA).<sup>90</sup>

Accordingly, incorporating and referencing regulatory tools such as BAT and BEP in the Convention provides parties with a reservoir of interpretive guidance and concrete experiences for their application. In the context of air emission from new sources, for example, parties will have the extensive regulatory experience of EPA to rely on for designing regulatory tools, including oversight and enforcement. The result is a set of Convention mandates that outline or provide options for regulating mercury—options that will facilitate and expedite implementation while preserving flexibility for individual parties.

The reference to specific practices such as BAT and BEP is exemplary of a trend in environmental treaty making that identifies tools and mechanisms for operationalizing commitments. Through these provisions, the Convention seeks to take seriously what has been the greatest challenge and most neglected issue for MEA effectiveness: implementation at the national level.

The reality of international environmental law is that national regulatory implementation of treaty commitments regularly lags far behind the high aspirations and goals set out in such treaties. The source of the problem is well-known: lack of capacity with respect to environmental regulation and weak governance systems. Implementation is especially challenging for developing nations, where governance institutions are frequently ineffective due to insufficient funding, lack of technical and regulatory expertise, and a weak rule of law. In such situations, explicit articulation of regulatory tools and mechanisms facilitates the operationalization of commitments and references a substantial set of national regulatory experiences that can provide valuable guidance for implementation efforts.

More generally, the Minamata Convention’s implementation-focused provisions illustrate how MEAs are no longer contract-type arrangements designed primarily to memorialize transactions exchanging reciprocal commitments between governments. Instead, environmental trea-

83. Minamata Convention, *supra* note 1, art. 8.4. (emphasis added).

84. *Id.*

85. *Id.* art. 2(b)-(c). Other treaty commitments allow implementation flexibility by providing a menu of tools and mechanisms, thus allowing tailoring of implementation efforts to specific national circumstances. *See, e.g.*, arts. 5.3, 9.4 & 9.5.

86. *Id.* art. 2(b)-(c).

87. Convention for the Protection of the Marine Environment of the North-East Atlantic, Sept. 22, 1992, 32 I.L.M. 1069 (1993), *available at* [http://www.ospar.org/html\\_documents/ospar/html/ospar\\_convention\\_e\\_updated\\_text\\_2007.pdf](http://www.ospar.org/html_documents/ospar/html/ospar_convention_e_updated_text_2007.pdf).

88. Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Mar. 17, 1992, 31 I.L.M. 1312 (1992), *available at* <http://www.unece.org/fileadmin/DAM/env/water/pdf/watercon.pdf>.

89. Stockholm Convention on Persistent Organic Pollutants, May 22, 2001, 40 I.L.M. 532 (2001), *available at* [http://www.pops.int/documents/conv-text/convtext\\_en.pdf](http://www.pops.int/documents/conv-text/convtext_en.pdf). Other conventions where BAT and BEP appear are the 1998 Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Heavy Metals (1998 LRTAP POPs Protocol), *available at* <http://www.unece.org/fileadmin/DAM/env/lrtap/full%20text/1998.Heavy.Metals.e.pdf>; and the International Seabed Authority Mining Code, *available at* <http://www.isa.org.jm/en/mcode>.

90. 33 U.S.C. §§1251-1387, ELR STAT. FWPCA §§101-607.

ties have become increasingly “relational” and “legislative” in their nature.<sup>91</sup> They are now increasingly designed with the characteristics of environmental regulatory systems, possessing their own governance structures, institutions, and independent legal personalities that provide for ongoing engagement among the parties. These systems increasingly cooperate closely and work in partnership with administrative regulatory systems at the national level.<sup>92</sup>

This relational and legislative approach still falls short of solving the fundamental capacity deficiencies and weak governance systems underlying implementation shortcomings. However, the Minamata Convention’s implementation-focused design provides a roadmap for making implementation and enforcement less burdensome and more effective. The result is an important step in advancing the evolution of MEAs.

