ANALYSIS OF ISPM 15 AND ITS IMPACT ON THE WOOD PALLET INDUSTRY

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I. INTRODUCTION

A few years ago, the age of globalization hit home for one small-business owner in southeast Iowa. Randolph Woodroffe,[1] the owner and operator of Woodroffe Sawmill, Inc.,[2] employs about eight men at any given time in his wood pallet manufacturing business. He currently manufactures about thirty thousand pallets a year that are used in international transport. Yet, in 2005, Mr. Woodroffe found his small business subject to regulation by the International Plant Protection Convention.

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1. The author's father.

2. Woodroffe Sawmill is located in Denmark, Iowa. For more information visit: http://www.iowapallets.com.

Woodroffe Sawmill is a part of the wood packaging materials (WPM) industry, sometimes referred to more specifically as solid wood packing materials (SWPM).[3] Wood packaging materials are defined as "'hardwood and softwood packaging . . . used in supporting . . . or carrying a commodity.'"[4] They include "pallets, skids, pallet collars, containers, cratings/crates, boxes, cases, bins, reels, drums, load boards, [and] dunnage."[5] It is estimated that between sixty-four million and seventy-one million wood pallets are exported each year from the United States.[6] Wood packaging materials used in the international shipment of goods have been blamed for the introduction and spread of plant pests that hitch a ride on the raw wood.[7] The International Plant Protection Convention (IPPC) sought to address this problem by setting an international standard for all WPM that is exported and imported around the world.[8] The standard entitled, "Guidelines for Regulating Wood Packaging Material in International Trade" (Guidelines or ISPM 15), codified under ISPM No. 15, was approved by the Interim Commission on Phytosanitary Measures of the IPPC on March 15, 2002.[9] The United States adopted this standard, which took effect on September 16, 2005, and required all WPM shipped abroad to be either heat treated or fumigated with methyl bromide to kill any pests or fungi on the wood to comply with the Guidelines.[10] By adopting the Guidelines, the United States can hold other countries to it, satisfying its own phytosanitary needs. Woodroffe Sawmill, along with thousands of other WPM manufacturing plants across the country, had been suddenly thrust into the age of globalization and required to comply with this new international regulation.

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3. *See generally* Importation of Wood Packaging Material, 69 Fed. Reg. 55,719, 55,719-55,721 (Sept. 16, 2004) (to be codified at 7 C.F.R. pt. 319) (replacing the SWPM definition with definitions for "regulated wood packaging material" and "wood packaging material" in implementing the ISPM 15 Guidelines discussed throughout this Note).

4. Animal & Plant Health Inspection Serv., USDA, Plant Export: Wood Packaging Materials, Frequently Asked Questions (Oct. 15, 2008), http://www.aphis.usda.gov/import_export/plants/plant_exports/wpm/wpm_faqs.shtml [hereinafter APHIS, Frequently Asked Questions].

5. *Id.*

6. TIMOTHY M. SMITH ET AL., POTENTIAL EFFECT OF INTERNATIONAL PHYTOSANITARY STANDARDS ON USE OF WOOD PACKAGING MATERIAL 5, *available at* http://ahc.caf.wvu.edu/joomla/wpm/TechPapers/article1.pdf (last visited Apr. 19, 2010).

7. SECRETARIAT OF THE INT'L PLANT PROT. CONVENTION, FOOD & AGRIC. ORG. OF THE UNITED NATIONS [FAO], INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES: GUIDELINES FOR REGULATING WOOD PACKAGING MATERIAL IN INTERNATIONAL TRADE 7 (2002) [hereinafter ISPM 15].

8. *See id.*

9. Importation of Wood Packaging Material, 69 Fed. Reg. 55,719, 55,719 (Sept. 16, 2004) (to be codified at 7 C.F.R. pt. 319).

10. *Id.*

This Note will explore the impact ISPM 15 has had on the WPM industry, primarily focusing on the wood pallet industry since it makes up the vast majority of exported WPM.[11] The Note initially looks at the need for an international regulation to control the spread of invasive species, the various solutions the USDA considered, and the origin of ISPM 15. The Note will then review the implementation of the ISPM 15 Guidelines and the compliance requirements for wood packaging manufacturers. This leads to a discussion of the initial problems encountered when implementing the Guidelines, followed by an analysis of the impact and effect ISPM 15 has had on the pallet industry. The Note will then take a look at what is in store for the future of wood pallet manufacturing. To conclude, this Note will argue that the regulations are justified in the face of alternative solutions to control the spread of invasive species.

II. INVASIVE SPECIES THREATEN AMERICA'S FORESTS

Over the last decade and a half, the United States has experienced a massive increase in international trade.[12] Most imported and exported goods are accompanied by some sort of solid wood packaging material, most commonly pallets, crates, and dunnage.[13] These WPMs are hosts to pests that have had a devastating environmental and economic impact on American forests.[14] Invasive species are defined in the Federal Register as "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health."[15] Throughout this Note invasive species are also referred to generally as "pests." According to the August 2003 USDA Environmental Impact Statement, "[b]etween August 1995 and March 1998, 97 percent of the pests intercepted by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) inspectors at U.S. ports and recognized as potential threats to U.S. forest resources were associated with SWPM."[16] Initially, the primary concern was the importation of invasive pests from China, which prompted early regulatory action in 1998 that required WPM from China and Hong Kong to be treated to kill the pests and mitigate the risks.[17] However, in 2000 and 2001, APHIS inter-

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11. *See* SMITH ET AL., *supra* note 6.
12. ANIMAL & PLANT HEALTH INSPECTION SERV., USDA, IMPORTATION OF SOLID WOOD PACKING MATERIAL: FINAL ENVIRONMENTAL IMPACT STATEMENT—AUGUST 2003, at 1 (2003), *available at* http://www.aphis.usda.gov/plant_health/ea/downloads/swpmfeis.pdf [hereinafter APHIS, ENVIRONMENTAL IMPACT STATEMENT].
13. *Id.*
14. *Id.*
15. Exec. Order No. 13,112, 64 Fed. Reg. 6183 (Feb. 8, 1999).
16. APHIS, ENVIRONMENTAL IMPACT STATEMENT, *supra* note 12.
17. *Id.*

cepted 700 different quarantine pest species in SWPM that originated in places other than China.[18] The international free trade of goods was also a free trip for some unwanted guests.

One of those unwanted guests is the Emerald Ash Borer. It was first discovered in the United States in 2002 in Michigan and is believed to have come from Asia in SWPM.[19] Since its discovery, it is estimated to have destroyed 40 million ash trees in Michigan alone and "tens of millions more . . . in Ohio, Illinois, Indiana, Pennsylvania, West Virginia, Missouri, Wisconsin and Virginia."[20] This vast destruction prompted the USDA to enforce ash-tree quarantines with heavy fines in those states, as well as Maryland, to prevent ash trees, logs, hardwood, or firewood from leaving infected areas.[21]

Another unwelcomed guest, the Asian Long-Horned Beetle, has also been linked to the importation of SWPM.[22] It was first discovered in 1996 in New York City and in Chicago in 1998.[23] Yet another, the Pine Shoot Beetle, was first discovered at a Christmas tree farm in 1992 and is believed to have come from Europe in WPM, but it is also an inhabitant of Asia.[24]

These pests have cost millions of dollars of damage and millions more in eradication efforts.[25] Baltimore estimated the value of damage by Asian Long-Horned Beetles to urban trees to be $399 million in 2003.[26] Asian Long-Horned Beetle (ALB) infestations have destroyed about $6 million worth of trees in New York and Chicago.[27] Based on the average annual spread of ALB, APHIS estimates that the current value of urban trees at risk in New York City is $55.7 mil-

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18. *Id.* at 1-2.

