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**Secretariat of the Commission for Environmental Cooperation**

**Article 15(1) Notification to Council that Development  
of a Factual Record is Warranted**

**Submitters:** Center for Biological Diversity (US) (Represented by  
Environmental Law Clinic, University of Denver Sturm  
College of Law)  
Pacific Coast Wild Salmon Society (Canada)  
Kwikwasu'tinuxw Haxwa'mis First Nation (Canada)  
Pacific Coast Federation of Fishermen's Associations (US)  
**Party:** Canada  
**Date received:** 10 February 2012  
**Date of the notification:** 12 May 2014  
**Submission no.:** SEM-12-001 (*BC Salmon Farms*)

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**I. EXECUTIVE SUMMARY**

1. On 10 February 2012, the Submitters listed above (the "Submitters") filed Submission SEM-12-001 (*BC Salmon Farms*) (the "Submission"), a submission on enforcement matters pursuant to Article 14 of the *North American Agreement on Environmental Cooperation* ("NAAEC" or the "Agreement"),<sup>1</sup> with the Secretariat of the Commission for Environmental Cooperation (the "Secretariat" of the "CEC"). Articles 14 and 15 of the NAAEC provide for a process allowing any person or non-governmental organization to file a submission asserting that a Party to the Agreement is failing to effectively enforce its environmental law. The Secretariat initially considers submissions to determine whether they meet the criteria contained in NAAEC Article 14(1). When the Secretariat determines that a submission meets the criteria set out in Article 14(1), it then determines, pursuant to the provisions of NAAEC Article 14(2), whether the submission merits a response from the NAAEC Party named in the submission. In light of any response from the concerned Party, and in accordance with the NAAEC, the Secretariat may notify the Council that the matter warrants the development of a factual record, providing its reasons for such recommendation in accordance with Article 15(1). Where the Secretariat decides to the contrary, or where certain circumstances prevail, it proceeds no further with its consideration of the submission.<sup>2</sup>

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<sup>1</sup> *North American Agreement on Environmental Cooperation*, United States, Canada and Mexico, 14-15 September, 1993, Can TS 1994 No 3, 32 ILM 1480 (entered into force 1 January, 1994) [NAAEC], online: CEC < [www.cec.org/NAAEC](http://www.cec.org/NAAEC) >.

<sup>2</sup> Previous Secretariat Determinations and Factual Records can be found on the CEC's website at: < [www.cec.org/SEMregistry](http://www.cec.org/SEMregistry) >. References to the word "Article" throughout this Notification, unless otherwise stated, refer to an article of the NAAEC.

2. The Submitters assert<sup>3</sup> that the Government of Canada is failing to effectively enforce sections 35 and 36 of the federal *Fisheries Act*<sup>4</sup> in relation to salmon aquaculture operations in coastal British Columbia (“BC”).
3. The Secretariat issued a determination and requested a response from Canada, in accordance with Articles 14 (1) and (2), on 12 September, 2013 (the “Determination”).<sup>5</sup> Canada provided a Response on 7 October, 2013 and in accordance with Article 14(3)(a), advised the Secretariat that, according to Canada, the matter is the subject of two “pending judicial or administrative proceedings” (the “Response”).<sup>6</sup> On 4 November, 2013 the Secretariat requested further information from the Party in accordance with Article 21(1)(b),<sup>7</sup> and on 17 December, 2013, the Secretariat received Canada’s response to the request (the “December letter”).<sup>8</sup> On 7 May, 2014 the Secretariat issued a notification to the Submitters and to Council that according to the Secretariat’s assessment, one of the proceedings identified by Canada met the definition of pending “judicial or administrative proceeding” in Article 45(3)(a) in relation to the Submitters’ assertions concerning section 35 of the *Fisheries Act* and that, in relation to the assertions involving section 36, neither of the proceedings met the definition. Consequently, the Secretariat informed the Submitters and Council that the Secretariat was proceeding with its consideration, pursuant to Article 15(1), whether the Submission in light of the Response warrants recommending the development of a factual record in relation to the Submitters’ assertions involving section 36 of the *Fisheries Act*. As a result of the Secretariat’s assessment of the proceedings mentioned by Canada in its Response, the parts of the Submission involving section 35 were terminated, in accordance with Article 14(3)(a).<sup>9</sup>
4. The Secretariat finds that having considered the Submission in light of the Response, central questions remain open about Canada’s effective enforcement of section 36 of the federal *Fisheries Act*, in relation to salmon aquaculture operations in British Columbia. The Secretariat considers that a factual record would provide the public with a better understanding of the relationships among section 36 and federal, provincial and other regimes that may allow the use of various substances for various purposes even though such substances may be “deleterious substances” as defined in the *Fisheries Act*. Similarly, a factual record would assist the public in understanding which persons Canada considers subject to the general prohibition in subsection 36(3), and in which circumstances. A factual record would also provide information about any changes to laws or regulations made since the date of the Submission that may affect how section 36 of the *Fisheries Act* is enforced.

