CITI Evaluation Annual Report

Green Supply Chain 2019

IPE 公众环境研究中心
Institute of Public & Environmental Affairs

About the Authors

Institute of Public & Environmental Affairs (IPE)

The Institute of Public & Environmental Affairs (IPE) is a non-profit environmental organization based in Beijing, China. Since its establishment in May 2006, IPE has developed and operated the Blue Map Database (wwwen.ipe.org.cn), and launched the Blue Map app in June 2014, consolidating nationwide environmental quality data and real-time emissions data for key pollution sources into a mobile app for the first time. IPE aims to leverage the Blue Map Database and app to promote environmental information disclosure and public participation and to improve environmental governance mechanisms.

Authors

The Institute of Public & Environmental Affairs (IPE): DING Shanshan, Linda Greer, MA Jun, MA Yingying, Erin WONG, LI Yunting, XU Xin, BAI Hui, ZHANG Hui, LI Meng, ZHAN Ying, SHI Huan, CHEN Shuangli

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Note:
1. The duration for this round of evaluation is between: 1st Oct 2018 and 30th Sept 2019;
2. The quotes from Cisco, C&A, Dell, Fiskars, Levi's, New Balance, Signify and Suitsupply have been translated by IPE for the purposes of reference only. If any questions arise related to the accuracy of the information contained in the translation, please refer to the original documents published by the brands.
3. If any divergences arise between the English and the Chinese versions of this report, please refer to the English version, which is the official version of this report.

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EXECUTIVE SUMMARY

IPE regards corporate green supply chain programs and policies as a key lever to reduce industrial pollution in China. Our Green Supply Chain Corporate Information Transparency Index (CITI) evaluation is a system for ranking brands' supply chain practices. IPE uses this index to dynamically assess brand performance in overseeing supply chain environmental responsibility, scoring on such matters as public engagement and responsiveness, requirements for supplier compliance and corrective action, and data disclosure and transparency. Points are maximized when companies give priority to their hotspots of environmental impact, reaching beyond their Tier 1 suppliers and pushing their direct suppliers to screen their own suppliers.

The CITI scoring system is structured to provide a step-by-step roadmap for the private sector to improve their sourcing programs and incorporate environmental behavior into the selection of manufacturers for their goods. Focused strictly on supply chain impacts, where the heaviest environmental impacts lie, the CITI evaluation makes an important complementary contribution to broader global sustainability reporting indices developed for the private sector such as the Global Reporting Initiative (GRI) developed by Ceres and the SASB standards developed by the Sustainable Accounting Standards Board.

Considerable progress was evident in supply chain oversight during the 2019 period, reflecting expanded efforts by all stakeholders concerned with environmental improvement in China, particularly by brands scoring high in the CITI evaluation. As a result of this broad stakeholder engagement, IPE saw a very gratifying increase in the number of factories demonstrating accountability to the public for their pollution problems, rectifying those problems by transparent means and providing information beyond legal requirements in their commitment to becoming stronger environmental leaders.

2019 Highlights

IPE ranked more than 438 companies with suppliers manufacturing in China in 2019. As in previous years, brands in the IT and apparel sectors were the most active. This year witnessed an encouraging increase in *the diversity of the types of suppliers* reporting into the system, reflecting the activities of certain brands to expand oversight into higher tiers of their supply chains to include hotspots of their manufacturing impact. As a result of this expansion, factories in sectors such as metal processing and off-site wastewater and hazardous waste treatment sites received much-needed additional oversight of their environmental behavior.

- Dell scored in first place with 80.07 points in the 2019 CITI for its superb performance in supply chain responsibility
- Apple moved into a new **CITI Master category** as the inaugural member of this new classification, which was conceptualized to drive aspiring Masters to mature their supply chain programs to the point of equal partnerships with suppliers
- Nine brands rounded out the Top 10 rankings for 2019: Levi's, Adidas, C&A, Inditex, H&M, Primark, Cisco, Nike and Target
- Three new major retailers/brands entered the CITI Top 20 for the first time: Cisco, Huawei and Tesco
- Compared to 2018, Chinese brands and manufacturers significantly strengthened their oversight in supply chain environmental management, thereby increasing their CITI scores and reducing industrial pollution problems; Huawei, Li Ning and Landsea were particularly noteworthy brands in this regard, as were the manufacturers Foxconn, Esquel, Mianyang Fulin Precision Machining and Avary Holding
- Collective efforts from members of the China Urban Reality Association and the Real Estate Industry Green Supply Chain Action group significantly strengthened their leverage among supply chain business partners by incorporating the requirement of environmental compliance **into their collective procurement initiative**, raising the bar of supply chain management by using supplier qualification criteria on environmental matters to drive out bad performers and reward the good
- On the transparency front, four new brands – Carrefour, C&A, Hitachi and VF Corp. chose to join IPE's [Green Supply Chain Map](), maximizing their transparency and accountability for supply chain environmental performance with the public

High-scoring CITI brands drove significant reductions in 2019 industrial pollution and reduced non-compliance rates with supply chain oversight

The continued acceleration of government inspection and enforcement efforts in 2019 greatly enhanced the overall private sector oversight of factory environmental performance in China during 2019. The government's targeting of thousands of factories operating out of compliance with the law and its continued release of compliance records and pollution discharge data boosted the number of supervision records in the IPE Blue Map Database to over 1.5 million and enabled many multinational and Chinese brands to broaden and deepen their own supply chain oversight.

IPE was gratified to see more than **2,900** factories engage with IPE to address their compliance problems via public explanations and rectifications or disclose environmental data in our system during the evaluation period between October 2018 and September 2019. This combines to make more than 9,800 facilities in total that have actively taken responsibility for their environmental performance since 2006.[1] In-depth analysis indicates that these improved numbers reflect increased supply chain oversight activity by a relatively small number of high scoring brands in the CITI who motivated their suppliers to be accountable for their compliance problems.

Much of 2019's increased supplier oversight activity can be traced to 37 brands as well as more than 50 of their Tier 1 (direct) suppliers which adopted IPE's Blue EcoChain program over the past 18 months. Blue EcoChain provides automatic database searches and push notifications to brands and suppliers when violations occur, greatly increasing the efficiency and effectiveness of supplier oversight and streamlining the process. A company's adoption of Blue EcoChain is recognized with additional points in their 2019 CITI score.

Beyond compliance, 2019 also witnessed a continuing surge in factories reporting under IPE's Pollution Release and Transfer Registry (PRTR), reflecting brand requirements that their suppliers proactively disclose environmental performance data on their energy and water use, as well as conventional pollutant and chemical discharges, providing public reporting beyond what is required by law.

However, over the same period this past year, IPE saw a stagnation in CITI scores at the bottom of the ranks, where 73 companies continued to score zero in CITI – indicating no activity on the ground whatsoever – not even responding to a factory violation brought to their attention by IPE or a concerned citizen. A similar number still scored at 5 or below in CITI again this year, leading to a total of 191 of 438 companies in urgent need of improving their supply chain oversight and environmental responsibility for their manufacturing.

Of particular concern in this regard this past year is the failure of the chemical industry to step up its supply chain oversight and responsibility in the wake of a major explosion at the Jiangsu Tianjiayi Chemical Co., Ltd. in March, which caused 78 deaths and injured hundreds of people including students from a school nearby. Regretfully, the enormous explosion did not trigger a similar level of concern to improve supply chain oversight in this inherently high risk industry. To the contrary, with the exception of Archroma, a dyes and specialty chemicals company, we are

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[1] IPE tracks the total number of enterprises responding to environmental issues through the green supply chain program each year. 9,800 enterprises represents the sum of these annual measurements from 2006 to 2019. Some enterprises may be double-counted if they receive additional environmental records or if their issues were not resolved within one year.

aware of no other firms in this sector that improved the oversight of factories in their supplier base in response to this tragedy.

Notwithstanding the weak performance in some key industrial sectors, it was indeed a very successful year for the IPE CITI program, which broke new records in many measures of supply chain oversight activity. With an increased number of brands and suppliers coming into the system and increasingly ambitious oversight programs that many long-time brand participants and manufacturers are bringing to the fore, IPE looks forward to reducing even greater amounts of pollution from industrial facilities in the coming year.

INTRODUCTION

Background

Over the past decade, as the globalization of manufacturing has accelerated, there has been an increasing recognition of the central importance of supply chain emissions to a company's environmental footprint. The Global Reporting Initiative (GRI), for example, the world's most widely adopted sustainability disclosure framework with nearly 50,000 registered reports, includes supply chain components in its reporting regime, and CERES, one of the leading nonprofit organizations building corporate leadership in sustainability, sets member expectations on supply chain policies and promotes the disclosure of supplier environmental performance data as well.

The financial community has become more vocal about the business benefits of transparent and sustainable supply chain practices, and the Sustainability Accounting Standards Board (SASB) includes supply chains in its set of financially material sustainability topics for its users. Most recently, organizations such as the World Resources Institute (WRI) and Carbon Disclosure Project (CDP) promoting the Science Based Targets initiative (SBTi) for carbon reductions in the private sector have prioritized Scope 3 supply chain emissions, in recognition that the vast majority of carbon emissions (often more than 80%) come from the supply chain, as opposed to direct emissions or energy use in shops and offices (Scopes 1 and 2, respectively).

IPE's **Green Supply Chain CITI Evaluation**, developed six years ago with the Natural Resources Defense Council (NRDC) to elevate environmental responsibility among companies manufacturing in China, makes a unique contribution to corporate sustainability evaluations with a scoring system and roadmap that is *exclusively concerned with manufacturing/supply chain impacts*. Scores are based on the depth and breadth of specific supply chain oversight activities and the transparency with which corporations proceed. The CITI scoring system is structured to provide a step-by-step roadmap for private sector sourcing programs to incorporate environmental behavior into the qualification and selection of manufacturers for their goods.

IPE regards corporate green supply chain programs and policies as a key lever to reduce industrial pollution in China. The organization has developed a large information database as well as tools that use *the power of environmental information disclosure* – transparency and access to data – to hold factories accountable to reduce their pollution impacts. IPE calls upon corporations sourcing in China as key stakeholders to use this information and oversee the factories that manufacture their goods.

