

WASTE INCINERATION, COMMUNITY PARTICIPATION, AND ENVIRONMENTAL JUSTICE: A COMPARATIVE STUDY OF CHINA AND THE UNITED STATES

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INTRODUCTION

China's economic boom has brought millions out of poverty, but comes at a cost to the environment, and many citizens have found themselves without protection from severe air, water, and soil pollution. Incidents of social disorder, often in response to environmental fears, are growing across China, with 87,000 public protests reported in 2005 alone.¹ As a way to stem the growing tide of protests, over the past decade, the Chinese government has officially embraced "participation" as a means to improve environmental protection, creating laws and regulations granting citizens rights to participate in the environmental decision making process.²

In spite of the comprehensive language of these new participatory laws and regulations and signs of increased participation broadly among the population, a divide has emerged among Chinese communities regarding their capacity to participate. This divide hinges primarily on socioeconomic status, which shapes both when and why Chinese communities participate.³ Similar to the U.S. experience with its respective environmental impact assessment (EIA) law, external factors shape Chinese communities' capacity to make full and effective use of their participatory rights. Questions of capacity become especially important when the right to participate is obscured by insufficiencies in the law in conjunction with systemic disregard for community participation.

1. Allison Moore & Adria Warren, *Legal Advocacy in Environmental Public Participation in China: Raising the Stakes and Strengthening Stakeholders*, 8 CHINA ENV'T SERIES 3 (2006), available at <http://www.wilsoncenter.org/sites/default/files/CEF%208%20Full%20Publication.pdf>.

2. *Id.*

3. Wanxin Li, Jieyan Liu & Duoduo Li, *Getting Their Voices Heard: Three Cases of Public Participation in Environmental Protection in China*, 98 J. ENVTL. MGMT. (forthcoming May 2012).

This paper will use a comparative analysis of China and the United States to explore the correlation between socioeconomic factors and the capacity of communities to participate in the environmental decision making process, focusing on when during the regulatory process the community's voice is heard. Part I will provide an overview of waste disposal in China and explore the increasing need for alternatives to traditional landfills. Part II will seek to define "community participation" as a distinct but related offshoot of the more commonly referenced theme in China of "public participation." Part III and IV will outline the relevant EIA laws in China and the United States, respectively, utilizing case studies to highlight the discrepancies in the types of community participation often seen between low- and middle-income communities in both nations. Finally, Part V will tie together the environmental justice implications of this pattern of disparate access to participation platforms, and will make a series of recommendations based upon the lessons learned from the United States' and China's experience with the participatory process. These recommendations will seek to achieve a more egalitarian EIA process, measuring success as the ability of communities to participate meaningfully in an original and thoroughly completed EIA.

I. THE WASTE DISPOSAL PROBLEM IN CHINA

China's development has brought about unprecedented growth in municipal solid waste (MSW), with no other country ever experiencing "as large and as fast an increase in solid waste quantities."⁴ "As China's economy barrels onward, waste, a byproduct of prosperity, is piling up."⁵ In China, MSW by definition includes household, industrial, and hazardous waste.⁶ MSW generation has increased rapidly in the last few decades, from 31.3 million tons in 1980 to 113 million tons in 1998.⁷ From 1979 to 2010, the average annual growth of MSW in China has been approximately 7.08%.⁸ In 2004, China surpassed the United States as the world's largest

4. Dong Qing Zhang, Soon Keat Tan & Richard M. Gersberg, *Municipal Solid Waste Management in China: Status, Problems, and Challenges*, 91 J. ENVTL. MGMT. 1623, 1623 (2010).

5. Violet Law, *As China's Prosperity Grows, So Do Its Trash Piles*, CHRISTIAN SCI. MONITOR (July 28, 2011), <http://www.csmonitor.com/World/Asia-Pacific/2011/0728/As-China-s-prosperity-grows-so-do-its-trash-piles>.

6. RUOFEI LI & SIBEI LIU, MUNICIPAL SOLID WASTE MANAGEMENT IN CHINA 23 (2010), available at <http://www.rucsdigitaleprojektbibliotek.dk/bitstream/1800/5513/1/Municipal%20Solid%20Waste%20Management%20in%20China.pdf>.

7. Zhang, Tan & Gersberg, *supra* note 4, at 1624.

8. LI & LIU, *supra* note 6, at 8.

waste generator in spite of having a lower per capita MSW generation rate.⁹ By 2030, it is expected that “China’s annual solid waste quantities will increase by another 150%—growing from about 190 million tons in 2004 to over 480 million tons.”¹⁰

“MSW disposal in China is predominantly by means of landfill because it is cost-effective and it can accommodate large fluctuations in the amount and type of waste.”¹¹ The current treatment ratio consists of 91.4% reliance on landfills and 6.4% on incineration, with the remainder going to compost and recycling.¹² Hahn Chu, the environmental affairs manager of Friends of the Earth Hong Kong notes: “As the government has tried to foster recycling enterprises, the scale of those enterprises is no match [for] the sheer volume of trash being generated day in and day out.”¹³ At these ratios and with urban China’s history of increased and fast-paced development, landfill overload has become a serious problem. “It is no doubt that the present disposal situation is expected to deteriorate as China experiences rapid urbanization. Housing developments are now increasingly encircling the existing dumps and the environmental degradation associated with [them] is directly affecting the population.”¹⁴ Due to high population density, high real estate values, and the subsequent challenge of finding new sites that are located at a “reasonable distance from collection areas,” landfills are becoming less economically viable.¹⁵ Many landfills have already closed ahead of their planned operational life, and reached capacity before expected,¹⁶ and all of Beijing’s remaining thirteen landfills are expected to be full by 2014.¹⁷ The capital is not an isolated case, with the largest landfill in Guangzhou also handling more than three times its intended capacity.¹⁸

One option being widely considered to address the lack of available landfill space and China’s ever-growing MSW production is increasing the country’s use of incineration.¹⁹ MSW incineration technology was originally introduced in China at the end of the 1980s, and underwent rapid

9. Zhang, Tan & Gersberg, *supra* note 4, at 1624.

10. LI & LIU, *supra* note 6, at 35.

11. Zhang, Tan & Gersberg, *supra* note 4, at 1627.

12. *Id.*

13. Law, *supra* note 5.

14. Zhang, Tan & Gersberg, *supra* note 4, at 1629.

15. *Id.*

16. *Id.*

17. LI & LIU, *supra* note 6, at 30.

18. Wang Ru, *The Burning Issue*, CHINA DAILY (July 28, 2009), http://www.chinadaily.com.cn/cndy/2009-07/28/content_8479490.htm.