19. Emerald Ash Borer, http://www.emeraldashborer.info/ (last visited Apr. 19, 2010).

20. *Id.*

21. *Id.*

22. Importation of Wood Packaging Material, 69 Fed. Reg. 55,719, 55,719 (Sept. 16, 2004) (to be codified at 7 C.F.R. pt. 319).

23. ANIMAL & PLANT HEALTH INSPECTION SERV., USDA, REGULATORY IMPACT ANALYSIS OF THE PROPOSED RULE TO ADOPT THE INTERNATIONAL STANDARD ON WOOD PACKING MATERIAL IN INTERNATIONAL TRADE, at i (2003), http://www.aphis.usda.gov/import_export/plants/plant_imports/downloads/SWPMRIA42103.pdf [hereinafter APHIS, REGULATORY IMPACT ANALYSIS].

24. Animal & Plant Health Inspection Serv., USDA, Plant Health: Pine Shoot Beetle, Background, http://www.aphis.usda.gov/plant_health/plant_pest_info/psb/index.shtml (last visited Apr. 19, 2010); Forest Serv., USDA, Pest Alert, http://www.na.fs.fed.us/spfo/pubs/pest_al/shootbeetle/shootbeetle.htm (last visited Apr. 19, 2010).

25. Cindy Skrzycki, *USDA Rule on Pallets and Pests Leaves Some Fuming*, WASHINGTON POST, Oct. 12, 2004, at E01, *available at* http://www.washingtonpost.com/wp-dyn/articles/A25720-2004Oct11.html.

26. APHIS, REGULATORY IMPACT ANALYSIS, *supra* note 23, at 4.

27. *Id.* at 5.

lion over 54 years; in Chicago it is $3.2 million dollars over 46 years.[28] State and local governments along with APHIS had already spent over $59 million to eradicate these pests as of 2003 in Chicago and New York City, helping to slow the spread of infestations.[29]

Along with the economic impact, these pests have had a destructive environmental impact, as evidenced by the staggering number of trees they have destroyed. "Perhaps the greatest devastation posed by these pests . . . is their potential to cause irreversible loss to native tree species and consequential alterations to the environment and ecosystem," as stated in the USDA's Regulatory Impact Analysis of the Guidelines.[30] The threat of the Emerald Ash Borer and the Asian Long-Horned Beetle to United States' forests has "prompted the chief of the Forest Service to name invasive species as one of four major threats to our Nation's forest and grassland ecosystems."[31]

III. THE USDA CONSIDERS POSSIBLE SOLUTIONS

"The free trade of goods in international commerce potentially brings with it negative externalities due to the inadvertent transport of exotic plant pests and pathogens that may be harbored in untreated wood packing materials."[32] Importers obviously do not pick up the costs incurred by society from the inadvertent introduction of invasive species through WPM.[33] The costs include primarily the loss of trees in forests and cities, and the pest eradication efforts to help save them. Left alone, the market would continue this way, adversely impacting U.S. agriculture, natural resources, and the economy.[34] Federal intervention is therefore necessary to reduce the cost society pays for the damage caused by imported pests.[35] Individual importers simply cannot, or at least have not been taking sufficient action themselves.[36]

In 1998, APHIS enacted two interim rules requiring all SWPM from China, including Hong Kong, to be treated prior to arrival in the United States in an effort to mitigate the risk of transporting pests.[37] By 2001, the USDA saw an

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28. *Id.* at 3.
29. *Id.* at 7.
30. *Id.* at ii.
31. Rebecca Wallace, *International Standard Slows the Spread of Invasive Species*, NEWSLINE, Summer 2005, at 2, 2, *available at* http://www.fpl.fs.fed.us/documnts/newsline/newsline-2005-3.pdf.
32. APHIS, REGULATORY IMPACT ANALYSIS, *supra* note 23, at 1.
33. *Id.*
34. *Id.*
35. *See id.*
36. *See id.*
37. APHIS, ENVIRONMENTAL IMPACT STATEMENT, *supra* note 12.

80 percent reduction in quarantine pests in SWPM from China since implementation of the regulation in 1998.[38] "[Q]uarantine pest[s]" are defined in the IPPC Guidelines as "[a] pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled."[39] In 2000 and 2001, APHIS intercepted 700 quarantine pest species in SWPM from 58 different places of origin.[40] A different strategy was needed to adequately protect the nation's forests from the threat of invasive species arriving on millions of WPM imported from the rest of the world each year.[41]

In 2003, APHIS considered several possible solutions to mitigate the risk of importing pests in SWPM.[42] The alternative solutions included: "(1) No Action (no change in the current regulation), (2) Extension of the Treatments in the China Interim Rule to All Countries, (3) Adoption of the IPPC Guidelines, (4) a Comprehensive Risk Reduction Program, and (5) Substitute Packing Materials Only."[43]

APHIS analyzed the potential consequences of each alternative, including its effectiveness in mitigating the risks, the environmental impact from the use of chemicals and other methods to control pests, and the environmental impact of manufacturing some types of packing materials.[44]

The "No-Action" alternative meant there would be no change to the regulations that were in place in 2003; there would be one standard for China and Hong Kong, and another standard for the rest of the world.[45] The "No-Action" option would not provide any further reduction in the risk of importing invasive species from the rest of the world, and would also not reduce the adverse environmental consequences associated with the preservative and fumigation treatments used by China and Hong Kong wood packaging manufacturers.[46]

The second alternative—extend the treatments in the China Interim Rule to all countries—would require all SWPM from foreign countries "to be heat treated, fumigated or treated with preservatives, and certified prior to being exported."[47] The risk of importing pests would be substantially reduced, but this alternative would also result in the greatest level of adverse environmental con-

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38. *Id.* at 1-2.
39. ISPM 15, *supra* note 7, at 6.
40. APHIS, ENVIRONMENTAL IMPACT STATEMENT, *supra* note 12, at 1-2.
41. *See id.* at 2.
42. *Id.* at 9.
43. *Id.*
44. *Id.* at 10.
45. *Id.* at 11.
46. *Id.*
47. *Id.*

sequences from the treatments used on SWPM.[48] The other main effect would be an increase in cost of SWPM due to the required treatments, which could shift demand to packing materials made from something other than wood.[49]

The third alternative, also the proposed alternative, was to adopt the IPPC Guidelines under ISPM 15, which would require all signatory countries to heat treat SWPM or fumigate them with methyl bromide prior to export.[50] These treatment requirements were slightly less rigorous than those of the China Interim Rule, and at the time, there was no debarking requirement, making it less burdensome on manufacturers.[51] Adoption of the IPPC Guidelines would substantially reduce the risk of importing pests, but would also pose adverse environmental consequences from the treatments—though not to the extent of the second alternative.[52] The increased cost of SWPM may also shift demand to packing materials made of something other than wood, as with the second alternative.[53]

