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Report Highlights:

An increasing number of Korean customers are making values-based consumption decisions. Korean customers are willing to pay more for eco-friendly products. As a result, Korean food companies are increasingly making environment, social, and governance factors a priority. U.S. exporters may wish to highlight their sustainability efforts when marketing their products in Korea.

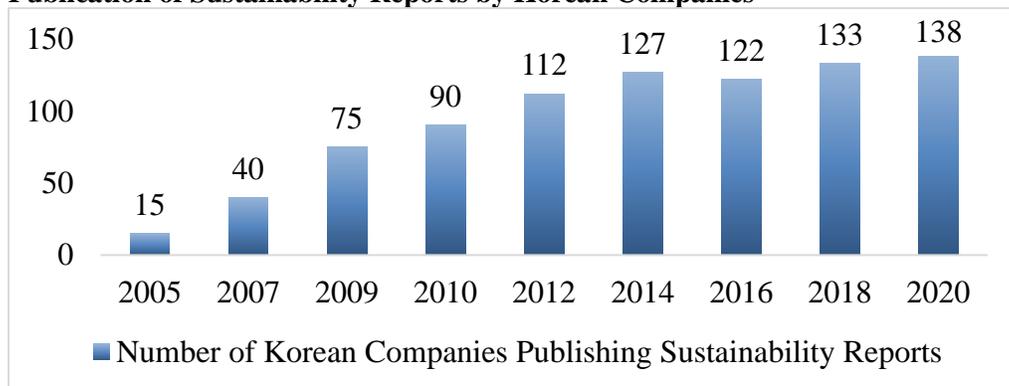
SECTION I. SUSTAINABILITY TREND IN KOREA

Consumers and governments around the world have been placing increasing attention on corporate social responsibility and environment, social, and governance (ESG) factors. Sustainability has become a key priority in food and agriculture as governments promote sustainable production and consumption in the face of climate change and growing environmental challenges. Consumers are also demanding transparency and environmental sustainability in the marketplace.

A. Sustainability Reports

Korean companies are prioritizing sustainable management in response to the Korean government's implementation of the 2050 Carbon Neutral plan and the 2030 National Greenhouse Gas Reduction Goal (NDC). The Korean Standards Association Sustainability Report was first published in Korea in 2000. The sustainability report transparently discloses non-financial data, such as a company's environmental efforts, social impact, and management structure. Fifteen reports were published in 2005 (including both private and public companies); the number of reports increased to 90 in 2010 and reached 138 in 2020. More companies are publishing sustainability reports following the increased attention to sustainability by consumers and governments.

