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A Solution to Plastic Pollution? Using International Law to Shape Plastic Regulation in the United States

Allyssa Rose*

Abstract

The single-use plastic bag has become a prolific symbol of plastic pollution across the world. These convenient, lightweight bags may clog drainage systems or become a lethal snack for animals when not recycled properly. Due to the social and environmental harms caused by these bags, countries across the world have implemented legislation to tax plastic bags, or in some cases, ban their use all together. This paper seeks to identify the difference in approaches used by the Global North and Global South to determine the best approach for the United States to implement. Zealous advocacy on behalf of the plastics industry may explain why the United States has yet to enact a national plastic bag policy. While many state and local governments have addressed plastic pollution, the solution to plastic pollution in the United States will require a multifaceted national policy that encourages consumers to reduce their plastic use. By emulating successful legislative approaches from both the Global North and South, the United States will be able to join world leaders in the fight to reduce plastic pollution.

Introduction

In the mid-twentieth century single-use plastic bags were born and soon proliferated society.¹ Today, consumers of all backgrounds across the world benefit from the convenient and inexpensive single-use plastic shopping bag available at retailers of all kinds.² However, plastics also have a dark side, which causes deleterious effects to the environment, our oceans, and our society.³ Take a walk down your street or look outside your window and you are likely to see a plastic bag floating in the air, stuck to a tree or some shrubbery, maybe even strewn across the ground. Yet,

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1. *From Birth to Ban: A History of the Plastic Shopping Bag*, U.N. ENV'T PROGRAMME (Apr. 25, 2018), <https://perma.cc/7393-8S5W>.

2. *See generally id.*

3. *Single Use Plastics: A Roadmap for Sustainability*, U.N. ENV'T PROGRAMME 12 (2018), <https://perma.cc/8HJH-W6SQ>.

the harmful effects of the plastic bag extend far beyond mere eyesores.⁴ Plastic bags are composed of petrochemicals, or synthetic materials, which are not easily bio-degradable.⁵ Therefore, plastic bags can take up to 1,000 years to decompose,⁶ much longer than plastics have even been around for. Today, the world collectively produces more than 400 million tons of plastics every year, of which thirty-six percent is single-use plastic packaging.⁷ Americans alone use an estimated 100 billion single-use plastic bags every year.⁸ In total, the world has produced nine billion tons of plastic, yet only nine percent has been recycled.⁹ Due to incredibly low recycling rates, plastic bag pollution is highly visible and harmful, which has spurred countries, cities, and communities to take action.¹⁰

While there is no question that countries across the globe have sought ways to mitigate plastic pollution, the approaches vary, particularly between the Global North and Global South.¹¹ Generally, the Global South is associated with less developed countries in the Southern Hemisphere, whereas the Global North includes the more developed and wealthier nations of the Northern Hemisphere.¹² For purposes of this paper, I use Rwanda as an example of the Global South because it exemplifies the types of plastic policies frequently used by other nations of the Global South—primarily total or partial bans.¹³ Rwanda became one of the cleanest nations through their strict plastic regulations, which included a ban on all plastic bags.¹⁴ The Global North, by contrast, primarily utilizes taxes or levies to persuade consumers to change their shopping behaviors.¹⁵ For example, Ireland implemented a “PlasTax” in 2002 which placed a €0.15 tax on all plastic bags provided at retailers across the country.¹⁶ Regardless of the type of regulation implemented, there appears to be a growing global trend toward national legislation aimed at reducing plastic pollution.

4. U.N. ENV'T PROGRAMME, *supra* note 3.

5. George Wachira, *Create Local Capacity for Plastic Bag Alternatives*, BUS. DAILY AFR. (July 18, 2017), <https://perma.cc/8Y3T-D4VV>.

6. U.N. ENV'T PROGRAMME, *supra* note 3.

7. *Id.*

8. Linda K. Breggin, *Plastic Bag Laws Proliferate*, 30 ENVTL. F. 10 (2013).

9. U.N. ENV'T PROGRAMME, *supra* note 3, at vi.

10. *See generally* U.N. ENV'T PROGRAMME, *supra* note 3.

11. *See generally id.*

12. *A 60 Second Guide to . . . The Global North/South Divide*, ROYAL GEOGRAPHICAL SOC'Y (last visited Oct. 17, 2019), <https://perma.cc/AY3Z-TXFD>.

13. *See* U.N. ENV'T PROGRAMME, *supra* note 3, at 25 (providing a chart listing various forms of national policies on plastic bags according to continent).

14. Kimiko de Freytas-Tamura, *Public Shaming and Even Prison for Plastic Use in Rwanda*, N.Y. TIMES (Oct. 28, 2017), <https://perma.cc/LV3L-HTLV>.

15. *See* U.N. ENV'T PROGRAMME, *supra* note 3, at 25.

16. U.N. ENV'T PROGRAMME, *supra* note 3, at 46–47.

This paper seeks to analyze the rationale behind different approaches towards combating plastic pollution to determine what might work best for implementing national legislation in the United States. Plastic pollution can—and has—caused great harm to both people and the environment, yet the United States is one of the few developed countries that has yet to implement a national law regulating single-use plastic.¹⁷ The first part of this paper will explain the health impacts of uncontrolled plastic pollution. Part two will examine the types of regulations in specific countries of the Global South and Global North and whether they have been successful. Next, part three of this paper will analyze local regulations in the United States, including the fight for the plastic bag tax in New York state. Part four of this paper will analyze some of the barriers that have prevented a national plastic bag regulation. Finally, in part five, I will offer my own solution to address plastic pollution in the United States. A comprehensive approach borrowed from Rwanda’s total plastic ban and Ireland’s PlasTax, combined with a hybrid approach borrowed from California’s statewide regulation would enable the United States to enact successful nationwide legislation. While local ordinances are beneficial in the absence of national legislation, they should represent steppingstones towards achieving a uniform, national policy on single-use plastic bag regulations.

