

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF GEORGIA**

RESOLUTE FOREST PRODUCTS, INC., *et al.*,

Plaintiffs,

v.

GREENPEACE INTERNATIONAL, *et al.*,

Defendants.

) NO. CV 116-071
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**DECLARATION OF FREDERICK CUBBAGE
IN SUPPORT OF PLAINTIFFS' RESPONSE TO DEFENDANTS'
MOTIONS TO STRIKE, DISMISS, AND TRANSFER VENUE**

I, **FREDERICK CUBBAGE**, hereby certify as follows:

I have been retained by Plaintiffs to render expert opinions regarding forest certification and sustainable forest management and to address Defendants' statements concerning Resolute's sustainability practices. I submit this Declaration in support of Plaintiffs' Response To Defendants' Motions To Strike, Dismiss, And Transfer Venue. I am over the age of 21, and I am competent to provide this Declaration. I make this Declaration based upon my own personal knowledge and for all purposes allowed by law.

Background and Qualifications

1. I am a Professor at North Carolina State University's Department of Forestry and Environmental Resources, where I currently teach natural resource policy and forest economics. Moreover, I was recently elected as President of the Society of American Foresters for 2017. I have co-authored more than 400 research papers analyzing natural resource policy, market-based conservation programs, economics, and sustainability certification. Recently, I co-authored *Natural Resource Policy* published by Waveland Press. Additionally, I am the editor of the

Encyclopedia of Forests and Forestry in the Americas. I have conducted research, published articles, and given speeches on forest certification for approximately 15 years.

2. I was a Member of the Sustainable Forestry Initiative (“SFI”) External Review Panel from 2006-2012 and a member of the American Tree Farm System/American Forest Foundation Task Force on forest certification standards revisions from 2008-2009. In 2011, I served as an auditor for an SFI audit, and attended a Forest Stewardship Council (“FSC”) plantation principle workshop. From 2001-2002, I helped lead a joint SFI and FSC forest certification project on North Carolina State University’s forest lands, in cooperation with Duke University and the North Carolina Division of Forest Resources. I have been the national co-leader of the “Assessment of Sustainable Forest Management (“SFM”) Criteria and Indicators, Criterion 7: Legal, Policy, and Institutional Framework” with the U.S. Department of Agriculture Forest Service for the 2010 and 2015 multilateral Montreal Process national reports. I am a leading authority with respect to research on Sustainable Forest Management Criteria and Indicators and forest certification in North America, as well as forest resource policy. Attached hereto as Exhibit A is a true and correct copy of my brief curriculum vitae.

Executive Summary

3. Forest certification, generally, refers to a non-state market-based policy approach to achieving sustainable forest practices and development. In this report, I focus on the certification standards and protocols associated with FSC and SFI. The International Standards Organization (“ISO”) and Canadian Standards Association (“CSA”) also provide forest certification standards in North America.

4. Defendants claim that the FSC’s suspensions of three of Resolute’s certificates in Quebec and Ontario indicate unsustainable practices with substantial adverse global impacts, including destroying the Canadian boreal forest, aggravating global warming, and harming

woodland caribou populations. Based on objective and verifiable scientific evidence, this is simply incorrect. To the contrary, Resolute's overwhelming compliance with the FSC's and the SFI's standards demonstrates an exemplary commitment to the principles and practice of sustainable forest management.

5. Indeed, Resolute is a global leader in compliance with numerous sustainable certification standards (Ex. B, Resolute Forest Products Company 2016). One hundred percent of Resolute's forests are independently certified by third parties, either the FSC or SFI. All of Resolute's forests have been certified under the SFI or the CSA standard since the 2000s.¹ Resolute holds an SFI forest management certificate for each of its eight Canadian and American regions, holds seven ISO 14001 certifications for its Canadian regions, and also holds four FSC certificates for those same Canadian regions. Resolute holds 133 chain-of-custody certificates for their final products of pulp, paper, newsprint, and solid wood.

