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Does Bankruptcy Law Prevent Internalization of Environmental Costs: Evidence from China

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DOES BANKRUPTCY LAW PREVENT INTERNALIZATION OF ENVIRONMENTAL COSTS: EVIDENCE FROM CHINA

*Xingwei Li**

I. INTRODUCTION

In 2019, the Intermediate People's Court of Qiqihar City, Heilongjiang Province, China declared Heihua Co., Ltd ("Heihua") bankrupt.[1] Despite the fact that Heihua had made great contributions to economic development within the Heilongjiang province, it was also at fault for discharging vast amounts of smoke, dust, and heavy metals into the surrounding land and air which caused subsequent environmental damage, in terms of land and air pollution, as well as water contamination.[2] Bankruptcy was attributable to these environmental issues, as well as the firm's aging equipment, yet the aforementioned environmental issues were not resolved following the completion of the bankruptcy process; with the soil and groundwater at the former Heihua site containing a large quantity of heavy metals far in excess of national standards, the site was later identified as heavily contaminated.[3] Cleanup and restoration of the contaminated site is in the public's best interest.[4] As the liquidation process of the bankrupt company has since concluded, it follows that any future rectification of consequential environmental damage stemming from the Heihua site must be covered by public funds.[5]

This highlights a common issue: the polluting company will be rendered bankrupt with several of its environmental issues still outstanding and pass any such liability on to the public—in other words, the cost of environmental liability will be borne by public funds.[6]

Based on the current environmental legal framework in China, both the Tort chapter of the Civil Code 2020 and the Environmental Protection Law 2014 apply the "polluter pays" principle, which requires polluters to assume responsibility for the cost of environmental

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[1] Xingwei Li, Environmental Liabilities and Insolvent Polluters in China Learning Lessons from the UK and US (Oct. 2022) (Ph.D. dissertation University of Leeds) (on file with author); *see* Press Release, People's Ct. Announcement, Bankruptcy Announcement of Heilongjiang Heihua Group (Feb. 4, 2021) (on file with author).

[2] Li, *supra* note 1 at 1; *see Annual Report of Heilongjiang Heihua Co., Ltd 2000*., http://www.sse.com.cn/disclosure/listedinfo/announcement/c/600179_2000_0.pdf [https://perma.cc/R35Y-MYVH] (last visited Mar. 2, 2024).

[3] *See* Press Release, Fularki Dist. People's Gov't, Announcement on the preliminary investigation results of soil pollution in the original factory area of Heilongjiang Heihua Group Co., Ltd. in Fularji District (Dec. 16, 2021) (on file with author).

[4] *See id*; *see also* Xinhua, *Xi Stresses for Full Revitalization of Northeastern China*, GLOB. TIMES (Sept. 9, 2023), https://www.globaltimes.cn/page/202309/1297875.shtml [https://perma.cc/YR3G-SFTC].

[5] *See* Kevin Bogardus, *Bankrupt Companies Avoid More Than $700 Million in Cleanup Costs*, CTR. PUB. INTEGRITY (May 3, 2007), https://publicintegrity.org/environment/bankrupt-companies-avoid-more-than-700-million-in-cleanup-costs/ [https://perma.cc/JZM4-WUMV].

[6] *See* U.S. GOV'T ACCOUNTABILITY OFF., GAO-05-658, ENVIRONMENTAL LIABILITIES: EPA SHOULD DO MORE TO ENSURE THAT LIABLE PARTIES MEET THEIR CLEANUP OBLIGATIONS 25 (2005).

cleanup and/or its remediation and restoration.[7] However, the polluter pays principle is being challenged by Chinese Enterprises Bankruptcy Law ("EBL").[8]

In the context of EBL, environmental liability is classified as a general, unsecured liability in the order of distribution during the winding up process.[9] In most cases generalized, unsecured claims face difficulty in being paid out of the funds from the winding up process, which results in the externalization or "transfer" of environmental costs from the bankrupt polluter to the public.[10] These costs are known to economists as negative externalities.[11]

If such environmental costs were to be externalized to society, it would not be fair for those ordinary citizens that would be forced to foot the bill on behalf of a bankrupt firm.[12] Those who cause damage to the environment ultimately benefit more from their actions because the cost of the damage, such as the government-funded cleanup and reduction in environmental quality, is not borne by individuals in proportion to their responsibility for the damage, but affects everyone indiscriminately.[13] Likewise, this renders environmental costs free for those polluting who would otherwise be responsible for any damage caused, since it can simply be externalized to the public in the event of bankruptcy, or, in other words, companies may be incentivized to seek bankruptcy in order to avoid any such environmental liability.[14] As such, if the externality of environmental costs to society was altered so that the respective polluters bore the costs they are responsible for, it would likely improve social justice with respect to post-bankruptcy liabilities.[15]

As an emerging economy, China has yet to gain the relevant experience necessary to effectively address the environmental liability of bankrupt polluters.[16] Therefore, this Article

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[7] *See* zhōnghuá rénmín gònghéguó mínfǎ diǎn (中华人民共和国民法典) [Civil Code of the People's Republic of China] (promulgated by NPC Legis. Comm'n, May 28, 2020, effective Jan. 1, 2021), art 1231-35; *see also* Zhōnghuá rénmín gònghéguó huánjing bǎohù fǎ (中华人民共和国环经保佑法) [Environment Protection Law of the People's Republic of China] (promulgated by the Standing Comm. Nat'l People's Cong., Apr. 24, 2014, effective date Jan. 1, 2015), art 59, 64.

[8] *See* David L. Eaton et. al., *Alert: China's New Enterprise Bankruptcy Law*, KIRKLAND & ELLIS LLP (Oct. 2006), https://www.kirkland.com/siteFiles/kirkexp/publications/2272/Document1/Chinas_New_Enterprise_Bankruptcy_Law.pdf [https://perma.cc/A24T-FR8A] ("identifying the recent promulgation of China's Enterprise Bankruptcy Law of 2006 which clarified 'many provisions' of China's 1986 Interim Enterprise Bankruptcy Laws.").

[9] *See generally id.* ("First, post-bankruptcy administrative costs and expenses are entitled to first priority in distribution; Second, post-bankruptcy liabilities for 'common benefits' are entitled to second priority in distribution. . . " author's go on to Provide an extensive list for "common benefit" liabilities); *see* Edith Hotchkiss, et. al., *Default and Bankruptcy Resolution in China*, 15 ANN. REV. FIN. ECON. 369 (Nov. 2023) (noting that the 2006 Enterprise Bankruptcy Law prioritizes repayments to secured creditors during the restructuring process.).

[10] *See* Michael Ohlrogge, *Bankruptcy Claim Dischargeability and Public Externalities: Evidence from a Natural Experiment*, AM. L. ECON. REV., 12-13 (forthcoming) (manuscript at 4, 12-13) (avalilable at https://ssrn.com/abstract=3273486).

[11] *See id.*

[12] *See* Zahar Alexander, *Implementation of the polluter pays principle in China*, 27 REV. EUR. COMPAR. INT'L. ENV'T L., 293, 294 (2016).

[13] *See id.* at 295.

[14] *See id.* at 296.

[15] *See id.*

[16] *See* Wang Chen, *China's Polluted Land Sold Off*, CHINA DIALOGUE (June 3, 2019), https://chinadialogue.net/en/pollution/11290-china-s-polluted-land-sold-off/ [https://perma.cc/H3HT-BENA].

examines how Chinese law treats environmental liabilities in bankruptcy proceedings.[17] In addition, this Article will discuss future direction to reform the EBL to internalize environmental costs in bankruptcy proceedings.[18]

II. THE MAIN FEATURES OF THE CHINA ENTERPRISES BANKRUPTCY LAW 2006

A. The Advances of the EBL 2006

The current bankruptcy law, China Enterprise Bankruptcy Law 2006 (the "EBL 2006"), was enacted in 2006 and took effect on June 1, 2007.[19] Compared with the previous bankruptcy law, China Enterprise Bankruptcy Law 1986 (For Trial Implementation) (the "EBL 1986"), the EBL 2006 is more comprehensive and sophisticated. The EBL 1986 consists of only six chapters and forty-three provisions, which primarily deal with the bankruptcy of state-owned enterprises.[20] By contrast, the EBL 2006 is more inclusive and implements many contemporary bankruptcy principles.

First, the EBL 2006 applies to a wider range of business entities.[21] The EBL 1986 can only be used by state-owned enterprises, whereas the EBL 2006 is open to almost all types of enterprises, including state-owned and private companies.[22] Article 2 of the EBL 2006 states that "where an enterprise with independent legal personality fails to pay its debts that are due, or where such an enterprise's liabilities exceed its assets, it may be liquidated according to the relevant provisions of this law."[23] This means that the EBL 2006 is intended to create an equal access to bankruptcy law for all enterprises.[24]

Second, the EBL 2006 established, for the first time in China, the profession of bankruptcy administrators.[25] Under the EBL 1986, it was routinely a government-organized liquidating committee full of officials that serve as the liquidator in the bankruptcy of state-owned enterprises.[26] Therefore, there is little room for professionals, like accountants and

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17 *See infra* Part II-IV.

18 *See infra* Part V.

19 *See* Zhōnghuá Rénmín Gònghéguó Qǐyè Pòchǎn Fǎ (中华人民共和国企业破产法) [The Enterprise Bankruptcy Law of the People's Republic of China] (promulgated by NPC Legis. Comm'n, Aug. 27, 2006, effective Jun. 1, 2007) (hereinafter PRC Enterprises Bankruptcy Law). For a translated outline of China's Enterprise Laws enacted in 2006, *see The Enterprise Bankruptcy Law of the People's Republic of China*, LEHMAN, LEE & XU https://www.lehmanlaw.com/resource-centre/laws-and-regulations/company/the-enterprise-bankruptcy-law-of-the-peoples-republic-of-china.html, [https://perma.cc/MC5D-8VYB] (last visited May 13, 2024) (providing a translated outline of China's Enterprise Laws enacted in 2006); *see also* Edith Hotchkiss et. al., *Default and Bankruptcy Resolution in China*, 15 ANN. REV. FIN. ECON. 369, 377 (Nov. 2023).

20 *See* Henry R. Zheng, *Bankruptcy Law of the People's Republic of China: Principle, Procedure & Practice,* 19 VAND. J. TRANSNAT'L L. 683, 696 (1986).

21 *See* Eaton, *supra* note 8.

22 *See id.*

23 *See* PRC Enterprises Bankruptcy Law, *supra* note 19, art. 2.

24 *See* Hotchkiss et. al., *supra* note 19, at 377.

25 *See id.*

26 *See Enterprise Bankruptcy Law of the People's Republic of China – Articles 24-27*, CHINALAWINFO CO., LTD. (Nov. 1, 1988), https://www.lawinfochina.com/display.aspx?lib=law&id=1170 [https://perma.cc/X399-SA46].

lawyers, to play a role. The government involvement in the bankruptcy of state-owned enterprises was criticized for violating market norms.[27] To build a market-based corporate bankruptcy system, the EBL 2006 relies on independent and qualified bankruptcy administrators to manage the property of bankrupt companies.[28] Under the EBL 2006, many law and accounting firms have been qualified to practice corporate bankruptcy.[29] However, Article 24 of EBL 2006 still retains the liquidation committee organized by the government, as well as qualified bankruptcy administrators, who will be appointed as bankruptcy representatives.[30] Although lawmakers aim for a committee formed by the government to solve the issue of bankruptcy of state-owned enterprises, this is not clearly defined in EBL 2006, and some scholars are concerned that it may lead to confusion or abuse in practices.[31]

Third, the EBL 2006 embraces international best practice by promoting corporate rescues. Chapter 8 of the EBL 2006 specifies how a corporate reorganization/rescue procedure can be conducted to avoid devastating company liquidations.[32] Reorganization means that the bankrupt debtor does not need to enter into the liquidation proceedings—instead, a rescue plan will be pursued to revive a beleaguered company.[33] This rescue mechanism is under the guidance of the court and is designed to ensure that the debtor and its creditors reach an agreement on the reorganization plan.[34] This means that the EBL 2006 law not only facilitates exit from the market but also prevents viable companies from being unnecessarily liquidated.[35] The reorganization mechanisms give an opportunity to financially bankrupt, but economically viable, companies to seek rehabilitation.[36]

Fourth, the EBL 2006 sets up clear rules to respect and honor securities.[37] Under the EBL 1986, employee claims trump securities.[38] This inevitably harms the interests of secured creditors, most of them banks, and is not in line with the trend of international bankruptcy law.[39] The new EBL 2006 gives priority to secured claims in bankruptcy proceedings: secured assets must be used to pay secured creditors first, and if there is a balance after fully paying secured creditors, the balance can go to the general property of the company which is to meet the claims of all unsecured creditors, including employees.[40] This is especially true for Chinese banks,

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[27] *See* Charles D. Booth, *The 2006 PRC Enterprise Bankruptcy Law: The Wait Is Finally Over*, 20 SING. ACAD. L. J. 275, 285 (2008).

[28] *See* Zhang Zinian, *Resolving Corporate Insolvencies in China: The Gap between Law and Reality*, 27 UNIV. MIAMI INT'L & COMP. L. REV. 370, 371 (2020).

[29] *See* PRC Enterprises Bankruptcy Law, *supra* note 19, art. 24.

[30] *See id.*

[31] *See* Zinian, *supra* note 28, at 377-78.

[32] *See* Adriaanse Jan, *The Uneasy Case for Bankruptcy Legislation and Business Rescue*, 2 NOTTINGHAM INSOLVENCY & BUS. L. E-J. 119 (2014).