I. Health Implications of Plastic Pollution

Whether referred to as “national flowers”¹⁸ or “flying toilets,”¹⁹ plastic bag pollution poses several public health and safety threats.²⁰ The wind easily carries plastic bags due to their lightweight nature. This can lead to clogged drain pipes, which not only increases the risk of flooding, but also creates a breeding ground for mosquitoes carrying malaria.²¹ In addition, plastic bags can adversely affect agriculture, leading to significant losses of various food sources.²² Rainwater cannot penetrate soil littered with plastic bags, thus many crops may die due to lack of water.²³ Livestock or marine life frequently mistake plastic bags for food, which

17. See generally *id.*

18. *South Africa Bans Plastic Bags*, BBC NEWS (May 9, 2003), <https://perma.cc/BC9R-YHAT>.

19. The Editorial Board, *Follow Kenya’s Lead on Plastic Bags*, N.Y. TIMES (Sept. 14, 2017), <https://perma.cc/6TSF-4NPR>.

20. Jennifer Clapp & Linda Swanston, *Doing Away with Plastic Shopping Bags: International Patterns of Norm Emergence and Policy Implementation*, 18 ENVTL. POL. 315, 318 (2009).

21. Wynne Ngo, *Environmental Reform in Africa: A Comparative Continental Union Solution Through Plastic Reform Legislation*, 43 BROOK. J. INT’L L. 691, 695 (2018).

22. de Freytas-Tamura, *supra* note 14.

23. *Id.*

often leads to premature death.²⁴ Developing nations in the Global South are far more likely to experience these drastic consequences of improperly recycled plastic bags.²⁵ Thus, concerns regarding human health drove several countries in the Global South to enact anti-plastic bag policies.²⁶ In contrast, the Global North is less likely to experience such drastic human health impacts, and accordingly, plastic policies in these nations tend to be less stringent than those in the Global South.²⁷

The petrochemicals used to create plastic bags present another public health threat, one that effects everyone regardless of location. Petrochemicals are made up of various types and shapes of hydrocarbon molecules used to create longer, more complex chains of molecules.²⁸ These long chains of molecules, when used as synthetic replacements for numerous natural based materials, are not easily biodegradable and thus, take far longer to decompose.²⁹ Such petrochemicals have been used to create plastic bags since the early 1960s.³⁰ In addition to taking centuries to decompose,³¹ plastic bags wreak havoc on the environment through the extensive greenhouse gas emissions emitted to produce the bags.³² To create plastic bags, oil or natural gas must be extracted and then transported to refineries where it is transformed into plastic.³³ Then, the plastic bags must be delivered to stores and establishments, requiring large amounts of trucks and fuel to do so, before the bags are finally collected and disposed.³⁴ This entire process consumes a great deal of energy which creates air and water pollutants as well as greenhouse gas emissions,³⁵ which in turn contributes to climate change.³⁶ Thus, the production of plastic bags presents its own set of health related issues that affect everyone in addition to the improper recycling of the bags once they are offered on the market.

Despite these adverse effects, demand for plastics—the most familiar of the petrochemical products—has outpaced all other bulk materials.³⁷

24. Ngo, *supra* note 21, at 695.

25. See Clapp & Swanston, *supra* note 20, at 319.

26. *Id.* at 320.

27. *Id.*

28. *Id.*

29. Albert Koehl, *Plastic, Plastic, Everywhere (Free Petrochemicals with Every Purchase)*, 119 MUN. WORLD 11, 12 (2009).

30. Wachira, *supra* note 5.

31. U.N. ENV'T PROGRAMME, *supra* note 3, at 12.

32. Koehl, *supra* note 29, at 12.

33. *Id.*

34. *Id.*

35. Koehl, *supra* note 29, at 12.

36. *The Causes of Climate Change*, NASA (last visited, Dec. 21, 2018), <https://perma.cc/Q5JA-NS6C>.

37. Fatih Birol, *The Future of Petrochemicals: Towards a More Sustainable Chemical Industry*, INT'L ENERGY AGENCY (2018), <https://perma.cc/6R5W-G3YD>.

While there can be substantial benefits to plastic products, such as single-use sterile syringes or blood bags,³⁸ the production, use, and disposal of plastic products still pose environmental and health related challenges.³⁹ Recycling plastic bags does not address the issue of over-consumption,⁴⁰ thus a tax or combination approach on a nationwide scale is necessary to combat some of the adverse effects the petrochemicals and plastics industries have on the environment.

II. Profile of Successful National Plastic Bag Regulations in the Global South and Global North

A. Rwanda's tough approach to plastic pollution illustrates the anti-plastic sentiment in the Global South.⁴¹

Currently more than forty nations have banned, restricted, or taxed the use of plastic bags,⁴² more than half of which are African countries.⁴³ The vast majority of the national plastic regulations in Africa are total or partial bans on plastic bag usage.⁴⁴ This is because the impacts of plastic waste on the developing countries in Africa can be life threatening.⁴⁵ Despite devastating impacts, developing countries often lack resources and funds to create new jobs to promote the cleanup and recycling of plastic products.⁴⁶ However, a recent trend in ecotourism⁴⁷ has provided both an incentive and the financial means for developing nations to rid the environment of plastic waste.⁴⁸ For Rwanda, a country considered to be the cleanest in Africa,⁴⁹ ecotourism can bring in more than 300 million dollars per year.⁵⁰ Such a boost to its economy has incentivized and enabled Rwanda to effectively address its plastic pollution problem.⁵¹ Rwanda has

38. XiaoZhi Lim, *These Cultural Treasures Are Made of Plastic. Now They're Falling Apart*, N.Y. TIMES (Aug. 28, 2018), <https://perma.cc/2A9T-YCYR>.

39. Birol, *supra* note 37.

40. Koehl, *supra* note 29, at 14.

41. de Freytas-Tamura, *supra* note 14.

42. *Id.*

43. U.N. ENV'T PROGRAMME, *supra* note 3, at 24.

44. *Id.* at 25.

45. Meghan Werft, *How Eliminating Plastic Bags in Rwanda Saves Lives and the Economy*, GLOBAL CITIZEN (Sept. 22, 2015), <https://perma.cc/H9F8-AV6Q>; Ngo, *supra* note 21, at 702.

46. Ngo, *supra* note 21, at 702.

47. Belisa Amaro, *Ecotourism and Ethics*, 14 EARTH ISLAND J. 16, 16 (1999).

48. Werft, *supra* note 45.

49. *Id.*

50. *Id.*

51. *See generally id.*

experienced incredible progress in reducing plastic waste and its strategies for achieving such success may be helpful for the United States to consider in drafting its own national policy.

