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Study on the Cognitive Status of Plastic Bottles under the New Plastic Restriction Order

-- Takes Bengbu City as an Example

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Abstract

The vigorous development of emerging business-form forms such as e-commerce, express delivery and takeout has provided the impetus for the plastic products industry, but it has also caused new problems of environmental pollution and resource waste. At the beginning of 2020, the Ministry of Ecology and Environment of the National Development and Reform Commission jointly issued the Opinions on Further Strengthening the Control of Plastic Pollution, requiring the promotion of plastic restriction in accordance with the time limit and regional steps stipulated by the state, and forming a number of replicable and popularizable plastic reduction and green logistics modes. In this context, the prosperity of the bottled water market also highlights the problem of how to recycle plastic beverage bottles again, and the Multi-functional bottle cap has a wide development space due to its novelty, environmental protection and practicality. To this end, the project takes Bengbu as an example to study its cognitive status quo and development path, and evaluate the implementation effect from the perspective of macro, medium, micro and implementation methods, so as to optimize the recycling problem of beverage bottles in China, so as to promote the development of social environmental protection undertakings.

Keywords

New Plastic Restriction; Circular Economy; Multifunctional Bottle Cap.

1. Foreword

In recent years, with the continuous and steady growth of the national economy, the continuous improvement of the household consumption level and the upgrading of the consumption structure, China's beverage industry has shown a good growth trend. and its plastic packaging, as a typical low value-added waste, has also caused a new environmental pollution and resource waste problems.

Before the Ministry of Environmental Protection released a new Catalogue of Imported Waste Management, most Chinese enterprises had long relied on imported waste plastic for processing and production, but with the environmental protection storm, waste plastic has entered the "banned".The industry predicts that domestic plastic products may usher in a price rise, and a standardized safe recycling system needs to be established urgently.

From the perspective of social recycling mechanism, because a perfect safe recycling system has not been established in China, the amount of waste plastic recycling is still difficult to match the demand of plastic products. Although plastic beverage bottles are recyclable garbage, the number of residents using plastic beverage bottles for classified recycling accounts for less than 10%.Among the social role components, the elderly have a stronger awareness of the recycling of plastic beverage bottles, but the output of plastic beverage bottles in social demand is difficult to be effectively recycled through the power of the elderly. The recycling efficiency is low and

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poor. In summary, it is difficult to balance the recovery and production of plastic beverage bottles.

From the perspective of social macro energy saving, although plastic beverage bottles can still be recycled and reused by special recycling technology, the technology of recycling and reprocessing is high, and the harmful products produced in the process of reprocessing are also difficult to eliminate.For example, phthalates, are toxic, as well as lead, cadmium and organic tin used as a stabilizer, are toxic chemicals, toxic, and easy to dissolve in oil.

Therefore, the direct secondary use of plastic beverage bottles is more economically efficient than the processing and reuse.However, China has not paid relevant attention and measures to the direct secondary use of plastic bottles.It can be seen that the blind areas under the jurisdiction of plastic restriction require the spontaneous environmental protection recycling of the social masses. How to establish environmental awareness and how to carry out environmental protection activities with plastic beverage bottles as the main body have become a new research field.

2. Current Status and Literature Review

2.1. The Current Situation of International Research

Since the last century, the United States has attached great importance to green and environmental protection issues, and many state governments have asked the public to recycle plastic waste and give certain preferential tax policies to relevant enterprises. Due to the importance and active implementation of the United States, they quickly established a relatively perfect plastic products recycling system. While reducing resource consumption and environmental pollution, the recycling and supervision workflow also brought a lot of labor demand to the society and provided a large number of jobs for the masses. The construction of environmental protection system in Japan pays more attention to the development of circulation system. Different garbage classification regulations in different streets and districts in Japan. For example, in Shibuya District of Tokyo in 2013, garbage is divided into four categories: combustible garbage, non-combustible garbage, crude waste, and resource waste. Each category will be subdivided into several sub-projects, such as branches less than 50 centimeters long that can be classified as "combustible waste". And throwing a plastic bottle will go through three processes, the project is cumbersome, never seen before. However, adhering to the attitude of not discarding, Japan's plastic bottle recycling mechanism is very sound, and the national awareness has been enhanced under this strict system. In addition, the government also strongly supports the construction of waste plastic bottle recycling stations, which will set up special personnel to collect them regularly and put them into a special recycling system.