The fourth alternative was the Comprehensive Risk Reduction Program, which would give countries several different options for complying with U.S. import requirements.[54] "[D]epending upon [a] countr[y's] economic and technological capabilities, and their pest status," different risk mitigation methods would be available to them, or the complete array of methods may be made available to all countries.[55] However, for this alternative to be practical, APHIS determined in its Analysis that the various approved treatment methods must be applied consistently to all countries.[56] This alternative also considered different combinations of treatment methods applied to different types of SWPM, but this would result in significant logistical difficulties for inspection and verification.[57] This alternative would reduce the pest risk, and the potential for adverse environmental impacts could be reduced as well, depending upon the treatment methods actually used.[58]

The fifth and final alternative posed by the USDA was to require the use of substitute packing materials only.[59] In other words, packing materials that are

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48. *Id.* at 12.
49. *Id.*
50. *Id.*
51. *Id.* at 12-13.
52. *Id.* at 13.
53. *Id.*
54. *Id.*
55. *Id.*
56. *Id.* at 14.
57. *Id.*
58. *Id.*
59. *Id.*

not restricted under the SWPM regulation or materials other than raw wood that are not capable of being hosts for pests.[60] Importers would be allowed to use any substance not restricted under the SWPM regulation, including "plywood, oriented strand board, particle board, corrugated paperboard, plastic and resin composites . . . metal, rubber, or fiberglass."[61] This alternative would achieve the greatest reduction in risk as well as reduction of adverse environmental consequences from treatments.[62] However, the decreased use of wood products would result in an increased use of other resources and energy in the manufacturing processes.[63] Wood, as opposed to plastic or other substitute packing material, has three key advantages: it's renewable, it's cheap, and wood product manufacturing results in far less pollutants and greenhouse gas emissions.[64] Making the switch to substitute materials when WPM dominated the market drastically limited the feasibility of this option.[65]

After careful analysis of the options, the USDA decided to join 117 other countries and adopt the IPPC Guidelines.[66] The purpose of ISPM 15 is to mitigate the risk of transferring invasive plant pests on WPM used in shipping goods around the world, which is exactly what the USDA hoped to accomplish.[67] According to Dr. Barbara Illman of the Forest Products Laboratory, "'Approximately half of all world trade moves on wood packaging materials.'"[68] Wood packaging materials are often reused, recycled, or re-manufactured, making it difficult if not impossible to determine their country of origin or the phytosanitary risks they pose.[69] For this reason, it is necessary to have one global standard applied to all WPM in order to significantly reduce the risk of transporting invasive plant pests.[70] According to Dr. Eric Allen of the Pacific Forestry Centre in Canada, whose research has helped develop the requirements of ISPM 15, the transfer of invasive species is a global problem, and therefore a global solution is necessary.[71]

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60. *Id.*
61. *Id.*
62. *Id.*
63. *Id.* at 14-15.
64. *Id.* at 41.
65. *See id.*
66. Natural Res. Def. Council, Inc. v. USDA, Nos. 05 CV 8005, 05 CV 8008, 2007 WL 1610420, at *4 (S.D.N.Y. June 4, 2007).
67. ISPM 15, *supra* note 7, at 8.
68. Wallace, *supra* note 31.
69. ISPM 15, *supra* note 7, at 8.
70. *See id.*
71. Chaille Brindley, *A Scientific Perspective: Expert Voices Opinion on Phytosanitary Challenges and Standards*, PALLET ENTERPRISE, Mar. 1, 2006, http://www.palletenterprise.com/articledatabase/print_view.asp?ArticleID=1900&Page=1.

IV. THE ORIGIN OF ISPM 15

Tracing the origin of authority for the Guidelines for Regulating Wood Packaging Material in International Trade under ISPM 15 is slightly complicated but substantiates its significance. Generally, ISPMs are adopted by contracting parties to the IPPC and members of the Food and Agriculture Organization (FAO) of the United Nations through the Commission on Phytosanitary Measures.[72] The United States became a contracting party to the IPPC in 1972.[73] Members of the World Trade Organization (WTO) also use the ISPM standards, guidelines, and recommendations as the basis for the phytosanitary measures they apply under the Agreement on the Application of Sanitary and Phytosanitary Measures.[74] Each signatory country to the IPPC has a National Plant Protection Organization (NPPO) whose responsibility it is to ensure their country meets the requirements of the ISPM.[75]

APHIS's Plant Protection and Quarantine (PPQ) program serves as the NPPO for the United States.[76] The American Lumber Standard Committee (ALSC) and the National Wooden Pallet and Container Association (NWPCA) work with APHIS and the PPQ to develop quality control programs to comply with the ISPM 15 Guidelines.[77]

In the fall of 2009, the IPPC issued a Revision of ISPM 15 (hereinafter Revised ISPM 15).[78] The Scope and Requirements of the 2002 version have mostly carried over to the revised version with a few additional requirements as well as exemptions, which are further described below.

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72. ISPM 15, *supra* note 7, at 2.

73. FAO, International Plant Protection Convention, http://www.fao.org/Legal/TREATIES/004s-e.htm (last visited Apr. 19, 2010).

74. ISPM 15, *supra* note 7, at 2. Under the WTO Agreement on the Application of Sanitary and Phytosanitary Measures, restrictions are set on member states' policies regarding, among other things, plant health and the importation of pests and diseases.

75. *See id.* at 10.

76. Animal & Plant Health Inspection Serv., USDA, Plant Export: International Standards Management/NAPPO, Overview (Mar. 23, 2007), http://www.aphis.usda.gov/import_export/plants/plant_exports/phyto_international_standards_overview.shtml [hereinafter APHIS, International Standards Management/NAPPO].

77. Animal & Plant Health Inspection Serv., USDA, Plant Export: Wood Packaging Materials, Heat Treatment Program (Jan. 23, 2007), http://www.aphis.usda.gov/import_export/plants/plant_exports/wpm/wpm_heat_treatment [hereinafter APHIS, Heat Treatment Program] (ALSC implements the quality control program for heat-treated WPM).

78. INT'L PLANT PROT. CONVENTION, FAO, REVISION OF ISPM NO. 15: REGULATION OF WOOD PACKAGING MATERIAL IN INTERNATIONAL TRADE (2009) [hereinafter REVISED ISPM 15].

V. ISPM 15 REQUIREMENTS FOR TREATMENT OF WOOD PACKAGING MATERIALS

The IPPC has approved two methods, described in the Guidelines, which can be used to treat WPM to kill any pests or fungi and eliminate the risk of transporting them.[79] One of the approved methods is to subject the WPM to a heat treatment.[80] This essentially amounts to baking the WPM in an oven, or rather, a highly insulated building. The WPM must be heated so that the core of the wood attains a minimum temperature of 56 degrees Celsius (132.8 degrees Fahrenheit) for a minimum of thirty minutes.[81] Heat treatment may be achieved through kiln-drying, chemical pressure impregnation, and through the use of steam, hot water, or dry heat.[82] Automated data recorders attached to sensors are drilled into the wood to record time and temperatures inside the heat-treatment buildings.[83]

The other IPPC approved method is methyl bromide fumigation.[84] This method requires WPM to be fumigated with methyl bromide according to a treatment schedule listed in the Guidelines.[85] The minimum temperature should not be less than 10 degrees Celsius (50 degrees Fahrenheit) and the minimum exposure time should be sixteen hours.[86]

Regardless of the method of treatment chosen, the Revised ISPM 15 requires all WPM to be made of debarked wood.[87] The bark must be removed prior to treatment by methyl bromide fumigation, and may be removed either before or after heat treatment.[88] The standard allows "visually separate and clearly distinct small pieces of bark [to] remain" provided that they are either less than three centimeters in width (irrespective of length), or larger than three centimeters but with a total surface area less than fifty centimeters squared.[89] The decision to implement this requirement had been debated since the original ISPM 15 came

79. ISPM 15, *supra* note 7, at 12.
80. *Id.*
81. *Id.*
82. *Id.*
83. Interview with Randolph Woodroffe, President, Woodroffe Sawmill, Inc., in Denmark, Iowa (Mar. 5, 2008).
84. *Id.*
85. *Id.*
86. *Id.* (footnote omitted).
87. REVISED ISPM 15, *supra* note 78, at 11.
88. *Id.*
89. *Id.*

out in 2002.[90] Mandating the use of debarked wood will greatly increase the effectiveness of the treatments.