Publication of Sustainability Reports by Korean Companies



Source: Korean Standards Association (KSA) Sustainability Report Database

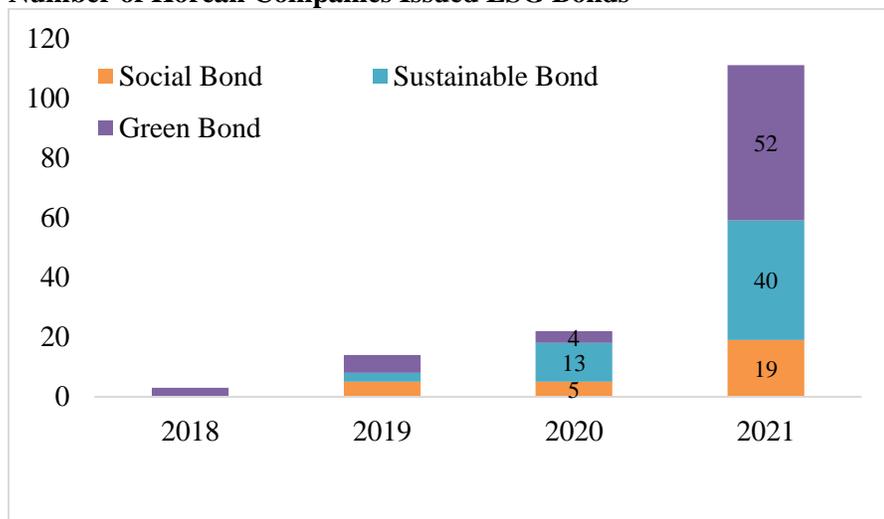
B. Sustainable Financing

According to a Korea Chamber of Commerce and Industry in Seoul survey, 70% out of 300 domestic companies consider ESG sustainability indicators to be important. Forty three percent of them said the main reason corporate sustainable management is important is that it has a positive effect on business. Korean credit rating agencies are actively considering ESG factors when revising credit ratings standards. Previously the standards mainly focused on financial soundness and profitability. Companies that neglect ESG factors are expected to have difficulty receiving high credit ratings. Korea Ratings is planning to revise the credit rating standards for each industry regarding non-financial indicators in March 2022, starting with industries with a high exposure to ESG risks. Sales efficiency indicators in the existing evaluation standard will be replaced with external responsiveness indicators.

In recent years, some investment institutions have decided to withdraw investment from companies that do not effectively manage ESG. Overseas pension funds have already decided to withdraw investment in Korean companies that have ESG risks. The Dutch pension fund 'All Pensions Group (APC) has decided to withdraw its 70 billion Korean Won stake in Korea Electric Power Corporation (KEPCO), which invests in coal power generation. The Norwegian Pension Fund decided to withdraw its

investment in the POSCO Group in 2021 due to concerns over environmental destruction caused by its Indonesia palm oil business.

Number of Korean Companies Issued ESG Bonds



Source: Korea Exchange (2021)

ESG Funds in foreign countries are growing faster and larger than those in South Korea. European countries and the United States have created trillions of won worth of ESG funds by declaring carbon neutrality. ESG Funds are also emerging as a way for small and medium sized businesses to raise investment. On February 17, 2022, the president of the Industrial Bank of Korea (IBK) and the chairman of the Korea Chamber of Commerce and Industry signed a business agreement introducing ‘Sustainability Linked Loans (SLL)’ for the first in Korea. With Sustainability Linked Loans, banks can adjust the interest rate on loans based on the borrower’s fulfillment of ESG goals.

ESG Fund Issuance of Major Economies

Division	U.S.	China	EU	South Korea
Declaration of Carbon Neutrality	July 2020	September 2020	December 2019	October 2020
Eco-friendly Investment	1,870 trillion won (per 10 years)	17,000 trillion won (per 30 years)	1,300 trillion won (per 10 years)	73.4 trillion won until 2025
Annual Average of Investment	187 trillion won	560 trillion won	130 trillion won	14.7 trillion won
Amount of ESG Funds	200 trillion won	21 trillion won	1,300 trillion won	1.3 trillion won

Source: Governments of the U.S., South Korea, and EU countries, Boston Consulting Group, NH Investments and Securities

SECTION II. CONSUMER TRENDS

The Korean food market is strongly influenced by fast changing consumer-driven trends. An increasing number of Korean customers are making values-conscious consumption decisions. ‘Greensumers’ (a combination of “green” and “consumer”) are at the center of the trend. Greensumers consider eco-friendliness as the most importantly factor when making purchases. Consumers view plastic waste as the most serious environmental issues. The Anti-Corruption and Civil Rights Commission reported that 98% of survey respondents said the environmental harm caused by plastic waste should be seriously

considered. Korean customers are willing to pay more for eco-friendly products. According to a June 2021 survey by KB Finance, 54% of consumers over 20 said they will gladly pay 10% more for eco-friendly products. 17% answered they are willing to pay 15-20% higher prices. Millennials and Gen Z in particular pay more attention to green consumption. Yes24, an online bookstore, reported that sales of books with ecology and environmental themes increased 217% last year compared to 2019.

Value conscious consumption trends, such as veganism, are mainly spreading among Millennials and Gen Z. Veganism, once considered a marginal trend, is spreading rapidly due to increased attention to climate change and animal welfare. According to the Korea Vegan Association, the number of vegetarians in Korea exploded from 150,000 in 2008 to 2.5 million last year. Industry experts predict that the plant-based meat market has a high potential and will grow significantly in the future. According to Euromonitor, the domestic plant-based meat market reached 15.5 billion won in 2021, up 35% from 11.5 billion won in 2020. The market is forecast to surpass 18.1 billion won in 2025.

