# **EVALUATION REPORT** on Green Packaging Actions of Couriers

(Brief Edition)

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URL:www.toxicsfree.org.cn Email address: info@szzw.org.cn WeChat account:Toxics-Free\_Corps The Plastic Free China is the very first non-governmental organization (ngo) in china that specializes in promoting the solution of plastic pollution. It is committed to eliminating plastic pollution in life and the environment through corporate, public and policy advocacy.

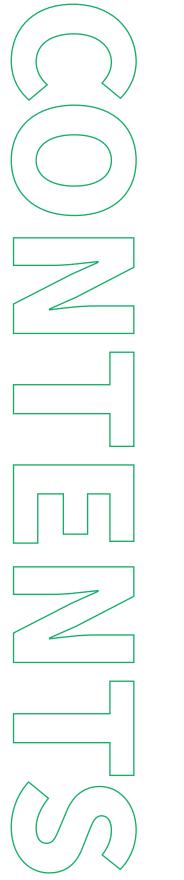
The Toxics-Free Corps is dedicated to detoxifying daily consumer goods for the public through independent testing and corporate advocacy, and promoting the mainstreaming of chemicals management issues by fostering and developing an ngo cooperation network.

#### DISCLAIMER

This Report was prepared by the Plastic Free China. The information and data used in the Report to evaluate the green packaging actions of courier companies were released by the State Post Bureau of People's Republic of China or disclosed by the companies involved, with sources including their corporate social responsibility (CSR) reports, environmental, social and governance (ESG) reports as well as official websites and WeChat/Weibo accounts. They were released in the period from January 1, 2018, to November 1, 2020. The Plastic Free China shall not be responsible for or liable in respect of errors or omissions from the information and data cited in the Report if any.

Before the release of this Report, the writing team tried to contact the nine companies involved in the Report by email and other means and added to the Report the corrigenda and opinions fed back by them before November 12, 2020. A few companies did not reply to the letter from the writing team. After the release of the Report, the companies involved may contact us at actionnow@btsf.org.cn for communication and correction if they find out any error in the information in the Report.

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### GLOSSARY

**Electronic Waybill** A document generated by outputting the original recipient and sender information of an express mail, which is stored in a computerized information system according to a certain format, onto a medium such as thermal paper through printing equipment. **[Source: YZ/T 0148-2015]** 

**Reusable Packaging** Reusable courier packaging, including reusable boxes, transit bags, and others, used by consumers and businesses alike.

**Reusable Boxes** Courier boxes which are made of polyester, plastic and the like as main raw materials and can be used many times. They are used by consumers.

**Transit Bag** Reusable freight containers made of polyester, plastic, cotton, linen, etc., as main raw materials and used in express mail distribution, transportation, processing and others. They are used by relevant businesses.



### PREFACE

With the rapid growth of e-commerce, the express delivery industry has become one of the fastest-growing emerging industries in China. Local express service companies delivered a cumulative total of 63.52 billion parcels in 2019, which accounted for more than half of the world's total annual parcel deliveries, and have ranked first globally for six consecutive years<sup>[1]</sup> according to statistics from the State Post Bureau of the People' s Republic of China (SPB). At the beginning of 2020, the COVID-19 pandemic outbreak had a huge impact on the express delivery industry within a short period. Nonetheless, the number of express deliveries rebounded rapidly thanks to the continuous implementation of pandemic prevention and control measures across China. In the first half of 2020, the average growth rate of the express delivery business was 22.5%, close to last year's average<sup>[2]</sup>.

Behind a booming express delivery industry, however, the environmental impact of courier packaging waste, which is increasing day by day due to problems such as overpackaging, difficulties in recycling relevant packaging and inability to reuse them, should not be ignored. According to the estimation of China' s State Administration for Market Regulation (SAMR) in 2020, China's express delivery industry generates more than nine million metric tons of paper waste and about 1.8 million metric tons of plastic waste every year, and it shows a trend of rapid growth<sup>[3]</sup>. SPB data show that, in the first half of 2018, the increase in courier packaging waste already accounted for 93% of the increase in domestic waste in very large Chinese cities and 85-90% in some large Chinese cities<sup>[4]</sup>.

The green development of the express delivery industry is highly valued by China. In most recent years, in order to solve problems including the wastage of resources and environmental pollution caused by courier packaging, the State Post Bureau of People's Republic of Chinahas released a battery of policies to promote the green governance of express packaging, including: the 13th Five-Year Plan for the Development of the Express Delivery Industry issued in February 2017, stating that a green and energy-saving express service system will be largely built by 2020<sup>[5]</sup>; the Guidelines for Green Packaging in the Express Delivery Industry (Trial) issued in December 2018, specifying the objectives for green packaging in the industry, namely, working under the objectives of standardization, reduction and recycling, strengthening coordination upstream and downstream, and gradually realizing the reduction and reuse of packaging materials<sup>[6]</sup>; the Green Packaging Standard for Express Mails released in June 2020, which requires delivery companies to establish and improve their internal systems, and enhance management in packaging procurement, standardized packaging operations, packaging usage statistics collection and other aspects, thus promoting their fulfillment of responsibilities in relevant areas<sup>[7]</sup>.

Following the aforementioned documents, express delivery companies have taken a variety of green packaging measures, including the extensive promotion of electronic waybills (e-waybills), narrower adhesive tapes, and reusable transit bags, as well as piloting the plastic-free cupboard cartons and reusable boxes (shared courier boxes), etc. Some companies have also launched special action plans, such as the JD Logistics (JDL) Green Stream Initiative, Suning Logistics Green City Project, and SF Express Feng Jing Program. According to our research, however, some companies offer limited access to their green packaging objectives and progress. At the same time, there is a gap between the actual actions of the company and the plans themselves, and the green packaging effects between companies have significant differences.

Under the aforementioned background, this Report presents an evaluation system for green packaging actions of courier companies and analyzes their advantages and disadvantages in such actions based on relevant policies for green governance of express packaging. Additionally, the Report uses public survey data from environmental organization Plastic Free China to examine the current status of green packaging by express delivery companies from a public perspective.

This Report aims to provide a reference for the express delivery industry to promote green packaging by presenting the current status of green packaging actions of express delivery companies. Given the survey results, we call on such companies to define more comprehensive and measurable green packaging targets, regularly monitor the progress toward these targets and disclose relevant information to speed up the pace of the industry's green development.

#### Ol Method of Evaluating Couriers' Green Packaging Actions

#### **1.1 Building the Evaluation System**

After an overview of documents involving the green governance of express packaging as part of national and industrial policies in most recent years, we see that most of them start with standardization, reduction and recycling(or reusing) to define the targets, tasks and quantitative indicators. At the same time, express delivery companies are required to voluntarily disclose their practices and results in green packaging. Accordingly, this Report is intended to evaluate their performance in green packaging actions in the following five dimensions:

**1. Green packaging targets.** This dimension mainly evaluates whether or not a company has announced its green packaging targets and disclosed the progress toward them.

2. Disclosure of information on packaging materials. This dimension is mostly about whether or not a company has disclosed information on its packaging materials and specifications as well as packaging and operating standards.

**3.** Courier packaging reduction. This dimension focuses on whether or not a courier has taken action to reduce the usage of packagings of various types, conducted green packaging research & development (R&D) and design, and disclosed statistics on packaging reduction.

**4. Reusable packaging applications.** This dimension focuses on whether a company is applying or piloting reusable packaging and has disclosed statistics on the use.

**5.** Courier packaging recycling. This dimension mainly evaluates whether or not a courier has carried out packaging recycling, and disclosed

corresponding statistics.