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<sup>3</sup> Submission SEM-12-001 (*BC Salmon Farms*) [“Submission”]. See the SEM Registry for the Submission and for developments in relation to it (including the documents listed in notes 5-9, *infra*), online: CEC < <http://goo.gl/hXEEaa> >.

<sup>4</sup> RSC 1985, c F-14.

<sup>5</sup> SEM-12-001 (*BC Salmon Farms*) Article 14(1) and (2) Determination (12 September 2013) [the “Determination”].

<sup>6</sup> SEM-12-001 (*BC Salmon Farms*) Government of Canada Response in accordance with Article 14(3) (4 October 2013) [the “Response”].

<sup>7</sup> SEM-12-001 (*BC Salmon Farms*) Article 21(1)(b) Information Request (4 November 2013).

<sup>8</sup> SEM-12-001 (*BC Salmon Farms*) Government of Canada provision of information pursuant to Article 21(1)(b) (17 December 2013) [the “December letter”].

<sup>9</sup> SEM-12-001 (*BC Salmon Farms*) Notification to the Submitters and to Council regarding proceedings notified by Canada (7 May 2014).

5. The preparation of a factual record is therefore warranted in order to gather additional information concerning the matters raised in the Submission.

## II. ANALYSIS

### A. Section 36 of the federal *Fisheries Act*

6. The *Constitution Act* confers on the Parliament of Canada exclusive legislative power regarding “Sea Coast and Inland Fisheries.”<sup>10</sup> Parliament first enacted the *Fisheries Act* in 1868, one year after Confederation.<sup>11</sup>
7. Section 36 of the *Fisheries Act* is administered by Environment Canada (while the rest of the *Act* is the responsibility of the federal Minister of Fisheries and Oceans)<sup>12</sup> and is contained in a part of the *Act* entitled “Fish Habitat Protection and Pollution Prevention.” Subsection 36(3) provides as follows:

Subject to subsection (4), no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water.

Provisions similar to the current prohibition, quoted above, have been included in the *Fisheries Act* since its enactment in 1868.<sup>13</sup> At the time of the Submission the prohibition applied everywhere in Canada, on public and private land and to all types of activity, whether carried out by individuals, businesses, provinces, municipalities or the federal government.<sup>14</sup>

8. Subsections 36(4), (5), (5.1) and (5.2) empower the federal government to adopt regulations prescribing when, where, under which circumstances and in which concentrations the deposit of specified deleterious substances, waste or pollutants is authorized. No such regulations are in force specifically relevant to salmon aquaculture operations such as those that are the subject of the *BC Salmon Farms* submission.
9. In order to succeed in a prosecution, the Crown prosecutor must prove beyond a reasonable doubt that a person “deposited” or “permitted the deposit of” a “deleterious substance” into or near “water frequented by fish.”<sup>15</sup>

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<sup>10</sup> *Constitution Act, 1867* (UK), 30 & 31 Vict, c 3, reprinted in RSC 1985, App II, No 5, s 91(12).

<sup>11</sup> 31 Vict, 1868, c 60.

<sup>12</sup> See Environment Canada, “Fisheries Act” (2012), online:

< <http://www.ec.gc.ca/pollution/default.asp?lang=En&n=072416B9-1> > (visited 9 May 2014).