The Revised ISPM 15 specifically lists wood packaging articles that are exempt from these requirements, because their risk of transporting invasive species is sufficiently low.[91] Included in this list of exemptions are WPM made entirely of thin wood with a thickness of six millimeters or less; WPM made entirely with processed woods, such as plywood or particle board; wood shavings, sawdust, or wood wool; and other woods used for wine barrels and gift boxes which have already been treated during their manufacture.[92]

Another change in the Revised ISPM 15: Importing countries "should accept" the ISPM 15 approved treatment methods without more phytosanitary import requirements.[93] This is a change from the 2002 version of ISPM 15 where countries could require higher treatment temperatures or longer exposure periods.[94] Revised ISPM 15 does allow countries to require "phytosanitary measures beyond an approved measure" but only with "technical justification."[95]

Treated WPM is required to be marked with a symbol to show it has undergone one of the approved treatment methods.[96] The marking must include the IPPC symbol, the International Organization for Standardization two letter country code followed by a number assigned by the NPPO to the WPM manufacturer, and the abbreviation for which approved method was used—either "HT" for heat treatment or "MB" for methyl bromide fumigation.[97] The marking must be legible, permanent, not transferable, and placed in a visible location "preferably on at least two opposite sides of the wood packaging unit"[98] (see example below).[99]

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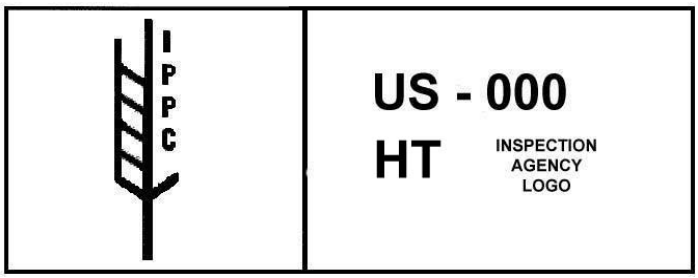
90. *Compare* ISPM 15, *supra* note 7, at 7, 10, *with* REVISED ISPM 15, *supra* note 78, at 5.
91. REVISED ISPM 15, *supra* note 78, at 7.
92. *Id.*
93. *Id.* at 5.
94. *See* ISPM 15, *supra* note 7, at 12 n.4.
95. REVISED ISPM 15, *supra* note 78, at 7.
96. *Id.* at 13.
97. *Id.*
98. *Id.* at 14.
99. APHIS, Frequently Asked Questions, *supra* note 4.



VI. IMPLEMENTATION OF ISPM 15 IN THE UNITED STATES

As stated *supra*, the USDA's APHIS PPQ serves as the NPPO for the United States and is responsible for establishing industry-wide inspection and marking procedures for wood treated in compliance with ISPM 15.[100] The American Lumber Standard Committee (ALSC) and the National Wooden Pallet and Container Association (NWPCA) were the two agencies chosen by APHIS to implement the Guideline's requirements.[101] The ALSC and NWPCA in turn employ regional auditing agencies who inspect the individual manufacturers,[102] such as Woodroffe Sawmill. The Revised ISPM 15 identifies "treating, manufacturing, and marking" as the three aspects of producing ISPM 15-approved WPM.[103] "These activities can be done by separate entities, or one entity can do several or all of these activities."[104] Customs and Border Protection (CBP) agents are responsible for inspecting WPM at ports of entry for compliance.[105]

A. *Heat Treatment*

The ALSC has been designated by APHIS-PPQ to oversee all heat treatment of WPM in the United States.[106] The ALSC authorizes regional auditing agencies to inspect each certified sawmill for compliance with the ISPM 15

100. APHIS, International Standards Management/NAPPO, *supra* note 76.

101. Bruce Scholnick, Nat'l Wooden Pallet & Container Ass'n, NWPCA's Fumigation Program–How Does It Work?, http://www.nwpca.com/exporttreatment/FumigationProgramHowDoesItWork.htm (last visited Apr. 19, 2010).

102. *See, e.g.*, *id.*

103. REVISED ISPM 15, *supra* note 78, at 8.

104. *Id.*

105. *See, e.g.*, U.S. CUSTOMS & BORDER PROT., OPERATING PROCEDURES FOR IMPLEMENTATION OF THE WOOD PACKAGING MATERIALS (WPM) REGULATION 6 (2006), *available at* http://www.fas.usda.gov/ffpd/WTO_SPS_TBT_Notifications/Forest_Products/Phase_III_DHS_CBP_Operating_Procedures_WPM.pdf [hereinafter CBP, OPERATING PROCEDURES].

106. APHIS, Heat Treatment Program, *supra* note 77.

Guidelines.[107] There are currently seventeen accredited auditing agencies and approximately 4,500 facilities licensed to produce WPM in accordance with the Guidelines.[108]

Sawmills and manufacturing facilities that wish to comply with ISPM 15 Guidelines through heat treating may apply for and purchase a license from an ALSC auditing agency to obtain and apply the required quality mark for their wood packaging products.[109] They are also inspected by the agency on a monthly basis.[110] Facilities are required by the ALSC through its auditing agencies to maintain records and quality control procedures to demonstrate their compliance with the IPPC standard.[111] Samples of the wood packaging products are also inspected for proper marking and quality.[112] Any WPM found not to be in compliance with the Guidelines must have the quality mark removed or be remanufactured.[113] Facilities must remain compliant or their authority to use the agency's quality mark may be revoked.[114]

B. *Methyl Bromide Fumigation*

The NWPCA "in coordination with APHIS and the wood packaging industry has developed an official program . . . to implement a quality control program for the official labeling of WPM fumigated with Methyl Bromide."[115] Their program is very similar to the ALSC's heat-treatment program. The NWPCA accredits and monitors inspection agencies that in turn audit and inspect wood packaging manufacturers who use methyl bromide fumigation.[116] Wood packaging and lumber manufacturers that wish to comply with the ISPM 15 Guidelines may apply for and purchase a license from an auditing agency to use and apply

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107. Am. Lumber Standard Comm. Inc., WPM Program: Summary, http://www.alsc.org/WPM_summary_mod.htm (last visited Apr. 19, 2010).

108. *Id.*

109. AM. LUMBER STANDARD COMM., INC., WOOD PACKAGING MATERIAL ENFORCEMENT REGULATIONS § 5.6.1, at 7 (2003).

110. *Id.* § 5.3.7, at 6.