A summary of evaluation indicators and relevant policy reference of the five dimensions is shown in Appendix A. As it is difficult to set the indicator weights, the evaluation method for this Report is about determining whether the companies have taken relevant actions or not. Hereinafter, having taken such actions is denoted by " $\checkmark$  "; otherwise, "×".

Corporate disclosure of statistics about relevant actions plays a significant role in the evaluation system because it not only proves that the company has truly taken action but also shows that its action is effective. The intention of the writing team was not to assess how well the companies disclosed information on the effectiveness of their green packaging actions. In addition, Article 7 of the Green Packaging Standard for Express Mails already specifies requirements for the companies' collecting statistics about packaging materials: they should establish and implement a statistical system for express mail packaging materials, including but not limited to the amounts, weight, standards, and usage of various packaging materials.

#### **1.2 Subjects Included in the Research**

Subjects for this Report were two logistics companies under local e-commerce platforms, namely, *Suning Logistics Co., Ltd. (Suning Logistics)* and *JDL*, as well as seven other large couriers:

- 1. SF Express Group Co., Ltd. (SF Express);
- 2. YTO Express Co., Ltd. (YTO Express);
- 3. STO Express Co., Ltd. (STO Express);
- 4. Shanghai Yunda Express Co., Ltd. (Yunda Express);
- 5. Deppon Logistics Co., Ltd. (Deppon);
- 6. ZTO Express (ZTO);
- 7. BEST Inc. (BEST).

The aforementioned nine companies are currently the largest, best-known couriers in China. All of them rank high on the TOP100 Logistics Companies (Internet Index) 2019 co-published by China Internet Weekly and eNet Research Institute.

E-commerce platforms' role and responsibility also should be emphasized during the green packaging of express mails. As is described in the Preface, the fast growth of e-commerce is a major contributor to a sharp increase in express parcels and courier packaging waste. Facing problems with courier packaging in the era of e-commerce, e-commerce platforms are supposed to honor their responsibility for green management, build a green supply chain, and encourage participating businesses and courier partners to take part in green packaging actions. Given that there are few contents about e-commerce platforms in the policy documents which this Report relied on to build the evaluation system, such platforms were not included in the subjects. The writing team expects to assess and analyze these platforms' green packaging actions in the future.

#### **1.3 Data Sources**

The information and data used in this Report to evaluate the green packaging actions of express delivery companies were from the "Express Delivery Market Regulation Report 2019" and other relevant reports published by the State Post Bureau of People's Republic of China or were disclosed by the companies involved through their CSR reports, ESG reports as well as official websites and WeChat/Weibo accounts in the period from January 1, 2018, to November 1, 2020.

Other relevant information such as that released by news media outlets were not adopted in this Report for two reasons:

Article 28 of the Green Packaging Standard for Express Mails already has requirements for information disclosure by couriers in terms of green packaging: couriers should strengthen green practices-relevant publicity and voluntarily disclose their practices and results in the area of green packaging.

It is difficult to distinguish whether relevant information released by the news media is true and accurate or not, and it is not as reliable as the information and data released by the State Post Bureau of People's Republic of China or the companies themselves.

Given the aforementioned definition of data sources, any company which has taken relevant actions but has not disclosed any information will be viewed as having not taken such actions. To avoid this situation, the writing team tried to contact the nine companies involved in the Report by email and other means before it was released, and added to the Report the corrigenda and opinions fed back by these companies before November 12, 2020. A few companies did not reply to the letter from the writing team. As green packaging information disclosure by the companies directly affects the evaluation results, the writing team hopes that the companies will voluntarily disclose relevant practices and results as required by applicable policies, so as to make the evaluation results true and objective.

Besides, the public survey data cited in the Report were obtained through an online questionnaire survey by Plastic Free China. The result reflects the public's awareness of and views on the green packaging actions of express delivery companies, and indirectly shows the current circumstance of these actions. No more special explanation will be made below. The questionnaire was available on May 2-7, 2020, and a total of 1,053 valid copies were collected.

#### 02 Overall Evaluation Results

The nine courier companies were evaluated with 29 indicators, which correspond to 29 green packaging actions, in five dimensions including green packaging targets, packaging materials information disclosure, packaging reduction, reusable packaging applications, and packaging recycling. The overall evaluation results show that the average number of green packaging actions taken by the nine companies is less than 14. JDL, SF Express, and Suning Logistics perform best by having taken 24, 23, and 22 actions respectively. YTO Express and Yunda Express perform poorly, as they have taken only six and four actions respectively.

As green packaging information disclosure by the companies directly affects the evaluation results, they should voluntarily disclose relevant practices and results as required by applicable policies. As many as ninety-two percent of the public think it is necessary for express delivery companies to disclose packaging-related information, while seventy-five percent of them think that

Ranking	Company								Co	oui	rie	r R	an	kir	ngs	in	Gı	ree	n I	Pad	:ka	gi	ng							
1	JDL	√		√		√			$\checkmark$	√	√	√	√	$\checkmark$	√	$\checkmark$	√	√	$\checkmark$	$\checkmark$			√	√	√	×	×	×	×	×
2	SF Express	√				√	√	√	√	√	√	√		√		√		$\checkmark$	√	√	√	√	√	√	×	×	×	×	×	×
3	Suning Logistics	√	√	√	√	√	√	V	V	√	√	√	√	√	√	V	√	V	√	V	√	√	√	×	×	×	×	×	×	×
4	STO Express	√	√	√	√	√	√	V	√	√	√	√	√	√	√	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
5	Deppon	√				√	√	$\checkmark$	$\checkmark$	√	√	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
6	ZTO	√						$\checkmark$	$\checkmark$	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
6	BEST	√						$\checkmark$	√	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
8	YTO Express	√	√	√	√	√	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
9	Yunda Express	√	V	$\checkmark$	$\checkmark$	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×

#### Table 2.6.1 Courier Rankings in Green Packaging

the companies need to make changes, such as increasing the means of information disclosure, improve information dissemination, and increasing public participation, according to the survey data from Plastic Free China.

 Table 2.6.2 Overall Evaluation Results about Couriers'
 Green Packaging Actions

No.	I	ndicator	JDL	SF Express	Suning	STO Express	Deppon	zто	BEST	YTO Express	Yunda Express
	Announcing	A1.1 Packaging reduction	$\checkmark$	$\checkmark$	$\checkmark$	×	×	×	×	×	×
<b>A1</b>	green packaging	A1.2 Applying reusable packaging	×	$\checkmark$	$\checkmark$	×	×	×	×	×	×
	targets	A1.3 Packaging recycling	$\checkmark$	×	$\checkmark$	×	×	×	×	×	×
A2	Disclosing th green packag	e progress toward ging targets	√	$\checkmark$	V	×	×	×	×	×	×
B1	Disclosing packaging	B1.1 Paper	$\checkmark$	$\checkmark$	×	×	×	×	×	×	×
	types & specs	ypes & B1.2 Plastic		$\checkmark$	×	×	×	×	×	×	×
<b>B2</b>	Disclosing pa	ackaging standards	×	×	×	×	×	×	×	×	×
		C1.1 Tapes	$\checkmark$	×	V	V	$\checkmark$	×	$\checkmark$	V	×
		C1.2 Plastic bags	$\checkmark$	$\checkmark$	×	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	×	×
C1	Packaging reduction	C1.3 Packaging filler	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	×	$\checkmark$	×	×	×
		C1.4 Corrugated cartons	$\checkmark$	$\checkmark$	$\checkmark$	×	$\checkmark$	×	×	×	×
		C1.5 E-waybills	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
		C2.1 Tapes	$\checkmark$	×	$\checkmark$	$\checkmark$	$\checkmark$	×	×	×	×
	Disclosing	C2.2 Plastic bags	$\checkmark$	$\checkmark$	×	$\checkmark$	$\checkmark$	×	$\checkmark$	×	×
C2	packaging reduction	C2.3 Packaging filler	1	$\checkmark$	$\checkmark$	×	×	×	×	×	×
	statistics	C2.4 Corrugated cartons	$\checkmark$	$\checkmark$	$\checkmark$	×	$\checkmark$	×	×	×	×
		C2.5 E-waybills	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	×	$\checkmark$	$\checkmark$	×	×
С3	Conducting and design	green packaging R&D	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
<b>D1</b>		sable boxes/bags		$\checkmark$	$\checkmark$	$\checkmark$	×	×	×	$\checkmark$	×