The public perception of veganism has become more positive. According to a survey conducted by Shinsegae Food, 68% of respondents aged between 20 and 39 said they have a positive perception of meat alternatives. Respondents chose environmental protection (71%), animal welfare (53%), and healthy diet (43%) as the top reasons for consuming plant-based meat. Seventy eight percent of respondents who have never eaten meat alternatives said they are willing to try it to protect the environment.

According to the Ministry of Agriculture, Forestry and Fisheries Food Education and Culture Information Service, the most mentioned words related to agriculture online were “price” and “brand” in 2019. In contrast, “vegetarian” and “animal welfare” were the most popular in 2021. Mentions of alternatives for dairy products (cheese and milk) and processed food products (sausage and ham) increased significantly in 2021.

SECTION III. SUSTAINABILITY EFFORTS IN THE KOREAN FOOD MARKET

III-1 Food Processing Company

The following are a brief introduction to some of the ESG initiatives by Korean food companies.

A. Pulmuone

Korea Corporate Governance Service awarded Pulmuone, a Korean food processor, its ‘ESG Grand Prize’ in 2021. It was the first time that a medium-sized company won the grand prize. Pulmuone’s sustainability efforts have coincided with an increase in sales. Pulmuone’s cumulative consolidated sales during the first three quarters of last year totaled 1.87 trillion won, up 8.4% from the same period in 2020. Pulmuone publishes an Integrated Sustainability Reports every year. For further information, please refer to the [Pulmuone Integrated Report 2020](#).

Production

Pulmuone is working to reduce greenhouse gas emissions and waste. Company per unit greenhouse gas emissions were 72% lower in 2020 than in 2008. Pulmuone’s tofu Factory in Eumseong, North Chungcheong Province, uses tofu residue as a raw material for making animal feed. It reduced the

amount of disposed plant residues by discharging bean sprouts residues through an extraction process. Pulmuone also uses fruit that was to be discarded to make fruit juice.

Sustainable Food

Pulmuone has three types of sustainable food products: plant-based foods, plant-forward foods, and animal welfare foods. Plant-based foods are products that are manufactured only with plant-based ingredients such as beans, tofu, and vegetables. Plant-forward foods are made with over 85% plant-based ingredients and contain some animal ingredients. Animal welfare foods are made using sustainable animal ingredients. Animal materials used by Pulmuone are certified organic, animal welfare, or have received certifications from the Aquaculture Stewardship Council (ASC) and the Marine Stewardship Council (MSC). The number of MSC and ASC certified marine products (salmon, shrimp, abalone) surged 242% in 2020 compared to the previous year. MSC and ASC certified marine products accounted for 33% of total marine product sales in 2020, up 22% from 2019.

Pulmuone’s Sustainable Foods System

Division	Sustainable Foods		
	Plant-Based Foods	Plant-Forward Foods	Animal Welfare Foods
Definition	Food processed only with plant-based ingredients	Food processed using minimal animal materials	Food processed with sustainable animal materials
Detailed Standards	<ul style="list-style-type: none"> ·100 % plant ingredients including seaweed ·No animal material including sauces 	<ul style="list-style-type: none"> ·Contains 85% or more plant ingredients ·Includes animal meat and seafood 	<ul style="list-style-type: none"> ·Animal materials contained are 100% sustainable (organic, animal welfare, ASC/MSC certified)

Source: Pulmuone Integrated Report 2020

Packaging

Pulmuone Water has reduced the weight of its 200ml bottled water to 11.1 gram in 2018, down from 15 grams in 2008. Pulmuone is also using water-based ink and it introduced Korea’s first ultra-light 1.4 lid. In recognition of these efforts, Pulmuone Water received the carbon labeling certification from the Korea Environmental Industry and Technology Institute in 2014. Pulmuone plans to reduce 500 tons of plastic and 900 tons of carbon dioxide emissions and increase products packed in recyclable packaging by 400 million by 2022.