6. Moreover, Resolute's compliance record with the strict governmental regulatory scheme for forest management in the boreal forest is amongst the best for the two provinces in which it operates. Notably, Canada has amongst the strictest forest regulation frameworks in the world. The specific Canadian provinces at issue also monitor forestry operations and enforce their own laws. Quebec's and Ontario's regulatory frameworks supplement the federal regulatory scheme in governing forest land management and conservation on public lands, publicly-leased lands, and private lands.

7. In this Declaration, I examine the reasons for the suspension of Resolute's three FSC certificates in 2013 and the associated implications. I conclude that one can draw only limited deductions regarding sustainable practices from a single forest certification. Resolute's failure to

Lister, J. 2011. Corporate social responsibility and the state: international approaches to forest co-regulation. Vancouver, BC: UBC Press (Canada).

meet a small number of almost 200 subjectively-applied performance “Indicators” does not in any way suggest that Resolute falls short of exemplary, sustainable forestry practices in these forests.

8. While forest certification can be, generally, an important overall signal of forest management commitment, a single certification in one discrete forest tract has no global impact (either positively or negatively). A single certification standard, whether the FSC, SFI, ISO, or CSA, is merely one metric of thousands necessary for an analysis of global sustainability. This is especially true with respect to Resolute, which harvests in Canadian provinces (Quebec and Ontario) that are already under extensive federal and provincial regulations mandating sustainable forest management.

9. Finally, I assess the limitations of the certification process in promoting sustainable forest management. Forest certification standards do differ somewhat, and research has found that some certified forests may have different practices and procedures. However, no reliable empirical evidence conclusively demonstrates that forest management practices in certified forests are better than non-certified forests, or that one certification system is better than another. Furthermore, there are no findings of any perceptible impact of certified versus non-certified forests on climate change at a regional, country, or global level.

Canadian Forest Laws

10. In order to fully comprehend Resolute’s FSC certifications, one must understand the regulatory scheme in which certification operates. Canada has among the strictest forest regulation frameworks in the world (Ex. C, Natural Resources Canada 2016), according to several international forestry law comparisons (Ex. D, FPAC 2004; Ex. E, McDermott et al. 2007; Ex. F, McDermott et al. 2009; Ex. G, McDermott et al. 2011). Canada has some of the most strictly protected forest areas, more than even Brazil or Russia. Provincial forest regulations mandate land-use planning, require indigenous consent, administer wildlife habitat protection, monitor

timber harvesting, and establish reforestation practices (Ex. C). As land managers, or as wood supply agreement holders, all forest companies (including Resolute) are required: (i) to operate pursuant to government-approved forest management plans; (ii) comply with comprehensive regulations; and (iii) conform to species' recovery plans. These federal regulations complement those of each province.

11. Canadian provinces also monitor forestry operations and enforce laws. Provincial governments, such as Quebec and Ontario, attentively scrutinize forestry companies operating in publicly-owned forests (such as Resolute) by: (i) requiring all companies to submit regular formal reports; (ii) conducting audits or field verifications to ensure legal and regulatory compliance; (iii) directing more detailed investigations if infractions exist; (iv) issuing warnings, fines, and other penalties; and (v) prosecuting companies for serious infractions judicially (Ex. C).

12. Additionally, Quebec's and Ontario's regulatory frameworks supplement the federal regulatory scheme in governing forest land management and conservation on public lands, publicly-leased lands, and private lands. In Quebec, the provincial government bears primary responsibility for forest management planning. Forest products mills and other wood users must obtain forest management permits and only can harvest where permitted (Ex. B). The Quebec forest law has specific provisions for protecting exceptional forest ecosystems, forest conservation, and biological refuges, in addition to rules for forest roads (Ex. H, Quebec 2016).² In Ontario, woodlands are governed by the Crown Forest Sustainability Act, the Algonquin Forestry Authority Act, the Ontario Tenure Modernization Act, the Professional Foresters Act, four separate forest management manuals, the Environmental Assessment Act (Chapter E.18), and numerous

² LegisQuebec. 2013. Chapter F-4.1 Forest Act. Accessed October 29, 2016 at: <http://legisquebec.gouv.qc.ca/en/pdf/cs/F-4.1.pdf>.

provincial forest policies.³ These extensive laws mandate strict forest management practices, in addition to rigid procedural requirements of public input and regular government auditing.