Rwanda has become a pioneer in banning single-use plastic bags with its tough approach to plastic pollution.⁵² The Rwandan government first implemented its all-out ban on plastic bags in 2008, which included a ban on the manufacture, use, sale, and importation of such bags.⁵³ The government decided to take action after a concerning study revealed that improper disposal of plastic has numerous adverse effects on the environment and well-being of Rwandan citizens.⁵⁴ The study spurred the enactment of numerous plastic related laws.⁵⁵ Among these laws were requirements to remove all plastic packaging at customs as well as requirements for companies that sell food in plastic bags to provide detailed business plans specifying how they plan to collect and recycle the used bags.⁵⁶ Such stringent anti-plastic laws resulted in Rwanda being lauded as one of the cleanest nations in the world.⁵⁷ However, there are drawbacks to the strict laws Rwanda has implemented to achieve this title, particularly for small businesses and local citizens.⁵⁸

As a result of Rwanda's zero tolerance policy for plastic packaging, the streets of Kigali, the nation's capital, have been revered by many as virtually spotless.⁵⁹ However, adverse effects from such strict laws are mostly felt by the poorest of Rwandan citizens.⁶⁰ While the government may have had good intentions with respect to reducing plastic pollution, key stakeholders, such as local businesses, were not consulted.⁶¹ For example, Rwanda provided tax incentives to companies willing to invest in plastic recycling equipment or manufacturing environmentally friendly bags.⁶² Yet, small businesses often cannot afford to invest in such costly activities and thus are not able to receive the tax incentives available to larger, wealthier companies.⁶³ These small businesses are also more likely to struggle to pay fines associated with plastic violations, which subsequently forces some locals to go out of business.⁶⁴ Additionally, the

52. U.N. ENV'T PROGRAMME, *supra* note 3, at 49.

53. *Id.*; Ngo, *supra* note 21, at 703.

54. U.N. ENV'T PROGRAMME, *supra* note 3, at 49.

55. *Id.*

56. *Id.*

57. de Freytas-Tamura, *supra* note 14.

58. U.N. ENV'T PROGRAMME, *supra* note 3, at 49; de Freytas-Tamura, *supra* note 14.

59. de Freytas-Tamura, *supra* note 14.

60. U.N. ENV'T PROGRAMME, *supra* note 3, at 49.

61. *Id.*

62. *Id.*

63. de Freytas-Tamura, *supra* note 14.

64. *Id.*

strict laws have created a black market for plastic bags.⁶⁵ The Rwandan government quickly responded to the plastic bag black market, enacting even stricter laws, which punish smugglers with up to one year of imprisonment.⁶⁶ However, at this point the government has yet to respond to the issues affecting small, local business owners.⁶⁷ While Rwanda has been able to successfully eliminate much of its plastic waste, the country should include local business owners in future policy conversations to address all key stakeholders' concerns.

In crafting its own plastic bag ban or tax, the United States could take some pointers from Rwanda. Prior to implementing the plastic bag ban in Rwanda, the government held a national cleanup day where the country's President, Paul Kagame, joined citizens in cleanup efforts and educated the public on the dangers of plastic pollution.⁶⁸ Engaging the citizens of the United States while educating them on the serious consequences of improperly recycled plastic bags may encourage more people to stand behind a bag ban or tax, as it did in Rwanda. Additionally, the Rwandan government worked with key industry players to provide tax incentives that would encourage their cooperation.⁶⁹ However, fines issued to violators of the plastic bag ban often force locals out of business, thus resulting in local frustration with the means chosen to implement the plastic ban.⁷⁰ Although Rwanda's solution to plastic pollution is through strict national enforcement, the United States could borrow Rwanda's practice of providing tax incentives, while also implementing policies that better address the realities of small and local business owners .

B. Ireland's PlasTax represents the typical approach to address plastic pollution in the Global North.

Trailing only Africa, Europe imposes the second most numerous national policies regulating plastic bags.⁷¹ This is largely due to the 2015 EU Directive 2015/720, which required Member states to aggressively target plastic waste reduction.⁷² Member states must reduce annual consumption levels to at least ninety lightweight plastic bags per person by

65. U.N. ENV'T PROGRAMME, *supra* note 3, at 49.

66. de Freytas-Tamura, *supra* note 14.

67. *See id.*

68. Ken Fullerton, *Reflecting on Rwanda's Plastic Bags Ban*, INT'L DEV. J. (Apr. 24, 2017), <https://perma.cc/2FLV-F6JY>.

69. U.N. ENV'T PROGRAMME, *supra* note 3, at 49.

70. de Freytas-Tamura, *supra* note 14.

71. U.N. ENV'T PROGRAMME, *supra* note 3, at 25.

72. *See* Directive 2015/720, of the European Parliament and of the Council of 29 April 2015 Amending Directive 94/62/EC as Regards Reducing the Consumption of Lightweight Plastic Carrier Bags, 2015 O.J. (L 115) 11.

December 31, 2019 and to at least forty per person by December 31, 2025.⁷³ All member states were required to enact laws and regulations to achieve these reduction goals by November 27, 2016.⁷⁴ The EU employs a mix of regulations, economic disincentives, and financial support as its strategy to implement plastic regulations.⁷⁵ This strategy, particularly providing economic disincentives such as bag taxes, is the most popular type of regulation throughout Europe.⁷⁶ Ireland is the ultimate success story of using economic disincentives to reduce plastic waste in the developed world, one the United States could mirror when enacting its own national plastic bag laws.

In 2002, the Irish government introduced the PlasTax, a tax placed on plastic bags that were previously provided for free at retail stores.⁷⁷ Ireland was the first country in the world to enact a bag tax, which led to a ninety percent reduction in plastic bag consumption.⁷⁸ Revenues generated from the bag tax support an environmental fund.⁷⁹ Thus, even those who continue to obtain plastic bags will still be contributing to the direct improvement of their environment.⁸⁰ Today, the plastic bag tax has become so popular among Irish citizens that it is considered politically damaging to advocate to remove it.⁸¹ Few, if any other taxes have been met with such enthusiasm as the PlasTax.⁸² The comprehensive approach Ireland took in enacting the PlasTax is what makes this policy so successful.