Unlike some organizations promoting environmentally responsible behavior, CITI scores and sub-scores are transparently reported to the public on the web and in an annual report. What's more, the CITI scores are based on public data, including government supervision data, online monitoring data, officially confirmed petitions and complaints, enterprise disclosures and third-party environmental audits, rather than simple self-reporting by the companies.

Description of CITI

IPE's Green Supply Chain CITI Evaluation focuses corporate green supply chain efforts in three key areas:

- public engagement and responsiveness;
- compliance and corrective action; and
- data disclosure and transparency.

Points are maximized when companies give priority to their hotspots of environmental impact, reaching beyond their Tier 1 suppliers and pushing their direct suppliers to screen their own suppliers. Disclosure of information beyond legal requirements – on energy and water use and the discharge of key pollutants and chemicals – is also encouraged with additional points in the scoring system.

Table 1 Scoring fields and points provided in CITI

指标	沟通与透明		合规性与整改行动			延伸绿色供应链		节能减排		推动公众绿色选择	总分
	公众问责与沟通	推动透明供应链	检索供应商环境合规表现	推动供应商整改并公开说明	废水和固体废物负责任管控	识别并管理供应链中环境影响较高的上游供应商	推动直接供应商检索其供应商	推动供应商披露能源和气候变化数据	推动供应商披露污染物排放转移数据	引导公众了解产品全生命周期环境影响的管控	
权重	8	8	10	12	10	10	10	12	12	8	100
Criteria	Responsiveness and Transparency		Compliance and Corrective Actions			Extend Green Supply Chain Practices		Energy Conservation and Emissions Reduction		Promote Public Green Choice	Total Score
	Respond to enquiries and engage with the public	Promote supply chain transparency	Screen suppliers for environmental compliance	Push suppliers to take corrective actions and issue public explanations	Responsible management of wastewater and solid waste	Identify and manage high environmental impact suppliers	Push direct suppliers to screen their own suppliers	Push suppliers to disclose energy and climate data	Push suppliers to disclose pollutant release and transfer data	Guide the public's awareness toward product life cycle environmental impact management	
Weight	8	8	10	12	10	10	10	12	12	8	100

The five subsections of CITI scoring indicated in Table 1 provide a structure and step-by-step guide for brands on how to green their supply chains and procurement programs. More detail on the CITI Scoring System can be found in Appendix 1, with changes made for 2019 described in Appendix 2. A recommended roadmap for how brands not yet engaged in CITI can best begin their supply chain work is provided later in this report.

2019 CITI SCORES

At its core, a high CITI score reflects high-functioning environmental oversight that enables a brand to develop a supplier portfolio of strong factories that take their environmental responsibilities – both compliance and beyond compliance – seriously.

CITI Top 50

01 DELL 80.07	02 Levi's 75.88	03 adidas 70.64	04 C&A 70.24	05 INDITEX 69.36	06 H&M 69.12	07 PRIMARK 67.8	08 CISCO 67.74	09 Nike 67.32	10 TARGET 60.12
11 new balance 56.48	12 M&S EST. 1884 56.36	13 HUAWEI 54.09	14 FOXCONN 53.99	15 PUMA 53.2	16 ESPRIT 50	17 SAMSUNG 49.44	18 Panasonic 46.14	19 TESCO 45.4	20 Gap Inc. 44.56
21 Microsoft 44.26	22 UNIQLO 43.64	23 ESQUEL GROUP 43.58	24 vf 41.62	25 HITACHI Inspire the Next 41.53	26 朗诗集团 41.48	27 KAO 40.01	28 LI-NING 38.4	29 BURBERRY 37.56	30 Canon 36.37
31 PHILIPS 34.82	32 TCL 34.65	33 Carrefour 34.42	34 领取新未来 OJI 34.12	35 LINDEX 33.96	36 Columbia 33.5	37 TOYOTA 32.12	38 DANONE 31.44	39 BESTSELLER 30.96	40 hp 30.84
41 IKEA 29.48	42 HONDA 29.42	43 KONTOOR 25.28	44 SUITSUPPLY 24.36	45 TOSHIBA 23.76	46 Walmart 23.2	47 三峰环境 22.5	48 GE 22.26	49 P&G 21.98	50 SMIC 21.7

The table above shows this year's CITI scores for the top 50 brands which have demonstrated excellence in undertaking supply chain environmental responsibility in China.[2] See Appendix 3 for the complete list of all 438 brands evaluated in 2019. Most of these top brands have consistently scored well in our system over the past few years. We particularly congratulate the three new brands that have entered the CITI Top 20 – Cisco, Huawei and Tesco – whose supplier oversight accelerated significantly during the 2019 evaluation year.

As in previous years, brands in the IT and apparel sectors were the most active in IPE's green supply chain system. In 2019, these sectors began to drive changes among suppliers of fashion accessories, ceramics, plastics, glass, yarn, fiber, buttons and zippers, mechanics, printing and ink, paper and packaging, and chemicals, as well as hazardous waste treatment, wastewater treatment and domestic waste incineration facilities. With this extension of their screening scope, these brands have provided quite a significant boost to the breadth of the IPE supply chain oversight program.

On the other hand, over the same time period this past year, too many companies, especially those from the chemicals, pharmaceuticals, food and beverage, dairy, beer, personal care and paper industries continued to score zeroes in the CITI assessment, indicating no activity on the ground whatsoever. Seventy-nine companies remained completely unengaged, not even responding to communication from IPE about a factory of concern in their supply chain, and provided no public commitment to greening their supply chain in China as far as we could determine; this number also remained essentially the same in 2019 as in 2018. An additional 191 companies still scoring at or below five points in CITI can be similarly regarded as not significantly engaged in their supply chain system.

This pattern indicates that the immense progress and impacts of IPE's 2019 program stems from the growing activity of already engaged brands rather than significant numbers of new companies undertaking supply chain oversight with us for the first time.

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[2] Scores from last year may have changed slightly, even in cases where supply chain oversight remained the same, due to minor changes in the scorecard system described in Appendix 2.

New in 2019! CITI Master

This year IPE has taken a new step in the Green Supply Chain CITI Evaluation to inaugurate a *CITI Master category*. This category has been conceptualized to drive aspiring Masters to mature their supply chain programs to the point of equal partnerships with suppliers – such that *accountability for compliance issues rests equally on suppliers' shoulders*, rather than fully relying upon continuing efforts of the brand to detect problems and inform the supplier of its responsibilities, issue a public explanation and undertake corrective action each time a problem arises.

Specific criteria for qualifying as a CITI Master are as follows:
1. Ranked as a top performance brand in the annual CITI;
2. Maintains high performance standards in supply chain environmental management based on the Blue EcoChain or equivalent data system, which enables the brand to communicate evidence dynamically.
3. Requires all key suppliers to track their environmental performance via Blue EcoChain or equivalent data systems to ensure their own accountability on a dynamic basis.

The CITI Master category will recognize the single top brand performer in supply chain responsibility each year. Once a Master, a brand is no longer scored on an annual basis in CITI, making room for a new top performer for the coming year. IPE will nonetheless review the company's performance each year to ensure that it is maintaining the high supply chain performance for which it was recognized as a Master. A company may lose its Master designation if it is no longer performing at a Master level.

Apple was awarded the inaugural CITI Master designation in 2019. The company has ranked #1 in the CITI annual report for five years in a row. It has been tracking and rectifying compliance problems for 223 suppliers in China in coordination with IPE and the Green Choice Alliance since 2012, and it has delivered high level of compliance with suppliers with its diligence and persistent work. The company has recently joined Blue EcoChain for 2019 and has committed to bringing all of its existing suppliers into Blue EcoChain, thereby fulfilling the final criteria of a Master.

We heartily congratulate Apple for this exciting achievement and look forward to welcoming more leading CITI performers into the Master class in the future!

GREEN SUPPLY CHAINS 2019: RESULTS

Expanded efforts by all stakeholders improved supply chain performance in 2019

Considerable progress was evident in supply chain oversight during the 2019 period, reflecting expanded efforts by all stakeholders concerned with environmental improvement in China. As a result of this broad stakeholder engagement, IPE saw a very gratifying increase in the number of factories taking public accountability for their pollution problems, rectifying those problems by transparent means and providing information beyond legal requirements in their commitment to become stronger environmental leaders.

Government inspections and the enforcement of environmental and safety regulations, which have been on the upswing in China for the past several years, maintained a high rate in 2019 to support these stakeholder efforts. In particular, the Chinese government continued to release tens of thousands of additional compliance ("supervision") records to the public this past year, which expanded the number of records in the IPE Blue Map database by 17% in the first eight months of 2019 to over 1.5 million (Figure 1).
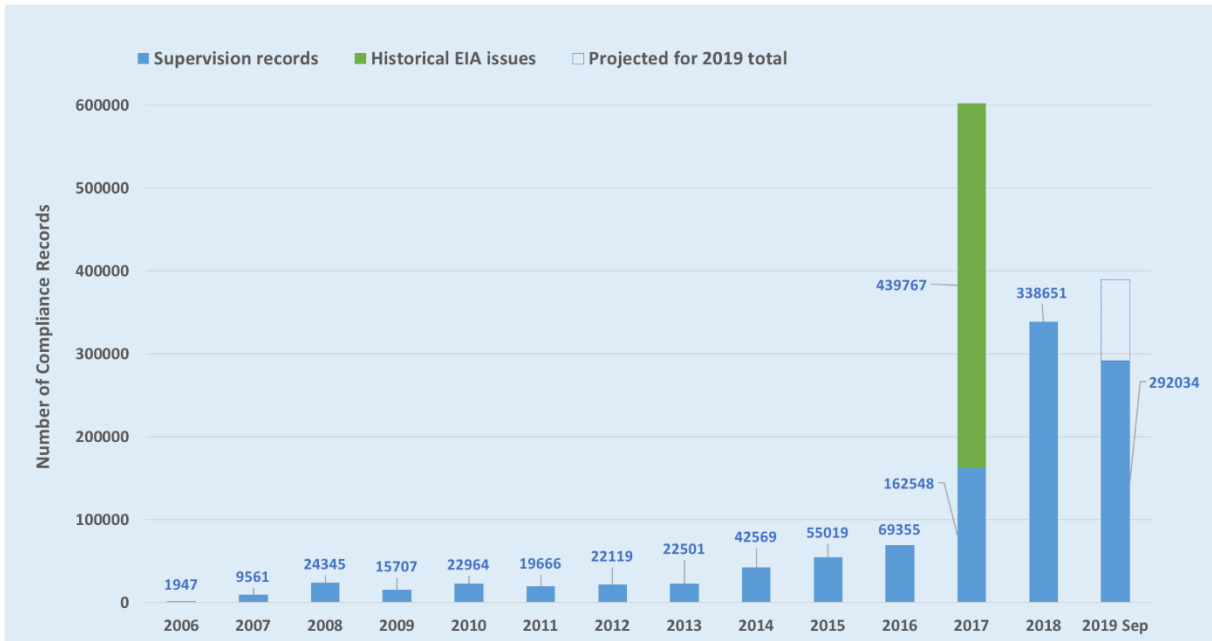
Figure 1. Number of compliance records collected into the Blue Map database[3]