13. Constance McDermott and Ben Cashore performed the seminal international comparison of forestry laws, which used Canada as the base line for most of their case comparisons (Ex. E; Ex. F; Ex. G). These scientists concluded that British Columbia, Quebec, and Ontario had among the strictest levels of mandatory, required riparian buffers and reforestation requirements (to regrow a specific number of trees within a given time period) in the world, as well as stringent controls on the annual allowable (timber) cut and specific allowable clear-cut sizes. All of these stringent regulatory and legal requirements both federal and provincial control Resolute's operations. In other words, Resolute was in substantial compliance with strict regulations even in the limited sites where its FSC certifications have been suspended.

Forest Certification Systems

14. As a preliminary observation, measuring and achieving sustainability is far from an exact science. Sustainability invokes competing values, uncertain ecological and social science, and crucial differences in the scale and measurement of sustainability.

15. Forest certification is a non-state market-based policy approach to achieve more sustainable forest practices through (expected) consumer demand for sustainable forest products.⁴ Forest certification is only one approach under the Corporate Social Responsibility umbrella designed to achieve sustainable development. While many believe forest certification to be valuable (and recommended when practical and affordable) empirical research and literature on

³ Ontario Ministry of Natural Resources and Forestry. 2016. Forest management policies. Accessed October 29, 2016 at: <https://www.ontario.ca/page/forest-management-policies>.

⁴ Cashore, B., Auld, G. and Newsom, D. 2004. Governing through markets: forest certification and the emergence of non-state authority. New Haven, CT: Yale University Press.

its impacts are scant. I am not aware of any objective and verifiable evidence to suggest that certification is indicative of sustainable practices, or that lack of certification signifies unsustainability.

FSC Certificate Suspension Bias

16. Forest certification under any set of standards is determined by objective and subjective standards, and occasionally by the luck of the draw. During field audits, the audit team usually spends one or two days in the forest tract. For large forest properties (such as Resolute's), field visits can be inadequate to make a definitive conclusion about the entire forest. Field visits provide a helpful overview but still could be inaccurate, mixing values, science, and politics reflecting the subjective judgment of one preconceived audit view. For example, there is wide philosophical debate about utilitarian or biocentric values of forests (which are reflected somewhat in the respective SFI or FSC orientations), and an evolving focus on moving from more biodiversity in small forest areas and large amounts of forest/open edges, versus large contiguous forests with more interior area and fewer less common species (Ex. I, Cubbage et al. 2017).

17. Many aspects of the field audit process are extremely subjective. The FSC National Boreal Standard has almost 200 Indicators (a specific requirement in the FSC National Boreal Standard in Canada) and more than 600 Verifiers (specific details or measures which enhance an Indicator assessment's ease, specificity, or precision). This immense list of Indicators and Verifiers cannot be checked specifically in the brief audit for any forest, so are inspected in the aggregate. Many of the key FSC Indicators (including high conservation forests, biodiversity, and community consultation) are particularly subjective. Hence, FSC's Indicators are likely to be judged inconsistently. Additionally, audit bias may exist towards certifying large organizations (*e.g.*, Ex. G), or may result in different outcomes between the various certification systems (*i.e.*, FSC, SFI, ISO, *etc.*) (Ex. J, Cubbage et al. 2003).

FSC Certificate Suspensions

18. The suspensions of Resolute's FSC forest certification for three tracts in 2013 do not demonstrate that Resolute is a "forest destroyer." These limited suspensions do not suggest that Resolute's practices are unsustainable or objectionable. To the contrary, Resolute's holding of dozens of FSC, SFI, and ISO certifications demonstrates that it has been a conscientious global participant in forest management and other environmental management certification systems.