19. LI & LIU, *supra* note 6, at 31.

development in the 1990s.²⁰ “More than 30 large and middle-scale cities already have or are constructing MSW incineration plants. By 2006, there were about 70 MSW incinerators and the total capacity had reached 33,010 ton[s][per] day.”²¹

A primary benefit of waste incineration is saving space; “during the incineration process, 90% of the waste volume and 75% of the waste weight [can] be reduced.”²² Additional benefits include complete disinfection of MSW and energy recovery.²³ It is also a mature technology, well integrated into the waste management systems of developed countries like Denmark and Japan, suggesting that China could similarly adopt safe incineration mechanisms.²⁴ According to Professor Nie Yongfeng of the College of Environmental Science and Engineering at Tsinghua University in Beijing:

[Incineration] is the only practical way at present to curb the crisis [of landfill overload]. Incineration technology has become mature and safe, and has been adopted in many developed countries The incinerator plant is an ideal waste-to-energy facility that generate[s] renewable electricity or heat.²⁵

As with many technologies, however, there are still a variety of risks associated with incineration, including potentially toxic dioxin and airborne mercury emissions. Additionally, incineration causes “considerable volumes of solid residues [including] bottom ash, grate sifting, fly ash, and air pollution control . . . residue, which are generated at different points in the process of MSW incineration.”²⁶ Dioxins, a type of persistent organic pollutant, have been linked by the World Health Organization to impairment of the immune system, nervous system, and endocrine system.²⁷ According to Zhao Zhangyuan, a retired expert formerly with the State Environmental Protection Administration (SEPA),²⁸ “[m]ost incinerators in China lack proper management due to cost cutting. The garbage is often not burned completely, so emissions of dioxins are inevitable.”²⁹

20. Zhang, Tan & Gersberg, *supra* note 4, at 1627.

21. *Id.*

22. LI & LIU, *supra* note 6, at 31.

23. Zhang, Tan & Gersberg, *supra* note 4, at 1627.

24. LI & LIU, *supra* note 6, at 32.

25. Wang Ru, *supra* note 18.

26. Zhang, Tan & Gersberg, *supra* note 4, at 1627, 1629.

27. Wang Ru, *supra* note 18.

28. In March 2008, SEPA’s name was changed to the Ministry of Environmental Protection (MEP).

29. Wang Ru, *supra* note 18.

Apart from human health concerns, some of the purported benefits of MSW incineration exist only minimally in Chinese application. “In comparison with developed countries, the net caloric value of MSW in China is far too low for waste heat utilization and poorly suited to incineration because of the high concentration of food waste and the moisture content.”³⁰ China also does not recycle the byproducts of the incineration process, including bottom ash, as consistently as other countries, reducing the value of that benefit in the overall calculation.³¹ In light of these problems, negative public response to plans to increase the use of incineration facilities further underscores that “the use of incineration technology . . . is by no means a perfect tonic to the nation’s ills.”³²

II. DEFINING COMMUNITY PARTICIPATION

While the Western environmental movement blossomed in the 1960s under pressure from U.S. and European citizens expressing discontent over visible air and water pollution, the Chinese experience has traditionally taken an alternative route.³³ Guided primarily by the “mass line” method of leadership in which public participation was integrated into a top-down management scheme, the government was required to solicit the opinions of communities, but in a way that differed tremendously from participation structures founded on the rights of individual citizens.³⁴ According to Pan Yue, former Vice Minister of China’s Ministry of Environmental Protection (MEP), “public participation means that common people have the right to participation in the decision making process of public policy.”³⁵ Transitioning from the top-down mass line method to public participation as so defined, means making the significant transformation to a rights-based standard.³⁶

A new development in China’s rights-based participation trajectory is a move from broad “public participation” terminology toward a more narrowly focused “community participation” standard. Reaching back to the 19th century, the term “community” first appeared in Ferdinand

30. Zhang, Tan & Gersberg, *supra* note 4, at 1629.

31. *Id.*

32. Wang Ru, *supra* note 18.

33. SIMON POWELL, MA JUN, INA POZON & XIE HONGZING, CHINA GREENING: THE EMERGING ROLE OF THE PUBLIC 3 (2008), available at <http://www.ipe.org.cn/Upload/Report-Public-Role-EN.pdf>.

34. *Id.*

35. Pan Yue (潘岳), *Huanjing Baohu yu Gongzhong Canyu* (环境保护与公众参与) [Environmental Protection and Public Participation], 13 *Qianyan Luntan* (前沿论坛) [THEORY FRONT] 12, 13 (2004).

36. *Id.*

Tonnies' essay *Community and Society*.³⁷ According to Tonnies, community is "a social group that is formed by those people that share the same values, intimate relationships, and help each other."³⁸ Chinese scholars expanded on these themes, defining communities as sharing the three elements of a particular space, common connections, and social interaction.³⁹ However, "in China, the term community has always been ambiguous and had a low profile during the decades when the Communist Party banned sociology."⁴⁰ With the reemergence of sociological studies in the late 1970s, Chinese governance has put an administrative gloss on the notion of community. In 1986, the Ministry of Civil Affairs provided an official definition for urban areas, equating community with either "a Street—the lowest level of formal urban administration—or a neighborhood-level[,] semi-governmental grassroots unit, known as the Residents' Committee, which is overseen directly by the Street."⁴¹ The Opinion on Promoting Nationwide Urban Community Construction, issued in 2000 by the Ministry of Civil Affairs, set forth reform principles for controlling urban community size to render governance more effective.⁴² "The reform focused on the relationship between the Street-Residents' Committee to render the Residents' Committee a core community organization and to enable the community to become independent from the urban administration."⁴³ Seeking to facilitate the transfer of social welfare responsibilities from the central government to local communities, the reform principles aim to control the size of urban communities in order to be helpful to the management, service, and self-governance of a community, and to be favorable to developing and sharing resources.⁴⁴ The Opinion also seeks to define community by outstanding regional features that ensure the residents have a sense of belonging and identification, suitable population intensity of 1000–3000 houses, and a

37. FERDINAND TONNIES, *COMMUNITY AND SOCIETY* 7 (Lin Rong-yuan trans., Beijing: The Commercial Press 1999).

38. *Id.*

39. ZHENG HANG-SHENG, *SHANGCHENG MODE: INVESTIGATION RESEARCH ON CHINESE SPECIAL HARMONIOUS COMMUNITY CONSTRUCTION* 19 (Beijing: World Publishing Company 2010).

40. Qingwen Xu, *Community Participation in Urban China: Identifying Mobilization Factors*, 36 *NONPROFIT & VOLUNTARY SECTOR Q.* 622, 626 (2007).

41. *Id.* at 627.

42. Opinion on Promoting Nationwide Urban Community Construction (promulgated by the Min. of Civil Affairs, Dec. 13, 2000) (China).

43. Qingwen Xu, *supra* note 40, at 627.

44. Jiao Li-li, (焦莉莉), *Chengshi Jumin Shequ Canyu Dongli ji Yingxiang Yinsu Yanjiu—Yi Baotou shi S Shequ Wei ge an Yanjiu* (城市居民社区参与动力及影响因素研究—以包头市S社区为个案研究) [Study on Urban Community Participation Power and Relevant Influencing Factors: A Case Study of S Community in Baotou 5] (2007) (unpublished Ms.D. Dissertation, Chongqing University) (on file with Chinese author).

common use of thoroughfares including streets, roads, and lanes.⁴⁵ While the individual resident is the primary actor in community participation, “there exist other subjects as well, including various community [non-governmental organizations] (NGOs) and other institutions that are located in the community.”⁴⁶

“The recent interest in community participation throughout the world is premised on the perceived benefits that community participation brings to programs in terms of added efficiency, sustainability, and collective community power.”⁴⁷ The form that community participation takes, and the success that it may have in producing sustained betterment, is intimately related to the country’s social, political, and economic environment.⁴⁸ Among Western societies, those of higher educational and income levels, are more likely to participate in community affairs than those of lower socio-economic status.⁴⁹ Studies in China, however, have found that motives for participation vary according to the objectives of the community action, with community safety, social services, and environmental improvement tending to attract more community participants.⁵⁰