[33] *See* Emily Lee, *The Reorganization Process under China's Corporate Bankruptcy System*, 45 INT'L LAW. 939, 940-41 (2011).

[34] *See* Cassandra Nicole Thomazios, *Corporate Rescue Mechanisms*, MAHWENGKWAI & ASSOC. (July 6, 2020), https://mahwengkwai.com/corporate-rescue-mechanisms/ [https://perma.cc/4X26-55S7].

[35] Li, *supra* note 1, at 39.

[36] *See* Lee, *supra* note 33, at 941.

[37] Li, *supra* note 1, at 39.

[38] *See* Henry R. Zheng, *The Enterprise Bankruptcy Law of the People's Republic of China (for Trial Use): A Translation*, 19 VAND. L. REV. 733, 739 (2021).

[39] Li, *supra* note 1, at 39.

[40] *See* PRC Enterprises Bankruptcy Law, *supra* note 19, art. 109.

because they are the major creditors for Chinese companies.[41] The bank charges the company's assets as security and then provides the loan.[42] If secured creditors are not protected in the event of bankruptcy, it means that these losses are passed on to the bank.[43] Evidently, Chinese legislators have recognized the importance of securities to support the sustainability of China's banking sector.[44]

B. The Rescue Procedure: Reorganization

Reorganization is the main rescue procedure under the EBL 2006 Chapter 8.[45] According to the provisions of EBL 2006, the debtor or its creditor may file directly to the court for reorganization.[46] To promote more rescues, even if there is an involuntary liquidation, the company or its shareholders[47] can request the court to convert it into a reorganization procedure.[48] When the applicant submits an application for reorganization to a court of competent jurisdiction, the court may approve the application for reorganization and appoint an administrator to supervise it.[49] The court will then notify all creditors.[50] At the same time, the court informs the creditors of the deadline of submitting claims and issues of the first creditors' meeting.[51] This provision demonstrates how bankruptcy law protects the equality of creditors.[52] Creditors shall declare their claims to the administrator, who examine the claims upon receipt of the declaration materials and submit them to the first creditors' meeting for verification.[53] After the examination of the claims, the debtor or administrator will begin to formulate a reorganization plan.[54]

During the preparation of the reorganization plan, the debtor may continue to operate and manage the property and prepare a draft reorganization plan under the supervision of the

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[41] *See* Wei Chuyi & Cheng Yongwei, *The Predicament of Bank Creditors in Chinese Bankruptcy and the Way Out*, SSRN (Apr. 13, 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2952350 [https://perma.cc/TU3A-PHX4].

[42] Li, *supra* note 1, at 39.

[43] *See* Wei & Chen, *supra* note 41.

[44] *See* Emily Lee & Karen Ho, *China's new Enterprise Bankruptcy Law: A great leap forward, but just how far*, 19 INT'L INSOLVENCY REV. 145, 170 (2010).

[45] Li, *supra* note 1, at 40.

[46] *See* PRC Enterprises Bankruptcy Law, *supra* note 19, art. 70.

[47] *See id.* (explaining that when a creditor applies to put his debtor into bankruptcy liquidation, the debtor, or his capital contributors whose capital contribution makes up one-tenth or more of the debtor's registered capital, may apply with the people's court for reorganization after it accepts the bankruptcy application and before declaring the debtor bankrupt).

[48] *See id.* at art. 70.

[49] *See id.* at art. 22.

[50] Li, *supra* note 1, at 40.

[51] *See* PRC Enterprises Bankruptcy Law, *supra* note 19, art. 14.

[52] *See* REBECCA PARRY, YONGQIAN XU & HAIZHENG ZHANG, CHINA'S NEW ENTERPRISE BANKRUPTCY LAW: CONTEXT, INTERPRETATION AND APPLICATION 23 (Routledge 2010).

[53] *See* PRC Enterprises Bankruptcy Law, *supra* note 23, art. 57-58.

[54] *See id.* at art. 80.

administrator.[55] The administrator may also carry out the entire process.[56] The draft reorganization plan should be submitted to the court within six months, and creditors shall vote on whether or not to approve it at the creditors' meeting.[57] If the reorganization plan has been voted down by creditors, the debtor or the administrator may still file to the court for a cram-down approval.[58] When the reorganization plan is approved, the debtor shall implement the plan under the supervision of the administrator.[59] In the event that the reorganization plan is rejected by both the creditors and the court or that the company's businesses deteriorate further during the implementation of an approved reorganization plan, the rescue procedure may be terminated and the company will be placed into liquidation.[60]

C. Liquidation

Liquidation provides an orderly route for failed companies to exit the market to protect a wide range of stakeholders, such as creditors and employees.[61] If the reorganization of the company fails, the court declares the debtor bankrupt in accordance with the provisions of the EBL 2006.[62] The court shall make a public announcement and notify the relevant creditors and administrator within the prescribed time.[63] In addition, the court shall appoint the bankruptcy administrator, and all creditors will declare their claims to the administrator at this time.[64] The administrator will then fully take over the bankrupt enterprise and be responsible for the liquidation, valuation, disposal and distribution of the bankruptcy property under the supervision of the court.[65] Afterward, the administrator will prepare a plan for the distribution of the bankruptcy property and submit it to the creditors' meeting for discussion.[66] If the plan passes the creditors' meeting, it will be submitted to the court for approval.[67] Lastly, the administrator will dispose of and distribute the bankruptcy property according to the distribution plan.[68] This marks the end of the bankruptcy proceedings where the company officially withdraws from the market.[69]

EBL 2006 is a modern bankruptcy law and established a bankruptcy legal framework in China.[70] However, the EBL 2006 is not suited to claims for environmental liability.[71] In the

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55 *See id.* at art. 73.
56 *See id.* at art. 73-74.
57 *See id.* at art. 79.
58 *See* Enterprises Bankruptcy Law, *supra* note 23, art. 79.
59 *See id.* at art. 89, 94.
60 *See id.* at art. 93.
61 *See* Ziad Raymond Azar, *Bankruptcy Policy: A Review and Critique of Bankruptcy Statutes and Practices in Fifty Countries Worldwide*, 82 AM. BANKR. L. J. 1, 29, 69 (2008).
62 *See* PRC Enterprises Bankruptcy Law, *supra* note 23, art. 107.
63 *See id.* at art. 107.
64 *See id.* at art. 22.
65 *See id*. at art. 22-24.
66 *See id.* at art. 111.
67 Li, *supra* note 1, at 42.
68 *See* PRC Enterprises Bankruptcy Law, *supra* note 19, art. 116-117.
69 Li, *supra* note 1, at 42.
70 *See* Zhang Zinian, *supra* note 28, at 380.
71 Li, *supra* note 1, at 42.

liquidation procedure, the provisions of the EBL 2006 focus more on traditional debts.[72] Environmental claims are not provided for in this bankruptcy law.[73] This increases the difficulty for environmental liabilities claims in bankruptcy cases.[74] Furthermore, the EBL 2006 provides for a new order of distribution and confirms that priority claims are in Articles 43 and 113.[75] However, environmental liability is not mentioned in the priority claims, which means it should be classified as general claims.[76] Therefore, the environmental liability of bankrupt polluters has become an issue because the provisions on environmental liabilities in the EBL 2006 are blank.[77] It results in the environmental liability of bankrupt polluters being ignored and transferred to public funds.[78]

III. CASE STUDIES

EBL 2006 for China was a milestone in legislation that established a market-based corporate bankruptcy profession and mentioned cross-border insolvencies.[79] China promulgated the modern EBL 2006 to provide an orderly exit for bankrupt enterprises and to protect creditors.[80] From this point of view, it was undoubtedly successful.[81] However, in the past decade a number of problems have emerged with bankruptcy practices, and these issues have exposed defects within the EBL 2006.[82] The environmental liability of bankrupt polluters is one such defect.[83]

A. Shenyang Smelter Factory

Shenyang Smelter was declared bankrupt in 2000 and was the first state-owned enterprise in China to go bankrupt due to environmental problems.[84] In the past, Shenyang Smelter accounted for one-tenth of China's total output of non-ferrous metals.[85] The enterprise has a high output of gold and silver, and it was the production base of gold and silver in China.[86]

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72 *Id.*
73 *Id.*
74 *Id.* at 2.
75 *See* PRC Enterprises Bankruptcy Law, *supra* note 19, at art. 43, 113 ("The bankruptcy property shall, after the expenses for bankruptcy proceedings are defrayed and the debts incurred for the common good of creditors are repaid first, be liquidated according to the following order: (1) the wages, (2) the social insurance and the taxes and (3) the common bankruptcy claims.").
76 Li, *supra* note 1, at 43.
77 *Id.*
78 *Id.*
79 *Id.*
80 *See* Ravi Bendapudi, *People's Republic of China Bankruptcy Law*, 6 SANTA CLARA J. INT'L L. 205, 206 (2008).
81 *See id.* at 209.
82 Li, *supra* note 1, at 43.
83 *Id.*
84 *Id.*
85 *Id.* at 43-44.
86 *Id.* at 44.

Shenyang Smelter has built a complete heavy metal processing system, including copper, lead, zinc, gold and silver, sulfuric acid and high purity metal semiconductor materials, which together form a large and comprehensive heavy non-ferrous metal smelting enterprise.[87] However, these prominent achievements have also produced a very serious pollution problem, such as exhaust fumes.[88] According to relevant statistics, Shenyang Smelter emits more than 2000 tons of dust in the air every year.[89] In these fumes, the average concentration of sulphur dioxide in the atmosphere around the factory is one to four times higher than the national standard, and the content of lead exceeds the standard by 150 times.[90] Furthermore, Shenyang Smelter releases 26,000 to 27,000 tons of sewage every day, and more than 370 tons of heavy metals are discharged from sewage each year.[91] Lastly, waste residue pollution is also an important pollutant arising from the business of Shenyang Smelter.[92] Shenyang Smelter produces 260,000 tons of waste residue every year.[93] This waste seriously pollutes the surrounding land and agriculture.[94]

After the 1980s, although Shenyang Smelter introduced some measures to reduce environmental pollution, the effect of these measures is not evident for two reasons. Firstly, Shenyang Smelter set up an internal environmental protection department. Secondly, for the company to strengthen pollution control, the treatment costs would be close to 10 million yuan per year.[95] However, these measures did not solve the pollution problem of Shenyang Smelter.[96] First of all, the internal environmental protection department is under the internal supervision and leadership of Shenyang Smelter.[97] This means that it lacks independence and mandatory powers, and cannot effectively assume responsibility for supervision.[98] Moreover, 10 million yuan (USD 1.41 million) is a relatively small amount and is not sufficient to solve these environmental problems.[99] The main cause of pollution in Shenyang Smelter is its outdated production equipment.[100] The company would require significantly more funds if it were to upgrade the production equipment to reduce pollution.[101]

Unfortunately, despite the fact that China began to pay attention to environmental protection during the 1990s, China lacks the relevant skills to reduce pollution in the processing in the 1990s.[102] On the other hand, the Shenyang Smelter lacks funds due to the serious shortage of raw materials, and local governments are also unable to save the smelters due to a lack of

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87 *Id.*
88 Li, *supra* note 1, at 44.
89 *Id.*
90 *Id.*
91 *Id.*
92 *Id.*
93 Li, *supra* note 1, at 44.
94 *Id.*
95 *Id.* at 44-45.
96 *Id.* at 45.
97 *Id.*
98 *Id.*
99 *Id.*
100 *Id.*
101 *Id.*
102 Li, *supra* note 1, at 45.

funds.[103] In the end, the environmental problem was not solved and Shenyang Smelter went bankrupt.[104] The lack of funds was disclosed in an interview with the manager of Shenyang Smelter.[105] He said that Shenyang Smelter had three plans at that time: pollution control, relocation, and bankruptcy.[106] However, there are technical difficulties in pollution control, and relocation was therefore a better plan; the smelter was moved out of Shenyang, but the relocation cost nearly 600 million yuan (USD 83.1 million).[107] Based on reduced market demand and outdated industrial technology, neither the company nor the government had the money needed to save it.[108] It was for this reason that Shenyang Smelter went bankrupt in 2000.[109]

The liquidation of Shenyang Smelter was done according to the old bankruptcy law.[110] This meant that the bankruptcy case of Shenyang Smelter focused primarily on employees' interests.[111] In this case, the Shenyang government promulgated the implementation plan of employee placement in Shenyang Smelter on August 18, 2000. In fact, because of the lack of relevant details in the old bankruptcy law, this plan only addressed the issue of distribution.[112] In this plan, all the bankruptcy property was used to meet the interests of the companies' employees.[113] However, Shenyang Smelter went bankrupt because of environmental problems, and it furthermore caused many environmental problems that were not mentioned in the plan.[114] After bankruptcy, the government wanted investors to redevelop the business of Shenyang Smelter.[115] However, the government wanted the new enterprises to establish a modern enterprise system that would not result in new pollution.[116] However, the government did not address how the contaminated land should be repaired in the future.[117] No investors wanted to take over the Smelter's business, and the Smelter's land had been left idle.[118] According to the relevant investigation, a few years after the bankruptcy of Shenyang Smelter, the original land is still seriously polluted.[119] A large number of heavy metals remain in the soil, over an area of

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103 *Id.*

104 *Id.*

105 *See* Pui-Kwan Tse, *The Mineral Industry of China*, 3 U.S GEOLOGICAL SURV. MINS. Y.B. 9.1, 9. 2, 9.8 (2013) (detailing the bankruptcy and subsequent acquisition of Shenyang Smelter).

106 Li, *supra* note 1, at 45.

107 *Id.*

108 *Id*.

109 *Id*.

110 *See generally* Zheng, *supra* note 38.