2.2. Status Quo of Domestic Research

Since the early 1990s, due to the convenient plastic bottles adapted to the needs of consumers, plus the strong publicity and guidance of enterprises, especially the public water quality crisis caused with industrialization, the consumption trend of plastic bottled water and bottled drinks has promoted the vigorous development of the plastic bottled industry. However, recently, the environmental pollution problem caused by plastic bottles in the United States, Europe and other places has also attracted wide attention from the Chinese government.

The recycling process of plastic bottles in China is to focus on relevant laws and regulations and establish scientific and advanced legislative concept, improve the legal rules and regulations of ground settlement control and consider bottled water, refine the legal control of solid waste pollution, including specific laws, specific technical indicators, implementation rules of Australia and American international experience, and environmental deposit system to realize

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scientific waste reduction, recycling and disposal. But the specific measures on how to recycle them effectively are still unclear.

2.3. Literature Review

The Alcoa Association and the Tanning Industry Association (Can Manufacturers Institute (CMI) have jointly released an updated report detailing the increasing advantages of aluminum cans in other types of packaging applications. Studies show that the recovery rates of aluminum cans were about twice as much as plastic bottles. Aluminum beverage cans recycle about 73%, while glass bottles average 23%, and plastic bottles are only 6% or less.

Xiaojie (2020) believes that the modern society can manufacture and use the plastic bottles in large quantities, but the plastic bottles cannot decompose naturally, so how to deal with the plastic bottle garbage has become a major environmental protection topic faced by the modern society. Because plastic bottles can be recycled, many areas have a recycling mechanism for plastic bottles. Plastic bottles on the market are made by --polyester, a byproduct of petroleum refining, and another use is textile. Plastic bottles and textiles, the two items that look very different, have the same raw materials. Reprocessing can be tried and applied in the textile industry.

3. Investigation and Design of the Cognition of Plastic Bottle Multi-function Bottle Cap in Bengbu Residents

3.1. Respondent

The survey object for Bengbu residents in Anhui province, the survey covers four city jurisdiction (longzi lake, clam mountain, yu and huai district) of 24 communities (Longhe community, bright street community, workers, peasants community, patriotic lane community, lakeside community, airport community, neighborhood, south lake community, latitude community, Wanrong community, upstream community, longhu incense community, Daqing community, splendid community, welcome community, sunrise community, golden community, mountain community, changsheng community, yiwu trade city community, peach garden community, laurel garden community, orchard community, community, chrysanthemum garden community).A three-month survey was mainly conducted through the use of residential plastic beverage bottles, the understanding of the Multi-functional bottle caps, the willingness to use the multifunctional bottle caps, the expectations of the Multi-functional bottle cap function, and the views on the future development prospects of the Multi-functional bottle caps.

3.2. Survey Content

The survey aims to investigate the basic situation of the recycling and reuse of plastic beverage bottles in China, the understanding and evaluation of Multi-functional bottle caps by residents in various municipal districts in Bengbu. The specific contents include: the basic analysis of the understanding of multifunctional bottle caps of Bengbu residents, the opinions and evaluation of multifunctional bottle caps and the development of beverage bottles and multifunctional bottle caps in China.

3.3. Investigation Method

The survey mainly uses four survey methods, and is gradually carried out according to the different objectives of each stage of the investigation. In the early stage, the copy research method was adopted to have a preliminary understanding of the concept, relevant policies and development status of plastic beverage bottle recycling and Multi-functional bottle cap; In the second stage, the group interview was adopted to understand the views of residents in Longzi Lake District, Pangshan District, Yuhui District and Huaiyang District on the recycling of plastic beverage bottles and Multi-functional bottle caps, Explore the reasons for its use of

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multifunctional bottle cover factors or its reluctance to use them, Develop a questionnaire; The third phase was pre-investigated by a simple random sampling method, Determine the optimal sample size for the formal survey and the specific sample assignment; Finally, the method of household survey is adopted, Samples were collected for quantitative analysis, Thus, we put forward relevant suggestions and countermeasures for residents, the government and enterprises.

3.3.1. Questionnaire Preparation

Questionnaire using the beverage bottle multifunctional cap cognitive status and innovation mechanism research questionnaire, according to lee 5-point theory from the basic situation, residents of multifunctional bottle cap, the evaluation of multifunctional bottle cap three aspects of the questionnaire revision and letter validity test, Bengbu residents of beverage bottle multifunctional cap cognitive status.

