



KUMHO TIRE

All-Ways, Go With you

2023 KUMHO TIRE SUSTAINABILITY REPORT

**THE BEGINNING
OF A NEW WAY,
ALL-WAYS FROM YOU**

CONTENTS

INTRODUCTION

- 3 CEO Message
- 4 Business Overview
- 5 Global Network
- 7 Global Partners
- 8 Brand Portfolio
- 9 Value Creation
- 10 Our Impact in Numbers

ESG HIGHLIGHTS

- 12 Highlight 1. ESG Management Strategy & Governance
- 18 Highlight 2. TCFD Report : Response to Climate Change
- 24 Highlight 3. Enhancing Future Competency by Securing New Growth Engines
- 27 Highlight 4. Expanding Eco-friendly Products

ESG FACT BOOK

ENVIRONMENT

- 31 Advancement of Environmental Management
- 33 Response to Climate Change
- 37 Circular Economy and Environmental Impact Management

SOCIAL

- 40 Human Rights and Diversity
- 44 Increase of Employee Value
- 51 Responsible Supply Chain
- 57 Internalization of Safety and Health
- 62 Product Responsibility
- 66 Contribution to Local Community

GOVERNANCE

- 68 Responsible Governance
- 74 Compliance and Ethical Management
- 78 Information Security and Risk Management

APPENDIX

- 85 Materiality Assessment
- 89 Stakeholder Engagement
- 90 Financial Performance
- 91 GRI Context Index
- 95 TCFD Index
- 96 SASB Index
- 97 UN Global Compact
- 98 WEF IBC Stakeholder Capitalism Metrics
- 99 UN SDGs Contribution
- 100 Domestic Greenhouse Gas Emission Verification Statement
- 101 Overseas Greenhouse Gas Emission Verification Statement
- 102 Scope 3 Greenhouse Gas Emission Verification Statement
- 103 Independent Assurance Statement
- 105 Awards
- 106 About This Report

This report was published as an interactive PDF with features such as related page navigation and links to related web pages.



INTRODUCTION ▾

CEO Message

Business Overview

Global Network

Global Partners

Brand Portfolio

Value Creation

Our Impact in Numbers

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

CEO MESSAGE

Dear Respected Stakeholders

In 2022, Kumho Tire achieved remarkable results such as a 37% year-on-year increase in sales and a turning to profit with 2.31 billion won in operating profit as a result of labor and management working together to normalize management despite difficulties such as the instability of the international situation and the global economic recession. For sustainable growth, we are advancing the ESG management system and responding to the business paradigm shift according to the 2045 Net-Zero roadmap. It is expected that prompt and sufficient information disclosure through the 2023 Sustainability Report will play an important role in seeking interest and support beyond trust from various stakeholders.

In 2023, we plan to focus on internalizing the ESG management system.

ESG management is an irresistible trend of the times and an essential agenda for corporate sustainability. In 2023, the ESG Committee was newly established under the Board of Directors, in order to manage and supervise ESG management at the board level and faithfully reflect environmental, social, and governance perspectives in major decision-making. With the ESG Committee, ESG Management Committee, and 5 Working Groups, we will make swift decisions and implement them on the spot.

We will implement practical reductions based on the Net-Zero action plan.

Governments and automakers around the world are accelerating an institutional basis for carbon neutrality. The era of presenting numerical targets for carbon neutrality has passed, and ESG management and carbon reduction must be implemented in order to sustain business and strengthen competitiveness. In July 2022, we joined the SBTi (Science-Based Target Initiative) to establish reduction targets that meet global standards, and plan to implement them company-wide through the establishment of a carbon neutral master plan. We will systematically manage not only Scope 1 and 2, but also Scope 3 emissions in the supply chain.

We will lead mobility paradigm shift.

The automobile industry is currently facing the rapid transition to the electric vehicle market and changes to a mobility paradigm. Kumho Tire is preparing to discover opportunities and strengthen its differentiated competitiveness amid these changes. Through research and development of tires for electric vehicles, Kumho Tire's technological prowess is recognized both locally and internationally, and increase of efficiency and innovation in the product development process is being promoted through the digital twin system using AI and big data.

We would like to ask for active interest and support from stakeholders in the future of Kumho Tire's changes and challenges.



Kumho Tire Co., Ltd. CEO
Iltaik Jung



INTRODUCTION ▾

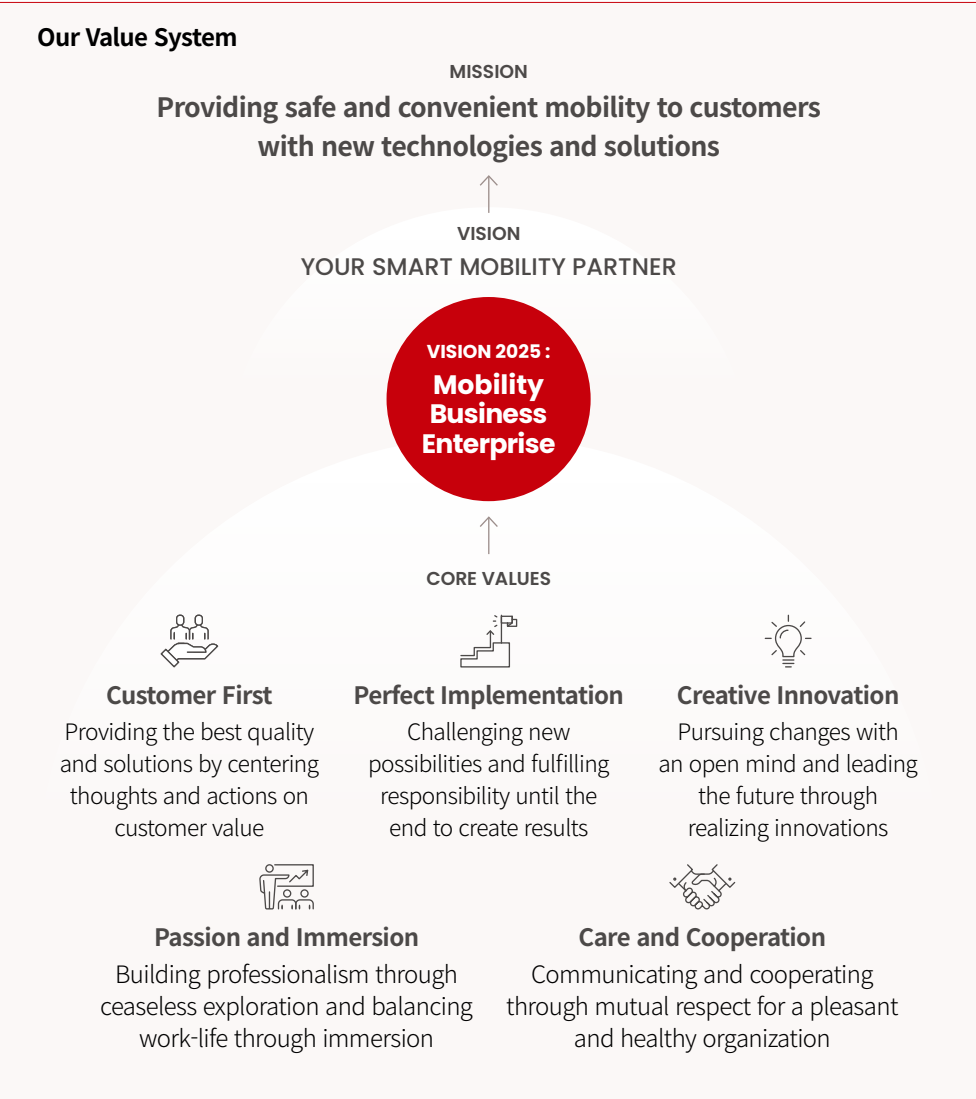
- CEO Message
- Business Overview**
- Global Network
- Global Partners
- Brand Portfolio
- Value Creation
- Our Impact in Numbers

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

BUSINESS OVERVIEW



Corporate Profile

(As of December 31, 2022)

Company Name	Kumho Tire Co., Inc.	Sales	KRW 3,559.2 billion
Establishment	June 30, 2003	Operating Profit and Loss	KRW 23.1 billion
CEO	Iltaik Jung	Total assets	KRW 4,695 billion
Headquarters	658, Eodeung-daero, Gwangsan-gu, Gwangju, Republic of Korea		
Employees	5,521persons*	Total liabilities	KRW 3,450.4 billion
Credit Rating	BBB (2017.09.11, Korea Ratings)	Total equity	KRW 1,244.6 billion

* Excluding registered executives and overseas local hires

Annual Report

Economic Performance in 2022



INTRODUCTION ▾

CEO Message

Business Overview

Global Network

Global Partners

Brand Portfolio

Value Creation

Our Impact in Numbers

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

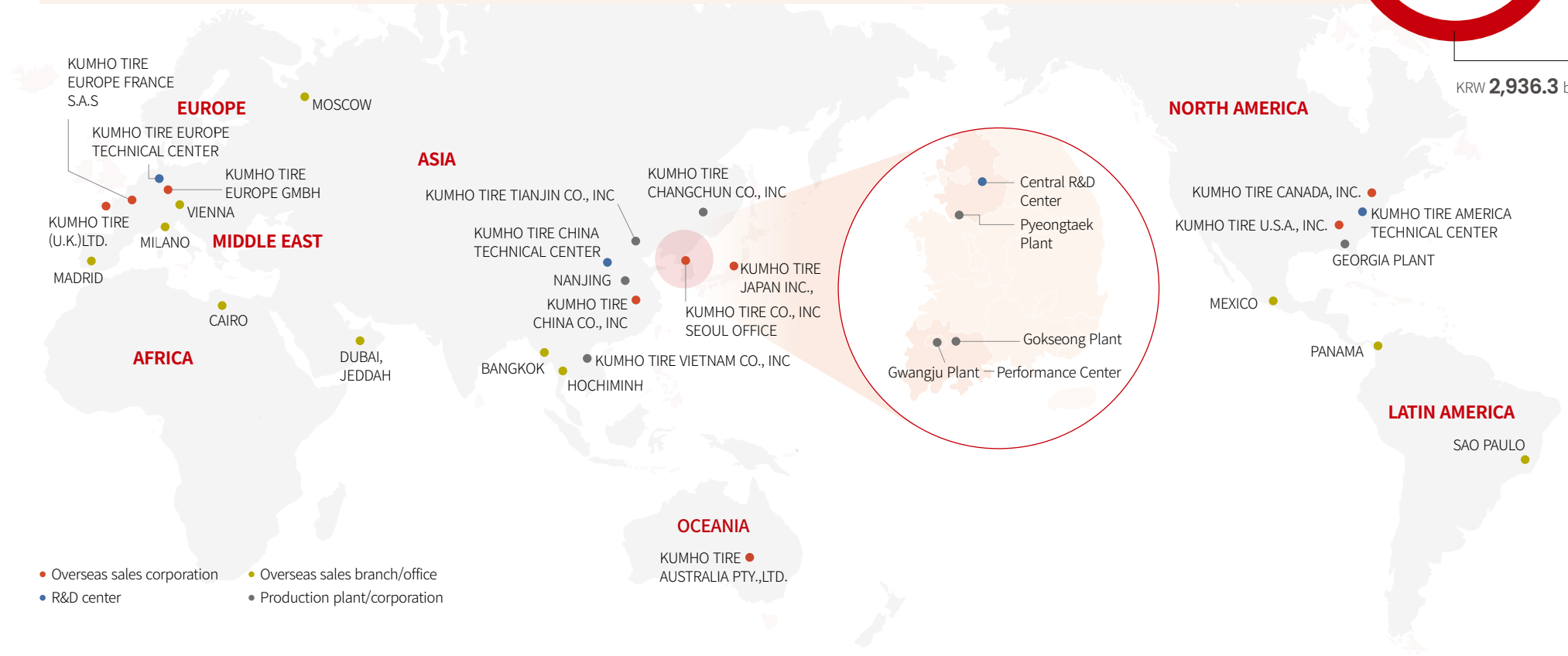
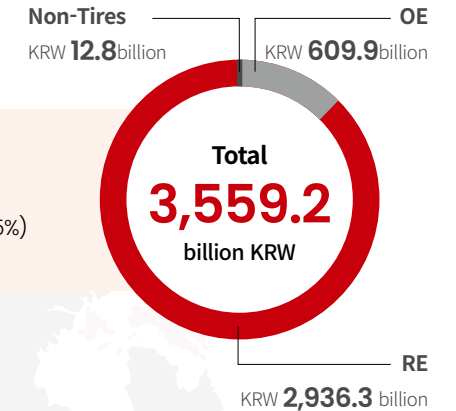
APPENDIX ▾

GLOBAL NETWORK

Based in the Seoul office, Kumho Tire has 8 domestic and overseas production plants, 9 overseas sales corporations, and 13 branches and offices and achieves annual sales of more than 3.6 trillion won through a network in 180 countries around the world. New car tires (OE) are sold to domestic and foreign automaker clients through overseas sales corporations and clients, and replacement (RE) tires are sold to consumers through distribution channels such as Tire Pro.

Sales Performance by Region (tire) (Unit: KRW in billions)

Europe	Asia	Korea	North America	Latin America	Others
672.5 (19.0%)	531.1 (15.0%)	784.3 (22.1%)	1,144.2 (32.3%)	219.6 (6.2%)	194.6 (5.5%)



INTRODUCTION ▾

CEO Message

Business Overview

Global Network

Global Partners

Brand Portfolio

Value Creation

Our Impact in Numbers

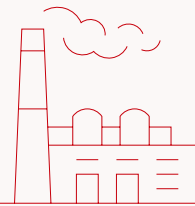
ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

GLOBAL NETWORK

Kumho Tire is constructing and developing a global production system based on three domestic plants in Gwangju, Gokseong, and Pyeongtaek, three overseas plants in Nanjing, Tianjin, Changchun in China, and two plants in the US and Vietnam, respectively. In addition, our research base is centered on the Central R&D Center (KRDC) located in Yongin and is operating a global R&D network connecting the Gwangju Performance Center (KPC) for product performance evaluation and mass production application and the technical centers in the United States (KATC), Germany (KETC), and the material centers in China (KCTC) for acquiring overseas market information and developing local products.



Production Base

8 Plants**Number of Tires Manufactured** (Unit: 1,000 units)

2020	37,290
2021	42,609
2022	48,351



Gwangju Plant



Gokseong Plant



Pyeongtaek Plant



Georgia Plant



Nanjing Plant (China)



Tianjin Plant (China)



Changchun Plant (China)



Vietnam Plant



Yongin Central R&D Center



Gwangju Performance Center



Gokseong Performance Ground



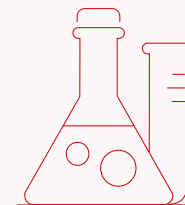
America R&D Center



Europe R&D Center



China R&D Center



R&D Centers and
Performance Center
**4 R&D centers &
1 Performance Center**

R&D Investment & Global R&D Workforce

(Unit: KRW in billion, persons)

2020	88.4	626
2021	92.7	642
2022	95.7	643



INTRODUCTION ▾

CEO Message

Business Overview

Global Network

Global Partners

Brand Portfolio

Value Creation

Our Impact in Numbers

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

GLOBAL PARTNERS

Kumho Tire continues OE partnerships with global finished vehicle makers such as Hyundai Motor Group (Hyundai, KIA), Volkswagen (Volkswagen, Audi, Skoda, Seat), Mercedes-Benz Group, Renault-Nissan (Renault, Renault Korea Motors, Nissan), KG Mobility, Tata Daewoo, etc. In addition, it is recognized for its technology by expanding its share of high-performance tires in the US and Europe, the world's largest premium tire markets.



GLOBAL OE PARTNERS



KUMHO
ECSTA HS52

Achieved GOOD rating

ADAC 2023 SUMMER TYRE TEST

Size : 205 · 55R 16 91V HS52

Test Vehicle : VW Golf 8



KUMHO
ECSTA PS71

Achieved GOOD rating

AUTOBILD 2023 SUMMER TYRE TEST

Size : 225 · 45R 18 95Y PS71

Test Vehicle : BMW 3 Series



Airborne
Winner in Product Concept
2023 iF Award

Winner in Design Concept
2022 Red Dot Award



Road Venture AT52
Winner in Product Design
2023 Red Dot Award

Winner of
2022 Good Design Award

ECSTA HS52



ECSTA HS52
Winner in Product
2022 iF Award

Winner of
2021 Good Design Award



Fin Sread
Winner in Product Concept
2022 iF Award

Finalist in Concept Design
2021 IDEA

INTRODUCTION ▾

CEO Message

Business Overview

Global Network

Global Partners

Brand Portfolio

Value Creation

Our Impact in Numbers













ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

BRAND PORTFOLIO

Kumho Tire is launching a variety of products in consideration of vehicle characteristics and driving environments to enable safe and comfortable driving in any environment. From conventional tires that have been loved for a long time to EV tires of a new market trend, Kumho Tire is gaining the trust of various stakeholders based on its differentiated technology and quality competitiveness.

PREMIUM BRAND				VOLUME BRAND	
<div>Product Lineup for EVs</div>				 A sport performance-special brand that provides comfortable high-speed driving and stable handling performance	 A high-efficiency performance tire brand with long mileage
 Majesty EV FAST SOLUS <ul style="list-style-type: none">EV tire for luxury sedans with advanced EV technologyLow rolling resistance, low noise, high traction and enhanced wear resistance	 CRUGEN EV HP71 <ul style="list-style-type: none">Tire for EV SUVs, applied with high-strength design optimized for electric vehiclesDriving stability, braking performance, and road noise reduction technology	 Majesty X SOLUS <ul style="list-style-type: none">Luxury product with the best riding comfortApplication of the latest driving safety technology and new noise reduction technology "K-Silent"	 SOLUS TA51 <ul style="list-style-type: none">All-season premium tires optimized for the Korean environmentPattern noise reduction technology and wear resistance improved	 ECSTA PS91 <ul style="list-style-type: none">High-performance premium sports tireSecuring driving stability and braking performance by realizing excellent grip performance on wet and dry road surfaces by applying a special compound	
 SOLUS EV TA31 <ul style="list-style-type: none">EV tire for sedans with enhanced rolling resistance and wear performanceApplying compound and pattern design technology suitable for EV characteristics	 ECSTA EV PS71 <ul style="list-style-type: none">High-performance tire optimized for EVsApplying EV-specific compound and high-strength design to prevent abnormal wear	 CRUGEN HP51 <ul style="list-style-type: none">New SUV tire satisfying the needs of SUV vehicles with balanceReduced pavement noise and strengthened driving stability	 ROAD VENTURE AT52 <ul style="list-style-type: none">Multiple tire satisfying both city drive and outdoor activities	 WINTERCRAFT WP72 <ul style="list-style-type: none">Premium winter tire for luxury sedansApplying design optimized for snow and wet performance	



INTRODUCTION ▾

- CEO Message
- Business Overview
- Global Network
- Global Partners
- Brand Portfolio
- Value Creation
- Our Impact in Numbers

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

VALUE CREATION

Kumho Tire seeks to fulfill its corporate social responsibility by fairly distributing the economic value created through business activities to various stakeholders, including suppliers, employees, investors, governments, local communities, and customers who are connected to the corporate value chain.





INTRODUCTION ▾

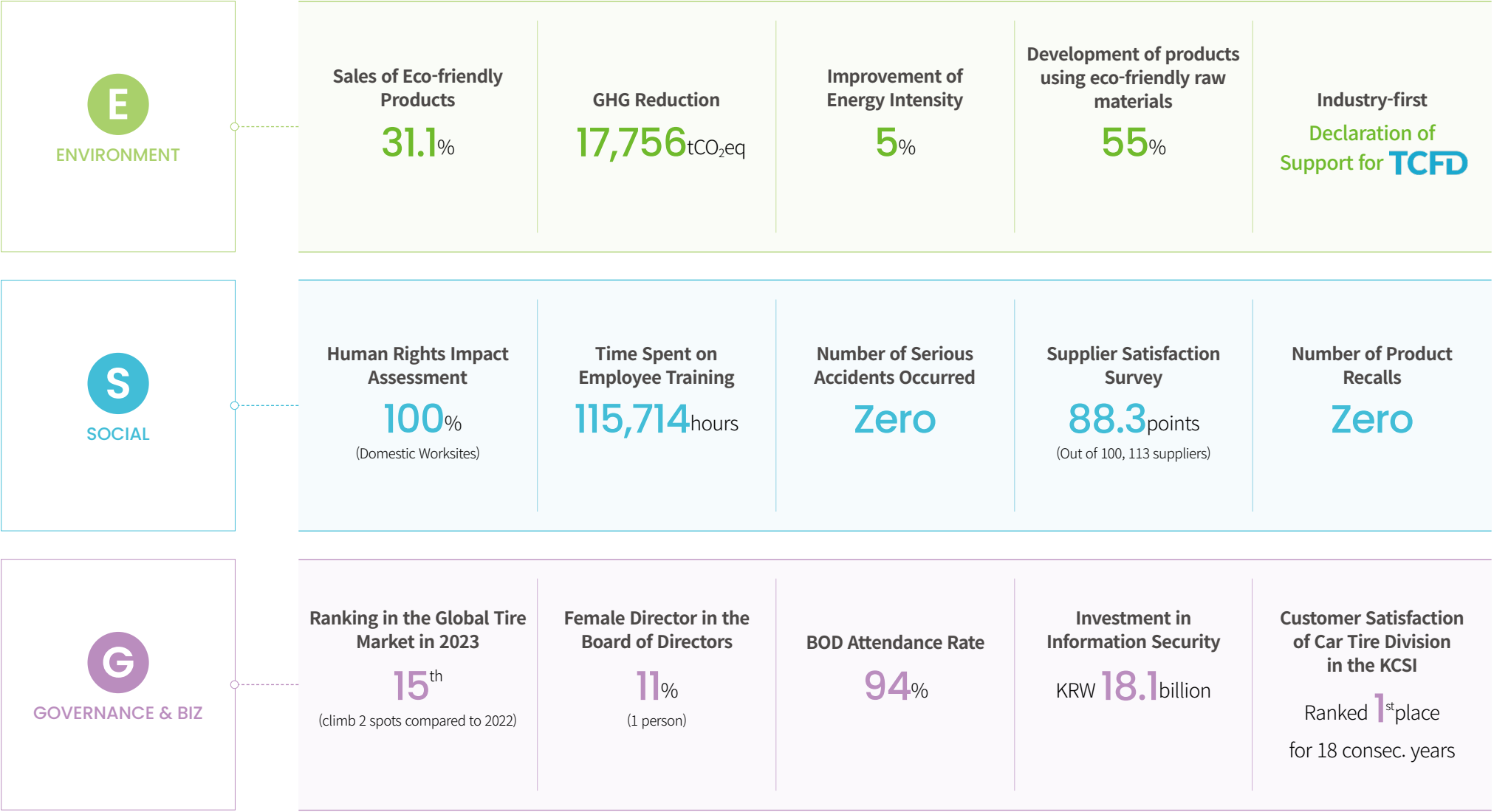
- CEO Message
- Business Overview
- Global Network
- Global Partners
- Brand Portfolio
- Value Creation
- Our Impact in Numbers

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

OUR IMPACT IN NUMBERS





INTRODUCTION ▾

ESG HIGHLIGHTS ▾

- HIGHLIGHT 1. ESG Management Strategy & Governance
- HIGHLIGHT 2. TCFD Report : Response to Climate Change
- HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines
- HIGHLIGHT 4. Expanding Eco-friendly Products

ESG FACT BOOK ▾

APPENDIX ▾

ESG HIGHLIGHTS

Highlight 1. ESG Management Strategy & Governance	12
Highlight 2. TCFD Report: Response to Climate Change	18
Highlight 3. Future-proof Capabilities with New Growth Engines	24
Highlight 4. Expanding Eco-friendly Products	27

HIGHLIGHT 1. ESG Management Strategy & Governance

- HIGHLIGHT 2. TCFD Report : Response to Climate Change
- HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines
- HIGHLIGHT 4. Expanding Eco-friendly Products

HIGHLIGHT 1
ESG Management Strategy & Governance

Kumho Tire presented five strategic directions ranging from responding to climate change to building transparent governance in order to maximize stakeholders’ value through its ESG vision of “Your Sustainability Partner.” In addition, as a promotion system for strategic tasks, we have established company-wide working groups in five sectors to implement our ESG vision and strategies by planning WG’s short-, mid-, and long-term targets, tasks, and goals as well as by monitoring performances.



