Adjudicating environmental tort cases in China: burden of proof, causation, and insights from 513 court decisions

Fan Yang

Department of Law, Beijing Forestry University, Beijing, China

Ting Zhang

School of Law, Hangzhou Normal University, Hangzhou, Zhejiang Province, China

Hao Zhang

Faculty of Law, The Chinese University of Hong Kong, Hong Kong SAR

Developing countries and countries with economies in transition have varying experiences in enforcing their national environmental law. China's judicial interpretations and legislation on environmental protection have established the rules that shift the burden of proof for causation in environmental tort litigation. However, this study of 513 court decisions from the people's courts at different levels in China shows that although the court decisions usually refer to or quote the rules that shift the burden of proof, in most cases the victim-plaintiffs still bear the liability to prove whether the causal relationship exists between the pollution and the harm. This study also finds that Chinese courts defer greatly to the evaluation report in proving causation. It suggests that the court practice of adjudicating environmental tort cases in China values more the factual causation of a pollution incident than the provisions regarding proof of causation stipulated by relevant laws. Consequently, such judicial practices hinder the effectiveness of judicial remedies for pollution victims in China.

Keywords: *environmental tort cases, adjudication, burden of proof for causation, Chinese courts*

1 INTRODUCTION

Developing countries and countries with economies in transition have varying experiences in enforcing their national environmental laws and it is increasingly acknowledged and understood that effective enforcement of national environmental laws is essential if international/transnational environmental laws are to be effective.¹ Among possible enforcement strategies and measures, the critical role of the judiciary in improving environmental enforcement and strengthening the rule of law never

1. Asian Development Bank, 'Asian Judges Symposium on Environmental Decision Making, the Rule of Law, and Environmental Justice: The Proceedings of the Symposium' (2011) Asian Development Bank, <<https://www.adb.org/sites/default/files/publication/29631/symposium-environmental-decisions-law-justice.pdf>> accessed 20 December 2017.

ceases to attract scholarly attention.² Within national legal systems it is becoming apparent that having new laws ‘on the books’ for the purpose of protecting the environment is not sufficient.³ Effective enforcement of criminal provisions and responsible practices of administrative agencies, as well as the availability of judicial remedies for pollution victims, are equally important.⁴ Because environmental pollution is often complex and increasingly transnational, understanding how national law deals with environmental issues offers some fundamental perspectives upon which knowledge exchanges of good practices and lessons learned can proliferate beyond the national boundary.⁵

This article focuses on China’s environmental tort cases through the lens of Chinese court decisions. Tort cases have increasingly played an important role in China’s environmental law system and the use of environmental tort claims by grassroots citizens against polluting entities has seen some positive changes over the past decade. A recent study finds that from 2004 to 2009, China’s courts accepted more environmental pollution tort cases than the combination of administrative and criminal cases that relate to environmental pollution.⁶ Another study reveals that civil environmental lawsuits increased from 96 to 1,509 from 1998 to 2008.⁷ Our search for court decisions in environmental tort cases in China also witnessed this trend of increase. While not an exhaustive list, the court decisions from 1993–2003 (137 decisions) that are available from the two major databases holding court decisions have more than doubled in the following decade from 2004–14 (378 decisions).

Despite the rising numbers of environmental civil lawsuits, the challenges associated with environmental tort litigation in China are not alien to both Chinese and English scholarships. Generally, environmental tort plaintiffs face enormous obstacles in bringing cases to courts.⁸ Chinese courts have set stringent bars to accepting cases. To accept a case officially, Chinese courts often require substantial evidence concerning the harm, the source of harm and even evidence of a causal link between the pollution and the harm, from the plaintiff.⁹

2. Ibid; see also Thijs Etty and others, ‘The emergence of new rights and new modes of adjudication’ (2016) 5(1) *Transnational Environmental Law* 1.

3. Robert Frank and Jasmine Wee, ‘China’s new environmental protection law’ (2015) 45(1) *Environmental Law Reporter: News & Analysis* 10023.

4. Michael Faure and Hao Zhang, ‘Environmental criminal law in China: a critical analysis’ (2011) 41(1) *Environmental Law Reporter: News & Analysis* 10024; Rachel Stern, ‘On the frontlines: making decisions in Chinese civil environmental lawsuits’ (2010) 32(1) *Law & Policy* 79.

5. Gitanjali Nain Gill, ‘Environmental justice in India: the National Green Tribunal and expert members’ (2016) 5(1) *Transnational Environmental Law* 175.

6. Adam Moser and Tseming Yang, ‘Environmental tort litigation in China’ (2011) 41(10) *Environmental Law Reporter: News & Analysis* 10895.

7. Alex Wang and Jia Gao, ‘Environmental courts and the development of environmental public interest litigation in China’ (2010) 3(1) *Journal of Court Innovation* 37.

8. Daniel Knudsen, ‘Environmental Protection Bureau, 2.0: China’s environmental courts as enforcement institutions’ (2013) 15(4) *Environmental Practice* 441; Benjamin van Rooij, *Regulating Land and Pollution in China, Lawmaking, Compliance, and Enforcement: Theory and Cases* (Leiden University Press, 2006); Randall Peerenboom, ‘A Tale of Two Judiciaries: Judicial Enforcement of Economic and Social Rights in China and India’, in Surya Deva (ed), *Socio-Economic Rights in Emerging Free Markets: Comparative Insights from India and China* (Routledge, 2016) 123.

9. Zhiping Li, ‘Analysis of the practice of water pollution public interest litigation: based on cases handled by the Guangzhou Maritime Court’ (2012) 13(4) *Vermont Journal of*

Environmental tort cases make no exceptions, despite the fact that victim-plaintiffs in China are often at a disadvantage and unable to introduce sufficient evidence, especially the causal link.¹⁰ The newly created environmental courts have not given much hope to address this issue, as observed by some commentators.¹¹ For example, a study of the flagship environmental courts in Guiyang, Wuxi and Kunming suggests that the number of criminal cases and non-litigation administrative cases dominate the case-loads but civil environmental lawsuits are all missing.¹² A similar finding comes from a study of the local courts in Hubei province, where local judges, under the incentive of fulfilling caseloads, were involved in regulating pollution by assisting administrative agencies in executing sanctions and collecting pollution levies.¹³

The scholarly focus on the role of Chinese courts¹⁴ as regulatory authorities in the environmental law regime has not only enriched the regulatory study scholarship on pluralism,¹⁵ but has also opened new research into more defined areas such as enforcement¹⁶ and landmark case studies.¹⁷ Very few studies have examined the court decisions in environmental tort cases adjudicated by Chinese courts, except a pioneering study based on 42 court decisions about how Chinese judges make decisions in civil environmental law suits.¹⁸ Chinese court decisions were not necessarily available to the general public.¹⁹ But since 2013 a centralized database administered by the

Environmental Law 797; Xuejun Hu, 'Critical analysis on the proof for causation in environmental tort litigation' [环境侵权中的因果关系及其证明问题评析] (2013) 5 *China Law Journal* [中国法学] 163.