<sup>13</sup> 31 Vict, 1868, c 60, s 14; replaced by SC 1969-1970, c 63, s 3.

<sup>14</sup> Information in paragraphs 6-11 is adapted from CEC Factual Records regarding Submission SEM-03-005 (*Montreal Technoparc*) (2008) at 34, Submission SEM-98-004 (*BC Mining*) (2003) at 23, and Submission SEM-00-004 (*BC Logging*) (2003) at 31-33.

<sup>15</sup> See *R v Northwest Territories (Commissioner)*, 1993 CarswellNWT 51, [1994] 1 WWR 441 (NWT Terr Ct), appeal dismissed 1994 Carswell NWT 24 (NWTSC), for an analysis of the elements of the offence in subsection 36(3).

10. Subsection 34(1) defines a “deposit” as any discharging, spraying, releasing, spilling, leaking, seeping, pouring, emitting, emptying, throwing, dumping or placing. A deposit occurs regardless of whether the act resulting in the deposit is intentional,<sup>16</sup> and includes both a deposit directly into fish-bearing water or in a place and under conditions where the substance deposited may enter fish-bearing water.<sup>17</sup> A deposit may occur if someone is in a position to exercise continued control of a deposit and prevent it from occurring, but fails to do so.<sup>18</sup>
11. A “deleterious substance” is defined in the *Fisheries Act* as a substance that, if added to any water, would cause the water to become harmful to fish.<sup>19</sup> The courts have held that if a substance is “deleterious” in and of itself, the prosecutor does not have to prove that depositing such a substance into water actually caused harm to fish or fish habitat, in order to secure a conviction under subsection 36(3).<sup>20</sup> The Federal Court of Appeal has commented on the breadth of the definition as follows:

44 It is worth noting that "deleterious substance" is a term broadly defined. Although, as indicated by the respondents, the provisions in this section are primarily concerned with pollution from industrial, agricultural and individual deposits resulting from man's activities, this does not mean that they can never apply to natural [phenomena] such as the flow of natural but harmful sediments after a landslide.<sup>21</sup> ...

45 However, a natural substance located in one place and in a specific quantity may become harmful in another environment as is obviously the case here. It would be surprising that when such rare cases occur, the public policy of protecting our fishing resources would simply be defeated. Parliament uses broad language in this type of legislation to avoid such a result for it is impossible to foresee all scenarios that could occur.<sup>22</sup>

#### **B. Assertions involving section 36 of the *Fisheries Act***

12. The Submission was summarized at paragraphs 3 to 14 of the Determination.
13. The Secretariat wrote (in paragraph 9 of the Determination):

In relation to subsection 36(3) of the Act, in section “D. Fish Feedlot Impacts from Toxic Chemicals, Pollution and Escaped Invasive Fish,” the Submitters allege that “Salmon feedlots add drugs such as antibiotics and therapeutants to

<sup>16</sup> *Fisheries Act*, *supra* note 4, s 40(5)(a).

<sup>17</sup> See *R v Western Stevedoring Co* 1984 Carswell BC 2208 (BCCA) at para 5, 13 CELR 155, leave to appeal to SCC refused (1984) 13 CELR 159 (note) (SCC).

<sup>18</sup> See *R v Sault Ste Marie (City)*, [1978] 2 SCR 1299.

<sup>19</sup> *Fisheries Act*, *supra* note 4, s 34(1) (“deleterious substance”). For the complete definition, see the Determination at para 21.

<sup>20</sup> *Fletcher v Kingston (City)*, 2004 CarswellOnt 1860 (OCA).

<sup>21</sup> Citing *R v British Columbia*, (2006) 73, [2006] BCJ No 530 (BC Prov Ct).

<sup>22</sup> *St. Brieux (Town) v Canada (Minister of Fisheries & Oceans)*, 2010 FC 427, 2010 CF 427, 2010 CarswellNat 1045, 2010 CarswellNat 2953, [2010] A.C.F. No. 491, [2010] F.C.J. No. 491, 188 A.C.W.S. (3d) 551, 370 F.T.R. 8 (Eng.) at paras 44-45.

salmon feed, and chemicals such as antifoulants, pesticides and disinfectants are also released into the environment by feedlots in an attempt to control unwanted organisms and diseases.”