111. *Id.* §§ 4.1.1, 4.1.2, at 4.

112. *Id.* § 5.3.3.1, at 5.

113. *Id.* § 4.1.2, at 4.

114. *Id.* § 5.6.2, at 7.

115. Animal & Plant Health Inspection Serv., USDA, Plant Export: Wood Packaging Materials, Methyl Bromide Fumigation Program (Jan. 26, 2007), http://www.aphis.usda.gov/import_export/plants/plant_exports/wpm/wpm_methyl_bromide.shtml.

116. NAT'L WOODEN PALLET & CONTAINER ASS'N, EXPORT WOOD PACKAGING MATERIALS FUMIGATION ENFORCEMENT REGULATIONS § 3.1, at 3 (2006), *available at* http://www.nwpca.com/ExportTreatment/ExportWoodPackagingMaterialFumigationEnforcementRegulationsMAR2008.pdf [hereinafter NWPCA, EXPORT WPM FUMIGATION REGULATIONS].

the methyl bromide treatment mark to treated WPM.[117] There are currently only five auditing agencies and just less than 100 licensed fumigators.[118]

Manufacturing facilities are required to maintain treatment records and have monthly inspections by the auditing agency to ensure compliance with ISPM 15 Guidelines.[119] During the monthly inspection, an agency representative samples a sufficient amount of the facility's products to determine if they have been properly treated and correctly marked.[120] "When a sample indicates the product was not properly fumigated or marked, the lot shall be held for correction."[121] As with the ALSC, continued use of the agency's treatment mark is dependent upon continued compliance with agency and the Guidelines.[122]

Continued use of methyl bromide fumigation in general may be short lived. In 1987 the United States signed on to the Montreal Protocol on Substances that Deplete the Ozone Layer, which required the phase-out of ozone-depleting substances,[123] including methyl bromide as of 1992.[124] In 1990, President George H.W. Bush signed into law the Clean Air Act Amendments codifying the United States' obligations under the Protocol, and providing for the EPA to implement the requirements.[125] While the use of methyl bromide fumigation was phased out in the United States in 2005, it is still allowed if users qualify under the "critical use exemption" in accordance with the Montreal Protocol.[126] The EPA reviews applications for critical use exemptions for domestic entities as well as for importation on a yearly basis.[127] To qualify for a critical use exemption, an entity must show that "[t]here are no technically and economically feasible alternatives or substitutes for methyl bromide available," and that the inability

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117. *Id.* § 3.5.1, at 7.

118. Nat'l Wooden Pallet & Container Ass'n, Export Wood Packaging Material Fumigation Program, http://www.nwpca.com/ExportTreatment/ProgramOverview.htm (last visited Apr. 19, 2010).

119. NWPCA, EXPORT WPM FUMIGATION REGULATIONS, *supra* note 116, § 3.3.3, at 5.

120. *Id.*

121. *Id.*

122. *Id.* § 3.6.2, at 8.

123. Protection of Stratospheric Ozone: Adjusting Allowances for Class I Substances for Export to Article 5 Countries, 71 Fed. Reg. 49,395, 49,395 (Aug. 23, 2006) (to be codified at 40 C.F.R. pt. 82).

124. Protection of Stratospheric Ozone: The 2006 Critical Use Exemption from the Phaseout of Methyl Bromide, 71 Fed. Reg. 5985, 5986 (Feb. 6, 2006) (to be codified at 40 C.F.R. pt. 82).

125. Protection of Stratospheric Ozone: Adjusting Allowances for Class I Substances for Export to Article 5 Countries, 71 Fed. Reg. at 49,396.

126. Protection of Stratospheric Ozone: The 2006 Critical Use Exemption from the Phaseout of Methyl Bromide, 71 Fed. Reg. at 5985.

127. *Id.* at 5985, 5987.

to use methyl bromide "would result in a significant market disruption."[128] The use of "methyl bromide to fumigate commodities entering or leaving the United States" to comply with APHIS requirements, like the ISPM 15 Guidelines, is currently an accepted exemption.[129]

The phase-out is generally attainable for WPM manufacturers in the United States and the European Union, but it is very difficult for those in developing countries that "lack the capital and resources to [build] adequate heat-treatment facilities.[130] The Protocol recognizes the strain on developing countries and has allowed them additional time in which to phase out methyl bromide usage.[131] Methyl bromide fumigation is often the least expensive treatment method in developing nations, so the exemption helps prevent conversion to alternative packing materials and a resulting market disruption that would adversely affect the industry.[132] Revised ISPM 15 addresses the negative environmental impact, but recognizes the unavailability of other treatment methods in developing countries.[133]

C. *Inspection at Ports of Entry*

APHIS recognized that requiring some developing countries to comply with the ISPM 15 Guidelines would take much effort and perhaps at a greater cost than to other countries.[134] Foreign trading partners were given a one-year period after the United States adopted ISPM 15 to implement the requisite treatment and inspection systems in order to become compliant with the rule.[135] Enforcement of ISPM 15 was phased in from its adoption in September 2005 to full enforcement on all regulated WPM arriving at ports of entry in the United States beginning in July 2006.[136]

To obtain entry into the United States, imported WPM must have a visible and legible mark indicating that the article meets the requirements of the reg-

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128. 40 C.F.R. § 82.3 (2009).

129. Clean Air Act, 42 U.S.C. § 7671c(d)(5) (2006).

130. APHIS, ENVIRONMENTAL IMPACT STATEMENT, *supra* note 12, at A-8.

131. Protection of Stratospheric Ozone: Adjusting Allowances for Class I Substances for Export to Article 5 Countries, 71 Fed. Reg. at 49,396.

132. APHIS, ENVIRONMENTAL IMPACT STATEMENT, *supra* note 12, at A-8.

133. REVISED ISPM 15, *supra* note 78, at 5.

134. Protection of Stratospheric Ozone: Adjusting Allowances for Class I Substances for Export to Article 5 Countries, 71 Fed. Reg. at 49,396.

135. Importation of Wood Packaging Material, 69 Fed. Reg. 55,719, 55,727 (Sept. 16, 2004) (to be codified at 7 C.F.R. pt. 319).

136. Press Release, U.S. Customs & Border Prot., CBP Plans Will Phase-in Compliance of the Wood Packaging Material Regulation (Sept.14, 2005), *available at* http://www.aphis.usda.gov/import_export/plants/plant_imports/downloads/CBPWPM09-14-05.pdf.

ulation and has been subjected to a heat treatment or methyl bromide fumigation.[137] CBP inspectors may order immediate re-export of WPM that does not have the required marking.[138] Inspectors must order re-export of WPM that is found to be infested with pests during the course of a visual examination whether or not the article has been marked or treated.[139]

Importers will be notified of the situation and "may request separation of the imported [cargo] from the violative WPM."[140] "If separation is not requested or if the Port Director determines . . . [it] is not feasible," the entire shipment will be re-exported regardless if there is compliant as well as non-compliant WPM.[141] The importer in violation of the Guidelines will bear the costs associated with any separation and exportation expenses.[142] The CBP may issue claims, however, for liquidated damages based on the "value of the WPM plus the value of the commodity."[143] The liquidated damages claim may be up to "three times (3x) the . . . value of the merchandise but not greater than the bond amount."[144] Penalties may also be assessed if "[t]he importer, carrier, or bonded custodian attempts to conceal" violative WPM, or if the party has more than five documented violations during one fiscal year nationally.[145] The rigorous procedures in place make it clear that it is in the best interest of the overseas exporter to comply with the Guidelines the first time around.