No.	Indicator			SF Express	Suning	STO Express	Deppon	zто	BEST	YTO Express	Yunda Express
		D2.1 The number of packaging in use	$\checkmark$	$\checkmark$	$\checkmark$	×	×	×	×	×	×
D2	Disclosing reusable	D2.2 The number of reusable times	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	×	×	×	×	×
	packaging usage statistics	D2.3 Regions	$\checkmark$	$\checkmark$	$\checkmark$	×	×	×	×	×	×
		D2.4 Use Scenarios	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	×	×	×	×	×
D3	Disclosing reusable transit	D3.1 The number of bags in use		×	×	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	V
	bag usage statistics	D3.2 The number of reusable times	V	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	×	×
D4		ting scrapped kaging (boxes/bags/		$\checkmark$	$\checkmark$	$\checkmark$	×	$\checkmark$	×	×	×
E1	Packaging	E1.1 Boxes	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
<b>E1</b>	recycling	E1.2 Filler	×	×	×	×	×	×	×	×	×
E2	Disclosing pa statistics	ackaging recycling		$\checkmark$	$\checkmark$	×	×	×	×	×	×

With regard to green packaging targets, six companies have yet to announce their respective targets. Suning Logistics performs best as it has announced targets in terms of packaging reduction, applying reusable packaging and recycling packaging, plus the progress of its efforts toward these targets<sup>[8]</sup>. Setting green packaging targets can encourage such companies to explore effective ways of green packaging and take action to achieve the targets. It should be emphasized that the companies should follow the principle of measurability when setting green packaging targets, and define quantitative indicators as the basis for evaluating whether the targets are achievable. Given that measurable green packaging targets are conducive to their assessing the effects of actions in going green, all these six companies should set and announce relevant targets as early as possible.

Regarding the disclosure of information on packaging materials, none of the companies has disclosed the packaging standards they are following, making it impossible to know whether their packaging meet the standards or not. SF Express is the only one which has released information such as the specs and models of its packaging materials<sup>[9]</sup>. On its official website, all packaging types are accompanied by corresponding pictures, and their specifications and models are made public, with an introduction to their features and applications. In addition, SF Express is the only one of the nine companies that has released data on the annual usage of packaging materials by weight<sup>[10]</sup>. About ninety percent of the public think that the companies should disclose packaging information, and expect them to make such information more transparent and increase the means of disclosure.

With regard to packaging reduction, SF Express and JDL perform best as they have acted on reducing the amounts of packaging materials and disclosed statistics about such reduction. Yunda Express and YTO Express perform relatively poorly. Thanks to China's policy incentives, the courier companies are taking steps to replace conventional disposable non-degradable plastic packaging with degradable ones. With that said, there remains controversy over this means of green packaging. In the current stage, the companies should focus on reducing the amount of packaging at the source. In the meantime, the courier companies' measures in this aspect should gradually cover more types of packaging, and they should disclose the data about actual reductions.

As for reusable packaging applications, five companies including STO Express, YTO Express, SF Express, JDL, and Suning Logistics have introduced reusable boxes including pilot applications. Compared with the numbers of orders received by the companies (JDL and SF Express saw about 2.85 billion<sup>[11]</sup> and 4.831 billion<sup>[12]</sup> orders respectively in 2019, for example), the current usage of reusable boxes is still very low. The public survey also indicates that seventy percent of the public have not used recyclable boxes, and that forty percent of them do not know how to use them. As a result, greater efforts are still needed to promote the use of reusable boxes. According to relevant research, the low usage relates to the cost<sup>[13]</sup>, and it might be not

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convenient enough for consumers receiving parcels contained in such boxes<sup>[14]</sup>. Obviously, it is still necessary to make more improvements relevant to the systematic and standardized work to increase the usage of reusable packaging. While the usage of reusable transit bags reaching seventy percent in the courier industry -- a target defined by the SPB -- has been achieved, merely four companies have released the reusable times of such bags and the amounts of those in use.

In terms of packaging recycling, the courier companies mainly recycle cupboard cartons, as it is difficult to recycle plastic packaging filler and other plastic packaging materials. When it comes to packaging recycling statistics, only SF Express, Suning Logistics and JDL have disclosed them. Six other companies including STO Express, ZTO, YTO Express, BEST, Yunda Express and Deppon are participating in the Boxes Recycling Program initiated by Cainiao.com, but none of them has disclosed their packaging recycling statistics. The public survey data show that only thirty percent of the public have participated in courier packaging recycling due to lack of participation ways and lack of information on relevant activities.

As courier parcels in China are mostly e-commerce ones, which account for more than eighty percent of all parcels<sup>[15]</sup>, the coordination and collaboration between couriers and e-commerce platforms have seriously affected the promotion of green packaging in the courier industry. Of the nine companies, JDL and Suning Logistics are owned by JD Group and Suning Group respectively and operated systematically with the groups' respective e-commerce platforms, namely, JD.com and Suning.com. It is, therefore, easier for them to realize unified and standardized packaging of goods sold via the groups' e-commerce platforms. Cainiao.com is the official delivery platform of Alibaba Group' s e-commerce business and it is responsible for matching the best courier company for sellers to provide delivery services. As six partners of Cainiao.com, STO Express, ZTO, YTO Express, BEST, Yunda Express and Deppon hold large shares of the courier business of Alibaba' s

e-commerce platforms. Unfortunately, however, Cainiao.com's cooperative courier campanies are now less enthusiastic about green packaging, which may pose certain challenges to the promotion of green packaging of e-commerce parcels, especially those from the e-commerce platform of Alibaba Group. Facing problems with courier packaging in the era of e-commerce, e-commerce platforms are supposed to play a leading and monitoring role in facilitating green packaging, making relevant management standards, and encouraging the participating businesses and the cooperative courier partners to jointly implement green packaging.

#### **03** Recommendations on Measures of Green Courier Packaging

### Stating green packaging targets and initiatives and developing corresponding quantitative indicators

By setting and announcing green packaging targets, courier companies can explore effective approaches to green packaging in an active manner. When setting green packaging targets, they should follow the principle of measurability and develop quantitative indicators as the basis for evaluating whether the targets are achievable. They should also regularly monitor and disclose the progress of their green packaging targets and initiatives.

### Facilitating packaging reduction in multiple ways and increasing the usage of reusable packaging

Express delivery companies still have a lot of room for improvement with regard to packaging reduction. They should effectively conduct reduction at the source to avoid over-packaging of express mails. At the same time, they should jointly explore and develop industry standards for reusable packaging, speed up the establishment of a recycling system for packaging materials, and increase the usage of reusable packaging. Moreover, they should carefully apply degradable plastic packaging before the front-end classified delivery and backend recycling and treatment of degradable plastic products are rolled out.