14. The Submitters state that

[c]onfined salmon [in aquaculture operations] are fed concentrated fish feed, commonly soaked in chemical treatments and antibiotics designed to remedy parasite infestations (such as sea lice) and bacterial infections. Any unconsumed feed, excrement, pesticides and antibiotics pass through the pens and enter the surrounding environment. Decapod crustaceans such as crabs, lobsters, prawns and shrimp, which are important scavengers in wild salmon habitat, tend to be drawn to accumulate[d] discharge on the seabed beneath finfish aquaculture operations.<sup>23</sup>

15. In support of this assertion, the Submission cites a scientific article reporting that “some sources of fish feed have been found to contain high levels of mercury.”<sup>24</sup> The same scientific article explains that fish farms produce “zones of anoxic sediment, a condition that promotes conversion of inorganic mercury into the bioaccumulative organometallic form methylmercury,”<sup>25</sup> and goes on to describe additional environmental effects. The same article also states that “Elevated mercury concentrations in rockfish prey near net-pen salmon farms likely result from a combination of mercury loading (in waste feed and fish feces<sup>26</sup>) and mobilization of native and added mercury in sediment due to farm-induced anoxia.”<sup>27</sup>

16. The Submission alleges that “[s]almon feedlots can use a variety of methods to attempt to prevent and treat sea lice outbreaks and pathogen transmission, including ... chemicals and drugs to treat feedlot salmon after an outbreak occurs.”<sup>28</sup>

17. In the context of British Columbia, the Submission alleges that “[t]he primary treatment for sea lice infestations in [BC] salmon feedlots is a reactive treatment of a chemotherapeutant

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<sup>23</sup> Submission at 2.

<sup>24</sup> Adrian MH DeBruyn et al, “Ecosystem Effects of Salmon Farming Increase Mercury Contamination in Wild Fish” (2006) 40 Environmental Science & Technology 3489 (cited in Submission at 6) at 3489. The DeBruyn article in turn cites MH Choi & JJ Cech, “Unexpectedly high mercury level in pelleted commercial fish feed” (1998) 17 Environ. Toxicol. Chem. 1979.

<sup>25</sup> DeBruyn et al, *supra* note 24, citing KM Brooks, AR Stierns and C Backman, “Seven year remediation study at the Carrie Bay Atlantic salmon (*Salmo salar*) farm in the Broughton Archipelago, [BC], Canada” (2004) 239 Aquaculture 81; KM Brooks et al, “Chemical and Biological Remediation of the benthos near Atlantic salmon farms” (2003) 219 Aquaculture 255; CE Nash, ed, “The Net-Pen Salmon Farming Industry in the Pacific Northwest. NOAA Tech. Memo” (2001) US Department Commerce, Seattle, WA; C Gagnon et al, “Diagenetic behavior of methylmercury in organic-rich coastal sediments” (1996) 41 Limnol. Oceanogr. 428; G Compeau and R Bartha, “Sulfate reducing bacteria: principal methylators of Hg in anoxic estuarine sediments” (1985) 50 Appl. Environ Microbiol 498.

<sup>26</sup> DeBruyn et al, *supra* note 24, citing MH Choi and JJ Cech (*supra* note 24).

<sup>27</sup> DeBruyn et al, *supra* note 24, citing C Gagnon et al and G Compeau and R Bartha, (both *supra* note 25)

<sup>28</sup> Submission, Exhibit C, “Fish Feedlot Impacts from Toxic Chemicals, Pollution and Escaped Invasive Fish” [“Exhibit C”] at 1 (citing MJ Costello, “Review of Methods to Control Sea Lice (Caligidae: Crustacea) Infestations on Salmon (*Salmo salar*) Farms” in GA Boxshall and D Defaye, eds, *Pathogens of Wild and Farmed Fish: Sea Lice* (Ellis Horwood, 1993), 219. Costello describes how pesticides and chemotherapeutants used in salmon farms may be deleterious to fish: *ibid* at 232-235.)