19. My review of the three contested audits revealed that, in each instance, Resolute's failure to retain forest certification was based on four or less FSC Indicators out of approximately 200 (and many more Verifiers) for each of the three forests. Moreover, the certification for one of the forests at issue (Black Spruce & Dog River) was restored two years after the initial suspension.

20. In my experience, the Indicators and Verifiers responsible for Resolute's FSC certification suspensions Free, Prior, and Informed Consent ("FPIC"), biodiversity/caribou protection, and the application of the precautionary principle are among the most contentious in all certification systems (with respect to scientific validity and auditing credibility). Additionally, lobbying by political environmental non-governmental organizations ("ENGOS") adversely affected the certification decisions: a single unspecified ENGO filed eleven elements of complaints against the Lac St-Jean certificate in 2013 (Ex. K, Rainforest Alliance 2013a).

21. In Quebec, despite Resolute's compliance with both federal and provincial law, two FSC certifications were suspended and not reinstated. The suspension of FSC certifications for these two discrete forest tracts reveals nothing about Resolute's overall sustainability practices.

A. Lac St-Jean

22. First, the suspension of Resolute's FSC certificate in Lac St-Jean was based on the Rainforest Alliance Annual Audit Report finding four "major" nonconformance reports ("NCRs") out of the 196 Indicators and more than 500 Verifiers. My review of the Audit Report reveals that

the reasons for the suspension were highly technical, and in no way related to sustainable forest management. As reflected in the audit report, the Lac St-Jean certificate was suspended because of a territorial dispute and caribou habitat issues that the Quebec government confirmed it was entirely responsible for.

23. At the time of suspension, Resolute was following required scientific recommendations and strict federal and provincial law in its caribou management.⁵ The Rainforest Alliance nevertheless found that Resolute's actions which complied with Quebec's regional caribou plan violated FSC regulations. Resolute conducted long-term modelling and monitoring of disturbance levels, best available habitats, road network densities, and old forest impacts: all of these required components of the provincial plan were deemed unsatisfactory by the FSC. Since 2013, the recommendations for caribou protection have changed (depending on location), but these modifications should not have prevented certification in 2013. In addition, many other factors such as hunting and climate change also have had adverse effects on caribou sustainability.⁶

24. The most notable NCR was related to the provincial government's failure to gain the FPIC of the Cree First Nation. Even within the Cree there are quite varied views of forestry operations, hunting, and income in Northern Quebec, with some preferring roads, access, and even increased moose populations favored by forest management (Ex. L, Heindel 2012).

25. Often, the FPIC consent criterion is impossible to achieve because different groups do not agree among themselves. It is impractical to routinely satisfy all constituencies and

⁵ Quebec. 2008. Sustainable Management in the Boreal Forest: A Real Response to Environmental Challenges; Environment Canada. 2012. Recovery Strategy for the Woodland Caribou, Boreal population in Canada. Species at Risk Act Recovery Strategy Series; Environment and Climate Change Canada. 2016. Range Plan Guidance for Woodland Caribou, Boreal Population. Species at Risk Act: Policies and Guidelines Series.

⁶ Government of Canada. 2016. Species at Risk Public Registry. Accessed November 11, 2016 at: http://www.registrelep-sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=636.

stakeholders. The requirement of consent by all indigenous stakeholders creates a dynamic where unilateral obstruction can stop almost any forest certification.⁷

B. Mistassini-Péribonka

26. Second, the Rainforest Alliance Annual Audit Report (2013b) for Mistassini-Péribonka upgraded three existing NCRs from minor to major, resulting in suspension of Resolute's FSC certificate. Similar to the suspension in Lac St-Jean, the Mistassini-Péribonka certificate was suspended for technical reasons, and not because of any unsustainable practices.