10. Moser and Yang (n 6); Sha Huang, 'Judicial practice and challenges of environmental court in China' [我国环境法庭司法实践的困境及出路] (2010) 6 *Journal of Law Application* [法律适用] 68; Michael Faure and Weiqiang Hu, 'Towards a reform of environmental liability in China: an economic analysis' (2010) 13(2) *Asia Pacific Journal of Environmental Law* 225.

11. Rachel Stern, 'The political logic of China's new environmental courts' (2014) 72 *The China Journal* 53; Darcey Goetz, 'China's environmental problems: is a specialized court the solution?' (2009) 18(1) *Pacific Rim Law & Policy Journal* 155; Alex Wang, 'Environmental courts and public interest litigation in China' (2010) 43(6) *Chinese Law & Government* 4.

12. See Stern, *ibid*.

13. Xuehua Zhang, 'Judicial enforcement deputies: causes and effects of Chinese judges enforcing environmental administrative decisions' (2016) 10(1) *Regulation & Governance* 29.

14. We use Chinese courts or courts to refer to the People's Courts in China. For this study, the courts include but are not limited to environmental courts.

15. Zhang (n 13); Benjamin van Rooij and others, 'The authoritarian logic of regulatory pluralism: understanding China's new environmental actors' (2016) 10(1) *Regulation & Governance* 3.

16. Benjamin van Rooij, 'Implementation of Chinese environmental law: regular enforcement and political campaigns' (2006) 37(1) *Development & Change* 57; Charles McElwee, *Environmental Law in China: Managing Risk and Ensuring Compliance* (Oxford University Press, 2011); Rachel Stern, *Environmental Litigation in China: A Study in Political Ambivalence* (Cambridge University Press, 2013); Benjamin van Rooij and Carlos Wing-Hung Lo, 'Fragile convergence: understanding variation in the enforcement of China's industrial pollution law' (2009) 31(1) *Law and Policy* 114; Carlos Wing-Hung Lo and others, 'Enforcement Styles: Changes Over Time' in Carlos Wing-Hung Lo and Shui-Yan Tang (eds), *Institutions, Regulatory Styles, Society and Environmental Governance in China* (Routledge, 2014) 119.

17. Michael Faure and Weiqiang Hu, 'Environmental Liability in China: Recent Development and Case Studies in an Ex Post Analysis' in Michael Faure and Guangdong Xu (eds), *Economics and Regulation in China* (Routledge, 2014) 269; Li Guan, 'Allocating the burden of proof in environmental tort litigation' [环境侵权案件中如何分配双方的证明责任] (2007) 12 *China Trial* [中国审判] 64.

18. Stern (n 4) 79–103.

19. See Moser and Yang (n 6); Stern (n 11).

Supreme People's Court has made access to the court decisions possible.²⁰ This study therefore has greatly benefited from the court decisions available from that database and aims to fill the research gaps on China's court decisions in civil environmental law suits.

Burden of proof and the issue of proving causation have been identified, by the existing research, as two stumbling blocks in the pursuit of justice by pollution victims through civil litigation.²¹ Previous studies mainly focused on the relevant provisions stipulated in the judicial interpretations and substantive law,²² but failed to look at these issues through the lens of Chinese court decisions. With a relatively larger sample of Chinese court decisions collected (617 court decisions collected initially), we are able to examine how Chinese courts adjudicate issues such as burden of proof and proving causation in China's environmental tort cases. While keeping in mind that generalization needs to be made with care,²³ we aim to draw some conclusions from analysis of those court decisions.

2 BURDEN OF PROOF AND CAUSATION IN CHINA'S ENVIRONMENTAL TORTS: JUDICIAL INTERPRETATIONS AND THE LAW

The general rule of Chinese tort law follows the universal principle that 'a claimant must prove on the balance of probability that a particular defendant's wrongful conduct was a factual cause of its injury in order to be entitled to compensatory damages in respect of that injury'.²⁴ Many Chinese scholars, however, have criticized this provision for its unfairness in environmental civil litigation, due to the power disparity between the plaintiff and defendant to prove the causal relationship.²⁵ Plaintiffs in environmental cases in China are usually considered to be at a disadvantage against the polluting entities in environmental tort litigation.²⁶ These entities, such as state-owned enterprises, are either large employers that uphold the local employment

20. The database is known as the China Judgements Online, <<http://wenshu.court.gov.cn>> accessed 20 December 2017.

21. Scott Wilson, *Tigers without Teeth: The Pursuit of Justice in Contemporary China* (Rowman & Littlefield, 2015) 73; Hong Mei and Yanjie Yin, 'A Feasible Approach to Environmental Public Interest Litigation: the People's Procuratorate As Plaintiff' in Paul Martin and others (eds), *Environmental Governance and Sustainability* (Edward Elgar, 2012) 135; Faure and Hu (n 17).

22. Michael Faure and Jing Liu, 'Compensation for environmental damage in China: theory and practice' (2014) 31(1) *Pace Environmental Law Review* 226; Alex Wang, 'The search for sustainable legitimacy: environmental law and bureaucracy in China' (2013) 37(2) *Harvard Environmental Law Review* 367.

23. Robert Baldwin and others, *Understanding Regulation: Theory, Strategy, and Practice* (Oxford University Press, 2012) 197.

24. Liming Wang, *Research on Tort Law* [侵权责任法研究] (Renmin University of China Press [中国人民大学出版社], 2011); Jin Wang, *Environmental Law* [环境法学] (Peking University Press [北京大学出版社], 2014); Lixin Yang, *Tort Law* [侵权责任法] (China Law Press [法律出版社], 2012).

25. Zhongmei Lv, *Environmental Law* [环境法学] (China Law Press [法律出版社], 2008); Liming Wang, *ibid*, at 489; Jin Wang, *ibid*, at 308.

26. Minchun Zhang and Bao Zhang, 'Specialised environmental courts in China: status quo, challenges and responses' (2012) 30(4) *Journal of Energy & Natural Resources Law* 361; Moser and Yang (n 6).

and assist local stability, or big contributors to local GDP growth that enjoy a preferential political support.²⁷

In order to address this problem, China's Supreme Court and legislators at the central level have taken a series of actions to reduce the plaintiff's burden of proof. In 1992, the Supreme People's Court of China issued the Opinion on Implementing Civil Procedure Law of People's Republic of China (hereinafter referred to as the Judicial Opinion of 1992).²⁸ Article 74 of the 1992 Opinion first opened the door to reducing the plaintiff's burden of proof. Article 74 stipulated that 'in compensation lawsuits concerning environmental pollution, the defendant bears the burden of proof if the defendant denies the fact rendered by the plaintiff'.²⁹ In 2001, the Supreme People's Court, in another judicial explanation on civil evidence (hereinafter referred to as the Judicial Explanation of 2001), incorporated a paragraph that further defined the burden of proof in environmental civil litigation.³⁰ That paragraph specifically stated: 'in compensation lawsuits concerning environmental pollution, the polluter shoulders the burden of proof to demonstrate the lack of causal link between the polluting activities and the harmful results'.³¹

Given these two judicial interpretations and their implementation effects in practice, both the Solid Waste Pollution Prevention Law of 2004 and the Water Pollution Prevention Law of 2008 adopted the provision that shifts the burden of proof from plaintiffs to defendants in environmental civil litigation.³² Notably, in 2009 China's National People's Congress passed a new Tort Law which became effective in July 2010.³³ Consistent with the existing judicial explanations and other environmental laws, the new tort law included a specific chapter on environmental pollution liability. Through codification and formally addressing the issue of liability which was previously controversial and unfair, the new tort law is hoped to clarify ambiguities and benefit plaintiffs in environmental tort cases.³⁴ The new tort law, in its articles 65 and 66, unambiguously and officially provides that the burden of proof in environmental pollution cases is on polluters.