Shipping

Pulmuone started to promote electric vehicles that do not generate exhaust gases when carrying out deliveries in 2017. Pulmuone started delivering green juice with an eco-friendly electric vehicle in 2019. Electric vehicles can reduce air pollution damage since they emit less nitrogen oxides, sulfur oxides, fine dust, and volatile organic compounds.

B. CJ Cheil Jedang

CJ Cheil Jedang, a Korean food processor, announced in 2021 that it will seek to achieve carbon neutrality and zero waste. It set mid to long-term strategies for energy decarbonization, producing sustainable products, and establishing green partnerships with suppliers. For further information, please refer to the [CJ Cheil Jedang Commitment for Climate Action 2021](#).

Production

CJ Cheil Jedang's greenhouse gas emissions totaled 4.01 million tons of CO₂ in 2020. It promised to reduce its greenhouse gas emissions at all manufacturing plants by 25%. CJ reported that they have almost reached its zero-landfill waste goal in its food processing plants in Korea by reusing waste as industrial ingredients and agricultural feed.

Packaging

CJ Cheil Jedang's PHA (polyhydroxy-alkanoates) is a biodegradable plastic material developed by applying microbial fermentation technology to biomaterials such as corn and sugar cane. Ninety percent of PHA naturally degrades within a year and it can be used for various purposes such as food packaging, plastic wrapping, and paper lamination. With the 3R (Redesign, Recover, Recycle) policy, CJ reduced its PVC (undegradable plastic) use to 0.4% of its total plastic use in 2020 and expanded reusable paper packing to holiday gift sets, one of its major food products. CJ Cheil Jedang is working to expand recycling of microwavable rice plastic containers.

Sustainable Foods

CJ Cheil Jedang produces amino acids through a fermentation system that uses *Corynebacterium* and raw grains. Byproducts from this fermentation process can be used as fertilizers when growing crops. CJ has launched plant-based dumplings using Textured Vegetable Protein (TVP), its proprietary natural seasoning (TasteNrich), and plant-based oil. CJ is also strengthening its food upcycling business and it plans to launch its first related product in the first quarter of 2022.

C. Lotte Food

Lotte Food, the largest vanilla import and extraction business in Korea, plans to use Rainforest Alliance (RA) certified vanilla to produce vanilla extract. Lotte Food is the first Korean company to produce vanilla extract with RA certified vanilla beans. Lee Jin Seong, the CEO of Lotte Food, signed an MOU with the global perfume company Symrise and Lotte Central Research Center for RA-certified vanilla bean use and vanilla flavoring technology. Lotte Food will use the RA certification logo on a wider variety of food products starting with its ice cream products.

D. Oriental Brewery

Food upcycling is spreading rapidly in the Korean food industry. It is considered an advantage since food giants can save money managing food by-products by signing business agreements with small and medium sized food upcycling companies. Oriental Brewery (OB) has been developing various food products using beer byproducts after signing a business deal with Reharvest last year, a company dedicated to food upcycling. OB Beer launched energy bars made of brewers' grain, a byproduct of beer, through a crowd funding platform Wadiz. According to Reharvest, byproducts from producing beer and sikhye (a sweet rice drink) total 420,000 tons a year and are normally thrown away.

SECTION V. Retail Food Sector

III-2 Retail Food Sector

A. Offline Retailers - E-mart, Home Plus

E-mart, the supermarket chain under the Shinsegae group, increased the number of low-carbon, organic gift sets to 30 types for this year's Lunar New Year holiday. It developed new products such as low-carbon shine muscat and organic sesame oil. Low-carbon, organic food gift set sales increased 43%

during this year's Lunar New Year holiday promotion weeks (Dec 12, 2021- Jan 24, 2022) compared to the same period of last year. Overall sales of low carbon certified agricultural products in E-mart surpassed 10 billion won in 2021. Sales are forecast to increase 20% in 2022 to 12 billion won. E-mart is also planning to expand antibiotic-free certified pork to 130 branches; in 2020 it was sold at only 13 stores.

Home Plus, a retail giant, has announced its goal of reducing workplace carbon emissions by 15% compared to 2016 and installing 2,000 electric vehicle charging stations at all branches by 2023. Home Plus also removed labels on water bottles as part of its goal of reducing 40,000 tons of plastic use and 550 tons of paper use by 2025.