Prior to enacting the plastic bag tax, the Irish government considered input from all key stakeholders to encourage a drastic reduction in plastic bag usage.⁸³ First, in 1998, the Irish Department of the Environment commissioned a study to assess plastic pollution and to determine an estimate for the maximum amount consumers would be willing to pay for plastic bags.⁸⁴ After completing the study, the government set the tax six times higher than that estimated maximum amount willing to pay in an effort to trigger behavioral changes in consumers.⁸⁵ Additionally, the Irish government worked with the public and key industries to ensure these

73. *Id.*

74. *Id.*

75. *Id.*

76. U.N. ENV'T PROGRAMME, *supra* note 3, at 25.

77. U.N. ENV'T PROGRAMME, *supra* note 3, at 47 (the PlasTax is more akin to a levy because the revenues generated are directed into an environmental fund).

78. *Id.*

79. *Id.*

80. *Id.*

81. Frank Convery et al., *The Most Popular Tax in Europe? Lessons from the Irish Plastic Bags Levy*, 38 ENVTL. & RESOURCE ECON. 1, 2 (2007).

82. *Id.* at 10.

83. U.N. ENV'T PROGRAMME, *supra* note 3, at 46.

84. *Id.*

85. *Id.*

groups would comply with the law.⁸⁶ The government took three major steps to ensure such compliance. First, the government implemented a strong public awareness campaign to reduce resistance by educating the public on the harmful effects of plastic pollution.⁸⁷ Second, the government consulted key industry players in tandem with drafting the policy to achieve smoother implementation through clearly defined requirements.⁸⁸ Third, the government monitored and evaluated progress under the new law and adjusted provisions when needed to continue to encourage further reduction of plastic use.⁸⁹ When surveys indicated that plastic bag usage was rising again after four years with the €0.15 tax, legislators increased the tax to €0.22 per bag in 2007.⁹⁰ In implementing the PlasTax, Ireland considered all key stakeholders, the public, and the subsequent progress under the law to truly ensure the success of the plastic bag tax in reducing plastic usage.

Ireland's PlasTax success is largely a result of wide public acceptance, extensive consultation, and clearly delineated responsibilities for key stakeholders and local authorities,⁹¹ and can serve as a model for the United States' own plastic policies. Extensive consultation with stakeholders to identify and minimize areas of potential push back was critical for the wide acceptance of the tax.⁹² The United States could follow Ireland's lead and work with the strong plastics industry here to ensure smooth implementation of a plastic bag tax or ban. Also, the Environmental Protection Agency ("EPA") could implement an awareness campaign designed to educate the public on the effects of plastic pollution and can guide the public on how to reduce plastic consumption. Overall, Ireland's comprehensive approach has proven successful in the Global North, and the United States could use Ireland's success story as a template in creating its own—hopefully equally successful—plastic bag policies.

III. New York's Attempts at Plastic Bag Regulations

According to New York City's sanitation department, New Yorkers throw away over 10,000 tons of garbage every day.⁹³ Plastic bags either end up in landfills or become visual pollution stuck in trees, bushes, or

86. *Id.*

87. *Id.* at 47.

88. *Id.* at 46.

89. U.N. ENV'T PROGRAMME, *supra* note 3, at 46.

90. Haoran He, *Effects of Environmental Policy on Consumption: Lessons from the Chinese Plastic Bag Regulation*, 17 ENV'T & DEV. ECON. 407, 411 (2012).

91. U.N. ENV'T PROGRAMME, *supra* note 3, at 47–48.

92. Convery et al., *supra* note 81, at 10.

93. *Trash*, N.Y.C. DEP'T SANITATION (last visited Sept. 15, 2019), <https://perma.cc/WT3D-C69S>.

littering common spaces.⁹⁴ Consequently, the city expends over twelve million dollars annually to clean up and properly dispose of plastic bags.⁹⁵ To combat the plastic bag waste, a statewide plastic bag recycling bill was enacted in 2009.⁹⁶ The law requires retail owners to establish their own plastic bag recycling programs with recycling bins placed in visible, easily accessible locations.⁹⁷ However, the recycling law fails to include reporting requirements therefore, the extent of compliance is unknown.⁹⁸ Additionally, the New York State Plastic Bag Task Force, a group tasked with developing a statewide plan to address plastic bag pollution, found that the vast majority of single-use plastic bags are still improperly disposed of.⁹⁹ The task force recognized that achieving wider compliance and improving clean-up efforts would require a broader program.¹⁰⁰

On May 5, 2016, the New York City Council adopted an ordinance requiring all retailers in New York City to charge a minimum of five cents per plastic and paper bag.¹⁰¹ Mayor Bill de Blasio previously set a goal of sending zero waste to landfills by the year 2030.¹⁰² To achieve this goal, he, along with the New York City Council Members, hoped the bag legislation would strike a balance of reducing plastic bag usage while incentivizing the switch to reusable bags.¹⁰³ Contrary to plastic industry cries that the ordinance would hurt low-income New Yorkers, purchases made with food stamps would be exempt from the fee,¹⁰⁴ and the New York Department of Sanitation would hand out free reusable bags across the city.¹⁰⁵ However, just one day before the bag fee was to take effect, Governor Andrew Cuomo signed a bill preempting the New York City ordinance.¹⁰⁶

94. *Carryout Bags*, N.Y.C. DEP'T SANITATION (last visited Sept. 15, 2019), <https://perma.cc/LW7G-BJAY>.

95. *Id.*

96. *NYS Plastic Bag and Film Plastic Reduction*, N.Y. DEP'T OF ENVTL. CONSERVATION (last visited Sept. 16, 2019), <https://perma.cc/4NPD-J3M9>.

97. *NYS Plastic Bag and Film Plastic Reduction*, *supra* note 96.

98. N.Y. Plastic Bag Task Force, *New York State Report: An Analysis of the Impact of Single-Use Plastic Bags: Options for New York State Plastic Bag Legislation*, N.Y. DEP'T OF ENVTL. CONSERVATION, 6 (Jan. 13, 2018), <https://perma.cc/RG3Z-R5QJ>.

99. *Id.* at 6–7.

100. *Id.*

101. *Was Previous Legislation Introduced?*, BAG IT NYC (last visited Dec. 21, 2018), <https://perma.cc/8Z9R-EY7D>.