## Normalizing packaging recycling action and enhancing plastic packaging recycling

Express delivery companies have generally carried out packaging recycling, although few have disclosed recycling statistics. The recycling done by companies confines to cupboard cartons, and plastic packaging materials have not been recycled yet. For the types of packaging that are difficult to be recycled, express delivery companies should actively explore alternative solutions by developing new types of packaging that can be reused or recycled. They may strengthen environmental publicity, introduce incentives to guide the public so that they actively participate in recycling, and regularly publish statistical data to show the effects of packaging recycling.

### Disclosing information on green packaging practices and results as policies require

Now that Chinese couriers offer limited access to packaging-relevant information, they should increase information transparency by disclosing relevant information such as the packaging and operating standards in use, the usage and recycling of various packaging materials, and data on the effectiveness of their green packaging plans in accordance with the Green Packaging Standard for Express Mails, so as to facilitate government departments, NGOs, news media outlets and consumers to participate in monitoring and improving the effectiveness of green packaging.

#### The State Post Bureau of People's Republic of China should enhance regulation, monitor standards implementation, and guide companies toward effective promotion of green packaging

Since green packaging of express parcels has yet to be further improved, the State Post Bureau of People's Republic of China should: enhance corporate monitoring and keep a close eye on the implementation of relevant standards to ensure that policies concerning green governance of courier packaging are followed; release incentives to encourage e-commerce platforms and courier companies to take actions such as applying reusable packaging; clarifying the rules of packaging information disclosure; offering the means of giving feedback and reporting to guide the public in participating in monitoring green governance of courier packaging.

### **APPENDIX**

### Appendix A: Indicators and Relevant Policies

Dimensions & indicators for evaluating couriers' green packaging actions

#### A. Green packaging targets

Evaluation in this dimension involves whether or not a courier has announced its green packaging targets, which are further divided into the packaging reduction, reusable packaging application and packaging recycling targets, and whether or not it has disclosed the progress toward relevant targets. Specific indicators include:

A1. The targets set by the company embodying green packaging of express mails, including:

A1.1 Packaging reduction A1.2 Applying reusable packaging

A1.3 Packaging recycling

# A2. Disclosing the progress toward green packaging targets

The contents of policy documents as the basis for designing the dimensions and indicators

The Green Packaging Standard for Express Mails: courier companies should work under the objectives of standardization, reduction and recycling, they should save resources, avoid over-packaging, and ensure implementing quantifiable and measurable packaging requirements.

### B. Disclosing information on packaging materials

Evaluation in this dimension involves whether or not a courier has disclosed information on the materials and specifications of its packagings, which include paper and plastic ones, and whether or not it has disclosed the packaging standard it is following. Specific indicators include:

### B1. Disclosing packaging types & specs, including:

B1.1 Paper B1.2 Plastic

### B2. Disclosing packaging standards

# The contents of policy documents as the basis for designing the dimensions and indicators

#### The Green Packaging Standard for

**Express Mails:** couriers should, in accordance with relevant regulations of the State, make their own express mail packaging standards, refine packaging requirements for different types of the packaging's contents, ensure that the green packaging requirements are quantifiable, measurable and satisfied, and disclose to the public the packaging and operating standards that they are following.

#### **Opinions on Further Strengthening the Control of Plastic Pollution**

requires relevant companies to work in strict accordance with applicable laws and regulations, and make plastic products compliant with relevant standards.

#### **C. Packaging Redcution**

Evaluation in this dimension involves whether or not a company has acted to reduce various packaging materials, including adhesive tapes, waybills, plastic bags, filler and corrugated cartons, whether or not it has disclosed statistics **The Green Packaging Standard for Express Mails** requires courier companies to roll out single-copy e-waybills, encourages them to prioritize the use of adhesive tapefree packaging, and prohibits them from using tapes on envelopes and bags already with the adhesive function. They should adopt readyto-use filler for cushion packaging wherever possible, and actively promote suspended

on packaging reduction, and whether or not it has conducted green packaging R&D and design. Specific indicators include:

### C1. Acting to reduce packaging

C1.1 Tapes C1.2 Plastic bags C1.3 Filler C1.4 Corrugated cartons C1.5 E-waybills

### C2. Disclosing packaging reduction statistics

C2.1 Tapes C2.2 Plastic bags C2.3 Filler C2.4 Corrugated cartons C2.5 E-waybills

#### C3. Conducting green packaging R&D and design

# The contents of policy documents as the basis for designing the dimensions and indicators

fastening packaging to reduce the use of filler. They should also actively facilitate green packaging R&D, design and production together with upstream and downstream players in the industry.

#### **Opinions on Further Strengthening the Control of Plastic Pollution** specifies the phased targets for reducing the usage of disposable plastic packaging in the express delivery industry. By the end of 2025, nondegradable plastic bags, plastic adhesive tapes, disposable polypropylene woven bags, etc., will be prohibited nationwide. Relevant companies should actively adopt new green and environment-friendly functional materials; strengthen the R&D of reusable, easy-torecycle, and degradable alternative materials and products; reduce the application costs and effectively increase the supply of green products.

#### Under the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid

**Waste**, the express delivery industry should prioritize the use of reusable and easy-torecycle packaging, optimize the packaging of goods, and reduce the use of packaging. The State also encourages the promotion of such alternative products.

The contents of policy documents as the basis for designing the dimensions and indicators

### D. Applying reusable packaging

Evaluation in this dimension involves whether or not a courier is using reusable boxes, has disclosed statistics on their usage, and has properly treated scrapped reusable packaging. Specific indicators include:

#### D1. Applying reusable boxes

### D2. Disclosing reusable packaging usage statistics

D2.1 The number of packaging in use D2.2 The number of reusable

times

D2.3 Regions D2.4 Use scenarios

### D3. Disclosing reusable transit bag usage statistics

D3.1 The number of bags in use

D3.2 The number of reusable times

D4. Properly treating scrapped reusable packaging(boxes/transit bags)

#### Both the **Opinions on Further Strengthening the Control of Plastic**

**Pollution** and the Green Packaging Standard for Express Mails encourage relevant companies to develop and improve new business models, strengthen their green management responsibilities, implement green supply chains, and actively promote reusable or recyclable packaging products and logistics distribution equipment. They are also encouraged to cooperate in ways such as jointly building a recollecting system for such equipment. They should properly treat scrapped reusable packaging in order to avoid wasting resources and causing environmental pollution, and they should file the treatment results for future reference.

E. Recycling courier packaging

Evaluation in this dimension involves whether or not a courier has acted to recycle packaging, including boxes and filler, and has disclosed packaging recycling statistics. Specific indicators include:

#### E1. Acting to recycle packaging

E1.1 Boxes

E1.2 Filler

### E2. Disclosing packaging recycling statistics

The contents of policy documents as the basis for designing the dimensions and indicators

The Law of the People's Republic of China on the Prevention and Control of **Environmental Pollution by Solid Waste.** the **Opinions on Further Strengthening** the Control of Plastic Pollution and the Green Packaging Standard for Express Mails require relevant companies to actively recycle packaging, and encourage them to offer compliant containers for packaging recycling in key areas such as distribution centers and stores. The companies are also required to establish corresponding working mechanisms and business processes, and promote reusing and recycling packaging. Boxes and filler with intact appearance and standard-compliant quality should be reuse, for example. The State encourages the recycling of disposable plastic products such as plastic bags, and promotes the application of recusable, easyto-recycling and degradable alternative products.

### Appendix B: Basis for Evaluating Green Packaging Actions

\*Data that can directly reflect the effectiveness of a company's packaging reduction will be regarded as statistical data of packaging reduction in this report

\*Only four of the nine companies are included in this Appendix.