### B. *Swift U.S. Signature and Acceptance*

The successful adoption by the United States of the Minamata Convention and prompt acceptance was an important success of the Barack Obama Administration’s policy of active reengagement in multilateral environmental matters, beginning with the Administration’s 2009 decision to support the negotiation of this binding international agreement.<sup>93</sup> With one stroke, the United States not only became the first party to the Convention, but also ended a decades-long run since it last became a party to a major MEA of global scope likely to achieve universal membership.<sup>94</sup>

In fact, in the 25 years preceding acceptance of the Minamata Convention, the only other major environmental agreements ratified by the United States were the 1992 United Nations Framework Convention on Climate Change (UNFCCC)<sup>95</sup> and the 1994 United Nations Convention to Combat Desertification (UNCCD).<sup>96</sup> In com-

parison, the preceding quarter century saw the United States join many more MEAs that have since attained near universal membership.<sup>97</sup>

Environmental treaty making over the last 25 years has been no less prolific. Scores of bilateral and regional environmental agreements have been concluded. And while the United States has been involved in negotiations for all of the multilateral agreements, many of these agreements now languish in treaty purgatory with respect to the United States—signed but not ratified.<sup>98</sup> They range from treaties such as the 1997 Kyoto Protocol, where the domestic politics of climate change has prevented ratification,<sup>99</sup> to the Basel Convention, which was uncontroversial at the time of signature and achieved Senate consent as early as 1992.<sup>100</sup> With respect to agreements such as the Basel Convention, the United States is not only the only major industrial country that is not a party, but is in the odd company of a handful of nations such as Afghanistan, Myanmar, South Sudan, and Tajikistan.

Despite the major shift in U.S. environmental treaty acceptance, U.S. ratification of the Minamata Convention received relatively little public attention when it occurred. One blogger noted that swift acceptance came at the expense of the typical Senate advice-and-consent process,<sup>101</sup> a step that is a significant departure from past practice with respect to multilateral environmental agreements of global scope and participation.

Concluding international agreements outside of the process of the U.S. Constitution’s Treaty Clause is not in itself unusual. Other avenues have included executive agreements under the president’s authority or delegated congressional authority, as well as congressional-executive agreements primarily used for trade pacts that involve participation by both houses of Congress through the regular

91. See Tseming Yang, *The Challenge of Treaty Structure: The Case of NAFTA and the Environment*, 100 AM. SOC’Y INT’L L. PROC. 32, 32-37 (2006).

92. The resemblance to traditional administrative regulatory systems is especially apparent when such regimes create and endow administrative bodies with regulatory authority over private entities, such as the Kyoto Protocol’s Clean Development Mechanism Executive Board. See Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC), Conference of the Parties, 3d Sess., art. 12, U.N. Doc. FCCC/CP/1997/L.7/Add.1 (1997). See also UNFCCC, *What Is the CDM Executive Board?*, <http://cdm.unfccc.int/EB/index.html> (last visited June 5, 2014).

93. U.S. EPA, Minamata Convention on Mercury, History of the Global Mercury Negotiations, <http://epa.gov/oia/toxics/mercury/minamata.html> (last visited June 5, 2014).

94. The 1994 U.N. Convention to Combat Desertification was the last MEA that the United States ratified (Nov. 17, 2000). See U.S. DEP’T OF STATE, TREATIES IN FORCE 373 (Jan. 1, 2013) [hereinafter TREATIES IN FORCE], available at <http://ehp.niehs.nih.gov/wp-content/uploads/121/10/ehp.121-a304.pdf>. By universal membership, I mean treaties that come close to having all U.N. countries as participants, currently 193 states. While there is no guarantee that the Minamata Convention will attain universal membership, its negotiation history, including wide-ranging international participation and the nature of the subject matter, are strong indicators. When the Convention was opened for signature on Oct. 10-11, 2013, 92 nations deposited instruments of signature. As of October 2014, 128 nations have already signed the Convention. See UNEP, Minamata Convention on Mercury, Countries, <http://www.mercuryconvention.org/Countries/tabid/3428/Default.aspx> (last visited Oct. 13, 2014).

95. See TREATIES IN FORCE, *supra* note 94, at 379.

96. *Id.* at 373.

97. These MEAs include the 1972 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), TREATIES IN FORCE, *supra* note 94, at 352; 1971 Convention on Wetlands of International Importance (Ramsar Convention on Wetlands), *id.* at 353; 1973 Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention), *id.* at 499; 1973/78 International Convention for the Prevention of Pollution From Ships (Marpol Convention), *id.* at 420; the 1985 Convention for the Protection of the Ozone Layer, *id.* at 456; and the 1987 Montreal Protocol on Substances That Deplete the Ozone Layer, *id.* at 457.