Interview

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management Strategy & Governance

HIGHLIGHT 2. TCFD Report : Response to Climate Change

HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines

HIGHLIGHT 4. Expanding Eco-friendly Products

ESG FACT BOOK ▾

APPENDIX ▾



“ We will support responsible ESG management by operating a substantial ESG committee. ”

Member of the ESG Committee

Moonsun Song Independent Director

❶ **As an independent director of the newly established ESG Committee in 2023, how would you diagnose Kumho Tire's ESG management level?**

Recently, Kumho Tire has been receiving good grades from various domestic and international ESG evaluation agencies such as MSCI. Due to the nature of the automobile industry to which Kumho Tire belongs, we have long been demanding substantial achievements in ESG management at a high level from global car makers in Europe and North America. Externally, customer needs are growing at a rapid pace, and internally, management and employees are proud of being a leading ESG company among domestic tire companies. Centered on the ESG Management Committee under the CEO, 5 Working Groups for each issue are entering the stage of attaining practical performances beyond setting targets and plans. The turnarounds to profit and labor-management stabilization in the business terms are expected to accelerate the advancement of Kumho Tire's ESG management in the future.

❷ **What is the most important and urgent issue for Kumho Tire to advance and internalize ESG management?**

We believe that reducing carbon emissions associated with achieving 2045 Net-Zero is the most important. We laid the groundwork for substantial reductions by building up a carbon neutral strategy and a roadmap to achieve goals, as well as establishing a step-by-step implementation strategy. We will set up goals that meet the SBTi standards and strive to expand carbon emission management to supply chain, including the entire product process and Scope 3. I will also participate in and monitor this process and fulfill my responsibilities and roles as a committee member. In addition, I believe that recently, due diligence for human rights management or transparent and active activities by the governing body to strengthen shareholder rights are also important.

❸ **What are your views on the ESG committee and your role?**

It is encouraging that major issues regarding the company's ESG management and decision-making are being actively reported. In addition to monitoring the company's ESG activities and checking whether goals are achieved, I will faithfully play a role in persuading and supporting the management so that when the working groups including the ESG team face difficulties in the process of achieving goals, they can be resolved.

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management Strategy & Governance

HIGHLIGHT 2. TCFD Report : Response to Climate Change

HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines

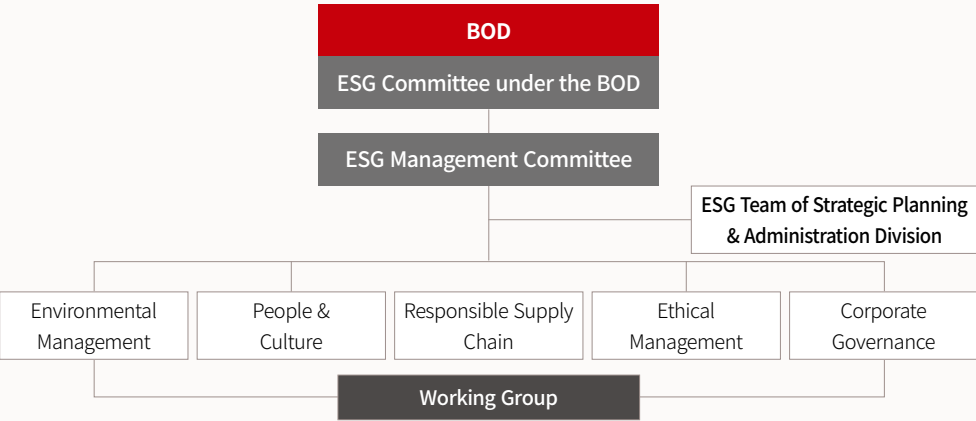
HIGHLIGHT 4. Expanding Eco-friendly Products

ESG FACT BOOK ▾

APPENDIX ▾

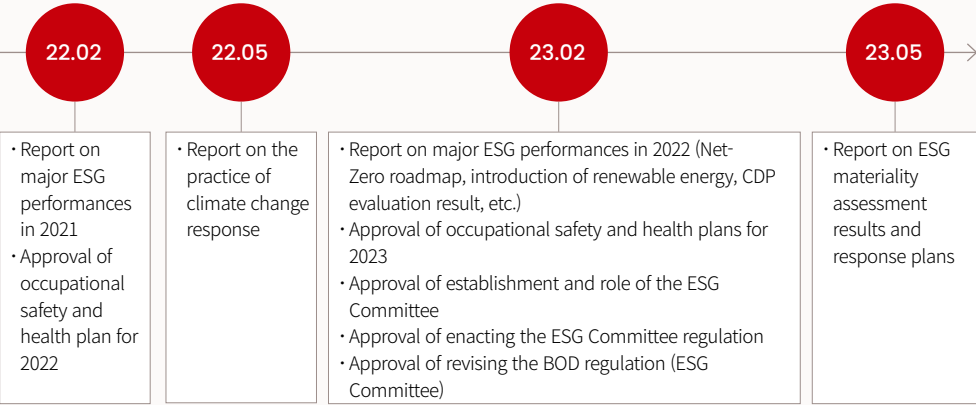
ESG Management Governance

For professional and systematic ESG management, Kumho Tire secured driving force by establishing a new team dealing with ESG management in the Strategic Planning & Administration Division in 2021 and newly established the ESG Committee under the Board of Directors in 2023. At the CEO and executive level, the ESG-related issues are being dealt through the ESG Management Committee. At the promotion and operation level of ESG action tasks, a total of 5 Working Groups, including. Environmental Management, People & Culture, Responsible Supply Chain, Ethical Management, and Corporate Governance are organized and operated.



Major Discussion Agendas of the BOD

The board of directors, the highest decision-making body, have been reported and resolving the following major agendas so that Kumho Tire could systematically promote sustainable management.



Establishment of the ESG Committee under the Board of Directors

Kumho Tire established the ESG Committee under the board of directors to systematically manage and supervise ESG management at the board level with integrating ESG in important decision-making processes. The ESG Committee is composed of three directors (1 executive and 2 independent directors), and the meeting is held at least once half a year and as needed.

The ESG Committee seeks to strategically and systematically manage the environmental, social, and governance sectors. Accordingly we discover and identify various topics and issues related to our ESG management, check the corporate sustainable management strategy and direction, and continuously monitor related performance and risks. In addition, the committee deliberates and decides on ESG management strategies, including the presentation of ESG management strategical directions, managing and monitoring progress on ESG management action tasks, and non-financial risk management.

Composition of the Committee

Name	Attendance rate	Goal
Iltaik Jung (Chairperson)	100%(1/1)	· Deliberation and resolution of ESG management promotion plan · Management and supervision of ESG management promotion tasks
Moonsun Song	100%(1/1)	· Non-Financial Risk (ESG) Management · ESG-related decision-making and performance management and supervision by the management
Jinyoung Kim	100%(1/1)	

Resolved Agendas of the ESG Committee

Date of meeting	Reported agenda	Approved agenda
May 2023	Results of comprehensive diagnosis on ESG management (ESG management system, environment, society, governance)	Approval of the 2045 Net-Zero Roadmap and carbon reduction target Approval of establishing human rights management system and supplier ESG management

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management Strategy & Governance

HIGHLIGHT 2. TCFD Report : Response to Climate Change

HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines

HIGHLIGHT 4. Expanding Eco-friendly Products

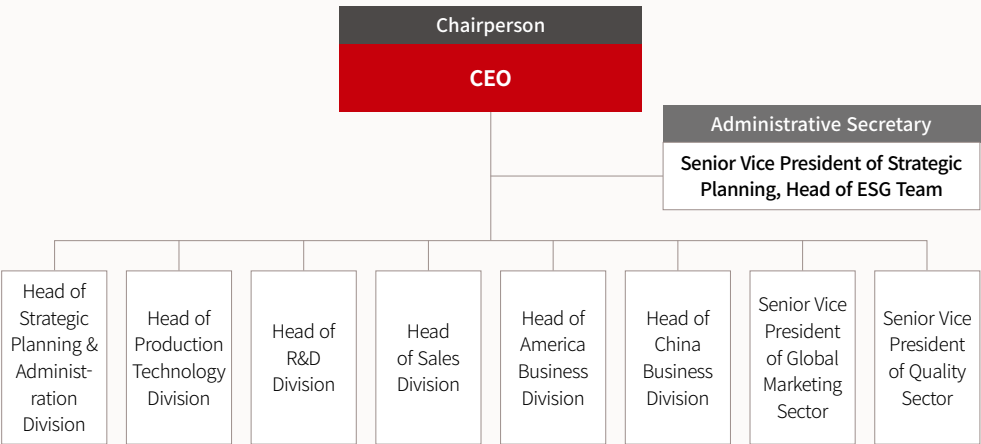
ESG FACT BOOK ▾

APPENDIX ▾

ESG Management Committee under the CEO

Kumho Tire has established the ESG Management Committee in April 2022 to integrate ESG into company-wide strategies, as a new business standard. The committee consists of 11 members, with the CEO as the chairperson and the heads of all divisions participating as members. The ESG Management Committee identifies significant financial and non-financial risks and discusses preemptive response plans. In addition, the committee makes final decisions with perspective considering ESG issues by reviewing key business opportunities and monitoring related performance.

Composition of the ESG Management Committee



Discussion Agenda of the ESG Management Committee

Apr. 2022	<ul style="list-style-type: none">• Our ESG management inspection and implementation plan• Response plan to the Serious Accident Punishment Act
Jul. 2022	<ul style="list-style-type: none">• Promotion status by 5 major working groups- Establishment of 2045 Net-Zero roadmap and CDP (Carbon Disclosure Project) response status• Review of the establishment of the ESG Committee under the BOD• Major contents of 2022 sustainability report
Oct. 2022	<ul style="list-style-type: none">• Latest ESG-related laws and trends• Promotion status by 5 major working groups• Plans for 2023 based on ESG management roadmap
Jan. 2023	<ul style="list-style-type: none">• ESG trends in 2023• Comprehensive diagnosis results on KH ESG management and roadmap• Establishment of quantitative goals by key task and major action tasks
Apr. 2023	<ul style="list-style-type: none">• C-M response status in terms of ESG management• Carbon emission reduction goal• Investment list for carbon reduction• Revision of policies: supplier code of conduct

Global Initiatives

Kumho Tire is participating in global initiatives to promote ESG management that meets global standards. Through active participations beyond mere joining, we are strengthening our capabilities to practice ESG management and to respond to climate change.





INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management Strategy & Governance

HIGHLIGHT 2. TCFD Report : Response to Climate Change

HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines

HIGHLIGHT 4. Expanding Eco-friendly Products

ESG FACT BOOK ▾

APPENDIX ▾

ESG Management Metrics and Implementation Status

To integrate ESG issues to the function of each department, Kumho Tire is setting action tasks in accordance with indicators of external ESG evaluations, and planning to subdivide Working Groups for promoting detailed action tasks.

	Performance Indicator	Status	Mid- to Long-term Goal		Achievement level (compared to 2025)	Tasks completed in 2022	Tasks to be promoted in 2023
			2025	2030			
Environmental Management	Improving energy intensity (compared to 2021)	5% reduction	4% reduction	20% reduction	● ● ● ● ●	<ul style="list-style-type: none">Establishment of Net-Zero strategy directions and roadmapEstablishment of carbon reduction targets and performance managementEstablishment of greenhouse gas inventoryAnalysis of climate change risks and opportunitiesEmployee training on energy saving and climate action	<ul style="list-style-type: none">Advancement of Scope 1~3 calculationReport on climate change issues to the Board of DirectorsDocumentation of ESG reflection in investment decision-makingParticipating in CDP Water SecurityEnergy saving activities and performance monitoringActivities to improve water intensity and recycling rate and performance monitoringBiodiversity policy establishment
	Reducing carbon emission (compared to 2021)	In progress	8.4%	100% (FY2045)	○ ○ ○ ○ ○		
	Ratio of sustainable raw materials use	25%	40%	100% (FY2045)	● ● ● ○ ○		
	Improving water withdrawals intensity (compared to 2021)	8.8% reduction	9.3% reduction	10% reduction	● ● ● ● ●		
	Improving waste recycling rate	80.8%	82.25%	90%	● ● ● ● ●		
People & Culture	Ratio of worksites conducting human rights impact assessment	44%*	100%	Maintain 100%	● ● ○ ○ ○	<ul style="list-style-type: none">Establishment of human rights policyImplementation of anti-bullying awareness programs in the workplaceImprovement of onboarding processGender equality training for interviewersImproved video conference and in-house messengerImplementation of information security awareness training	<ul style="list-style-type: none">Revision of human rights policy and distribution and training to overseas sitesAdvancement of grievance handling processCampaign to improve corporate cultureImprovement of employee satisfaction
	Accident rate (domestic plants)	5.5%	4.6%	3.9%	● ● ● ● ○		
Responsible Supply Chain	Completion rate of core supplier ESG evaluation	80%*	100%	Maintain 100%	● ● ● ● ○	<ul style="list-style-type: none">Establishment and signing of the Supplier Code of ConductReflection of ESG items when evaluating suppliersActive participation in GPSNR activitiesESG training for purchasing manager	<ul style="list-style-type: none">Implementation of supplier ESG evaluation and support for supplier ESG managementExpansion of the application scope of the Supplier Code of ConductSupport for suppliers related to climate change and carbon emissions managementEstablishment of conflict minerals policy and monitoring of usageRevised sustainable natural rubber policy
	Intensive ESG diagnosis and planning mitigation measures	In progress	Bottom 5%	Bottom 10%	○ ○ ○ ○ ○		
Ethical Management	Pledge to complying with Code of Ethics	1,441 persons	Over 70% of all employees	All employees	● ● ○ ○ ○	<ul style="list-style-type: none">Daily audit and report to the Audit CommitteeEstablishment and execution of regular ethical management education plansPublicity and campaigns to foster employees' ethical awarenessFair trade training for employeesSelf-diagnosis of the Improper Solicitation and Graft Act	<ul style="list-style-type: none">Obtainment of anti-corruption management system (ISO37001) certificationObtainment of compliance management system (ISO37301) certificationEstablishment of regular corruption monitoring system and training to raise awarenessEstablishment of fair trade policyEmployee training on fair competition and trade
	Training on Code of Ethics	1,450 persons	Over 60% of all employees	Over 80% of all employees	● ● ● ○ ○		
Governance	Building governance system meeting Code of Best Practices	B grade	Improving Governance ratings on KCGS evaluations		● ● ● ● ○	<ul style="list-style-type: none">Review of non-financial risks by the BoardDisclosure of governance evaluation grade on website	<ul style="list-style-type: none">Training to enhance the expertise of the Board of DirectorsPreparation of plans to enhance shareholder rights
	Building a company-wide global ESG governance system	In progress	Continuous internal diagnosis and monitoring on ESG management of overseas sites		○ ○ ○ ○ ○		

* As of the first half of 2023

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management Strategy & Governance

HIGHLIGHT 2. TCFD Report :
Response to Climate ChangeHIGHLIGHT 3. Future-proof
Capabilities with New Growth
EnginesHIGHLIGHT 4. Expanding
Eco-friendly Products

ESG FACT BOOK ▾

APPENDIX ▾

Efforts to Internalize ESG

Integration of ESG to the KPI of Employees and Teams

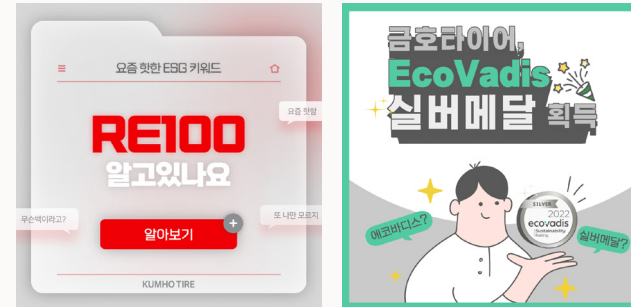
Kumho Tire has adopted ESG-related KPIs in the company-wide performance management system to internalize and secure driving force for ESG management. ESG factors are applied from 5% to 20% in the KPI evaluation of major ESG-related departments. The ESG Management Committee, chaired by the CEO, manages and supervises goals and performance. The company establishes a system that can effectively manage KPIs of committee members by linking with ESG performances. Going forward, we plan to expand the scope of application of ESG-related KPIs to internalize ESG management at the company level.

Establishment of ESG Data System

We plan to build an ESG data management system to collect domestic and international ESG data more efficiently. This system will allow us to clarify data definitions and comprehensively manage environmental and social data from global sites. This system is also expected to greatly reduce the inefficiency of the existing manual collection method and contribute to systematic data management with accuracy.

Employees awareness training

To raise employees' awareness of ESG management, a letter called "ESG Pick" is provided via e-mail to members of the ESG Management Committee and of Working Group once a week. Major issues are posted on the groupware, as well as shared through Card News and corporate newsletters, to raise employees' awareness on the latest ESG trends.

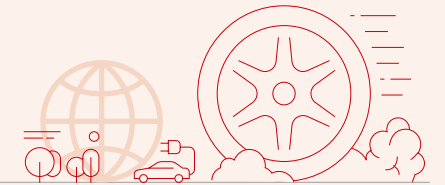


Card news

Highlight

Global ESG Ratings in 2022

Kumho Tire has improved its ESG ratings every year from global institutes, including MSCI, KCGS, and EcoVadis, on the strength of active ESG management actions.

MSCI  AA gradeecovadis  Silver Medal 한국ESG기준원 **B+**
(Environmental: B, Social: A,
Governance: B) **Management B**



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management Strategy & Governance

HIGHLIGHT 2. TCFD Report : Response to Climate Change

HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines

HIGHLIGHT 4. Expanding Eco-friendly Products

ESG FACT BOOK ▾

APPENDIX ▾

HIGHLIGHT 2
TCFD Report : Response to Climate Change

Governance

Kumho Tire's governance structure consists of the Board of Directors, the premier decision-making body; the ESG Management Committee, the decision-making body of the management and five Working Groups that promote and operate ESG implementation tasks.



In accordance with the recommendations of the Task Force on Climate Related Financial Disclosures (TCFD), Kumho Tire assesses the risks and opportunities of climate change and implement the long-term goals and strategies for 2045 Net-Zero.

Board of Directors Management

As the premier decision-making body, the BOD deliberates and resolves on company-wide ESG management strategies, including climate change response and environmental management, and promotes systematic and sound ESG management by managing major financial and non-financial risks.

ESG Committee under BOD

The ESG Committee deliberates on major risks and opportunities related to climate change response and the environment, and strengthens the efficiency and expertise of the company's decision-making process. In May 2023 at the ESG Committee, reports were being made on the results of the comprehensive diagnosis of ESG management and together with approvals for the Net-Zero plan and reduction target for 2045.

ESG Management Committee under the CEO

Kumho Tire has operated the ESG Management Committee, which includes the CEO and key executives, on a quarterly basis. The ESG Management Committee identifies material financial and non-financial risks, including climate change response issues, discusses preemptive countermeasures, and makes final decisions considering ESG issues by reviewing major business opportunities in advance and monitoring their related performance.

Climate Change Agenda in the ESG Management Committee

22.04	<ul style="list-style-type: none">• Necessity of ESG management• Kumho Tire ESG management status and plans
22.07	<ul style="list-style-type: none">• Consideration of establishing an ESG Committee under the BOD• Status of five Working Groups<ul style="list-style-type: none">- Establishment of 2045 Net-Zero roadmap, CDP (Carbon Disclosure Project) response, etc.
22.10	<ul style="list-style-type: none">• Global legislative trends related to climate change response<ul style="list-style-type: none">- Enforcement of the Carbon Neutrality Basic Act on August 2022. Introduction of the EU CBAM in January 2023. Enforcement of the EU Supply Chain Due Diligence Act in 2024, etc.• 2023 plan based on ESG management roadmap<ul style="list-style-type: none">- Implementation of carbon emission reduction measures, etc.
23.01	<ul style="list-style-type: none">• Establishment of quantitative targets for each core task and major initiatives<ul style="list-style-type: none">- Promoting carbon neutrality, enhancing ESG information disclosure and evaluation response, etc.• Report on carbon emission reduction investment
23.04	<ul style="list-style-type: none">• Carbon emission reduction targets and reduction measures• List of investments required for carbon reduction



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management
Strategy & Governance

**HIGHLIGHT 2. TCFD Report :
Response to Climate Change**

HIGHLIGHT 3. Future-proof
Capabilities with New Growth
Engines

HIGHLIGHT 4. Expanding
Eco-friendly Products

ESG FACT BOOK ▾

APPENDIX ▾

Operation of the Environmental Management WG

The Environmental Management Working Group is a working council led by the executives in charge and participated by the working-levels. It implements major initiatives related to climate change and environmental management while monitoring the performance. In the second half of 2023, we plan to expand action tasks including such issues as circular economy, biodiversity, eco-friendly tires, and WBCSD research projects in addition to climate change response.

Application to the Management KPIs

Kumho Tire establishes relevant targets and applies KPIs to employees in relevant departments in promoting climate change response. In particular, for production plants that consume the majority of electricity and fuel, Kumho Tire establishes targets and KPIs for reducing electricity and fuel consumption intensity for facility teams and key executives to systematically manage performance. The ESG Management Committee periodically checks the goals and performance of the five Working Groups, including Environmental Management WG, and reflects the task achievement in the KPIs of working departments and executives to manage progress of tasks. In the future, we plan to expand the percentage of KPIs applied in order to internalize ESG management at a company-wide level.

Investment for carbon neutrality

We consider climate change issues when making key investment decisions. For that, we closely engage with the Investment Review Committee and the departments, and plan to add 'climate change' review step to the review process in 2023. We are implementing investments needed for renewable energy conversion, conversion of energy-efficient facilities, and response to the emissions trading system. In particular, energy reduction is a major topic in terms of business operations, given the rising energy costs nationwide. We will build a consensus on climate change response at the ESG Committee and ESG Management Committee within the Board of Directors before making investment decisions.

Highlight

Participating Initiatives

Setting goals in accordance with the SBTi

Kumho Tire joined the Science Based Targets initiative (SBTi) in July 2022. We have set the carbon neutrality target aligned with the 1.5°C scenario and plan to submit detailed reduction plans and measures in 2024 to have the target approved.



First TCFD Supporting Company in the Korean Tire Industry

In March 2023, we were the first Korea tire company to declare our support for the Task Force on Climate-Related Financial Disclosures (TCFD). Currently, approximately 3,400 companies and organizations in 95 countries around the world support the TCFD. We will achieve the Net-Zero goal by transparently disclosing climate change-related financial information and reflecting its financial impact in our management.





INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management Strategy & Governance

HIGHLIGHT 2. TCFD Report : Response to Climate Change

HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines

HIGHLIGHT 4. Expanding Eco-friendly Products

ESG FACT BOOK ▾

APPENDIX ▾

Climate Change Response Strategy

Climate Change Risk · Opportunity Analysis

Kumho Tire strives to preemptively identify and manage risks and opportunities related to climate change on a systemic manner. We identify potential financial impact of risks and opportunities related to climate change in the short and mid- to long-term, and minimize climate change impact on the business environment through appropriate response activities.