B. Online Retailers - Market Kurly

Online retail giant Market Kurly introduced the "Kurly Purple Box," an insulated box for early morning deliveries. The purple box is made out of "toilon," a synthetic resin material that can maintain freshness for a long time. It can hold up to 47 liters, including frozen food and processed food. The purple box can save up to 11.7 million paper boxes over a year since there is no obligation to return it. Market Kurly reported that they have saved 1.06 million square meters of paper boxes, 7.4 tons of plastic bags, and 17,000 cubic meters of refrigerants within 100 days after introducing the purple box. Kurly is actively involved in the "all-paper challenge" and replaced Styrofoam boxes, buffer materials, and box tape with paper boxes and tape. They also switched to water-based ice packs, saving 4,831 tons of plastic in a year.

III-3 Food Service Sector - Hotels and Restaurants

A. Hotels

Hotels are actively collaborating with a range of industries to follow sustainability trends and provide special experiences reflecting customers' lifestyles. Four Seasons introduced a collaborative promotion under the theme 'Sustainability' with Nespresso for customers concerned about sustainability. Customers are offered various desserts and cocktails made using the limited-edition coffee capsule, and amenities with the theme "Gifts from the Forest." Proceeds from sales of the collaboration items will be used to support environmental protection through "Naver Happy Bean." Kensington Hotel is expanding use of eco-friendly packaging such as biodegradable containers, paper straws, wood sticks, reusable cups and tableware made of Poly Lactic Acid (PLA). PLA is an eco-friendly resin extracted from food products such as corn. They offer various plant-based menus at their restaurants in collaboration with a vegan food chef.

Walkerhill Hotels & Resorts has signed a business agreement with SK Global Chemical for continuing efforts to protect the environment. Internationally certified environmentally friendly toothbrushes are provided in all rooms. They are trying to reduce food waste, such as providing customers with an opportunity to experience crafts with clay made by upcycling coffee residue.

B. Restaurants

Michelin Guide has introduced the "Green Star" in its 2021 Michelin Guide, prioritizing sustainability when evaluating restaurants. Gwendal Poullennec, the international director of Michelin Guide, said that it should consider not only the taste and quality of food that restaurants serve, but also the virtuous cycle of the restaurant industry. In Korea Gold Beans Patch, an artisanal tofu restaurant in Mapo-gu Seoul,

and Good Bab, an eco-friendly organic food restaurant, were the first to be awarded Michelin's Green Star.

Nongshim, South Korea's top instant noodle maker, will open a vegan restaurant called Forest Kitchen in April 2022. Its menu will only feature plant-based ingredients, including plant-based meat. Previously, Nongshim launched a plant-based meat brand 'Vegie Garden' which sells plant-based meat products along with processed food and sauces. Nongshim's plant-based meat uses the independently developed High Moisture Meat Analogue method, which can make taste and texture similar to real meat. Vegan food is gaining more traction with customers and the market for plant-based food has high potential.

SECTION IV. Government Requirements and Import Regulations

A. Labeling Requirements

Ministry of Food and Drug Safety (MFDS)

MFDS' Food Policy of Labeling and Advertising Division develops labeling standards for food, including livestock products. All imported food products are required to carry legible Korean language labels. In August 2021, Korea revised its Food Labeling and Advertisement Act to replace the current "sell-by date" with a "use-by date" (consumption date) to reduce food waste. Food products to be shipped from the United States on or after January 1, 2023 must carry a label that includes a use-by date. This revision is aimed at reducing food waste by informing consumers that the product can be safely consumed over a longer shelf life.

MFDS' "Standards & Specifications for Equipment and Container/Packaging" (Packaging and Container Code) provides general standards for equipment, containers, and packaging for food products and specifications for individual packaging materials. Recyclable containers or packages must carry a "separation and discharge" marking to facilitate recycling. In accordance with the Act on the Promotion of Saving and Recycling of Resources and the corresponding decree, containers or packages made with paper, carton pack, metal, glass, PET, plastic materials, and vinyl must be marked with a "separation and discharge" sign.