98. These MEAs include the 1989 Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal (Basel Convention), 1992 Convention on Biological Diversity (Biodiversity Convention), 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Dumping Convention), 1997 Kyoto Protocol to the UNFCCC (Kyoto Protocol), 1998 Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention), 2000 Stockholm Convention, and the 2001 International Treaty on Plant Genetic Resources for Food and Agriculture (Plant Genetic Resources Treaty or International Seed Treaty).

99. In 2001, the United States officially announced through then-EPA Administrator Christine Todd Whitman that it would not ratify the agreement. See *U.S. Won’t Follow Climate Treaty Provisions, Whitman Says*, N.Y. TIMES, Mar. 28, 2001, at A19, available at <http://www.nytimes.com/2001/03/28/us/us-won-t-follow-climate-treaty-provisions-whitman-says.html>.

100. 138 CONG. REC. S12291 (daily ed. Aug. 11, 1992).

101. See Duncan Hollis, *Doesn’t the U.S. Senate Care About Mercury?*, OPINIO JURIS, Nov. 12, 2013, <http://opiniojuris.org/2013/11/12/doesnt-u-s-senate-care-mercury/>.

legislative process. Some of these approaches have been the subject of scholarly debate, but they remain standard tools of U.S. treaty making, including for environmental agreements. For example, regional environmental agreements such as the North American Agreement on Environmental Cooperation<sup>102</sup> and the UNECE Convention on Long-Range Transboundary Air Pollution<sup>103</sup> have been concluded as executive agreements, without Senate approval.

However, the question remains: Why was Senate advice and consent skipped here? Why the choice to conclude the Minamata Convention as an executive agreement, when a number of other MEAs are still pending before the Senate, including several that are on the U.S. State Department's treaty priority list?<sup>104</sup> To the extent that Senate approval was deemed unnecessary for U.S. membership for the Minamata Convention, the common perception that the politics of Senate advice and consent is *the only* stumbling block to ratification of pending environmental treaties is incorrect. Congressional opposition is thus not the exclusive determinant of U.S. participation in MEAs, especially when there is a commitment by the president to participate fully in an environmental agreement.

Here, the answer can be found primarily in the determination by the executive branch that the Minamata Convention's provisions can be implemented without new congressional legislation.<sup>105</sup> In contrast, the major MEAs that have been pending before the Senate are viewed as requiring the enactment of additional legislation, so as to allow for full compliance with treaty commitments. Domestic implementation authority is usually essential for treaty participation because most modern environmental agreements call for affirmative governmental actions encompassing the regulation of private-party conduct. It has been the practice of the State Department not to deposit instruments triggering party status unless all necessary legal authority for treaty compliance is in place.

As a practical matter, this practice has usually meant delaying deposit of ratification instruments to allow for necessary legislative steps to be taken.<sup>106</sup> The result is frequently—and with environmental agreements almost always—a significant delay. If additional legislative authority is necessary for treaty compliance, a choice of the executive agreement path over the Senate advice-and-consent

path would not lead to any more expeditious treaty membership.<sup>107</sup> Thus, one answer to the question “why here?” is that a quick path to membership through the executive agreement option was available and presented an opportunity for the United States to demonstrate its commitment and willingness to be actively involved in the treaty.

Internationally, U.S. membership in the Minamata Convention significantly enhances the prospect that the treaty will achieve an effective level of participation by key states. Even though mercury pollution is an environmental problem with global impact, much like climate change, a limited number of countries play a disproportionate role in mercury's release into the environment. Just a few countries, including China, Kyrgyzstan, Mexico, Peru, Russia, Slovenia, Spain, and Ukraine, host most of the world's mercury deposits. Only one of these, Kyrgyzstan, still engages in primary mining of mercury for export.<sup>108</sup> Further, most of the environmental releases of mercury from artisanal and small-scale gold mining—the largest sector of mercury use—come from a small number of countries in Asia, Africa, and South America.<sup>109</sup> The second largest sector of global mercury use is the polyvinyl chloride industry, much of it located in China.<sup>110</sup>

Japan, the European Union (EU), and the United States, have also played critical roles in the history of mercury pollution. Traditionally, they have been among the world's three largest exporters of mercury, though the United States and the EU have already adopted self-imposed export bans.<sup>111</sup> Participation by the wealthy industrialized nations will be important, especially because of their significance to the world economy and trade, their role in global development assistance, and their historical role as significant mercury polluters. American regulators in particular will have much to contribute in terms of domestic environmental regulatory experience in addressing mercury pollution issues.