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[3] The bar highlighted in green reflects a one-time release of historical violations sparked by the Notice on Moving Toward Completion of the Review Work of Construction Project Environmental Violations issued by the Ministry of Environmental Protection (MEP) in 2017. This notice resulted in the release of more than 620,000 violation records featuring the historical review of illegal construction projects without Environmental Impact Assessment (EIA) approvals.

Continued energetic government inspection efforts in 2019, which led to closures and suspensions of production in egregious circumstances as well as a large uptick in corrective actions, reinforced brand recognition of the business value inherent in improved supply chain oversight – if for no other reason than to reduce supply chain operational risks triggered by noncompliance. It also supported increased attention from ESG investors/financial institutions about practices that might have material impact on the performance of a given investment or loan.

These government efforts also supported broader local environmental NGOs' public supervision of factory performance in 2019. Five NGOs of particular note, Lvse Jiangnan, Green Qilu, Huangdao District Qingyuan Environmental Protection Public Service Center, Green Oxygen Ecological & Environmental Protection Centerand Green Anhui from Jiangsu, Shandong, Sichuan and Anhui Provinces, pushed 25 factories to address their compliance records this past year. They also pushed 721 factories to address any pollutant emissions over the legal standard shown in their online monitoring data either by themselves or through local EPBs.

Rising numbers of factories contacted IPE for compliance and "beyond compliance" reporting

IPE was gratified to see a continued surge in the number of factories reporting to the public about their compliance problems and rectification plans as well as increased numbers of "beyond compliance" disclosures of annual pollutant release and transfer registry (PRTR) data following from 2018.
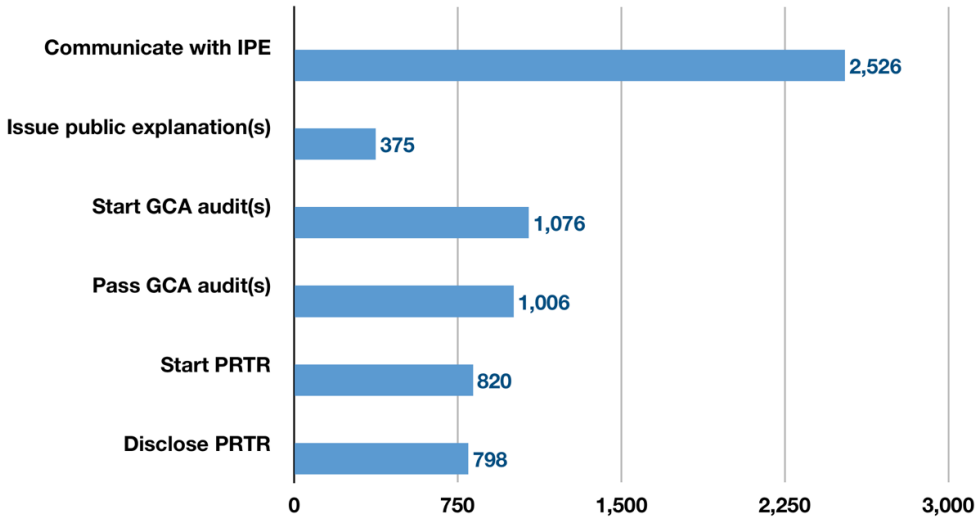

Figure 2. Number of facilities that communicated with IPE between January 1 and September 30, 2019

As Figure 2 indicates, the majority of factories got in touch with IPE to address compliance problems and remove supervisions records by undertaking a GCA audit, though a very significant number of other factories were also in touch to provide the public with "beyond compliance" information via IPE's PRTR program. This trend reflects an increased efficiency and effectiveness of key high-scoring brands in overseeing the environmental performance of factories in their supply chain. The numbers produced an average of more than 100 to 150 factories contacting IPE per week following the requests from their brands to address violation records or disclose environmental information. See IPE's Communication Updates for the daily log of facilities that contacted IPE over the past year, organized chronologically.

Public accountability for compliance problems was on the rise

This past year, IPE witnessed a substantial increase in the number of factories providing public explanations for compliance issues – 375 as of September 2019, already surpassing the grand total for 2018 (Figure 3). Many of the facilities contacting IPE were calling about compliance issues that had been brought to their attention from a buyer.

Figure 3.
Number of facilities that provided public explanations regarding compliance issues on the Blue Map

After providing initial public explanations, many of the factories with significant violations went on to conduct a GCA audit as described below.

The number of GCA audits verifying effective rectifications of compliance problems remained high

When compliance problems are discovered in the IPE Blue Map Database, factories are expected to take action on two fronts: 1) they must issue a public explanation to explain why the violation occurred and what they plan to do about it, and 2) they must remediate the problem. Rectification of the most serious problems requires a third-party audit and documentation/validation via a Green Choice Alliance (GCA) audit before non-compliance records can be removed. Facilities most often undertake a GCA audit because their buyers require them to do so to verify the effectiveness of their corrective actions and remove the record. See the Guide to Record Removal from the Blue Map Database for a full description of the GCA review/audit procedure.

Compared to other auditing mechanisms, a GCA audit includes more comprehensive participation from environmental NGOs in the Green Choice Alliance to fully ensure that the enterprise has in fact corrected its illegal practices and achieved compliance with the law. Following a seven-day feedback period in which GCA members review and approve the audit, successful audit reports are then publicly disclosed on the Blue Map Database.

As of September 2019, 1,006 facilities have passed GCA audits to verify the effectiveness of their corrective actions and publicly demonstrated the current status of their environmental performance by disclosing their environmental impact assessment (EIA) approvals, discharge permits, third-party testing reports and related documents on the Blue Map Database (Figure 4). [4]
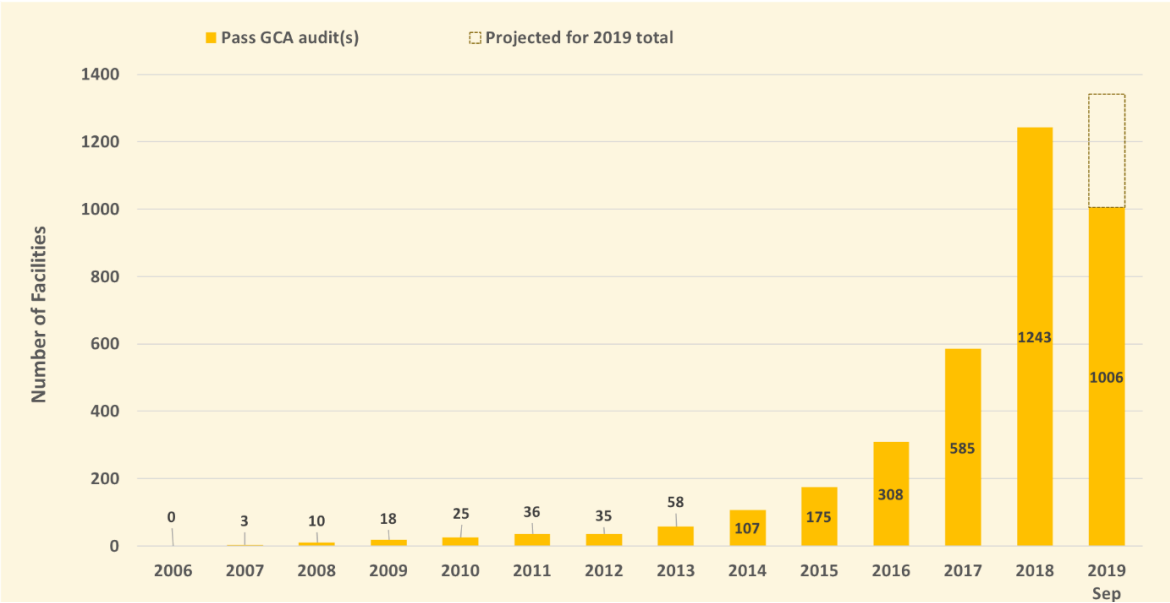
Figure 4. Number of GCA audits passed

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[4] Only after remediation is complete and it has been documented and validated can a facility pass the GCA audit.