3.3.2. Sampling Design

In this survey, the sampling process according to PPS sampling is as follows: first calculate the probability of primary sample entry unit (municipal jurisdiction) according to the proportion of population density in the four districts, and then empower the secondary sample entry unit (community residents committee) according to the total area of 4 municipalities in each jurisdiction.

(1) Determination of sample size

Before the official investigation began, team members conducted a pre-survey of 100 passers-by by street interception and interview survey methods, asking if they knew about the "multifunctional bottle cap. "Through the pre-survey, the proportion of people understanding the toilet renovation in the two surveys was 8% and 7%, respectively, and the overall variance of the two pre-surveys was 0.08 * (1-0.08) =0.0736 and 0.07 * (1-0.07) =0.0651, with the minimum variance, namely P =7% selected. Based on the proportion of d 0.03 filled in in the pre-questionnaire, the absolute error limit was set. At 95% confidence, according to the calculation formula of sample size n, n 703 can be obtained. Considering the questionnaire recovery rate, we finally determined to issue 901 questionnaires.

(2) Assignment of sample size

In this survey, a total of 900 questionnaires were actually issued, and invalid questionnaires filled by incomplete, missed questions or answered at will were excluded. 756 valid questionnaires, and the recovery rate of effective questionnaires was 84.2%.In the actual survey, we calculated the number of questionnaires that should be issued in each district, and investigated the number of communities under its jurisdiction, thus determining the sampling interval, further determining the total number of districts and communities surveyed based on the sampling interval, and issuing the questionnaire.

3.3.3. Data Handling

Questionnaire data were performed statistically and analyzed using SPSS16.0.

(1) Reliability analysis of the questionnaire

Reliability (Reliability) refers to the consistency, stability and reliability of the test results, generally indicating the reliability of the test.If the reliability of a questionnaire is high, the results are consistent, reliability and stability. Through visiting the residents of Bengbu, we collected a total of 756 questionnaires. While using the questionnaire data, we should first analyze the reliability. The reliability analysis method of the questionnaire mainly includes retest reliability method, complex reliability method, discount half reliability method and Alpha reliability method.Considering the data availability and practical activity process, we used the Alpha reliability coefficient method in this questionnaire survey.The questionnaire is divided into three levels: the basic situation of beverage bottle recycling in China, residents' views on Multi-functional bottle caps, and the evaluation of Multi-functional bottle caps.

ISSN: 2688-9323

In general, we mainly consider whether there is a high intrinsic consistency between the intrinsic reliability --items of the scale.The Cronbachα reliability coefficient is currently the most commonly used one, and is generally considered to be:

Table 1. Reliability coefficient and their corresponding evaluation

coefficient of reliability	Reliability evaluation
>0.9	fine
0.8-0.9	receivability
0.7-0.8	Need to revise
<0.7	Need to abandon

If the questionnaire is reasonably designed, the results of repeated measurements should be highly related.The Cronbachα coefficient is calculated by the following formula:

$$\alpha = \frac{K}{K-1}\left(1 - \frac{\sum S_i^2}{S^2}\right)$$

$\alpha \sum S_i^2 \ S^2$ Among them, represents the reliability coefficient, K represents the total questions, the total variance of the total questions, for the scale of the rear difference, we can see from the formula, the Cronbachα coefficient standardized evaluation for the questionnaire design internal consistency, if the Cronbachα coefficient score is higher, the internal consistency of the questionnaire, and the questionnaire design is more stable, the more credible.Below, we use the SPSS software to conduct the reliability analysis of our questionnaire. For all the indicators of the questionnaire, the reliability analysis results of the SPSS software after operation are shown in Table 3:

Table 2. Sample processing information table

		Case number	scale /%
individual cases	valid	756	100.0
	get rid of	0	0.0
	amount to	756	100.0

Table 3. Results of the questionnaire reliability analysis

The Cronbachα coefficient	Standardized Cronbachα coefficient	number of terms
0.945	0.944	12

We can see from the table, the value of the Cronbachα coefficient is 0.945, indicating that the overall questionnaire design is highly internally consistent, and the stability and reliability of the questionnaire data are very good.We then conducted the reliability analysis of the relevant indicators under the four criteria, publicity, income, policy and poverty alleviation cadres. The results are shown in Table 4:

According to Table 4, the reliability coefficient of each criterion layer of the questionnaire is above 0.8, indicating the high stability and reliability of each criterion layer and meeting the requirements of data use requirements.