111 *See* Tse, *supra* note 105, at 9.2 (highlighting how China's old bankruptcy laws affected Shenyang Smelter after insolvency).

112 *See City's Heavy Metal Blues*, S. CHINA MORNING POST 1-2 (Aug. 20, 2000, 12:00 AM) https://www.scmp.com/article/324187/citys-heavy-metal-blues [https://perma.cc/K6BE-Y9WD].

113 Li, *supra* note 1, at 46.

114 *See City's Heavy Metal Blues*, *supra* note 112, at 2.

115 *See How a smoggy Chinese city turned green*, GUARDIAN ENV'T NETWORK: POLLUTION 4-5 (Oct. 17, 2011, 11:27 AM), https://www.theguardian.com/environment/2011/oct/17/smoggy-chinese-city-green [https://perma.cc/77PA-QHA8].

116 Li, *supra* note 1, at 46.

117 *See* Gerald R. Smith, *Lead*, 1 U.S. GEOLOGICAL SURV. MINS. Y.B. 44.1, 44.7 (2002).

118 *See id.*

119 *See How a smoggy Chinese city turned green*, *supra* note 115, at 4.

360,000 square meters.[120] According to the environmental quality of soil standard of China, the land of Shenyang Smelter is seriously polluted.[121] For the land to be redeveloped, it must be repaired first.[122]

In 2002, the government began to prepare for the restoration of land at the Shenyang Smelter.[123] Restoration of the land was done to develop the local economy, so the Shenyang government could prepare to sell the land of Shenyang Smelter.[124] The cost of restoration amounted to more than 50 million yuan (USD 6.9 million), which was borne by the Shenyang government.[125] As the old bankruptcy law applied, all of the company's assets were distributed to the employees.[126] This means that taxpayers bore the cost of restoration, while the polluter, Shenyang Smelter,[127] only bore the cost of land restoration, which in this case, was nearly zero yuan.[128]

B. Heilongjiang Heihua Co., Ltd

Heilongjiang Heihua Co., Ltd ("Heihua") is a Chinese listed company.[129] Its main products are coke products and chemical fertilizers.[130] The direct predecessor of Heihua was Heilongjiang Chemical General Plant. Heihua was founded in the context of China's economic system reform, which aimed to move the economy from state-owned enterprises to modern companies.[131] Heihua was founded in 1997 and successfully listed in 1998.[132] According to the relevant data from the annual financial report of Heihua, it has grown rapidly since its listing.[133] For example, the total assets of Heihua increased from 950 million yuan (USD131 million) to 3.2 billion yuan (USD 442 million); industrial output value increased from 230 million yuan (USD 31.7 million) to 1.5 billion yuan (USD 207 million); sales income increased from 500 million yuan (USD 69 million) to 2.2 billion yuan (USD 303 million); and profits tax increased from 5 million yuan (USD 690,000) to 500 million yuan (USD 69 million).[134] Thus, Heihua

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[120] Li, *supra* note 1, at 46.

[121] *Id.* at 43.

[122] *Id.* at 46.

[123] *See How a smoggy Chinese city turned green*, *supra* note 115, at 5.

[124] *See id.*

[125] *See Contaminated soil treatment project in the former Shenyang smelting plant area started*, MINISTRY ECOLOGY ENV'T PRC 1 (July 25, 2006) https://www.mee.gov.cn/ywgz/trsthjbh/trsthjgl/200607/t20060725_91296.shtml, [https://perma.cc/38WX-D2CU].

[126] *See id.* at 5.

[127] *See* FITCHRATINGS, ALUMINUM CORPORATION OF CHINA 1 (Apr. 2022) (the owner of Shenyang Smelter is China Copper, Lead and Zinc Group, a central enterprise in China. It is a state-controlled enterprise, which means the state capital is not the only source of capital, but also private or foreign capital).

[128] Li, *supra* note 1, at 47.

[129] *Id.* at 48.

[130] *Id.*

[131] *Id.*

[132] *Id.* at 47-48.

[133] *Id.* at 48.

[134] *See Annual Report of Heilongjiang Heihua Co., Ltd.*, HEILONGJIANG HEIHUA CO., LTD. (Mar. 2000), http://www.sse.com.cn/disclosure/listedinfo/announcement/c/600179_2000_0.pdf [https://perma.cc/P5KS-KFF5].

became one of the top 500 enterprises in China, and one of the top ten enterprises in the Chinese chemical system.[135]

Because of China's adjustment of its industrial structure, two of Heihua's main chemical/mineral products, coke and urea, have been over-produced.[136] This led to market saturation in 2011 and, consequently, low demand and value in the Chinese market.[137] This also led to four consecutive years of losses in the financial statement disclosed by Heihua.[138] The price of coke and urea in China fell particularly sharply in 2014 further reducing Heihua's profits.[139] Furthermore, in 2014, the Chinese government had promulgated the new Environmental Protection Law, which is regarded as the strictest environmental law in Chinese history.[140] Heihua has seriously violated the new law and received 29 environmental fines over a two year period (2015-2016).[141] The major factor was that the levels of pollution produced by Heihua significantly exceeded the new national standards. Prior to 2014, emissions from Heihua met the existing standard, but in 2014, the allowable emission rate of atmospheric pollutants in thermal power plants was lowered from 200mg/m3 to 30mg/m3, which led to the emission of Heihua far exceeding the new national standards.[142] Thus, Heihua was fined twenty-nine times for air pollution alone.[143] Therefore, in the case of overcapacity and environmental problems, Heihua suffered a cumulative loss of 766 million yuan (USD 105 million), with an asset-liability ratio of 99.61%.[144]

Heihua began to look for opportunities of reorganization in order to repay its debts and rescue the company.[145] Heihua announced its restructuring plan in May 2015.[146] In the restructuring plan, Heihua disclosed the restructuring for the sale of major assets and the issuance of shares to buy assets and raise supporting funds.[147] After this reorganization, Heihua

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[135] *See id*.

[136] *See 2011 Annual Report of Heilongjiang Heihua Co., Ltd.*, HELILONGJIANG HEIHUA CO., LTD. (2011), http://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESH_STOCK/2012/2012-4/2012-04-19/887637.PDF [https://perma.cc/F8F6-8ZYP].

[137] *See id.*

[138] Li, *supra* note 1, at 45.

[139] *Id.*

[140] *See* Lillian He, *China Begins Enforcing Newly Amended Environmental Protection Law*, JONES DAY (January 2016), https://www.jonesday.com/en/insights/2016/01/china-begins-enforcing-newly-amended-environmental-protection-law [https://perma.cc/GCB5-4AG5].

[141] *See* Chen Yan, *Heihua received 29 environmental fines in two years*, SINA, (Feb. 5, 2016), https://news.sina.cn/gn/2016-02-05/detail-ifxpftya4333577.d.html [https://perma.cc/X244-TVUW].

[142] Li, *supra* note 1, at 2, 48-49.

[143] *See Heihua shares received 29 fines in a row and finally quit the market. Environmental protection said that even if the company is in difficulty, it must be fined*, SINA (Apr. 25, 2016, 10:47 AM), https://finance.sina.com.cn/stock/s/2016-04-25/doc-ifxrpvcy4428750.shtml [https://perma.cc/9U5G-YXLD].

[144] *See 2014 Annual Report of Heilongjiang Heihua Co*., Ltd. HEILONGJIANG HEIHUA CO., LTD. (2014), http://www.sse.com.cn/disclosure/listedinfo/announcement/c/2015-03-02/600179_2014_n.pdf [https://perma.cc/VD5L-6CB7].

[145] *See China Haohua Chemical Corporation agreed to acquire substantially all assets and liabilities from HeiLongJiang HeiHua Co., Ltd*., MARKET SCREENER (May 8, 2015, 2:00 AM), https://www.marketscreener.com/quote/stock/ANTONG-HOLDINGS-CO-LTD-9950191/news/China-Haohua-Chemical-Corporation-agreed-to-acquire-substantially-all-assets-and-liabilities-from-He-38381820/ [https://perma.cc/36P7-8H3B].

[146] *See id.*

[147] *See id.*

sold the listed shell to Antong Holdings, and the parent company of Heihua became China Haohua Chemical Co., Ltd ("Haohua").[148]

However, this reorganization failed to rescue Heihua. Instead, Heihua became a "zombie company" after reorganization.[149] A "zombie company" in China means a company that loses the ability to develop itself and must rely on government subsidies or bank renewal loans to survive.[150] Heihua became a notorious zombie company in China and has been out of production since 2016.[151] Although Heihua repaid some of its debts after reorganization, the pollution problems remain unsolved.[152] For example, Heihua invested 60 million yuan (USD 8.2 million) to reduce environmental pollution before the reorganization, but did not pay more money to reduce environmental pollution after reorganization.[153] A cumulative environmental fine of 33,796,800 million yuan (USD 4.6 million) has not been paid.[154] What is especially notable is that Haohua, the parent company of Heihua, seems to be evading its environmental obligations.[155] In the reorganization plan, Haohua receives all assets and debts of Heihua.[156] However, it did not bear the relevant environmental liabilities of Heihua.[157] Haohua did not give Heihua relevant financial support, and indeed Heihua ultimately shut down production and was unable to meet any of its remaining liabilities.[158] For example, Qiqihar Environmental Protection Bureau applied for court procedures to force Heihua to pay its environmental fines.[159] However, the local court assessment found that Heihua did not have enough funds to do this.[160]

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148 *Id*.

149 *See Bankruptcy Announcement of Heilongjiang Heihua Group*, *supra* note 1; *see also* Xiangling Fu, et al., *Analysis on Evolution Model of Zombie Company under the Absence of Bank Data*, 52 Haw. Int'l Conf. Sys. Sci 1323, 1324-25 (2019), https://scholarspace.manoa.hawaii.edu/server/api/core/bitstreams/b3d9b991-e534-4c3d-a1e0-c5e3b5cdeafd/content [https://perma.cc/G82A-9ZWH] (defining 'zombie company' as "companies caught in a financial crisis", identifying Heihua as a zombie company in the coal industry).

150 *See* Xinfeng Jiang et al., *The mystery of zombie enterprises- "stiff but deathless"*, 295 CHINA J. OF ACCT. RESEARCH 341, 342 (2017).

151 *See* Fu et al., *supra* note at 149; *see also* Xinhua, *Listed Chinese coal firm issues investor alert due to heavy losses*, CHINA DAILY (Mar. 10, 2016) https://www.chinadaily.com.cn/business/2016-03/10/content_23813609.htm [https://perma.cc/DY9R-FLZN].

152 *See* Malin Song & Jianlin Wang, *Environmental efficiency evaluation of thermal power generation in China based on a slack-based endogenous directional distance function model* 161 ENERGY 325, 325 (2018).

153 *See Heihua shares received 29 fines in a row and finally quit the market. Environmental protection said that even if the company is in difficulty*, *supra* note 143.

154 *See id*.

155 *See* Yanan Wang, *Chinese farmer turned eco-warrior takes on big business* PHYS ORG (Nov. 12, 2017) https://phys.org/news/2017-11-chinese-farmer-eco-warrior-big-business.html, [https://perma.cc/4DVW-LLJK].

156 *See China Haohua Chemical Corporation agreed to acquire substantially all assets and liabilities from HeiLongJiang HeiHua Co.,Ltd*.,, *supra* note 145.

157 *See Heihua shares received 29 fines in a row and finally quit the market. Environmental protection said that even if the company is in difficulty*, *supra* note 143.

158 *See id*.

159 *See* Edward Wong, *Fines Total $26 Million for Polluters in China*, N.Y. TIMES (Dec. 31, 2014), https://www.nytimes.com/2015/01/01/world/asia/chinese-court-orders-6-companies-to-pay-26-million-for-polluting.html#:~:text=The%20Taizhou%20City%20Environmental%20Protection,upheld%20the%20lower%20court's%20ruling [https://perma.cc/C3L3-CSJJ].

160 Li, *supra* note 1, at 62.

The environmental liabilities for Heihua were not simply about environmental fines.[161] In fact, the groundwater pollution around the Heihua plant remains very serious.[162] In an investigation, the groundwater pollutants around the Heihua exceeded the standard, including, as stated in the permanganate index, volatile phenols, anionic synthetic detergents and other indicators that evaluate serious pollution.[163] These pollutants seriously affect the health of the surrounding residents.[164] However, Haohua did not address these environmental problems after the sale of the listed shell of Heihua.[165] In the end, neither Heihua nor the government has repaired the groundwater around Heihua.[166] If the groundwater is repaired in the future, the cost of rehabilitation, like environmental fines, may not be recovered.[167] This is again because Heihua lacked sufficient solvency.[168]

Heihua filed for bankruptcy and began the claim declaration process in May 2019, and its liquidation was completed in December 2019.[169] According to the relevant information, no environmental liability has been imposed on Heihua or Haohua.[170] Throughout the liquidation process, environmental liability was not mentioned.[171] Moreover, there is no information that the government will remediate the contaminated site of Heihua after the bankruptcy liquidation is concluded, which means that the site is currently in an abandoned and unmanaged state.[172]

C. Yunnan Yongren Tuanshan Copper Mine

Yunnan Yongren Tuanshan Copper Mine (Tuanshan) was founded in 1990 and specializes in the mining and sale of copper concentrate.[173] Tuanshan is a subsidiary company of Yunnan Copper. Tuanshan began bankruptcy liquidation proceedings in 2017. The reason for the bankruptcy was that it exhausted its resources and had no prospect of generating more.[174]

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161 *See Heihua shares received 29 fines in a row and finally quit the market. Environmental protection said that even if the company is in difficulty*, *supra* note 143.