In the environmental context, the public can participate at three different stages.⁵¹ Before decisions are made, the public can participate in environmental assessments intended to identify potential environmental impacts of a contemplated action in order to reveal their preferences and interests.⁵² When a decision has been made to proceed with a project, EIA mechanisms become relevant, and the government is required to notify the public and solicit opinions, often through public hearings.⁵³ Finally, when projects have been completed and pollution or other environmental harms have actualized, “the public can redress their grievances by suing polluters in the courts or . . . complaining to the mass media or the government, or taking the issue in[to] their own hands to protest.”⁵⁴ As highlighted by the case studies in Parts III and IV of this paper, and as discussed in Part V, the

45. *Id.*

46. Yang Gui-hua (杨贵华), *Zhuanhuan Jumin de Shequ Canyu Fangshi Tisheng Jemuin de zi Zuzhi Canyu Nengli* (转换居民的社区参与方式 提升居民的自组织参与能力) [*Change the Mode and Enhance the Capability: A Study of Self-Organizing Capacity in Urban Communities*], FUDAN (复旦学报) FUDAN J. 127, n.1 (2009).

47. Qingwen Xu, *supra* note 40, at 622–23.

48. *Id.* at 624.

49. *Id.*

50. *Id.* at 625.

51. Li, Liu & Li, *supra* note 3.

52. *Id.* at 4.

53. *Id.*

54. *Id.*

stage of community participation in facility siting decisions can frequently be correlated with the socioeconomic status of the community.⁵⁵

III. PARTICIPATION THROUGH EIAs IN CHINA

A. *Relevant EIA Laws and Regulations*

The transition to embracing participation in China began in earnest in 2003 when the Law on Environmental Impact Assessment (EIA Law) came into effect, representing a watershed moment in China as the country's first law to require public participation in any decision making process.⁵⁶ "Although EIAs had existed in China—at least conceptually—since 1973, prior to 2003, the public had been effectively absent from the process."⁵⁷ Until China's Environmental Protection Act was enacted in 1979, the EIA process was not statutorily mandated and was a mere administrative function.⁵⁸ Even under the Environmental Protection Act, however, EIA procedures were not stipulated in detail.⁵⁹

The EIA Law continued to progress and, in 1998, the Regulations on the Environmental Management of Construction Projects required solicitation of "the views of the units and residents of the locality wherein the construction project is located."⁶⁰ The Regulations on Environmental Management further specified that construction projects of all sizes be subject to EIAs and that "the detail of the environmental impact report varies, respectively, with the likelihood that the proposed project will cause significant environmental harm."⁶¹ For projects having a potentially major environmental impact, developers must prepare an environmental impact report (EIR), the most comprehensive type of documentation.⁶² Projects

55. See *infra* Parts III.C, IV.C, V.A.; Li, Liu & Li, *supra* note 3.

56. Law on Environmental Impact Assessment (promulgated by the Standing Comm. Nat'l People's Cong., Oct. 28, 2002, effective Sept. 1, 2003) (China); Jesse L. Moorman & Zhang Ge, *Promoting and Strengthening Public Participation in China's Environmental Impact Assessment Process: Comparing China's EIA Law and U.S. NEPA*, 8 VT. J. ENVTL. L. 281, 282 (2007).

57. Moorman & Zhang, *supra* note 56.

58. *Id.* at 297.

59. Bo-sin Tang, Siu-wai Wong & Milton Chi-hong Lau, *Social Impact Assessment and Public Participation in China: A Case Study of Land Requisition in Guangzhou*, 28 ENVTL. IMPACT ASSESSMENT REV. 57, 59 (Apr. 15, 2007), available at <http://www.ucdenver.edu/academics/colleges/Engineering/research/CenterSustainableUrbanInfrastructure/LowCarbonCities/Documents/Bo-sin%20Tang/Social%20Impact%20Assessment.pdf>.

60. Jianshe Xiangmu Huanjing Baohu Guanli Tiaoli (建设项目环境保护管理条例) [Regulations on the Environmental Management of Construction Projects] (promulgated by the State Council, Nov. 29, 1998) art. 15 (China).

61. Moorman & Zhang, *supra* note 56, at 298.

62. *Id.* at 300.

with a light potential environmental impact require only an environmental impact form (EIF), and projects deemed to have an even lower potential environmental impact only require an environmental impact registration form (EIRF), without any further assessment.⁶³

The 2003 EIA Law essentially built on the processes implemented by the 1998 construction regulation, with two important additions.⁶⁴ “First, it expands the EIA mandate to encompass government plans as well as construction projects. . . . [T]he EIA Law adds a Strategic Environmental Assessment (plan-based) overlay to the existing EIA process. . . .”⁶⁵ Second, and more importantly for the scope of this paper, the EIA Law requires that the public participate in the process.⁶⁶ Article 11 of the EIA Law requires that the project drafting organ “hold evidentiary meetings or testimony hearings or adopt other forms of soliciting opinions on the environmental impact report from relevant work units, experts and the public” prior to submitting the plans for approval.⁶⁷ Additionally, Article 21 requires that the drafting organ explain its decision to adopt or reject public comments: “explanations of adoption or rejection of the opinions of relevant work units, experts and the public shall be attached to the environment impact report submitted . . . for approval.”⁶⁸

Seeking to enhance participation in the EIA process, the Provisional Measures on Public Participation in Environmental Impact Assessment, enacted in 2006, built on the existing public participation framework by making disclosure of basic information regarding the project and the contact details of the developers and EIA institution “a fundamental requirement.”⁶⁹ “Prior to the implementation of the Provisional Measures, there was no legal requirement of notice to the public in the EIA process. The general public was not normally informed of any forthcoming projects since only limited public participation, if any, might occur after the drafting of the EIA reports.”⁷⁰ The Provisional Measures required the disclosure of contact information and basic background information within seven days of the project developer being hired.⁷¹ An improvement over the general requirements set forth by the EIA Law and building off the Provisional

63. *Id.*

64. Tang, Wong & Lau, *supra* note 59, at 60.

65. Moorman & Zhang, *supra* note 56, at 299.

66. *Id.*

67. Law on Environmental Impact Assessment, *supra* note 56, at art. 11.

68. *Id.* at art. 21.

69. POWELL, MA, POZON & XIE, *supra* note 33, at 23.

70. Yuhong Zhao, *Public Participation in China's EIA Regime: Rhetoric or Reality?*, 22 J. ENVTL. L. 89, 103 (2010).

71. POWELL, MA, POZON & XIE, *supra* note 33, at 23.

Measures, Article 11 of the subsequent Measures on Open Environmental Information (for Trial Implementation) required disclosure of seventeen different categories of information prior to the submission of an EIA report.⁷² The details requiring disclosure under the Open Environmental Information measures include:

- (1) A description of the potential environmental impacts and a summary of preventive or meditative measures including emergency plans;
- (2) Information on the acceptance of the EIA documents;
- (3) Comments and complaints issued by the public and subsequent investigations;
- (4) Information on the collection of pollution fees and administrative penalties; and
- (5) Disclosure of enterprises that have a history of “serious” pollution accidents or events.⁷³

B. Implementation Challenges

In part, the laws seem to be working to awaken the public consciousness and encourage participation even in the absence of ideal implementation conditions. “Since 2002, the number of complaints to the environmental authorities has increased by 30% every year, reaching 600,000 in 2004; while the number of mass protests caused by environmental issues has grown by 29% every year.”⁷⁴ Additionally, the first ten months of 2009 saw as many Environmental Administrative Reconsideration cases as the total number for 1997–2007.⁷⁵ However, “[w]hile noticeable progress has been made to facilitate public participation in the EIA process, the public still finds it extremely difficult to provide meaningful input that could have real impact on the ultimate decision made by the government.”⁷⁶ As Pan Yue noted, this challenge arises because “details of the conditions and procedures for public participation have not yet been clearly stipulated. That is to say, faced with a specific problem, the

72. Measures on Open Environmental Information (for Trial Implementation) (promulgated by the State Env'tl. Prot. Admin., Feb. 8, 2007, effective May 1, 2008) art. 11 (China).