VII. INITIAL PROBLEMS WITH ISPM 15

The USDA's decision to adopt ISPM Guidelines was the basis of a lawsuit in 2007 against the USDA and the Secretary of Agriculture.[146] Plaintiffs—the Natural Resources Defense Council, Inc., and the states of New York, California, Connecticut, and Illinois—claimed that APHIS did not properly consider an alternative solution other than heat treatment and fumigation with methyl

137. 7 C.F.R. § 319.40-3(b)(2) (2010).
138. CBP, OPERATING PROCEDURES, *supra* note 105.
139. *Id.* at 15.
140. *Id.* at 6.
141. *Id.*
142. *Id.* at 12.
143. U.S. CUSTOMS & BORDER PROT., GUIDELINES FOR LIQUIDATED DAMAGES AND PENALTIES ON WOOD PACKAGING MATERIAL (WPM) (2007), *available at* http://www.cbp.gov/linkhandler/cgov/trade/trade_programs/agriculture/wpm/guidelines_wpm.ctt/guidelines_wpm.doc.
144. *Id.*
145. *Id.*; *see also* 19 U.S.C. §§ 1592, 1595a(b) (2006) (providing for additional penalty assessment for unlawful importation).
146. *See* Natural Res. Def. Council, Inc. v. USDA, Nos. 05 CV 8005, 05 CV 8008, 2007 WL 1610420 (S.D.N.Y. June 4, 2007).

bromide.[147] Specifically, a solution encompassing "'a phased transition away from raw wood pallets and crates, replacing them with packing materials made of substitute materials . . . that are impervious to insect pests.'"[148] Plaintiffs argued that the use of substitute materials would provide the "greatest protection against pests and also minimize the destructive consequences to the ozone layer of fumigation with methyl bromide."[149] They argued that the USDA's Final Environmental Impact Statement (referred to *supra*) inadequately considered the environmental impact of methyl bromide.[150] Plaintiffs asked the court to find that APHIS violated the National Environmental Protection Act (NEPA) as well as the Plant Protection Act (PPA), and sought for the "'[c]ourt to order APHIS to reconsider its environmental impact analysis . . . and then to revise the rule as appropriate based on any supplemental findings.'"[151]

The PPA, which became law in 2000, gives the Secretary of Agriculture, and by delegation APHIS, the authority "'to prevent the introduction of plant pests into the United States.'"[152] It also states that it is the "Secretary's responsibility to facilitate commerce 'in ways that will reduce, to the extent practible [sic], as determined by the Secretary, the risk of dissemination of plant pest. . . .'"[153] The PPA further provides that "'[t]he Secretary [of Agriculture] shall ensure that phytosanitary issues involving imports and exports are addressed based on sound science and consistent with applicable international agreements.'"[154] This is consistent with the purpose of the IPPC–"'to secure common and effective action to prevent the spread of pests of plant products, and to promote appropriate measures for their control.'"[155]

The plaintiffs wanted the court to adopt a much narrower view of what the PPA mandates the Secretary to consider when adopting regulations, placing the most emphasis on environmental factors.[156] However, the court determined that the Secretary, through APHIS, must also consider the "facilitation of commerce" in reducing the risk of plant pests.[157] The PPA also gives the Secretary discretion in weighing the alternatives to the proposed adoption of rules, such as

147. *Id.* at *1.
148. *Id.* (citation omitted).
149. *Id.*
150. *Id.* at *3.
151. *Id.* at *1-2 (citation omitted).
152. *Id.* at *3 (citing 7 U.S.C. § 7711(a) (2006) (emphasis omitted)).
153. *Id.* (citing 7 U.S.C. § 7701(3) (2006) (emphasis omitted)).
154. *Id.* (citing 7 U.S.C. § 7751(e) (2006)).
155. *Id.* at *4 (citing Guide to the International Plant Protection Convention [AR VI.2], at 2).
156. *Id.*
157. *Id.*

the ISPM 15 Guidelines.[158] The court found that the Secretary, through APHIS, did not violate the PPA in his decision to adopt the Guidelines.[159]

NEPA requires that an agency "[r]igorously explore and objectively evaluate all reasonable alternatives," which the plaintiffs challenged that APHIS did not do in its Final Environmental Impact Statement of August 2003.[160] Under NEPA, the primary function of an environmental impact statement is to ensure that a "fully informed and well-considered decision" is made by the agency.[161] To fulfill this function, the statement must set forth sufficient information for the agency to "consider fully the environmental factors involved and to make a reasoned decision after balancing the risks of harm to the environment against the benefits to be derived from the proposed action."[162] The court held that APHIS violated NEPA only in that it did not accurately and fully account for the impact methyl bromide would have on the environment.[163] As a result, the court ordered APHIS to circulate a supplemental Environmental Impact Statement with more accurate estimates of the amount of methyl bromide that would potentially be released, and to consider how those estimates affect the agency's decision to adopt ISPM 15.[164]

This issue was also addressed in the Revised ISPM 15 which contains an "Environmental Statement" recognizing the negative effects of using Methyl Bromide as a treatment option, and affirming that it is "known to deplete the ozone layer."[165] The Revised ISPM 15 adopted a "[r]ecommendation on the *Replacement or reduction of the use of methyl bromide as a phytosanitary measure*" by the Commission on Phytosanitary Measures, and states that the IPPC is seeking more environmentally friendly treatment options.[166]

Other issues have emerged since implementation of the rule as well. APHIS has "encountered several cases where private firms have [fraudulently] developed and applied ISPM 15 quality[] treatment marks to wood packaging material for export without entering into an agreement with APHIS."[167] In some

158. *Id.*
159. *Id.* at *5.
160. *Id.* at *3 (citing 40 C.F.R. § 1502.14(a) (2006)).
161. Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc., 435 U.S. 519, 558 (1978).
162. County of Suffolk v. Sec'y of the Interior, 562 F.2d 1368, 1375 (2d Cir. 1977) (citation omitted).
163. Natural Res. Def. Council, Inc. v. USDA, Nos. 05 CV 8005, 05 CV 8008, 2007 WL 1610420, at *8 (S.D.N.Y. June 4, 2007).
164. *Id.* at *9.
165. REVISED ISPM 15, *supra* note 78, at 5.
166. *Id.*
167. Export Certification for Wood Packaging Material, 72 Fed. Reg. 35,915, 35,916 (July 2, 2007) (to be codified at 7 C.F.R. pt. 353).

of the cases the WPM had not even been treated in compliance with the Guidelines.[168] In effort to solve the problem, APHIS amended Part 353 in the Federal Regulations to clarify that the ISPM 15 quality treatment mark "may only be issued when the person . . . applying the certification mark has first entered into a written agreement with APHIS," and the mark must only be applied in accordance with all applicable requirements.[169]

Another problem, which the PPQ has come to terms with for now, is the fact that adopting the ISPM 15 Guidelines does not completely eliminate the transfer of all invasive species.[170] "[T]here are some deep wood-borers, fungi, rots, and wilts" that cannot be eliminated by current heat treatments or methyl bromide fumigation requirements.[171] "[H]eat treated wood that is still green is [even] subject to reinfestation."[172] The only way to achieve total elimination is to prohibit the use of wood packaging in favor of an alternative packaging material as proposed by groups including the American Lands Alliance.[173] While the advantage of this plan is the virtual elimination of the spread of invasive species, the disadvantages are the harm to international trade and the economically crippling effect on the WPM industry.[174] In an effort to make the current treatment options more effective, the European Union amended ISPM 15 to require the debarking of all WPM beginning January 1, 2009.[175] It is also included in the Revised ISPM 15, which came out later that year.[176] Debarking pallets allows heat treatments and methyl bromide fumigation to more thoroughly penetrate the wood core killing the deep-rooted pests.[177] More amendments to the regulations can be expected in the coming years.[178]

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168. *Id.*

169. *Id.*

170. APHIS, ENVIRONMENTAL IMPACT STATEMENT, *supra* note 12, at 88.

171. *Id.*

172. *Id*. at A-69 (public cmt. of Nancy K. Osterbauer, Survey Plant Pathologist (Dec. 30, 2002)).