Article 65 of the tort law states:

[w]here any harm is caused by environmental pollution, the polluter shall assume the tort liability.³⁵

27. Alex Wang, 'Chinese State Capitalism and the Environment', in Benjamin Liebman and Curtis Milhaupt (eds), *Regulating the Visible Hand?: The Institutional Implications of Chinese State Capitalism* (Oxford University Press, 2015) 251.

28. Supreme People's Court, 'Opinion on Implementing Civil Procedure Law of People's Republic of China' [关于适用中华人民共和国民事诉讼法若干问题的意见] (1992) *People.cn* <<http://www.people.com.cn/zixun/flfgk/item/dwjf/falv/9/9-1-1-08.html>> accessed 20 December 2017.

29. *Ibid*, art 74.

30. Supreme People's Court, 'Some Provisions of the Supreme People's Court on Evidence in Civil Litigations' [关于民事讼证据若干问题的规定] [2001] *Lawinfochina* <<http://www.lawinfochina.com/display.aspx?lib=law&id=2197&CGid=>>>.

31. *Ibid*, art 4, para 1.

32. Art 86 of the Solid Waste Pollution Prevention Law of 2004 and art 87 of the Water Pollution Prevention Law of 2008 both adopted the provision that shifts the burden of proof for lack of causation to the defendant in environmental tort litigation.

33. Tort Law of the People's Republic of China, National People's Congress, Order No. 21 (2009), 26 December 2009.

34. See Faure and Hu (n 17).

35. Tort Law, art 65.

Article 66 of the tort law reads:

[w]here any dispute arises over an environmental pollution, the polluter shall assume the burden to prove that it should not be liable or its liability could be mitigated under certain circumstances as provided for by law or to prove that there is no causation between its conduct and the harm.³⁶

The latter is generally recognized as shifting the burden of proof from the plaintiffs to the polluters in China's environmental tort cases.³⁷ Since the newly amended tort law was enacted in 2010, different opinions have emerged among Chinese environmental law scholars as to whether Articles 65 and 66 have indeed shifted the burden of proof and therefore benefited plaintiffs when environmental pollution cases are adjudicated by judges.³⁸ To answer this question, this article examines 513 court decisions on environmental tort cases spanning over 20 years, from 1993 to 2014. Rather than examining one or two cases that are influential or limited to a certain geographic boundary, this article aims to provide a relatively bigger picture about whether burden of proof has, in practice, shifted to the polluter-defendants, and what kind of evidence is mainly taken into consideration by judges when determining the causation between the pollution and the harm. A causal link between pollution and damage is a key element that determines whether plaintiffs can win the case and receive compensation.³⁹ By doing so we hope to cast some light on the reality of how Chinese judges at different levels of courts make decisions that fit into the bigger context of controlling pollutions.

3 COURT DECISIONS OF CHINA'S ENVIRONMENTAL TORTS: DATA COLLECTION AND REPRESENTATIONS

Chinese court decisions were not necessarily open to the public and searching for court decisions on environmental tort cases was a difficult task.⁴⁰ A previous study on China's civil environmental law suits conducted a search on a 'Beijing-based legal database' and turned up only 42 cases between 2000–07.⁴¹ Another search of 'one of China's primary legal databases' showed only 79 court decisions available from environmental tort cases.⁴² Chinese courts were not required to release court decisions to the public and allowing the public to access to those decisions faced a challenge of being politically legitimate.⁴³ For environmental tort cases, publishing court decisions may attract more scrutiny from legal professionals and environmental non-governmental organizations over issues such as legality of legal reasoning and

36. Tort Law, art 66.

37. Zhongmei Lv, 'Preliminary study on the standard of proof in environmental tort litigation' [环境侵权诉讼证明标准初探] (2003) 21(5) *Journal of China University of Political Science and Law* [中国政法大学学报] 26.

38. Hu (n 9); Guan (n 17).

39. Xusheng Ma, 'Research on presumption of causation in environmental torts' [环境侵权视野下的因果关系推定] (2007) 25(3) *Hebei Law Journal* [河北法学] 114.

40. Moser and Yang (n 6); Stern (n 4).

41. Stern (n 4) 80.

42. Moser and Yang (n 6) 10895.

43. Stern (n 4) 80.

severity of environmental damage.⁴⁴ Databases, back then, lacked motivation to publish those court decisions.⁴⁵

The extremely limited access to court decisions on civil environmental disputes in China made existing research and study in this area extremely rare. To fill this gap, we conducted a thorough search for China's civil environmental cases and examined these cases in details. Our search was mainly based on two databases—Peking University law database and China Judgements Online (*zhongguo caipan wenshu wang*).⁴⁶ Peking University law database⁴⁷ provided the most court decisions on China's environmental tort cases before 2013 when court decisions were mostly held behind closed doors. Our efforts to conduct case searches also benefited greatly from the China Judgements Online (CJO). The CJO, initiated and administered by China's Supreme People's Court since 2013, upholds and publishes the most comprehensive court decisions, including environmental civil disputes. As part of the efforts made by China's Supreme People's Court to advance full disclosure of adjudication procedures, court verdicts and enforcement, people's courts at various levels are required to publish verdicts within seven days via the CJO after decisions become effective.⁴⁸ Although cases published by CJO are mostly from 2013 onwards, cases prior to 2013 have increasingly been digitalized and published. A thorough search from these two databases provided us with a large sample upon which the basic categorization and analysis were carried out at a later stage.

In light of the fact that the Judicial Opinion of 1992 first opened the door to shifting the burden of proof and considering the possibility that adjudication on the matter of causation may start to change afterwards, we searched for and collected court decisions between 1993 and 2014.⁴⁹ A total of 617 court decisions were initially collected. After a preliminary examination of all 617 decisions, 104 verdicts were found not to contain any legal reasoning about the liability of proof or its associated proof of causal links between the pollution and the damage. Therefore, the remaining 513 court decisions that contain legal reasoning on causation constitute the overall sample for further study and analysis. From a distributional point of view, we are confident to say that the 513 cases are representations of how Article 65 and 66, as well as the associated provisions from judicial interpretations, have been implemented across the country. As this is not an exhaustive collection of cases, we refrained from drawing conclusions on how cases from different provinces were handled differently. Generally these cases are representatives of how the different levels of courts that adjudicate the disputes and the types of pollution the cases involve. In terms of geographic location, the 513 cases were adjudicated by courts at various levels and from almost all over China, except Tibet (see Table 1).