73. *Id.*

74. Ma Jun, *How Participation Can Help China's Ailing Environment*, CHINA DIALOGUE (Jan. 31, 2007), <http://www.chinadialogue.net/article/show/single/en/733-How-participation-can-help-China-s-ailing-environment>.

75. Lei Xie, *Environmental Justice in China's Urban Decision-Making*, 3 TAIWAN IN COMP. PERS. 160, 161 (2011).

76. Yuhang Zhao, *Assessing the Environmental Impact of Projects: A Critique of the EIA Legal Regime in China*, 49 NAT. RESOURCES J. 485, 498 (2009).

public still does not know how to participate . . . The public cannot find a way to participate.”⁷⁷ Exacerbating this problem, the laws make no provisions for public involvement under some project scenarios. The type of EIA document required for a proposed project is pre-determined, without public input, by a SEPA-published catalogue describing categories of projects. Under the EIA Law, a full EIA process is not necessary for projects only requiring an EIRF with anticipated “low-impact” to the environment, meaning “this requirement amounts to little more than a check-the-box formality.”⁷⁸

The struggle for meaningful involvement manifests itself in the absence of public participation in the initial stages of project design, “where the public has little opportunity to access information regarding proposed projects or participate in the decision-making process.”⁷⁹ Under the 2006 Provisional Measures, for instance, the public is technically permitted to submit concerns and suggestions prior to the EIR submission, but “at this stage it is difficult for concerned citizens to raise informed questions. Extensive information disclosure and public participation takes place within a very limited space of time before the draft EIR is submitted to environmental agencies for approval.”⁸⁰ According to the EIA Law requirements, the public has only ten days to comment on a proposed project.⁸¹ “Since 2006, an increasing number of proposed projects have begun making initial disclosures and posting abridged additions of the EIA report; however, these disclosures are often very brief and lack essential details.”⁸² SEPA “expressly rejected the public right of access to full EIA documents,” excluding them from the “‘government information’ required to be disclosed” under China’s two disclosure laws.⁸³ “Without access to accurate and reliable project information, the public is placed at a great disadvantage. An opportunity to comment does not necessarily lead to meaningful public input.”⁸⁴ Further, Chinese reports find that there are still many infrastructure projects that have not implemented the EIA process properly or at all:

77. Pan, *supra* note 35.

78. Moorman & Zhang, *supra* note 56, at 302.

79. POWELL, MA, POZON & XIE, *supra* note 33, at 14.

80. *Id.* at 23.

81. *Id.* at 25.

82. *Id.*

83. The disclosure laws include the Measures on Open Environmental Information (for Trial Implementation) and the Regulations on Disclosure of Government Information. *Assessing the Environmental Impact of Projects*, *supra* note 76, at 500.

84. *Id.*

According to a 2006 survey on new projects under construction . . . the rate of EIA implementation is low and violation of environmental rules is rampant. While provinces claim that the EIA was implemented at a rate of 86.9%, the central government's own audit found that the rate was much lower in provinces such as Shanxi, Guangdong, Guizhou, Yunnan and Gansu, at well below 50%.⁸⁵

This problem of implementation is exacerbated by the fact that in cases where the EIA rules are violated or ignored, neither the EIA Law itself nor the Provisional Measures provide any means for seeking legal redress.⁸⁶

Even disregarding the challenges created by the language of the EIA Law and its regulations, a variety of cultural and social challenges underlie the ineffectiveness of the EIA process. In spite of increased public reporting to attract investment, many local governments have adopted a policy of "pollute now, clean up later."⁸⁷ Development zones and industrial parks are created where environmental standards can be lowered, and some major polluters have even been classified as "eco-friendly" to prevent the environmental authorities from making spot checks.⁸⁸ "At the start of 2007, SEPA announced a further 82 projects, with a total investment value of over 112 billion Yuan, had been found in serious breach of the EIA law and regulations on the integration of health and safety measures into project design."⁸⁹ Many officials, particularly at the local level, perceive the EIA process to be an obstacle rather than an incentive, "and do not consider [the rules to be] capable of adding value to the development process."⁹⁰

In terms of including the public in the EIA process, the assumption exists in many Chinese cities "that the public still lacks the knowledge and capacity to participate in policy formulation and decision making. Such an assumption has led to an 'expert-cult' phenomenon in Chinese development planning, especially in . . . environmental protection."⁹¹ Bolstered by the loose definition of "the public" in the EIA Law and the discretion given to project proponents to determine who represents the potentially affected population, "it is common to treat the views and comments of experts and even relevant local government bureaus as 'public' opinion."⁹² With regard

85. POWELL, MA, POZON & XIE, *supra* note 33, at 25.

86. *Id.*

87. Ma, *supra* note 74.

88. *Id.*

89. *Id.*

90. Tang, Wong & Lau, *supra* note 59, at 68.

91. *Id.* at 60.

92. *Public Participation in China's EIA Regime*, *supra* note 70, at 109.

to experts, “participation” often takes the form of a review so they can provide technical comments to the project proponents.⁹³ Representatives of government departments have also admitted that public participation is sometimes ignored because of the perception that “involving the general public places risks on achieving anticipated quantitative economic targets,” increasing costs and time delays which directly impact promotion opportunities among officials.⁹⁴ The mechanisms available to communities to counteract the often-failed EIA system in China vary widely, often according to socioeconomic status, as highlighted by recent developments surrounding waste incineration facilities in two communities.

C. Chinese Case Studies

1. High Participation Capacity Community: Panyu, Guangzhou Province

In coordination with the Eleventh Five-Year Plan for Intermediate Waste Disposal, the Panyu district in Guangzhou Province was officially selected as the location for city’s next waste incineration facility.⁹⁵ In September 2009, a local newspaper, citing unofficial sources, revealed plans for the new facility to the Panyu community.⁹⁶ An upper-class, white-collar neighborhood, the residents of Panyu began to conduct online research, and grew panicked to learn of the water, air, and sound pollution created by a similar facility built in another district in Guangzhou three years earlier.⁹⁷ Opposition erupted in response both to health concerns and “the government’s hard stance in trying to bulldoze through the project.”⁹⁸ Panyu residents “wrote proposals to relevant government departments, printed T-shirts with slogans, and demonstrated in front of the local supermarket. . . . [O]thers participated enthusiastically in a special section on Jian-Wai-Jiang, the community forum . . . titled ‘The Waste Incineration and Environmental Protection.’”⁹⁹

93. Da Zhu & Jiang Ru, *Strategic Environment Assessment in China: Motivations, Politics, and Effectiveness*, 88 J. ENVTL. MGMT. 615, 624 (2008).