Ministry of Environment (MOE)

In 2019, MOE published amendments to the "Enforcement Decree and the Rule of the Act on the Promotion of Saving and Recycling of Resources" and the "Enforcement Rule of the Act on Standards for Packing Materials and Packing Methods of Products" to promote recycling and reduce waste. These amendments require packages to be evaluated, graded, and labeled for recyclability of packaging materials. To meet this new requirement, Korean importers may request exporters provide packaging material information for their products for classification and labeling of packaging materials depending on recyclability. For details, please refer to FAIRS Country Report from the following link: [FAS GAIN system](#)

B. Organic Trade

Korea's Act on the Management and Support for the Promotion of Eco-Friendly Agriculture/Fisheries and Organic Foods requires that all domestic and imported organic produce and processed products be

certified by certifying agents accredited by the Ministry of Agriculture, Food and Rural Affairs (MAFRA) and the National Agricultural Product Quality Management Service under MAFRA. However, in-lieu of certification by accredited certifying agents, the Act allows MAFRA to have an equivalency arrangement on processed organic products with foreign trading partners. The U.S. signed an organic equivalence agreement with Korea for organic processed foods in 2014. According to the agreement, if the terms of the agreement are met, certified organic operations in Korea and the United States may sell processed products as organic in either country. For more information visit the [ATO Seoul](#) website's regulations page and [USDA/NOP website](#).

C. Circular Economy Implementation Plan for Carbon Neutrality

The Ministry of Environment (MOE) and the Ministry of Trade, Industry and Energy co-announced the 'Korean Circular Economy Implementation Plan in December 2021. The plan was reaffirmed by the President's 2050 Carbon Neutrality Committee. Use of animal and plant residues, which were not previously considered as energy sources, will be promoted. Accreditation procedures will be simplified to make it easier for food waste that can be easily and safely utilized to count as recyclable resources and be excluded from waste regulation policies. MOE recognized coffee residue from coffee shops as a recyclable resource starting March 15, 2022. Coffee residue can be used to make fertilizer, building materials and plastic. Rice hull and rice bran will be declared as recyclable as well.

According to the Korea Environment Corporation under MOE, the average daily waste generated in 2020 totaled 540,872 tons, up 9% from the year before. The daily average plastic waste was 1,998 tons in 2020, an increase of 15% from 2019. Korea Statistics reported that the domestic production of plastic containers for food delivery increased 20% to 110,957 tons in 2020 from 92,695 tons in 2019. Since plastic containers are easily contaminated, they are thrown away rather than recycled. The increased use of plastic containers for food deliveries have led to an increase in overall waste. Standards for the thickness of disposable containers and excessive packaging will be prepared this year.

Production of Food Packaging Containers



Source: Korea Plastic Packaging Container Association (2020)

Material Circulation Rate Goals

	2021 (Current)	2030	2050
EPR Packages	81%	85%	90%
Plastic waste	56%	60%	95%
Food waste	13%	52%	70%

*EPR: Extended Producer Responsibility

Source: Ministry of Environment

SECTION VII. OUTLOOK

Korean Companies' sustainability efforts are expected to continue. According to a Federation of Korean Industries (FKI) survey of corporate sustainability managers from 300 companies, 81% of respondents answered that they will increase their ESG efforts this year. Meanwhile, the remaining 19% of respondents answered they will maintain their business size in 2021. No respondents said they would reduce the size of their ESG business this year. According to the same survey, Korean companies' main concerns relate to environmental issues, such as reducing carbon emissions. According to the FKI survey, the environment was selected as the most important factor (67%) to address this year, followed by society (19%), and governance (14%).

Korean food companies are actively collaborating with companies with sustainable initiatives. More companies are expected to start ESG businesses this year. An increasing number of Korean companies are signing MOUs with companies producing organic, fair-trade, and eco-friendly certified products. The Ministry of Food and Drug Safety (MFDS) is also promoting food waste reduction and recyclable packaging. There will be growing opportunities in the Korean market for U.S. exporters with certified sustainable products and verified sustainability initiatives.

Attachments:

No Attachments.