The green " $\checkmark$ " indicates that the companines have determined the relevant action based on the information disclosed by them, and the blue " $\checkmark$ " indicates that the companines have determined the relevant action based on the information feedbacked from the companies.

	JD Logistics									
No.	Indica	ator	Result	Basis for Evaluating Green Packaging Targets						
		A1.1 Packaging reduction	V	√ The Green Stream Initiative is the largest environmental action launched by JD Logistics (JDL) after it was established as a sub-group of JD.com. According to this initiative, JD.com is expected to reduce the usage of 10 billion disposable paper cartons in the supply chain by the end of 2020, which is equivalent to the usage of paper cartons in China's express delivery industry in 2015 <sup>[18]</sup> .						
<b>A1</b>	Announcing green packaging targets	A1.2 Applying reusable packaging	×	✓ From brand owners to suppliers of e-commerce companies, JDL will realize 80% of product packaging is recyclable and reduce the average weight of single product packaging by 25%. For users, more than 50% of JDL's plastic packaging will use biodegradable materials; 100% of its logistics packages will use renewable or recyclable materials and be printed with eco-friendly printing						
		A1.2 Applying reusable packaging	V	<ul> <li>processes <sup>[18]</sup>.</li> <li> The progress toward the targets<sup>[19]</sup>: <ol> <li>JD.com disclosed the results of actions including packaging reduction, recycling and reusing via a Green Stream Initiative performance report;</li> <li>Reusable packagings such as Green Stream boxes have</li> </ol> </li> </ul>						
A1	Disclosing pro toward green targets		V	<ul> <li>been use a cumulative total of 160 million times in over 30 cities across China;</li> <li>3. It has reduced plastic usage by a cumulative total of 50,000 metric tons and saved 1.30 million metric tons of paper;</li> <li>4. It has recycled 5.40 million paper cartons in over 100 Chinese cities.</li> </ul>						

No.	Indic	ator	Result	Basis for Evaluating Green Packaging Targets
B1	Disclosing packaging types &	B1.1 Paper B1.2	J	✓ JDL's official website has disclosed the types and dimensions of packaging materials for corrugated cartons
	specs Disclosing pa	Plastic	×	
B2	standards	craging	×	
No.	Indic	ator	Result	Basis for Evaluating Green Packaging Targets
		C1.1 Tapes	V	As of the release of the third annual report, plastic consumption has been reduced by a cumulative total of
		C1.2 Plastic bags	J	50,000 metric tons, and 1.3 million metric tons of paper have been saved. The specific reduction actions are as follows <sup>[19]</sup> : 1. Reducing tape usage by 500 million meters through
C1	Acting to reduce packaging	C1.3 Filler	<ul> <li>promoting the use of narrower tapes;</li> <li>2. Reducing the usage of convention</li> </ul>	
		C1.4 Corrugated cartons	V	$\checkmark$ In cooperation with Dow, Exxon Mobil, etc., the thickness of courier bags has been reduced from 100 µm to 40 µm through the introduction of high-performance materials.
		C1.5 E-waybills	J	3. Reducing the thickness of cushion packaging by 25- 35% <sup>[21]</sup> ;
		C2.1 Tapes	J	✓ Reducing the thickness of inflatable bags from 20 μm to 15 μm (a 10-μm new material is being tested on a small scale) and that of air-column bags from 65 μm to 40 μm, thus reducing polyethylene consumption by several thousand metric tons per year.
		C2.2 Plastic bags	V	<ul><li>4. Improving corrugated cartons by reducing their weight, thus saving over 300,000 metric tons of base paper;</li><li>5. Saving 12,000 metric tons of paper by using e-waybills</li></ul>
C2	Disclosing packaging reduction statistics	C2.2 Plastic bags	J	and paper-free operations in its warehouses. √ Regarding green packaging R&D, JD.com has established a packaging innovation center. In most recent years,
	statistics	C2.4 Corrugated cartons	J	technical improvements have been made to plastic bags and adhesive tapes, and new packaging such as biodegradable bags <sup>[22]</sup> .
		C2.5 E-waybills	J	✓ JD.com has successfully developed air-column bags made of a single material polyethylene (PE) with raw material suppliers, solving the problem that it is difficult to
С3	Conducting g packaging R& design		J	recycle the current air-column bags. It plans to promote the new bags across the industry in 2021.

No.	Indica	ator	Result	Basis for Evaluating Green Packaging Targets
D1	Using reusabl	e boxes	J	✓ Since the launch of the Green Stream Initiative in 2017, Green Stream boxes have been totally reused over 10
		D2.1 The number of boxes in use	J	million times, and the covered region was expanded from Beijing, Shanghai, Guangzhou and Hangzhou at the beginning to nearly 30 cities. <sup>[23]</sup>
D2	Disclosing reusable	D2.2 The number of reusable times	J	✓ Reusable foldable cooler boxes have been fully used in distribution of fresh food, and 100 million foam boxes have been reduced by the application of reusable foldable cooler boxes <sup>[23]</sup> .
	box usage statistics	D2.3 Regions	of products are able to u distribution, covering cosr	✓ There have been several hundred thousand kinds of products are able to use Green Stream boxes for distribution, covering cosmetics, food, mobile phones,
		D2.4 Use scenarios	J	network accessories, digital accessories, office supplies, etc.When a customer picks up the goods at an express delivery outlet, the goods will be taken away by the customer, and the recyclable bag will be recycled and
D3	Disclosing reusable transit	D3.1 The number of boxes in use	×	returned to the warehouse for reuse <sup>[24]</sup> . √ JDL replaced disposable PP woven bags by reusable transit bags between the distribution center and express
	bag usage statistics	D3.2 The number of reusable times	√	delivery outlets. The reusable transit bags are made of PP and can be used more than 50 times.
D4	Properly treat reusable pack (boxes/transit	aging	J	treated are recycled by third-party companies for cleaning, sterilization and remanufacturing <sup>[25]</sup> .
No.	Indica	ator	Result	Basis for Evaluating Green Packaging Targets
E1	Acting to	E1.1 Boxes	V	✓ JD.com has taken a series of packaging recycling actions and is continuously expanding the coverage of its recycling service from the four pilot cities to nationalwide. Relevant performance data have also been released via the Green Stream performance report. Starting from 2016, JD.com has launched paper carton recycling operation to promote the green logistics. The coverage of its carton recycling service
	packaging	E1.2 Filler × JD.co outlet promo	has been continuously expanded from Beijing, Shanghai, Guangzhou and Shenzhen in March 2017 to 12 major Chinese cities and even the whole country. In addition, JD.com has set up a special carton recycling area at each outlet; under the Green Stream Initiative, it has long been promoting the use of Green Stream boxes in nearly 30 cities across China, with a long-term idle-carton recycling project nationwide. In June 2020, JD.com's Beijing-based Asia No.	
E2	Disclosing pa recycling stati		V	<ul> <li>1 Logistics Park launched a pilot practice to classify and collect wastes generated from warehousing operations<sup>[26]</sup>.</li> <li> <b>/</b> The Green Stream performance report shows that, by the time it was released, a cumulative total of 5.4 million paper cartons have been recycled in a door-to-door way<sup>[19]</sup>.      </li> </ul>