Categories	Risks and Opportunities Related to Climate Change	Timeline	Potential Financial Impact		Financial Impact	Responding Activities
			Description	Cost		
Transition Risks	Policies, Laws and Regulations					
	• Rising prices for GHG emission permits as countries tighten climate regulations	Short-term	• Increased compliance costs due to emissions purchases and related facility investments	Approximately \ 50 to 60 billion	Low	• Establishing GHG reduction plans, investing in related facilities, and purchasing low-cost carbon emission permits
	• Accelerating the enactment of binding legislation such as the Carbon Neutrality Act and the EU Supply Chain Due Diligence Act	Short- to mid-term	• Increased compliance costs and fines for non-compliance	-	Mid	• Identifying regulations, conducting various improvement activities and monitoring
	• Prohibition on sales of internal combustion engine vehicles and strengthening of greenhouse gas reduction goals in the transportation sector	Mid- to long-term	• Decreased sales due to dropping demand for conventional tire products	-	High	• Production and sales of eco-friendly tires and tires for hydrogen and electric vehicles
	Technology and Market					
	• Increased customer demand for eco-friendly products	Short- to mid-term	• Profit decrease due to increasing R&D costs to produce more eco-friendly products	-	Mid	• Securing next-generation advanced technologies to meet customer needs
	• Expanding the market for tires for electric vehicles as the market for electric vehicles expands	Mid- to long-term	• Increased costs to build new production facilities and process	Approximately KRW 620 billion	High	• Market leadership through research on EV tires
	• Need to expand infrastructure and workforce for technology development	Mid- to long-term	• Financial losses due to failed technology development and increased labor costs due to expanded workforce	-	High	• Expanded investment in technology development and talent recruitment
	Reputation					
	• Increasing customer and investor demand for climate action	Short-term	• Increased R&D spending to produce tires with lower climate impact	-	Mid	• R&D to produce tires with lower climate impact
Physical Risks	• Requests for ESG management from customers and automakers	Mid- to long-term	• Reduced sales due to sourcing restrictions when ESG requirements are not met	Approximately KRW 100 billion	High	• Meeting the needs of customers and business partners through ESG management
	Acute Risks					
	Increased risk of extreme weather events in critical production areas (flooding, heat waves, water shortages, wildfires)	Short-term	• Increased R&D costs to produce tires with less climate impact	Approximately KRW 12 to 50 billion	Mid	• Periodic inspections of manufacturing plants and logistics facilities, establishment and revision of emergency plan manuals
	Chronic Risks					
Opportunities	Decrease in natural rubber production due to climate change	Mid- to long-term	• Increased natural rubber purchasing costs and risk of supply disruptions	-	High	• Management of natural rubber supply chain and participation in natural rubber sustainability efforts
	Resource efficiency: reducing resource inputs through technology development	Short-term	• Reduced operating costs	-	Mid	• Efforts to save resources and use them efficiently
	Response to the Emissions Trading System: Sale of emission permits	Short-term	• Generate revenue through the sale of residual GHG emission permits	Approximately KRW 4 billion	Mid	• Efforts to reduce energy consumption
	Market : Creating new markets as the electric vehicle market expands	Mid- to long-term	• Increase revenue through production and sales of tires for hydrogen and EV	Approx. KRW 320 ~ 400 billion	High	• Development and improvement of tires for hydrogen and EVs through R&D
	Product: 'Tires for electric vehicles' taxonomy classified as a green economic activity	Mid- to long-term	• Expanded access to capital by expanding taxonomy-based green investment products	Approx. KRW 0.3 ~ 1.5 billion	Mid	• Efforts to reduce capital costs by expanding access to capital
	Business-related resilience: Reducing the impact of climate change through business diversification	Mid- to long-term	• Increase revenue through business diversification	-	High	• Reviewing and promoting new businesses
	Energy-related resilience: Expanding the use of renewable energy	Mid- to long-term	• Reducing costs by increasing the use of renewable energy	-	Mid	• Introducing and expanding renewable energy facilities at business sites such as solar power facilities



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management Strategy & Governance

HIGHLIGHT 2. TCFD Report : Response to Climate Change

HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines

HIGHLIGHT 4. Expanding Eco-friendly Products

ESG FACT BOOK ▾

APPENDIX ▾

Scenario Analysis

We identified the main types of risks that may arise from the climate crisis - transitional risk and physical risk, and analyzed scenarios responding to each risk. Based on the scenario analysis, Kumho Tire has established a set of response strategy to minimize the impact of climate change risks.

Category	1.5°C Scenario	2.0°C and Above Scenarios
Key Scenarios	International Energy Agency (IEA) 1.5°C Scenario (NZE2050) • A prescriptive scenario that lays out an implementation pathway to limit global temperature increase to well below 1.5°C on average. • Global action to keep temperature rise below 1.5°C from pre-industrial levels, consistent with the Paris Agreement	Intergovernmental Panel on Climate Change (IPCC) Fifth Report Scenario (RCP 8.5) • Scenarios based on Representative Concentration Pathways (RCPs) • Cases when greenhouse gas emissions continue on current trends without reductions, resulting in a rise of 2.6°C or more
	Reducing Carbon Emissions • 2045 Net-Zero declaration • Establish carbon emission reduction targets and actively implement reduction measures → Short-term: Participate in the third planning period of the Emissions Trading System to minimize costs and maximize profits → Long-term: Implement reduction measures by GHG emission scope to reduce carbon emissions Scope 1 : Fuel switching, vehicle conversion, energy efficiency improvement, etc. Scope 2 : Increase the proportion of renewable energy use while investing in energy production Scope 3 : Promote energy reduction in the tire use stage, such as improving rolling resistance (RR)	Heat Waves • Conducting crisis response drills to prepare for power outages due to surging use of air conditioning facilities • Checking the health status of workers to prevent heat stroke • Strengthening water usage reduction activities and increasing recycling in preparation for water shortages
Response Strategies	Responding to Domestic and International Regulations • Leading responses to environmental regulations such as the Basic Carbon Neutrality Act in Korea and the EU Supply Chain Due Diligence Act → Closely identify and monitor domestic and international regulations → Receive agreements on the Code of Conduct from suppliers and induce them to participate in carbon emission reduction activities	Floods • Establishing and revising emergency plan manuals for each factory • Conduct mock drills in accordance with the manual, at business sites including manufacturing plants and logistics facilities • Inspecting facilities such as sandbags and outdoor drainage ditches
	Responding to Climate Change-Related Needs of Customers and Stakeholders • Expanded research on low-carbon products, including the development of low rolling resistance (LRR) tires to respond to the demand for eco-friendly products • Actively responding to demands from the automotive industry to participate in ESG assessments and initiatives	Raw Materials • Joining the GPSNR initiative to support activities to improve rubber yields, prevent land conversion and deforestation, protect biodiversity and water resources, and to enhance supply chain transparency and sustainability • Strengthening efforts to conserve and reclaim resources, including natural rubber, throughout the entire tire manufacturing and distribution process by enacting a Natural Rubber Policy

• Transition risk: Risks that may occur due to the rapid transition to a low-carbon economy, and during the process of adjusting to a sustainable economy, such as changes in public policy, radical technological developments, and changes in customer and investor preferences

• Physical risk: Refers to economic costs and financial losses arising from an increase in extreme weather events such as typhoons, floods, or heat waves and changes in long-term climate patterns, and are caused by the impact of extreme weather events and broader environmental changes

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management
Strategy & Governance

**HIGHLIGHT 2. TCFD Report :
Response to Climate Change**

HIGHLIGHT 3. Future-proof
Capabilities with New Growth
Engines

HIGHLIGHT 4. Expanding
Eco-friendly Products

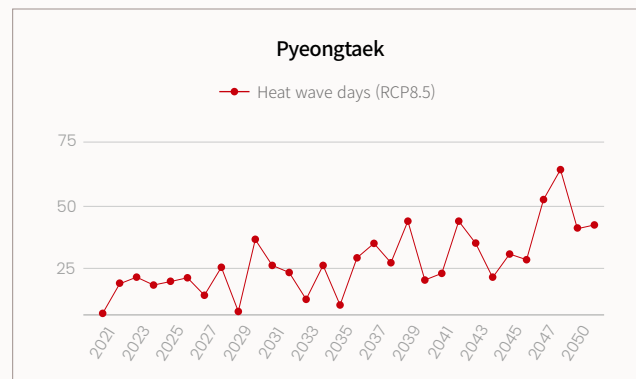
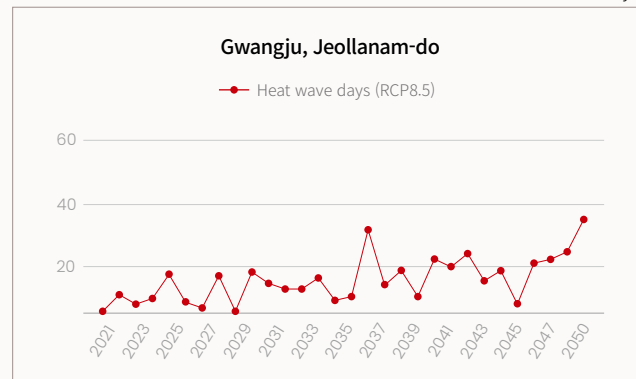
ESG FACT BOOK ▾

APPENDIX ▾

Scenario-Based Impact Analysis of Changes in Heat Wave Days And Precipitation Intensity

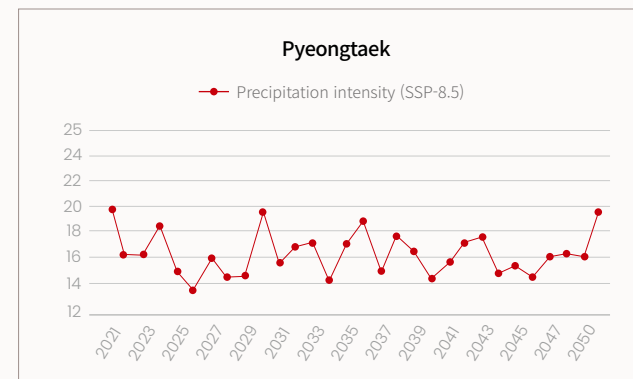
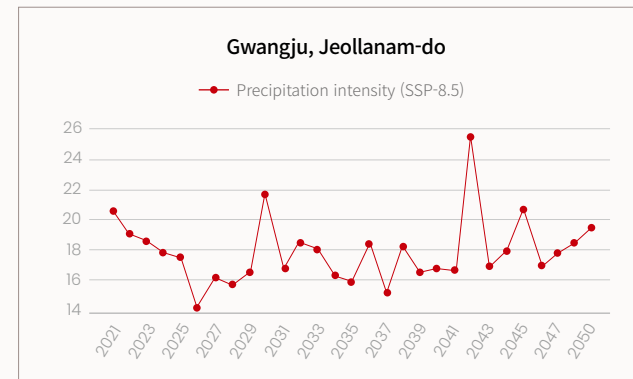
As a company using natural rubber as raw material to manufacture tires, Kumho Tire is directly and indirectly affected by disruptions in raw material supply and demand, production interruptions, and facility losses if the number of heat wave days increases. Therefore, we analyzed changes in the number of heat wave days and precipitation intensity at domestic business sites based on the RCP 8.5 scenario. Predictions of the number of heat wave days in Jeollanam-do and Gyeonggi-do regions from 2021 to 2050 found that the number of heat wave days will continue to increase until 2050, especially 10 days or more in 2030 and 20 or more in 2050. Precipitation intensity also increased continuously, and the width of change in precipitation intensity tended to increase. In the future, we plan to derive financial impacts of physical risks based on scenario analysis and take response accordingly by reflecting them in management strategies.

Scenario-based heat wave day projections (RCP 8.5 scenario)
(Unit: days)

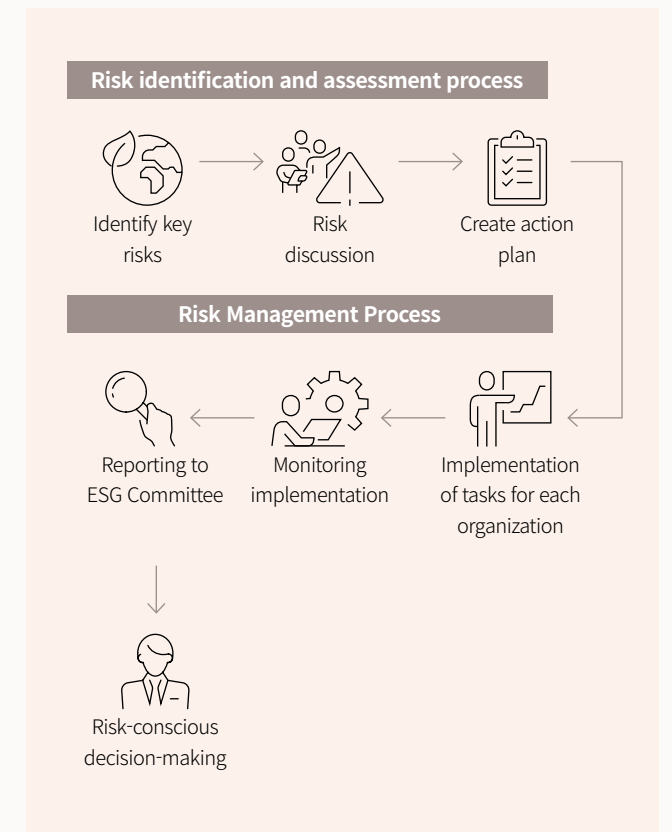


· Heat wave days: number of days with daily high temperatures of 33 degrees or higher

Scenario-based precipitation intensity projections (SSP - 8.5)
(Unit: mm/day)

**Risk Management****Risk Identification and Management Process**

Kumho Tire operates a climate change risk management process to ensure that climate change issues are considered throughout management activities. Relevant departments regularly monitor legal regulations and major risks, and report significant issues to the ESG Committee for countermeasures.





INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management Strategy & Governance

HIGHLIGHT 2. TCFD Report : Response to Climate Change

HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines

HIGHLIGHT 4. Expanding Eco-friendly Products

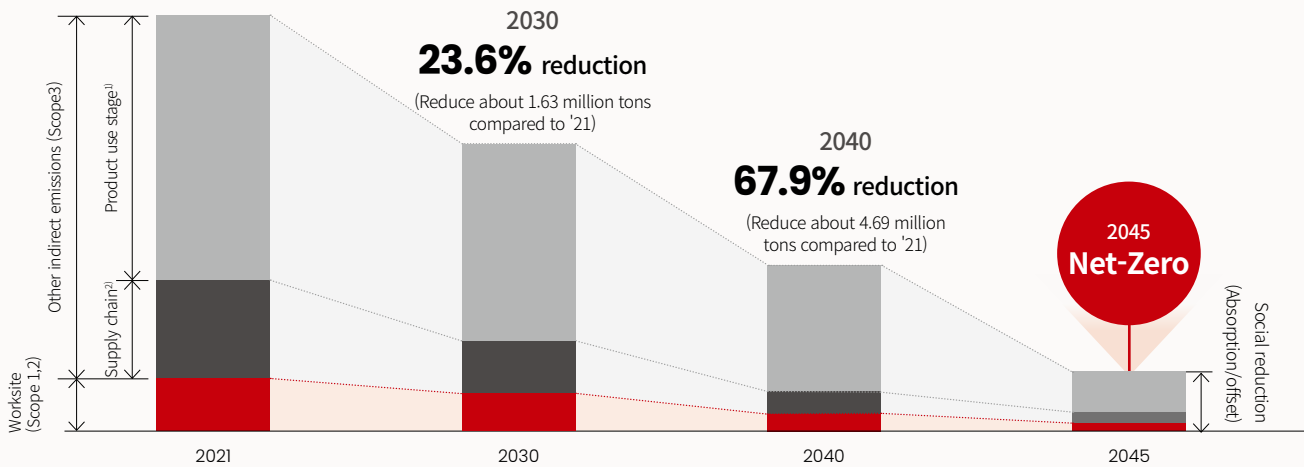
ESG FACT BOOK ▾

APPENDIX ▾

Indicators and Reduction Targets

2045 Net-Zero Target

Kumho Tire has established the '2045 Net-Zero Roadmap' to reduce GHG emissions by 23.6% compared to 2021 by 2030, and to achieve carbon neutrality by 2045 including Scope 3. To reduce Scope 1 and 2 emissions, we plan to install solar power facilities and expand the introduction of reduction facilities such as steam turbine generators. For Scope 3, we plan to reduce emissions from the transportation stage by utilizing low-carbon transportation and reduce emissions from the tire use stage by improving the rolling resistance coefficient and relative load.



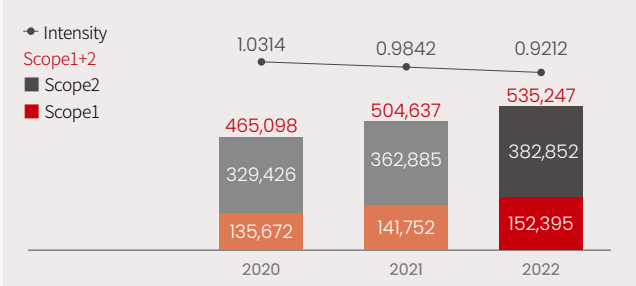
1)Emissions from tires in use (during vehicle operation) (C11)
2)Other indirect emissions excluding C11, such as raw materials, transportation, product disposal, etc.

Net-Zero Roadmap

Category	'22 ~ '23	'24 ~ '30	'31 ~ '45
Governance	<div>Establishing a governance framework</div> <div>Establish climate change response strategy</div>	<div>Establish climate change-related performance management system</div>	<div>Monitoring and developing carbon neutrality performance</div>
Scope Management	<div>Establish Scope 1,2,3 inventory</div> <div>Establishing and promoting GHG reduction measures at sites</div> <div>Expand the introduction of renewable energy</div> <div>Establishment of supplier evaluation and management indicators</div> <div>Implementing and analyzing LCA (Life Cycle Assessment)</div>	<div>Transportation of zero-emission vehicles and conversion of ship fuel</div> <div>Expand the use of sustainable raw materials</div> <div>Expand development of eco-friendly tires</div> <div>Expand product eco-certification</div> <div>Establishing waste tire management system</div> <div>Supporting suppliers' climate change response</div>	<div>Promote reduction activities through absorption and offsetting</div> <div>Fuel conversion</div> <div>Apply 100% sustainable raw materials</div> <div>Establishing a circular economy system</div>
Initiatives	<div>Join SBTi (Science-Based Targets Initiative)</div> <div>Participate in CDP Climate Change, Water Security</div> <div>Promote biodiversity conservation activities</div>	<div>SBTi submission and approval</div> <div>Expand participation in issue-specific initiatives</div> <div>Scale up biodiversity activities</div>	<div>Review SBTi performance and reestablish targets</div>

Emissions and intensity at domestic and overseas sites

(unit: tCO₂e, eq (tCO₂e/ton))



Scope 3 emissions in 2022

(unit: tCO₂e, eq (%))

C1. Purchased goods and Services	963,007 (13.8)
C2. Capital goods	157,193 (2.3)
C3. Fuel, energy-related activities	53,297 (0.8)
C4. Upstream transportation and distribution	758,670 (10.9)
C5. Waste generated in operations	8,990 (0.13)
C6. Business travel	-
C7. Employee commuting	1,213 (0.02)
C8. Upstream leased assets	2,220 (0.03)
C9. Transportation and distribution of sold products	54 (0.001)
C10. Processing of sold products	65 (0.001)
C11. Use of sold products	4,914,880 (70.42)
C12. End-of-life treatment of sold products	96,179 (1.38)
C13. Downstream leased assets	-
C14. Franchises	23,433 (0.34)
C.15 Investments	-
Total	6,979,201 (100)

* Scope 3 has been calculated and managed for domestic companies since 2021, and expanded to overseas companies from 2022

* C1, C4, C9, C10, C11, and C12 have been verified by a third-party

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management
Strategy & GovernanceHIGHLIGHT 2. TCFD Report :
Response to Climate Change**HIGHLIGHT 3. Future-proof
Capabilities with New Growth
Engines**HIGHLIGHT 4. Expanding
Eco-friendly Products

ESG FACT BOOK ▾

APPENDIX ▾

HIGHLIGHT 3**Future-proof Capabilities with
New Growth Engines****Expanding EV Tire Supply**

Kumho Tire is expanding its supply of EV tires optimized for domestic and imported luxury electric sedans and SUVs. EV tires have dramatically improved in rolling resistance, resulting in improved fuel efficiency compared to regular tires and optimized performance for EVs. Kumho Tire will become a technology powerhouse that opens the new EV era with its differentiated technology and quality competitiveness.

**Applying EV-optimized compound materials**

We applied EV-optimized compounds and materials to minimize energy losses due to heat and friction while driving an EV.

By applying functional polymers and precision silica, we have improved rolling resistance (RR) performance by at least 20% and enhanced fuel economy performance.

Applying Technologies to Secure Driving Stability

By applying 3D interlocking sipes to improve control, we secured stability in the handling and braking of EVs with high instantaneous acceleration. We also applied hybrid side walls to prevent belt moving and vehicle pulling during acceleration, as well as improving durability and driving stability. With even ground pressure design by a design analysis system, braking and driving performances are improved.

Road Noise Reduction Pattern Technology

The noise-absorbing dimple design and pattern pitch optimization design that minimize the noise generated from tire treads while driving.

We also applied Kumho Tire's noise reduction technology, 'K-silent' foam, reducing tire cavity resonance noise.

Supply of EV OE Tire
(As of 2022)

Appx.
790,000
tires



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management
Strategy & Governance

HIGHLIGHT 2. TCFD Report :
Response to Climate Change

**HIGHLIGHT 3. Future-proof
Capabilities with New Growth
Engines**

HIGHLIGHT 4. Expanding
Eco-friendly Products

ESG FACT BOOK ▾

APPENDIX ▾

Preparing for the Age of Advanced Mobility

Airborne Tire

In response to the era of Urban Air Mobility (UAM), which represents a paradigm shift in mobility, we have introduced the futuristic Airborne Tire. Airborne tires for UAM, which are installed on urban vertical landing aircraft, come equipped with a landing suspension using magnetic fields and roll on their own to move the aircraft, providing customers with a safe and comfortable ride. Airborne Tire, which incorporates Kumho Tire's future mobility technology, was awarded the WINNER in the 2022 Design Concept category at the Red Dot Design Awards, proving its excellence not only in technology but also in design.



"Airborne Tire" for Urban Air Mobility (UAM)

Airless Tire

Airless tires are innovative products that do not require inflation, reducing the risk of accidents due to punctures and lowering maintenance costs. Kumho Tire is developing OEM airless tires of lateral and mixed spoke design technology, and in 2023, we will introduce more advanced airless tires by partnering with companies that develop airless tires for ultra-small special vehicles and military applications. We are also seeking market diversification by securing airless tire products for various fields such as small unmanned self-driving mobility vehicles and delivery robots.



Airless Tire

Fin-Sread Tire

The Fin-Sread tire, inspired by the fluid movement of whales, is a futuristic tire that delivers performance for future mobility. The S-shaped tread on Fin-Sread tires minimizes tire squeal, and each tread is independently controlled to provide road-ready comfort. In addition, only the damaged tread can be replaced in case of breakage or wear, thus reducing waste and improving environmental performance. The new platform structure based on airless improves safety by preventing accidents caused by punctures, and it communicates organically with autonomous mobility through 5G-based big data technology to realize the required performance according to road surface and traffic conditions in real time.

The Fin-Sread tire was selected as a finalist at the International Design Excellence Awards (IDEA) in North America in 2021 and the Winner in the Transportation Equipment category at the iF Design Award in Germany in 2022 for its design innovations, including noise reduction, comfort, safety, and environmental performance. Kumho Tire will continue to provide customers with reliable and enhanced value experiences through innovative technologies and future-oriented designs.



Fin-Sread Tire

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management Strategy & Governance

HIGHLIGHT 2. TCFD Report : Response to Climate Change

HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines

HIGHLIGHT 4. Expanding Eco-friendly Products

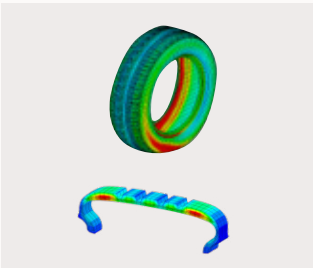
ESG FACT BOOK ▾

APPENDIX ▾

Digital Twin System

To ensure a quick response to the rapidly changing mobility industry environment, Kumho Tire has developed digital twin system for tire development. The digital twin system utilizes computer-aided engineering (CAE), big data, and artificial intelligence (AI) technologies in a virtual environment, shortening the development period and maximizing development efficiency. It also contributes to resource savings by reducing the physical manufacturing test process. In 2022, we adopted a high-performance computer (HPC) with 10 times the performance over the previous one. We are currently developing and improving our vehicle behavior and tire virtual model analysis technology.