173. *See id.* at A-21 (public cmt. of Faith Thompson Campbell, Am. Lands Alliance (Dec. 24, 2002)).

174. *Id.* at A-21 to A-22.

175. Letter from Thomas D. Searles, President, Am. Lumber Standard Comm., Inc., to WPM Agencies (Sept. 24, 2008) (on file with author).

176. REVISED ISPM 15, *supra* note 78, at 11.

177. APHIS, ENVIRONMENTAL IMPACT STATEMENT, *supra* note 12, at A-27 (public cmt. of Faith Thompson Campbell, Am. Lands Alliance (Dec. 24, 2002)).

178. The United States, the European Union, and international organizations are all presently working to completely eliminate the spread of invasive species, while at the same time considering the viability of the WPM industry under such regulations. *See, e.g.*, REVISED ISPM 15, *supra* note 78, at 5.

VIII. IMPACT OF ISPM 15 ON THE WOOD PALLET INDUSTRY

The regulatory action of ISPM 15 has had a vast impact on the wood products industry. WPMs are used when shipping "most commercial product[s] around the world."[179] In 2000, "[i]t is estimated that over 50% of the $2.0 trillion worth of goods" leaving or entering the United States were on or in some form of WPM.[180] Almost forty percent of hardwood lumber, or "approximately 4.53 billion board feet per year," is used for container and pallet manufacturing.[181] The wood products industry employs 1.5 million people, and there are approximately 7,000 pallet manufacturing facilities nationwide–all of which are impacted by ISPM 15.[182] Manufacturers, who do not have treatment facilities themselves, must find others who do in order to meet the demand for ISPM 15 compliant pallets.

The effects of adopting ISPM 15 were thought to "fall largely on foreign manufacturers of [wood] pallets."[183] As stated *supra*, APHIS recognized that developing countries would struggle to comply with the Guidelines more than others.[184] Manufacturers must purchase the equipment and kilns for heat-treatment or fumigation systems and also pay for increased energy usage. The cost of treating pallets is unavoidably passed on to importers of commodities transported on pallets, and in turn, the consumers of those goods.[185] U.S. exporters have to be cognizant of whether the countries they export to are signatories to the IPPC, thus requiring the U.S. exporter's WPM to be ISPM 15 compliant. Therefore, the impact of the Guidelines is felt well beyond the walls of the foreign WPM manufacturer, though relatively, their burden may be the greatest.

U.S. manufacturers similarly incur the initial building and equipment costs. Woodroffe Sawmill's estimated total cost was $50,000 to convert its only dry kiln into a more intense heat-treatment building and to purchase a treatment data recorder system.[186] Sawmills must also pay licensing fees to acquire the use of the international quality marking and monthly auditing by their designated inspection agency. Woodroffe Sawmill, like others, incurs a monthly auditing

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179. *E.g.*, APHIS, ENVIRONMENTAL IMPACT STATEMENT, *supra* note 12, at A-16 (public cmt. of John Heissenbuttel, Am. Forest & Paper Ass'n (Dec. 30, 2002)).

180. *Id.*

181. *Id.*

182. *Id.*

183. Importation of Wood Packaging Material, 69 Fed. Reg. 55,719, 55,729 (Sept. 16, 2004) (to be codified at 7 C.F.R. pt. 319).

184. *Id.* at 55,731.

185. *See* APHIS, REGULATORY IMPACT ANALYSIS, *supra* note 22, at iii.

186. Interview with Woodroffe, *supra* note 83.

fee of approximately $300.[187] The data recorder tracts the amount of time the wood's core attained the minimum required temperature.[188] The information is then uploaded onto a computer in a form that is easily inspected by the auditor to ensure all treatment batches were compliant.[189] After pallets are treated they must be individually stamped with the quality mark.[190] Automated wood-branding stamps are available but can cost several thousand dollars, making the manual stamp the marking method of choice for some manufacturers.[191] In all, the recordation and marking processes are very time consuming and burdensome, but absolutely necessary to prevent revocation of a manufacturer's ISPM 15 compliance license.

Although complying with the ISPM 15 requirements are burdensome, some sawmills have benefited from adoption of the standard. For some, the "break-even point" for heat treating is one truckload per week if one dollar is added to the cost of each pallet.[192] In some areas of the United States, competition has already driven the cost of heat treating below one dollar,[193] but in areas where heat-treating facilities are sparse the cost may be slightly more. For example, Woodroffe Sawmill has been able to stay competitive while adding $1.10 to the cost of one standard-sized pallet, $1.40 per heavy pallets, and $100 per heavy skid.[194]

Some manufacturing facilities have also benefited from providing heat-treating or fumigation services to other producers who are unable to expend the capital necessary to install such systems and obtain certification from an APHIS agency. Woodroffe Sawmill is one such manufacturer that has profited from heat treating lumber and pallets for other area sawmills who do not have their own heat-treating systems and are not certified to use the ISPM 15 quality treatment mark. In the sour economic climate of 2008 and 2009 when orders for pallets dropped dramatically nationwide, the ability to provide heat-treating services enabled this sawmill to maintain a steady cash flow.

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187. *Id.*
188. *Id.*
189. *Id.*
190. *Id.*
191. *Id.*
192. Niels Jorgensen, Kiln-direct.com, U.S. Standard for Heat-Treated Pallets (Jan. 2008), http://www.nwpca.com/_INTLRegulations/USStandardforHeatTreatedPallets.htm.
193. *Id.*
194. Interview with Woodroffe, *supra* note 83.

IX. THE FUTURE OF WOOD PALLETS

It is fully recognized that the current requirements of ISPM 15 or Revised ISPM 15 do not completely eliminate the spread of invasive species in the United States and abroad. Pallet manufacturers in the United States may soon be required to heat treat all of their pallets—including those intended solely for domestic use. Concern about the spread of quarantined species, such as the Emerald Ash Borer, within the United States is growing, and government officials and industry leaders have been discussing the possibility of a national pallet treatment requirement since 2007.[195] The impact on the industry would be tremendous. Currently, about 3,800 companies heat treat WPM in the United States, and by one estimate, "far less than 20% of the new pallets" produced each year are treated.[196] There is not enough heat-treatment capacity currently in place to be able to comply with such a regulation.[197] If this proposed requirement became law, some manufacturing facilities may find their primary source of business is treating WPM for domestic and international shipping.[198] Such a regulation should also provide for an extended implementation schedule to allow the industry to increase its treatment capacity and avoid market disruptions.