27. As with the Lac St-Jean Audit Report, the Rainforest Alliance concluded that Resolute's compliance with Quebec's caribou conservation plans was insufficient to meet the heightened FSC standards in the Mistassini-Péribonka forest tract. That Rainforest Alliance Audit Report found that certain protected areas were not of sufficient size or quality to protect woodland caribou populations (Ex. N, Rainforest Alliance 2013b). The provincial government's caribou management plan, one of the most stringent in the world, was not satisfactory by FSC standards. Again, a major NCR was issued for inadequate indigenous FPIC consent.

28. Moreover, after its suspension in 2013, the Lac St-Jean certificate was extended for two years to permit the provincial government to settle its dispute with the Cree and to resolve issues with the caribou conservation plan. Only the Lac St-Jean certificate was extended. The Mistassini-Péribonka certificate, on the other hand, was not extended even though both were alleged to suffer from the same flaws. For both the Lac St-Jean and Mistassini-Péribonka

⁷ Social scientists have concluded that FPIC, the concept implicated in the Lac St-Jean audit, is difficult to implement in forest certification (Ex. M, Mahanty and McDermott 2012). Those authors noted that in FSC certification in British Columbia, 67% of the certified operations were issued Principle 3 Corrective Action Requests ("CARs") of relevance to FPIC. The remaining operations were not considered to require FPIC or to have followed an adequate FPIC process. Thus, only 33% or less would be considered to have fully satisfied the FPIC criterion.

suspensions, the FSC certifications were suspended *despite* the fact that Resolute had complied with and implemented the regulatory scheme: one of the most stringent regulations in the world.

29. Overall, the suspensions reveal nothing about the sustainability of Resolute's forest management practices. Resolute's compliance with federal and provincial law is the strongest objective evidence of sustainability.

C. Black Spruce & Dog River-Matawin

30. Third, the Rainforest Alliance Annual Audit Report for Black Spruce & Dog River-Matawin originally identified two major NCRs resulting in suspension, both related to securing support from interested parties. This support was rendered unattainable due to the May 2013 collapse of regional negotiations with ENGOs for the implementation of the elements of the Canadian Boreal Forest Agreement ("CBFA"). However, the Black Spruce & Dog River-Matawin certificate was reinstated two years later after a new audit was conducted by a different team.

31. Each of the two major NCRs originally identified were technicalities related to which parties should have been consulted during the certification process, and inadequate analysis (and maps) of candidate protected areas. However, both of these two NCRs were identified and remedied prior to the 2015 Annual Audit Report.

32. The Black Spruce & Dog River-Matawin Audit Report, was better documented and less capricious than that of Lac St-Jean and Mistassini-Péribonka (Ex. O, Rainforest Alliance 2013(c)). These NCRs for inadequate consultation and maps of candidate protected areas were "major" in name alone: they were actually extremely manageable and possible to remedy, consistent with a reasonable environmental management system. Those two NCRs were withdrawn in the subsequent 2015 Audit Report (Ex. P, Rainforest Alliance 2015). Here, unlike the other two Audit Reports, reasonable shortcomings were identified and remedied. The 2015 Audit Report demonstrated Resolute's compliance with the FSC standards.

33. Finally, these three audits overall demonstrate that Resolute's certifications were suspended for narrow (and debatable) technical issues: Lac St-Jean's and Mistassini-Péribonka's caribou conservation plans; complying with the hopelessly unrealistic precautionary principle (*see infra* ¶ 36); a territorial dispute between Quebec and First Nations; securing universal agreement from all interested parties in Black Spruce & Dog River-Matawin. None of the issues identified by the FSC indicate anything negative or positive about the sustainability of Resolute's forest management practices. Furthermore, one cannot reasonably draw any general inferences regarding Resolute's operations (or caribou, or First Nations, or community support) from these three specific forests. All these results suggest are that, in limited circumstances, FSC auditors determined that its standards were not satisfied.