ISSN: 2688-9323

Table 4. The reliability results for the classification by the criterion layer

The standard layer	The Cronbachα coefficient	Standardized Cronbachα coefficient	number of terms
Basic information of the recycling of national beverage bottles	0.821	0.822	4
Residents' views on multifunctional bottle caps	0.815	0.815	5
Evaluation of the multifunctional bottle caps	0.862	0.862	4

(2) Validity analysis of the questionnaire

The validity (Validity) means that the questionnaire can accurately investigate the purpose of the investigator. The more the questionnaire we designed can reflect people's views and evaluation of multifunctional bottle caps, the higher the validity of the questionnaire. Generally speaking, the validity is divided into three types, namely content validity, conception validity and standard validity.When we analyze the validity of a questionnaire, it is often difficult to adopt a specific criterion, but we can directly conduct the validity test of all the variables involved in the questionnaire, and evaluate the structural validity through the number of variability of KMO sampling.Based on this, we chose and only selected the content validity as the validity evaluation type.In general, the KMO is calculated as:

$$KMO = \frac{\sum\sum_{i\neq j} r_{ij}^{2}}{\sum\sum_{i\neq j} r_{ij}^{2} + \sum\sum_{i\neq j} p_{ij}^{2}}$$

r_{ij} p_{ij} Where, it represents the simple correlation coefficient between the pairwise variables, which indicates the partial correlation coefficient between the pairwise variables.As can be seen from the calculation formula, the KMO value takes the value range of [0,1], and the closer the result is to 1, the more suitable the factor use analysis.

Using the SPSS software, we can obtain the results of the validity analysis of the questionnaire, as shown in Table 5:

Table 5. Results of the validity analysis

Number of KMO sampling fits		0.925
Bartlett's spherical degree test	Approximate chi square	1292.743
	free degree	66
	conspicuousness	0.000

From the results of the analysis, the value of KMO is 0.925, very close to 1. According to the validity rule, the closer the value of KMO is to 1, the more suitable for factor analysis, the original hypothesis of the Bartlett spherical degree test is that the correlation coefficient matrix is a single m-bit matrix, its approximate card square is 1292.743, the degree of freedom is 66, the significance value is 0.000, less than 0.05, indicating that the original hypothesis is a correlation between our selected questionnaire indicators, which is more suitable for factor analysis, and the overall validity of the questionnaire is good.

ISSN: 2688-9323

4. Statistics and Analysis of the Survey Results

4.1. Respondents had Limited Knowledge of the Multifunctional Bottle Cap, but had Formed an Initial Awareness of Environmental Protection

According to the data study, 52.83% agreed that multifunctional bottle cap is more energy saving and environmental protection and environment; 33.96% agreed that multifunctional bottle cap can cultivate sentiment; 37.74% agreed that multifunctional bottle cap can kill time; 41.5% agreed that multifunctional bottle cap has strong practical value.But in an offline interview with Bengbu residents, we learned that in the respondent week, more than half of the interviewees first heard about the Multi-functional bottle cap, the cognition of the Multi-functional bottle cap or stay on the shallow level, think it is just a bottle cap can protect the environment, but do not know how to protect the environment, reduce plastic bottle pollution.Secondly, among the residents of Bengbu, most of them said they were willing to try Multi-functional bottle caps for environmental protection.

4.2. Multi-functional Bottle Caps have a Broad Market Potential

According to the team's market research, there is no Multi-functional bottle cap product in the domestic market, and the research data show that 75.47% of people have a "good, should be often used" attitude towards buying the Multi-functional bottle cap gift package, and will use to make beverage bottle tools.After determining that the use of multifunctional caps can contribute to environmental protection, 92.45% of residents are willing to accept fees, only 7.55% can only accept no money, which can see that the multifunctional caps have good market potential, 55.1% of residents willing to accept fees can accept the price of 1-5 yuan / set. Therefore, multifunctional caps should pay attention to the price setting when put into the market, to ensure that everyone is willing to buy and can buy, so that they can have a broad market prospect.