162 *See* Wang, *supra* note 155.

163 *See* IPEN & GREEN BEAGLE, QIHUA PVC PLANT IN QIQIHAR, HEILONGJIANG PROVINCE, at 1-12 (Jan. 2015); *see also* Xiaodong Wang, Analysis of Water Quality and Purification Process Improvement for Urban Water Supply in North-Eastern China, at 8 (Dec. 2020) (Doctoral Thesis, The University of Kitakyushu Faculty of Environmental Engineering).

164 *See* IPEN & GREEN BEAGLE, *supra* note 163 at 1-12; *see also* Xiaodong Wang, *supra* note 163 at 3; *see also* Wang, *supra* note 155.

165 *See* IPEN & GREEN BEAGLE, *supra* note 163 at 1-12.

166 *See id.*

167 *See id.; see also* Song & Wang, *supra* note 152, at 62.

168 *See Heihua shares received 29 fines in a row and finally quit the market. Environmental protection said that even if the company is in difficulty, it must be fined*, *supra* note 143.

169 *See Achievements in resolving the difficulties of central enterprises in accordance with the law - Shang Gongsuo successfully completed the bankruptcy liquidation of Xintai Petrochemical*, S&P LAW FIRM (Dec. 31, 2019), https://www.splf.com.cn/CN/07/00000000000000002144.aspx [https://perma.cc/4UB6-JAH9].

170 *See* Song & Wang, *supra* note 152, at 62.

171 Li, *supra* note 1, at 62.

172 *Id.*

173 *Id.*

174 *Id.*

In recent years, Tuanshan mainly depended on mining sporadic small ore and recovering residual ore to maintain its business.[175] But this kind of business put Tuanshan into a state of sustained loss.[176]

Tuanshan lost more than 5.5 million yuan (USD 759,000) in total from 2015 to 2017.[177] Furthermore, Tuanshan has been looking for a receiver since 2015, but to no avail.[178] By the end of May 2017, the total assets of Tuanshan were 9.19 million yuan (USD 1.3 million), but the debt scale was as high as 37.69 million yuan (USD 5.2 million) and the asset-liability ratio was nearly (-)410%.[179] It has insufficient assets for repaying all its debts and it is apparently bankrupt.[180] Therefore, if Tuanshan completes bankruptcy liquidation, it can effectively reduce long-term losses and contribute to the overall healthy development of Yunnan Copper in the future.[181]

The high pollutant mining activities of Tuanshan caused significant environmental damage.[182] According to Article 64 of the Environmental Protection Law, the mine is responsible for mining land remediation.[183] Unfortunately, according to the relevant information disclosed by Yunnan Copper, such as its Corporate Social Responsibility ("CSR") report and annual report, Yunnan Copper and its subsidiaries have repaired some mining land after 2014, but not the mining land in Tuanshan.[184] Although there is no direct evidence that Yunnan Copper deliberately evaded responsibility for the restoration of Tuanshan, there is some evidence that indirectly shows this.[185]

Firstly, in the CSR report of Yunnan Copper that the mines repaired by Yunnan Copper are profitable.[186] These subsidiaries, which include Yuxi Mining Industry, Diqing Mining Industry and Chuxiong Mining Industry, have all shown excellent profitability in recent years.[187] The profits of Yuxi Mining exceeded more than 50 million yuan (USD 6.9 million) in

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175 *Id.*

176 *Id.*

177 Li, *supra* note 1, at 63.

178 *See Yunnan Copper to Accelerate Disposal of Loss Assets Tuanshan Copper Mine Bankrupt will be Liquidated*, SOUHU FINANCIAL, (Oct. 30, 2017) http://m.sohu.com/a/201229399_99904063 [perma.cc/9ZDV-5AYY].

179 *See id.*

180 Li, *supra* note 1, at 63.

181 *See* Adam Hayes, *Liquidating: Definition and Process as Part of Bankruptcy*, INVESTOPEDIA (Mar. 16, 2023), https://www.investopedia.com/terms/l/liquidate.asp [https://perma.cc/Y77E-2Z56].

182 Li, *supra* note 1, at 63.

183 *See* PRC Environmental Protection Law, *supra* note 7, art. 64

184 *See* Yujuan Bai, et al., *Research on Environmental Accounting Information Disclosure of Resource-Based Enterprises from the Perspective of Ecological Compensation—Take Yunnan Copper Industry as an Example*, INT'L ACCT. FRONTIER 43, 43-55 (2019); Li, *supra* note 1, at 63 (these sites are mentioned in CSR report of Yunnan Copper between 2014 -2021).

185 Li, *supra* note 1, at 63.

186 *Id.*

187 *See Yunnan Copper 2016 Corporate Social Responsibility and Sustainability Report*, YUNNAN COPPER CO., LTD. (Mar. 2017), https://pdf.dfcfw.com/pdf/H2_AN201703280445361844_1.pdf?1647100039000.pdf [perma.cc/8UHQ-ALU2]. For example, Yuxi and Chuxiong sites were mentioned in 2016 CSR report. *Id.*

the first half of 2017.[188] Diqing Mining achieved sustained profits in 2018.[189] Also, Chuxiong Mining has rich mineral resources to be exploited.[190] Compared with these companies, Tuanshan's mineral resources are exhausted, without economic and profit value, and the company's asset-liability ratio is (-)410%.[191] One of the important goals of the company is profit.[192] Yunnan Copper, as the parent company, is not willing to provide funds to support worthless companies, and has reduced its commitment to environmental liability.[193] It can be speculated from this behavior that the company wants to evade environmental liabilities.[194] Because Yunnan Copper is a Chinese listed company, it is likely to be affected in its business and profits due to the environmental liability of its subsidiaries.[195] Although this inference cannot be directly confirmed, it has been confirmed in the past case.[196] Yunnan Copper sold Lanping Yun Mine at a low price in 2012.[197] Many researchers believe the sale of Lanping Yun mine was a measure by Yunnan Copper to avoid China's regulation of the mining environment.[198]

Furthermore, in China, all mining companies need to pay a deposit before mining.[199] The deposit, "the mine deposit," is used to fund mine restoration after mining.[200] The nature of the deposit is like a mandatory financial assurance.[201] A mining company can pay this deposit by installments.[202] These deposits are owned by the enterprise, supervised by the local government, and stored in a dedicated account only for the remediation of the mine post closure.[203] However, even if they pay all of the deposit, it is still less than the cost of restoration after mining.[204] It is worth noting that while the payment of the deposit can be provided in

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188 *See Yunnan Copper: 2017 Social Responsibility Report*, YUNNAN COPPER CO., LTD. (Apr. 12, 2018), https://notice.10jqka.com.cn/api/pdf/f76159d006e05d95.1523450191.pdf [perma.cc/M5M7-E8VS].

189 *See* 2018 Corporate Social Responsibility Report, YUNNAN COPPER CO., LTD. (2018), https://ynty.chinalco.com.cn/shzr/shzrbg/202101/P020210127391277925267.pdf, [perma.cc/3XDP-ZPKT].

190 *See Yunnan Copper: 2017 Social Responsibility Report*, YUNNAN COPPER CO., LTD., *supra* note 187.

191 Li, *supra* note 1, at 63.

192 *See* KEAY ANDREW & WALTON PETER, INSOLVENCY LAW CORPORATE AND PERSONAL 55 (4th ed., 2017).

193 Li, *supra* note 1, at 64.

194 *Id.*

195 *Id.*

196 *See infra* notes 155-57.

197 Li, *supra* note 1, at 64.

198 *See Yunnan Copper Sells Mineral Deposits at A Low Price and Makes A Grotesque Loss on Assets Transferred*, BEIJING BUS. DAILY (June 18, 2012), http://www.cs.com.cn/ssgs/gsxw/201206/t20120618_3375156.html [https://perma.cc/2TWD-EDQ9].

199 *See* Regulations on Geological Protection of Mines No.44 Order of the Ministry of Land and Resources of P.R. China (promulgated by the Ministry of Land & Res., effective May 1, 2009) (this "came into effect in 2009 and expired in 2017. The mine deposit was established according to the guidelines of the Ministry of Land and Resources P.R. China, and each province and city set their own fees standard, but the fees are generally low, for example, 3-9 yuan ($0.41-1.24) per square meter in Jiangsu Province").

200 *Id*.

201 Li, *supra* note 1, at 54.

202 *Id.* ("The method and mode of deposit is regulated by each province and city, but the rules are mostly the same from province to province").

203 *See* Ministry of Land and Resources, *supra* note 199, reg. 18.

204 *See More than 70% of Mines give up deposits*, SHOUYUN MINE (July 19, 2019), https://www.kanzhun.com/news/386140.html [https://perma.cc/6Q7Y-2JSW].

installments, many companies do not complete the full installment when they go bankrupt or close down.[205] As a result, some companies give up the deposit after bankruptcy.[206] According to the relevant data from the Ministry of Natural Resource ("MNR"), nearly 70% of companies have not paid the fees for cleanup or remediation.[207] Similarly, an interview in the Economic Observer supports this supposition.[208] Mr. Lin, who is the manager of a mine said that, "[b]efore I finished paying, the enterprise went bankrupt. I didn't want the money I paid before, because it wasn't enough to cover the repair cost."[209] In essence, if a mining company forfeits their deposit they do not need to repair the mined land.[210] Three national departments, the Ministry of Finance ("MF"), MNR, and the Ministry of Environmental Protection ("MEP"), jointly issued guidance in 2017, which abolished the mine deposit system and established the fund for the mine remediation.[211] However, according to the retroactivity principle, Tuanshan entered bankruptcy liquidation in 2017.[212] Thus, Tuanshan does not need to establish the fund for mine remediation.[213] In the end, the government has to undertake the environmental remediation of Tuanshan, which means that environmental costs will be transferred to the society.[214] Based on the Measures for the Administration of Special funds for the recovery and treatment of the Mine Geological Environment, the government should bear the responsibility for remediation if the polluter is bankrupt.[215]

Lastly, if the local government pays Tuanshan's costs to repair the mined land, the government can file a lawsuit to demand that Tuanshan pay the cost for the restoration.[216] However, the end result may be that the government wins the lawsuit but still does not get back

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205 *See id.*

206 Li, *supra* note 1, at 54.

207 *See More than 70% of Mines give up deposits, supra* note 204.

208 *See id.*

209 *See id.*

210 *See id.*

211 *See Guiding on abolishing the deposit for the recovery of mine geological environment and establishing the recovery fund for mine geological environment control*, MF: MINISTRY FIN. MNR: MINISTRY NAT. RES. MEP: MINISTRY ECOLOGY ENV'T (July 24, 2017), https://www.gov.cn/hudong/2017-07/24/content_5213030.htm [https://perma.cc/J4AD-3AD4].

212 Li, *supra* note 1, at 55.

213 *Id.*

214 *Id.*

215 *Measures for the administration of special funds for the recovery and treatment of mine geological environment*, St. Council Gaz., Mar. 27, 2013, Article 2-3 ("These measures apply to the use and management of special funds for the restoration and management of geological environments in mining areas (hereinafter referred to as "special funds") which are arranged by the central finance through the special revenues from mineral resources that are appointed to the central government."). The restoration and management of geological environments in mining areas, as referred to in these measures, refers to the restoration and management of the geological environment damaged by mining activities in state-owned mines that were formed during the planned economy period or where the responsible party has ceased to exist. *See id*.

216 *See Provisions of the Supreme People's Court on the Trial of Cases Involving Compensation for Ecological and Environmental Damage (Trial)*, SUP. PEOPLE'S CT., (May. 20, 2019). Provincial and prefecture-level people's governments, their designated departments and institutions, or the departments entrusted by the State Council to exercise the ownership of natural resources assets owned by the entire people may act as plaintiffs to file lawsuits for compensation for ecological and environmental damage. *See id*.

the compensation money.[217] Things are actually moving in this predicted direction.[218] In 2021, the local government began work on cleaning up and remediating the mine site of Yongren Tuanshan, and put it out to public tender.[219] In 2022, cleanup and remediation work has already begun, but according to the local government press reports, it is public funds that will pay for these environmental costs.[220] This means that by the time the government completes the repair and calculates how much this repair costs, Tuanshan will have already completed their bankruptcy liquidation.[221] Tuanshan is an independent legal entity, whose debt has nothing to do with Yunnan Copper.[222] In the end, Yongren Tuanshan and its parent company, Yunnan Copper, will be successful in transferring their environmental liability to the society.[223]

D. Yunnan Jinggu Mining and Metallurgical Co., Ltd

The main business of Yunnan Jinggu Mining and Metallurgical Co., Ltd ("Jinggu") is the mining and production of non-ferrous metal mines, and the sale of copper concentrate and electrolytic copper products.[224] Jinggu became the subsidiary company of Yunnan Copper in 2011.[225] Yunnan Copper's first year of business after acquiring Jinggu was profitable, earning Yunnan Copper 738 million yuan (USD 792,000).[226] However, in the next four year period between 2012 and 2016 was a loss for Yunnan Copper, because Jinggu's profitability declined.[227] Yunnan Copper initially stated that in 2011 Jinggu earned a profit of 573.08 million yuan (USD 79 million), mainly due to the increase in price of electric copper on the market; however, as the soaring prices began to decline in the years to follow, Jinggu continued to

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217 Li, *supra* note 1, at 55.

218 *Id.*

219 *See Yongren County Tuanshan Copper Mine Solid Waste Treatment and Ecological Restoration Project*, YONGREN CNTY GOV'T (July 11, 2022), http://m.biaokezhan.com/detail/62cbcb4f416e2338b0dc76b2.html [https://perma.cc/6QNK-WA9Z].