102. *NYC Lawmakers Impose 5-Cent Charge for Plastic Bags*, NEWS 12 BROOKLYN (May 5, 2016), <https://perma.cc/2KCN-G96D>.

103. *Id.*

104. *Id.*

105. *Carryout Bags*, *supra* note 94.

106. Jesse McKinley, *Cuomo Blocks New York City Plastic Bag Law*, N.Y. TIMES (Feb. 14, 2017), <https://perma.cc/KHU3-4FMY>.

The Governor opposed the New York City bag fee and blocked its enactment until a task force could be assembled to assess the plastic bag waste problem and propose a better statewide solution.¹⁰⁷ Moreover, the Governor considered the New York City ordinance to be “deeply flawed” because merchants were allowed to keep the five-cent-fee for the bags as a profit.¹⁰⁸ The State Legislature also framed the New York City ordinance as a regressive tax for poor consumers and vehemently opposed its enactment.¹⁰⁹ Such arguments are identical to those posed by plastics industry groups like the American Chemistry Council, which I discuss below.¹¹⁰ Despite this setback to reducing single-use plastic pollution, legislators quickly began drafting new policies to improve the New York City ordinance and to make it applicable statewide.¹¹¹

Finally, on April 1, 2019, New York passed legislation that, once in effect, would amount to a statewide ban on single-use plastic bags.¹¹² Set to take effect in March 2020, the law bans plastic bags entirely, save for a few exceptions like produce bags and takeout bags provided by restaurants.¹¹³ Additionally, individual counties may choose to enact paper bag taxes in which revenues would not only benefit an environmental protection fund, but would also be used to purchase and distribute reusable bags to low- and fixed-income communities.¹¹⁴ However, those purchasing goods with food stamps or WIC will be exempt from paper bag taxes.¹¹⁵ This approach addresses the plastics industry’s claims that low income communities will be disproportionately affected by plastic regulations and shows New York’s ability to involve key stakeholders—namely the public. Overall, in successfully passing legislation that aims to reduce plastic pollution, New York has shown that plastic regulation on a nationwide scale may indeed be possible.

107. *Id.*

108. McKinley, *supra* note 106.

109. *Id.*

110. *Id.*; *Plastic Bag Recycling and Manufacturing Supports Thousands of Jobs, BAG THE BAN* (last visited Dec. 21, 2018), <https://perma.cc/X5PK-DL5Q>; *see infra* Part IV.

111. McKinley, *supra* note 106.

112. Olivia Rosane, ‘*People Will Wonder Why We Didn’t Do This Sooner*’: *New York Becomes Second State to Ban Plastic Bags*, ECOWATCH (Apr. 1, 2019), <https://perma.cc/83MY-BMFM>.

113. N.Y. ENVTL. CONSERV. LAW § 27-2801 (Consol. 2019).

114. N.Y. ENVTL. CONSERV. LAW §§27-2805(1)(a), (7) (Consol. 2019).

115. N.Y. ENVTL. CONSERV. LAW § 27-2805(3) (Consol. 2019).

IV. The Plastics Industry as an Obstacle to Nationwide Plastic Bag Regulation in the United States Prompts Local Regulations

Each year, consumers in the United States use approximately 100 billion plastic bags,¹¹⁶ yet only eight states—California, Connecticut, Delaware, Hawaii, Maine, New York, Oregon, and Vermont—have implemented statewide plastic bag bans.¹¹⁷ However, in piecemeal fashion, numerous cities and communities across the country have taken initiative to combat plastic pollution in the absence of state or nationwide legislation.¹¹⁸ Those municipalities that have implemented plastic regulations in some capacity tend to use a combination of both a ban and a tax.¹¹⁹ For example, San Francisco, became the first city in the United States to ban petroleum-based plastic bags,¹²⁰ while taxing thicker, reusable plastic and paper bags.¹²¹ More recently, Seattle issued a similar local ban on thin, single-use plastic bags, opting for thicker, reusable bags which retailers may tax voluntarily.¹²² However, not all municipalities have been successful in implementing plastic regulation to limit plastic pollution. In June of 2018, the Texas Supreme Court upheld a lower court’s ruling prohibiting local government efforts in Laredo to ban plastic bag usage, insisting that such regulation could only be achieved on a statewide or national level.¹²³ While local efforts to implement plastic bag regulations are a valuable step in the right direction, securing nationwide legislation ensures uniformity and would enable the United States as a whole to reduce its plastic consumption and pollution.

The plastics industry in the United States has proven to be a pervasive obstacle to implementing nationwide—or in some cases, statewide—

116. Jennie R. Romer & Leslie Mintz Tamminen, *Plastic Bag Reduction Ordinances: New York City’s Proposed Change on All Carryout Bags as a Model for U.S. Cities*, 27 TUL. ENVTL. L.J. 237, 240 (2014).

117. *State Plastic and Paper Bag Legislation*, NCSL (Aug. 15, 2019), <https://perma.cc/W8SU-SHBL>. (Note, all of Hawaii’s counties have enacted bans on plastic bags, so the state has a de facto statewide ban.)

118. *Id.*

119. See U.N. ENV’T PROGRAMME, *supra* note 3, at 41–42.

120. Charlie Goodyear, *S.F. First City to Ban Plastic Shopping Bags / Supermarkets and Chain Pharmacies Will Have to Use Recyclable or Compostable Sacks*, SFGATE (Mar. 28, 2007), <https://perma.cc/5P5Y-A3YD>.

121. U.N. ENV’T PROGRAMME, *supra* note 3, at 42.

122. *Id.*

123. Mike Lee, *Texas Supreme Court Trashes Local Bag Bans*, GREENWIRE (June 22, 2018), <https://perma.cc/U2M6-C9AE>.

plastic regulations.¹²⁴ As the third largest manufacturing industry, plastics have many powerful and aggressive lobbyist groups.¹²⁵ For example, in Seattle, the American Chemistry Council assisted in funding a 1.4 million dollar advertising campaign against a proposed twenty-cent bag charge.¹²⁶ This effectively killed the proposed bag ban, despite the policy's overwhelming support from the City Council.¹²⁷ However, the plastics industry's influence did not spell the end for Seattle, as the city now has a complete ban on plastic bags and a five-cent tax for paper bags.¹²⁸ Additionally, New York City's proposed five-cent bag tax was blocked from enactment partly due to the plastics industry's persuasion on the State legislature.¹²⁹ Yet again, the plastics industry did not quite prevail, as New York recently enacted a statewide plastic law.¹³⁰ Currently, the plastics industry represents the biggest obstacle to implementing a national plastic bag law, however, this obstacle is not insurmountable.