34. In my opinion, Resolute's 2013 FSC audits in Lac St-Jean, Mistassini-Péribonka, and Black Spruce & Dog River-Matawin indicate possible bias. Audits of similar forests in similar situations should have similar outcomes. That did not appear to be the case with Resolute. An applicant in full compliance with relevant federal and provincial laws, performing excellent forest management and social practices, should be certified under *any* standard, whether that be the FSC's or SFI's. Certification standards that contradict or exceed the law are undesirable, as are standards that interpret science differently than federal and provincial governments.

35. Social criteria that faulted Resolute, such as the FPIC requirement, are nebulous, largely immeasurable and perhaps unachievable (and also can be applied arbitrarily).⁸

⁸ Per FSC's Canadian Boreal Standard (2004) at 132, FPIC is defined complexly as: Free and informed consent: Consent that has two aspects to it: the consent must be freely given, and it must be knowledgeably given. Consent itself means to express willingness; to give permission; to agree. It also means a voluntary agreement; a permission. Freely given consent is consent that is voluntarily given, without manipulation, undue influence or coercion. Key to "freely given consent" is maintaining the essential dignity and individual/community's right to choose. Informed consent requires disclosure, particularly related to the risks involved to the right being protected. It is assumed, but not certain in law, that the disclosure necessary to qualify consent as being "informed" would relate to the scope and content of the right being protected. In the context of

Expectations that forest products companies resolve governmental problems are completely unrealistic. There is a substantial problem in determining which First Nations need to be consulted (and even who has the requisite authority to be consulted within those First Nations).

36. Another key basis for denying certification was the presumed failure of Resolute to follow the precautionary principle in dealing with uncertain science regarding caribou. This principle essentially states that managers should not take action if the consequences are unknown, which is almost always the case everywhere in the world.⁹ Thus, the principle is *a priori* a criterion to stop all action, and can be applied (or not) arbitrarily based on values more than on science. In practice, one can never know if any reasonable forest action will “lead to irreversible changes in ecosystem function and resilience,” because this criterion is essentially unmeasurable.

Forest Certification Differences

37. In addition to being in full compliance with federal and provincial government regulations, 100% of Resolute’s forests were audited and certified by the SFI (including the three forest tracts for which the FSC suspended its certification in 2013). Resolute is SFI certified in all of its forest management operations throughout North America.

38. Despite emphasizing different standards and performance metrics, the FSC and SFI certification systems are similar in many respects.¹⁰ One cannot leap to the conclusion that on the

Aboriginal title or Indigenous lands, disclosure may have to be more complete since the right is an encompassing right, whereas disclosure with respect to Aboriginal hunting rights may be limited to the effect on that right.

⁹ Per FSC Canadian Boreal Standards (2004) at 141):

Precautionary approach: An approach that tends to refrain from actions where the outcome is not known. In a forest management context it refers to situations in which a forest manager will often be required to act with incomplete knowledge of cause and effect relationships: The manager avoids actions that may lead to irreversible changes to ecosystem function and resilience.

¹⁰ Generally, FSC certification emphasizes high conservation value forests, biodiversity, and indigenous communities. SFI certification balances forest management with social and economic components. FSC uses 10 Principles and Criteria to determine national and sub-national standards for forest management certification. These

ground forest management practices actually differed between the FSC and SFI certified forests without further empirical studies to see how the Indicators are implemented.¹¹

39. The touchstone here is that although the FSC and SFI are similar in their ends of trying to improve forest management, they focus on slightly different means.¹² The two certification systems are roughly equivalent in overall forest sustainability, and the differences do not indicate that either enhances sustainable practices more. However, it is important to note that the FSC is an outlier in its emphasis on FPIC and indigenous communities (both non-sustainability/non-environmental metrics). SFI does not give First Nations veto power.