STEP 1 Basic Design	STEP 2 Performance Prediction	STEP 3 Optimal Design	STEP 4 Virtual Evaluation
<ul style="list-style-type: none">Completed the development of an automatic tire shape generation system while designing based on tire design standards	<ul style="list-style-type: none">Adopted HPC and advanced tire performance prediction system	<ul style="list-style-type: none">Developing a system to propose optimal designs that meet various performance requirements	<ul style="list-style-type: none">Developing a virtual evaluation system using tire and vehicle models



Digital Twin System



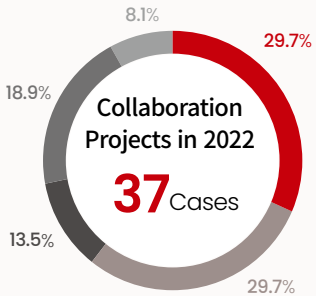
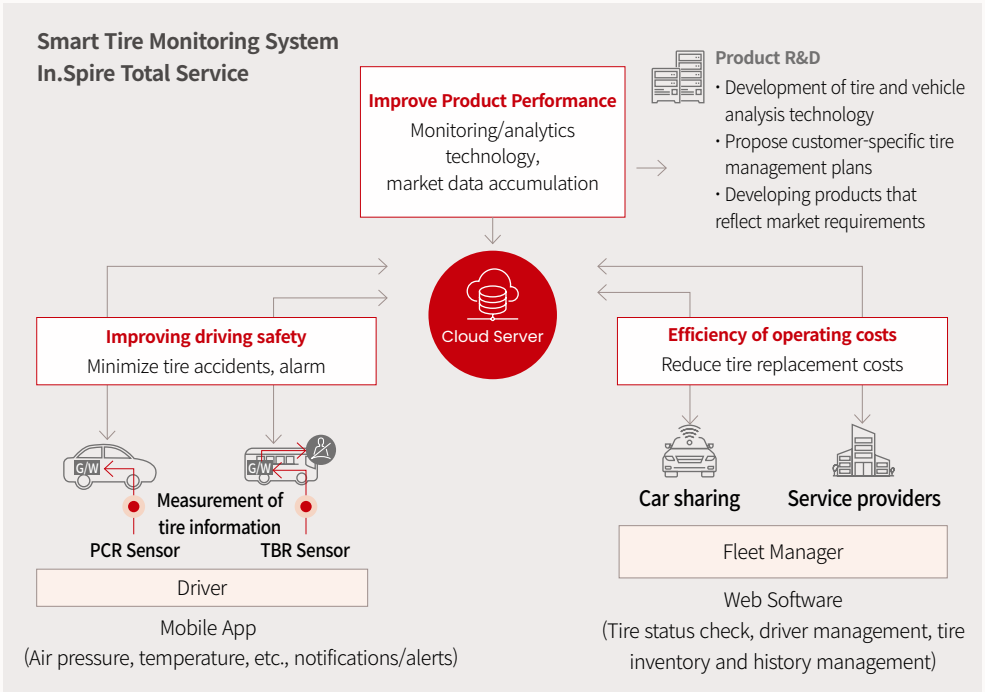
Simulation Evaluation System

Expanding Open Innovation

Kumho Tire conducts R&D collaborations with external organizations to secure new eco-friendly technologies and strengthen the expertise and R&D efficiency. In 2022, we conducted a total of 37 research projects, including 26 joint research projects, 4 government projects, and 7 projects under joint development with companies including Hyundai Motor Company. Total 11 of joint projects were on developing eco-friendly materials, which is one of the major issues of ESG strategies. We will continue to expand and promote advanced and innovative technology projects to secure new technologies and improve competitiveness.

Smart Tire Monitoring System

The Smart Tire Monitoring System, which consists of a tire sensor module and wireless communicator, is a tire information management system developed after years of research by Kumho Tire. The system enables real-time monitoring of tire condition and vehicle location during driving to prevent traffic accidents and reduce fuel consumption. We are expanding into new mobility businesses through supply contracts with city bus companies and hope to provide customers with a more convenient and safe mobility environment in the future.



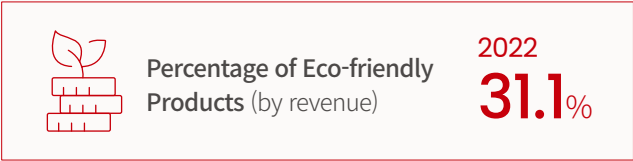
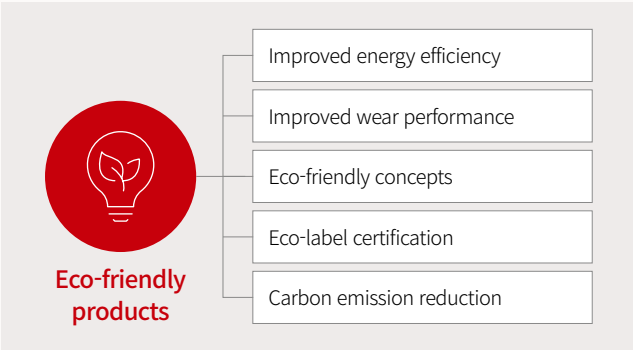
Eco-friendly material development	11 Cases
Joint development of raw materials	11 Cases
Innovative technology for product development	5 Cases
Development of next-generation advanced technologies and products	7 Cases
Others	3 Cases

HIGHLIGHT 4

Expanding Eco-friendly Products

Defining Eco-friendly Products

The trend of ‘greenusers’, who value eco-friendly consumption, has intensified and awareness of greenwashing has increased recently. We have established a new definition of eco-friendly products, which will be managed and monitored by related divisions in accordance with the changing legal standards and regulations. Eco-friendly products are classified into the product ①with improved energy efficiency, ②with improved wear performance, ③developed as eco-friendly concepts, ④certified with eco-labels, or ⑤contributing to carbon reductions. They accounted for 31.1% of sales in 2022. Going forward, we plan to expand investment and R&D to reduce the environmental impact of our products by, for example, expanding sustainable materials and improving tire dust.



Kumho Tire conducts a variety of R&D projects to develop and expand sustainable products. To expand eco-friendly tires, we aim to reduce the environmental impact of our products throughout their entire life cycle, including R&D, production, use, and disposal. In particular, we are developing fuel-efficient tires that use less fuel in the use stage, low-wear, and low-noise tires, and conducting R&D to reduce tire dust and microplastics. In this way, we strive to reduce environmental impacts throughout our business by expanding production and sales of products with reduced environmental impacts.

Developing Fuel-efficient Tires

Demand for improved automobile fuel efficiency performance is increasing in response to carbon neutrality and stricter emissions regulations. In line with this, the tire industry is striving to reduce weight and improve fuel efficiency, and Kumho Tire has completed the development of fuel-efficient tires with an RRc (Rolling Resistance Coefficient) of 4.5 in 2022. In addition to developing new compounds with improved fuel efficiency and wear performance, we are developing LRR (Low Rolling Resistance) tire products through low weight and high strength cord reinforcement technology and structural profile optimization technology. In particular, low-carbon certified products with improved fuel efficiency and reduced carbon emissions are popular in the global market and have contributed to reduce approximately 28 thousand tons of carbon emissions based on sales volume in 2022.

Development of Low-Wear Tires

Kumho Tire develops and researches tires that contribute to the reduction of greenhouse gases and fine dust. We also continually participate in R&D project such as road technology project by the Ministry of Land, Infrastructure, and Transport and developing technology for quantitative analysis of fine dust.

Development of Low-Noise Tires

Pass By Noise (PBN) regulations and car makers' noise standards for tires are also being strengthened. Accordingly, Kumho Tire is continuously developing low-noise pattern, structure, material, design and radiated noise analysis technology.

Environmental Labeling Certification

The environmental labeling is a certification given to products that have improved their environmental impact compared to other products of the same use, such as reducing pollutants and greenhouse gases and saving resources and energy, in the entire process of manufacturing, consuming, and disposing of materials and products. Kumho Tire has maintained the certification for four products as of 2022, and is pursuing certification for the new TBR models in 2023. Through the environmental labeling system, we will transparently provide consumers with information on products with reduced environmental impacts and continue to maintain and expand related certifications.

Category	Purposes	Strengths
11R22.5 16PR KCD12	Truck and bus tires for winter	Improved resource
11R22.5 16PR KCA03		circularity, energy savings, noise and vibration reduction
275/70R22.5 18PR KCA03	Truck & bus tires	
275/70R22.5 18PR KCD12		



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management Strategy & Governance

HIGHLIGHT 2. TCFD Report : Response to Climate Change

HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines

HIGHLIGHT 4. Expanding Eco-friendly Products

ESG FACT BOOK ▾

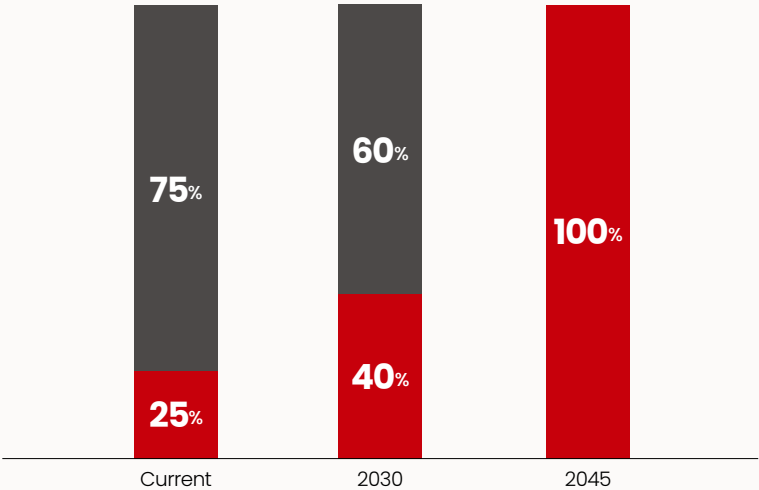
APPENDIX ▾

Development of Sustainable Materials

Kumho Tire aims to convert 40% of total raw materials to sustainable materials by 2030 and 100% by 2045 by strengthening basic R&D of sustainable materials with which can replace existing petrochemical-based materials.

We continue to promote the development of eco-friendly tires by applying renewable and recycled materials and plant-based eco-friendly new materials in tire production. In 2022, we completed the development of tires with 55% of sustainable materials, including synthetic rubber made by recycled plastic, rice husk-based eco-friendly silica, bio-based eco-friendly chemicals and oils, and rubber powder of ELT tires. In 2023, we plan to develop tires with 80% sustainable materials by expanding the use of carbon black based on crude oil extracted from waste tires, recycled PET from plastic bottles, and recycled steel cord from scrap metal.

■ Sustainable materials
■ Petroleum-based materials



Highlight

Participation in WBCSD-TIP Research Projects

Kumho Tire is a member of the Tire Industry Project (TIP) of the World Business Council for Sustainable Development (WBCSD). With 10 member companies accounting for more than 60% of global tire sales, the WBCSD-TIP is a forum led by the CEOs from the member companies to ensure that the tire industry contributes to sustainable future. It aims to address and manage ESG issues across the tire industry and value chain. To ensure the credibility of its findings, TIP requests research projects to independent institutions and transparently discloses the results to stakeholders.



- 2022 - 2023
WBCSD-TIP Research Topics
- TRWP quantitative analysis technology development and toxicity studies
 - Developing waste tire management toolkit
 - Developing circular economy indicators for 8 types of key tire materials

Areas of Interest of TIP



• Sustainable natural rubber



• Research on tire and road wear particles and chemicals of high concern



• End-of-Life Tires (ELT) management



• Researching and disclosing environmental impacts of tires throughout life cycle

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

HIGHLIGHT 1. ESG Management Strategy & Governance

HIGHLIGHT 2. TCFD Report : Response to Climate Change

HIGHLIGHT 3. Future-proof Capabilities with New Growth Engines

HIGHLIGHT 4. Expanding Eco-friendly Products

ESG FACT BOOK ▾

APPENDIX ▾

Research on Eco-friendly Tires based on LCA

Kumho Tire makes efforts to reduce environmental impacts such as GHG and hazardous substances generated in the production process through life cycle assessment (LCA). We have completed LCA for the HP71 tire model produced at the Gwangju plant, and are currently planning LCA for the TA31 model as well as exported products. Through LCA, we plan to accelerate the development of eco-friendly tires by improving tire materials, fuel efficiency, and manufacturing processes.

LCA Mid- to Long-Term Strategy

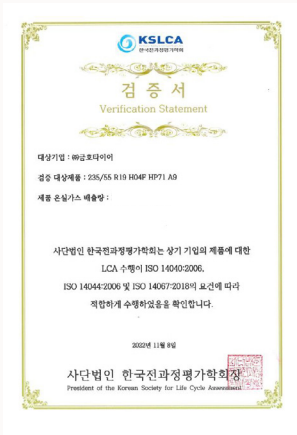
Targets	Minimizing Environmental Impact to Achieve 2045 Net-Zero		
Priorities	① Environmental impact analysis by plant	② Focus on EV / next generation mobility	③ Focus on European OE response
	Phase 1(2022~2023)	Phase 2(2024~2025)	Phase 3(2026~)
System	<ul style="list-style-type: none">Developing guidelines for internal data collection and analysisLCA for domestic business sites	<ul style="list-style-type: none">Link to internal systems: ERP, BOM, etcAutomatic calculation of LCA using the system	<ul style="list-style-type: none">Expansion of LCA-conducted products

LCA Certification

Kumho Tire received a third-party verification for an LCA on HP71. In accordance with international standards(ISO 14040, 14044, 14067), the environmental impact was measured from the raw material stage to the disposal. We are planning to secure reliability on LCA results with verification and increasing the accuracy of carbon information by the product.

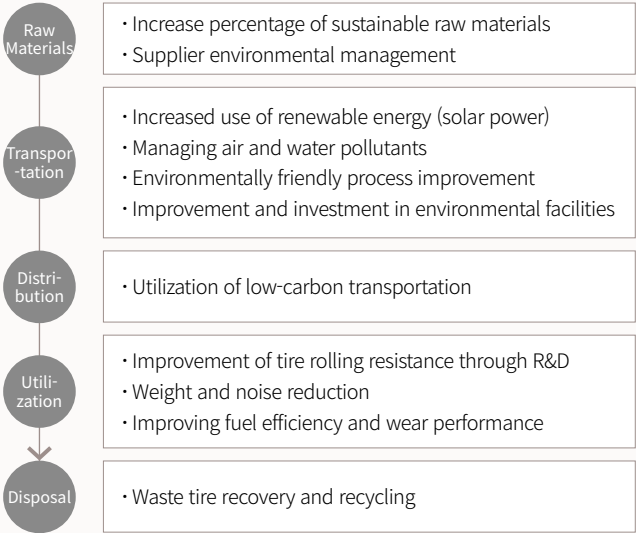
LCA Items

Acidification	Climate change	Environmental toxicity	Eutrophication	Human toxicity	Ionizing radiation
Land use	Ozone depletion	Particulate matter	Photochemical ozone	Resource use	Water use



Establishing a Step-by-Step GHG Reduction Plan

We are establishing plans to reduce GHG emissions in stages as well as expanding LCA-subjects. We intend to expand the use of sustainable materials in the raw materials stage, increase the proportion of renewable energy in the manufacturing stage, and conduct research to improve rolling resistance and weight in the use stage.





INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

APPENDIX ▾

ESG FACT BOOK

Environment	31
Social	40
Governance	68



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

Advancement of
Environmental Management

Response to Climate Change

Circular Economy and
Environmental Impact
Management

SOCIAL
GOVERNANCE

APPENDIX ▾

ENVIRONMENT

31

Advancement of Environmental Management

33

Response to Climate Change

37

Circular Economy and Environment Impact
Management

Advancement of Environmental Management

Environmental Management System

Establishment of Environmental Management Strategy and Environmental Policy

Kumho Tire advances its environmental management under the ‘4G’ strategy: establishing global environmental management system; developing eco-friendly products; pursuing high efficiency of eco-friendly energy; and creating green market opportunities for new businesses. Additionally, in 2023, we revised the Environmental Policy to reflect global trends and established the Environmental Management Policy, which covers raw materials, energy, greenhouse gases, water management, waste, hazardous chemicals and other environmental pollutants, products and services, and ecosystem issues. It also contains details on environmental management governance, education, and performance management.

 Environmental Management Policy

Environmental Management Strategy

Green Management
Establishing global environmental management system <ul style="list-style-type: none">Establishment of global environmental management system (ISO 14001 Certification)Establishment of global environmental regulation response system
Green Business
Creating green market opportunities for new businesses <ul style="list-style-type: none">Development of eco-friendly productsSubstitute hazardous substances and develop eco-friendly materialsExpand product LCA
Green Products
Developing environmentally friendly products <ul style="list-style-type: none">Establishment of a company-wide climate change response system
Green Production
Pursuing high efficiency of eco-friendly energy <ul style="list-style-type: none">Expanding the market for eco-friendly products (eco-friendly/ environmentally labeled products)Participation in the emissions trading market

Environmental Management Governance

Kumho Tire implement environmental management by establishing governance framework, in order to meet the global standard on eco-friendly transition in business. We established the ESG Committee under the Board of Directors to create strategies for environmental management. The ESG Management Committee make sure that the Environmental Management Working Group works efficiently. The SHE Planning Team, oversees and manages the company-wide environmental management matters. In addition, the Health & Safety, Environment Team at the Gwangju, Gokseong, and Pyeongtaek plants is in charge of domestic environmental management, while the Health & Safety, Environment Department and EHS Team at global plant handles overseas environmental management, and the R&D SHE Team is in charge of R&D Division.





INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

Advancement of
Environmental Management

Response to Climate Change

Circular Economy and
Environmental Impact
Management

SOCIAL
GOVERNANCE

APPENDIX ▾

Environmental Management System Certification

Kumho Tire has obtained the ISO 14001, an international standard for environmental management systems, and undergoes follow-up and renewal audits. In 2022, the Georgia plant, USA, obtained ISO certification, making a total of nine domestic and overseas plants and research institutes certified for environmental management systems. This has laid the foundation for minimizing environmental impacts in the production process, and we will continue to carry out environmental improvement activities in the future.

	Unit	2020	2021	2022
ISO 14001 Certified sites	%	88.9(8/9)	88.9(8/9)	100(9/9)

Environmental Risk Management

Environmental Compliance

Environmental laws and regulations are being strengthened to protect the environment and manage impacts arising from business activities. In response, Kumho Tire operates a process for responding to environmental regulations. We monitor environmental laws and regulations to establish countermeasures and prevent non-compliance, such as the Air and Water Environment Protection Act, the Waste Management Act, the Chemical Substances Control Act, the Act on Registration and Evaluation of Chemical Substances, the Noise and Vibration Control Act, and the Act on Allocation and Trading of Greenhouse Gas Emission Rights.

Environmental Compliance Process

01.	Monitor environmental regulations at all times
02.	Reviewing amendments and enactment of regulations (twice a month)
03.	Review of regulations and plan for countermeasures
04.	Review environmental investment decision
05.	Conduct legal compliance evaluation (4 times a year)

Environmental Incident Response

Kumho Tire has established environmental incident response process to prevent the spread of damage on the sites and local communities. In case an environmental accident occur, we take temporary measures and promptly report the classification and status of the accident to the person in charge. We then organize the emergency response team to implement appropriate response measures to minimize damage. Afterwards, we establish measures to prevent recurrence through the accident analysis, and strive to prevent any occurrence or spread of environmental accidents through employee training and simulation drills at least once a year.

	Category	Unit	2020	2021	2022
Environmental investment	Energy management	KRW 1 million	619	52	337
	Environmental safety and fire	KRW 1 million	52	1,109	1,449
Environmental expenses	Water and air quality improvement inspection costs	KRW 1 million	698	318	217
	Emission charges	KRW 1 million	0	0.08	4.6
Environmental compliance	Number of environmental violations	Cases	2	3	4
	Fines for negligence	KRW 1,000	480	200	5,760

Employee Environmental Education

Kumho Tire runs various channels to raise awareness of environmental management among employees. We share ESG issues and promote concepts and terms through card news, and encourage employees to practice carbon neutrality and environmental management in their daily lives by distributing guidelines. In addition, we provide education on environmental management that can be practiced at the workplace through a five-minute training before work, such as water resources and waste, and especially on climate change, such as energy conservation, climate action, carbon neutrality, and biodiversity, thus building consensus and encouraging participation in carbon neutrality.

Training	Trainees	Number of sessions	Training content
5 minutes of training before work	Technical worker	49	· Environmental management that can be practiced in the workplace, such as water conservation and waste reduction
Education on carbon neutrality practices	Technical worker	3	The concept and need for carbon neutrality · Climate action practices: Energy conservation, eco-friendly consumption, transportation, resource circulation, carbon offsets, etc.

Daily practice of carbon neutrality



* Source: Ministry of Environment's Guide to Carbon Neutral Living Practices



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

Advancement of
Environmental Management

Response to Climate Change

Circular Economy and
Environmental Impact
Management

SOCIAL
GOVERNANCE

APPENDIX ▾

Response to Climate Change

Energy Management

Renewable Energy (Solar Power) Transition

Kumho Tire generates more than 50% of its GHG emissions from Scope 2, and supplying electricity through renewable energy is a key issue for achieving the 2045 Net-Zero goal. Therefore, we are constructing photovoltaic facilities at our domestic and overseas plants as part of our efforts for renewable energy transition.

In Korea, we are operating small-scale solar power generation facilities at the Yongin R&D Center and the Gokseong Plant Office Building, while also reviewing the feasibility of building solar power generation facilities at our Gwangju, Gokseong, and Pyeongtaek plants. As for overseas plants, four out of five plants in China, including the Nanjing, Tianjin, and Changchun plants, as well as plants in Vietnam and the United States, have introduced or are considering solar power facilities.

The Nanjing plant in China is building a 16 MW solar facility on its roof, which, once completed, is expected to generate approximately 14,000 MWh of electricity.



Solar power generation facilities at Nanjing Plant

Our Tianjin, Changchun, and Vietnam plants are also building solar facilities to use renewable energy and are expected to be operational by early 2024 at the latest. Upon completion, the plants will generate approximately 20% of its electricity from renewable sources, on average, based on 2021 electricity consumption.

In order to realize our 2045 Net-Zero goal, we plan to continue to procure renewable energy through various channels, including Power Purchase Agreements (PPAs), Renewable Energy Certificates (RECs), and Green Premium, and will establish a year-by-year procurement plan to achieve the RE100 goal.

Utilizing the Factory Energy Management System

Kumho Tire utilizes the Factory Energy Management System (FEMS) at its domestic factories to systematically manage energy use and greenhouse gases. We not only optimize energy use by analyzing and sharing energy usage and efficiency in real time, also manage facility efficiency by examining energy usage on an intensity basis.

Energy Management Committee

Kumho Tire convenes the Energy Management Committee once a month to reduce energy use in response to changes in internal and external circumstances. In 2022, the Committee reviewed the savings against the business plans at each plant, reviewed the effectiveness of energy-saving activities, and shared plans for achieving the business plans in 2023. The Committee also reviews the current status of investments for energy saving and the savings against to investment, and prepares effective and reasonable investment plans.

Energy Consumption

		Unit	2020	2021	2022
Non-renewable energy	B/C Oil	GJ	129	-	-
	LNG	GJ	2,583,921	2,696,631	2,916,493
	Diesel	GJ	32,734	33,937	24,571
	Propane	GJ	24,405	28,507	26,289
	Gasoline	GJ	5,017	4,718	6,250
	Kerosene	GJ	2	10	-
	Total	GJ	2,646,209	2,763,803	2,973,603
Electricity		GJ	4,251,809	4,665,396	8,650,559
Steam		GJ	96,375	227,735	315,169
Renewable energy	Solar	GJ	456	463	503
Total		GJ	6,994,848	7,657,397	11,939,834
Intensity		GJ/ton	15.51	14.93	20.55
Electric energy ratio		%	60.78	60.93	72.45
Renewable energy ratio		%	0.007	0.006	0.004

* Starting from 2022, energy consumptions from overseas operations included.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

Advancement of Environmental Management

Response to Climate Change

Circular Economy and Environmental Impact Management

SOCIAL
GOVERNANCE

APPENDIX ▾

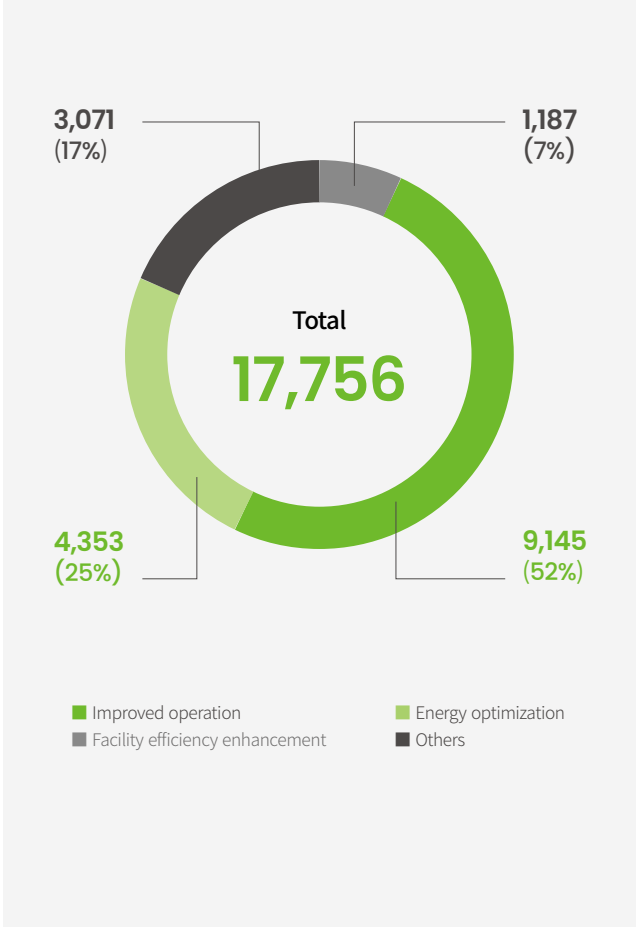
Capital Investment for Energy Saving

Kumho Tire reduces energy consumption through various investments and energy efficiency management.