Only about fifteen percent of plastic bags are properly recycled in the United States,¹³¹ yet the plastics industry continues to claim that recycling is the best and only way to reduce plastic waste.¹³² The American plastics industry has fought for grocery stores to mandate implementation of plastic bag recycling programs across the nation as the industry's solution to plastic pollution.¹³³ Bag the Ban, a project lead by the plastics industry, claims that plastic bags are "the most environmentally friendly option at the checkout."¹³⁴ Opponents of plastic regulation argue plastic bags take up less space in landfills than reusable bags and may be reused far fewer times than reusable cotton bags to have a "lower global warming potential."¹³⁵ Therefore, the industry claims that the best way to reduce plastic pollution is to implement recycling programs, including store

124. Bridget M. Warner, *Sacking the Culture of Convenience: Regulating Plastic Shipping Bags to Prevent Further Environmental Harm*, 40 U. MEM. L. REV. 645, 653 (2010).

125. Zhongguo Li & Justin S. Richter, *Problem and Countermeasure on Promoting the Plastic Bag Ban of USA*, 768 APPLIED MECHANICS & MATERIALS 787, 790 (2015).

126. Martin Kaste, *Debate Over Plastic Bags Heats Up in Seattle*, NPR (Aug. 10, 2009), <https://perma.cc/B7NH-49CA>.

127. *Plastic Bag Ban*, SEATTLE CITY COUNCIL (last visited Mar. 6, 2019), <https://perma.cc/V3YL-DBR3>.

128. *Id.*

129. Rosa Prince, *Why Won't America Join the War on Plastic Bags?*, SPECTATOR USA, (Apr. 6, 2018) <https://perma.cc/UHE9-T8XG>.

130. N.Y. ENVTL. CONSERV. LAW § 27-2801 (Consol. 2019).

131. *Id.*

132. Warner, *supra* note 124, at 674; *Plastic Bags and the Environment*, BAG THE BAN (last visited Dec, 16, 2018), <https://perma.cc/Y5MM-HPJA>.

133. Warner, *supra* note 124, at 653.

134. *Plastic Bags and the Environment*, *supra* note 132.

135. *Plastic Bags and the Environment*, *supra* note 132.

signage for collecting returned bags.¹³⁶ The plastics industry also claims that recycling does not disproportionately disadvantage lower income communities, as opposed to a tax that places a fee on an item currently provided for free in many jurisdictions.¹³⁷ Additionally, Bag the Ban proudly states that plastic bag bans and taxes have *never* been successful at reducing litter.¹³⁸ Due to a hard, pro-recycling stance and zealous advocates, the plastics industry has been the largest barrier to plastic bag regulation in the United States.¹³⁹

However, the plastics industry's pro-recycling arguments simply are not convincing. The industry claims that recycling or reusing plastic bags is widespread in the United States.¹⁴⁰ While some consumers do reuse plastic bags for trash bin liners or for other purposes, around fifty percent of plastic produced yearly is actually used just *once* before it is disposed.¹⁴¹ Additionally, less than ten percent of all plastics are recycled in the United States, with more than three quarters of plastic waste ending up in landfills each year.¹⁴² This is compounded by the fact that the numerous plastics recycling companies lack sufficient infrastructure to handle recovery of the bags.¹⁴³ It is clear that simply encouraging more recycling, on its own, is not enough to solve the growing problem of plastic pollution. Despite the plastics industry's claims, a pro-recycling policy standing alone is not enough to reduce plastic's harmful effects on social and environmental matters.¹⁴⁴

Additionally, while the plastics industry often argues that plastic bag taxes or fees disproportionately affect lower income communities, studies conducted after California state and local legislation was enacted find little to no support for these claims.¹⁴⁵ In Los Angeles, after the county enacted an anti-plastic bag ordinance, the economic impact was found to be less than \$4.00 per resident, per year.¹⁴⁶ Within the first year of San Jose's plastic bag ban and fee legislation, costs increased by just \$7.68 per household.¹⁴⁷ Switching to reusable bags also saved consumers money in

136. Warner, *supra* note 124, at 674.

137. *Plastic Bags and the Environment*, *supra* note 132.

138. *Id.* (emphasis added).

139. Warner, *supra* note 124, at 653.

140. *Plastic Bags and the Environment*, *supra* note 132.

141. Charles Grosenick, *The Price of Plastic*, 42 ADMIN. & REG. L. NEWS 34, 34 (2017) (emphasis added).

142. *Advancing Sustainable Materials Management: 2015 Fact Sheet*, EPA, 4 (July 2018), <https://perma.cc/NR3Y-NQ2Y>.

143. Li & Richter, *supra* note 125, at 787.

144. Warner, *supra* note 124, at 653.

145. N.Y. Plastic Bag Task Force, *supra* note 98, at 11.

146. *Id.*

147. *Id.*

the long run because they were not continually paying the bag fees.¹⁴⁸ Another solution to ensure that low income communities are not adversely effected by plastic bag fees is to provide free reusable bags prior to enactment of the legislation.¹⁴⁹ Not only does this enable lower income communities to freely comply with the new legislation, but it is also a great way to spread knowledge about the benefits of the ban as well. Because reusable bags cut down consumer costs in the long run and there are easy solutions to enable lower income consumers to freely comply with plastic bag bans and taxes, the plastics industry's cost concerns are not valid reasons for preventing plastic bag regulations.