IPE's Blue EcoChain tool enabled more proactive and efficient green supply chain oversight

The Blue EcoChain system, IPE's automated supply chain environmental management tool (Figure 5), which provides automatic database searches and push notifications to brands and suppliers when violations occur, was used to great effect in 2019 by nearly 90 companies. A total of 37 brands as well as 50 Tier 1 suppliers significantly expanded the depth and breadth of supply chain oversight over the course of the year.[5]
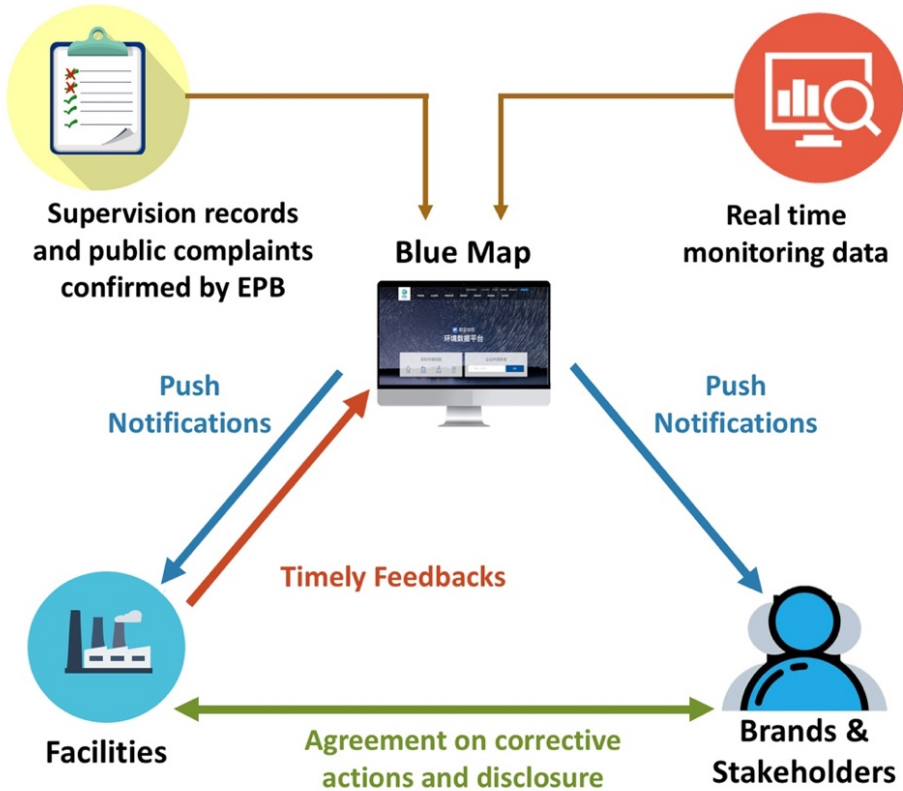
Figure 5. Blue EcoChain enables suppliers to receive notifications alongside their stakeholders and provide timely disclosures regarding their violation records

In fact, much of the increased 2019 results can be traced to brands which adopted the organization's Blue EcoChain program, although several brands operating outside of EcoChain were significant contributors as well.

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[5] Blue EcoChain enables brands to track their suppliers' performance 24/7. The tool provides brands with instantaneous updates about suppliers' environmental performance – both from real-time monitoring data, where available, and tracking the appearance of violation records and corrective actions in the Blue Map Database. Blue EcoChain also empowers suppliers who use this tool to demonstrate continued compliance, receive updates on their own performance, alert brands if problems arise along their supply chain in China and proactively disclose their own information in a timely manner.

igure 6 provides a listing of the 37 leading brands that have registered for a brand account with IPE and subsequently made full use of the Blue EcoChain to motivate more proactive action from suppliers. More than a dozen other brands and Tier 1 factories also have registered accounts and have begun to use the system to some extent, but they are still not making full use of its capabilities or have not yet started pushing suppliers in response to compliance problems.

Figure 6. Brands making full use of Blue EcoChain

Among all leading brands, Dell has reached a written agreement with its suppliers to proactively participate in Blue EcoChain *before problems arise.* In this agreement, Dell suppliers are required to promptly adopt follow-up corrective actions and publicly disclose a written explanation on the Blue Map Database if and when they ever receive an email push alert notification regarding their supervision records or real-time monitoring compliance problems. We have therefore seen Dell's suppliers proactively contacting IPE before the brand itself turns to the case. The Dell system thereby achieves an important new level of performance in supply chain oversight. Its system aligns well with the environmental protection laws in China, which require that enterprises should undertake the primary responsibilities of pollution control.

By enrolling in Blue EcoChain under these terms, Dell's suppliers are expected to provide timely explanations on their own, which allow both the brand and local communities to understand the reasons for the violation, the corrective actions suppliers have adopted and the current status of environmental performance. This enables Dell to move beyond the oversight of supply chain compliance to building mutual trust with their suppliers on improving their environmental performances beyond compliance. The company will continue to check that its system is delivering the expected results moving forward in the coming year.

Real-time monitoring data drove suppliers to keep closer track of their own performance

Since *The Measures on Self-Monitoring and Information Disclosure for Key State-Monitored Enterprises* entered into force in 2014, substantial breakthroughs have been made in the real-time disclosure of factory emissions data. Over the past five years, local governments in China have gradually established platforms and mechanisms for the disclosure of such state-monitored pollution source emissions data. Notably, cities such as Nanjing in Jiangsu Province have issued local legislation, which treats online monitoring data as evidence for identifying wastewater and exhaust non-compliance in law enforcement.[6]

The leading brands Adidas, C&A, Dell, Levi's, Primark and Target have followed this lead by starting to oversee suppliers' environmental performances by tracking their real-time monitoring data via push alert notifications offered by the Blue EcoChain tool. Upon seeing emissions over the legal standard in the real-time monitoring data, these brands contact their suppliers to cross-check if there has been a genuine pollution incident, a malfunctioning of testing equipment or another reason for the problem.

Beyond compliance activities grew with increased PRTR reporting

Pollutant release and transfer register (PRTR) systems are environmental databases or inventories of potentially hazardous chemical substances and/or other pollutants released into the air, water and soil and transferred off-site for treatment and disposal. Since the establishment of the U.S. Toxics Release Inventory (TRI) system in 1986, PRTR systems have been launched in over 50 countries worldwide.

IPE has long advocated for the establishment of a nationwide PRTR system suitable for China. With the Chinese government's commitment to improving the quality of the environment during the 13th Five Year Plan (2016-2020), it has become ever more significant for industrial facilities to calculate and track their annual release and transfer of conventional and hazardous pollutants, greenhouse gases as well as solid and hazardous waste.

In 2019, twenty-four brands (Figure 7-1), including first-timers Bestseller, Li-Ning and VF Corporation, actively required their suppliers in China to calculate and disclose their annual PRTR data. Other brands such as Huawei, Microsoft and Panasonic have required those suppliers who conducted on-site GCA audits to disclose PRTR data.

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[6] http://hbj.nanjing.gov.cn/site/njhbj/search.html?searchWord=南京市环境自动监测监控管理办法&siteId=57&pageSize=10&type=1149

This brand action resulted in a rising number of voluntary environmental information disclosures in 2019, which enabled the facilities themselves, brand customers, industrial experts and the public to track the pollutant releases, GHG emissions and resource and energy efficiency levels (Figure 7-2).

Figure 7-1. Brands requiring suppliers in China to publish PRTR data
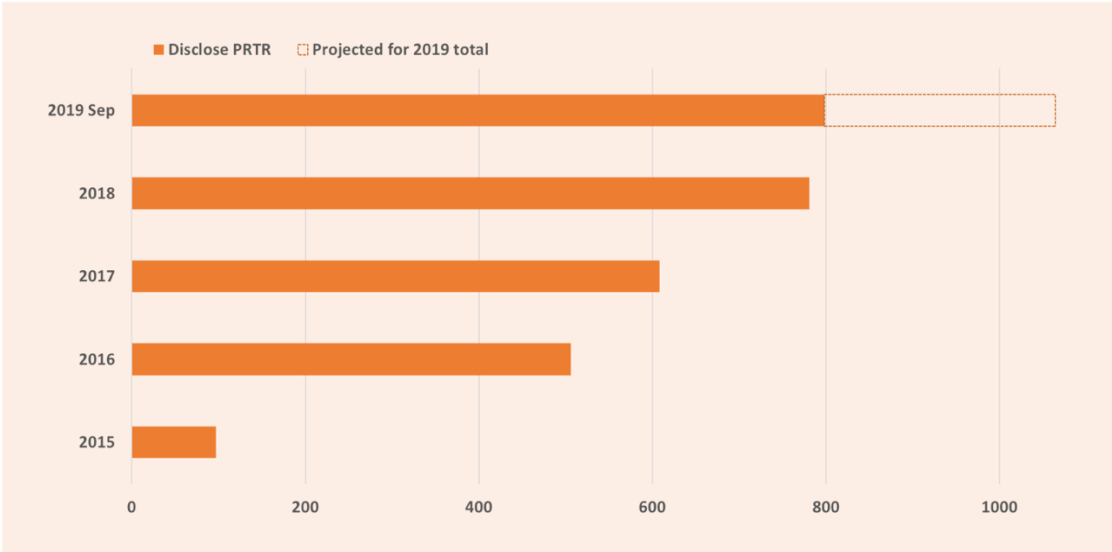
Figure 7-2. Number of PRTR submissions to Blue Map Database

Supply chain transparency moved to new heights with more brands joining IPE's Green Supply Chain Map

On the transparency front, four new brands, namely Carrefour, C&A, Hitachi and VF Corporation chose to come onto the Green Supply Chain Map, co-developed by IPE and NRDC in 2018, where top-performing brands move for maximum transparency and accountability of their suppliers. To date, 15 brands have disclosed a total of 1,578 suppliers (including subsidiaries in the case of Hitachi and Samsung) on the Green Supply Chain Map. (Figure 8)