4.3. The Promotion of Multifunctional Bottle Caps is Conducive to the Formation of Plastic Reduction

Multifunctional bottle caps refer to the different transformation of discarded bottle caps for different production as different uses, such as rotating toys, spray cans, extrusion cleaner / shower gel, kitchen cooking spraying bottles, bubble blowing tools and other practical tools.In this way, each beverage bottle can be recycled, effectively reducing the waste of the bottle, each cap can be replaced, adding utility, people can only need to buy seasonings and shower gel, instead of a bottle.Therefore, the promotion of multifunctional bottle caps can reduce the use of plastic bottles, increase practicality, and promote environmental protection.

4.4. Economic Cost is the Key Factor Restricting the Promotion of Multi-functional Bottle Cap

Economic cost is the professional term for enterprise economy, which refers to all the economic costs that a project pays from the whole process of construction and promotion, including research and development, materials and other aspects.For the multifunctional bottle cap, its cost is mainly reflected in the recycling of the beverage bottle cap.The raw material of the multifunctional bottle cap is the waste beverage bottle cap, which is the recycling of the waste beverage bottles.Nowadays, there is no complete recycling mechanism in China, so for Multi-functional bottle cap merchants, they need to collect waste beverage bottles, and the cost is huge.So few businesses are willing to produce Multi-functional bottle caps, which limits the promotion of Multi-functional bottle caps, and is a key factor.

ISSN: 2688-9323

4.5. Multi-functional Bottle Cap Innovation Will Directly Affect its Use Value

According to the team's main research on the production status of Multi-functional bottle caps abroad, we found that most bottle caps will only be produced as life items such as water guns, graffiti brushes, cutting knives, spinning toys, watering cans, sprinkling bottles and other common items, so it is difficult to transform them innovatively.And for these can transform items, on the one hand is most people can buy in ordinary stores new, look better so more willing to spend a few dollars to the store, on the other hand is to buy most people just to contribute to environmental protection rather than really use in their life, so willing to pay the not expensive, consumption power is insufficient.As a result, many people will not choose to buy the second time after buying it once.So if it is difficult for the Multi-functional bottle cap to have a big innovation, its promotion is a big shackles.

5. Discussion and Suggestions

5.1. Suggestions for the Government

5.1.1. The Government Should Gradually and Effectively Promote the Development of Plastic Restrictions

Plastic pollution is a major harmful factor to the environment today, and the government, as a national functional department, has the obligation and ability to call on everyone to protect the environment by using policy means.Since the 2007 "plastic restriction" was put forward, the problem of plastic pollution in China has been contained, but with social development and science and technology, the plastic restriction should also gradually expand the scope of restrictions, and the government should effectively promote the development of plastic restrictions.

5.1.2. The Government Should Step up Publicity and Popularize Knowledge of Reuse Bottles

According to the above questionnaire survey data, many people want to but do not know how to use the beverage bottle twice.With the development of economy, people's rich life, the demand for spiritual entertainment gradually grows, while the awareness of environmental protection is also constantly strengthening.This benefits from people's own consciousness, and of course, it is also inseparable from the government's efforts to protect the environment.For beverage bottles that are not worth a penny, in this fast-paced life society, most people will not specially find how to use and make knowledge. Generally speaking, they will choose the most convenient way to throw them away or sell them as waste.But if they know how to use it, more than most residents are willing to make waste beverage bottles into practical supplies. Therefore, the government should increase the publicity of the knowledge of the secondary use of beverage bottles, and constantly popularize how to use the abandoned beverage bottles to the residents with the help of new media channels such as TikTok and Weibo.

5.1.3. The Government Should Increase Capital Input and Establish a Multi-channel Recovery Mechanism

With the above research conclusions, it can be known that the recycling cost of beverage bottles today makes most businesses shrink back from the Multi-functional bottle caps and become a key factor hindering the promotion of Multi-functional bottle caps.In fact, according to the domestic and foreign beverage bottle recycling research found that our beverage bottle recycling rate is in the international advanced level, but because the number base, so to promote recycling further, this from the economic, environmental and social effect, etc., is still very meaningful, therefore, the national government to further promote garbage fine classification and subsequent centralized sorting and processing, increase capital investment,

ISSN: 2688-9323

expand recycling system, establish Multi-channel recycling mechanism, make the recycling system of waste beverage bottles can be further reduced.