U.S. membership in the Minamata Convention ensures that it will be engaged in the treaty system and provide crucial leadership for its success.<sup>112</sup> Most importantly, U.S. participation will encourage the same from other key

102. See Exec. Order No. 12915, 59 Fed. Reg. 25775 (May 13, 1994).

103. See Convention on Long-Range Transboundary Air Pollution, Nov. 13, 1979, 1302 U.N.T.S. 217, available at <http://www.unece.org/fileadmin/DAM/env/lrtap/full%20text/1979.CLRTAP.e.pdf>.

104. Letter from Richard Verma, Assistant Secretary of State, to Senator John Kerry, Senate Foreign Relations Committee Chair, Treaty Priority List for the 111th Congress (May 11, 2009), available at <http://www.state.gov/documents/organization/153474.pdf>.

105. Acceptance on Behalf of United States, John Kerry, Oct. 18, 2013 (Measures to Implement the Minamata Convention on Mercury) (providing references to existing regulatory authority and conditions that allow the United States to implement the Convention), available at <http://mercuryconvention.org/Portals/11/documents/submissions/US%20declaration.pdf>.

106. See, e.g., Susan Biniaz, Deputy Legal Adviser, U.S. Dep't of State, Remarks at the American Society of International Law Annual Meeting (Apr. 6, 2013) (stating that if provisions of a treaty go beyond existing U.S. laws, the United States joining the treaty would need to await additional congressional implementing legislation) (author's notes).

107. However, given the increasing integration of national environmental regulatory schemes with international treaty regimes, ranging from protection of the ozone layer to climate change to marine pollution, one unanswered question is the legitimacy and political astuteness of joining environmental agreements that have universal membership without the full engagement of Congress, including through the Senate advice-and-consent process. In many respects, MEAs are different from most other areas of international law because they link to a set of domestic regulatory schemes that are complex, dynamic, and the continuing subject of close congressional scrutiny.

108. UNEP, MERCURY: TIME TO ACT, *supra* note 13, at 15.

109. *Id.* at 17; see also Mercury Watch website, <http://www.mercurywatch.org>.

110. UNEP, MERCURY: TIME TO ACT, *supra* note 13, at 19.

111. Natural Res. Def. Council, Mercury Pollution: An End in Sight?, available at <http://www.nrdc.org/international/ftoxic.asp>.

112. For example, U.S. leadership in the 1980s was a crucial ingredient for the successful conclusion of the Montreal Protocol regime, the treaty system responsible for the global control of substances that deplete the stratospheric ozone layer. Even today, more than one-quarter of a century after the adoption of the Montreal Protocol, the Ozone Treaties are still viewed as among the most successful environmental treaty regimes. While the example is only anecdotal evidence, it is consistent with the relatively uncontroversial proposition that weak engagement by the United States in an environmental agreement may deprive it of support by a key actor in the international system.

countries, which will be critical to realizing the objectives of the Convention. Even the most stringent and comprehensive global environmental agreement will be of little value unless the most significant contributors to mercury pollution implement the Convention requirements. In short, U.S. acceptance of the Minamata Convention will be instrumental to its success.

#### **IV. Future Directions in Environmental Treaty Making: Shifting the Focus From Facilitating Process to Advancing Implementation and Functional Effectiveness**

There are at least two sets of lessons that the discussion here suggests for environmental treaty making. First, a global environmental problem does not automatically require universal participation for the treaty to be effective. If a problem affecting the global environment has its origin in a limited set of countries and those key entities are meaningfully engaged, an agreement with a relatively limited number of participants can effectively address a global problem. Conversely, an agreement that has near-universal participation but lacks membership by key countries can be seriously hampered in its effectiveness.

Second, as explained above, countries have varying levels of domestic implementation capacity. At the lower end of the spectrum, especially in developing countries, states will encounter serious limitations in their effective participation and ability to contribute to achieving treaty objectives. Lack of adequate regulatory capacity and other national governance weaknesses may thus present a far greater challenge than international collective action problems. Though generic funding or technical assistance promises, now standard in modern environmental agreements, are designed to address these issues, in the past, fulfillment of such promises has fallen far short of what is necessary or has been significantly delayed, often the casualties of funding constraints and the politics of development aid.