220 *See Wu Yangfeng: responsibility in mind, responsibility in action, high quality completion of mine remediation treatment* (July 11, 2022), http://www.yr.gov.cn/info/1040/45824.html [https://perma.cc/85ZC-UZJG].

221 Li, *supra* note 1, at 55-56.

222 *See* Company Law (promulgated by the Standing Comm. Nat'l People's Cong., Dec. 23, 1993, rev'd Oct. 26, 2018, effective Oct. 26, 2018), art.14, 2010 P.C.V. LAWS No. 51 (China). ("A company may establish subsidiaries, which shall possess the status of legal persons, and shall independently bear civil liabilities according to law.")

223 Li, *supra* note 1, at 56.

224 *See* Yunnan Copper, *Announcement on the Court's Acceptance of the Bankruptcy Liquidation Application of a Wholly Owned Subsidiary*, SINA FIN. (Sept. 30, 2017), http://money.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=000878&id=3787681, (providing a translation of the announcement posted on September 29, 2017 by the Board of Directors of Yunnan Copper Co., Ltd.). [https://perma.cc/QN72-2FHN].

225 *See Yunnan Copper Co., Ltd. agreed to acquire remaining 28.73% stake in Yunnan Jinggu Mining And Metallurgy Co., Ltd from Yuxi Mining Co. Ltd., Yunnan Copper Sales Company and Yunnan Chuxiong Mining & Metallurgy Co., Ltd. for CNY 12 million*, MARKETSCREENER (Oct. 8, 2012), https://www.marketscreener.com/quote/stock/YUNNAN-COPPER-CO-LTD-6496901/news/Yunnan-Copper-Co-Ltd-agreed-to-acquire-remaining-28-73-stake-in-Yunnan-Jinggu-Mining-And-Metallu-39248394/, [https://perma.cc/RME4-ZNYH].

226 *See* YUNNAN COPPER CO., LTD, 58-59 2011 ANNUAL REPORT (2012).

227 *See* Copper, *supra* note 224.

experience losses.[228] As a result, Yunnan Copper decided to liquidate Jinggu in order to avoid any further losses.[229]

The Yunnan Copper announcement indicates that as of June 2017, Jinggu's assets totaled 12.75 million yuan (USD 1.7 million), whereas their debts totaled 58.52 million yuan (USD 8 million), causing an unstable asset-liability ratio of (-)461%.[230] Due to the insufficiency of Jinggu's profits in comparison to their sizable liabilities, the company would not be able to repay its maturing debts and would continue to suffer future losses.[231] Jinggu's declining profits due to fluctuating copper prices and pending maturing debts inevitably led to the decision to file for bankruptcy.[232]

As previously noted, one of Jinggu's main revenue generations are its operations in mining.[233] Therefore, like in the case of Tuanshan discussed above, Jinggu also did not repair the damages to the land caused by their mining operations.[234] Fortunately, Jinggu did pay the cost of another environmental remediation case in the lawsuit, as described below.[235]

In 2015, a pipeline in Jinggu broke, causing copper sulphate to leak through the spillway.[236] The leak caused contamination in a portion of the farmland and the river in a nearby village.[237] Following this incident, Jinggu reached a compensation and mediation agreement with the local villagers regarding the direct economic loss caused by the pollution.[238] Jinggu Company agreed to pay a total of 514,900 yuan (USD 71,000) to the injured villagers.[239] However, Jinggu did not pay the costs of environmental remediation. According to the opinion issued by Yunnan Desheng Judicial Expertise Centre, the environmental pollution damage was 1.36 million yuan (USD 180,000), including 528,600 yuan (USD 73,000) for farmland environmental pollution damages and 829,700 yuan (USD 11,000) for ecological environment damage repair.[240] This amount does not include Jinggu's compensation for the direct economic

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228 *Id*.

229 *See Yunnan Copper files for liquidation*, REUTERS, (Oct. 26, 2017), https://www.reuters.com/article/brief-yunnan-copper-files-for-liquidatio-idINL4N1N21TR/, [https://perma.cc/77J6-HUDP]; Li, *supra* note 1, at 56-57.

230 Li, *supra* note 1, at 58.

231 *See China's Yunnan Coal Becomes Latest Miner to Struggle With Debts*, BLOOMBERG (Nov. 16, 2015), https://www.bloomberg.com/news/articles/2015-11-17/china-s-yunnan-coal-becomes-latest-miner-to-struggle-with-debts?embedded-checkout=true [https://perma.cc/C5WB-3NXH].

232 *See* Bankruptcy Creditor's Service Inc., et. al., *Headlines*, TROUBLED CO. REP. ASIA PAC. (Mar. 7, 2014), http://bankrupt.com/TCRAP_Public/140307.mbx, [https://perma.cc/957K-G99U].

233 *See Announcement on the Court's Acceptance of the Bankruptcy Liquidation Application of a Wholly Owned Subsidiary*, *supra* note 224.

234 *See Chinalco International: 2022 Environmental, Social and Governance Report*, SINA FINANCE (Mar. 8, 2023), https://vip.stock.finance.sina.com.cn/corp/view/vCB_AllBulletinDetail.php?stockid=601068&id=8871050 [https://perma.cc/Q6Q3-YTCS].

235 *See* YUHONG ZHAO, CHINESE ENV'T L., 428 (Cambridge Univ. Press 2021) (referencing the facts in the Environmental Civil Public Interest Litigation Case of Pu'er People's Procuratorate Jinggu Mining and Metallurgical Co., Ltd.).

236 *See id.*

237 *See id.*

238 *See id.*

239 *See id.*

240 *See* Pǔ'ěr Shì Rénmín Jiǎncháyuàn Mínshì Gōngyì Sùsòng àn Sù Jǐnggǔ Yě Kuàng Gǔfèn Yǒuxiàn Gōngsī (普洱市人民检察院民事公益诉讼案 诉景谷冶矿股份有限公司) [Environmental Civil Public Interest Litigation Case of Pu'er People's Ct. Guiding Case 2017. (China).

losses of injured villagers through the mediation agreement.[241] In April 2016, the Pu'er City People's Procuratorate[242] filed a civil public interest lawsuit with the Pu'er Intermediate People's Court.[243] In this case, the procuratorate asked Jinggu Company to pay 829,700 yuan (USD 11,000) for the restoration of ecological and environmental damage.[244] The procuratorate and Jinggu voluntarily reached a settlement agreement, where Jinggu Company agreed to pay the requested environmental repair costs.[245]

In the above lawsuit, the procuratorate filed environmental public interest litigation in accordance with article 55 of the Civil Procedure Law.[246] In addition, Article 64 of the Environmental Protection Law provides that the polluter shall be liable for damage if it pollutes or damages the environment.[247] Similarly, Article 65 of the Tort Liability Law provides that the polluter shall bear tort liability.[248] Therefore, under the circumstances, Jinggu and the procuratorate reached a mediation agreement.[249] This case, fortunately, protected environmental liabilities because it took place before the company filed for bankruptcy and the mediation agreement was received before the company went into liquidation.[250] This meant that the cost of environmental remediation was not able to be classified under general claims in liquidation.[251] This claim was independent of other bankruptcy claims.[252] If the procuratorate had accepted the lawsuit when Jinggu entered bankruptcy liquidation, the result would have been drastically different.[253] This is because, during liquidation, the claim of environmental remediation would have been classified under general claims.[254] If environmental liabilities are to be paid off, it must be done after the bankruptcy expenses and the interests of employees are distributed.[255] Even if the bankruptcy property can pay off a portion of the general claim, the asset-liability ratio of Jinggu was (-)461%, which means that only a very small portion or even

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241 *See* ZHAO, *supra* note 235, at 428.

242 *See Procuratorate*, MERRIAM-WEBSTER DICTIONARY (11th ed. 2024) (defining procuratorate as the office of a procurator. A procurator is defined by the same source as "one that manages another's affairs," or an agent.).

243 *See id.*

244 *See* Sup. People's Ct. Guiding Case, *supra* note 240.

245 *See id*.

246 *See* Laney Zhang, *China: Laws Amended to Allow Prosecutors to Bring Public Interest Lawsuits*, LIBRARY OF CONGRESS, (July 6, 2017), https://www.loc.gov/item/global-legal-monitor/2017-07-06/china-laws-amended-to-allow-prosecutors-to-bring-public-interest-lawsuits/ [https://perma.cc/L7HU-Z7RC].

247 *See* Qianxun Xu & Mehran Idris Khan, *Reflections on the environmental damage compensation regime in Chinese civil legislations*, NAT'L LIBR. MED. (Apr. 6, 2023), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10123204/ [https://perma.cc/R5YQ-M6BU].

248 *See id.*

249 *See* Sup. People's Ct. Guiding Case, *supra* note 240.

250 *See id,; see also See* Copper, *supra* note 224.

251 *See* Tom Mounteer, *Seven Things to Keep in Mind about Treatment of Environmental Liabilities in Bankruptcy*, PAUL HASTINGS, (May 20, 2020), https://www.paulhastings.com/insights/client-alerts/seven-things-to-keep-in-mind-about-treatment-of-environmental-liabilities-in-bankruptcy, [https://perma.cc/39AW-5MA3].

252 *See* Sup. People's Ct. Guiding Case, *supra* note 240.

253 *See* Mounteer, *supra* note 251.

254 *See id.*

255 *See* GAO-05-658, *supra* note 6, at 27.

none of the environmental liability can be paid off.[256] Therefore, this case presents a fortunate situation where Jinggu paid full compensation.[257]

This case can prove that the relevant laws of China can protect or support environmental liability.[258] However, in bankruptcy proceedings, environmental liabilities are still hard to meet.[259] If the government, procuratorates, or public welfare organizations can file a lawsuit before the polluter enters bankruptcy liquidation, then there is a good chance that the polluter will pay the full environmental liabilities.[260] However, the government, procuratorates, or public welfare organizations must be able to carefully determine environmental liabilities and file environmental public interest litigation in a timely manner.[261] For this reason, these relevant staff members must have professional skills and knowledge in environmental science and law.[262] In China, however, most relevant staff do not have the dual background of environmental science and law so, in most cases, they cannot file the relevant environmental public interest litigation in time.[263]

Because of a range of issues described above, the current situation of environmental liability is that most cases do not lead to compensation in bankruptcy proceedings, as indicated by the cases described here, such as Shenyang Smelter, Heihua Group, Yongren Tuanshan, and the restoration of mining in Jinggu. In the end, these environmental liabilities can only be borne by public funds.[264] Even if the government can file an environmental claim in court, the bankrupt polluter often has already completed the liquidation process and they no longer possess the funds to pay for environmental liabilities.[265] Thus, the government is still unable to receive compensation from bankrupt polluters. However, if the bankrupt polluter cannot pay their environmental liability, it still violates environmental protection law, environmental protection taxes law and tort law in China, which have created provisions for the polluter pays policy.[266] Thus, further research is required to better understand the connection between bankruptcy law and environmental law in China.

E. Some Reflections from Case Studies

The case study section of this Article describes how Chinese law treats environmental liability in bankruptcy proceedings and considers three core findings as were discussed in the thesis, *Environmental Liabilities and Insolvent Polluters in China Learning Lessons from the UK and US*.

The first finding from the case studies is that public funds paid for the environmental costs of bankrupt polluters. Although polluters are required to pay environmental costs, the

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256 Li, *supra* note 1, at 69.
257 *Id.*
258 *Id.*
259 *Id.*
260 *Id.* at 69-70.
261 Li, *supra* note 1, at 70.
262 *Id.* at 70.
263 *See* Zhang Hongzhen et al., *Environmental Damage Assessment: Establishing of System Framework in China*, 35 ENVIR. SCI. 4015, 4020 (2014).
264 Li, *supra* note 1, at 69.
265 *Id.* at 70.
266 *Id.*

government still plays a major role in paying these costs in the event of bankruptcy.[267] Even in some companies that have gone bankrupt due to pollution, environmental costs have not been paid by polluters in the liquidation process, such as in the case of Shenyang Smelter and Yongren Tuanshan.[268] It is clear that the legislature did not take into account the conflicting relationship between the bankruptcy law and Environmental Law.[269] Although the environmental law provides a number of remedies against environmental cost recovery, these are ineffective in bankruptcy cases.[270] For example, the law allows regulators to take environmental action to require polluters to pay environmental costs.[271] In Case Study D, the regulator was successful in recovering the environmental costs of the Jinggu site.[272] However, another possible scenario was also considered in Case Study D, i.e. if the environmental litigation occurs after a bankruptcy, then it is likely that the regulator will win the case but not be able to recover environmental costs.[273] The other scenario is the mine deposit, which is a type of mandatory financial assurance and was introduced in Case Study C.[274] The mine operators in this case were required to prepare a deposit to cover the cost of the mine's remediation, but before 2017 the deposit could be paid by installment.[275] However, many mine operators fail to complete deposit payment at the time of mine bankruptcy, and the recovery of the deposit is not considered by the judge or bankruptcy administrator in bankruptcy cases.[276] This idea has been demonstrated in Case Study C. In the end, environmental costs are not internalized in practice and therefore must be transferred to society.[277]

The second finding is that there may be no one to clean up or remediate the sites of bankrupt polluters. Although a proportion of the environmental costs of bankrupt polluters are covered by public funds, a significant proportion of contaminated sites are not being remediated.[278] For example, in Case Study A, Heihua completed its liquidation and its environmental liability was not mentioned in winding up, meaning that the contaminated site is in an unmanaged and abandoned state.[279] If this contaminated site is not remediated and cleaned up, it can result in the long-term persistence of pollutants that can have an ongoing negative impact on the surrounding environment and human health.[280] Another significant issue is that there are a large number of zombie enterprises in China, and the polluting ones, such as

[267] *Id.* at 71.
[268] *Id.*
[269] *Id.*
[270] Li, *supra* note 1, at 71
[271] *Id.*
[272] *Id.*
[273] *Id.* at 26-27, 71.
[274] *Id.*
[275] *Id.* (the method and mode of deposit is regulated by each province and city, but the rules are mostly the same from province to province).
[276] *See More than 70% of Mines give up deposits*, *supra* note 205.
[277] Li, *supra* note 1, at 72.
[278] *Id.*
[279] *Id.*
[280] *See* Richard L. Revesz, *Cost-Benefit Analysis and the Structure of the Administrative State: The Case of Financial Services Regulation*, 34 YALE J. REG. 545, 548 (2017).