94. Terry H.Y. Li, S. Thomas Ng & Martin Skitmore, *Public Participation in Infrastructure and Construction Projects in China: From an EIA-Based to a Whole-Cycle Process*, 36 HABITAT INT. 47, 50 (2012).

95. Carrie Yang, *Waste Incineration and Environmental Protection Project*, TECHNOLOGY FOR TRANSPARENCY NETWORK, (Feb. 23, 2010), <http://transparency.globalvoicesonline.org/project/waste-incineration-and-environmental-protection-6>.

96. *Id.*

97. *Id.*

98. James Pomfret, *Hundreds in South China Oppose Waste Incinerator*, REUTERS, (Nov. 23, 2009), <http://www.reuters.com/article/2009/11/23/us-china-environment-incinerator-idUSTRE5AM0JS20091123>.

99. Yang, *supra* note 95.

The residents' mobilization attracted the attention of traditional media, prompting the Panyu Municipal Government to hold a press conference intended to dispel pressure from the continuous reports.¹⁰⁰ In response to protests, officials ensured no action would be taken prior to completion of an EIA, but affirmed that the waste incinerator was still the best option to address the waste demands of Panyu's 2.5 million residents.¹⁰¹ On November 5, 2009, despite government reassurances, the Guangdong Shengqing Research Center found that "97.1% of Panyu residents were opposed to the incinerator project, and almost all of them would [request] a second environmental evaluation if the project passed."¹⁰² On November 23, more than a thousand residents gathered outside the district's City Administration Department building with banners and masks to continue protesting.¹⁰³ On December 20, the Party Committee Secretary of Panyu came to the community to speak with the residents. During the visit, he informed the community "that construction of the incinerator project had come to a halt."¹⁰⁴

2. Low Participation Capacity Community: Haian, Jiangsu Province

On the other side of the spectrum is the Haian community in Jiangsu Province, representative of many communities in China that do not have ready access to the same platforms of participation available in Panyu. Built in 2006, the Haian Waste Incineration Plant operated without facility approval or discharge permits from the city's environmental protection agency, unbeknownst to Haian residents.¹⁰⁵ In 2008, SEPA released a document setting the safe residential distance from incinerator facilities at 300 meters, while the Haian facility continued to operate in close proximity to residents, inspiring the nation's first suit against a MSW incinerator.¹⁰⁶

Xie Yongkang was born on May 12, 2008 with brain paralysis and epilepsy, but the boy's lower-class family gave no thought to what caused his disability until his father encountered a flyer advocating for demolition of the incinerator.¹⁰⁷ Operational throughout Mrs. Xie's pregnancy with

100. *Id.*

101. Pomfret, *supra* note 98.

102. Yang, *supra* note 95.

103. *Id.*

104. *Id.*

105. Wang Xiaoqing (记者 王晓庆), *Zhongguo Lese Fenshao di yi an* (中国垃圾焚烧第一案) [*The First Case of China MSW Incineration*], CAIXIN CENTURY (Nov. 28, 2011), <http://magazine.caixin.com/2011-11-26/100331655.html>.

106. *Id.*

107. *Id.*

Yongkang, the Haian Waste Incineration Plant was only 190 meters away from the Xie's home.¹⁰⁸ Inspired by the flyer, Mr. Xie grew convinced there was a connection between the two to three millimeters of dust in the residents' yards, the deaths of domestic animals, and the increase in premature births and cancer deaths.¹⁰⁹ In 2010, he sued the incineration facility on behalf of his son in Haian County Court.¹¹⁰

As with most environmental litigation in China, proving causation presented a difficult hurdle for Mr. Xie's case.¹¹¹ On appeal, however, the Nantong City Intermediate Court adopted a more relaxed approach to causation, shifting the burden of proof to the defendant facility to demonstrate its activity "would not lead to the harm" alleged.¹¹² Despite this victory, the family's lawyer continued to express reservations about the ultimate outcome, noting the resistance of local protectionism would continue to provide obstacles to compensation.¹¹³ Long after Mr. Xie's lawsuit went to court and the media began covering Yongkang's story, dozens of Haian villagers continued to live within 300 meters of the site of the incinerator.¹¹⁴

IV. PARTICIPATION THROUGH EIAs IN THE UNITED STATES

A. Relevant EIA Laws and Regulations

As in China, the plain language of the U.S. EIA law suggests a consistent, guaranteed outlet for meaningful community participation in siting decisions and other projects with potential environmental impact.¹¹⁵ Broadly declaring that "it is the continuing responsibility of the Federal Government to use all practicable means . . . to the end that the Nation may . . . assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings," the 1970 National Environmental Policy Act (NEPA) is seen as the genesis of all modern federal environmental law.¹¹⁶ "The basic policy of NEPA is to assure that all branches of government give proper consideration to the environment prior to undertaking any major federal action which significantly affects the

108. *Id.*

109. *Id.*

110. *Id.*

111. *Id.*

112. Wang Xiaoqing, *supra* note 105.

113. *Id.*

114. *Id.*

115. 42 U.S.C. § 4321 (2006);

116. *Id.* § 4331(b); BARRY E. HILL, ENVIRONMENTAL JUSTICE: LEGAL THEORY AND PRACTICE 3 (2009).

environment.”¹¹⁷ To that end, the NEPA process begins with a preliminary assessment of the likelihood that a proposed federal action will have a significant environmental impact, and thereby require a more detailed Environmental Impact Statement (EIS).¹¹⁸ This preliminary assessment is called an Environmental Assessment (EA). An agency is not required to prepare an EIS if it makes a finding of no significant impact (FONSI). Once the agency makes the FONSI available to those directly affected by the federal action, the NEPA process ends.¹¹⁹ If an EIS is required a Notice of Intent (NOI) is issued to provide the public with a description of the proposed project and its alternatives, and clarify the scope of the EIS.¹²⁰

The Council on Environmental Quality (CEQ), a three-member advisory panel within the Executive Office, provides regulations to clarify the procedural processes of NEPA.¹²¹ These regulations dictate the participation requirements of an EIS:

A draft EIS, once prepared, is to be furnished to any person, organization, or agency that is involved with the proposed action, or upon specific request. The agency preparing the EIS is required to solicit comments from affected parties, experts, and the public, who are usually afforded no less than forty-five days to review and comment on the draft.¹²²

While the regulations leave discretion to the relevant federal agency regarding the public comment period, the regulations instruct “that [public] hearings might be appropriate where there is substantial controversy or interest surrounding the proposed action.”¹²³ When an agency plans a public hearing for a draft EIS, the document must be made available to the public at least fifteen days prior to the hearing.¹²⁴

After the time for public comment on the draft EIS has concluded, the agency completes a final EIS, “addressing all substantive comments by either amending its analyses, or by explaining why a particular comment does not warrant agency response.”¹²⁵ The agency then files the final EIS with the U.S. Environmental Protection Agency (EPA), and distributes it

117. HILL, *supra* note 116, at 3, n. 11.

118. Moorman & Zhang, *supra* note 56, at 291.

119. *Id.* at 291–92.

120. *Id.* at 292; POWELL, MA, POZON & XIE, *supra* note 33, at 22.

121. Moorman & Zhang, *supra* note 56, at 292.

122. 40 C.F.R. § 1506.10(c) (2011).