In fact, as the number of multilateral environmental agreements has proliferated, the capacity of most governments to participate meaningfully in the work of all of these new international regimes, not to speak of full implementation, has generally not kept pace. Prof. Edith Brown Weiss has termed this “treaty congestion.”<sup>113</sup> Even for wealthy nations such as the United States, this presents a challenge. But it is especially problematic for developing countries that frequently face serious resource constraints, including funding for travel and staff, in their efforts to stay meaningfully engaged.

MEAs are also more comprehensive and complex than ever before, increasingly resembling complex administrative regulatory regimes. With missions no longer limited to

memorializing exchanges of commitments, they are now frequently devoted to the creation of ongoing endeavors to solve the global tragedy of the commons and protect environmental public goods. The emphasis in their content has shifted from the expression of abstract objectives and promises to the articulation of practical regulatory mechanisms and design of oversight institutions.

If resources and time were unlimited and no harm irreversible, slow progress might be workable. Unfortunately, the reality of environmental degradation and loss of unique environmental resources is not so patient.

However, there is an available second-best solution to this challenge: treaty design that channels implementation efforts into particular regulatory tools and approaches that have proven effective in other nations or contexts. For example, prior informed consent, export and import licensing requirements, phaseout and production bans, information disclosure, tradable emission allowances, and other mechanisms have proven useful in environmental agreements. Less explored have been tools and mechanisms successfully used in national environmental regulatory systems that may be adapted to other nations or internationally.

Specific choices in regulatory design will necessarily vary depending on the international and national context, including legal traditions and governance systems. What is likely to be less effective, however, has been the tendency in treaty making to rigidly adapt earlier agreement architecture without regard to whether it fits the environmental problem at hand. Designing treaties for functional effectiveness will require closer examination of the environmental problem and how to adapt appropriate regulatory solutions.<sup>114</sup>

Such an understanding of environmental treaty evolution also suggests an additional affirmative prescription for treaty making. For the creation of effective MEAs, diplomats should think more like environmental regulators than like hard-driving negotiators. Their primary objective should be to create functionally effective systems, rather than to get the best deal for their own country. That is the lesson of the tragedy of the commons applied to the design and negotiation of environmental agreements.

113. Edith Brown Weiss, *International Environmental Law: Contemporary Issues and the Emergence of a New World Order*, 81 GEO. L.J. 675, 697-702 (1993).

114. In hindsight, one might view the choice to build the initial climate change treaty, the UNFCCC, as a universally subscribed agreement as inappropriate and a misinterpretation of the basis of the ozone regime's success. The 1985 Vienna Convention on the Protection of the Ozone Layer initial list of just 28 signatories consisted mostly of then-significant chlorofluorocarbon (CFC)-producing and -consuming countries. See UNEP, Ozone Secretariat, Status of Ratifications, [http://ozone.unep.org/new\\_site/en/treaty\\_ratification\\_status.php](http://ozone.unep.org/new_site/en/treaty_ratification_status.php) (last visited June 5, 2014). In contrast, the UNFCCC was intended from the beginning to be a universally subscribed agreement, negotiated as one of the three 1992 Rio Summit Conventions, and started off with 165 signatories. See UNFCCC, Status of Ratification of the Convention, [http://unfccc.int/essential\\_background/convention/status\\_of\\_ratification/items/2631.php](http://unfccc.int/essential_background/convention/status_of_ratification/items/2631.php) (last visited June 5, 2014). One possible alternative historical path for the climate change conventions could have been the conclusion of a more limited agreement engaging primarily the countries that were significant carbon emitters at the time, and subsequently broadening the agreement to emerging major carbon emitters and other interested nations.

## **V. Conclusion**

Recognition of the interconnected nature of the environment and environmental problems has brought international environmental cooperation a long way. A host of international institutions, venues, and processes now exist that have given the environment a significant voice on the global stage. However, to address modern environ-

mental problems with the scope, severity, and integrated nature that mercury pollution or climate change present, close cooperation and long-term engagement by the international community will be critical. The Minamata Convention is an important positive milestone in the evolving responses of modern environmental treaties to these needs.