Heihua, are a problem that the Chinese government has focused on in recent years.[281] However, in documents issued by the Chinese government relating to the bankruptcy of zombie companies, the interests of employees are the priority.[282] In this case, the amount of abandoned contaminated sites will only increase and is undoubtedly a huge challenge for the internalization of environmental costs.[283]

The third finding is that EBL 2006 is a haven for polluters.[284] The parent company separates subsidiaries with depleted mining resources and high debts by way of liquidation.[285] The parent company focuses on environmental remediation obligations for some valuable subsidiaries, like those rich in mineral assets.[286] The parent company uses this approach to circumvent its environmental obligations.[287] This approach is evident in Case Studies C and D. This is the mode adopted by Yunnan Copper.[288] Yongren Tuanshan and Jinggu, were both subsidiaries of Yunnan Copper and were declared bankrupt as their mines were no longer profitable while they were heavily in debt.[289] After Yongren Tuanshan and Jinggu completed their bankruptcy, their environmental liabilities were not mentioned and were not at all present in the relevant bankruptcy disclosures.[290] On the other hand, other valuable subsidiaries have environmental remediation processes positively presented in Yunnan Copper's annual reports.[291]

Meanwhile, it is suspected that some companies may also use reorganization to escape their environmental obligations.[292] Typically, companies with environmental liabilities are automatically "released' when they are taken over by other buyers.[293] The buyer, in turn, usually refuses to pay the environmental costs owed by the previous company.[294] Government officials, in order to facilitate the success of corporate reorganization, usually do not force buyers to assume the seller's previous environmental liability, with the ultimate environmental costs being borne by the government.[295] Heihua is a classic example. When Heihua was acquired by

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[281] *See China Holds Key Economic Meeting to Plan for 2019, The State Council of P.R.China*, Dec. 21, 2018, http://english.www.gov.cn/news/top_news/2018/12/21/content_281476445128423.htm [https://perma.cc/3ZEG-B85D].

[282] *See id.*

[283] *See* OECD & DEV. RES. CENTER ST. COUNCIL, INDUSTRIAL UPGRADING FOR GREEN GROWTH IN CHINA: THEMATIC FOCUS ON ENVIRONMENT: KEY FINDINGS AND RECOMMENDATIONS, 2-3 (2017).

[284] Li, *supra* note 1, at 72-74.

[285] *Id.*

[286] *Id.* at 72-73.

[287] *Id.*

[288] *Id.*

[289] *Id.*

[290] *Id.*

[291] *See* 2020 Annual Environmental Report, YUNNAN COPPER (2021) http://file.finance.sina.com.cn/211.154.219.97:9494/MRGG/CNSESZ_STOCK/2021/2021-3/2021-03-30/6991274.PDF. [https://perma.cc/38LA-4RBW].

[292] Li, *supra* note 1, at 73.

[293] *See* Koks & Million, *Environmental Issues in Bankruptcy*, 40 TEX. ENVTL. L.J. 43, 44 (2009) 46.

[294] Li, *supra* note 1, at 72-73.

[295] *See* Koks & Million, *supra* note 293, at 46; see also Liu Mingkang & Wei Chuyi, *Towards A Better Future For Chinese Bankruptcy Law: Problems and Potential* (Lau The Chinese University of Hong Kong Chor Tak Institute of Global Economics and Finance, Working Paper No. 2, 2017), https://www.igef.cuhk.edu.hk/igef_media/working-paper/IGEF/igef%20working%20paper%20no.%2062%20english%20version.pdf [https://perma.cc/VP6G-HVNU]. Although the author's study is based on US bankruptcy law, the role of the government in bankruptcy will be more powerful in China.

Haohua, Haohua did not pay anything for Heihua's environmental costs as well as not paying the environmental damage fines.[296]

There is a strong conflict between environmental law and bankruptcy law.[297] Internalization of environmental costs is difficult to achieve in Chinese bankruptcy proceedings and in most cases, public funds have to cover the environmental costs of bankrupt polluters.[298]

IV. EXISTING PROBLEMS OF THE EBL 2006

EBL 2006 was successful when China first enacted this law, as it addressed the country's corporate bankruptcy issues.[299] However, this law cannot meet the needs and demands of current societal development.[300] One problem is that environmental liabilities are ignored in bankruptcy cases, which would be in breach if the polluter pays principle and regulation of environmental laws.[301] In the past 15 years, the implementation of EBL 2006 has remained considerably weak.[302] The implementation of EBL 2006 did not address the issue of environmental liabilities, despite it deserving attention from Chinese legislators.[303] This part will analyze the shortcomings of EBL 2006 in terms of environmental liability, and will focus on reorganization, liquidation, and post-liquidation.[304]

A. Reorganization

One purpose of bankruptcy law is to rescue the bankrupt company.[305] Reorganization is often utilized in China, as it serves as a vital means of saving bankrupt companies and their creditors' interests.[306] Despite the pervasiveness of the practice, reorganization plans typically do not include environmental liability.[307] For example, in the first reorganization of Heihua, there was no mention of any environmental liability in the reorganization plan.[308] As such, bankruptcy law lacks the relevant provisions to protect environmental liabilities in reorganization solutions.[309]

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296 Li, *supra* note 1, at 73.
297 *Id.* at 74.
298 *Id.*
299 *Id.*
300 *See* Zinian, *supra* note 28, at 394.
301 *See Can the Insolvent Polluter Pay - Environmental Licenses and the Insolvent Company*, 12 J. Envtl. L. 207, 210 (2000).
302 *See* Zinian, *supra* note 28, at 394.
303 Li, *supra* note 1, at 74.
304 *Id.*
305 *See* Tuula Linna, *Insolvency Proceedings from a Sustainability Perspective*, 28 INT'L INSOLVENCY REV. 210 (2019).
306 *See*, ZHANG ZINIAN, CORPORATE REORGANISATION IN CHINA: AN EMPIRICAL ANALYSIS 12 (2018).
307 Li, *supra* note 1, at 74-75.
308 *Id.* at 75.
309 *Id.*

Firstly, there are shortcomings with the creditor committee system.[310] A creditor committee contains only nine members and there are no representatives for environmental claims.[311] It is therefore difficult to guarantee any recognition of environmental liability.[312] Creditor committees play a dominant role in the supervision of debtors' property, because the members represent the interests of the various creditors in the meeting.[313] For example, EBL 2006 provides that one of the members of the creditor committee must be an employee representative or a representative of the work union.[314] Thus, employees are given preferential protection in EBL 2006.[315] It is possible for environmental liability to be given preferential protection by the creditor committee in the current state of EBL 2006 but it is uncertain because the member selection process is performed and approved by the court.[316] In practice, few representatives of environmental claims become members of the creditor committee.[317] Since environmental liabilities of bankrupt polluters involve a wide range of fields, and the cost of environmental claims are often high,[318] representation for such environmental claims in bankruptcy proceedings is not proportionate.[319] Committees are then unable to respond quickly to the number of environmental claims, as seen in the cases of Jinggu and Tuanshan.[320] The absence of environmental claims representatives from the creditor committee and meeting of creditors in bankruptcy restructuring practices makes it difficult to protect environmental liability of a polluting bankrupt company.[321]

Secondly, there is a problem with the voting system in bankruptcy law.[322] The representative of an environmental claim only has the right to vote on the reorganization plan when it is permitted to join the creditors by a determination that an environmental claim has been confirmed.[323] If the environmental claim can be paid off, the representative of the environmental claim needs to join the creditors' meeting.[324] However, as seen in Shenyang Smelter, it is not easy for the government or relevant environmental reorganization to identify relevant environmental liabilities because environmental liabilities are sometimes hidden.[325] The result is that environmental claims cannot be declared at the creditors' meeting.[326]

Once the vote has been completed, and environmental claims are subsequently discovered, a question arises as to whether a special vote be taken. The answer is possibly. However, according to EBL 2006, the representatives who vote on the reorganization plan are

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310 *Id.*
311 *Id.*
312 *Id.*
313 *See* Rebecca Parry & Yingxiang Long, *China's Enterprises Bankruptcy Law, Building an Infrastructure Towards a Market- Based Approach*, 20 J. CORP. L. STUD. 157, 167 (2020).
314 *See* PRC Enterprises Bankruptcy Law, *supra* note 19, at art. 67.
315 *See* Parry & Long, *supra* note 313.
316 Li, *supra* note 1, at 64.
317 *Id.*
318 *See* Linna, *supra* note 305.
319 Li, *supra* note 1, at 64.
320 *Id.* at 64-65.
321 *Id.* at 65.
322 *Id.*
323 *See* PRC Enterprises Bankruptcy Law, *supra* note 19, art. 59.
324 Li, *supra* note 1, at 65.
325 *Id.*
326 *Id.*

limited to secured claims, labor claims, taxes, and ordinary claims.[327] The representative for environmental claims only votes as a general unsecured creditor and therefore cannot guarantee whether environmental liabilities will be incorporated into the reorganization plan or not.[328]

Thirdly, there is an absence of relevant laws for the assessment of environmental claims.[329] In practice, professional environmental appraisal institutions evaluate environmental claims, and the assessment report serves as the basis for judges to determine the monetary value of environmental claims.[330] For example, in the case of Pu'er City Procuratorate v. Jinggu, it was the assessment report issued by a professional institution that served as evidence of the environmental claim.[331] However, the effects of environmental pollution are often found by a continuous process of assessment, highlighting a problem that the result of previous assessments has the potential to change with time.[332] Therefore, it is necessary to enact a review system for the assessment of environmental claims.[333] This will help to ensure environmental liabilities and uphold the fairness principle.[334]

B. Liquidation

As analyzed above, environmental liabilities do not have priority in relation to liquidation in Chinese bankruptcy cases.[335] This means that environmental liabilities are in an adverse position when it comes to liquidation, and are not in line with China's national development policy in regards to the green economy.[336] Generally, the cost of environmental liability involved is high.[337] If environmental liabilities were equal to general, unsecured claims, then environmental liabilities could not be realized in the course of bankruptcy proceedings.[338] This will lead to more companies taking up environmental costs as free costs and avoiding environmental liability through bankruptcy liquidation after polluting activity has occurred, as was the case with Tuanshan.[339] Such behaviors constitute a serious violation of the polluter pays principle and corporate social responsibility.[340]

In addition to the problem described above, under Chinese law, the bankruptcy property is used for the liquidation of corporate debts and the distribution to shareholders.[341] The company no longer owns any property, and this distribution does not take into account

[327] *Id.*
[328] *See* PRC Enterprises Bankruptcy Law, *supra* note 19, art. 59, 64.
[329] Li, *supra* note 1, at 65.
[330] *Id.* at 65-66.
[331] *Id.* at 66.
[332] *Id.*
[333] *Id.*
[334] *Id.*
[335] Li, *supra* note 1, at 66.
[336] *See* Qu Dongmei, *Low Carbon Economy and the Priority of Environmental Tort Liability in Bankrupt Enterprises*, 5 ENERGY PROCEDIA 1814, 1815 (2011).
[337] Li, *supra* note 1, at 66.
[338] *Id.*
[339] *See* Dongmei, *supra* note 336, at 1816.
[340] Li, *supra* note 1, at 66.
[341] *See* PRC Enterprises Bankruptcy Law, *supra* note 19, art. 30.

whether the company will have new debt after liquidation.[342] This manner of distribution is not conducive to environmental liability.[343] If environmental liability is discovered after bankruptcy and supported by the claim, but the company does not have any property to compensate for environmental liability, it cannot be compensated through bankruptcy proceedings[344]

Environmental liability should be given priority in winding up according to the values of equality and justice.[345] The bankruptcy regime is designed to meet the requirements of equitable distribution, which is the primary purpose of bankruptcy legislation.[346] When considering the long-term, latent, and complex nature of environmental damage, it becomes particularly difficult to protect the public interest represented by environmental liabilities compared to other creditors.[347] These environmental costs are closely linked to people's lives and health.[348] If an enterprise is unable to pay its debts when due, its assets are insufficient to pay all of its claims and the enterprise enters into bankruptcy liquidation proceedings, then prior payment of claims for environmental costs are conducive to achieving a fair distribution in bankruptcy and protecting public interest.[349] In particular, these environmental liabilities are paid to avoid pollution and ultimately to reduce the risk of pollution to the public.[350]

In addition, the fact that environmental liabilities are paid upfront would mean that the requirements of sustainable development are met.[351] If environmental liabilities are not paid, much of the contaminated land will not be cleaned and the pollution created will persist, if not spread, which is unquestionably detrimental to sustainable development.[352]

Lastly, the polluter pays principle has been accepted and implemented into Chinese environmental legislation.[353] Its purpose is to consign the responsibility of dealing with and preventing the worsening of pollution to the polluter.[354] Therefore, even if an enterprise becomes bankrupt or declares bankruptcy, it should still bear the corresponding environmental liability. Otherwise, the effect of not paying for environmental liability would be equivalent to allowing the enterprise to use bankruptcy to avoid assuming environmental responsibility. Therefore, the majority of such environmental responsibility would be passed yet again onto the state and wider society. This would inevitably make the use and subsequent abuse of environmental resources a free cost to the enterprise.[355] This is not in line with the economic

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342 Li, *supra* note 1, at 67.