	SF E	xpre	SS	
No.	Indic	ator	Result	Basis for Evaluating Green Packaging Targets
		A1.1 Packaging reduction	J	✓ SF Express has disclosed its packaging reduction target in its ESG report: <sup>[10]</sup> By 2025, SF Express will reduce 400,000 metric tons of greenhouse gas emissions through three measures including packaging reduction, packaging recycling and
A1	Announcing green packaging targets	A1.2 Applying reusable packaging	J	reusing, and applying eco-friendly packaging recycling and reusing, and applying eco-friendly packaging materials. For achieving this goal, SF Express has created the Reward and Punishment System for Emissions Reduction and started establishing environmental management system certification in 2019. The system
		A1.3 Packaging recycling	×	should have accomplished in 2020. ✓ SF Express has announced the progress toward the targets via its CSR report <sup>[16]</sup> , articles published via some social platforms and SF Technology's official website.
A2	2 Disclosing progress toward green packaging targets		J	By the time it published the ESG Report 2019, SF Express had reduced 36,000 metric tons of greenhouse gas emissions through its green packaging materials program.
No.	Indic	ator	Result	Basis for Evaluating Green Packaging Targets
<b>B1</b>	Disclosing packaging types & specs	B1.1 Paper B1.2 Plastic	√ √	$\sqrt{1}$ Its official website has disclosed the types and specs of its paper and plastic packaging. <sup>[9]</sup>
<b>B2</b>	Disclosing pac standards	kaging	×	or its paper and plastic packaging.
No.	Indic	ator	Result	Basis for Evaluating Green Packaging Targets
		C1.1 Tapes	×	<ul> <li>SF Express has disclosed its packaging reduction actions and results:<sup>[10][16]</sup></li> <li>1. Saving about 2,500 metric tons of base paper by using modular cartons with optimized proportions of box dimensions;</li> <li>2. Saving about 2,000 metric tons of plastic annually by</li> </ul>
		C1.2 Plastic bags	J	<ul> <li>reducing the thickness of plastic bags by 10%;</li> <li>3. Saving about 3,500 metric tons of base paper by reducing the weight/m2 of gray-based white base paper for document envelopes by 10%;</li> <li>4. Saving a cumulative total of about 115 metric tons of</li> </ul>
C1	C1 Acting to reduce packaging	C1.3 Filler	J	<ul> <li>paper, 80 metric tons of polypropylene (PP) woven bags and 500 metric tons of plastic bubble film by promoting the use of fastening packaging*;</li> <li>5. Saving about 1,400 metric tons of base paper by simplifying the structure of e-waybills from 3 layers to 2 layers;</li> </ul>
				6. Saving about 2,000 metric tons of raw materials
		C1.4 Corrugated cartons	V	<ul> <li>by applying gourd-shaped bubble film instead of conventional bubble film;</li> <li>7. Saving about 2,400 metric tons of plastic and 1,500 metric tons of paper while reducing CO2 emissions by a cumulative total of nearly 12,000 metric tons from</li> </ul>

		r	·							
		C2.1 Tapes	×	SF Express has taken the following actions in green packaging innovation <sup>[16]</sup> :						
	Disclosing	C2.2 Plastic bags	1	1. In 2013, SF Technology Sustainable Packaging Solutions Service Center (SPS) was found;						
C2	packaging reduction	C2.3 Filler	J	2. SF Express has been actively developing new green packaging. It has held a packaging innovation						
	statistics	C2.4 Corrugated cartons	J	competition for three consecutive years, and conducted research in the fields of testing packaging materials, designing opened system, improving packaging material						
		C2.5 E-waybills	J	user experience, doing basic research on materials, researching on fresh food mechanisms, etc. As of 2019,						
<b>C3</b>	Conducting green packaging R&D and design		1	it had applied for more than 340 patents involving reuse, plastic reduction, green printing and others.						
No.	Indicator		Result	Basis for Evaluating Green Packaging Targets						
D1	Using reusable	boxes	√							
		D2.1 The number of boxes in use	J	✓ Reusable Feng boxes are being well used. With no filler at all, each box can be reused up to 50 times, effectively avoiding wastage of resources while						
D2	Disclosing reusable box usage statistics	D2.2 The number of reusable times	J	increasing efficiency. A cumulative total of about 600,000 Feng boxes have been put into use in 24 Chinese cities, where they have been reused over 20 million times in all, leading to savings of more than 20 million paper cartons						
	otationeo	D2.3 Regions	1	[17]						
		D2.4 Use scenarios	✓ In areas where Feng boxes are available ask the couriers to use such boxes. Th	✓ In areas where Feng boxes are available, users may ask the couriers to use such boxes. The couriers will then confirm whether the Fang boxes are quilleble at						
	Disclosing reusable	D3.1 The number of boxes in use	×	then confirm whether the Feng boxes are available at the outlet. As the users' freights meet the size, safety and other requirements, they could use Feng boxes as containers.						
D3	transit bag usage statistics	D3.2 The number of reusable times	J	✓ Scrapped reusable Feng boxes will be returned to relevant plants for remanufacturing <sup>[16]</sup> .						
D4	Properly treatin reusable packa transit bags)		1	✓ Reusable transit bags can be recycled over 50 times.						
No.	Indic	ator	Result	Basis for Evaluating Green Packaging Targets						
E1	Acting to	E1.1 Boxes	V	✓ In August 2019, SF Express launched a paper carton recycling event within the industry. The participating express deliverymen received certain incentives. They might generate corresponding income while recycling cartons to reduce pollution and wastage of resources.						
	E1 recycle packaging	E1.2 Filler	×	In October 2019, SF Express set up a paper carton recycling process and developed a paper carton recycling form. In November, it began to pilot carton recycling in four regions and has been promoting it nationwide since February 2020 <sup>[10]</sup> .						
E2	Disclosing pack recycling statis		J	✓ In 2019, SF Express recycled a cumulative total of 163,000 paper cartons. In the first five months of 2020, it recycled 17.847 million cartons cumulatively, with the whole network recycling 193,000 cartons per day on average <sup>[10]</sup> .						

	Sun	ing L	.09	istics
No.	Indi	cator	Result	Basis for Evaluating Green Packaging Targets
		A1.1 Packaging reduction	V	✓ Suning announced the upgrade of the Green City Project to Version 2.0 and the nationwide promotion of the 9999 campaign for green logistics. It is estimated that by the end of next year, 99% of its packages will be sealed by ultra- narrow adhesive tapes of under 42mm in width; 99% of its e-commerce express parcels will no longer be packed a second time; the utilization rate of its transit bags will reach 90%; its recycling system will cover more than 99 cities across China. In 2019, the costs arising from using non-
A1	Announcing green packaging targets	A1.2 Applying reusable packaging	V	<ul> <li>In 2019, the costs and non-dising non-dising non- recyclable materials per outlet dropped by nearly 20% year on year. Suning Logistics plans to implement the Green City Project in 100 cities nationwide by 2020, with a target of introducing two billion green reusable packaging. <sup>[27]</sup></li> <li>The Green City Project <sup>[28]</sup>:</li> <li>Launched in 2018, it aims to focus on reducing the wastage of express packaging and promoting their reduction, greening and recycling;</li> </ul>
		A1.3 Packaging recycling	V	<ul> <li>2. As Suning's overall strategic plan for green logistics, the Green City Project has been implemented in Haikou, Hainan Province and Wuxi, Jiangsu Province, and is planned to enter 100 cities by 2020.</li> <li>✓ The progress toward the targets <sup>[28][27]</sup>:</li> <li>1. During the Double Eleven shopping spree in 2019, Suning Logistics continued to add 200,000 reusable courier boxes in 11 cities including Beijing, Shanghai, Guangzhou,</li> </ul>
A2	Disclosing pi green packa	rogress toward ging targets	J	Nanjing, Shenyang, Wuhan, Chengdu, Shenzhen, Hangzhou, Zhengzhou and Chongqing, while starting to create a group of green cities under the Green City Project; 2. Suning Logistics's Beijing branch has achieved 99% of the packages being sealed with 45-mm-wide adhesive tapes, 95% of the e-commerce express parcels being no longer packed a second time, and 90% of the distribution centers and express delivery outlets being covered with recycling equipment.
No.	Indi	cator	Result	Basis for Evaluating Green Packaging Targets
B1	Disclosing packaging	B1.1 Paper	×	
	types & specs			N/A
<b>B2</b>	Disclosing packaging standards		×	