5.1.4. The Government Should Give Subsidies to Environmental Protection Invention Enterprises to Protect Their Interests

Environmental protection invention enterprises have an embedded role in promoting social and environmental protection undertakings, and inject strong impetus into the development of environmental protection undertakings.But such companies will face the dilemma of large research and development costs and low market competitiveness, so they cannot continue to survive.Therefore, the government needs to formulate relevant policies, such as recent years issued for energy conservation and environmental protection industry enterprise income tax preferential policies, home appliances to the countryside policy, etc., and give certain subsidies, such as provincial energy saving special funds according to a certain amount of funds, support the new energy industry industry leading and advantageous enterprises, mainly support key technology research and development and industrialization, public platform construction projects, so as to ensure the interests of enterprises.

5.2. Suggestions for Beverage Manufacturers

5.2.1. In Response to the Call of the Government, We Will Actively Promote the Innovation and Manufacturing of Multi-functional Bottle Caps

At present, beverage manufacturers are not a major source of pollution compared with chemical plants.However, in the event of plastic pollution, drinks, as an indispensable consumer goods in the public's daily life, people will inevitably reduce the purchase of drinks.At this time, beverage manufacturers are facing competition pressure suddenly increased, is bound to cause more porridge less scramble for each other.Now, the proposal of the multifunctional bottle cap has brought a turning point for these enterprises.On the one hand, beverage manufacturers have a natural advantage in making multifunctional bottle caps compared with other industries; on the other hand, the manufacturing of multifunctional bottle caps also expands the economic business and production scope.Realize environmental protection and win-win enterprise development win-win situation.

5.2.2. We Should Pay Great Attention to Environmental Protection and the Coordinated Development of Environmental Protection and Economy

On the issue of environmental protection, there has always been a saying that the nature protection and economic development cannot coexist. Especially in some economically backward regions or developing countries, to speed up economic development, we are bound to give up environmental protection. In fact, the idea is wrong.Developing the economy can also accommodate environmental protection. For example, the implementation of the Panderba Nature Protection and Community Development project is a good example, and the government needs to learn from their practices. For beverage enterprises, it is necessary to respond to the call of the government, pay attention to environmental protection undertakings, and contribute to the coordinated development of environmental protection and economy, so as to improve the corporate image and be conducive to the next development of enterprises.

5.3. Suggestions for the Individuals

5.3.1. Establish a Green Concept, Strengthen the Awareness of Environmental Protection

Environmental protection is not only the responsibility of a country, but also the responsibility of every one of us. Today's environmental problems have become a crucial issue affecting the survival and development of all mankind. All kinds of pollution, such as deforestation, water waste, and earth warming, have seriously affected the future economic and technological development of the society.And want to fundamentally improve the environment, relying on

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the government for a lot of money and manpower is not good, need everyone to set up the green concept, improve environmental awareness, spontaneous protection, environmental maintenance, our national environmental governance can fundamentally achieve results, so that "protect the environment, everyone is responsible" is no longer a slogan.

5.3.2. In Response to the Call of the Government, and Actively Participate in Environmental Protection Activities

"The paper is shallow, absolutely know this matter to practice."This is the truth that has been celebrated since ancient times, everything is universal, the same for protecting the environment. We always say that it is crucial to raise people's environmental awareness, but in fact, after raising environmental awareness, we need to protect the environment, so as to truly improve the environment and achieve the purpose of environmental protection. Taking action should not only pay attention to garbage classification and water saving in their daily life, but also call on the government to actively participate in environmental protection activities, constantly publicize the pressure of the current environment and the importance of environmental protection to others, and call on more people to take action.

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References

[1] Coca-Cola makes 100% recycled plastic for bottles [J].Green packaging, 2021 (03): 30.

[2] this magazine.Sustainability of beverage bottle recycling and packaging advances environmental improvement [J]. Wine Beverage Technology and Equipment, 2021 (02): 67-68.

[3] Zhou Mina, Zheng Xianyong.Risk assessment of urban road reconstruction project based on fuzzy comprehensive evaluation method [J].Northern traffic, 2021 (04): 26-28 + 34.

[4] Chen Jinghuan.Coca-Cola has launched the first generation of recyclable paper bottle samples [J]. Paper Making Information, 2021 (02): 56.

[5] Liu Jingfeng. A Brief Analysis of the Development of Modern Steam Enterprises in China [J].Wealth of Today, 2021 (04): 33-34.

[6] Chen Bai, Cheng Jiwen.Yuanqi forest "Z play method" [N].The Economic Observer, 2021-01-11 (022).

[7] xiaojie. Plastic Bottle Recycling [J]. Read, 2020 (94): 42-43.