		Key Energy Savings Activities in 2022	Key Energy Savings Initiatives for 2023
Korea	Gwangju	<ul style="list-style-type: none">Improving productivity in mixing processIncreased power generation utilizing steam turbines	<ul style="list-style-type: none">Improve compressor operationReplacement with constant temperature chiller
	Gokseong	<ul style="list-style-type: none">Adjusted the number of N₂ generatorsOptimization of mixing process	<ul style="list-style-type: none">Replacement with high efficiency air compressorImprove operation of absorption chiller
	Pyeongtaek	<ul style="list-style-type: none">Changing operation conditions for curing machine Hyd. unitInstalled a barrier to prevent outside air from entering the curing processManaged compressor optimization	<ul style="list-style-type: none">Improve air conditioner fan operationImprove spray dust collector operationIntroduce waste steam recovery facility
	Vietnam	<ul style="list-style-type: none">Improved chiller efficiencyManage Chiller Operating HoursNew Air Compressor InstallationImproved Air Compressor Room Temperature	<ul style="list-style-type: none">Improve mixing process cooling water pumpCooling tank operation improvementImprove cooling water piping chillerReduce steam loss through steam trap management
	Georgia, USA	<ul style="list-style-type: none">Repaired air leaksImproved mixer main motor operation	<ul style="list-style-type: none">Improve chiller operationImprove curing process PCI Rim Air and Steam lines
Global	Nanjing	<ul style="list-style-type: none">Fan Inverter retrofitCooling Tower Operation Improvement	<ul style="list-style-type: none">External steam purchaseBoiler operation improvements
	Tianjin	<ul style="list-style-type: none">Refined dust collector inverter retrofitFreezer pump inverter retrofit	<ul style="list-style-type: none">Improve UT boiler feedwater inverter to high efficiencyReplacement with higher efficiency motor
	Chang-chun	<ul style="list-style-type: none">Compressor operation improvementReduce cooling and heating power through indoor temperature managementAir conditioning improvement of Mixing control room	<ul style="list-style-type: none">Improve operation of air conditioners by facilities such as side, tread, and calendaring facilitiesBoiler room and pit room pump improvement workImprovement of boiler tubes and leaks

GHG Reduction

(Unit : tCO₂eq(%))





INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

Advancement of
Environmental Management

Response to Climate Change

Circular Economy and
Environmental Impact
Management

SOCIAL
GOVERNANCE

APPENDIX ▾

Greenhouse Gas Management

Scope 1,2 Emissions Reduction

Kumho Tire accurately calculates, verifies, and reports direct emissions from owned and controlled sources (Scope 1) and indirect emissions from externally purchased sources (Scope 2). The SHE Planning Team manages the entire process of calculating and reporting GHG emissions and is also responsible for budgeting for participation in the third planning period of the Emissions Trading System. In addition, staffs in charge at each plant set GHG emission reduction targets and reflect the achievements in their performance, while securing budgets in consideration of free allocations and future increases in emissions.

Domestic Greenhouse Gas Emissions

		Unit	2020	2021	2022
Gwangju Plant	Scope1	tCO ₂ eq	39,187	42,307	43,337
	Scope2	tCO ₂ eq	68,481	75,174	77,105
Gokseong Plant	Scope1	tCO ₂ eq	38,302	39,431	40,278
	Scope2	tCO ₂ eq	81,148	84,870	86,643
Pyeongtaek Plant	Scope1	tCO ₂ eq	3,973	4,595	4,786
	Scope2	tCO ₂ eq	7,358	7,997	8,450
Research centers and sales offices	Scope1	tCO ₂ eq	1,526	1,549	1,498
	Scope2	tCO ₂ eq	2,279	2,424	2,407
Total	Scope1	tCO ₂ eq	82,989	87,882	89,900
	Scope2	tCO ₂ eq	159,266	170,465	174,605
	Scope1+2	tCO ₂ eq	242,255	258,347	264,505

* Domestic GHG emissions are calculated based on the values disclosed in the statement and may differ from the total by business site due to rounding off.

* Measured in accordance with the Guidelines for Emissions Reporting and Certification of the GHG Emissions Trading System.

* Research centers and sales offices include 29 domestic business sites, including the Yongin Central Research Center, Seoul Office, and sales offices.

Overseas GHG Emissions

		Unit	2020	2021	2022
Tianjin Plant	Scope1	tCO ₂ eq	20,503	21,414	23,850
	Scope2	tCO ₂ eq	74,657	81,563	81,685
Nanjing Plant	Scope1	tCO ₂ eq	8,717	13,165	15,431
	Scope2	tCO ₂ eq	23,318	33,670	36,902
Changchun Plant	Scope1	tCO ₂ eq	8,669	8,928	10,192
	Scope2	tCO ₂ eq	16,742	17,383	19,674
Vietnam Plant	Scope1	tCO ₂ eq	6,593	1,910	1,910
	Scope2	tCO ₂ eq	30,380	32,219	41,212
Georgia Plant	Scope1	tCO ₂ eq	8,188	9,200	10,361
	Scope2	tCO ₂ eq	23,492	25,751	26,491
Overseas Research Centers and Sales Offices	Scope1	tCO ₂ eq	15	10	756
	Scope2	tCO ₂ eq	1,572	1,836	2,285
Total	Scope1	tCO ₂ eq	52,685	53,872	62,499
	Scope2	tCO ₂ eq	170,162	192,422	208,249
	Scope1+2	tCO ₂ eq	222,848	246,295	270,748
Domestic and International Emissions	Scope1	tCO ₂ eq	135,672	141,752	152,395
	Scope2	tCO ₂ eq	329,426	362,885	382,852
	Scope1+2	tCO ₂ eq	465,098	504,637	535,247
Total intensity at domestic and overseas emissions		tCO ₂ eq/ton	1.0314	0.9842	0.9212

* Emissions for 2020 and 2021 were corrected and emissions for 2022 were verified by a third-party verification organization. (Verified targets: Tianjin, Nanjing, Changchun plants in China, Vietnam plant, Georgia plant in the U.S., research centers in China, the U.S., and Europe, and corporate offices in the U.S., Europe, China, and Australia, US distribution centers (McDonough))

* Intensity are calculated and managed based on tire production weight for each year.

* Includes major domestic and overseas sales offices and distribution centers from 2022.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

Advancement of
Environmental Management

Response to Climate Change

Circular Economy and
Environmental Impact
Management

SOCIAL
GOVERNANCE

APPENDIX ▾

Scope 3 Emissions Management

Kumho Tire aims to systematically calculate and manage not only Scope 1 and 2 GHG emissions, but also Scope 3 GHG emissions generated throughout the supply chain. For the first time in 2023, emissions of 6 categories with high emissions out of 15 received a third-party verification on the calculation to improve data reliability. We will reflect the findings from the verification and promote more accurate data calculation in the future.

Scope 3 GHG Emissions

		Unit	2020	2021 (Domestic)	2022 (Domestic & Overseas)
Scope 3	C1. Purchase of products and services	tCO ₂ eq	-	815,424	963,007
	C2. Purchase of capital goods	tCO ₂ eq	-	42,164	157,193
	C3. Fuel, energy-related activities	tCO ₂ eq	-	28,178	53,297
	C4. Upstream logistics	tCO ₂ eq	-	219,568	758,670
	C5. Waste generated during operations	tCO ₂ eq	-	1,987	8,990
	C6. Business travel	tCO ₂ eq	-	-	-
	C7. Employee commuting	tCO ₂ eq	-	-	1,213
	C8. Upstream leased assets	tCO ₂ eq	-	-	2,220
	C9. Downstream logistics	tCO ₂ eq	-	219,568	54
	C10. Sales product process (processing)	tCO ₂ eq	-	222,234	65
	C11. Use of sales products	tCO ₂ eq	-	4,570,584	4,914,880
	C12. Disposal of sales products	tCO ₂ eq	-	299,478	96,179
	C13. Downstream leased assets	tCO ₂ eq	-	-	-
	C14. Franchising	tCO ₂ eq	-	24,091	23,433
	C.15 Investments	tCO ₂ eq	-	-	-
Total		tCO ₂ eq	-	6,443,276	6,979,201

* Scope 3 was calculated and managed for domestic targets from 2021 and partially expanded to overseas operations from 2022.

* C1, C4, C9, C10, C11, and C12 have been verified by a third-party verification organization.

Highlight

Using low-carbon (LNG) ships

Kumho Tire uses low-carbon (LNG) fueled ships to transport cargo in order to reduce Scope 3 greenhouse gas emissions throughout the supply chain. Kumho Tire receives certificates from CMA CGM, a French shipping company, when cargo is transported on ships that use eco-friendly fuel, and will continue to increase the proportion of transportation that use low-carbon fuel sources to reduce Scope 3 emissions generated during transportation.

Air Pollutant Management

Kumho Tire conducts air self-measurement and improves air pollution prevention facilities to respond to strengthened environmental laws and regulations such as the Air Quality Protection Act. We regularly measure air pollutants such as dust, NO_x (nitrogen oxides), SO_x (sulfur oxides), and odors generated during the production process, and manage emissions in accordance with internal standards that are stricter than legal limits. To minimize the environmental impact on local communities around our plants, we operate Tele-Metering System (TMS) at Gwangju plant, and preventive facilities at Pyeongtaek and Gokseong plants. In 2023, we plan to establish a dust collector monitoring system to minimize pollutant emissions and strengthen management.

		Unit	2020	2021	2022
Domestic	Dust	ton	9.8	18.55	19.83
	NO _x	ton	53.8	49.68	49.46
	SO _x	ton	0.47	1.77	8.13
International	Dust	ton	17.49	15.12	28.68
	NO _x	ton	27.44	26.22	59.19
	SO _x	ton	4.70	3.00	2.39
Total intensity at domestic and overseas sites		ton/ton*	0.00025	0.00022	0.00029

* ton (air pollutant weight) / ton (production weight)

* Disclosure of quantitative data for air pollutants, water pollutants, water pollutants, and waste is based on eight production plants.

- Advancement of Environmental Management
- Response to Climate Change

Circular Economy and Environmental Impact Management

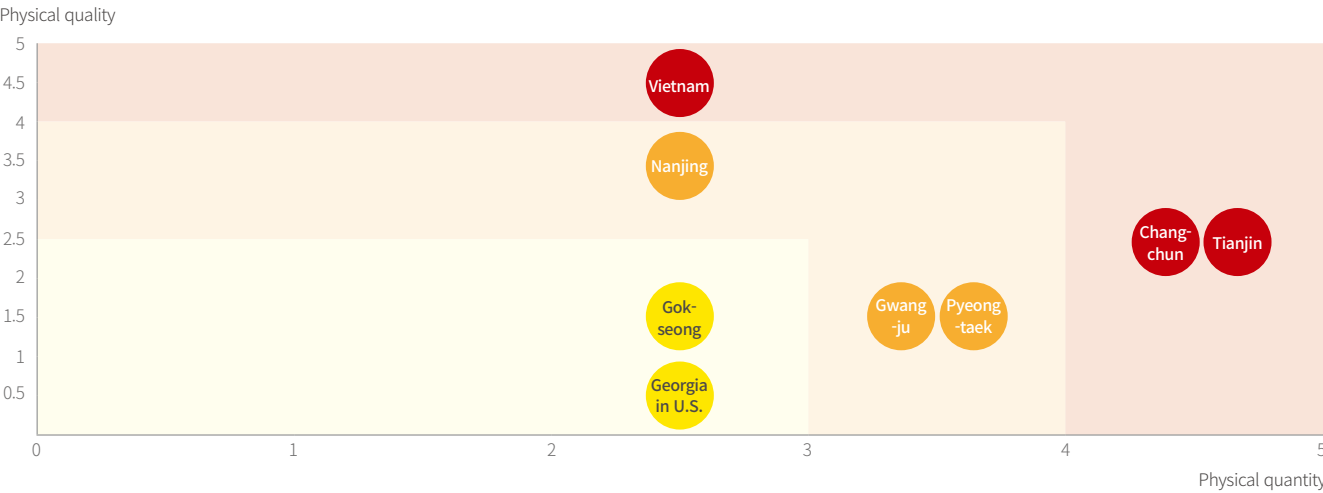
Circular Economy and Environment Impact Management

Water Resources Management

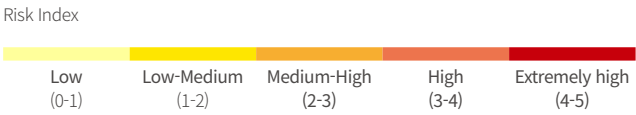
Water Resource Risk Analysis

We utilized the Aqueduct Water Risk Atlas provided by the World Resources Institute (WRI) to identify water risks at the sites in Korea, China, Vietnam, and the United States. We plan to conduct risk assessments on various items such as water stress and drought risks, as well as water quantity and quality risks due to floods and droughts, and to disclose the assessment results annually. As a result of the overall water risk analysis, we found that water risks are generally higher in the plants in China and Vietnam compared to those in Korea and the US. Changchun Plant has a high "water stress" index, meaning a high ratio of water demand to available water resources, and Tianjin Plant has a high risk due to river and coastal flood risks. In Korea, the total water risk is low, but the risk of flooding is high depending sites located near rivers and coastal areas, and the risk impact is expected to increase due to drought and heat waves in Jeollanam-do. Accordingly, we will periodically report the status of water risk to the management and establish detailed countermeasures.

Water risk by business site



Classification	Gwangju	Gokseong	Pyeongtaek	Changchun	Tianjin	Nanjing	Vietnam	Georgia
Total water risk	Low-Medium	Low-Medium	Low-Medium	High	High	Medium-High	High	Low-Medium
Physical quantity risk	High	Medium-High	High	Extremely high	Extremely high	Medium-High	High	Medium-High
Physical quality risk	Low-Medium	Low-Medium	Low-Medium	Medium-High	Medium-High	High	Extremely high	Low
Regulatory and reputational risk	Low	Low	Low	Medium-High	Medium-High	Medium-High	Medium-High	Low-Medium



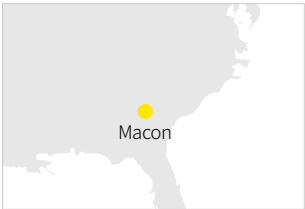
Korea, China



Vietnam



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INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

Advancement of
Environmental Management

Response to Climate Change

Circular Economy and
Environmental Impact
Management

SOCIAL

GOVERNANCE

APPENDIX ▾

Water Resource Management System

Kumho Tire has established water management system to respond to strengthened environmental laws and regulations, including the Water Environment Conservation Act, and to respond to water risks at each business site. We set and manage mid- and long-term targets for the improvement of water intensity and manage water usage, including water supply and sewage, and industrial water. In order to recycle wastewater into process water, the Gokseong Plant uses advanced treatment methods such as reverse osmosis to recycle it for boiler water, and the Gwangju Plant recycles wastewater that has gone through sedimentation tanks into cleaning water for air pollution prevention facilities in the plant, thus reducing wastewater emissions.

Water Consumption

		Unit	2020	2021	2022
Domestic	Waterworks	Ton	232,933	241,615	257,741
	Underground water	Ton	997,616	1,166,729	1,093,483
	Industrial water	Ton	32,519	41,972	51,545
	Total	Ton	1,263,068	1,450,316	1,402,769
	Reuse	Ton	146,262	131,657	31,905
	Wastewater discharge	Ton	338,287	264,986	254,255
	Wastewater recycling	Ton	185,489	131,657	37,739
	Recycling rate	%	54.8	49.7	14.8
Overseas	Waterworks	Ton	988,103	1,078,714	1,087,491
	Underground water	Ton	-	-	-
	Total	Ton	988,103	1,078,714	1,087,491
	Reuse	Ton	166,193	187,003	238,508
	Wastewater discharge	Ton	383,341	383,971	429,662
	Wastewater recycling	Ton	144,884	153,550	156,689
Recycling rate		%	37.8	40	36.5
Intensity at domestic and overseas sites		Ton/Ton*	4.992	4.932	4.286

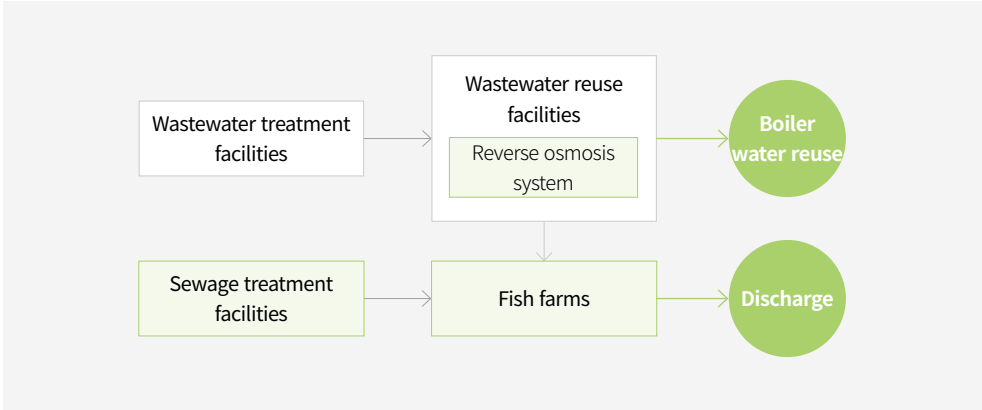
* Ton (water weight) / ton (production weight)

* Amount reused: Not calculated for Gwangju Plant in 2022

Water Pollution Management

Kumho Tire regularly measures water quality in the vicinity of its plants to manage the pollutants below 50% of the legal limit, and improves wastewater treatment facilities to prevent water pollution. At the Gokseong Plant, wastewater and sewage are discharged into the Seomjin River after going through physical and biochemical treatment, and capillary water generated by some boilers is handled by a specialized company for a strict wastewater management. We also operate wastewater prevention facility at the Pyeongtaek Plant to comply with legal standards and prevent water pollution.

Wastewater Treatment System Diagram of Gokseong Plant



Water pollutants

		Unit	2020	2021	2022
Domestic	SS	ton	0.939	7.402	2.64
	BOD	ton	0.857	0.631	0.442
	COD	ton	1.846	8.09	-
	TOC	ton	-	-	27.655
Overseas	SS	ton	24.254	22.843	11.425
	COD	ton	8.815	10.499	16.341

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

- Advancement of Environmental Management
- Response to Climate Change

Circular Economy and Environmental Impact Management

SOCIAL GOVERNANCE

APPENDIX ▾

Waste and Biodiversity Management

The circular economy model, which has emerged to address environmental issues such as climate change, declining biodiversity, and depleting natural resources, aims to create a sustainable loop of resources by reducing the amount of raw material inputs and waste in the process of procurement, manufacturing, disposal, and recycling. Kumho Tire is making various efforts to build a circular economy model by cutting down on resources and waste, reducing environmental impacts during use, and recycling end-of-life tires (ELTs) based on the characteristics of tire products made of natural rubber.

Waste Management

Through its waste management process, Kumho Tire stores and discharges waste generated during the production process in separate and hazardous waste storage areas in accordance with legal standards, and entrusts specialized treatment companies to handle it safely. In the case of external discharge, data is entered into the 'All-baro System' and managed through computerized processing, and we plan to monitor the treatment process by conducting due diligence on waste processors. In addition, we set annual targets to improve the waste recycling rate and aim to increase the rate from 85% as of 2022 to 90% by 2030. We participate in the EPR* partnership of the Korea Tire Industry Association to recycle end-of-life (ELT) tires.

* EPR: Extended Producer Responsibility.

		Unit	2020	2021
Domestic	Consigned shredding / crushing	ton	1,422.5	1,450.5
	Consigned landfill	ton	274.2	229.9
	Consigned incineration	ton	1,386.0	1,356.3
	Consigned recycling	ton	9,605.1	9,898.7
	Non-hazardous waste	ton	10,328.6	10,667.6
	Hazardous waste	ton	1,003.4	1,117.3
	Construction waste	ton	1,355.8	1,169.9
	Total	ton	12,687.8	12,954.8
	Hazardous waste ratio	%	7.9	8.6
	Recycling ratio	%	75.7	76.4
Overseas	Total	ton	7,883.7	8,811.6
	Recycling ratio	%	36.8	40.8
Total intensity at domestic and overseas sites		ton/ton*	0.04562	0.04245

* ton (total waste volume)/ton (production volume)

		Unit	2022
Domestic	Non-hazardous waste	ton	11,975.6
	Consigned landfill	ton	288.8
	Consigned recycling	ton	10,226.9
	Consigned incineration	ton	1,192.7
	Consigned shredding/crushing	ton	267.2
	Hazardous waste	ton	1,131.5
	Consigned landfill	ton	0.0
	Consigned recycling	ton	896.9
	Consigned incineration	ton	234.6
	Consigned shredding/crushing	ton	0.0
	Construction waste	ton	779.1
	Consigned landfill	ton	0.0
	Consigned recycling	ton	0.0
	Consigned incineration	ton	0.0
	Consigned shredding/crushing	ton	779.1
	Total	ton	13,886.2
	Consigned landfill	ton	288.8
Overseas	Consigned recycling	ton	11,123.8
	Consigned incineration	ton	1,427.2
	Consigned shredding/crushing	ton	1,046.4
	Hazardous waste ratio	%	8.1
	Recycling ratio	%	80.8
	Total	ton	9,962.5
	Recycling ratio	%	36.9
Total intensity at domestic and overseas sites		ton/ton*	0.04104

* tons (total waste volume) / tons (production volume)

Transition to Package-free

In light of the international discussions surrounding plastics regulations, we have taken proactive measures by pursuing the initiative of 'ZERO Tire Packaging.' As of 2022, all products shipped to Korea, the Americas, and Europe have been transitioned to packaging-free and in Saudi Arabia, we have successfully achieved the same for truck tires. For all other products, our plan is to convert entire quantities to non-packaging from 2024 to reduce the amount of packaging waste generated in the distribution process.

Highlight

Biodiversity Activities

Kumho Tire actively engages in cleanup activities and campaigns at Jangrok Wetland in Hwangnyong River for biodiversity conservation. This ecologically vital wetland, which remains in pristine condition, is the only riverine wetland in the city center that is ecologically connected to the Yeongsan River. This project holds great significance, as it involves not only Kumho Tire but also various stakeholders, including local governments, public institutions, and schools. Going forward, Kumho Tire aims to progressively expand this initiative, fostering a conducive environment for diverse creatures to thrive.



Participated in cleaning activities for Jangnok Wetland in Hwangnyong River



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

SOCIAL



40
Human Rights and Diversity

44
Increase Employee Value

51
Responsible Supply Chain

57
Internalization of Safety and Health

62
Product Responsibility

66
Contribution to Local Community

Human Rights and Diversity

Revision of Human Rights Policy

In 2022, Kumho Tire established a set of Human Rights Policy based on the principles of international organizations such as the UN and ILO in order to prevent human rights violations for stakeholders and to mitigate risks. The Human Rights Policy is applied on employees at all domestic and overseas worksites. We strive for coverage expansion of the policy to core stakeholders, such as suppliers, customers, local communities, and etc. In 2023, we revised the Human Rights Policy to refine the basic principles and clarify the implementation system, ensuring a systematic human rights management.