Forest Certification Impacts

40. The sparse research literature regarding boreal forests indicates that certification had little impact on conservation in Canada (Ex. Q, Roberge et al. 2011; Ex. R, Euler 2014).¹³

41. Scientists cannot deduce global conclusions about sustainability, environmental

Principles cover laws and FSC Principles, tenure and indigenous people, forest management and multiple forest benefits, environmental impacts and forest management plans, monitoring and assessment, high conservation value forests, and plantations. The SFI 2015-19 Forest Management Standard has 15 Objectives including forest management, health, and productivity, water resources and biological diversity, visual quality and recreation, special sites, fiber resources, indigenous peoples' rights, laws and regulations, forestry research, training and education, communities and landowners, public land, communications and reporting, and continual improvement. [SFI] Sustainable Forestry Initiative. 2016. SFI Standard 2015-2019 at: <http://www.sfiprogram.org/sfi-standard/>.

¹¹ Science has explored whether meeting one forest certification system's requirements differ substantially from meeting the others' requirements. One comparison of FSC and SFI in Canada and the U.S. found that there was no statistically significant difference between the total number of changes made by organizations certified under each system. Moore, S., Cubbage, F., and Eicheldinger, C. 2012. Impacts of Forest Stewardship Council (FSC) and Sustainable Forestry Initiative (SFI) forest certification in North America. *Journal of Forestry* 110 (2): 79–88. However, FSC organizations made slightly more environmental and forest management changes than SFI (6.6 vs. 5.8 per firm) and more social and legal changes (3.0 vs. 2.6), although these differences were not large. SFI made more economic and system changes than FSC (5.5 vs. 3.1).

¹² FSC focuses more on old growth and high conservation forests, environmental impacts, biodiversity rules, indigenous people, and informed consent requirements. The SFI is more balanced with Objectives distributed between management, environmental, social, research and education, communities, and communications. In recent years, FSC has increasingly added more complex Indicators and regulations at the expense of promoting pragmatic sustainable forestry practices.

¹³ One study in Sweden showed modest impact. The study revealed that a non-FSC certification program (PEFC) prompted more timber harvesting and more biodiversity improvements than on land certified by the FSC. Lidestav, Gun and Solveig Berg Lejon. 2011. Forest certification as an instrument for improved forest management within small-scale forestry. *Small-scale Forestry* 10(4):401-418.

impacts, climate change, or social welfare based on forest certification. As noted above, some of the standards between systems differ, prompting minor changes in forest practices (at least on paper). The available literature assessing forest certification impacts has found few definitive differences between forest management on certified and non-certified properties, especially in Canada. In fact, only two rather dated empirical studies in the U.S. (and none that I could find in Canada) have actually found on the ground differences due to forest certification.¹⁴

42. Generalizing certification conclusions to any local, regional, or global scale is unfounded. There is little support to prove that the standards' set of practices, or impacts of one certification system are better than another.¹⁵ Nor can one link certifications with sustainability in the scant empirical research. Additionally, science provides major conflicting or indeterminate findings regarding different forest management practices' impacts on the environment, climate change, and social welfare. Finally, certifications have about 100 (SFI) to 200 (FSC) Indicators to measure performance, which undoubtedly interact in a myriad of ways that make determining overall environmental, social, and economic impacts impossible.

¹⁴ One recurring field study found that SFI-certified forest products mills prompted the use of more Best Management Practices to protect water quality in Texas. Simpson, H., Donnellan, J., and Harrington, S. 2005. Voluntary implementation of best management practices in East Texas: Results from Round 6 of BMP Implementation Monitoring. Texas Forest Service, Texas A&M University System; Simpson, Hughes, Donnellan, J. Duncan, C., Harrington, S. 2008. Results from Round 7 of BMP Implementation Monitoring. Texas Forest Service. Texas A&M University System. 48 p. Another opinion survey of northern U.S. forest landowners found that either FSC or SFI improved forest biodiversity ranking scores in New England, but there was no difference between the systems. Hagan, J., Irland, L., and Whitman, A. 2005. Changing timberland ownership in the northern forest and implications for biodiversity. Report MCCC-FCP-2005-1. Manomet Center for Conservation Sciences, Brunswick, Maine. 25 p. Accessed November 1, 2016 at: http://www.iatp.org/files/181_2_78270.pdf.