Although the American plastics industry may be overly zealous in defending its less than perfect solution, the United States government should work to provide them with some incentives to limit resistance to a nationwide tax or ban. Creating clear requirements to receive a tax incentive, as the Irish government did, and creating clear programs for the industry to follow, like in Rwanda, can help to decrease at least some industry opposition. Industry opposition to reduction in plastic consumption is expected,¹⁵⁰ but presenting the industry with options can help garner support for regulations.¹⁵¹ Consulting with key stakeholders, such as the plastics industry, is essential to the success of future nationwide legislation.¹⁵²

V. Proposal for a Hybrid Approach to Plastic Regulation in the United States

Of the various countries around the world with national plastic bag regulations in place, three main approaches stand out—bans, economic instruments, and a combination of the two.¹⁵³ Some form of uniform plastic bag regulation is needed in the United States due to consistently low recycling rates under voluntary take-back or collection programs.¹⁵⁴ Recycling, on its own, just simply is not sufficient to minimize single-use plastic bag pollution.¹⁵⁵ The few states and numerous localities with plastic bag regulations tend to implement a combination approach, banning traditional lightweight bags while providing, and taxing, thicker reusable

148. *Id.*

149. *Carryout Bags*, *supra* note 94.

150. Wachira, *supra* note 5.

151. U.N. ENV'T PROGRAMME, *supra* note 3, at 69.

152. *See id.* (showing that Ireland's PlasTax was accompanied by extensive consultations prior to implementation).

153. U.N. ENV'T PROGRAMME, *supra* note 3, at 25.

154. Charles Grosenick, *supra* note 141; Prince, *supra* note 129; EPA, *supra* note 142, at 4 (showing recycling rates for plastic at just 9.1 percent in 2015).

155. *Id.*

plastic bags, to lower consumption and pollution of plastic.¹⁵⁶ While successful in their own right, local ordinances alone are not enough. Uniform, nationwide legislation is needed to combat the United States' single-use plastic pollution problem.

To achieve lasting pollution reduction, the United States should enact a plastic bag policy that focuses on changing consumers' behaviors. According to the rationalist theory of compliance, actors comply with a policy when the balance of their interests and the benefits of compliance outweigh the benefits of noncompliance.¹⁵⁷ Therefore, for consumers to comply with a plastic bag ban, the benefits of banning plastic bags must outweigh the cost of continuing to use those plastic bags. In the United States, where cashiers repeatedly seek assurances that a customer really does not need a plastic bag for a single purchased item, it seems that plastic bags have become ingrained in our culture.¹⁵⁸ In California, prior to the local and state plastic bag bans, just five percent of consumers used reusable bags.¹⁵⁹ Under the rationalist theory of compliance it is difficult to anticipate many Americans finding the benefit of complying with a bag ban—namely reduced pollution—as outweighing the costs of ridding our grocery stores of the beloved plastic bag. To truly change Americans' behaviors and to lower single-use plastic pollution will require more than simply banning all plastic bags.

Using a tax to change consumer behavior can be seen as a more “sophisticated” option as opposed to simply banning plastic bags,¹⁶⁰ but it may not be enough to combat plastic pollution. A tax can be considered sophisticated because it provides consumers with a choice—pay the tax or bring a reusable bag—which encourages consumers to actively change their behaviors. While the United States plastics industry argues that such a tax would undoubtedly harm lower income communities, Los Angeles County's own bag tax demonstrates otherwise.¹⁶¹ The Los Angeles ordinance, whose hybrid approach gave rise to a ninety-four percent reduction in single-use plastic bag usage, resulted in an economic impact of less than \$4.00 per resident, per year.¹⁶² Yet, while implementing a tax may be more likely to change consumers' behaviors, lightweight plastic bags would still be used by those who choose to pay the tax anyway. This means that those who choose to pay the tax would have to be encouraged

156. *See id.*

157. DAVID HUNTER, JAMES SALZMAN & DURWOOD ZAELEKE, INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 383 (5th ed. 2015).

158. My own local grocery store used to bag everything “double plastic.” Even if you only purchased a jar of peanut butter, you would always walk out with at least two bags.

159. N.Y. Plastic Bag Task Force, *supra* note 98, at 4.

160. Romer & Mintz Tamminen, *supra* note 116, at 242.

161. N.Y. Plastic Bag Task Force, *supra* note 98, at 11.

162. *Id.*

to then recycle their single-use plastic bags in order to reduce pollution of such bags. Due to incredibly poor recycling rates¹⁶³ under a taxing only scheme, the United States would not as effectively reduce plastic pollution as it could under a hybrid approach.

For the United States to reduce both usage and pollution of single-use plastic bags, the best solution would be to adopt a hybrid, comprehensive, nationwide regulation.¹⁶⁴ Combining Ireland's comprehensive approach with California's and New York's hybrid regulations would enable the United States as a whole to have a more successful plastic bag policy. Such an approach would reach the maximum number of individuals who have a stake in the regulation: largely the public, the plastics industry, and retailers. Combining the two different approaches would likely lead to an overall reduction in both use and pollution of plastic bags across the country.

In November of 2016, California implemented a statewide hybrid plastic bag regulation which could be a model for the United States to follow in drafting its own nationwide legislation, in addition to New York's recently passed legislation.¹⁶⁵ Prior to California's statewide law, numerous ordinances applying hybrid approaches to plastic bag regulations were employed in cities, towns, and counties all over the state.¹⁶⁶ Before local regulations were adopted in California, about seventy-five percent of individuals used single-use plastic bags and only five percent opted for a reusable bag.¹⁶⁷ However, once local regulations took effect, those localities saw forty-five percent of individuals using reusable bags as opposed to just five percent before such regulations were enacted.¹⁶⁸ By implementing statewide legislation, California prevented the approximately thirteen billion bags that were handed out the previous year from becoming pollution.¹⁶⁹ Plastic bag litter on beaches dropped even further once statewide legislation was implemented as well.¹⁷⁰ Overall, California's statewide plastic bag legislation shows that while local

163. Charles Grosenick, *supra* note 141; Prince, *supra* note 129; EPA, *supra* note 142, at 4 (showing recycling rates for plastic at just 9.1 percent in 2015).

164. N.Y. Plastic Bag Task Force, *supra* note 98, at 12 (citing Equinox Center as finding that hybrid approaches to single-use plastic regulation is successful in changing bag-use behavior).

165. N.Y. ENVTL. CONSERV. LAW §§27-2708, 27-2713 (Consol. 2019); Rosane, *supra* note 112.

166. N.Y. Plastic Bag Task Force, *supra* note 98, at 11–12.

167. N.Y. Plastic Bag Task Force, *supra* note 98, at 11–12.

168. *Id.* (because these ordinances banned single-use plastic bags, the only options became reusable bags, taxed paper bags, or no bag).