Respect for human rights	Non-discrimination
Prohibition of forced labor	Prohibition of child labor
Freedom of association and collective bargaining	Prohibition of sexual harassment and bullying at workplace
Working conditions	Safe working environment
Protection of local human and environmental rights	Protection of customers human rights
Women's rights	Spread to supply chain

Human Rights Policy

Human Rights Risk Management

Kumho Tire has established a process to monitor human rights risks at business sites and throughout supply chain. To that end, we periodically check and evaluate human rights risks to identify potential risks, thereby taking improvement measures. We also strive to minimize negative impacts arising from management activities by monitoring implementation and effectiveness of mitigation measures.



Human Rights and Diversity

- Increase of Employee Value
- Responsible Supply Chain
- Internalization of Safety and Health
- Product Responsibility

- Contribution to Local Community

Human Rights Impact Assessment

Background of Human Rights Impact Assessment

Kumho Tire abides by the international standards on human rights and labor, including the Universal Declaration of Human Rights, the UN Global Compact, the UN Guiding Principles on Business and Human Rights, and the ILO Declaration. In order to prevent human rights violations and risks that may arise from our business activities and to take appropriate measures in a timely manner, we conduct human rights impact assessment through a non-face-to-face survey of our employees. To identify human rights issues in the workplace, Kumho Tire classified stakeholders exposed to human rights issues based on business processes and identified major human rights issues accordingly. For the human rights issues identified, we conducted survey on a scale of 1 to 3 based on the frequency, likelihood, and severity of occurrence, and received comments on violating factors and mitigating process.

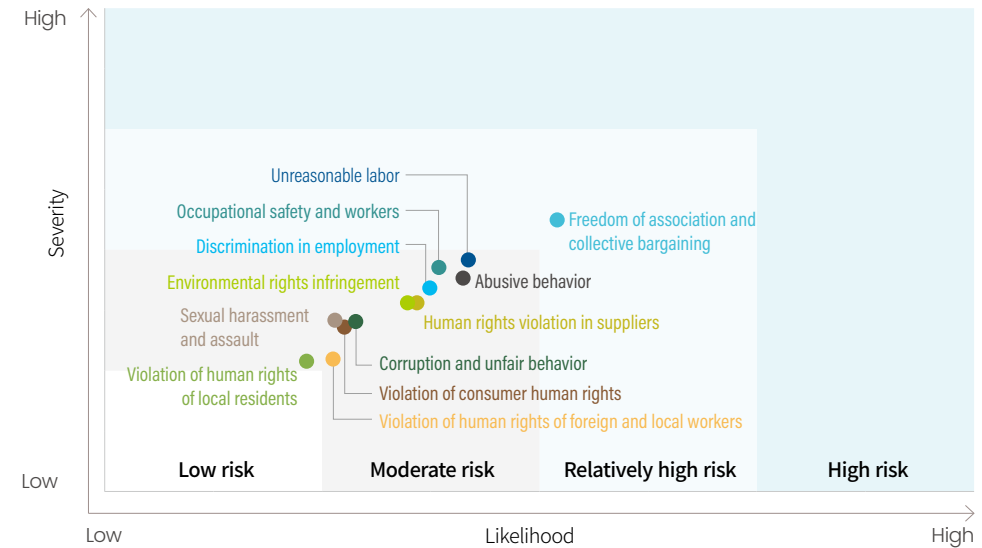


Human Rights Risks

Unreasonable labor (forced and illegal overtime, child and underage labor)
Sexual harassment, molestation, and sexual assault
Abusive behavior (including verbal and physical violence, harassment, and unreasonable demands)
HR discrimination, including hiring, performance evaluations, and job transfers
Restrictions on freedom of association and collective bargaining (labor unions, unfavorable treatment of labor unions, unfaithful agreements)
Poor health and safety management (facilities, safety of pregnant women and people with disabilities, health and safety training, assistance to workers in industrial accidents)
Violation of environmental rights (pollution of local environment with waste, noise, etc., non-disclosure of environmental information)
Corruption and unfair practices (bribery, solicitation, etc.)
Violation of consumer rights (product and service information, consumer health, failure to act on complaints, personal information)
Human rights violations at suppliers (human rights violations, acquiescence to human rights violations, negligence in monitoring, etc.)
Human rights violations of local residents
Human rights violations and mismanagement of foreign and local workers

Human Rights Impact Assessment Result

A total of 334 stakeholders responded to the human rights impact assessment, and among the human rights risk factors, "restriction on freedom of association and collective bargaining" was identified as requiring intensive management as it showed a relatively high risk level. "Unreasonable labor," "poor health and safety management," and "abusive behavior" were identified as moderate issues requiring continuous monitoring and management. Also, other issues raised to be improved included "the will of the management," "awareness training and promotion," and "establishment of human rights management system".



Future Plans

Based on the results of the human rights impact assessment, we will establish improvement action plans for advancing human rights management and implement them according to priorities. To ensure company-wide human rights management practice, we will share the will of the management and conduct training on human rights. Assessment target will also be extended to overseas sites and suppliers to identify and address human rights risks across supply chain.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

Employee Grievance Resolution Process

Kumho Tire operates grievance resolution system to create a mutually respectful corporate culture and protect the human rights of employees. Employees can report any distress or difficulties at workplace, human rights violations including unfair instructions, sexual harassment, or harassment in the workplace, as well as illegal and unfair practices. Reported cases are processed in a prompt manner. Anonymity and confidentiality are strictly guaranteed to ensure that the informants do not suffer any disadvantage or discrimination.



Human Rights Training

We conduct human rights education programs every year to ensure that all employees comply with our human rights policy and engage in human rights management. All employees take mandatory training on disability awareness, preventing sexual harassment and harassment at workplace, meanwhile employees with access to personal information also receive privacy protection training. We also conduct gender equality trainings for job interviewers on desirable interviewer attitudes and questions to avoid, thus striving to prevent various gender discrimination-related risks that may arise during the recruitment process. From 2022, we additionally carry out workplace harassment prevention training for executives and senior managers to prevent human rights violations likely to occur due to workplace hierarchy and thereby to create a respectful corporate culture.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

Promote diversity inclusiveness

Gender equality

Kumho Tire has operated a pay system with Equal Pay for Equal Work. We apply a fair compensation system based on an individual's job duties and competencies, regardless of gender, age, or other conditions, and strive to ensure equal pay for men and women. However, because of the current imbalance in the gender ratio and male employees with relatively more seniority, the average of salary for male employees tends to be higher than that of females. We are therefore working to increase the number of female employees to close the gap in average pay between genders.

Participation in GEK Korea

The 2023 Gender Equality Korea (GEK) Women Leaders Network is the program organized by the UN Global Compact Korea to raise awareness of women's empowerment in business and promote women's leadership. Through the participation, we are benchmarking best practices on empowering and cultivating female personnels, and strive for improving awareness on gender equality in the workplace.



GEK Female Leaders Network Program

Employee Diversity

	Unit	2020	2021	2022
Number/Percentage of employees with disabilities	Persons	222 (4.80%)	215 (4.40%)	199 (3.60%)
Number/percentage of female employees	Persons	212 (4.60%)	213 (4.40%)	232 (4.20%)
Number/percentage of veteran employees	Persons	324 (7.00%)	315 (6.50%)	299 (5.40%)

*Based on domestic personnel

Employee gender composition

			Unit	2020	2021	2022	Remarks
Job roles	Management	Males	Persons	813	802	852	Executives, Research Fellow, senior managers, managers
		Females	Persons	76	80	76 (8.19%)	
	Non-management	Males	Persons	314	316	281	Assistant manager, Assistant
		Females	Persons	86	86	103 (26.82%)	
Job title	Top management	Males	Persons	8	9	9	C-level, Executive Vice President
		Females	Persons	0	0	0	
	Senior management	Males	Persons	27	30	30	Senior Vice President
		Females	Persons	0	0	0	
	Junior management	Males	Persons	337	333	313	Manager
		Females	Persons	56	61	52 (14.25%)	
Profit-generating departments	management	Males	Persons	207	206	206	Departments directly involved in business and sales
		Females	Persons	10	6	4 (1.90%)	
STEM departments	management	Males	Persons	237	250	270	Departments relevant to Science, Technology, Engineering, and Mathematics
		Females	Persons	32	33	33 (10.89%)	

* Based on office workers in Korea



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

Increase of Employee Value

Fair and non-discriminatory hiring

Introduction of AI Competency Test

Kumho Tire introduced the AI competency test for new hires in 2022. This solution allows us to discover the best talent by analyzing applicants' capability to adapt to the organizational culture and interpersonal skills in more depth. Through this, we aim to create a competency-based recruitment culture to ensure fair opportunities for all applicants.

Job Fair Participation

Kumho Tire participated in a job fair at the Catholic University of Korea in the second half of 2022, providing an opportunity to share recruitment-related information and communicate with prospective applicants face-to-face. In 2023, we will continue to actively participate in job fairs held for university students, providing open information and various recruitment opportunities.

Introduction of Onboarding Process for New Hires

Kumho Tire adopted the onboarding process for new hires to help strengthen their capabilities and adapt to our organizational culture in 2022. We also created a website for new hires to obtain helpful tips on work. We extended the training schedule for new employees from two days to three days to organize training program with various activities such as visiting the manufacturing plants.

Onboarding Program for New Hires



Welcome kit for new employees



Retention training



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

Employee composition

		Unit	2020	2021	2022
Domestic and overseas	Domestic and overseas employees	Persons	8,542	8,583	9,879
	Domestic employees	Persons	4,617	4,855	5,521
	Overseas local employees	Persons	3,925	3,728	4,358
Domestic					
Average years of service		Years	20.5	20.1	18.6
Employment type	Full-time	Persons	4,570	4,805	5,469
	Part-time	Persons	47	50	52
Gender	Male	Persons	4,405	4,642	5,289
	Female	Persons	212 (4.59%)	213 (4.39%)	232 (4.20%)
Age	Under 30	Persons	161	368	452
	30 ~ 50	Persons	2,651	2,464	2,846
	Over 50	Persons	1,805	2,023	2,223
Executives and managers	Executives	Persons	35	38	39
	Research Fellows	Persons	13	14	6
	Total Leaders*	Persons	189	217	212
	Female leaders	Persons	3	5	6
Job area	Office worker	Persons	1,247	1,277	1,267
	Technical worker	Persons	3,170	3,370	4,036
	Ratio of R&D staff	%	7.12	7.31	6.38
	Domestic R&D employees	Persons	472	492	494
	Overseas R&D employees	Persons	136	135	136
Domestic and Overseas					
Region	Korea	Persons	4,503	4,738	5,403
	China	Persons	2,400	2,226	2,226
	North America	Persons	654	563	563
	Europe	Persons	113	135	233
	Asia Pacific · others (except for Korea and China)	Persons	872	921	1,454
	Total overseas employees	Persons	4,039	3,845	4,476
Number of expatriates		Persons	114	117	118
Number of local employees		Persons	3,925 (97.18%)	3,728 (96.96%)	4,358 (97.36%)
Number of local-hire managers		Persons	105 (2.68%)	108 (2.90%)	110 (2.52%)

* Leader: A person with a position such as team leader excluding executives and research fellows

Recruitment rate

		Unit	2020	2021	2022
New employees	Gender (male)	Persons	116 (95.10%)	426 (95.50%)	405 (90.60%)
	Gender (female)	Persons	6 (4.90%)	20 (4.50%)	42 (9.40%)
	By age (under 30)	Persons	75 (61.50%)	324 (72.60%)	309 (69.13%)
	By age (30 ~ 50)	Persons	44 (36.10%)	110 (24.70%)	110 (24.61%)
	By age (over 50)	Persons	3 (2.50%)	12 (2.70%)	28 (6.26%)
	Total	Persons	122	446	447

Retirement rate

		Unit	2020	2021	2022
Retirement pension plan assets		KRW million	167,127	172,753	176,982
Retirees	Gender (male)	Persons	272 (5.89%)	310 (6.39%)	429 (7.77%)
	Gender (female)	Persons	18 (0.39%)	18 (0.37%)	34 (0.62%)
	By age (under 30)	Persons	56 (1.21%)	78 (1.61%)	161 (2.92%)
	By age (30 ~ 50)	Persons	56 (1.21%)	81 (1.67%)	120 (2.17%)
	By age (over 50)	Persons	178 (3.86%)	169 (3.48%)	182 (3.30%)
	Total	Persons	290 (6.28%)	328 (6.76%)	463 (8.39%)
Voluntary turnover	Gender (male)	Persons	65 (1.41%)	114 (2.35%)	196 (3.55%)
	Gender (female)	Persons	9 (0.19%)	14 (0.30%)	24 (0.43%)
	By age (under 30)	Persons	19 (0.39%)	32 (0.69%)	73 (1.32%)
	By age (30 ~ 50)	Persons	44 (0.91%)	88 (1.91%)	140 (2.54%)
	By age (over 50)	Persons	11 (0.23%)	8 (0.17%)	7 (0.13%)
	Total	Persons	74 (1.60%)	128 (2.77%)	220 (3.98%)

* Domestic

** Voluntary turnover : Retirement other than involuntary retirement such as due to contract termination, lay-off, regular retirement, and etc.

*** Number of retirees and voluntary turnover for 2020 and 2021 updated based on calculation criteria changes in 2022



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

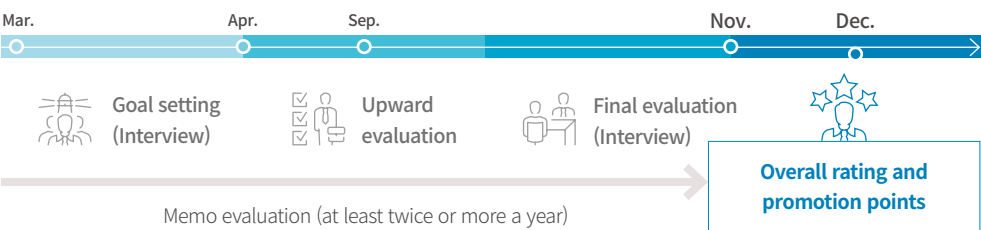
APPENDIX ▾

Fair Evaluation Process

HR Evaluation Process

Kumho Tire has operated online evaluation system to systematically manage company-wide goal setting and performance. Employees set and enter their own goals in the first quarter of each year into the system, and manage the progress in real time through Memo Evaluation at least twice a year. For employees who are team leaders or higher than senior managers, Upward Evaluations are conducted to ensure fairness in employee evaluation and to improve the leadership of managers through feedback.

Regular HR Evaluation Process



Improving HR Evaluation System

In 2023, we improved our HR evaluation system to motivate employees to enhance individual performances and provide them fair compensation, thereby contributing to the company-wide performance improvement. By increasing the proportion of high-performers and reorganizing the evaluation system, we laid the foundation for talent acquisition and retention by providing reasonable rewards to employees with high competency. We also increased the scores for certifications, language tests, master's degrees, and research results in the promotion screening to encourage employees to improve their personal capabilities.

Employee Performance Evaluation

Indicator	Category	Unit	2020	2021	2022
Ratio of performance evaluation*	Overall	%	100	100	100
	Males	%	100	100	100
	Females	%	100	100	100

*Percentage of employees who completed their performance evaluation

** Evaluation subject: as of the end of October each year

*** Evaluation exception: New hires, promotions in the current year, leave of absence, and specially designated employees (non-evaluated jobs - doctors, nurses, etc.)

Highlight

Special lecture to secure competitiveness for future mobility transition

Kumho Tire offers special lectures to enhance the capabilities of employees and secure competitiveness in a rapidly changing industrial and economic environment, including future mobility transformation, economic conditions, and working environment. Executives and team leaders are required to attend the special lectures to strengthen their future capabilities for decision-making and organizational management.



Big data:AI

- Trends in how big data professionals “think and work”
- How is artificial intelligence changing business?



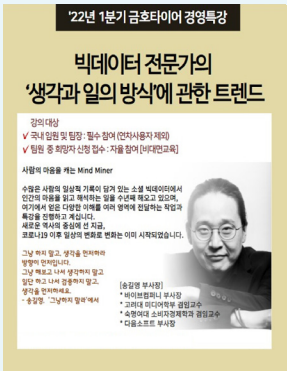
Future mobility

- Future mobility industry and survival strategies (domestic and international automotive industry)
- The rise of IP management and Kumho Tire's response strategy



General management

- Era of economic slowdown, comparison of crises and strategy to overcome (2022-23 internal and external economic outlook)
- How to live satisfied: from the psychological perspective





INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

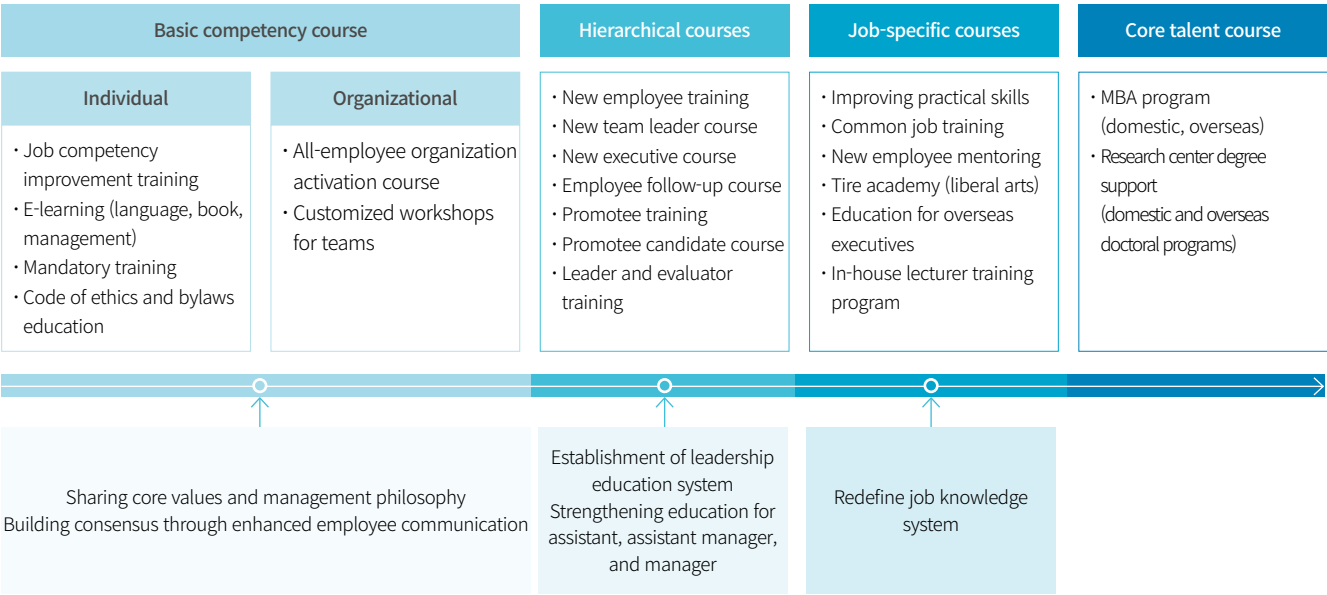
APPENDIX ▾

Training

Employee Training System

Kumho Tire considers the competency of each employee as a core value, the source of corporate competitive power. We provide customized training according to position and job duties and strive to help employees establish their growth direction and goals. We also continuously discover core competencies and job knowledge of Kumho Tire and reflect our management philosophy in our training system.

Kumho tire employee training system



R&D Division CDP Program

Considering that the industrial environment is accelerating toward digitalization and automation (AI), Kumho Tire operates a self-directed CDP (Career Development Plan) program for R&D staff to check and supplement their competencies. For those who complete the program, we monitor the R&D Competency Index to evaluate and manage effectiveness of the program.

Future Planning Support for Retirees

Kumho Tire provides training program for those who plan to retire, including career and aptitude diagnosis, future career design, job placement, unretirement or start-up. This provides them with the opportunity to design their post-retirement lives and helps them to relieve anxiety about retirement, thereby fostering a positive attitude toward the second half of their lives. In 2022, a total of 128 retirees participated in the program to design their future after retirement.

Employee Training Completion

		Unit	2020	2021	2022
Training hours per person		Hours	19.7	23.7	21.6
Training hours per person by job area	Office worker	Hours	42.6	46.9	58.3
	Technical worker	Hours	14.0	17.2	13.4
	R&D staff	Hours	6.7	12.8	16.7
Employee training expenses**		KRW billion	3.90	3.66	4.99
Employee training Satisfaction index	Out of 5 points	Points	4.27	4.41	4.53

*Based on domestic personnel (full-time employees)

**Training cost in 2021 was revised due to change in calculation criteria in 2022

Statutory training completion status

	Unit	2020	2021	2022
Number of participants	Persons	3,955	4,219	5,045
Completion rate	%	91.0	93.6	91.7

*Based on domestic participants

**Number of participants based on as of the training period may differ from total number of employee in each year (excluding leave of absence, business travels, etc.)

Training Program Status

		Unit	2022
R&D self-directed CDP program	Total training hours	Hours	6,113
	Hours per person	Hours	17.52
	Participants	Persons	349
	Satisfaction	Out of 5 points	3.5
Retiree future planning support	Total training hours	Hours	6,120
	Hours per person	Hours	34
	Participants	Persons	128
	Satisfaction	Out of 5 points	4.6

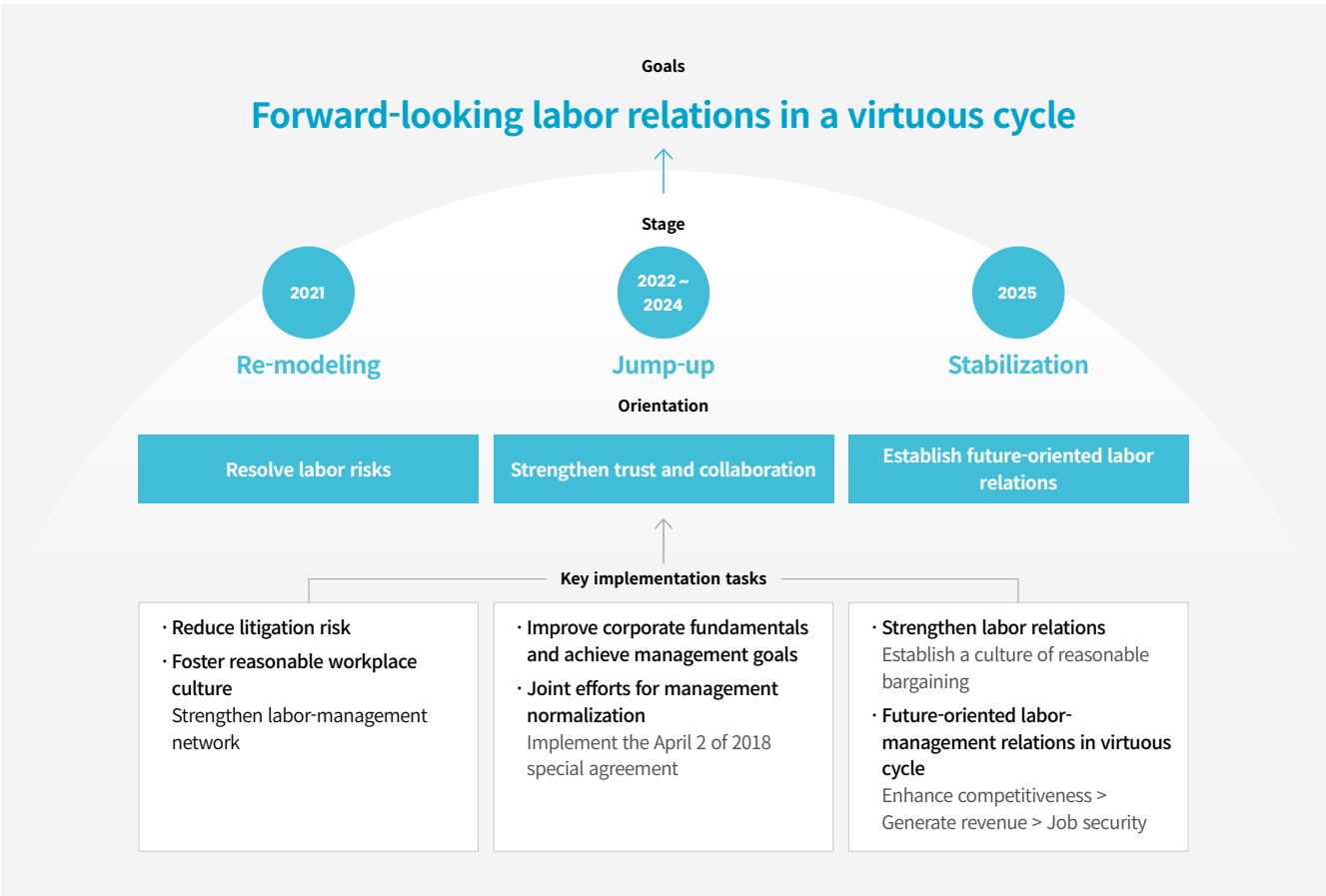


Shared Growth of Labor-Management

System of Shared Growth of Labor-Management

Kumho Tire established a mid- to long-term roadmap for shared growth of labor-management with the goal of 'forward-looking labor relations in a virtuous cycle'. In order to establish a healthy labor-management culture based on mutual respect and trust, we operate labor-management consultation systems such as the Labor-Management Council, Collective Bargaining, Employment Security-Labor-Management Joint Development Committee, strengthening job security and the competitiveness both of the company and employees. For the purpose of establishing a more stable and future-oriented labor-management relationship, we will continue to communicate and cooperate to improve managerial status and corporate cultures, and achieve management goals together.