We particularly urge those companies that already provide a public supplier list to join the map in 2020, linking their brand logo to real-time information on supplier environmental performance, thereby greatly enhancing accountability in their supply chain.
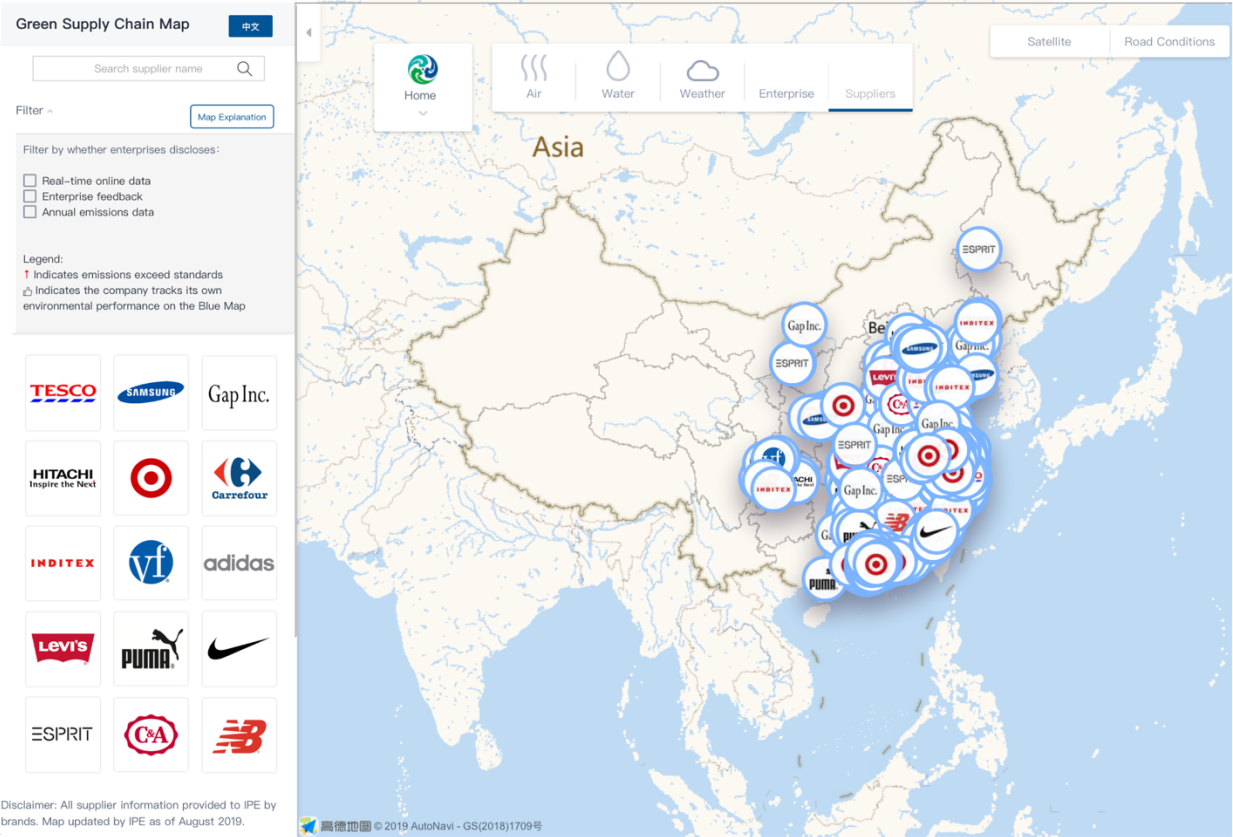
Figure 8. Green Supply Chain Map (click to expand the map for more precise locations)

The Green Supply Chain Map is the first tool to openly link brands' disclosed supplier lists to publicly-available data concerning supplier environmental performance, including real-time monitoring data for air emissions and wastewater discharge.

The map creates opportunities to accelerate supply chain environmental improvements by putting the onus on suppliers to actively maintain environmental management and transparency. It also offers the future potential to facilitate transparency surrounding other supply chain environmental impacts as well, such as GHG emissions.

Chinese brands and manufacturers joined in the collective efforts to drive changes in supply chain environmental compliance

Compared to 2018, Chinese brands and major Tier 1 suppliers significantly strengthened their oversight in supply chain environmental management, thereby contributing to the increased impact of IPE's green supply chain program (Table 2). Among them:

- Li-Ning made a start on employing the Blue EcoChain to track its suppliers' performances;
- Huawei extended the scope of its supplier CSR audits to subcontractors, thereby extending the sphere of its impact;
- Esquel required its dispersed dye and intermediate manufacturers as well as printing ink suppliers to conduct GCA audits to verify the effectiveness of their corrective actions;
- Semiconductor Manufacturing International Corporation (SMIC) required two hazardous waste treatment facilities to conduct GCA audits to verify the effectiveness of their corrective actions;
- China Energy Conservation and Environmental Protection Group (CECIC) incorporated violation screening into its project bidding document and pushed one testing lab and one construction company to contact IPE for record removal;
- Two leading supplier groups to major brands in the automotive and IT industries – Mianyang Fulin Precision Machining Co., Ltd. and Avary Holding – reacted to brands' requirements on environmental compliance by completing GCA audits. They then decided to use the Blue Map Database to control the risks along their own supply chain by tracking and requiring those with violation records to give public explanations;
- Li & Fung required more than 100 suppliers to contact IPE to address their outstanding violation records, among which nearly half have conducted GCA audits to verify the effectiveness of their corrective actions and removed violation records from the Blue Map Database.

Table 2 Partial list of Tier 1 manufacturers who have begun their own supply chain oversight.

Mianyang Fulin Precision Machining Co.,Ltd.	Shenzhen Everwin Precision Technology Co, Ltd.
Li & Fung	Avary Holding
Wistron (Zhongshan, Chengdu)	Rongfeng Supply Chain Co., Ltd.
Compal Information Technology (Kunshan) Co., Ltd.	WNC (Kunshan)
Inventec Corporation	Everdisplay Optronics
Foxconn (Wuhai, Tianjin, Shenzhen)	Sunwoda

Shenzhen China Star Optoelectronics Technology Co., Ltd (Wuhan)	Semiconductor Manufacturing International Corporation
Flextronics Manufacturing (Zhuhai) Co., Ltd.	GM Apparel
Pegatron (Suzhou)	JDU
Delta (Dongguan)	Randa
Crystal	Haddad

In the light of these active Tier 1 suppliers, IPE plans to launch in 2020 a new evaluation tracking how major manufacturers track and elevate the environmental performances of their subsidiaries and suppliers.

Selected companies moved up their supply chain beyond Tier 2 to oversee other hotspots in their manufacturing footprints

- **Metal processing**

Eight brands from the IT and household appliance industries – Apple, Dell, Foxconn, Hitachi, Huawei, Microsoft, Panasonic, Royal Philips and Toshiba – began mapping out strategic suppliers of metals used in their electronic products in 2019. Members of CURA and the Real Estate Industry Green Supply Chain Action also incorporated iron and steel as well as aluminum suppliers in their scope of analysis. Both streams of work resulted in more than 30 suppliers of aluminum, cobalt, copper, magnesium, titanium, zirconium processing and powder metallurgy, as well as iron and steel contacting IPE in 2019 to address outstanding violation records.

In one case, Apple required one of its aluminum processing suppliers based in Jiangmen, Guangdong Province to address its 2018 violation record for the improper management and storage of a small sum of hazardous waste. The documents provided by this supplier demonstrated that it has since strengthened its waste management system, built a new storage facility with clear labels and transferred the hazardous waste to treatment facilities with legal permits in a timely manner.

- **Chemical processing**

This past year, various brands from the textile, IT, personal care and paper industries have begun to look into the vast range of chemical suppliers in their product life-cycle:

- Apple, Cisco, Dell, Hitachi, Huawei, Panasonic, Samsung, Toshiba, Kao and Oji drove suppliers of resin, fluorine, coating and paint to address their violation records;
- C&A, Esquel, Inditex, Levi's, Lindex and Primark asked their dyeing and washing facilities to notify their suppliers of viscose, dyestuffs and auxiliaries who were not in compliance with the law to provide public explanations regarding corrective actions they have taken;
- Primark asked seven of its cosmetics suppliers and Nike pushed two of its white carbon black suppliers[7] to conduct audits to verify the effectiveness of their corrective actions.

- **Centralized wastewater treatment facilities**

To date, concerned that they lack sufficient influence, too many brands have shied away from screening the environmental performance of centralized industrial wastewater treatment facilities (WWTPs) that jointly treat wastewater from many suppliers, such as in an industrial park setting. However, this past year, brands such as Adidas, Columbia, C&A, Esprit, H&M, Inditex, Levi's, Primark and Target demonstrated the power of collective action when each of them pushed their shared suppliers to assess the environmental performance of the off-site WWTPs treating their wastewater. The factories responded with action, notifying WWTPs with violation records through their own wet processing suppliers to take corrective actions and give public explanations. This important oversight resulted in five WWTPs providing public explanations via the Blue Map Database and two conducting GCA audits to verify the effectiveness of their corrective actions in 2019.
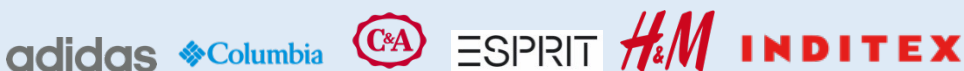
In one case in Changzhou, Jiangsu Province, Adidas, Columbia, C&A, Esprit, H&M and Inditex each determined that three dyeing and washing mills who supplied them all shared one WWTP. Collectively, the dyeing mills pushed the WWTP to verify the rectification of a 2016 odor violation through a GCA audit. The photos and documentation subsequently disclosed by the WWTP showed that it has installed odor collection and treatment facilities and its current emissions are in compliance with standards.

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[7] White carbon black is hydrolyzed SiCl4, a fumed silica powder used as a replacement for carbon black in rubber compounds.

In the IT industry, Dell similarly pushed two WWTPs which accepted wastewater from a plastic factory and a PCB factory to address their violation records. Cisco also started requiring WWTPs in its supply chain to track their own environmental performance via Blue EcoChain.

- **Hazardous waste treatment facilities**

In an important 2019 development, a number of IT and textile brands extended their requirement of environmental compliance to the treatment facilities to which their printed circuit board suppliers or dyeing and washing mills transfer their hazardous waste. More than 40 hazardous waste treatment facilities have since been requested by suppliers of Apple, Cisco, Dell, Hitachi, Huawei, Inditex, Levi's, Primark, Marks & Spencer and Suitsupply to contact IPE to address their violation records.

One of Huawei's suppliers in Shanghai explained that the brand notified them in a Supplier CSR audit that the hazardous waste treatment facility they worked with had two violation records. The supplier subsequently contacted the facility to request a public explanation regarding the correction action they have taken. The facility then provided the public with exhaust and wastewater testing reports following their corrective action, and explained that the online monitoring data which is also collected and displayed publicly via the Blue Map Database shows that the facility has adequate capacity to control its pollutant emissions according to legal standards.