No.	Indi	cator	Result	Basis for Evaluating Green Packaging Targets
		C1.1 Tapes	J	The current packaging reduction actions cover different types of packaging materials <sup>[29][28][30]</sup> .
		C1.2 Plastic bags	×	1. Reducing the width of adhesive tapes from 48 mm to 45 mm and their usage by 100 million meters/year; promoting tape-free paper cartons; innovating and promoting kraft
C1	Acting to reduce packaging	C1.3 Filler	J	paper tapes; 2. Reducing the thickness of a single-bubble air cushion film by 50%; promoting automatically filling bubble bags as packaging, and the bags will not be wrapped with adhesive
		C1.4 Corrugated cartons	J	tapes and filler; 3. The system will match the most suitable box automatically depending on the length, width and height of
		C1.5 E-waybills	J	the goods; increasing the filling rate of packaging materials by 18.8%; 4. Achieving an e-waybill penetration rate of 100%, thus
		C2.1 Tapes	reducing the usage of biaxially oriented polypropy	reducing the usage of biaxially oriented polypropylene films (BOPP films) by 20 million m2/year;
		C2.2 Plastic bags	×	✓ Suning Logistics has taken the following packaging R&D activities:
C2	Disclosing packaging reduction statistics	C2.3 Filler	J	<ol> <li>On April 22, 2018, the Suning Green Packaging Laboratory was established with a focus on developing green and safe packaging;</li> <li>Suning Logistics has introduced reusable courier boxes</li> </ol>
	statistics	C2.4 Corrugated cartons	1	and cooler boxes for fresh foods <sup>[28]</sup> ; 3. In 2019, Suning Logistics introduced intelligent packaging into its warehouses across China. This
		C2.5 E-waybills	J	technology matches material types with user orders, and features a 3D packing algorithm which automatically recommends package sizes and positions depending on
С3	Conducting packaging F design	-	J	products, improving the filling rate by 18.8% and hence effectively reducing wastage of paper cartons <sup>[29]</sup> .

No.	Indi	cator	Result	Basis for Evaluating Green Packaging Targets
D1	Using reusal	ole boxes	J	✓ Shared courier box is an innovative product for Suning Logistics's green and reusable packaging. Up to now, more thab 400,000 shared courier boxes have been in use
		D2.1 The number of boxes in use	V	nationwide, with cumulative total usage of more than 100 million times a year <sup>[30]</sup> . √ The upgraded Version 2.0 shared courier boxes can be
	Disclosing reusable	D2.2 The number of reusable times	J	reused at least 60 times <sup>[32]</sup> . √ During the Double Eleven shopping spree in 2019, Suning Logistics added 200,000 shared courier boxes in
D2	box usage statistics	D2.3 Regions	J	11 cities including Beijing, Shanghai, Guangzhou, Nanjing, Shenyang, Wuhan, Chengdu, Shenzhen, Hangzhou, Zhengzhou and Chongqing <sup>[33]</sup> .
		D2.4 Use scenarios	J	✓ These boxes are mainly used to pack computers, communications devices and consumer electronics. By promoting the use of cooler boxes, the company saves at least 20 million white foam boxes per year <sup>[28]</sup> .
	Disclosing reusable	D3.1 The number of boxes in use	×	✓ Circulation boxes and transit bags have been routinely used in the transit and distribution processes. By upgrading the materials of the first batch of transit bags with more wear-resistant ones, Suning Logistics has increased the average number of reusing by 28%, and the bags can now
D3	transit bag usage statistics	D3.2 The number of reusable times	J	be reused at least 60 times. As of the release of the 2019 CSR report, the penetration rate of such bags increased to 32.6% across the network <sup>[28]</sup> .
D4	Properly trea recyclable pa (boxes/trans		J	✓ The reusable boxes are 100% recycable and the scrapped ones will be recycled by Suning's partners for treatment.
No.	Indi	cator	Result	Basis for Evaluating Green Packaging Targets
E1	Acting to recycling	E1.1 Boxes	J	√ The Green Beacon Program <sup>[34]</sup> On April 22, 2019, Suning officially launched the Green Beacon community-based express packaging recycling system and piloted "10,000 + Green Beacon" community- based recycling system nationwide. Relying on smart stores
	packaging	E1.2 Filler	×	such as Suning convenience stores and the recycling of traditional paper cartons and reusable packaging, it has gradually covered neighborhoods, campuses, shopping malls, thus realizing a all-scenario recycling model and creating an open recycling network.
E2	Disclosing p recycling sta		J	√ A single express packaging recycling outlet is expected to collect up to 300 cartons per day, nearly 30% of which can be directly reused. It can recycle more than 30,000 cartons per year, which is equivalent to cutting down 100 fewer trees <sup>[35]</sup> .

### **STO Express**

No.	Indicator		Result	Basis for Evaluating Green Packaging Targets
A1	Announcing green packaging targets	A1.1 Packaging reduction	×	N/A
		A1.2 Applying reusable packaging	×	
		A1.3 Packaging recycling	×	
A2	Disclosing progress toward green packaging targets		×	
No.	Indicator		Result	Basis for Evaluating Green Packaging Targets
B1	Disclosing packaging types & specs	B1.1 Paper	×	N/A
DI		B1.2 Plastic	×	
<b>B2</b>	Disclosing packaging standards		×	
No.	Indicator		Result	Basis for Evaluating Green Packaging Targets
	Acting to reduce packaging	C1.1 Tapes	1	<ul> <li>✓ STO Express has taken the following packaging reduction actions <sup>[36]</sup>:</li> <li>1. Promoting the use of packaging bags that made of degradable, eco-friendly materials, and applying narrower, 45-mm-wide tapes. By the end of 2019, a cumulative total of 55 million meters of such tapes had been used. Some outlets are even using 39-mm-wide tapes and plant-based tapes on a pilot basis;</li> <li>2. By the end of 2019, a cumulative total of 200 million degradable plastic bags had been used, reducing 2,920 metric tons of CO2 emissions;</li> <li>3. Upgrading the materials of filler and using green filler;</li> <li>4. In June 2019, single-copy e-waybills were introduced. They are nearly 50% smaller in area than their two- and three-copy counterparts, with a penetration rate of 39%;</li> <li>✓ As for green packaging R&amp;D, STO Express has cooperated with the Department of Chemical Engineering, Tsinghua University to develop bags made of degradable eco-friendly materials. STO Express has also developed plant-based tapes, reuseble acturing bases.</li> </ul>
C1		C1.2 Plastic bags	1	
		C1.3 Filler	V	
		C1.4 Corrugated cartons	×	
		C1.5 E-waybills	V	
	Disclosing packaging reduction statistics	C2.1 Tapes	1	
C2		C2.2 Plastic bags	1	
		C2.3 Filler	×	
		C2.4 Corrugated cartons	×	
		C2.5 E-waybills	J	
С3	Conducting green packaging R&D and design		J	reusable courier boxes, eco-friendly document envelopes with some environmental companies <sup>[36]</sup> .