Overall, provinces with higher economic growth have witnessed more civil disputes over the issue of environmental pollution. Jiangsu has the most cases disclosed

44. Guan (n 17) 65.

45. Ibid.

46. China Judgements Online, <<http://wenshu.court.gov.cn>> accessed 20 December 2017.

47. Peking University Law Database, <<http://www.pkulaw.cn>> accessed 20 December 2017.

48. Provisions of the Supreme People's Court on the Issuance of Judgments on the Internet by the People's Courts [最高人民法院关于人民法院在互联网公布裁判文书的规定], the Judicial Committee of the Supreme People's Court No. 26 (2013), 13 November 2013, art 7.

49. Since 2015, China's new Environmental Law allows Chinese Non-Government Organizations to initiate public interest litigation in relation to activities that harm the environment. See Richard Zhang and Benoit Mayer, 'Public interest environmental litigation in China' (2017) 1(2) *Chinese Journal of Environmental Law* 202.

Table 1 Distribution of 513 Chinese court decisions

Provinces	Number of court decisions	Provinces	Number of court decisions
Beijing	13	Shanghai	16
Tianjin	21	Chongqing	26
Heilongjiang	11	Jilin	14
Hebei	18	Liaoning	19
Henan	56	Shandong	26
Shanxi	4	Inner Mongolia	12
Ningxia	17	Shaanxi	1
Qinghai	2	Xinjiang	18
Sichuan	8	Yunnan	2
Guizhou	4	Jiangxi	9
Jiangsu	66	Zhejiang	21
Anhui	20	Fujian	10
Guangdong	16	Guangxi	49
Hainan	3	Hunan	24
Hubei	7	Tibet	—

Note: Compiled by authors based on the collection of 513 Chinese environmental tort cases.

from 1993–2014, with a total of 66 court decisions available. Surprisingly, the province of Guizhou, which was among the first to establish an environmental court that was initiated as part of the experiment by the Supreme People's Court and was specially granted to be innovative in dealing with cases,⁵⁰ had merely four civil cases available since 2007.⁵¹ From the perspective of adjudication levels, the majority of the cases were trials of first instance, with a total number of 328 cases. 172 cases were appealed and adjudicated for a second time at the upper level of courts. There were 13 cases that were re-examined and underwent retrial. In terms of the pollution types, water pollution was the most common pollution case in China and water pollution from the industrial sectors resulted in 232 disputes across the country. Disputes involving noise constituted a total number of 115 cases. Atmospheric (air) pollution and soil contamination generated 64 and 63 cases respectively. There are 39 cases involving three other forms of pollution, including marine pollution, radiation and odour. All together, these cases involve the major types of pollution that are regulated by the specific environmental laws in China.

4 BURDEN OF PROOF AND PROOF FOR CAUSATION IN CHINA'S ENVIRONMENTAL TORT LITIGATION: INSIGHTS FROM COURT DECISIONS

Evidence collection for both causation and the harmful results caused is a major obstacle for pollution victims in China.⁵² In general, China's Civil Procedure Law

50. Stern (n 4); Wang and Gao (n 7); Zhang and Zhang (n 26).

51. The environmental court in Guizhou was established in 2007 in the capital city of Guiyang to resolve a jurisdiction dispute that involved pollution from a fertiliser plant in the city's main water source. See Huang (n 5).

52. Guan (n 17) 65; Lv (n 25) 156.

sets a high bar for plaintiffs to bring civil disputes to courts.⁵³ To accept a case officially, Chinese courts often require substantial evidence concerning the harm, the source of harm and even evidence of a causal link, from the plaintiff.⁵⁴ Environment tort cases are no exception. For environmental tort litigation in China, our findings correspond with this general requirement. Chinese court decisions often contain a summary of evidence collected from both parties when the case is accepted by the court. In order to file a case with the court, victims of pollution most likely need to provide essential facts in relation to the pollution activities, the damage incurred and the causal link between them. The difficulties of collecting such evidence, particularly evidence that proves probability of the causal link, hinder the plaintiffs from bringing environment tort cases to court. In 2009, over a million tort cases were adjudicated by the courts in China, only 1,783 of which were environment torts.⁵⁵

The pollution victim's long march towards justice has just begun once the case reaches court. Because of Chinese courts' strong position on promoting dispute resolution that favours non-adversarial forms of settlement, Chinese judges prefer court-managed mediation that settles disputes fast and quietly.⁵⁶ While nationwide data is hardly available, a provincial report on court performance in the area of environmental protection from Jiangsu province suggests that from 2006 to 2010, courts in Jiangsu province accepted 502 environmental tort cases of first instance, of which 304 were resolved through mediation.⁵⁷ Putting this number into a percentage, around 61 percent of the environmental torts in Jiangsu from 2006 through to 2010 were handled through mediation.⁵⁸ In 2010 in particular, the percentage of mediation was as high as 75 percent.⁵⁹ Another study estimated a much lower figure: that of all the environmental law suits filed with courts in China, on average only around three percent of the environmental law suits will actually be adjudicated by judges.⁶⁰

The fact that a majority of cases are mediated by courts helps to explain why court decisions from environmental tort cases in China are rare and difficult to retrieve. The 513 environmental tort cases collected and examined, therefore, provide insights into the implementation gap on the proof of causation in China's environmental tort cases.

4.1 Who proves causation? Evidence from the court decisions

While the judicial interpretations and the new tort law have already placed the burden of proof for causation on the defendant, thereby relieving the plaintiffs of that major

53. Li (n 9) 810; Hu (n 9) 177.

54. Ibid.

55. Moser and Yang (n 6) 10895.

56. Ibid 10896.

57. Jiangsu People's Courts, 'Protecting the Environment through Litigation in Jiangsu People's Courts' [江苏法院生态环境司法保护状况] (2010) *Jiangsu Court Net*, <<http://www.jsfy.gov.cn/pdf/sthjjsf.pdf>> accessed 20 December 2017.

58. Ibid.

59. In China, courts with low rates of case completion often face penalty. Adjudication, mediation and execution all contribute to court's overall performance of case completion. See e.g. Benjamin Liebman, 'A Populist Threat to China's Courts?' in Margaret YK Woo and Mary Gallagher (eds), *Chinese Justice: Civil Dispute Resolution in Post-Reform China* (Cambridge University Press, 2011) 269.

60. Tun Lin and others, *Green Benches: What Can the People's Republic of China Learn from Environment Courts of Other Countries?* (Asian Development Bank, 2009) 5.

obstacle to proving their claims, the court decisions we studied have shown rather a contradicting story.

On the one hand, our study shows that the overall implementation of the relevant interpretations or the provisions in the tort law that shifts the burden of proof for causation still leaves much to be desired. Of the 513 court decisions studied, less than half (231 cases, around 44 percent) of the court decisions referred to the relevant interpretations or the provisions in the tort law as to shifting the burden of proof to the defendant. This means, from a judicial practice point of view, that most plaintiffs in the pollution torts still shouldered the burden of proof for causation from 1,993 to 2014. On the other hand, we can see some positive changes when studying the 513 decisions in two decades separately (137 decisions from 1993 to 2003, and 376 decisions from 2004 to 2014). Prior to 2003, shifting the burden of proof from the victim plaintiff to the polluter defendant was mainly based on two judicial interpretations, the Judicial Opinion of 1992 and the Judicial Explanation of 2001. We found that the implementation effects of these two judicial interpretations were rather limited, as merely 27 court decisions (around 20 percent) in fact incorporated the interpretations in the verdicts as the legal ground to shift the burden of proof to the defendant. From 2004 to 2014, the shifting of the burden of proof became more of a popular practice. Of the 376 court decisions studied, 207 decisions cited the relevant provisions and placed the burden of proof for causation on the defendant. Increasingly we can see Chinese courts shifting the burden of proof for causation to the defendant.