Efforts in the green real estate sector began to deliver substantial results

The collective efforts from members of the China Urban Reality Association (CURA) and those in the Real Estate Industry Green Supply Chain Action group expanded the breadth and depth of supply chain oversight in key industrial sectors in 2019. Most notably, this year CURA decided to incorporate the requirement of environmental compliance into their collective procurement initiative launched in 2011. It has since required 20 suppliers of escalators, pumps, waterproof materials, glass and windows, solar heaters, paint and door locks to at least provide public explanations regarding previous violation records. This level of supplier response demonstrates the power of industrial coalitions in raising the bar of supply chain environmental management and the significant impact that environmental procurement criteria can generate in reversing the conditions in which bad performers are rewarded with more business due to the lower prices and drive out good performers in environmental compliance.

More brands actively shared their green supply chain work to promote sustainable consumption

In 2019, Apple, Cisco, Dell, Fiskars, Huawei, Levi's, New Balance, Signify and Suitsupply all shared information about their efforts in driving environmental responsibility and improving compliance with environmental laws and regulations in their China supply chains. They published stories on their corporate websites and in their sustainability or environmental responsibility reports. See Appendix 4 for the quotes taken from their publications promoting supply chain environmental management.

Similarly, brands like C&A, Dell and M&S shared their green supply chain work via social media accounts such as WeChat and Weibo, guiding the Chinese public to understand the environmental footprints of purchased goods. These brands thereby demonstrated to the public the positive impacts that more sustainable consumption can deliver the environment. These companies also shared some specific best practices in motivating suppliers in China to continuously improve their environmental performance, which can help push fellow brands to embark on or deepen their work in greening their supply chains in China and sharing more information publicly.

C&A "For a more efficient green supply chain, we require wet processing suppliers (dyeing and weaving factories; washing and printing factories) to do the following:

1. Track the environmental performance and real-time monitoring data of their upstream and downstream suppliers in China through the Blue Map app or Blue EcoChain system;
2. Provide timely feedback on environmental violation records and remove any records through a document review or Green Choice Alliance (GCA) audit;
3. Publicly disclose annual energy, hazardous waste, wastewater and air emissions data by uploading it onto the Institute of Public and Environmental Affairs (IPE) Pollutant Release and Transfer Registry (PRTR) platform;
4. Publish the wastewater testing reports on the Greenpeace Detox platform.

Over the past few years, we have been working with the Chinese NGO the Institute of Public and Environmental Affairs (IPE) to help improve the environmental performance of our Chinese suppliers. In IPE's Green Supply Chain CITI Report, IPE evaluates retailers and brands based on their environmental information and performance transparency. We are pleased to see this year's progress as a forward leap."

Green Fashion | Second Place in the Industry! C&A's listing on the Green Supply Chain CITI Index, C&A China Official WeChat account, January 11th 2019.

IPE PRIORITIES FOR CITI GREEN SUPPLY CHAINS IN 2020

Chemical giants must urgently step forward with greater supply chain oversight

On March 21, 2019, a major explosion occurred at the Jiangsu Tianjiayi Chemical Co., Ltd. (hereinafter referred to as JTC) in Jiangsu, China. The enormous explosion triggered an earthquake, caused 78 deaths and injured more than 600 people including students from a school nearby. Authorities closed operations at all the factories in the industrial park where JTC was located to scrutinize remaining hazards.

Where the JTC explosion should have served as an urgent call to action for the chemical industry to improve its supplier oversight, three of the four companies that IPE identified as likely using this factory for manufacturing – BASF, Dupont, Merck, Clariant – all declined to use our tools for oversight of their suppliers in the wake of this accident. Some companies did not respond to outreach at all; some denied responsibility because JTC was a Tier 2 supplier, rather than a Tier 1; and some promised to get back to us, but did not follow through. BASF, which was already using the IPE database to oversee their subsidiary factories, declined for now to expand its oversight to the independently owned factories from which they source many raw materials. [8] The American Chemistry Council (ACC), one of the industry's major trade associations, declined to engage and noted that its Responsible Care Program was not designed to address outsourced manufacturing. IPE is in preliminary conversations with the industry's European trade association, Together for Sustainability (TfS), to assess interest in stepping up to further help their membership on supply chain oversight matters[9].

One bright exception, the dye company Archroma, stepped forward when contacted by IPE, after we learned from press accounts that the dye industry's supply chain had been severely impacted by the JTC closure. In early August, Archroma began to pilot IPE's Blue Map Database for supplier environmental compliance screening and informed those with violation records to provide explanations. Several Archroma suppliers have since contacted IPE with explanations and updates on their rectification plans. Another industry trailblazer, Huntsman Chemical, expanded their compliance oversight to indirect suppliers of raw materials this year.

Chemical manufacturing is an inherently dangerous industry and one that cries out for rigorous safety and environmental checks. The giant multinational chemical manufacturing companies are well positioned to leverage improvements, and it is a good business practice for them to do so if

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[8] BASF has required four of its subsidiaries in China to provide public explanations regarding violations since October 2018.

[9] See *Outsourced Responsibility? Response to Fatal Explosion by Chemical Giants*, IPE's full report on this incident and the disappointing response from the chemical sector to this incident.

for no other reason than to ensure the reliability of their own production.. We call upon this industry to join the IPE green supply chain program in 2020 and follow the guide offered by the CITI scoring system to develop an effective, transparent and diligent supplier oversight program.

More brands should undertake supply chain oversight beyond Tier 1

Despite the encouraging leap in the number of factories publicly reporting on their compliance problems and rectification plans, and the continuing high scores of the most engaged corporate CITI companies, IPE saw most brand CITI scores did not increase significantly over the same 2019 evaluation cycle. Two particularly important CITI sub-scores – Section 3.1 and 3.2, which score brands for their oversight on high impact suppliers further up the supply chain – received inadequate attention from most brands. The number of brands that matured to expand oversight to their upstream factories, which tend to be the hotspots of environmental concern in manufacturing, remains a small minority of only 20, out of the total of 438.

IPE calls upon all brands to strategically expand the focus of their supplier oversight to where it matters most – with their high environmental impact suppliers – rather than confine their efforts to Tier 1 facilities where it is easiest to start. This will be a priority for expansion for IPE in 2020.

HOW BRANDS CAN BEST IMPROVE CITI SCORES IN 2020

For brands not yet engaged in CITI: Getting Started

Nearly 200 companies at the bottom of the 2019 CITI scorecard with scores below five points, half of which have zero points, are completely unengaged and do not even respond to communications about a factory of concern in their supply chain. These numbers remain essentially the same as in 2018, despite generally higher levels of corporate attention and public commitments to environmental protection that we have witnessed in the press. Supply chain oversight should be a key priority for all companies concerned with lowering their environmental impact in the coming years. We urge those companies ready to move forward to use the IPE CITI as a step-by-step roadmap for environmentally responsible manufacturing.

On the most basic level, the Green Supply Chain CITI program directs companies to 1) know which of its factories have the largest potential to pollute, 2) screen those factories for compliance and pollution problems, and 3) require corrective action as needed. They should also have a program in place to response to members of the public when contacted about pollution problems at any of the factories manufacturing their products. Such a program would be reflected in the following CITI sub-scores, which should be considered the **bare minimum** of environmental responsibility for supply chain matters in any company operating today:

Where to start: CITI Score of 16.5, distributed as follows:

Section 1: Responsiveness and Transparency
The company conducts follow-up actions when notified that its suppliers have violation records, provides stakeholders with details of its subsequent investigation and response, and pushes problem suppliers to issue public explanations (Section 1.1, 5 points).

Section 2: Compliance and Corrective Actions
The company screens its suppliers' environmental compliance at least quarterly (Section 2.1, 2.5 points) and requires suppliers with violation records to take corrective actions to remediate their violations and provide public explanations detailing the actions they have taken (Section 2.2, 4 points).

Section 3: Extend Green Supply Chain Practices
The company has identified its high-impact suppliers and made them a priority for screening for compliance and corrective action (Section 3.1, 5 points).

Appendix 1: Description of the CITI Scoring System
([Click for a full description of the CITI scoring system](#))

Responsiveness and Transparency
This category awards points based on a brand's responsiveness to public inquiries about environmental violation issues in its supply chain. Minimum points are awarded to brands who respond to inquiries raised via public channels, with more points given to brands who maintain a regular communication channel with stakeholders and push suppliers to disclose information about follow-up actions. Maximum points are given to brands who actively communicate with stakeholders by using the automatic reporting form provided by the Blue EcoChain system or equivalent system.

This category also awards points for providing information about the names and locations of factories in a brand's supply chain proactively. More points are awarded if the brand includes those suppliers with higher environmental impacts on the Green Supply Chain Map or equivalent platform, which provides environmental data, rather than just supplier names in a simple public listing. Maximum points are awarded if the brand goes beyond disclosure by pushing those suppliers to also track their own environmental performance via Blue EcoChain or other automated methods.

Compliance and Corrective Actions
This category examines whether a brand has adopted a mechanism to screen its suppliers in China for environmental compliance infractions. Minimum points are extended to brands who conduct systematic screenings on a regular basis, with more points awarded to brands who adopt Blue EcoChain or an equivalent system to automate screenings and expedite follow-up actions. As with transparency, maximum points are awarded to brands who also push suppliers to actively track their own performance in real time and who screen potential suppliers for their environmental performance before qualifying them for business.

Beyond screening, this category looks at the extent to which suppliers with environmental violations adopt corrective actions and publicly disclose relevant information. To receive more points, brands must adopt written requirements in their Supplier Code of Conduct for problem suppliers to pursue corrective actions and push these suppliers to provide public explanations. More points are awarded if suppliers provide timely public explanations regarding the reason for violation and the status of corrective actions already undertaken. Brands are rewarded maximum points if they adopt an automated method via Blue EcoChain or equivalent system for suppliers to actively respond to violations as soon as they arise and they proactively communicate with stakeholders about follow-up progress.

Finally, this category looks at whether brands are evaluating the compliance status of the centralized wastewater treatment facilities their suppliers may be using – an important area of environmental impact often slipping between the cracks – and whether they commit to reducing solid waste (including hazardous waste) in their supply chain.