¹⁵ However, only three empirical (Swedish) studies compared FSC versus PEFC (Footnote 13, Lidestav and Lejon). Also, two other studies found that the PEFC endorsed standard (similar to SFI) had more on the ground impacts than did FSC. Johansson, Johanna and Gun Lidestav. 2011. Can voluntary standards regulate forestry?—Assessing the environmental impacts of forest certification in Sweden. *Forest Policy and Economics* 13:191-198; Schlyter, Peter, Ingrid Stjernquist, and Karin Backstrand. 2009. Not seeing the forest for the trees? The environmental effectiveness of forest certification in Sweden. *Forest Policy and Economics* 11:375-382. Hagan et al. found no differences between FSC and SFI in the northeast U.S.

43. The concept of sustainable practices, itself, is problematic. It is difficult for scientists to agree on what scale sustainability should be measured: the forest tract, the region, the province, the country, or the world. Scientists are uncertain about what sustainable biodiversity is, what healthy forests are, and which communities should have a voice. Therefore, certification itself does not measure sustainability. Certification has a very limited meaning: that an applicant meets that organization's specific standards and metrics measuring compliance. Failure to satisfy specific Indicators does not mean that a forest is unsustainable because only certain Indicators actually gauge environmental impacts.

44. A related issue is that environmental science is in a constant state of flux. Certification standards and performance indicators become more expansive and more numerous with each iteration. New scientific findings, as well as pressure from ENGOs and from social groups, can impact certification standards haphazardly.¹⁶ FSC, in particular, issues periodic interpretations which are likely to make standards more rigorous (as reflected in certification standard revisions). These frequent changes in standards and in scientific literature prevent one from drawing any definitive correlation between forest certification and sustainable forest management practices.

Conclusion

45. In my opinion, FSC's certification suspensions resulted from unachievable targets wholly outside of Resolute's control. The fact that Resolute complied with stringent federal and provincial law indicates sustainable practices more so than does certification.

46. This conclusion is corroborated by the fact that 100% of Resolute's forests were

¹⁶ Probably because of ENGOs' roles in FSC forest certification, Canada's FSC certification has decreased in recent years. FSC reported 61 million ha certified in Canada in 2013, but only 50.6 million at the end of 2015: a 16% decline (Ex. S, Rotherham 2016).

audited and certified by the SFI, including Lac St-Jean, Mistassini-Péribonka, and Black Spruce & Dog River-Matawin: the three forest tracts for which FSC suspended certification in 2013.

47. There is no scientific basis whatsoever to generalize about global impacts from the loss of three (now, two) forest certifications. In fact, substantial evidence, including Resolute's compliance with strict provincial and federal regulations (in addition to Resolute's historical record of certification) points to Resolute's role as an environmental leader.

48. Resolute's certification suspensions do not equate to unsustainable practices. Resolute should not be held captive to FSC's unreasonable demands with respect to environmental matters that are squarely within the authority of the provincial and federal governments.

49. Resolute's 2013 FSC audits indicate possible bias. Audits of similar forests in similar situations should have similar outcomes. That did not appear to be the case for Resolute. An applicant in full compliance with relevant laws should be certified under *any* standard.

50. I declare, certify, verify, and state under penalty of perjury that the foregoing is true and correct.

This 22nd day of November, 2016.



Frederick W. Cabbage, Ph.D.

CERTIFICATE OF SERVICE

This is to certify that I have this day electronically filed the foregoing Declaration of Frederick Cubbage in Support of Plaintiffs' Response to Defendants' Motions to Strike, Dismiss, and Transfer Venue with the Clerk of Court using the CM/ECF system and served upon counsel of record by electronic filing, as follows:

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This 22nd day of November, 2016.

/s/ Lauren Tabaksblat
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