123. Moorman & Zhang, *supra* note 56, at 294.

124. *Id.*

125. *Id.* at 293

once more to interested parties and the public.¹²⁶ A final decision cannot be made by the agency on a proposed action “until at least thirty days after the EPA has public notice of the final EIS in the Federal Register, or 90 days after the draft EIS is made public, whichever is later.”¹²⁷ Once a decision has been made, the EIS is finalized through a public Record of Decision (ROD), stating, “whether all practicable means to avoid or minimize environmental harm from the alternatives selected have been adopted, and if not, why they were not,” thereby ensuring public notification through the final stage of the process.¹²⁸

B. Implementation Challenges

Despite the language of NEPA and its regulations, there is a history of U.S. citizens, particularly those coming from more vulnerable socioeconomic or minority backgrounds, struggling to ensure equal implementation and enforcement of the law’s protections.¹²⁹

A prevailing assumption in this country has been that pollution is a problem faced equally by everyone in society . . . [however,] whether by conscious design or institutional neglect, communities of color in urban ghettos, in rural “poverty pockets,” or on economically impoverished Native-American reservations face some of the worst environmental devastation in the nation.¹³⁰

This environmental devastation has stemmed in large part from the fact that hazardous waste sites, incinerators, and other pollution-generating facilities are disproportionately located in or near minority and low-income communities.¹³¹ Some literature even argues that environmental and land use laws “have provided more environmental benefits to the white and affluent while providing fewer benefits to or worsening the environmental conditions of the poor and communities of color” due to the laws’ failure to consider distributional consequences.¹³² “To the extent that distributional consequences were considered, it was assumed that reducing aggregate pollution levels would make everyone better off. When distributional

126. 40 C.F.R. § 1506.9 (2011).

127. Moorman & Zhang, *supra* note 56, at 293.

128. *Id.* at 294.

129. Hill, *supra* note 116, at 4.

130. *Id.* at 7.

131. *Id.* at 9.

132. Alice Kaswan, *Environmental Justice: Bridging the Gap Between Environmental Laws and “Justice,”* 47 AM. U. L. REV. 221, 268 (1997).

issues were raised, federal institutions declined to consider the connection between environmental protection and race or other socioeconomic issues.”¹³³ The historically white and upper-class nature of the environmental movement and the ongoing challenges associated with minority and low-income status in the United States help to further explain why even with NEPA’s strong public participation language, certain voices remain left out of environmental politics and planning.¹³⁴

These disempowered communities disproportionately struggle with poverty, unemployment, inadequate housing, and poor health. Such overwhelming and cumulative constraints help explain the continued underrepresentation of low-income communities of color in environmental activism.

These communities cannot afford the luxury of being primarily concerned about the quality of their environment when confronted by a plethora of pressing problems related to their day-to-day survival. Within this context, [minority and low-income] communities become particularly vulnerable to those who advocate the siting of a hazardous waste facility as an avenue for employment and economic development.¹³⁵

The limitations these burdens place on less affluent communities also restrict economic mobility. Minority and low-income communities do not have the same resources or opportunities “to vote with their feet” and relocate away from unhealthy environments.¹³⁶ This stifles local opposition to polluting industries, which can manifest in a false choice between economic opportunity and community health.¹³⁷ Communities assume that with these industries will come new employment opportunities, an increased tax base, and civic improvements; in reality, however, these economic benefits rarely materialize.¹³⁸ Finally, the siting of pollution-generating facilities creates a positive feedback loop, as areas dominated by such activities attract further environmentally degredative development.¹³⁹

133. *Id.* at 260.

134. HILL, *supra* note 116, at 14–15.

135. *Id.*

136. *Id.* at 19.

137. Robert D. Bullard, *Environmental Justice in the 21st Century*, EJRC.EDU, <http://www.ejrc.edu/ejinthe21century.htm> (last visited Jan. 27, 2013).

138. HILL, *supra* note 116, at 18.

139. *Id.*

C. United States Case Studies

1. High Participation Capacity Community: Houston, TX

A landmark dispute in the United States took place in 1979 when African American homeowners began the fight to keep a landfill out of their suburban, middle-class Houston neighborhood.¹⁴⁰ Residents established the Northeast Community Action Group (NECAG) and filed a class action suit to prevent the facility's construction.¹⁴¹ Plaintiff's were ultimately unable to demonstrate racial discrimination to establish the injunction.

Eight years after the NECAG suit, the Commission for Racial Justice produced a study titled *Toxic Waste and Race in the United States: A National Report on the Racial and Socio-Economic Characteristics of Communities with Hazardous Waste Sites*. While the study found race "to be the most potent variable in predicting where these facilities were located," the Houston community demonstrates the level of activism that can be independently achieved under accommodating socioeconomic conditions, even in a predominantly colored community.¹⁴²

2. Low Participation Capacity Community: Kettleman City, CA

Further West in 1979, a toxic waste landfill was built in a primarily Spanish-speaking, immigrant farm worker community in Kettleman City, California.¹⁴³ Trucks filled with chemical waste passed daily through the town center in order to reach the facility.¹⁴⁴ In the mid-1980s, the U.S. EPA found the landfill to be in repeated violation of its permit, charging the company with fines for faulty record keeping and leakage into water supplies.¹⁴⁵ In 1990, the same company proposed building a hazardous waste incineration facility not far from the landfill to take advantage of the preexisting dump.¹⁴⁶ As the permitting process for the new incineration facility began, meetings, hearings, and technical information were provided to the Kettleman community only in English.¹⁴⁷

140. Bullard, *supra* note 137.

141. *Id.*

142. *Id.*

143. *Stop: Kettleman City,*

INVISIBLE5.ORG,

<http://www.invisible5.org/index.php?page=kettlemancity> (last visited Jan. 27, 2013).

144. *Id.*

145. *Id.*

146. *Id.*

147. *Id.*

At this point, Greenpeace's Southwest Toxic Campaign Coordinator was alerted to the company's expansion plans, and through local contacts, reached out to community members.¹⁴⁸ With support from Greenpeace and other outside organizations, the Kettleman community organized to oppose the planned incinerator. "In February 1991, a lawsuit filed by California Rural Legal Assistance on behalf of the community coalition El Pueblo Para el Aire y Agua Limpio formally stated that the permit process violated the rights of residents" because none of the information was provided to the community in their language.¹⁴⁹ By 1994, through the efforts of environmental non-profits, the Kettleman community, and two successful lawsuits filed by California Rural Legal Assistance, the company eventually abandoned its incinerator facility plans, although the original landfill continued to operate.¹⁵⁰

V. ENVIRONMENTAL JUSTICE IMPLICATIONS & RECOMMENDATIONS

A. *Environmental Justice: Not in My Backyard (NIMBY)*

As highlighted by the case studies in both China and the United States, when participation is marginalized, the opportunities available to the community often depend as much on its capacity to participate as on its desire to participate.¹⁵¹ This reality raises important environmental justice implications.

As a community-based movement, environmental justice seeks to address the disproportionate burdens of environmental degradation borne by low-income communities of color. With regard to participation, environmental justice means "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."¹⁵² Six factors are said to contribute to environmental injustices: "(1) relative lack of political power; (2) economics; (3) lack of participation in the environmental movement; (4) racism; (5) NIMBY; [and] (6) segregated housing and immobility."¹⁵³ As

148. *Debating Risk & Environmental Justice in Kettleman City: Conflict in the Siting of a Hazardous Waste Incinerator*, WASHINGTON.EDU., <http://courses.washington.edu/alisona/pbaf590/pdf/Kettleman-City-Case-A.pdf> (last visited Jan. 27, 2013).