Extend Green Supply Chain Practices

In this important section, brands are rewarded with points for mapping out suppliers with significant environmental impacts and focusing their compliance screening efforts on these high-impact suppliers. Similar to sections above, more points are given to brands who use the Blue EcoChain or equivalent system to automate this screening and oversight. Brands receive maximum points when they push their high-impact suppliers to also adopt a set process via Blue EcoChain or equivalent system to actively respond to violations as soon as they arise and proactively communicate with stakeholders about follow-up progress.

Parallel to earlier sections, the "extend green supply chain practices" section looks at whether a brand's direct suppliers conduct environmental compliance screenings for their own suppliers. Initial points are awarded to brands whose direct suppliers screen sub-tier suppliers' performance on a regular basis, and push sub-tier suppliers to give public explanations about their violation(s) and demonstrate the effectiveness of corrective actions. Maximum points are given to brands whose direct suppliers have pushed sub-tier suppliers to actively track their own performance in real time. Brands receive maximum points when their direct suppliers adopt a set process via Blue EcoChain or equivalent system with their own suppliers, who actively respond to violations and proactively communicate with stakeholders about follow-up progress.

Energy Conservation and Emissions Reduction

This section scores brands for "beyond compliance" initiatives in energy and water use as well as chemical reduction initiatives. It is of increasing relevance to brands making climate commitments, because supply chain emissions comprise the majority of overall emissions for most industrial sectors and are therefore essential to address for climate targets within a 2-degree limit for global warming. The score for carbon emissions reductions in this section is calculated from the brand's overall Supply Chain Climate Transparency Index (SCTI) score – an annual evaluation IPE inaugurated in 2018 in collaboration with the Carbon Disclosure Project to track brand climate transparency, efforts to engage suppliers in China in emissions reductions and work with suppliers to set their own carbon reduction targets.

Beyond climate action, this section also scores brands on their efforts to push suppliers to disclose annual pollutant release and transfer registry (PRTR) data, which tracks their energy, water and chemical use. Maximum points require the active disclosure of annual PRTR data from brands' high-impact suppliers, as well as the publication of relevant information about best practices or measures to improve poor performance through reduction programs.

Promote Public Green Choice

Section 5 focuses on brands' efforts to communicate supplier environmental improvement efforts to the general public, with the aim of enabling consumers to use this information to make green purchasing decisions. The publication of information on supplier environmental improvements will gain brands minimum points, whereas brands who actively interact with consumers and use the Green Supply Chain Map or other traceability initiatives to publicly visualize brands' efforts to reduce the environmental impacts of upstream production processes will gain maximum points.

Appendix 2: Changes in the 2019 CITI scorecard

The primary change in the 2019 CITI evaluation was raising the bar on the frequency of compliance screening from a quarterly basis to real-time tracking. This new standard applies to indicators 2.1, 2.3.1, 3.1 and 3.2, which cover both brands' and their Tier 1 suppliers' screening of their own suppliers, especially those with higher environmental impacts in their upstream supply chain. Brands are recommended to employ the Blue EcoChain or other automated data-driven methods to fulfill this expectation and require their suppliers to keep track of their environmental compliance status.

The other changes include indicator 2.2, which now highlights the importance of brands differentiating suppliers according to the extent of their environmental risks and requires those with high environmental risks to verify the effectiveness of their corrective actions via GCA audits.

An additional indicator featuring the responsible management of solid waste was added to this year's CITI, in the face of surging waste worldwide, local government efforts on garbage classification in China as well as the embrace of the circular economy. Brands are expected to require their suppliers in China to measure and track the amount of solid waste generated, reduced, reused and recycled in the production processes in order to achieve a fully closed-loop flow of materials in its supply chain in China.

Lastly, we've incorporated the score brands achieve in the SCTI evaluation as the subscore for indicator 4.1. SCTI draws a more comprehensive roadmap to direct brands to set up energy and greenhouse gas emissions reduction targets, identify energy-intensive and high-emissions suppliers in their supply chains in China, and push these suppliers to reduce their emissions and publicly disclose energy consumption and climate data. For more details, please see the 2018 SCTI report.

These changes may lead to decreased scores for those brands who continued their supply chain oversight programs, which are likely inadequate in the face of strengthened law enforcement in China. On the other hand, brands who have worked with suppliers to move beyond compliance will be rewarded for their efforts in working with suppliers to reduce solid waste and greenhouse gas emissions.

Appendix 3: 2019 CITI Scores

Brand	Score	Brand	Score	Brand	Score	Brand	Score	Brand	Score
Dell	80.07	Toshiba	23.76	sunkwan	16	Anhui Xinyi Group	11	Nissan	8.78
Levi's	75.88	Walmart	23.2	DaAi City	16	OPPO	11	Arkema	8.76
Adidas	70.64	Sanfeng Envr.	22.5	Dafa	16	Vantone Real Estate	11	Merck Group	8.76
C&A	70.24	GE	22.26	AUX	16	SAMTAK	11	KIA	8.6
Inditex	69.36	P&G	21.98	Hisense	16	Hodo	11	Tiffany	8.6
H&M	69.12	SMIC	21.7	HUAYUAN	16	SINYI	11	Solvay	8.6
Primark	67.8	Everbright Intl.	21.68	TENTIMES	16	Chengdu Jiaoda Real Estate	11	Dystar	8.56
Cisco	67.74	Coop	21.5	BEIJING HUANWEI	16	BSD	11	Shanghai Envr.	8.5
Nike	67.32	MOMA	20.48	Central China Real Estate	16	LUCKYKING	11	ENFI	8.5
Target	60.12	Vanke	20.48	Tahoe	16	TENHONG LAND	11	Fonterra	8.49
New Balance	56.48	SIIC Envr.	20.42	BRC	16	Electrolux	10.98	Sanofi	8.48
M&S	56.36	Mizuno	20.4	Shanghai Electric	15.86	UPM	10.88	SAIC MOTOR	8.48
Huawei	54.09	Grandblue	20.18	Jinjiang Environment	15.84	Lenovo	10.76	LG	8.46
Foxconn	53.99	ASICS	18.74	China Tianying	15.5	Canvest	10.7	Novartis	8.38
Puma	53.2	BASF	18.08	Conch Venture	15.5	Swire Foods	10.68	Mercedes-Benz	8.23
Esprit	50	Takeda	17.98	Sony	15.15	General Mills	10.65	GM	8.08
Samsung	49.44	Weiming Envr.	17.7	Intel	14.92	Merck & Co.	10.58	Youngor	8
Panasonic	46.14	Ericsson	17.44	Starbucks	14.76	Pepsi	10.38	Vodafone	7.92
Tesco	45.4	Coca Cola	17.42	Stora Enso	14.56	McDonald's	10.33	AkzoNobel	7.92
GAP	44.56	CIFI Group	17	Abercrombie & Fitch	14.54	Mars	10.17	Unilever	7.9
Microsoft	44.26	sunnyworld	17	Bridgestone	14.04	Sharp	10.1	Next	7.68
Uniqlo	43.64	SHOUGANG Envr.	16.9	yingfeng	13.5	Colgate-Palmolive	10.08	CECEP	7.48
Esquel	43.58	ChiXia Development	16.48	ANTA	13.02	ReckittBenckiser	10.06	APP	7.12
VF	41.62	Gold Mantis	16.48	HPE	12.98	SE Environment	10	Eastman	7.12
Hitachi	41.53	zhenro	16.48	BMW	12.92	Seiko Epson	9.78	Perfetti Van Melle	7.09
Landsea	41.48	Dongdu Intl.	16.48	Ford	12.58	Kraft Heinz	9.73	Prada	7.06
Kao	40.01	Kingdom	16	BT	12.51	Groupe PSA	9.71	Shengyuan	7
Li-Ning	38.4	DaHan	16	COFCO PROPERTY	12.5	ABInBev	9.66	CSG Environment	7
Burberry	37.56	ZhongFang	16	Pfizer	12.4	Volkswagen	9.56	Guess	7
Canon	36.37	ROFFAR	16	GlaxoSmithKline	12.26	huimignhuanbao	9.5	Yanjing Beer	6.98
Royal Philips	34.82	New Space	16	Nokia	11.72	Bosch	9.46	Clarks	6.98
TCL	34.65	yahe	16	L'Oréal	11.5	Hyundai	9.3	Fujitsu	6.88
Carrefour	34.42	Xinyang	16	Huntsman	11.34	Nestlé	9.28	COFCO	6.84
Oji Paper	34.12	worldunion	16	IBM	11.3	Lilly	9.22	Cortefiel	6.7
Lindex	33.96	Sansheng Hongye	16	Whirlpool	11.26	Mazda	9.18	Victoria's Secret	6.56
Columbia	33.5	huajian real estate	16	HUGO BOSS	11.24	Clariant	9.12	Google	6.56
Toyota	32.12	Sincere	16	FC ENVIRONMENT	11.22	FCA Group	9.08	PEP	6.5
Danone	31.44	Zhongda	16	ZTE	11.2	Henkel	9.08	DAJIHUANJING	6.5
Bestseller	30.96	TUNGHSU	16	Tommy Hilfiger	11.2	Singtel	9.02	TIANLONG	6.5
HP	30.84	Joyi	16	Calvin Klein	11.2	Midea	9	JAC	6.48
IKEA	29.48	JUNFA	16	DSM	11.04	Wanna Environment	9	Vinda	6.14
Honda	29.42	Golden Eagle	16	CPNE	11.04	DYNAGREEN	9	Asahi	6.08
Kontoor	25.28	Sunriver	16	Tus-sound	11	Carlsberg	8.94	Benetton	6
Suitsupply	24.36	ruchen	16	HISUN	11	Disney	8.78	DONGFENG	6