Mid- to long-term roadmap



Labor Union Operation and Activities

Kumho Tire does not discriminate against employees for joining or participating in labor unions and continuously communicates with them to improve working conditions and resolve grievances through regular labor-management meetings. As of 2022, there are four labor unions in operation: Kumho Tire Branch of the Korean Metal Worker's Union of Gwangju and Jeonnam, the Kumho Tire Workers' Union, the Kumho Tire Site Managers' Union, and the Kumho Tire Office Workers' Union.

Labor Unions

Information	
Name (founded date)	Kumho Tire Branch of the Korean Metal Worker's Union of Gwangju and Jeonnam (1973. 6. 12.)
Parent organization	Korean Metal Workers' Union under the Korean Confederation of Trade Unions • Joined Chemical Textile Union under KCTU in 1995 • Changed into KMWU in June 16, 2007
Name (founded date)	Kumho Tire Workers' Union (multiple unions – 2nd union) (2011. 7. 15.)
Parent organization	Unit union (unions by company)
Name (founded date)	Kumho Tire Office Workers Union (2021.04.02)
Parent organization	Unit union (unions by company)
Name (founded date)	Kumho Tire Site Manager Labor Union (2022. 1. 21.)
Parent organization	Unit union (unions by company)

Unionization status

	Unit	2020	2021	2022
Technical worker	Persons	2,792 (97.00%)	2,867 (97.10%)	3,561 (98.40%)
Office worker	Persons	-	-	361 (29.3%)



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community


GOVERNANCE

APPENDIX ▾

Labor-Management Communication Channel

Collective bargaining

Kumho Tire guarantees the right to collective bargaining so that workers can add their voice to management based on trust and mutual benefit. In October 2022, an agreement was reached through collective bargaining to raise base pay and provide incentives.



Key agenda for 2022 collective bargaining

- Base salary increase
- Payment of incentive
- Increasing contribution rate of Retirement Plan

Labor-Management Council

Kumho Tire holds the Labor-Management Council every quarter to discuss various issues such as wages, employee welfare, improvement of the working environment, and matters related to personnel and labor management.

Employment Safety Labor-Management Joint Development Committee

Kumho Tire has formed the Employment Safety Labor-Management Joint Development Committee to improve the employment security and competitiveness of domestic plants. Every quarter, the Council identifies problems related to plant facilities and the division of work duties that are directly related to production, and seeks solutions to improve the working environment and enhance safety management.

Management Briefing

Kumho Tire holds a management briefing session once a year at each plant to share major business performance and plans, and mid- to long-term strategies. We build cooperative labor-management relations by promoting mutual understanding of our management strategies and goals.

Great Place to Work

We operate and develop various welfare programs to support employees' work-life balance to improve job satisfaction and create a good working environment.

Work & Life Balance

Kumho Tire guarantees employees a flexible and efficient work system and free use of vacations to ensure balance between work and life. Going forward, we will continue to actively introduce policies for employee's better life and encourage utilization.



Flexible Work System

- Flexible commute schedule outside of core hours
- Improve work engagement and secure work-life balance



PC-OFF System

- Automated system for break alarms and start and end of shifts
- Ensuring on-time work and respect for evening hours



Self-Approval of Vacation

- Self-approving of vacation
- Establishing an autonomous and proactive vacation culture



Leaders' Day

- Organized mandatory time off for leaders the second week of every month
- Improving work engagement and work-life balance



Refresh Vacation

- Create a culture that definitely establishes when to work and when to rest

Team Synergy Enhancement Programs

In order to strengthen employees' loyalty and bonding, Kumho Tire provides not only company-wide support but also programs that can be utilized by the departments to strengthen teamwork and contribute to improving employee engagement. Kumho Tire conducts the Team Synergy Enhancement Program to facilitate communication and mutual understanding, and to strengthen the bond between team members in case of a major restructuring. This has improved communication among team members and enhanced employees' satisfaction with the organization.



Team Synergy Enhancement Programs

Results of the 2022 Team Synergy Enhancement



27 teams participated



291 participants



4.71 points Satisfaction score



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

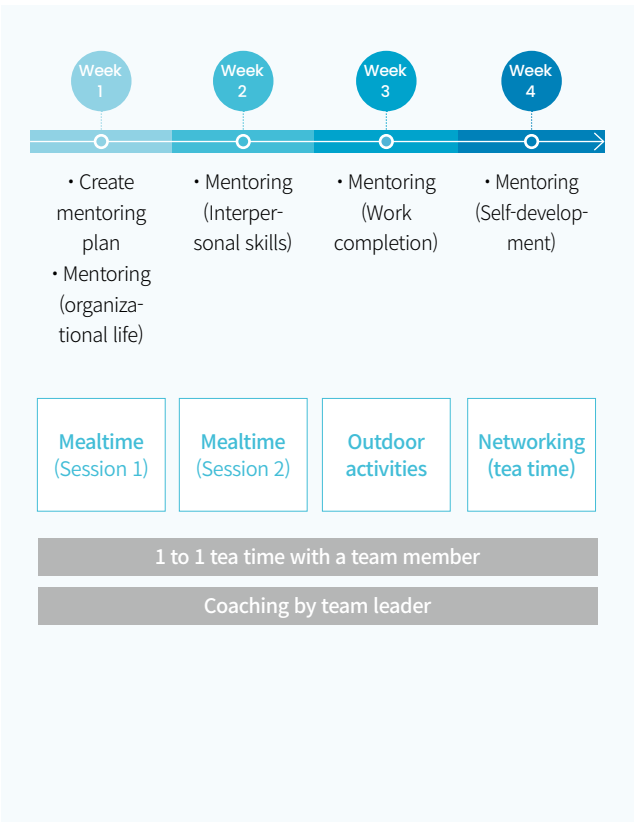
GOVERNANCE

APPENDIX ▾

In-house Mentoring Program

Kumho Tire operates an in-house mentoring system to strengthen the work capabilities of the inexperienced through training among employees. Through this, we are creating a coaching culture that mentors easily share and transfer experiences and know-how to mentees. Considering the effectiveness of the mentoring system in enhancing the mentees' adaptability to the organization and improving their competency, we extended the period from one month to three months from 2022, and significantly increased the mentoring subsidy.

In-house Mentoring Program



Support for Maternity Care

To create a family-friendly workplace culture and support work-life balance, we actively encourage pre- and postnatal leave and parental leave, as well as support childbirth celebration payments. To protect pregnant employees, we guarantee a reduced working hours system during pregnancy and a pre- and postnatal leave system, in accordance with the Labor Standards Act. We also provide childcare subsidies for preschool children and operate in-house daycare centers at our Gwangju and Gokseong plants.

Maternity and Parental leave status

			Unit	2020	2021	2022
Reduced work hours during pregnancy				1	4	6
Pre- and postnatal leave				3	7	5
Eligible for parental leave	Male	Persons		780	725	765
	Female	Persons		50	50	52
Parental leave users	Male	Persons		17 (2.20%)	38 (5.20%)	27 (3.50%)
	Female	Persons		6 (12%)	15 (30%)	13 (25%)
Returning from parental leave	Male	Persons		10	35	11
	Female	Persons		8	14	9
12 month-service after returning	Male	Persons		10	33	13
	Female	Persons		6	14	8

* Based on office workers in Korea

Key benefit programs

Life & House

- Living expense assistance (in case of illness and industrial accident leave)
- Employee apartment (at plants)
- Support for house rent (working in a domestic sales office), etc.

Health & Family

- Employee health checkups
- Leave and allowance for congratulations and condolences
- Childcare center (at plants)
- Medical expenses (including spouse and children)
- Educational expenses for children (kindergarten to university)
- Long service rewards

Culture & Leisure

- Organization of company clubs
- Providing tire discount coupons
- Summer vacation and subsidy, etc.

Highlight

Good Place to Work

Kumho Tire's North American Technical Research Center was selected as a Good Place to Work in 2023. Rubber News in North America selected outstanding companies among rubber-related companies in North America after evaluating corporate policies, practices, and employee satisfaction. We will continue to secure competitiveness based on the trust of our employees by creating a good working environment and stable organizational culture.



Kumho Tire's North American Technical Research Center



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

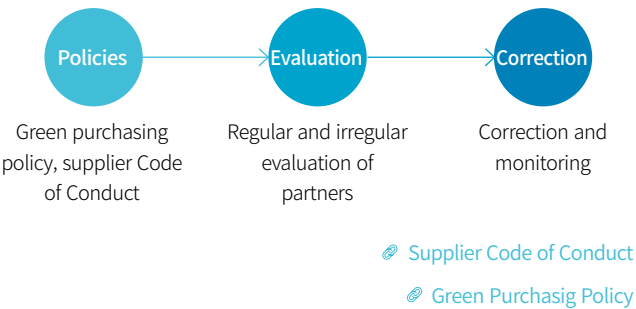
Responsible Supply Chain

Supply Chain Management System

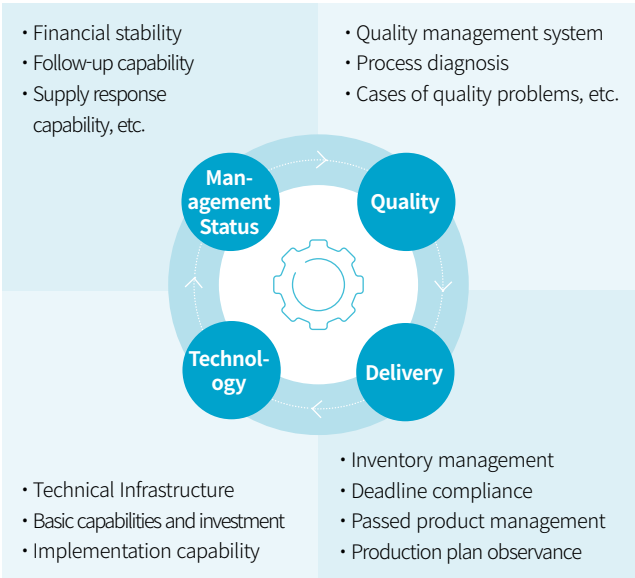
Kumho Tire recognizes its suppliers as key stakeholders and strives to create win-win partnerships and secure supply chain sustainability through the supply chain management process. Through the Code of Conduct for Suppliers and the Green Purchasing Policy, we provide guidelines to our suppliers to create a sustainable supply chain. In addition, we conduct annual and frequent evaluations based on evaluation items such as management status, quality, technology, and delivery time, and accordingly manage supply chain fairly based on the results, such as selecting suppliers or suspending transactions.

In 2022, we conducted regular evaluations for a total of 87 suppliers (42 Raw Material and 45 Machinery suppliers), and we plan to provide feedback and support for future improvements so that we can build lasting win-win relationships with our suppliers.

Supply chain management process



Supplier Evaluation and Management Indicators



	Indicators	Unit	2020	2021	2022
Total suppliers	Raw materials	Companies	114	117	118
	Machinery	Companies	534	547	575
Key suppliers	Raw materials	Companies	47	45	57
	Machinery	Companies	5	6	6
Agreement of Supplier Code of Conduct		Companies			50
		%			98
Regular supplier assessment	Completed regular evaluation	Companies (%)	66 (100%)	73 (100%)	87 (100%)

Supply Chain ESG Management System

Legislation on companies' supply chain ESG management responsibilities is spreading around the world, such as the German Supply Chain Due Diligence Act (LkSG), which has been in effect since January 2023, and the EU Supply Chain Due Diligence Directive, which is scheduled to take effect in 2024. In particular, we are directly and indirectly affected by relevant laws and regulations as a global manufacturer, as well as demands from our customers for supply chain ESG management. As a result, we have been implementing supply chain ESG management programs such as spreading codes of conduct for suppliers, evaluating and supporting suppliers' ESG management in order to manage ESG risks throughout supply chain.

Revising and Disseminating the Supplier Code of Conduct

Kumho Tire presents the Supplier Code of Conduct as a guideline for integrating ESG in the supply chain management.

In the first half of 2023, we revised the Code of Conduct for Suppliers by adding and modifying detailed items such as discrimination, women's rights, climate crisis response, grievance handling, and conflict minerals to strengthen the level of ESG management in the supply chain. We received consent forms from a total of 163 suppliers to increase their participation in our efforts to create a sustainable supply chain.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

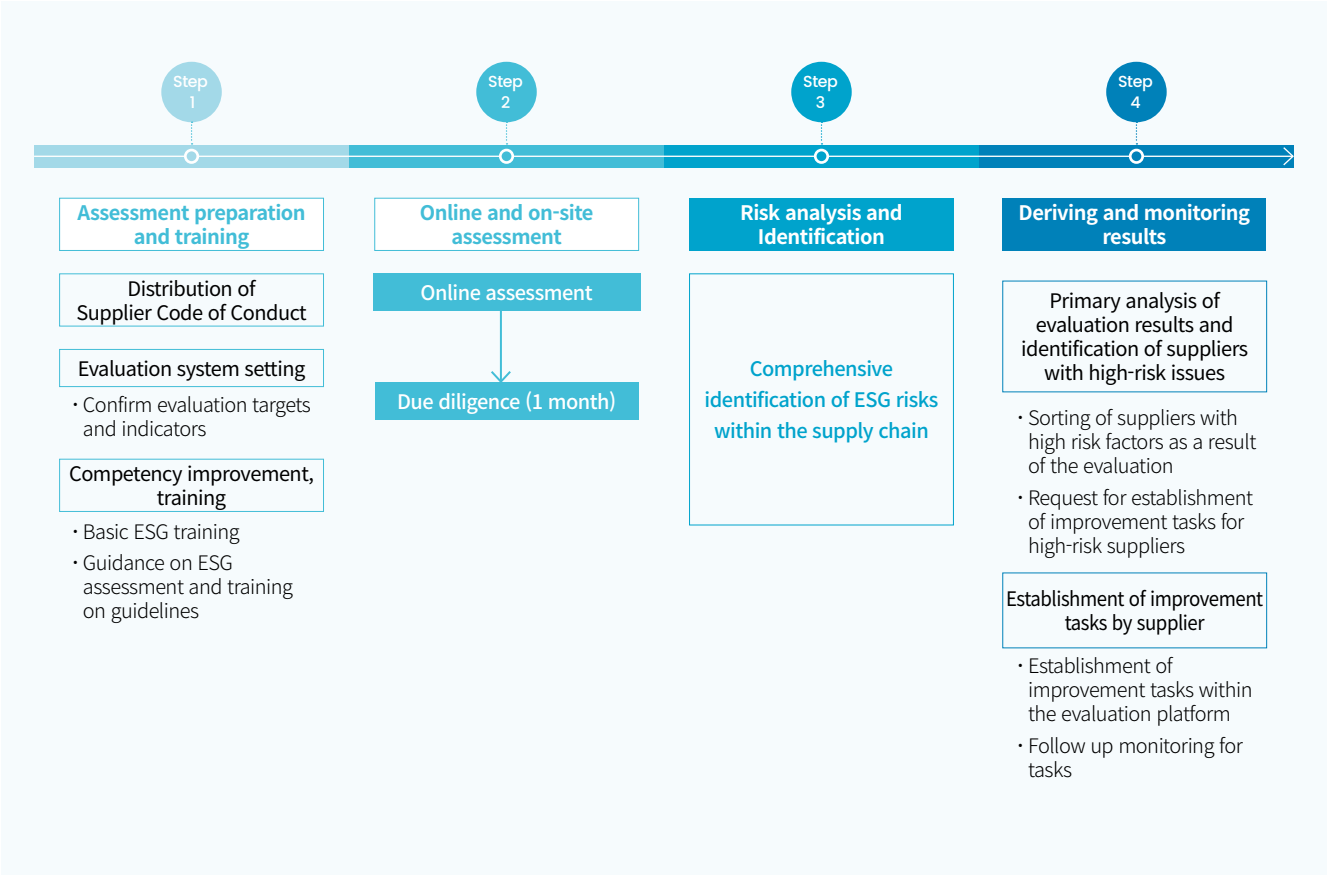
GOVERNANCE

APPENDIX ▾

Supply Chain ESG Assessment Process

In 2023, Kumho Tire has established and is operating a supply chain ESG assessment process in order to identify and systematically manage ESG risks within the supply chain. Evaluation targets were selected considering the size of transaction, suppliers' size and their regular evaluation results, and we diagnose supply chain ESG risks through online evaluation and due diligence. Based on the diagnosis results, we plan to systematically manage ESG risks within the supply chain by identifying high-risk suppliers, establishing improvement tasks, and monitoring improvements for each supplier.

Supply Chain ESG Assessment Process



Supplier ESG Risk Diagnosis Index

Environment	Human rights and labor
<ul style="list-style-type: none">Environmental riskEnvironmental management systemGreenhouse gas, water and wastewater, waste, air quality, etc.	<ul style="list-style-type: none">Human rights and labor riskSafety and health riskHuman rights/labor standards and practicesWorkplace safetySupply chain human rights and labor, etc.
Ethics and governance	Product and service responsibility
<ul style="list-style-type: none">Ethical riskEthical managementESG management and information disclosureGovernance, etc.	<ul style="list-style-type: none">Risks by country or regionProduct and service risk, etc.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

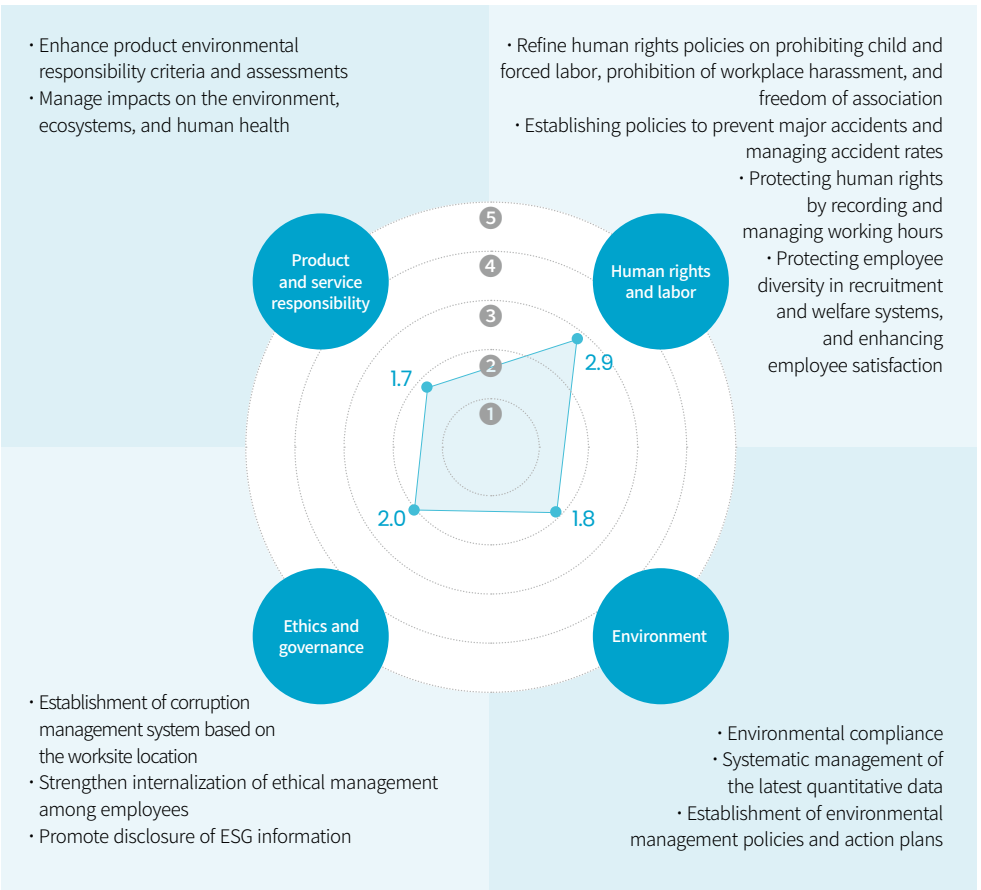
GOVERNANCE

APPENDIX ▾

Supply Chain ESG Assessment Results

Kumho Tire conducted supplier ESG evaluations for 202 major suppliers with a transaction volume coverage of approximately 90% as of the first half of 2023. Online written evaluations were conducted on the ESG issues such as human rights and labor, environment, ethics and governance, and product and service responsibility, and we identified risks and improvements for each item based on the evaluation results. In the second half of 2023, suppliers will be provided on-site consulting with improvement plans, and follow-up monitoring to check implementation of the plans.

Scores by category and improvements



Support for Suppliers' ESG Awareness

Kumho Tire operates various programs to support the ESG management of its suppliers. We regularly share the latest trends by sending 'ESG Pick', which shares ESG issues and related materials with suppliers once a week. We also provide training on ESG management, supply chain management, conflict minerals, and LCA to support suppliers' ESG management and strive to manage ESG risks in the supply chain.

The State of Supply Chain ESG Management

Classification		Unit	Performance in 2023
Supplier Code of Conduct agreement		Companies	163
ESG Assessment target suppliers		Companies	202
Percentage of transaction volume of targets		%	96
Assessment completed		Companies	159 (79%)
Core suppliers (Tier 1)	Good	Companies	33
	Risky	Companies	5
	Total	Companies	38
Suppliers (Tier 2)	Good	Companies	104
	Risky	Companies	17
	Total	Companies	121
Percentage of suppliers with high sustainability risk (Tier 1 and 2)		Companies	22 (13.8%)

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

Shared Growth with Suppliers

Awareness Training on Fair Trade Act

Kumho Tire regularly conducts fair trade law training for sales managers and employees in related departments to improve their awareness on fair trade and to spread a culture of compliance, including prevention of violations. External legal experts in various fields are invited to provide training on relevant laws, such as Fair Trade Act, Subcontracting Act, Transfer Pricing Tax System Act, and Agency Act, and trends of the Fair Trade Commission in order to prevent violations and improve employees' fair trade capabilities.

Year	Stage	Topic	Department	Personnel
2022	1st	Agency transaction	RE sales	18

Anti-trust practice

	2020	2021	2022
Total monetary loss due to unfair trade practices such as anti-competitive behavior, monopolization, etc.	0	0	0



Training to raise the awareness of the Fair Trade Act

Supplier Communication Channels

Kumho Tire operates the KUMHO TIRE Portal of Supplier Management (K-POS) to facilitate communication with suppliers. Through K-POS, suppliers have access to comprehensive management of the purchasing process, fair trade-related campaigns, ESG assessment and education. We received opinions of suppliers by conducting an annual supplier satisfaction survey to check their overall satisfaction on the business relationship and areas for improvement. In 2022, we conducted a satisfaction survey with 113 suppliers and added writing question to actively collect opinions on improvements. In the future, we plan to further refine the evaluation items and collect more detailed opinions from suppliers.