149. *Stop: Kettleman City*, *supra* note 143.

150. *Id.*

151. Li, Liu & Li, *supra* note 3, at 18.

152. Colin Carrol, Editorial, *NIMBY Suits: The Crutch of the Unskilled Environmental Advocate*, VT. J. ENVTL. L. (Oct. 10, 2003), available at <http://www.vjel.org/editorials/ED10038.html>.

153. *Id.*

noted in a comparative study of three infrastructure projects in China, ownership of private property, social affiliations, and a variety of other socio-economic factors dictate access to public participation in environmental decision-making.¹⁵⁴ In the case of middle class communities like those highlighted in Panyu and Houston, concentrated costs but dispersed benefits often foster the attitude of “not in my backyard.”¹⁵⁵

The NIMBY phenomenon occurs when “affluent communities with resources to resist the siting of facilities in their communities have shifted the siting efforts of industry to other communities.”¹⁵⁶ Sociologist Robert D. Bullard has commented that “‘Somewhere Else, USA’ often ends up being located in poor, powerless, minority communities.”¹⁵⁷ The NIMBY attitude among middle-class communities works in concert with the interests of industry, which often seeks the path of least resistance, targeting areas less likely to express opposition to siting.¹⁵⁸ Because low-income communities of color often lack the same resources or government and industry contacts sustaining proactive organizing in affluent communities, polluting facilities end up there.¹⁵⁹ “Under conditions of social and economic inequality, only some people . . . will have the clout and the funding to get the powers that be to pay attention to their NIMBY claims.”¹⁶⁰ While less affluent communities are occasionally successful in preventing polluting industry projects from being built, this success is often both temporary and reliant on support from individuals and organizations outside of the community.¹⁶¹

154. Li, Liu & Li, *supra* note 3.

155. *Id.* at 17.

156. HILL, *supra* note 116, at 19.

157. *Id.*

158. Vicki Been, *What's Fairness Got to Do with It? Environmental Justice and the Siting of Locally Undesirable Land Uses*, 78 CORNELL L. REV. 1001, 1002 (1993).

159. HILL, *supra* note 116, at 19.

160. Kyle Powys Whyte, *Why Not Environmental Injustice?*, 13 ETHICS, PLACE & ENV'T. 333, 333 (2010).

161. In halting dam construction on the Nu River, the national media and scientists were the primary sources of opposition.

[T]he local residents failed to take a side and organize themselves to engage in the debates. They were remotely located from each other in the mountains and organizing would have incurred high time and financial costs in communicating and traveling, especially when the level of Internet literacy was low among those farmers and herders. Thus, facing loosely organized and weak opposition from the local people, the idea of developing hydropower on the Nu River was picked up again early this year

B. Recommendations

While there may be means to address the waste issue in China more directly through recycling or other waste reduction initiatives, the reality is that incineration facilities will be a major part of the Chinese waste disposal landscape in coming years. Rather than demand an alternate reality, this paper sought to unearth the reasons for the lack of meaningful participation in the existing system.

Bridging the current divide between government and private sector perceptions of community participation, and achieving the goal of meaningful, participatory environmental decisionmaking requires a series of changes to the existing EIA process in China.¹⁶² The following recommendations seek to improve the quality of community participation in the EIA process under the existing legal and regulatory scheme, rather than calling for the implementation of a new law that would likely carry just as many promising, but ultimately toothless, protections for communities.

By comparing the challenges that face comprehensive implementation of EIA laws in China and the United States, it is clear that important differences exist between the political and cultural systems. Many of the shortfalls in China can be traced back to the “traditional Chinese culture of compliance and its associated autocratic mode of governance and decision-making.”¹⁶³ Under this regime, “the social interests of the mass were unilaterally determined by the state. Individuals were required to ‘sacrifice’ their personal interests for the national/collective interests when the former came into conflict with the latter.”¹⁶⁴ As a result, there remains an ongoing tension between the limitations placed on participation in the political process and the legislated requirement for participation in EIAs.¹⁶⁵ This is a marked departure from Western views, where “individual rights must not be trespassed or sacrificed for the interests of others.”¹⁶⁶ Recognizing that these important differences in Chinese culture often prevent identical application of techniques used by communities in the United States, a variety of mechanisms can still be applied by Chinese communities to increase their participatory capacity, ultimately achieving a more meaningful EIA process.

162. Li, Ng & Skitmore, *supra* note 94.

163. *Id.* at 52.

164. Tang, Wang & Lau, *supra* note 59, at 68.

165. Li, Ng & Skitmore, *supra* note 94, at 52.

166. Tang, Wang & Lau, *supra* note 59, at 68.

1. Make Use of the Courts

In the United States, public participation laws were largely treated as voluntary “until lawyers took cases to court to enforce the public’s participation rights. In such cases, the experience of going through the required steps . . . can cause disclosure of valuable information and educate the public about its legal rights.”¹⁶⁷ Courts can be a crucial force in changing agency behavior in order to better integrate community opinion, and there has been a growing awareness among Chinese citizens that this option is available to seek remedies.¹⁶⁸ At present, the restrictive interpretation of standing under Chinese administrative law places a high bar to community members or NGOs seeking judicial review of EIAs.¹⁶⁹ Despite the challenges created by the Chinese judicial system, increasing use of the courts will likely improve the quality of participation across all communities.

a. Environmental Public Interest Litigation

Defined as the ability of “any citizen, social group, or national department to bring a lawsuit in its name to protect the public interest,” this option is largely inaccessible under Chinese environmental law, where only the direct victims have the ability to bring a civil lawsuit.¹⁷⁰ Pan Yue argues for achieving environmental public interest litigation by gradually broadening the scope from direct victims of environmental issues to environmental protection departments, to qualified environmental protection organizations, and finally to the general public.¹⁷¹ The public prosecutor’s office has expressed interest in environmental public interest litigation, which could provide an important outlet and investigative authority through which communities could appeal even absent judicial reform.¹⁷² “Judicial review of the administrative approval of EIA documents can provide an additional check on agency behavior and improve the quality of the approval process . . . this would significantly strengthen the role and function of EIA as a regulatory tool.”¹⁷³

167. Moore & Warren, *supra* note 1, at 17.

168. *Assessing the Environmental Impact of Projects*, *supra* note 76, at 519–20.

169. *Id.* at 521.

170. Pan, *supra* note 35.

171. *Id.*

172. Moore & Warren, *supra* note 1, at 17.

173. *Assessing the Environmental Impact of Projects*, *supra* note 76, at 521.

b. Tort Liability

Following the example of the Xie family in the Haian case study, an alternative method for accessing the courts is to individually or communally seek compensation for harms caused by the polluting facility. This outlet is particularly promising in light of the intermediate court's decision in Mr. Xie's case to reevaluate causation, shifting the burden to the polluting facility to demonstrate that it has not caused harm.¹⁷⁴ While judicial precedent does not hold the same weight in China as it does in the United States, this is still a promising step forward for those seeking redress.