Brand	Score	Brand	Score	Brand	Score	Brand	Score	Brand	Score
BAIC GROUP	6	Ralph Lauren	4.2	Hisense	2.48	LMZ	1	Oishi	0
INTL. ENERGY	6	SHISEIDO	4.12	New Hope	2.48	Nice	1	Kingstar Beer	0
YUNNAN WATER	6	Volvo	4.04	Mothercare	2.34	NEXEN TIRE	1	Wahaha	0
FEIMA	6	Modern Farming	4	Yili	2.32	Yunnan Baiyao	1	Belle	0
yonker	6	Want-Want	4	361°	2.12	Huiyuan	1	Nongfu Spring	0
JUNXIN	6	Shengyun	4	CHANEL	2.04	WEIQUAN	1	CP	0
Syngenta	6	Dachan	4	Long Chen Paper	2.04	Panpan Foods	1	Kappa	0
Motorola	5.98	Uni-president	4	Sun Paper	2	Brilliance Auto	1	DKNY	0
Haier	5.96	BEHET	4	Spalding	2	Costa	1	Junlebao	0
Mondelēz Intl.	5.62	Avic Renewable Energy	4	mobike	2	Master Kong	0.84	Kangnai	0
Hankook Tire	5.6	DCEP	4	ofo	2	Chery	0.72	Whitecat	0
MICHELIN	5.56	Xiamen Municipal Constr. Group	4	Valentino	2	FILA	0.72	innisfree	0
Bayer	5.56	KNC	4	bluemoon	2	Snowbeer	0.48	CHAOYANG	0
HTC	5.55	KRE	4	GEELY	2	MEIZU	0	GITI	0
J.C. Penney	5.48	HUAGUANG SHARES	4	Hisense Kelon	2	Umbro	0	BOSIDENG	0
Siemens	5.48	HAIYING GROUP	4	C&S	2	Pierre Cardin	0	lepur	0
Johnson&Johnson	5.44	NENGDA HUAWEI	4	Tranlin	2	Dicos	0	Gloden Throat	0
RICOH	5.4	Hangzhou Envr. Group	4	Meters/bonwe	2	Burger King	0	AUX	0
Mengniu	5.32	XINDU HOLDINGS	4	Nine West	2	River Island	0	Changhong	0
Kate Spade	5.26	keqiaoshuiwu	4	Shuanghui	2	ROXY	0	KONKA	0
COACH	5.26	SEPG	4	Toread	2	Hush Puppies	0	PurCotton	0
Cargill	5.24	Chengde Heating Group	4	KUMHO TIRE	2	Proya	0	Taiji Group	0
GREE	5.23	Zhongshan Public Utilities	4	ERDOS	2	Hanhoo	0	ASD	0
DuPont	5.2	TEDAHB	4	TIANFU	2	Unifon	0	HSU FU CHI	0
Herrel	5.2	COOPERTIRES	3.9	Nippon Paint	2	TIANYOU	0	Tong Ren Tang	0
Ann Taylor	5.08	CR Sanjiu	3.88	Nine Dragons Paper	1.96	K-BOXING	0	Xifeng	0
AVON	5.01	Boehringer-Ingelheim	3.82	SKYWORTH	1.86	HLA	0	YANGHE	0
MANGO	5	Liby	3.5	BYD	1.84	bluegogo	0	Niulanshan	0
WENERGY	5	Changan	3.48	MARY KAY	1.84	Genguquan	0	FEN JIU GROUP	0
JMC	5	G-Star	3.48	Kweichow Moutai	1.5	SENLI	0	GUJING GROUP	0
Orchard Farmer	5	Shanying Paper	3.48	Yibin Wuliangye	1.5	QINGYUAN	0	Luzhou Laojiao	0
ecco	4.98	SANYUAN	3.48	UGG	1.48	wondersun	0	SUPOR	0
Dow	4.84	Armani	3.2	Jahwa	1.48	huishan	0	Haitian	0
Vitasoy	4.73	Great Wall	3.18	Brightdairy	1.48	kaimi	0	Coconut Palm	0
SC Johnson	4.52	Giordano	3	Country Garden	1.2	watsons	0	Tesla	0
Daphne	4.5	Macy's	3	EVERGRANDE	1.2	GAC GROUP	0	NIVEA	0
Lee & Man Paper	4.48	HTRH	3	Zhujiang Beer	1	vivo	0	Hello Bike	0
Tsingtao	4.48	Lacoste	3	Hengan	1	Tonlion	0	Be & Cheery	0
Heineken	4.44	YINGE	3	MUJI	1	Semir	0	Three Squirrels	0
Amazon	4.36	Joyoung	3	Chando	1	YISHION	0	Bestore	0
JEANSWEST	4.36	Facebook	2.56	Beingmate	1	Pechoin	0	FUJIYA	0
Yuen Foong Yu	4.3	Samsonite	2.5	HEAD	1	HONGAN	0	LOCK LOCK	0
Hormel	4.24	Xiaomi	2.5	Nongshim	1	SHUANGDENG	0		
WEAL	4.2	Chen Ming Group	2.48	KFC	1	XINYA PAPER	0		

Appendix 4: Leading brands promote supply chain environmental management in their publications
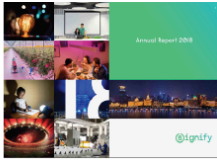
Signify

To reduce the environmental pollution in China, Signify worked with the Chinese Institute of Public & Environmental Affairs (IPE), leveraging their work to engage with our suppliers… Signify engages with any suppliers on the IPE list to resolve environmental non-conformances. From 2015 to the end of 2018, there were 34 direct suppliers flagged on IPE's list, which was reduced to 7 by this year-end and 27 suppliers have taken actions to remediate and their violation records were removed from IPE website. Signify also requested direct suppliers to engage their own direct suppliers that appear on IPE's list for them to resolve non-conformances.

---- Signify 2018 Annual Report

CISCO

China is an important market for us, as nearly 50% of our component supplier facilities and manufacturing sites are located in the region. Jointly developed by IPE and the Natural Resources Defense Council, the CITI index is the first quantitative evaluation system designed to assess brands' environmental management of their supply chains.

Cisco's jump in the ranks reflects the work we've been doing with our suppliers in China, including wastewater surveys and pollution mitigation projects, tracking and addressing reports of illegal pollution, and requiring our tier 1 suppliers to assess and manage the environmental performance of their tier 2 suppliers.

---- Cisco Receives Top Rankings from China's Institute of Public and Environmental Affairs
Cisco Corporate Social Responsibility Blog

FISKARS

We have utilized their databases to monitor the environmental related legal compliance of our suppliers in China. In case any such violation is detected from their database, which the IPE collects from government reports and websites, we will require immediate actions from our suppliers and provide our support during the remedy process. We piloted this at the beginning of 2017 and in 2018 we already have established a process and demonstrated our ability for quick response. During 2018, we have managed to support our suppliers in responding and taking actions to address six instances of such environmental legal violations.

---- Fiskars Group 2018 Sustainability Report

Levi's

The Corporate Information Transparency Index released their rankings of companies leading the way on transparency and supply chain practices in China. For the second consecutive year, Levi Strauss & Co. was the top ranked apparel company on the list, ranking third overall behind only Apple and Dell……These rankings, and the work that IPE and CITI do more generally, are pushing companies to be more transparent and accountable…It's extraordinary that this information is available online to consumers, citizens, and companies working in the country, especially now that pollution is such a prevalent issue in China and there's more scrutiny, as there should be, of supply chain management globally. All of this has rightfully raised the pressure on corporations operating in China, through their own facilities or through vendors, to ensure greater transparency and better performance.

---- Levi Strauss & Co. Official Website

C&A

C&A highly values IPE's contribution to the disclosure and transparency of corporate environmental performance in China. With the launch of the Green Supply Chain Map, we are looking to expand our partnership with IPE to make transparency the new normal. Because transparency leads to accountability we embrace the new ability to understand the environmental performance in real-time so that we can react and support our suppliers' wet processing units to increase performance and leadership.

---- Jeff Hogue, Chief Sustainability Officer C&A Global

New Balance

New Balance was one of only six companies to step forward and be featured on a new online map that links brands to their suppliers' environmental performance in China……In 2017, New Balance ranked 16th of 267 companies in the Corporate Information Transparency Index (CITI) that evaluates brands according to how well they address supply chain environmental responsibility in China. In 2018, we climbed to 11th overall.

---- Responsible Leadership
New Balance Official Website

For the fifth straight year, we were awarded the #1 ranking in the Corporate Information Transparency Index. The index is a product of the Institute of Public & Environmental Affairs (IPE), a civil society organization with expertise in environmental protection. The Index ranks hundreds of brands on environmental supply chain performance in China.

For more than five years, Apple and IPE have partnered to create meaningful environmental impacts that extend far beyond our own supply chain. This collaboration has proven to provide positive impacts that we hope to continue in the years to come.

---- Supplier Responsibility 2019 Progress Report

We assess our suppliers' performance in preventing the release of potentially harmful chemical substances or pollutants. Last year, over 100 of our suppliers' factories reported information about these releases to a monitoring database maintained by the Institute of Public & Environmental Affairs (IPE) in China.

We also worked with our Original Design Manufacturers to better manage their own supply chain's using the IPE database.

---- Supply Chain Sustainability Progress 2018 Annual Report

Since 2011, Huawei has been supporting the Green Choice Alliance, which was established by the Institute of Public and Environmental Affairs (IPE), a nongovernmental organization. We have added the IPE's enterprise environmental data to our supplier audit list and supplier self-checklist. When query results show that a supplier violates environmental rules, Huawei immediately asks them to solve the problems within a designated timeframe. In 2018, routine queries about the environmental data of 900 key suppliers revealed 52 violations of environmental protection rules, and these violations were properly addressed. On the IPE's 2018 Greening the Global Supply Chain – Corporate Information Transparency Index (CITI), Huawei was scored as the leading company in mainland China and ranked 7th in the IT sector.

---- Huawei Investment & Holding Co., Ltd. 2018 Sustainability Report

SUITSUPPLY

A large share of a garments' environmental footprint is generated in its supply chain, often in places where it's hard to see or measure. In order to address and monitor this better, we joined the Green Supply Chain initiative in 2018, a publicly available online transparency tool that ties companies to their suppliers' environmental performance…

We will continue and improve tracking the environmental performance of our suppliers in this way.

---- Suitsupply 2018-2019 Sustainability Report