However, in judicial practice, at least in the 513 court decisions we studied, shifting the burden of proof for causation to the defendant does not relieve the plaintiff's liability to do so. According to the relevant judicial interpretations and articles 65 and 66 of the new tort law, plaintiffs shall not bear the burden of proof or at least minimize the effort to prove causation, given the fact that the less evidence provided by the plaintiffs, the harder it becomes for the defendant to prove that causation does not exist.⁶¹

Notwithstanding, there is explicit requirement by the judges in 415 cases that the plaintiff bore the liability to prove causation, regardless of whether the burden of proof was shifted to the defendant at a later stage. Proliferation of the shifting principle does not change the fact that 80 percent of the plaintiffs in the cases we studied are still required to prove causation—a serious departure from the judicial interpretations and legislations.

A distinguished case stood out in our sample—*Zhejiang Pinghu Shifan Farm v Five Chemical Factories in Buyun County*⁶²—which was heard by all levels of courts over 15 years from 1995 to 2009. The case was first brought to the local Pinghu Court (basic court) by the legal representative of the Farm, Yu Mingda, in 1995. Yu claimed that his frog farm was severely polluted by five chemical plants that neighbored the farm in the county and the death of tadpoles in his farm was caused by the pollution. The defendants denied causation. Despite the fact that the Supreme Court had adopted the shifting of the burden of proof for causation in its judicial opinion in 1992, the Pinghu court declared that the plaintiff was responsible for proving causation. Both the Jiaxing Intermediate Court and the Zhejiang Higher Court recognized the application of the shifting principle but they still placed the initial burden of proof for causation on the plaintiff. In the verdicts, both the Intermediate Court and the Higher Court

61. See Ma (n 39) 115–16.

62. *Zhejiang Pinghu Shifan Farm v Five Chemical Factories in Buyun County* (1998) Jiamin Zai Zhongzi No. 2.

shifted the burden of proof to the defendants but the evidence rendered by the defendants that there was no causal link between the death of Yu's tadpoles and the sewage discharged by the five chemical plants on the grounds that the plaintiff failed to provide an evaluation report, were favoured by the courts. In 2006, the Supreme Court accepted the case for re-examination and three years later in 2009, the Supreme Court reversed the decisions by the lower courts and ruled against the five chemical factories. In its verdict, the Supreme Court reiterated that according to the relevant judicial interpretations endorsed by the Supreme Court in 1992 and 2001, the defendant shall be exempted from tort liability only if the defendant can prove the lack of causation between the pollution and the damages incurred. The ruling was that the five chemical plants must compensate the plaintiff because they failed to prove that the causation did not exist.

In our sample, disparity of understanding and implementing the shifting principle does not only occur at various levels of courts, such divergences regarding who bears the burden of proof also emerge across the courts in China. For the rest of the court decisions in which the judges placed no burden of proof for causation on the plaintiffs, the following scenarios floated to the surface. These different scenarios are useful perspectives to understand how Chinese judges deal with complex issues surrounding facts and causal links between them.

The first scenario is in cases where the factual evidence is simple and clear, and the courts do not explicitly require any party to prove causation. As long as the factual evidence is endorsed by both parties, plaintiffs in these cases are usually relieved from proving causation.⁶³

The second scenario comes from cases where the plaintiff failed to provide sufficient evidence about the damage or the scope of damages. The courts, without taking any further investigation, ruled against the plaintiff that proving causal link lacks the factual basis. For example in *Bei Rongkuan v Lan Xianlu*,⁶⁴ the court stated that 'the facts and scope of damages are the basis for the environmental torts ... the plaintiff's claims bear no legal ground if the factual basis of damages cannot be proved'.

The third scenario appears in cases where the burden of proof for causation is shifted to the defendant while the plaintiff bears no burden at all to prove causation. This is exactly the case where burden of proof is inverted from the plaintiff to the defendant, as argued by many Chinese scholars. From a judicial practice point of view, judges in these cases strictly followed the shifting principle and required the defendant to prove the lack of causation. Ideally speaking, such cases are supposed to proliferate and be the mainstream of the adjudication for environmental torts. In our sample of 513 cases, however, judges ruled in only ten cases that burden of proof for lack of causation was borne by the defendant.⁶⁵

63. *Huang Jinfeng v Dazhuang Co. Ltd* (2010) Wanlong Qimin Chuzi No. 149; *Liao Xigen v Xumu LiangZhong Farm* (2002) Yumin Zhongzi No. 29.

64. *Bei Rongkuan v Lan Xianlu* (2013) Limin Chuzi No. 1397.

65. These ten cases include: *Zhou Fuqi v Jia Xianfeng* (2013) Suimin Chuzi No. 803; *Chen Momo v Jiangsu Electric Power Yancheng Company* (2013) Tingmin Chuzi No. 1139; *Zhu Zhanyang v Qidong Saiteke Construction Materials Company* (2011) Qihe Min Chuzi No. 0531; *Lu Peizhong v Wuming County Baoqiaolin Chemicals* (2011) Nanshi Min'er Zhongzi No. 282; *Luo Yong v Chongqing Tiantai Aluminium Company* (2009) Yuwu Zhongmin Zhongzi No. 14; *Hu Changlin v Jiangxi Jiujiang Power Supply Company* (2006) Lu Minyi Chuzi No. 116; *Wu Fuzhen v HuaiBei Zhongcheng Cement Company* (2004) Dumin Chuzi No. 253; *Guizhou Tongzi County Mutang Village 32 Farmers v Qijiang County Ganshui*

The last (but not least) scenario is in cases where neither party rendered evidence regarding causation and nor did the court initiate its own investigations into the core evidence around causation.⁶⁶ Such investigations are usually scientific studies commissioned by the courts and carried out by the official at the local environmental protection bureaus or certified agencies that assess the environmental damage and the causal link between the pollution and the harm.⁶⁷ In our sample, courts' initiative to investigate through acquiring scientific report unfolds a common practice—because environmental tort cases often involve complex factual issues, and judges are often alien to synthesis of scientific issues with legal liability, an official or a certified report often determines the court's decision. An example case is *Changle village No. 4 Production Unit v Guangxi Daxin Lead-Zinc Mine Factory*.⁶⁸ In this case the local environment monitoring centre, commissioned by the local court, confirmed in its report that the farmland cultivated by the production unit was polluted by the discharge from the Daxin mine factory. The local court endorsed the report as unassailable evidence for causation and ruled against the mine factory. As discussed in the section below, heavy reliance on the scientific report to form legal reasoning around causation has significant impacts on the diversity and validity of legal evidence to prove causation.