In the short term, this method may perpetuate the environmental justice issues raised by low participation capacity communities only being able to act, or participate, after harm has already been caused. However, the evolution in judicial understanding of major legal hurdles like causation may prompt a more widespread shift toward a reliable judicial check on agency action. A community's bargaining power would be substantially enhanced if all stakeholders knew in advance of litigation that the facility's proponents would have to prove that the facility's pollution was innocuous. The outcome of other suits for liability may effectively force a more balanced relationship between low participation capacity communities and project proponents without requiring a drastic increase in technical expertise or resources from the community members. Such a trend would also weave a cooperative strand through the otherwise dispersed low capacity communities in China, potentially increasing the participatory capacity of each.

2. Stakeholder Gatherings

In an effort to move away from the formal expertise-dominated approach thriving in China, community members must be recognized as experts in their own right, with the experience of living with environmental hazards.¹⁷⁵ Improving the community's participation status to one of full partner instead of a requirement on a checklist means fostering co-planning relationships and site-specific community groups.¹⁷⁶ This recommendation will be difficult for communities to implement absent willingness from project proponents. The attention siting issues are receiving in light of the recent flood of protests, however, should work in the communities' favors

174. Wang Xiaoqing, *supra* note 105.

175. Eileen Gauna, *The Environmental Justice Misfit: Public Participation and the Paradigm Paradox*, 17 *STAN. ENVTL. L.J.* 3, 54 (1998).

176. *Id.*

by reshaping the cost-benefit analysis done by project proponents, and placing a premium on community acceptance.

a. Collaborative Problem Solving

While public hearings by name have been part of the Chinese landscape for several years, concern with finding “harmonious” solutions to public conflicts¹⁷⁷ means this forum currently exists as another mechanism that works for well-connected individuals to the detriment of low participation capacity communities.¹⁷⁸ Before the EIA process begins for a specific project, “community residents should be able to meet with officials to discuss existing risks and potential non-compliance by [existing] facilities located within their community.”¹⁷⁹ The informal nature of these gatherings allows for less technical, more reciprocal communication and education, creating an environment where common-sense solutions can develop early on to avoid conflict and litigation later.¹⁸⁰

Collaborative problem solving is “a process involving interdependent parties identifying issues of mutual interest, pooling their energy and resources, address[ing] their differences, charting a course for the future, and allocating implementation responsibility among the group.”¹⁸¹ This approach is often seen as valuable by NGOs and community stakeholders because collaboration offers an alternative to litigation, which can be dragged out and deplete their resources, particularly when up against major industry players.¹⁸² Similarly, “companies have come to believe that proactive and progressive community outreach can . . . allow them to operate and maintain their business profitably in communities where there had previously been negative relationships.”¹⁸³ “Because the emphasis is on concrete, feasible contributions to community quality of life rather than abstract principles, the goals for each participant are workable,” and the community is more meaningfully engaged in the process.¹⁸⁴ Ultimately, the goal of collaborative problem solving is for communities to be approached

177. Moore & Warren, *supra* note 1, at 11.

178. Yan Haichao, *NGO Observation: Can the Government and the Public Achieve a Win-Win Situation?*, CHINA GREEN NEWS, Nov. 17, 2010, <http://eng.greensos.cn/ShowArticle.aspx?articleId=674>.

179. Gauna, *supra* note 175, at 67.

180. *Id.*

181. Hill, *supra* note 116, at 107.

182. *Id.*

183. *Id.*

184. *Id.* at 109.

differently, “through participatory processes sensitive to their bargaining position and cumulative burdens.”¹⁸⁵

3. Partnerships with NGOs and Other Third-Party Advocates

In order to facilitate the development of collaborative problem solving initiatives, low participation capacity communities should partner with NGOs and other third-party advocates. Studies have found that “increasing the role of third-party advocates, including public and private lawyers, nongovernmental organizations (NGOs), and lay advocates in supporting” community participation can help overcome a variety of obstacles.¹⁸⁶ While government and private sector organizations frequently find the suggestions made by community members to be of questionable value, NGOs, as captured through interviews, consistently counter this position, arguing for, at minimum, a legitimate communication channel through which the public can be heard.¹⁸⁷ This suggests an inherent support for participation among Chinese NGOs, making them a particularly valuable resource for low participation capacity communities.

The potential roles of NGOs and other third parties with relevant expertise can be wide and varied depending on the needs of the community. First, NGOs can provide training, technical support, and guidance for all stakeholders: government, private sector, and community groups alike.¹⁸⁸ Behind the scenes of many of the most infamous environmental protests in high participation capacity communities were “‘folk scientists’ who were able to translate the complicated information into a language [the rest of the community] could understand.”¹⁸⁹ Similar support is needed in low participation capacity communities, and NGOs or other third parties can fill this niche. Such technical understanding also includes access to important communication outlets like online forums in addition to more traditional public hearings. Third-party advocates can help strengthen these official channels for raising concerns and help communities to access them effectively.¹⁹⁰ Finally, NGOs’ access to communication resources can encourage and improve information sharing.¹⁹¹ By demanding public disclosure of EIA reports in forums familiar to low capacity community partners, disclosure becomes a legitimate information sharing mechanism

185. Whyte, *supra* note 160, at 334–335.

186. Moore & Warren, *supra* note 1, at 4.

187. Li, Ng & Skitmore, *supra* note 94.

188. Moore & Warren, *supra* note 1, at 17.

189. Yan, *supra* note 178.

190. Moore & Warren, *supra* note 1, at 17.

191. *Id.* at 17–18.

rather than a mere technicality being met to achieve compliance with the law. Particularly as relates to low capacity communities, then, the role to be filled by NGOs and other third-party advocates is immense and can help reshape the playing field of community participation in China. As summed up by Ma Tiannan of the Friends of Nature NGO:

We have the central government, a just judicial system and non-governmental and non-profit organizations. If a variety of social forces play their roles well, it will not be difficult to find a detached neutral third party to mediate or arbitrate a dispute, and it will not be difficult to find a wise and balanced solution to minimize the social cost of settling a conflict, instead of letting public opinion conduct the fight single-handedly.¹⁹²

CONCLUSION

Much like the experience in the United States in the years following the enactment of NEPA, China is struggling to effectively implement its new EIA law and regulations. Exacerbated by the historical context of a centralized government focused on the whole of society rather than individual rights, the growing pains associated with implementing China's wholly new participation guarantee manifests itself in the conflicts that have emerged over waste incinerator siting.

While all communities seek to protect their livelihoods, homes, and families from the potentially harmful effects of MSW incineration, a clear delineation has formed between high participation capacity communities and their low capacity counterparts. High capacity communities have used their resources and access to government and media to protest successfully against the siting of waste incineration facilities in their neighborhoods. The NIMBY attitude manifested in this response, however, has the unfortunate side effect of pushing development with concentrated costs, but dispersed societal benefits, into communities lacking the resources to combat it.

The goal in China, as in the United States, should be a more egalitarian process that defines success universally across communities as the ability to participate meaningfully in an original and thoroughly completed EIA process. Taking guidance from the U.S. experience, the recommendations set forth in Part V of this paper seek to outline mechanisms for

192. Newsletter, Ma Tiannan, Friends of Nature, Xiamen PX (Paraxylene) Event Demonstrates Positive Effects of Public Participation in Environmental Protection, (Winter 2007), available at <http://fon.org.cn/content.php?aid=9943>.

disempowered communities in China to increase their participation capacity under the existing EIA law and regulations, and in the contextual setting of Chinese society. In order to fulfill its promise, participation in China must be accessible and meaningful for all communities, not only those with the resources to make their NIMBY claims heard.