No.	Indicator		Result	Basis for Evaluating Green Packaging Targets
140.	inte	indicator		Dasis for Evaluating oreen rackaging targets
<b>D1</b>	Using reusable boxes		1	✓ STO Express is ready to pilot eco-friendly document envelopes that can be reused 50-60 times
	Disclosing reusable box usage statistics	D2.1 The number of boxes in use	×	<ul> <li>It has been piloting reusable courier boxes to ship valuables, fresh food, etc. <sup>[36]</sup>.</li> <li>✓ STO Express is promoting RFID transit bags and continuously upgrades them with practical experience. The average service life of a single RFID transit bag is 50-70 times, and about 10% of its transit bags can be used for more than 100 times. By the end of 2019, the utilization rate of transit bags had reached 98%, and a total of 5.8 million bags had in use with an average service life of more than 50 times. In 2019, transit bags were used 160 million times in all across the network, equivalent to reducing the discharge of plastic waste by about 16,000 metric tons.<sup>[36]</sup></li> </ul>
D2		D2.2 The number of reusable times	1	
		D2.3 Regions	×	
		D2.4 Use scenarios	1	
D3	Disclosing reusable transit bag usage statistics	D3.1 The number of boxes in use	J	
		D3.2 The number of reusable times	1	Reusable envelopes used by STO Express can be recycled after being scrapped. Transit bags that cannot be repaired and reused are recycled by
D4	Properly treating scrapped reusable packaging (boxes/ transit bags)		1	cannot be repaired and reused are recycled by certain manufacturers and then made into plastic coasters, trash bins, etc. <sup>[36]</sup>
No.	Indicator		Result	Basis for Evaluating Green Packaging Targets
E1	Acting to recycle packaging	E1.1 Boxes	1	✓ A member of the Cainiao Alliance, STO Express is participating in the Box Recycling Program launched by it. This program is only about recycling paper carton <sup>[36]</sup> .
		E1.2 Filler	×	
E2	Disclosing packaging recycling statistics		×	Garton .

### **REFERENCE LIST**

1. 国家邮政局发展研究中心,《中国快递行业发展研究报告(2019-2020年)》,2020年10月.

2. 国家邮政局,《2020年6月中国快递发展指数报告》,2020年7月.

 市场监管总局,市场监管总局等八部门联合印发《关于加强快递绿色包装标准化工作的指导意见》,http://www.gov.cn/xinwen/2020-08/09/content\_5533457.htm, 2020-08-07.
 新华网,特大城市快递包装垃圾增量已占生活垃圾增量 93% 快递包裹减负不能再拖, http://www.xinhuanet.com/2018-09/19/c\_1123451408.htm, 2018-09-19.

5. 国家邮政局,《快递业发展"十三五"规划》,2017年2月.

6. 国家邮政局,国家邮政局关于印发《快递业绿色包装指南(试行)》的通知,http://xxgk. spb.gov.cn/extranet/detail.html?yc\_id=550afbd4-3e50-429f-9ebc-f85e6b4fdb5e, 2019-01-07.

7. 国家邮政局,国家邮政局关于印发《邮件快件绿色包装规范》的通知,http://xxgk.spb. gov.cn/extranet/detail.html?yc\_id=0f667d2c-70fe-4f04-b7ef-f445b4c7cb02,2020-06-22.

8. 苏宁物流,小包裹的碳中和行动,https://weibo.com/5150844649/Jr6GQ1RQ6,2020-10-27.

9. 顺丰速运,包装服务,https://www.sf-express.com/cn/sc/express/express\_service/ added\_service/packaging\_services/.

10. 顺丰控股,《顺丰控股 2019 年度可持续发展报告》,2020-03-28.

 11. 物流指闻,京东物流变形记,https://www.headscm.com/Fingertip/detail/id/11409. html#:~:text=%E6%88%91%E4%BB%AC%E4%BC%B0%E7%AE%972019%E5%B9
 %B4%E4%BA%AC%E4%B8%9C,2017%E5%B,2020-04-29.

12. 顺丰控股,《顺丰控股 2019 年年度报告》, 2020-03-24.

13. 吴竞鸿,共享包装在快递行业的应用问题研究, 2020-07-17.

14. 侯高强,电商自营商品循环快递盒的回收效益研究, 2019-06-06.

15. 招商银行研究院,快递行业跟踪报告——2019 年与 2020 年一季度分析, http://pdf. dfcfw.com/pdf/H3\_AP202005201379980404\_1.pdf, 2020-05-11.

16. 顺丰控股,《顺丰控股股份有限公司 2019 年社会责任报告》, 2020-03-24.

17. 国家邮政局,《中国邮政快递业绿色发展报告(2019-2020年)》,2020年10月.

18. 京东物流,京东物流联合九大 500 强企业发起"青流计划" 3 年内或少用纸箱 100 亿 个, https://mp.weixin.qq.com/s/cAg9iVfJPolh2P94NofEig, 2017-06-05.

19. 京东物流,青流计划三周年,你的快递包装正在悄然发生着变化,https://mp.weixin. qq.com/s/fSamkXw5xRljQPjM\_woOyg,2020-06-05.

20. 京东物流, 服务细则, https://www.jdl.cn/aging/serviceDetails.

21. 国家邮政局,《2019年度快递市场监管报告》,2020年7月.

22. 京东集团,《京东集团社会责任报告 2013-2017》,2018-01-09.

23. 京东物流,让蓝天不只属于朋友圈,青流计划两周年成绩单出炉, https://mp.weixin. qq.com/s/kNs5TDinctd\_sZhigrw6ww, 2019-06-05.

24. 京东物流,物流包装还能这么用? 京东物流颠覆你的环保观!, https://mp.weixin. qq.com/s/hPl\_-6R0exfq\_Fklg2WJIA, 2017-05-04.

25. 京东物流,京东物流投放 10 万循环快递 "青流箱",首创行业全新开放回收体系, https://mp.weixin.qq.com/s/7rUGN8eqRggqq8AI51S\_Fw, 2017-12-07.

26. 京东物流,"箱"见不如怀念,京东物流纸箱回收扩大至全国啦!,https://baijiahao. baidu.com/s?id=1643843278063671752&wfr=spider&for=pc,2019-09-05.

27. 苏宁物流,小包裹的碳中和行动,https://weibo.com/5150844649/Jr6GQ1RQ6, 2020-10-27.

28. 苏宁易购,《苏宁易购 2018CSR 报告》, 2019-03-30.

29. 苏宁易购,一张图看懂快递包裹"绿皮书", https://weibo.com/1769962140/ HjMqfjVfW, 2019-03-07.

30. 苏宁快递,双11重磅!苏宁物流"青城计划"正式启动!,https://mp.weixin.qq.com/ s/1flkBO5A9Xh2FO09rTbNqg,2018-11-01.

31. 国家邮政局,《中国邮政快递业绿色发展报告(2019-2020年)》,2020年10月.

32. 苏宁易购,苏宁物流推出"零胶纸箱" 解决快递胶带包装浪费难题, http://www. suning.cn/cms/mediaReports2017/24567.htm, 2017-12-28.

33. 苏宁物流,增投 20 万共享快递盒! 双十一苏宁物流 "青城计划" 11 城落地, https://wuliu.suning.com/home/newsDetail.htm?id=94, 2019-11-18.

34. 苏宁易购,《2019 社会责任报告》,2020-04-18.

35. 苏宁物流,向包装垃圾宣战 818 苏宁全国增投 50 万共享快递盒, https://mp.weixin. qq.com/s/5zlsCdl0JwSpelt8v5H-KA, 2019-07-30.

36. 申通快递,《2019 申通快递社会责任报告》,2020-04-30.