4.2 What proves causation? The form of evidence endorsed by the court decisions

In Chinese environmental tort cases, proving causation involves many scientific issues that many argue are better handled by specially trained judges. There are numerous proposals that civil court judges be trained to enhance their expertise adjudicating environmental cases.⁶⁹ Judges with environmental expertise are very scant in China and they closely relate to the challenge of proving causal links in environmental tort cases.⁷⁰

Chinese scholars, when interpreting articles 65 and 66 of the new tort law, have two different views towards proof of causation. Some believe that no matter whether the burden of proof has been shifted to the defendant or not, the plaintiff still bears the liability to render *prima facie* evidence to prove that there is a causal link between the pollution and the damage incurred.⁷¹ The *prima facie* evidence refers to the environmental tort cases in which the evidence before trial is sufficient to prove the causation before the court can accept the case. The defendant, on the other hand, can present substantial contradictory evidence at trial to prove otherwise. Others argue that what the shifting rule means for judicial practice is to reduce the plaintiff's liability to prove and the defendant should bear the burden of proof for lack of causation and in adjudication the defendant shall render substantial evidence to do so.⁷²

Mineral Company (2004) Qiangao Minyi Zhongzi No. 30; *Du Yannian v Shizuishan City Fengrun Chemicals* (2003) Shiqu Hemin Chuizi No. 36; *Bai Shouzheng v Ledu County Pharmaceuticals* (1997) Lemin Chuizi No. 18.

66. See Li (n 9) 819–21.

67. Ibid.

68. *Changle village No. 4 Production Unit v Guangxi Daxin Lead-Zinc Mine Factory* (2001) Guimin Zhongzi No. 107.

69. Knudsen (n 8); Li (n 4); Zhang and Zhang (n 26).

70. Moser and Yang (n 6); Hu (n 9); Stern (n 4).

71. Guan (n 17) 65; Ma (n 39) 115–16.

72. Lv (n 37) 33; Wang (n 24) 309.

A close examination of the 513 court decisions revealed that in the majority of the cases the plaintiff, in order to prove causal link, often rendered the following types of evidence to the court, including but not limited to (a) documentary evidence, such as images of the contaminated area, and notice of administrative penalty from the governmental agency; (b) records of inspection, mainly referring to the records of inspection conducted by the relevant government agencies, such as the local environmental protection bureau and records of inspections conducted by the courts; (c) evaluation reports from governmental agencies or qualified entities that assess the damage and its associated causal link; and (d) witness testimony. Among these types of evidence, Chinese courts give great deference to official or certified reports from administrative agencies or certified entities that assess the environmental damage or the causal link between the pollution and the harm.

The evaluation reports are undoubtedly the most common evidence endorsed by the courts. 314 of the 513 court decisions involved the evaluation of damages and causation, in which the plaintiff offered a commissioned evaluation report. The evaluation report can be divided into two categories. The first category refers to the official evaluation report made by the relevant administrative agencies with environmental protection duties, for example the environmental protection bureau, department of fisheries, department of agriculture and other environmental administrative departments at all levels. The official report was issued to the pollution victim after the pollution incident was reported to the relevant governmental agency. These reports often contained elaboration on the pollution incident and its cause, which later became essential evidence at trial to decide causation.⁷³ The second category of reports came from qualified or certified professional agencies. These professional agencies are either environmental monitoring and testing centres which are subordinated to the local environmental protection bureaus, or third-party independent environmental centres that are more commercially centred.

In our sample, more than 60 percent of the cases (314 cases) endorsed the evaluation report as the most essential piece of evidence to decide causal links between the pollution and the harm. Also in most cases, the evaluation report was commissioned by the plaintiff or requested by the plaintiff through the court's own investigation. In other words, when proving causation the plaintiff is much more likely to bear the burden of proof than the defendant in environmental tort lawsuits in China.

Of the 314 court decisions which endorsed an evaluation report rendered by the plaintiff as an essential piece of evidence to decide causation, 244 court decisions ruled in favour of the plaintiff's claim. Defendants in those cases often questioned the validity of the report but in very few cases defendants also introduced their own report.⁷⁴ For cases in which both the plaintiff and the defendant rendered the respective evaluation report, the court often prioritized the report produced by an evaluating institution with a higher rank and better prestige. The courts also set priority for the report which adopted a more reasonable methodology and had more clarity on elaborating the facts and causation. Because environmental tort cases often involved complicated scientific factors and because most judges in China are still not familiar with how to adjudicate environmental lawsuits under scientific uncertainty, Chinese judges rarely stray from the conclusions contained in an evaluation report.⁷⁵ Statistically, our sample suggested that the court decisions with respect to causation were highly consistent with the expert opinions contained in the evaluation report. Except in two cases, Chinese courts in 312 cases recognized the report as unassailable evidence

73. Moser and Yang (n 6) 10899.

74. Li (n 9) 819.

75. Moser and Yang (n 6) 10899.

to decide causation. The implication emanating from this finding is apparent—if the evaluating institution tends to recognize that the causal links between the pollution and the damage is established, the court will be most likely to rule in favour of the plaintiff, and vice versa.

In addition to the evaluation report, a testing result regarding whether the polluter-defendant's activity conforms with the environmental standards was the second highest form of evidence used to prove causation. The testing result, known as a compliance report, was often commissioned by the plaintiff to introduce at trial as part of the chain of evidence to prove causation. In very few cases, the defendant also rendered a compliance report.⁷⁶ There are 51 out of the 513 court decisions that included specific results indicating whether the detected pollutants have surpassed the environmental standards established by the environmental statutes. Different from the evaluation report which is a more comprehensive study on the environmental quality and factual causation between the pollution and the harm, a compliance report is often considered to be circumstantial and as indirect evidence in proving causation, due to the difficulty of proving non-compliance at the exact time when pollution occurred.⁷⁷ In our sample, a compliance report is vital in deciding causation particularly in cases such as water,⁷⁸ atmospheric⁷⁹ and noise pollution.⁸⁰ In each of the pollution cases, compliance reports were commonly used as a proof for causation. Chinese judges in

76. See for example, *Bian Jianbin v Xinjiang Yabao Ceramic Co. Ltd* (2007) Changzhong Minyi Chuzi No. 8. In this case the plaintiff claimed that the noise produced from the Yabao Ceramic factory had had negative impacts on his chicken farm and reduced egg production. The defendant, in order to prove that the factory's production activity conformed with the noise standard established by the relevant industrial and environmental authorities, introduced two compliance reports. The court ruled against the plaintiff on the basis that his claim lacked scientific evidence.

77. Hu (n 9) 177.

78. See for example, *Ling Qinghua v Guangzhou Railway (Group) Company* (2005) Zhu Zhongfa Minyi Zai Zhongzi No. 29. The plaintiff claimed that his fish farm was polluted by the pollutants from the coals that were placed on the outdoor loading deck at the Sifen railway station. The pollutants were carried by the rain water into this nearby fish farm, causing the death of all his fish. The plaintiff reported the incident to the local fishery bureau and the bureau, together with the environmental quality monitoring station under the environmental protection agency, detected the water pollutants in the plaintiff's fish farm. The level of pollutants detected were much beyond the national standards. At trial, the defendant also introduced a compliance report which was conducted almost a year later and the court dismissed the report. On the basis of the plaintiff's report, the court ruled in against of the defendant.