343 *See* Dongmei, *supra* note 336, at 1815.

344 Li, *supra* note 1, at 67.

345 *See* Qu Dongmei & Qu Junpeng, *Research on the Priority of Environmental Tort Obligation in Bankrupt Enterprises under the Background of Low Carbon Economy*, 4 J. SUSTAIN. DEV. 150, 151-2 (2011).

346 *See* Daniel A. Austin & Cheng-to Lin, *Bankruptcy with Chinese Characteristics: Insolvency Administration in the People's Republic of China*, 94 AM. BANKR. L.J. 85, 96 (2020).

347 Li, *supra* note 1, at 69.

348 *See* Jin Zhao & Ghulam Rasool Madni, *The impact of economic and political reforms on environmental performance in developing countries*, 16 PLOS ONE 2 (2021).

349 *See* Dongmei, *supra* note 336, at 1816.

350 *See* Mounteer, *supra* note 251.

351 *See* Dongmei, *supra note* 336, at 1815.

352 Talia Gordner & Ralph Cuervo-Lorens, *The Polluter Does Not Always Pay: Environmental Liability of Property Owners*, MCMILLAN (Apr. 18, 2023), https://mcmillan.ca/insights/publications/the-polluter-does-not-always-pay-environmental-liability-of-property-owners/ [https://perma.cc/AC9M-FJX8].

353 Li, *supra* note 1, at 68.

354 *Id*.

355 *See* Dongmei, *supra* note 336, at 1815.

development policy in China which endeavors to balance the demands of both economic development and environmental protection.[356]

EBL 2006 must pay special attention to environmental liabilities during bankruptcy liquidation.[357] This can not only protect public interests and maintain social stability, but also help to implement sustainable development and the green economy.[358]

C. Post-Liquidation

First and foremost, the subject of environmental liability remains unclear after the completion of the bankruptcy liquidation process.[359] According to traditional company law theory, the subject of the company is dissolved upon the completion of bankruptcy liquidation, and its records are removed from the company registration system.[360] However, in many cases, environmental liability is hidden, and as such, it is difficult for administrative reorganization or judicial reorganization to supervise it.[361] The issues created by the emission of pollutants have not been resolved, but the bankrupt polluter is able to escape its environmental liability; with the government subsequently assuming such liability.[362] Some scholars believe that the government should be the bearer of such environmental liability, as it is due to government negligence that the polluting firms are able to escape their environmental liability.[363] However, this argument is unreasonable and detrimental to both public interest and environmental sustainability.[364]

Furthermore, there is no environmental liability relief system in EBL 2006 following the completion of the bankruptcy liquidation process.[365] First of all, EBL 2006 has no established corporate representative system after the liquidation procedure has been completed.[366] If the bankrupt polluter needs to assume environmental liability in the future upon completion of the liquidation process, in accordance with the polluter pays principle, then there will be a series of difficulties, such as the sourcing of funds and the manner of audit and audit personnel.[367] In bankruptcy procedures, because of the supervision of the courts, creditors and administrators, even if there are various problems in practice, the different parties can negotiate

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356 *See The 14th Five-Year Plan of the People's Republic of China—Fostering High-Quality Development*, ASIAN DEV. BANK 6 (2021)

357 *See* Chaoyi Huang, *China's practical wisdom: Assumption of liability for endangering public health in bankruptcy proceedings—A case study of the Changchun Changsheng Biotechnology vaccine incident and the Johnson & Johnson baby powder incident*, 10 FRONTIERS IN PUB. HEALTH 3 (2022).

358 *Id*. at 4.

359 *See* Li, *supra* note 1, at 68.

360 *See* Company Law 2005, *supra* note 222, art. 188.

361 Li, *supra* note 1, at 65.

362 *See id*.

363 *Id*. at 69.

364 *See* Environmental Protection Law, *supra* note 7, art.64.

365 *See* Runze Yang & Ruigang Zhang, *Environmental Pollution Liability Insurance and Corporate Performance: Evidence from China in the Perspective of Green Development*, INT'L J. OF ENV'T RSCH. & PUB. HEALTH 2 (2022).

366 Li, *supra* note 1, at 69.

367 *Id.* at 69-70, 80-81.

and compromise with each other.[368] However, if environmental liability has to be resolved following liquidation, it is difficult for the government or the environmental organization to submit an environmental claim. As such, China needs to establish a corporate representative system, which can represent the company in dealing with outstanding debts within a period after the completion of liquidation.[369]

Moreover, the scope of the preservation system is too narrow. [370] Articles 118 and 119 of EBL 2006 provide details of this preservation system.[371] In accordance with the preservation system, the distribution shares of the bankruptcy property that have not been collected by creditors shall be preserved by the relevant bankruptcy administrator in advance.[372] Where if the creditor did not collect bankruptcy properties or the action is not being settled as a creditor's right.[373] The bankruptcy administrator shall distribute the preserved distribution share to other creditors.[374] However, some pollution is often discovered after bankruptcy.[375] For example, at Wuhan brown site, the pollution was discovered a few years after the bankruptcy of Wuhan Pesticide Factory.[376] Even if the provincial government of Wuhan were to take a lawsuit for remediation of the brown site, they would not receive the compensation from Wuhan Pesticide Factory.[377] This is not only detrimental to the protection of the interests of wider society, but it is also a violation of the polluter pays principle.[378] Therefore, if similar environmental liabilities are to be received in the future, the preservation system must expand its scope of application in the future, so that environmental liabilities are accounted for.[379]

V. SOLUTION—INTERNALIZATION OF ENVIRONMENTAL COSTS IN BANKRUPTCY

A. Environmental Priority in the EBL

368 *Id.* at 70.

369 *Id.*

370 *Id.* The preservation system is often used for certain specific creditors. *See* PRC Enterprises Bankruptcy Law, *supra* note 19, art. 117 (explaining any creditor's right subject to the requirement for effectiveness or rescission, a bankruptcy administrator shall preserve the distribution share in advance).

371 Li, *supra* note 1, at 69.

372 *Id.*

373 *Id.*

374 *Id.*

375 *Id.*

376 Li, *supra* note 1, at 69.

377 *Id.*

378 *Id.* at 66.

379 *Id.* at 70-71.

The order of priority in the winding up process is already accounted for in EBL (Table 1). In EBL, after paying the costs of the liquidation and first paying the debts incurred for the common good of creditors, the bankruptcy property will pay employees' wages, pensions, and then the social insurance and taxes, followed by unsecured, non-preferential creditors.[380] The primary importance of the polluter pays principle in bankruptcy cases is to establish the priority of environmental liabilities in the process of liquidation distribution.[381] If prioritizing environmental liability is feasible in the winding up process, the following issues deserve to be considered.[382]

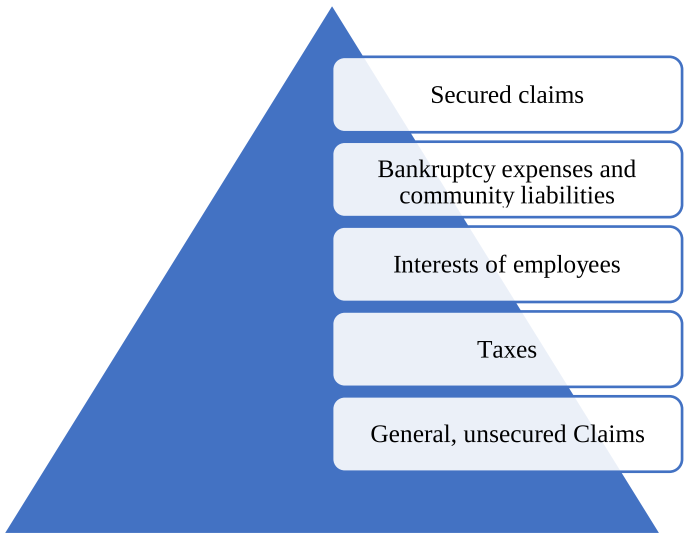

Table 1: The Existing Order of Distribution in EBL

Firstly, the scope of environmental liability priority should be considered. The purpose of giving priority to environmental liability is to realize the importance of the internalization of environmental costs.[383] Costs include environmental fines, in addition to foreseen environmental liability and unforeseen environmental liability.[384] Regarding the nature of environmental fines, there is an argument that these are merely administrative fines, rather than costs associated with actual environmental pollution.[385] However, the fines also cover the cost of environmental investigations carried out by regulators, which means that if the costs are not recoverable then the funds available to the regulator will have decreased.[386]

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380 *See* PRC Enterprises Bankruptcy Law, *supra* note 19, art. 113.
381 Li, *supra* note 1, at 225.
382 *Id.*
383 *Id.*
384 *Id.*. Foreseen liabilities include the closure of a mine or landfill; unforeseen liabilities would include a pollution incident. *Id*.
385 *See* Gelber et al., *supra* note 359.
386 *See* GAO-05-658, *supra* note 6, at 27.

Furthermore, if the distributable assets are insufficient to cover the full environmental priority, the cost of environmental remediation should be paid in priority to environmental fines. The reason for this is that the implementation of administrative fines cannot change the pollution that the operator has caused; rather the administrative fine acts more like a warning notice issued by the regulator.[387] Giving priority to administrative fines will only add additional revenue to the government, with the revenue from fines not guaranteed for use on matters relating to environmental governance.[388] However, the nature of other environmental liabilities that come at some actual cost to environmental governance, such as cleanup costs, restoration, and environmental damage that the debtor's operations have caused to adjoining property, are indeed different from administrative fines.[389] These environmental liabilities should be given priority in liquidation since they are more closely linked to the cause of the pollution itself.[390]

The order of priority given to environmental liability also warrants discussion. Upon reading EBL 2006, environmental liability can be recognized as a kind of community liability in China.[391] The community liability has been interpreted as the liabilities arising from damage caused by a debtor's property.[392] In practice, some public interests have been confirmed as community liability in Chinese bankruptcy cases.[393] For example, demolition compensation and resettlement[394] was recognized as community liability upon the bankruptcy of a real estate company.[395] The bankrupt real estate company's polluting behavior has the potential to cause extensive damage to the environment and poses a threat, directly or indirectly, to human health (which is in the public interest), as has been argued in previous chapters.[396] Furthermore, if the polluter fails to meet its environmental obligations, this can be understood as the polluter circumventing the expenses of its environmental obligations, which can be recognized as ill-gotten gains.[397] Environmental liability can therefore be recognized as a community liability in a broader sense.

Lastly, protecting the interests of employees has been prioritized throughout the development of Chinese bankruptcy law, as seen in both EBL 1986 Trial and EBL 2006.[398] If

387 *See generally* He, *supra* note 140.

388 *See* PRC Enterprises Bankruptcy Law, *supra* note 19, at art. 113.

389 *See* Gelber et al., *supra* note 359.

390 *See id*. (noting that this will meet the requirement of the polluter pays principle.)

391 *See* PRC Enterprises Bankruptcy Law, *supra* note 19, at art. 42.

392 *See id.*

393 *See* Huang, *supra* note 357.

394 *See* Matthew S, Erie, *Property Rights, Legal Consciousness and the New Media in China: The Hard Case of the 'Toughest Nail-House in History"*, 26 CHINA INFO. 35, 40-41 (2012) (noting that demolition compensation and resettlement refer to the company that obtains the housing demolition and relocation permit to pay for the owner of the demolished house for the demolition compensation and resettlement.)

395 *See* Christian Shepherd, *China's 'Controlled Demolition' Plan for Evergrande Marks the End of Its Housing Boom*, WASH. POST (Sept 29, 2021), https://www.washingtonpost.com/world/asia_pacific/china-evergrande-debt-property-xi/2021/09/28/98ad816e-1f3f-11ec-a8d9-0827a2a4b915_story.html [https://perma.cc/H2ZC-CXV5]. In the bankruptcy case of *Jiangsu Lianshui Xin Ding Real Estate Co., Ltd.*, the administrator identified the resettlement costs of the demolished households as a community debt. Notice of recruitment of community debt lenders in bankruptcy cases issued on January 19, 2020. *Id.*

396 *See* Gelber et al., *supra* note 359.

397 *See id.*

398 *See* Enterprise Bankruptcy Law Trial 1986, *supra* note 38, art. 37; *see also* PRC Enterprises Bankruptcy Law , *supra* note 19, at art. 113.

the cost of environmental cleanup is too large, all bankruptcy properties will be used to pay for the cost of environmental remediation; this means that the interests of employees cannot or are less likely to be protected.[399] It is worth noting that China's EBL 2006 provides a remedy for the interests of employees.[400] Under Article 132 EB 2006L, if bankruptcy properties are insufficient to pay employees in the winding up process, the realization of the secured property can be paid to the employees in priority.[401] Therefore, Chinese legislators should further improve on Article 132 in subsequent amendments.[402]

In summary, environmental liability cannot be classified as labor claims or taxes; instead, it can only be classified as common bankruptcy claims, or general and unsecured liability.[403] Therefore, the order of environmental liability in the distribution should be raised (Table 2) from the following aspects.