given to feedlot fish in food after a sea lice infestation has occurred. Although diluted by surrounding water, the chemicals entering the marine environment via feces may affect non-target wild crustaceans ....”<sup>29</sup> The Submission further alleges that sea lice resistance to such chemotherapeutants “has led to use of bath treatments, which release the drug directly into surrounding waters.”<sup>30</sup>

18. The Submission then states that “Canadian federal rules require Atlantic salmon aquaculture to monitor the abundance of sea lice on their feedlots once a month, and take ... action in the form of chemical treatment if an average of three motile lice per fish are observed” between March and July under certain circumstances.<sup>31</sup>
19. In addition to the more general assertion that salmon aquaculture operations use chemicals that are deleterious to fish, the Submission alleges the use of a particular substance called emamectin benzoate, “sold under the trade name SLICE,” which the Submission states is applied as a coating on fish feed and is toxic to fish.<sup>32</sup>
20. As an example of information available about alleged deposits of deleterious substances into British Columbia coastal water frequented by fish the Submission refers, in its “Supporting Information — Literature Cited,”<sup>33</sup> to a report by the BC Ministry of Agriculture and Lands.<sup>34</sup> Section 5 of the BCMAL 2008 report is titled “Therapeutant Use and Monitoring” and describes the use of antibiotics, including the concentrations of antibiotic “in grams per metric tonne of fish produced” over time.<sup>35</sup> The report does not discuss whether the antibiotics are deleterious substances. The report also discusses the use of emamectin benzoate in the period from 2000 to 2008.<sup>36</sup>

### C. Discussion

21. The Submission asserts that Canada is failing to effectively enforce section 36 of the federal *Fisheries Act* in relation to salmon aquaculture operations in British Columbia. Subsection

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<sup>29</sup> Submission, Exhibit C at 2.

<sup>30</sup> *Ibid.*

<sup>31</sup> *Ibid.*, citing Department of Fisheries and Oceans Canada, “Management of Sea Lice in BC” (2011), online: < <http://www.dfo-mpo.gc.ca/aquaculture/lice-pou/lice-pou01-eng.htm> > (visited 8 May 2014). When navigating to the above website, the Secretariat found only the message: “The page you are looking for might have been removed, had its name changed, or is temporarily unavailable.” The same website indicated a “Date modified” of “2008-09-26.” An attachment to the Submission titled “Sea Lice” (see Submission, Exhibit G at 3) states that “current [federal] aquaculture management strategies” in relation to sea lice include a “sea lice trigger level of three motile lice per fish.”

<sup>32</sup> Submission at 6 and Exhibit C at 2-3. Exhibit C gives further information about the status of emamectin benzoate under various regulatory regimes in both Canada and the United States.

<sup>33</sup> See the first listed Annex < [http://www.cec.org/Storage/133/15820\\_12-1-Supporting\\_Information\\_-\\_Literature\\_Cited.pdf](http://www.cec.org/Storage/133/15820_12-1-Supporting_Information_-_Literature_Cited.pdf) > under date 13/02/12, in the Registry for *BC Salmon Farms*, online: CEC < <http://goo.gl/hXEEaa> >.

<sup>34</sup> British Columbia Ministry of Agriculture and Lands, “Fish Health Program Annual Report 2008” (2008) British Columbia Ministry of Agriculture and Lands [“BCMAL 2008 report”].

<sup>35</sup> *Ibid.* at 53-54.

<sup>36</sup> *Ibid.* at 54-55.

36(3) imposes a general prohibition on the deposit of deleterious substances into water frequented by fish.

22. The Submission provides information about “deposits” related to salmon aquaculture operations in BC, of substances alleged to be deleterious to fish that, according to the Submission, are contrary to subsection 36(3) and not otherwise authorized by regulations.
23. Canada’s Response and the December letter discuss only Canada’s claims of pending proceedings, and do not otherwise discuss the assertions in the Submission.