79. See for example a landmark class action in Fujian province. *Zhang Changjian and 1721 farmers v Fujian Nanping Chemical Co. Ltd* (2003) Ningmin Chuzi No. 1. The plaintiffs in the case claimed that the sulfur dioxide discharged by the chemical factory caused sickness of their plants. The plaintiff introduced a compliance report conducted by the environmental monitoring station, which proved that the pollutants succeeded the national standards. However, because the test sample was surrendered by the plaintiffs to the testing agency, the validity of the test was questioned and eventually dismissed by the court.

80. See for example, *Li Ming and Wang Jun v Beijing Zhuangwei Real Estate* (2005) Fengtai Minzi No. 02152. The plaintiffs in this case claimed that the water pump installed by the Zhuangwei Real Estate near their apartment had produced unbearable noise that significantly impacted their health. The couple, and their son, had to see doctors several times because of severe headaches. The plaintiffs commissioned the environmental monitoring station (under the district environmental protection agency) to test the degree of noise from the water pump and the test result indicated that the noise regularly lasted around ten minutes for every two

49 cases endorsed the compliance report as an essential piece of evidence to prove legal causation. The correlation between compliance report and court decision is the same as that in the evaluation report—if a compliance report confirms that there is a breach of the environmental standards, in a majority of cases the court will rule against the defendant, and vice versa.

Occasionally, Chinese judges also validated ‘well-known facts’ or common sense as proofs for causation, despite the fact that neither the plaintiff was able to render sufficient evidence nor the defendant could prove otherwise. For example, in *Zhou Fuqi v Guquanshan Bricks Factory* (2013),⁸¹ the judge held that ‘[i]t is a well-known fact that the brick factory needs approval from the relevant environmental protection agency to operate. The fact itself suggests that the brick factory is a source of pollution’. In our sample, Chinese judges using well-known facts or common sense to establish causation constituted 27 cases. In a noise pollution case for example, the judge demonstrated that ‘[t]he reality is the construction and the particular construction method adopted by the real estate developer produced noise and vibration. It is a well-known fact such noise and vibration cause damage to the plaintiff’.⁸² One of the model cases published by the Supreme People’s Court also contains proof for causation through ‘public recognition’ or ‘everyday life experience’. In *Jiang Jianbo v Jing Jun*, the judge pointed out that ‘[i]t is a public recognition that noise can cause harm to people’s health. Jiang’s claim that the noise causes his insomnia and mental trauma is in line with the everyday life experience and shall be presumed to be true’.⁸³

5 IMPLEMENTATION GAP AND IMPLICATIONS

5.1 Plaintiff’s burden of proof

Obviously, when it comes to proving the causation, and in the majority of cases, Chinese judges still place the initial burden on the victim plaintiff to link the harm to the polluter-defendant. Only then are the judges likely to shift the burden of proof to the defendant, either requiring additional information or seeking evidence that proves lack of causation. In our sample we can say that even the possibility of shifting the *ex post* burden of proof to the defendant is still low. Of the 513 verdicts, Chinese judges ruled against the plaintiff in 147 cases that there was lack of causation between pollution and harm. Among these 147 cases, only 20 cases saw the defendants render evidence proving the lack of causal link that was later favoured by the courts. Placing the initial burden of proof on the plaintiff has departed from the provisions stipulated in the law, yet some commentators see Chinese courts’ practices as appropriate especially under the tort law system.⁸⁴ The gap between the judicial interpretations and

hours, day and night, and the degree of noise had surpassed the national standards. The court ruled in favour of the plaintiffs and ordered the defendant to offer compensation up to 100 thousand RMB.

81. *Zhou Fuqi v Guquanshan Bricks Factory* (2013) Suimin Chuizi No. 803.

82. *Zheng Wa et al v Haikou Changxin Real Estate* (2003) Xiumin Yi Chuizi No. 401.

83. *Jiang Jianbo v Jing Jun* (2012) Midong Minyi Chuizi No. 283.

84. Xusheng Ma and Zhongmei Lv, ‘Legal Reasoning on Causation in Environmental Tort Cases’ [因果关系推定研究 – 以环境侵权为视角], in Zhongmei Lv and Xiangmin Xu (eds), *环境资源法论丛* [Forum on Environmental and Natural Resources Law] (China Law Press, 2005) 218–25; see also Hu (n 9) 176.

legislations endorsing the shifting of the burden of proof and the implementation of this principle in judicial practice, is gigantic. There is still a long march ahead for the shifting principle to be fully incorporated in the daily judicial practice concerning environmental tort cases at the lower level of courts.

Still, we have found some positive signs. Overall our collection of cases suggests that Chinese judges had adjudicated many more environmental cases in the period 2004–14 than in 1993–2003. From 2004 to 2014 there were 376 cases that were accepted and adjudicated by courts and the number from 1993 to 2003 was only 137. In the more recent court decisions, Chinese courts' reference to the relevant provisions that shift the burden of proof has had a significant increase. More than half (207 cases) of the court decisions from 2004 to 2014 explicitly referred to the shifting principle as part of the legal reasoning for burden of proof and for causation. Although Chinese courts' references to the relevant provisions do not change the fact that those provisions were not correctly enforced in most cases, such an increase suggests that Chinese judges are gradually incorporating the shifting principle into the enforcement. Our sample of cases collectively offers a sense that, very occasionally, Chinese judges relieved the plaintiff from the initial burden of proof for causation. In two model cases published by the Supreme Court, the decisions regarding proof for causation made by the lower courts were both reversed by the Supreme Court to correctly enforce the shifting principle.⁸⁵ Although the model cases published by the Chinese Supreme Court are considered to have some demonstrative effects on adjudication and law enforcement by the lower level courts,⁸⁶ such effects are far from reaching tort litigation involving environmental pollution.⁸⁷ The reasons for this are obvious. As environmental lawyers know, preserving evidence in environmental pollution cases is a difficult task for both the plaintiff and the defendant.⁸⁸ Placing the initial burden of proof on the plaintiff will turn away most pollution victims from filing cases at court. A wide enforcement of the shifting principle means that the courts need to hear every pollution case, regardless of the standards for accepting cases established by the Chinese courts. In doing so there will be environmental lawsuits flooding the courts against the polluters, which will consequently impact local economic performance. Mainstreaming the universal principle of the tort law into environmental tort litigation is to avoid this from happening. As observed by scholars researching China's specialized courts, this is why Chinese judges often tend to be risk-averse in environmental tort litigation, because of the court's deep local root within local government that is still largely driven by local economic growth.⁸⁹

5.2 Chinese courts' heavy reliance on evaluation reports

Faced with scientific uncertainty of pollution and the difficulty of synthesizing such uncertainty with legal provisions, Chinese judges often take refuge in comprehensive evaluation reports. Our collection of court decisions collectively show that the

85. These two cases were discussed above. See *Zhejiang Pinghu Shifan Farm v Five Chemical Factories in Buyun County* (1998) Jiamin Zai Zhongzi No. 2; *Jiang Jianbo v. Jing Jun* (2012) Midong Minyi Chuzi No. 283.

86. Zhang and Zhang (n 26) 382.

87. Zhaoxia Yang and Jing Huang, 'How to deal with environmental disputes in China' [如何应对中国环境纠纷] (2012) Z1 *Environmental Protection* [环境保护] 66.