Likewise, the European Union is currently considering the "possible extension of ISPM 15 to all intra-community movements of [WPM]."[199] The E.U. member nations have grown to include more environmentally diverse regions, rationalizing the argument for the proposed intra-community extension.

Industry acceptance of heat-treatment and fumigation standards has helped the industry fight off competition from alternative materials, such as plastic pallets and slip sheets.[200] Treating domestic pallets as well as those for export may further reduce the market competition from alternative products.[201] Groups such as the National Resources Defense Council continue to advocate for required use of alternatives to wood in shipping goods as the only way to complete-

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195. *See* Chaille Brindley, *Thinking Ahead-Letter from Chaille: Don't Mean to Bug You*, PALLET ENTERPRISE, May 1, 2007, http://www.palletenterprise.com/articledatabase/print_view.asp?ArticleID=2221&Page=1 [hereinafter Brindley, *Don't Mean to Bug You*].

196. *Id.*

197. *Id.*

198. *Id.*

199. EUROPEAN FED'N OF WOODEN PALLET & PACKAGING MFRS. [FEFPEB], POSITION STATEMENT ON THE POSSIBLE EXTENSION OF ISPM 15 TO INTRA COMMUNITY MOVEMENTS OF WOOD PACKAGING MATERIAL (2008), http://www.fefpeb.eu/public/file0003/000345_Position_statement_on_the_possible_extension_of_ISPM15.pdf.

200. Chaille Brindley, *Is Mandatory Domestic Pallet Treatment Coming? Government and Industry Leaders Meet to Discuss Ramifications*, PALLET ENTERPRISE, Feb. 1, 2008, http://www.palletenterprise.com/articledatabase/print_view.asp?ArticleID=2520&Page=1.

201. *Id.*

ly prevent the spread of invasive species.[202] If this advocacy is successful, thousands of sawmills would go out of business and the overall impact on the wood products industry would be catastrophic. It has been estimated that the use of alternative packing materials may increase to account for ten to fifteen percent of the total market, but it is unlikely that alternative materials alone could ever be used in packaging goods.[203] One reason is that the shipping market is currently dominated by wood pallets—ninety-five percent of the total.[204] A second reason is that treating WPM is the most economical way of producing pest-free packing materials.[205] Use of alternative material is much more costly and well beyond the means of exporters in developing countries.[206]

Few, if any, broad-based studies have been done on the environmental effects of obtaining and manufacturing non-wood materials such as plastic and steel if wood pallets are phased out.[207] In addition, alternative-material pallets are difficult and unlikely to be repaired, while wood pallets are done so easily and there is a large market for recycled pallets.[208] According to Dr. James Bowyer, Professor of Forestry at the University of Minnesota, "'[W]ood is renewable, recyclable, biodegradable and far more energy efficient in its manufacture and use than are products made from steel, aluminum, plastic or concrete.'"[209] Many wood product manufacturers who responded to the USDA's notice of its final Environmental Impact Statement on Importation of SWPM agreed that Alternative 5, mandating use of substitute packing materials only, would have a catastrophic effect on the wood products industry and "its significant contribution to our [country's] gross national product and employment."[210]

X. CONCLUSION

The globalization phenomenon was lead by an increased demand for international trade—unfortunately accompanied by a dramatic increase in the in-

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202. *See generally* Natural Res. Def. Council, Inc. v. USDA, Nos. 05 CV 8005, 05 CV 8008, 2007 WL 1610420, at *1 (S.D.N.Y. June 4, 2007).

203. APHIS, ENVIRONMENTAL IMPACT STATEMENT, *supra* note 12, at 89.

204. *Id.*

205. Importation of Wood Packaging Material, 69 Fed. Reg. 55,719, 55,721 (Sept. 16, 2004) (to be codified at 7 C.F.R. pt. 319).

206. *Id.*

207. *See, e.g.*, APHIS, ENVIRONMENTAL IMPACT STATEMENT, *supra* note 12, at A-59 (public cmt. of Paul Houhland, Nat'l Hardwood Lumber Ass'n (Dec. 17, 2002)).

208. *Id.* at A-60.

209. *Toward a Global Environmental Ethic*, EVERGREEN, Winter 2000, at 30, 30.

210. *E.g.*, APHIS, ENVIRONMENTAL IMPACT STATEMENT, *supra* note 12, at A-66 (public cmt. of Jane Hogan, Ont. Hardwood Co. (Dec. 5, 2002)).

ternational transfer of pests.[211] These invasive species arrive on WPM and pose great enough economic and environmental threats to the nation's forests to demand governmental intervention. The USDA was charged with the regulatory task and considered several options to mitigate the threat posed by invasive species.[212] After extensive research, the USDA found ISPM 15 to be the most practical and most effective solution.[213] It was evident that an international problem required an international solution as presented in ISPM 15.

The Guidelines set forth in ISPM 15 require all adopting countries to implement programs to ensure pallets and all WPM are treated to kill pests prior to exportation.[214] Heat treating and methyl bromide fumigation are the two approved treatment options in place today.[215] The vast majority of WPM manufacturers choose to heat treat their pallets, because it is the more safe and economical option.[216] The use of methyl bromide has been phased out in other industries with some exceptions, including phytosanitary usage, but may be completely prohibited in the future.[217]

The Guidelines were arguably the most practical and effective solution, but have not proven to be perfect. Bark left on wood has been found to act as a barrier to heat treatment and methyl bromide leaving pests alive within the wood. The recently Revised ISPM 15 now requires the complete debarking of all wood prior to being treated.[218] Other problems with implementation and effectiveness of the Guidelines have arisen, but as with any innovative piece of legislation, it will take years of trial and error before more revisions can be expected.

While some groups are lobbying for the mandated use of alternative packing materials, the wood pallet industry has adapted to the Guidelines and overcome its difficulties of implementation. Strict use of alternative packing materials would virtually eliminate the spread of invasive species, but the associated costs make it grossly impracticable, as well as devastating to the wood industry as a whole. Manufacturers who were able to expense the capital obtained their own treatment system facilities, while others have simply outsourced their pallet treatments. Overall, the pallet industry has endured the regulations and some treatment facilities have even thrived from providing treatment services.

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211. *Id.* at 1.
212. *See id.* at 9.
213. *See id.* at 64, 66.
214. *See* ISPM 15, *supra* note 7, at 9.
215. SMITH ET AL., *supra* note 6, at 2.
216. *See* Skrzycki, *supra* note 25.
217. REVISED ISPM 15, *supra* note 78, at 5.
218. *Id.* at 11.

As long as the threat of invasive species arriving on WPM still exists, governments will continue to search for the most effective and efficient ways to control it. This was evident in the recent revision of the ISPM 15 Guidelines and the current consideration by the United States and the European Union of more mitigating options, including the treatment of all domestic pallets.[219] The WPM industry has placed their trust and confidence in the USDA and IPPC to consider the significance of wood in packing materials and continue to strive to protect this valuable resource from invasive species. In the meantime, Woodroffe Sawmill, like other sawmills nationwide, is "*just lumbering along*" and adapting nicely to international regulation.

219. FEFPEB, *supra* note 200; Brindley, *Don't Mean to Bug You*, *supra* note 196.