### III. PREPARATION OF A FACTUAL RECORD IS WARRANTED

24. Article 15(1) provides: “If the Secretariat considers that the submission, in the light of any response provided by the Party, warrants developing a factual record, the Secretariat shall so inform the Council and provide its reasons.” Canada had opportunities to provide a substantive response to the Submission in both the Response and the December letter. Other than providing information concerning its claims of pending judicial proceedings, it did not provide a substantive response to the Submission. The Secretariat’s task in Article 15(1) is to provide its reasons for whether a factual record is warranted, “in the light of *any* response provided by the Party.” The Secretariat considers that the requirements of Article 15(1) have been met and that it is justified in issuing the present Notification, making the Recommendation below for the reasons herein.
25. Since the Submission asserts Canada’s failure to enforce subsection 36(3) of the federal *Fisheries Act* and provides supporting information, in the context of salmon aquaculture operations in British Columbia,<sup>37</sup> and since Canada has not responded directly to this assertion, the Secretariat considers that central questions remain open about the effective enforcement of subsection 36(3) in this context.
26. A factual record would provide information to the Submitters and to the North American public about Canada’s enforcement of section 36 in the context of BC salmon farms, including the relationships among section 36 and federal, provincial and other regimes that may allow the use of various substances for various purposes even though such substances may be “deleterious substances” in accordance with the federal *Fisheries Act*. Similarly, a factual record would assist the public in understanding which persons and in which circumstances, Canada considers subject to the general prohibition in subsection 36(3). A factual record would also provide information about any changes to laws or regulations made since the date of the Submission that may affect how section 36 of the *Fisheries Act* is enforced.

### IV. RECOMMENDATION

27. For the reasons contained in this Notification, the Secretariat finds that having considered the Submission and the Response, central questions remain open about Canada’s enforcement of section 36 of the federal *Fisheries Act* in relation to salmon aquaculture operations in British Columbia.

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<sup>37</sup> See for example *supra* paras 13-20.

28. Preparation of a factual record is thus warranted in order to gather additional information concerning the matters raised in Submission SEM-12-001 (*BC Salmon Farms*), and is necessary for a thorough consideration of the assertions that Canada is failing to effectively enforce section 36 of Canada's *Fisheries Act*.
29. CEC Council Resolution ("CR") 12-06, which adopted revisions to the *Guidelines for Submissions on Enforcement Matters under Articles 14 and 15 of the* [NAAEC] (the "Guidelines"),<sup>38</sup> which include target deadlines for completing various steps in the Submissions process, notes "the collaborative work between the [NAAEC Parties'] SEM Modernization Review Task Force, the [CEC's Joint Public Advisory Committee or JPAC] and the Secretariat in seeking to improve the timeliness, accessibility, and transparency of the SEM process ...."<sup>39</sup> CR 12-06 elaborates on Council Resolution 01-06, in which Council commits "to making best efforts, and [encourages] the Secretariat to make best efforts, to ensure that submissions are processed in as timely a manner as is practicable, such that ordinarily the submission process will be completed in no more than two years following the Secretariat's receipt of a submission; ...."<sup>40</sup> Should the Council vote to instruct the Secretariat to prepare a factual record, the Secretariat will make its best efforts to produce a factual record in as timely a manner as practicable and in accordance with the NAAEC and the Guidelines.
30. In accordance with Article 15(2) and Guideline 19.4 the Council has 60 working days, that is, until 12 August, 2014, to vote on whether to instruct the Secretariat to prepare a factual record.

Respectfully submitted for your consideration on this 12<sup>th</sup> day of May 2014.

**Secretariat of the Commission for Environmental Cooperation**



Per: Irasema Coronado, Ph.D.  
Executive Director

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<sup>38</sup> Commission for Environmental Cooperation, *Guidelines for Submissions on Enforcement Matters under Articles 14 and 15 of the North American Agreement on Environmental Cooperation* (Montreal: CEC, 2012) [the "Guidelines"], online: CEC < [www.cec.org/guidelines](http://www.cec.org/guidelines) >.

<sup>39</sup> Council Resolution 12-06, "Adoption of revised Guidelines for Submissions on Enforcement Matters under Articles 14 and 15 of the North American Agreement on Environmental Cooperation" (11 July 2012) ("CR 12-06").

<sup>40</sup> Council Resolution 01-06, "Response to the Joint Public Advisory Committee (JPAC) Report on Lessons Learned regarding the Articles 14 and 15 Process" (29 June 2001).