88. Li (n 9); Huang (n 10).

89. Goelz (n 11) 169; Zhang and Zhang (n 26) 382.

plaintiff is often required to commission such reports which are extremely hard for them to afford. Failure to provide an evaluation report from a qualified institution by the plaintiff is often used to prove lack of causation by the defendant. As discussed in the cases above, without an evaluation report the plaintiffs are more likely to lose the lawsuit.

Chinese courts' deference to the evaluation report has given rise to a number of problems. For the plaintiff, given that Chinese judges place great emphasis on the evaluation report, the report seems to have become the only clue to prove causation. This is a problem for two main reasons. Firstly, the cost associated with an evaluation report is very high. Some Chinese environmental advocates and scholars reveal that a basic evaluation report often costs much more than the amount of monetary compensation claimed by the plaintiff, not to mention an evaluation report that is more technically demanding.⁹⁰ Such a high cost for evaluation is argued to be the most important deterring factor for the plaintiff to render sufficient evidence, even though they do not technically bear the burden of proof.⁹¹ Secondly, because of the temporary character of some pollution incidents, the plaintiff often faces a challenge in preserving the evidence before it is too late to collect evidence at trial. This challenge is two-fold, as conducting an evaluation report before trial carries a potential risk of the case not reaching court for whatever reasons. Additionally, if the plaintiff disagrees with the outcome of the report it is very difficult for them to find or even afford another institution to provide an additional report. For the courts, heavy reliance on the evaluation report while excluding other evidence to prove whether causal links between the pollution and the harm exist has departed from the nature and purpose of civil adjudication. Our sample suggested that Chinese judges, when adjudicating environmental tort cases, have largely refrained from the role of the judiciary that requires legal reasoning and synthesis of complex factual composition of environmental pollution with legal liability. Instead, they have become rather mechanical in borrowing conclusions regarding causation from scientific study conducted by an evaluation institution. In this regard, in most cases the Chinese courts' establishment of legal causation does not go beyond the factual causation established by the evaluation institution. Previous studies may have provided an argument for this phenomenon. As observed by some scholars, China's environmental tort cases are compensation-centred, and the plaintiff, as the pollution victim, often claims for compensation for the loss rather than for restoring the environment.⁹² Furthermore, van Rooij et al argue that environmental tort cases are not easy to be handled through mediation because pollution victims are often 'angry or radicalized when the case reaches court'.⁹³ Establishment of factual causation by a qualified or certified institution enjoys a much higher acceptance by both parties at trial and Chinese courts regularly dismiss evaluation report from institutions without official certification.⁹⁴ In this way the compensation-focused adjudication values more of the factual causation of a pollution incident and shifts the focus of judiciary towards outcome delivery for the plaintiff, so that the court can complete the case. In doing so the Chinese courts, through heavy reliance on evaluation reports to make judicial decisions, can hardly define themselves as neutral adjudicators. As some legal practitioners commented,

90. Yang and Huang (n 87); Huang (n 10).

91. Moser and Yang (n 6) 10899.

92. Moser and Yang (n 6) 10898; van Rooij (n 8) 189.

93. van Rooij and others (n 15) 5.

94. Li (n 17) 818–21.

Chinese courts' over-emphasis on factual causation has made evaluation reports the 'king of the evidence' (*zhengju zhiwang*).⁹⁵

6 CONCLUSION

This study of court decisions generated from China's environmental tort litigation cases leads to mixed findings about enforcing provisions regarding burden of proof and proof for causation. While the general trend suggests that Chinese judges have increasingly referred to the relevant judicial interpretations and legal provisions that shift the burden of proof in adjudicating environmental torts, in most cases these interpretations and provisions were not correctly enforced. When it comes to proving causation between the pollution and the harm, the plaintiff still bears the initial liability to introduce evidence to the judges. Only then were the judges likely to shift the burden of proof for lack of causation to the defendant.

The disparity of adjudicating environmental tort cases in China reveals an important link between having new laws 'on the books' and the environmental law enforcement 'in practice' at the Chinese courts—with no clear and coherent judicial interpretations, there would be no establishment of consistent and robust adjudication for environmental pollution in China. Further to clarify the issues of burden of proof and proving causation, the Supreme People's Court issued a Judicial Interpretation of Several Issues on the Application of Law in the Trial of Disputes over Liability for Environmental Torts in June 2015. This timely judicial interpretation addresses several issues including the standards of filing cases at Chinese courts and the liability of proof for causation, which are central to the findings of our study. Starting from 3 June 2015, pollution victims, when filing cases at the People's courts, are not required to surrender substantial evidence proving causation. Instead, some preliminary evidence that are able to prove the pollutants discharged by the polluter are relevant to the damage incurred is sufficient to fulfil the plaintiff's liability of proof.⁹⁶ The polluters, on the other hand, shall bear the liability to surrender substantial evidence in order to prove that the polluter's pollution has no causal relationship with the damage.⁹⁷

The findings of this study have also discovered two insights for researching the enforcement of China's environmental law through civil litigation, as well as studying the processes of adjudication at Chinese courts. To begin with, more empirical studies are required to explore how Chinese judges review and validate scientific studies that are contained in the form of evaluation reports. Our study of the 513 courts decisions reveals that evaluation reports were critical in determining Chinese court's decisions on environmental torts. However due to the limited information presented in the court decisions, we are unable to address a set of interesting questions: What factors do

95. Jinhua Intermediate Court, 'Research Report on the Assessment and Validation of the Evaluation Report' [对鉴定意见审核与认定的调研报告] (2013) *Jinhua Intermediate Court*, <<http://www.jhcourt.cn/Page/NewsShow.aspx?id=10675>> accessed 20 December 2017.

96. In addition, pollution victims are still required to provide evidentiary materials to the facts that the polluter(s) discharged the pollutants and damage has been caused to the pollution victims. See art 6, Supreme People's Court, 'Interpretation of Several Issues on the Application of Law in the Trial of Disputes over Liability for Environmental Torts' [关于审理环境侵权责任纠纷案件适用法律若干问题的解释] (2015) *Supreme People's Court*, <<http://www.court.gov.cn/fabu-xiangqing-14615.html>> accessed 20 December 2017.

97. *Ibid*, art 7.

Chinese judges take into account when reviewing and validating the evaluation report? What accounts for the gap between the 'law in books' and 'law in practice' regarding the burden of proof and proof for causation in China's environmental tort litigation? We hope that findings derived from this study can serve as the basis for further study into the process of adjudication in China's environmental tort litigation.

Second, Chinese courts' heavy reliance on evaluation reports has made the questions in relation to the third party evaluation institutions ever pressing. Our study suggests that the evaluation institutions play a crucial role in environmental tort litigation in China, because the conclusions regarding causation contained in the certified evaluation reports are most likely sway the court's decision on environmental torts. Chinese scholars and environmental advocates often point out the lack of monitoring and supervision of the evaluation institutions and they also question the ability of these institutions to avoid interference in the process of discovering the factual component of a pollution incident. But these questions are still under researched, especially from the regulation and governance perspective. Further studies are needed to understand how these evaluation institutions are created and regulated, and to what extent their operations are in line with the integrity and governance requirements.