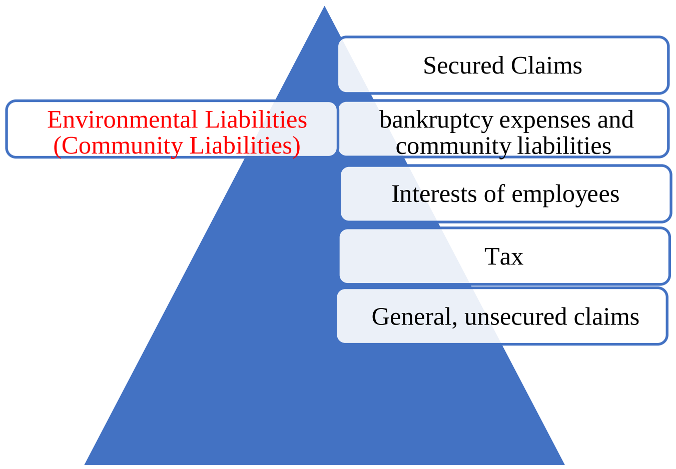

Table 2: The Proposed Reform of the Order of Distribution in EBL

B. Environmental Presentative and Notice Provision

Environmental liability is not addressed in EBL 2006; thus, the liquidators cannot pay adequate attention to the bankrupt polluter's environmental liability.[404] As such, EBL 2006 should establish notice provisions of environmental liability and a system of environmental

399 *See* PRC Enterprises Bankruptcy Law, *supra* note 19, at art. 6.
400 *See id.* at art. 132.
401 *See id.*
402 *See id.*
403 *See id.*
404 *See id.*

representatives.[405] Environmental representatives should be civil servants under the local environmental protection authority of the People's Government.[406]

Enterprise acts likely to cause substantial environmental pollution should provide a notice of assessment to the environmental department; these notices should describe existing acts of environmental concern and include a complete organizational framework report.[407] The report should include the legal entity of the enterprises involved, the polluting behavior, the fact, area, and extent of the pollution caused, and the estimated cost of environmental cleanup and future remediation.[408] This idea has been practiced by other countries and supported by other scholars.[409] Thus, when an enterprise files for bankruptcy, the enterprise must submit an overview of its environmental pollution and a future plan to remediate the environmental issue to the court.[410] After the court accepts the filing, the bankruptcy administrator will present a specific implementation plan and timely report to the court and will be subject to the supervision of the creditors' committee to ensure that environmental liability is internalized to the maximum extent.[411]

Furthermore, EBL 2006 should confirm the environmental representative's identity who will participate in future bankruptcy proceedings.[412] The representative represents the interests of contingent environmental creditors who declare and estimate their claims.[413] This is to ensure that future solvent environmental creditors will receive comparable liquidation shares.[414] Meanwhile, environmental representatives will share their viewpoints with the Creditors' Committee.[415] This provision should refer to the existing structure of the creditor committee whereby employee interest representatives have at least one seat on the creditor committee.[416] At least one individual should be chosen to be an environmental representative if bankruptcy proceedings involve environmental liabilities.[417]

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405 *See generally Superfund "Notice of Liability" Letters*, E.P.A. (June 5, 2023) https://www.epa.gov/enforcement/superfund-notice-liability-letters [https://perma.cc/2F62-FU9Y].

406 *See* PRC Enterprises Bankruptcy Law, *supra* note 19, art. 24.

407 *See Chapter 7- Bankruptcy Basics*, U.S. CT., https://www.uscourts.gov/services-forms/bankruptcy/bankruptcy-basics/chapter-7-bankruptcy-basics [https://perma.cc/AMF6-278E] (last visited Feb. 15, 2024).

408 *See generally* 2023 *Agency Financial Report*, U.S. OFF. PERS. MGMT., https://www.opm.gov/about-us/2023-agency-financial-report/management-s-discussion-and-analysis-section-1/organizational-framework/ [https://perma.cc/DD3B-DLR2] (last visited Feb. 15, 2024).

409 *See e.g.*, *Cantwell Hails ASARCO Superfund Cleanup Deal, Continues Push to Hold Corporate Polluters Accountable*, MARIA CANTWELL U.S. SEN. FOR WASH. (Oct. 31, 2006), https://www.cantwell.senate.gov/news/press-releases/cantwell-hails-asarco-superfund-cleanup-deal-continues-push-to-hold-corporate-polluters-accountable [https://perma.cc/YYB7-6BBL].

410 *See Chapter 7- Bankruptcy Basics*, *supra* note 407.

411 *See e.g.*, *Chapter 11- Bankruptcy Basics*, U.S. CT., https://www.uscourts.gov/services-forms/bankruptcy/bankruptcy-basics/chapter-11-bankruptcy-basics, [https://perma.cc/3QNZ-6WG3] (last visited Feb. 15, 2024).

412 *See Chapter 7- Bankruptcy Basics*, *supra* note 407.

413 *See id.*

414 *See e.g.*, *63 Creditors' Claims in Bankruptcy Proceedings*, U.S. DEPT. JUST., https://www.justice.gov/jm/civil-resource-manual-63-creditors-claims-bankruptcy-proceedings [https://perma.cc/7KU6-HPMC] (last visited Feb. 15, 2024).

415 *See Chapter 7- Bankruptcy Basics*, *supra* note 407.

416 *See* Kenneth N. Klee et al., *Symposium on Bankruptcy: Chapter 11 Issues: Creditors' Committees Under Chapter 11 of The Bankruptcy Code*, 44 S. C. L. REV. 995 (1993).

417 *See id.* at 1009.

Lastly, the representative should be involved in reorganization proceedings.[418] The reorganization plan will comprise a specific debt settlement plan and the debt voting group.[419] The voting group should include an environmental liability group, a secured liability group, a labor liability group, a tax group and an ordinary liabilities group.[420] The reorganization plan must be approved by the environmental liability group, to ensure that environmental cleanup costs are paid after reorganization.[421] Meanwhile, the extent of environmental liability should be a determinative factor in the restructuring process since environmental representatives will be a part of the voting group.[422]

C. Piercing the Corporate Veil

In some necessary cases, the scope of environmental liability needs to be expanded; for example, if the polluter deliberately files for bankruptcy in order to escape environmental liability, or if the pollution is caused by the polluter intentionally or negligently.[423] In such instances, in accordance with the principle of joint and several liability, regulators could recover the environmental costs from the relevant corporate entity by way of individuals within the entity, such as executives and shareholders.[424] At present, this view has been supported by some scholars, who have expressed that the veil of the corporation should be lifted in these kinds of cases.[425] That is to say that joint and several liability are borne by the responsible shareholders of the company, which is not only conducive to the settlement of environmental liability, but also plays a warning role for shareholders to participate in the company's environmental protection and reasonable management.[426] However, it is worth noting that the extent to which successor entities bear continuing responsibility should be limited in order to promote the healthy development of the economy.[427]

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418 Li, *supra* note 1, at 65.

419 *See Chapter 11 – Bankruptcy Basics, supra* note 411.

420 Li, *supra* note 1, at 13.

421 *See* Andrew J. Gallo et al., *What To Know About Environmental Liabilities In Bankruptcy*, MORGAN LEWIS (Dec. 14, 2023), https://www.morganlewis.com/pubs/2023/12/what-to-know-about-environmental-liabilities-in-bankruptcy [https://perma.cc/S5BR-5EBY].

422 *See Recent Developments at the Intersection of Bankruptcy and Environmental Law*, WEIL RESTRUCTURING (Aug. 8, 2022), https://restructuring.weil.com/environmental/recent-developments-at-the-intersection-of-bankruptcy-and-environmental-law/ [https://perma.cc/XM4X-SWKM].

423 *See* Dallo & McCall, *supra* note 421.

424 *See Environmental Liability*, ENV'T L. INST., https://www.eli.org/environmental-liability/environmental-liability [https://perma.cc/WV7Q-AYM4] (last visited Mar. 1, 2024).

425 *See* Hui Huang, *Piercing the Corporate Veil in China: Where Is It Now and Where Is It Heading?*, 60 AM. J. COMPAR. L. 763, 770 (2012).

426 *See* George W. Dent, *Limited Liability in Environmental Law*, 26 WAKE FOREST L. REV. 151, 160-162, 169 (1991).

427 *See Successor Liability Claims for Environmental Contamination*, TAFT L. (Jan. 28, 2013), https://www.taftlaw.com/news-events/law-bulletins/successor-liability-claims-for-environmental-contamination/ [https://perma.cc/5X5H-H2MN].

Some experts agreed with the proposal to lift the corporate veil to protect the interests of creditors.[428] In the view of Judge Li and Judge Zhang, the bankruptcy termination company is canceled, and its entity no longer exists.[429] Meanwhile, the appropriate continuation of its entity will help to fulfill the liability arising from its polluting activity.[430] The continuation of its entity can also ensure the realization of the polluter pays principle and the internalization of environmental liabilities.[431] Furthermore, the judges' view is that the will of the company is reflected by its executives, which may in turn encourage the ill-behavior of executives, for example, earning income from operating environmental pollution risk business.[432] Therefore, the judges suggest that in this case, shareholders or executives should be forced to assume environmental liability.[433]

Lifting the corporate veil in China was first used as a statutory remedy in 2005, and was drafted into Chinese Company Law 2005.[434] This legislation provides for the extension of the rights of creditors to pierce the corporate veil and to pursue all shareholders of a company, from single shareholder companies to listed firms.[435] For example, Article 20 established a wide range of rights for creditors to pursue the debts of companies with limited liability and joint stock companies, including shareholders of publicly listed companies:

Where any of the shareholders of a company evades the payment of its debts by abusing the independent status of legal person or the shareholder's limited liabilities, if it seriously injures the interests of any creditor, it shall bear several and joint liabilities for the debts of the company.[436]

Furthermore, Article 63 also imposes requirements on companies with a single shareholder, it states,

> If the shareholder of a one-person limited liability company is unable to prove that the property of the one-person limited liability company is independent from his own property, he shall bear joint liabilities for the debts of the company.[437]

The veil piercing rule is strictly applied in the Company Law of other jurisdictions, though not very common.[438] In contrast, Articles 23 and 64 of the Chinese Company Law

[428] *See* Mark Wu, *Piercing China's Corporate Veil: Open Questions from the New Company Law*, 117 YALE L. J. 329, 329 (2007).

[429] Li, *supra* note 1, at 232.

[430] *See "Mere Continuation" Doctrine Applied to Transfer Liability to Successor Entity*, MASUDA FUNAI (Dec. 23, 2015), https://www.masudafunai.com/articles/mere-continuation-doctrine-applied-to-transfer-liability-to-successor-entity [https://perma.cc/9H48-ABTZ].

[431] *See* Dent, *supra* note 426, at 169.

[432] Li, *supra* note 1, at 232-33.

[433] *Id*. at 233.

[434] *See* Huang, *supra* note 425, at 734-44.

[435] *See* Kimberly Bin Yu & Richard Krever, *The High Frequency of Piercing the Corporate Veil in China*, 23 ASIA PAC. L. REV. 63, 73-74 (2015).

[436] Company Law 2005, *supra* note 222, at art. 20.

[437] *Id.* at art. 64.

[438] *See* Lawrence S. Kirsch & John C. Raffetto, *Chapter 1 Federal Environmental Liability under CERCLA and RCRA*, A.B.A, https://www.americanbar.org/content/dam/aba-cms-dotorg/products/inv/book/408778006/chap1-5350266.pdf [https://perma.cc/RQ9G-4N7J] (last visited Mar. 1, 2024).

results in the corporate veil being pierced far more frequently in China than in other jurisdictions.[439] Articles 20 and 64 also provide a means for achieving the internalization of environmental liability in bankruptcy proceedings.[440] In bankruptcy cases, where a company's shareholders have deliberately transferred property to escape environmental liability or where company accounts are mixed with private accounts, the corporate veil can be pierced, meaning that shareholders would be expected to cover the costs of the company's environmental liability.[441]

VI. CONCLUSION

The polluter pays principle is explicitly detailed within Chinese environmental legislation, but this principle has been challenged in the context of bankruptcy law.[442] In practice, environmental costs have been transferred to society in bankruptcy proceedings, with many contaminated sites not having been cleaned up post-liquidation.[443] Some companies use bankruptcy regimes to escape their environmental responsibilities.[444] The enactment of EBL 2006 was a success in that it solved the problem of bankruptcy in China.[445] However, EBL 2006 has now become a haven for polluters insofar as environmental resources have become a somewhat free cost for companies under the bankruptcy framework in China.[446] From the perspective of the polluter pays principle, EBL 2006 has thus revealed a number of problems, such as a lack of environmental representation in bankruptcy proceedings, as well as environmental liabilities not being given priority in the winding up process. EBL 2006 should consider several changes to realize the internalization of environmental costs, such as giving priority to environmental liability in winding up and increasing the presence of environmental representatives in bankruptcy proceedings, which are recommendations on bankruptcy proceedings.[447] Meanwhile, the corporate entity post-liquidation is also an important way to internalize environmental costs. Therefore, the corporate veil should be lifted when there is sufficient evidence that a company's shareholders have deliberately transferred property to avoid environmental liability, or that corporate accounts have been mixed with private accounts.

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439 *See* Yu & Krever, *supra* note 435, at 65, 75-76.
440 *See* Wu, *supra* note 428 at 332-33.
441 *See* Lauren Gross, *The Relationship between Declaring Bankruptcy and Piercing the Corporate Veil*, AM. BANKR. INST., https://www.abi.org/member-resources/blog/the-relationship-between-declaring-bankruptcy-and-piercing-the-corporate-veil [https://perma.cc/3Q9R-JHDQ] (last visited Mar. 1, 2024).
442 Li, *supra* note 1, at iii.
443 *Id.* at 37.
444 *Id.* at 251.
445 *Id.* at 37.
446 *Id.* at 2.
447 *Id.* at iii.