169. The Times Editorial Board, *It's Been a Year Since California Banned Single-Use Plastic Bags. The World Didn't End*, L.A. TIMES (Nov. 18, 2017), <https://perma.cc/Z6ZT-8HBU>.

170. *Id.*

ordinances are a step in the right direction, statewide, and eventually nationwide legislation is essential to reducing the maximum amount of plastic bag pollution.

The United States would benefit tremendously from implementing a national plastic bag regulation similar or equivalent to that implemented in either New York or California because it would save the government money while also positively influencing consumers' behaviors. For example, litter costs Americans about eleven billion dollars each year to clean up.¹⁷¹ A hybrid approach to plastic bag regulations in combination with a robust educational campaign would likely reduce this expense. Similar to Ireland's approach, the United States could first work with the EPA to devise an educational campaign to demonstrate the adverse effects of plastic pollution and explain how individuals can reverse those effects. In Ireland, the awareness campaign helped gain wider public acceptance, which is key to successfully passing a tax or fee.¹⁷² For the United States, television, radio, and social media campaigns could reach much of the public prior to the enactment of such legislation. Additionally, an educational campaign would ease the public into the new plastic regulation through exposure, making it more likely to be accepted. A combination of a hybrid approach to plastic bag regulations with Ireland's awareness campaign, would help to not only garner public support, but also reduce pollution, and thus reduce cleanup costs for the United States government.

In enacting a law like California's and New York's laws, the United States may want to consider implementing a bag fee or tax where the revenues raised fund environmental efforts. Similar to how Ireland's revenues are dedicated to an environmental fund, the United States could use bag tax revenues to help offset the current annual litter cleanup costs.¹⁷³ Revenues from the California bag tax go back to the stores to use to provide new reusable bags to comply with the ban, or for educational campaigns on reusable grocery bags.¹⁷⁴ Revenues generated from New York's paper bag tax are expected to go to the Environmental Protection Fund as well as to a fund that purchases reusable bags for low income consumers.¹⁷⁵ Also, the District of Columbia uses three cents out of its five-cent bag fee for its Anacostia River Clean Up and Protection Fund, which has raised ten million dollars in just five years.¹⁷⁶ If the United States were to implement a bag tax, revenues should be utilized for an environmental purpose, so the

171. N.Y. Plastic Bag Task Force, *supra* note 98, at 12.

172. U.N. ENV'T PROGRAMME, *supra* note 3, at 46-47.

173. N.Y. Plastic Bag Task Force, *supra* note 98, at 12.

174. *Ban on Single-Use Carryout Bags (SB 270/Prop 67) Frequently Asked Questions*, CAL RECYCLE, (Apr. 2017), <https://perma.cc/X7R9-PBQK>.

175. McKinley, *supra* note 106.

176. N.Y. Plastic Bag Task Force, *supra* note 98.

law would not only reduce plastic pollution, but also generate a potentially significant amount of funds to improve the environment as well.

Finally, for the United States to implement a successful plastic bag regulation, it must consider key stakeholders, namely the plastics industry. The industry frequently pushes back against all kinds of plastic bag regulations that aim to ban or tax usage.¹⁷⁷ Therefore, the industry represents the United States' biggest challenge to enacting any kind of plastic bag regulation. Thus, it is essential that the United States work with the industry to achieve some common ground so the push back against such regulation will not prevent its enactment. Additionally, evidence based opinions are a vital tool to combating industry opposition.¹⁷⁸ For example, the New York City Styrofoam ban was lifted after its introduction due to successful plastics industry lobbying.¹⁷⁹ However, after the city proved that the industry claims were unfounded, the ban was restored and currently remains in place.¹⁸⁰ Furthermore, providing incentives for industry players such as allowing transition time or offering tax rebates, can help minimize opposition.¹⁸¹ Enacting clear requirements to acquire these incentives may also ensure the industry complies with the laws. Like in Rwanda where the government provided strict, but clear laws on how businesses with plastic packaged products were permitted to sell in the country,¹⁸² the United States would also need to have strict, but clear guidelines for how any tax incentives could be awarded. Providing the plastics industry clear guidance and monetary incentives to comply will give the United States an opportunity to enact successful plastic regulation.

Standing alone, local and even statewide plastic bag regulation is not enough to combat the growing plastic pollution in both the United States and the world as a whole. Absent national legislation, statewide bans can help to reduce plastic pollution, but greater impact can be achieved through a uniform, national policy, one that all Americans are held to. Therefore, to truly make a change and promote more sustainable behaviors, the United States will need to enact nationwide plastic legislation. Following California's, Ireland's, New York's, and Rwanda's lead, the United States has several successful models to reference for enacting its own legislation. An ideal plastic policy likely includes a comprehensive scheme involving all key players—the public, retailers, and industries—with a focus on positively changing consumers' shopping behaviors to reduce reliance on single-use plastics.

177. Warner, *supra* note 124, at 653; Kaste, *supra* note 126; Prince, *supra* note 129.

178. U.N. ENV'T PROGRAMME, *supra* note 3, at 69.

179. *Id.*

180. *Id.*

181. *Id.*

182. de Freytas-Tamura, *supra* note 14.

Conclusion

The single-use plastic bag has become a symbol of prolific plastic pollution across the world, spurring many nations to enact policies aimed at remedying this severe environmental harm. Currently, sixty-eight countries have established some type of national legislation to reduce consumption and pollution of single-use plastic bags.¹⁸³ However, the United States is one of few developed nations that has yet to implement a national plastic bag policy.¹⁸⁴ While numerous states and localities have passed plastic bag bans and taxes,¹⁸⁵ nationwide legislation is needed to achieve a comprehensive and uniform plan to address plastic pollution. The solution to plastic pollution will borrow approaches used in the Global North and the Global South to focus on changing consumers behaviors through educational campaigns, investing bag tax revenues back into the environment, and creating smart incentives to garner support from all key stakeholders, which collectively will enable the United States to join world leaders in the fight to reduce plastic pollution.

183. U.N. ENV'T PROGRAMME, *supra* note 3, at 27–44.

184. *Id.*

185. *Id.*