Results of Satisfaction Survey

	Unit	2020	2021	2022
Satisfaction score	Point	87.4	87.5	88.3
Number of respondent companies	Companies	103	89	113



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

Shared Growth with Dealers

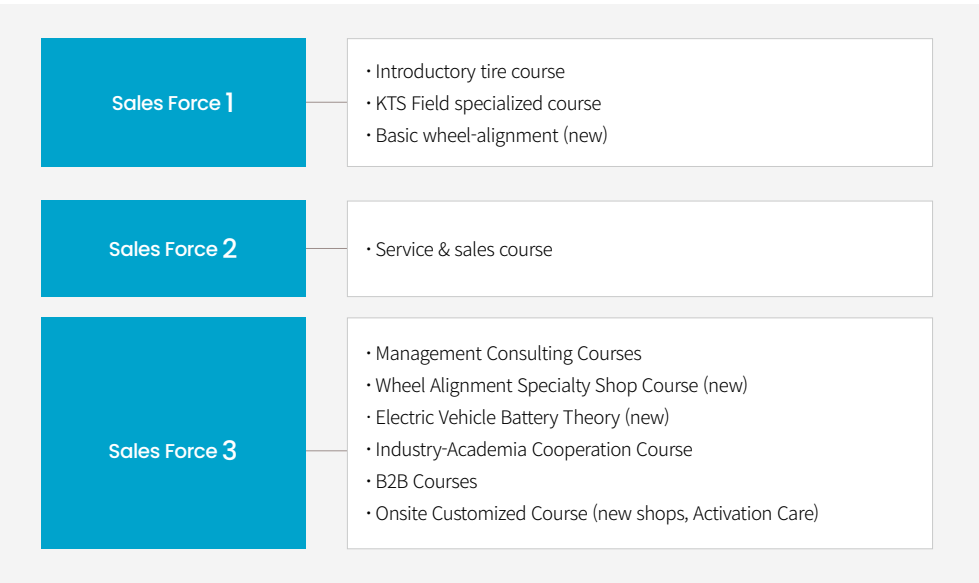
Support for Dealer Capacity Development

To build mutually respectful, win-win relationships with agencies across the nation, one of our core stakeholders, we offer a variety of trainings for shop owners and employees. In 2022, we further refined the training courses to help enhance professionalism and provided more opportunities to participate in training for agency employees.

Results of Dealer Capacity Development Program in 2022

Training Courses	Unit	2020	2021	2022
Sales Force Training	Persons	115	66	107
Special course	Persons	2,043	1,914	2,372
Total	Persons	2,158	1,980	2,479

Sales Force Training Course



Communication with Dealers

In March of 2023, Kumho Tire held the 'Kumho Members Day' at the ICC Hotel in Daejeon, inviting dealers nationwide. More than 420 dealers and employees of Tire Pro and KTS attended the event and communicated with each other under the theme of One Team Spirit, 'Sharing one goal as one team'. We shared our business results for 2022 and management policies for 2023, and presented certificates of appreciation to more than 80 dealers who contributed to sales growth.



Kumho Members Day event





INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

Global Platform for Sustainable Natural Rubber

Natural Rubber Policy

Kumho Tire aims to build a sustainable natural rubber supply chain by establishing and developing relevant policies. We have established a natural rubber policy to promote the sustainability of natural rubber, which reflects the Global Platform for Sustainable Natural Rubber (GPSNR) guidelines and discloses it on our website. The policy emphasizes human rights protection, anti-corruption, grievance redress, shared growth, resource conservation, and information disclosure for all stakeholders along the value chain for the sustainability of natural rubber, and will be continuously revised and managed in accordance with the principles proposed by the GPSNR.

 [Natural Rubber Policy](#)



Kumho Tire Natural Rubber Policy

- Kumho Tire prioritizes the conservation and regeneration of resources, including natural rubber, when making decisions throughout the entire manufacturing and distribution.
- We recognize that we can directly or indirectly affect the upstream of the value chain, thereby acting in a way that leads to qualitative growth of the entire value chain in the use of natural rubber.
- We regularly and transparently disclose to the stakeholders our management performance related to the natural rubber value chain.
- We promote natural rubber value chain issues to end consumers to help them make sustainable consumption decisions.
- We listen to natural rubber issues at all times and continuously find ways for Kumho Tire to contribute to the value chain.

Participation in GPSNR Disclosure

Kumho Tire responds to the GPSNR Reporting Requirement (RR) to provide accurate information to our stakeholders. In 2022, our performance on ESG risk management across the natural rubber supply chain was disclosed on the GPSNR website regarding issues including human rights, anti-corruption, forest protection, stakeholders, and management system, and we will continue to transparently disclose information on ESG management in our natural rubber supply chain.

 [GPSNR Disclosure](#)

Participation in GPSNR Working Group

As a founding member of the Global Platform for Sustainable Natural Rubber (GPSNR) since 2018, we have participated in efforts to ensure natural rubber sustainability. In 2023, we participated in discussions on the establishment of the EU Regulation on Deforestation-free Products and governance framework.

Category	Activities
Policy Tool box	· Finalizing and complying with the GPSNR Implementation Guidance and Reporting Roadmap
Shared Responsibility	· Discussion on establishing governance framework for WG funding activities
Traceability and Transparency	· Supply chain and risk assessment mapping · Discussion on EU regulations on deforestation products, etc.

Responsible Management of Conflict Minerals

Establishing Policies on Conflict Minerals

In order to fulfill its social responsibility as a global company, Kumho Tire prohibits the use of conflict minerals and actively participates in responsible sourcing of raw materials. Therefore, in June 2023, we established a policy that complies with international norms such as the OECD Due Diligence Guide, the EU Conflict Minerals Regulation, and the US Dodd-Frank Act, and strives to prevent human rights violations and environmental destruction in the process of procuring raw materials and to minimize negative social and environmental impacts. In addition, we aim to create a sustainable supply chain with suppliers, disseminating the policy throughout the value chain.

 [Conflict Minerals Policy](#)

Conflict Minerals Management Governance

Kumho Tire operates a management system by cooperating with related departments in accordance with the conflict minerals management process. G. Raw Material Purchasing Team in the Purchasing Division checks and manages risks related to conflict minerals at suppliers and revises the Conflict Minerals Policy. The team also collaborates with the R&D division to manage process ranging from new alternative materials development to reviewing whether conflict minerals are included in products. In addition, ESG Team in the Strategic Planning & Administration Division supports conflict minerals management in terms of suppliers ESG management and the group-wide ESG risk management.

Conflict Minerals Management Status

Through the supply chain ESG assessment, Kumho Tire requires suppliers to submit the Conflict Minerals Reporting Template (CMRT) once a year to identify the use of conflict minerals and to exclude them from purchases and manage related risks in advance.

Internalization of Safety and Health

Health and Safety Management System

Establishing Health and Safety Management Policy

As the Act on the Punishment of Serious Accidents in 2022 entered into force in 2022, corporate responsibility for safety incidents is increasing. As a global manufacturing company, we are committed to ensuring a safe and healthy workplace by prioritizing the safety of all employees. In 2022, we revised the Safety and Health Policy, while establishing the Safety and Health Management Policy. The policy is based on the principles of safe workplaces, employee health management, accident prevention and response, and includes promotion system for governance, education, and performance management.

 [Safety and Health Management Policy](#)



Health and Safety Policy

- Establishing a global safety and health management system, and regularly reviewing by the executives on the performance
- Minimizing safety accidents, and continuously reducing and improving accident rates
- Encouraging and motivating our employees by devoting for employees health care
- Preventing accidents and health hazards by creating a safe and healthy working environment
- Identifying potential risk factors through risk assessment, and managing the risks through establishing plans and goals regarding occupational health and safety
- Complying with regulations regarding health and safety, and setting own standards with tighter criteria than domestic and international legislations
- Supporting the safety and health education for all employees and OHS (Occupational Health and Safety) management of its partners, and continuously carrying out improving measures for safety and health of its stakeholders
- All employees shall operate the company's safety and health management system efficiently, and give the best efforts on their duties to achieve the goals, integrating the policy into daily work and business activities.

Safety and Health Governance

Kumho Tire has promoted the SHE Planning Team to a department directly under the CEO, as a company-wide control tower for safety and health management, in order to pursue Zero Safety Accidents and safe workplace for employees and partners. In addition, the company operates an Occupational Safety and Health Committee in accordance with Article 24 of the Occupational Safety and Health Act, and the committee is composed of equal numbers of workers and employers to diagnose risk factors in the workplace and discuss improvement directions once a quarter.



Health and Safety Management System Certification

To fulfill its responsibility for the health and safety of all employees, the company has established safety and health management systems and acquired the international standard ISO 45001 at 8 business sites out of total 9 plants and research center. We plan to continuously renew and monitor certification going forward.

Ratio of Safety and Health Management System Certification

Classification	Unit	2020	2021	2022
ISO 45001 certified workplace	%	88.9 (8/9)	88.9 (8/9)	88.9 (8/9)

Advancing the Safety and Health System

To establish a company-wide safety and health management system to respond to the Act on the Punishment of Serious Accidents, Kumho Tire completed a status check and identified improvements with experts consultation in the second half of 2022. We will continuously monitor not only the workplace but also all business sites, to minimize potential risks of industrial accidents.



Assessment on Company-wide Health and Safety Management System

- Inspection and diagnosis of workplace status under the Act on the Punishment of Serious Accidents
- Diagnosis of the status of the safety and health management system under the Act on the Punishment of Serious Accidents
- Establishment of countermeasures for vulnerable areas



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

Health and Safety Risk Management

Assessment and Audit on complying with Occupational Safety and Health Act

Kumho Tire reviews compliance with relevant laws and regulations regarding safety, health, fire, and environment to prevent industrial accidents and maintain a comfortable working environment. Evaluations and audits are conducted based on a checklist developed in-house, and in 2022, there were no non-compliance issues as a result of compliance checks, same as the previous year. In 2023, we plan to strengthen the standard by updating the checklist.

Regular and frequent risk assessments

Every year, we identify hazards and risks in our workplaces through assessment in a regular and rolling basis to improve facility safety and worker environment. In 2022, we completed regular risk assessments on all our plants and research center, and carried out measures on hazards identified through frequent assessments, such as slip and fall risks, with safety training and scaffolding installation. From 2023, we plan to conduct additional follow-up assessment to continuously monitor the status of improvements.

Joint Safety and Health Inspection

Kumho Tire conducts joint safety inspections once a month with safety managers, manufacturing team leaders, facility operators, and labor unions to check the working environment. For any risks or problems identified during the process, we seek improvement measures and conduct periodic monitoring of the measures. In 2022, through a joint labor-management safety inspection, the fall prevention nets under the conveyor were reset and replaced to eliminate potential safety risks in the workplace.

Internalizing Safety and Health Management

Safety and Health Communication Channels

Kumho Tire's executives and employees actively communicate to achieve safety and health goals and create a safe workplace through operating and regular meeting of the Safety and Health Council, by sharing relevant policies and major safety and health issues. We also operate communication channels in accordance with the Enforcement Decree of the Act on Punishment of Serious Accidents and the Occupational Safety and Health Act in order to identify and improve safety hazards, based on the opinion raised from field workers. In 2022, we built an automated loading system for Green Case (rubber compound before curing) to reduce risk of musculo-skeletal diseases, according to workers suggestion at Gokseong plant.



SHE Steering Committee

Chair: CEO
Twice a year
(June, December)

- Compliance with Act on the Punishment of Serious Accidents
- Evaluation of compliance with obligations
- SHE issues
- Reporting on the consultation results with regard to the Act on the Punishment of Serious Accidents



SHE Communication Meeting

Organized by: Head of Production Technology
Twice a year (March, September)

- SHE Activities
- SHE issues
- Training on accident cases, etc.



SHE working-level meeting

Organized by: SHE Planning Team
2~3 times (monthly)

- Discussion of SHE issues
- ① Status of SHE-related laws and regulations
- ② Detailed plans for on-site safety and health compliance
- ③ Resolution of SHE requests, etc.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

Health and Safety Management System Update Open

In the first half of 2023, we updated existing system for managing safety and health-related data, protective equipment provision, and hazardous work. Through this update, we are now able to more systematically manage related data such as risk assessment and safety and health training, and we expect that it will contribute to the internalization and the strengthening of company-wide safety and health management.

Safety and Health Training

Kumho Tire conducts safety and health education every year to prevent accidents and raise safety awareness. By conducting safety training for technician managers once a month, we aimed to improve supervisors' safety management capabilities and ensure the safety of workers. From 2023, we will expand safety and health training to office workers once a month to ensure safety management at all worksites.

Category	Unit	2020	2021	2022
Statutory Training for Supervisors	Persons	430	445	500
Regular training for technical workers	Persons	3,113	3,285	3,637

Familiarization with Safety Rules before Work

To prevent all kinds of accidents that may occur in the workplace or during work, we require employees to familiarize themselves with safety rules and complete self-checklists. For overseas worksites, we share safety and health procedures in multiple languages to ensure safety management. In addition, from 2022, field workers at all domestic plants are required to watch a video on preventing serious injuries before starting their shifts to prevent safety accidents.

Laboratory Safety and Health Management

Kumho Tire Research Center identifies and improves risk factors to strengthen the safety and health management of researchers. We minimize the risk of serious accidents through continuous guidance and education on the risks of safety accidents and hazardous chemicals that may occur in the R&D process.

Supplier Safety Management

Supplier Safety Level Management

To manage the in-house contractors' safety, which is relatively vulnerable than employees, we provide safety and health training before starting work. We also conduct safety and health inspections at work sites once a day to proactively identify and take measures against on-site risks, and strive to create a safe working environment through joint inspections by our and contractors' safety managers once a quarter.

Safety and Health Communication Channels for Suppliers

Kumho Tire provides safety and health education for its suppliers through the Contracted and Construction Suppliers Meetings, to share accidents cases and safety rules and to collect safety-related suggestions. In 2022, a total of 12 meetings were held to provide education on fire accident prevention, dissemination of serious accident cases, and safety tips for various machineriaes. Total of four suggestions were received and reflected in the improvement of the working environment at the business sites.

Industrial Accident Indicators

	Indicator	Unit	2020	2021	2022
Kumho Tire	Accident rate	%	4.2	4.5	6
	Fatalities	Persons	0	0	0
In-house contractors	Accident rate	%	9.1	8.6	1.4
	Fatalities	Persons	0	0	0

*The number of fatalities in 2020 was corrected, and the accident rate for 2020 and 2021 were updated with calculation changes

**Insourcing of in-house contractors in 2022 increased accident rate of Kumho Tire and decreased that of in-house contractors



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

Hazardous Chemicals Management

Hazardous Chemicals Management System

Kumho Tire complies with domestic and international regulations related to chemicals, including the Act on the Registration and Evaluation of Chemical Substances, the Chemical Substances Control Act, the Occupational Safety and Health Act, and EU-REACH. Departments that use hazardous chemicals prepare and submit a hazardous chemical use management register for a hazardous chemical facility and equipment checklist to the relevant departments, and they keep the documents for five years. In addition, we conduct regular inspections of hazardous chemical management contents once a year and take measures to prevent safety accidents in areas that need improvement.

Work Environment Measurement

Kumho Tire conducts the Work Environment Measurement half-yearly based on Article 125 of the Occupational Safety and Health Act and Article 82 of the Collective Bargaining. We select a reliable measurement agency with consultation between labor and management. We measure the extent to which workers are exposed to harmful factors during work to create a safe work environment, protect workers' health, and improve productivity. We also identify and correct hazardous work environments through working-level meetings to improve the work environment. For the last five years, including 2022, we have managed safe workplaces without exceeding legal standards.

Category	Unit	2020	2021	2022
Hazardous Chemical Usage	ton	1,784.4	1,943.8	~(*)

*2022 data to be available in August 2023

Hazardous Chemical Training

Our managers and handlers of hazardous chemicals receive training every two years, and new managers receive initial training. Training topics include prevention of harmful chemical substances, incidence response, management of toxic substances storage facilities, and labelling of toxic substances. In 2022, a total of 4,422 employees at domestic plants received safety training on emergency measures for hazardous chemicals (K-13) and situational disaster prevention through collective training by hazardous chemicals managers. We will continue to manage training programs that reflect the issues of hazardous chemicals management in the future.

Category	Unit	2020	2021	2022
Completed Hazardous Chemical Substance training	Persons	4,300	4,548	4,422

Chemical Safety Community Activities

Kumho Tire participates in the Chemical Safety Community with small and large companies to minimize the spread of damage to the community and respond quickly in the event of a chemical accident. We conduct various activities such as information exchanges, workshops, and meetings through the Sochon Pyeondong Industrial Complex Chemical Safety Community.



First half meeting of chemical safety community



Agreement with the chemical safety community

Highlight

Exemplary Laboratories in Safety Management

Kumho Tire has obtained new certifications for two laboratories: the Wear Dynamic Evaluation Laboratory and the Additive Analysis Laboratory, in the '2022 Certification of Exemplary Laboratories in Safety Management' organized by the Ministry of Science and ICT. There had been no laboratory safety accidents in the last two years, and we have scored more than 80 points in the evaluation areas of laboratory safety environment and system, laboratory safety environment activity, and safety awareness of laboratory safety management personnel. We plan to maintain the certification with the belief that excellent products can be developed in a safe environment.



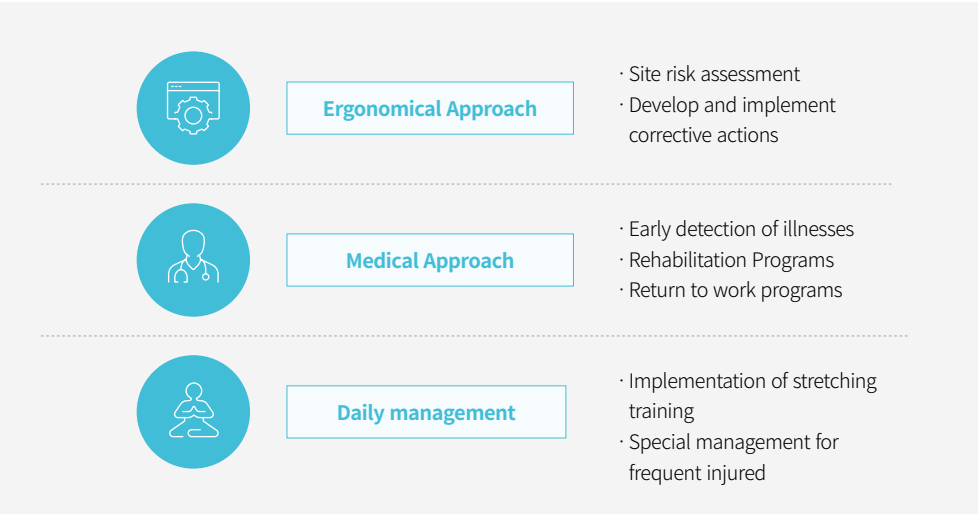
Certified for Exemplary Laboratories in Safety Management

Employee Health Management

Musculoskeletal and Cerebrovascular Disease Prevention Programs

Kumho Tire protects the health of its technical workers by having musculoskeletal occupational health doctors visit them twice a month to provide consultations to employees with symptoms of musculoskeletal abnormalities. We also provide programs to minimize fatal health risks such as sudden death by managing underlying diseases that cause cerebrovascular diseases, such as hypertension, dyslipidemia, and diabetes, in advance. Employees in high-risk groups and those with pre-existing diseases are regularly monitored, and objective management of pre-existing conditions is practiced in accordance with the guidelines of the Korea Occupational Safety and Health Agency.

Musculoskeletal Disease Management



Psychological Counseling Program

Kumho Tire operates its own psychological counseling program to take care of employees' mental health as well as their physical health. Every year, we conduct a survey and analysis to identify employees who need counseling, and take measures such as interviews and treatment to help them recover the mind fitness.

Category	Unit	2020	2021	2022
Employees Monitored for Cerebrovascular Diseases	Employees with diseases	31	27	26
	Highest risk	22	2	39
	High risk	245	37	311
	Intermediate/low Risk	1160	1194	873
Psychological counseling program participants	Persons	798	702	555



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

Human Rights and Diversity

Increase of Employee Value

Responsible Supply Chain

Internalization of Safety and Health

Product Responsibility

Contribution to Local Community

GOVERNANCE

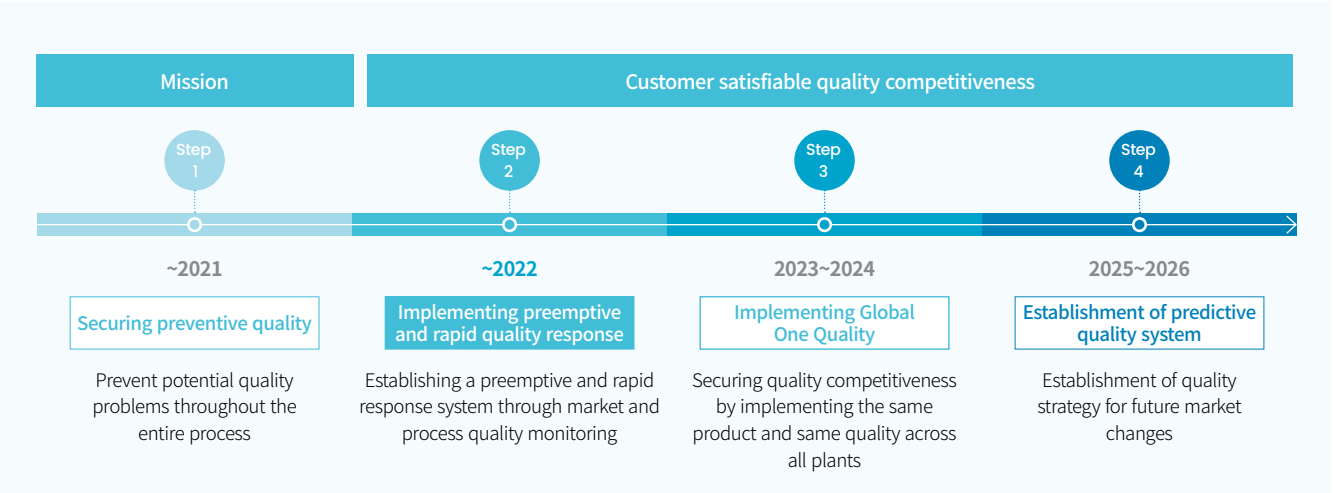
APPENDIX ▾

Product Responsibility

Integrated Quality Management

Kumho Tire discloses quality policies aimed at enhancing the quality awareness of all employees and creating customer value by prioritizing 'customer safety and trust'. For systematic quality management, we have categorized processes into development quality (PLM), quality of mass production (QMS), and market quality (VOC). We have also established a mid- to long-term roadmap and applied quality management strategies throughout the entire process from production to the point of sale. Accordingly, we focus on enterprise-wide quality management and have established a system based on IATF 16949: 2016, the automotive industry quality management system standard, and ISO 9001 certification to carry out quality management activities.

Mid- to Long-Term Quality Management Roadmap



* Development quality (PLM, Product Lifecycle Management): Robust design for customer-required performance

** Mass production quality (QMS, Quality Monitoring System): Strengthen manufacturing quality uniformity management

** Market quality (VOC, Voice of Customer): Rapid customer response and analysis

IATF 16949: 2016 Certification

Country	Region	Acquisition date	Expiration date	
Domestic	Gwangju	2021.11	2023.11	
	Gokseong	2021.11	2023.11	
	Pyeongtaek	2021.11	2023.11	
Overseas	China	Nanjing	2021.04	2024.04
		Tianjin	2021.09	2024.03
		Changchun	2021.08	2024.08
	US	Georgia	2021.01	2023.12
	Vietnam		2021.12	2024.01

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

- Human Rights and Diversity
- Increase of Employee Value
- Responsible Supply Chain
- Internalization of Safety and Health

Product Responsibility

- Contribution to Local Community

GOVERNANCE

APPENDIX ▾

Advancing and Managing the Quality Management System

Global Quality System Management

To manage the global quality system, we conduct quality management diagnosis for global plants to meet the needs of automakers and secure Global One Quality, Quality Management System diagnosis to maintain and develop based on the IATF 16949: 2016 quality management system, and a supplier quality management system diagnosis to ensure uniformity in supplier quality.

In order to strengthen our credibility with all stakeholders and maintain customer satisfaction, Kumho Tire completed the diagnosis of the global plants quality management system for eight factories in China, Vietnam, and the U.S., including Korea, in 2022. We also conducted the diagnosis of the supplier quality management system for 91 domestic and overseas suppliers to secure quality uniformity and to become a company trusted by customers by managing and improving quality-related risks.

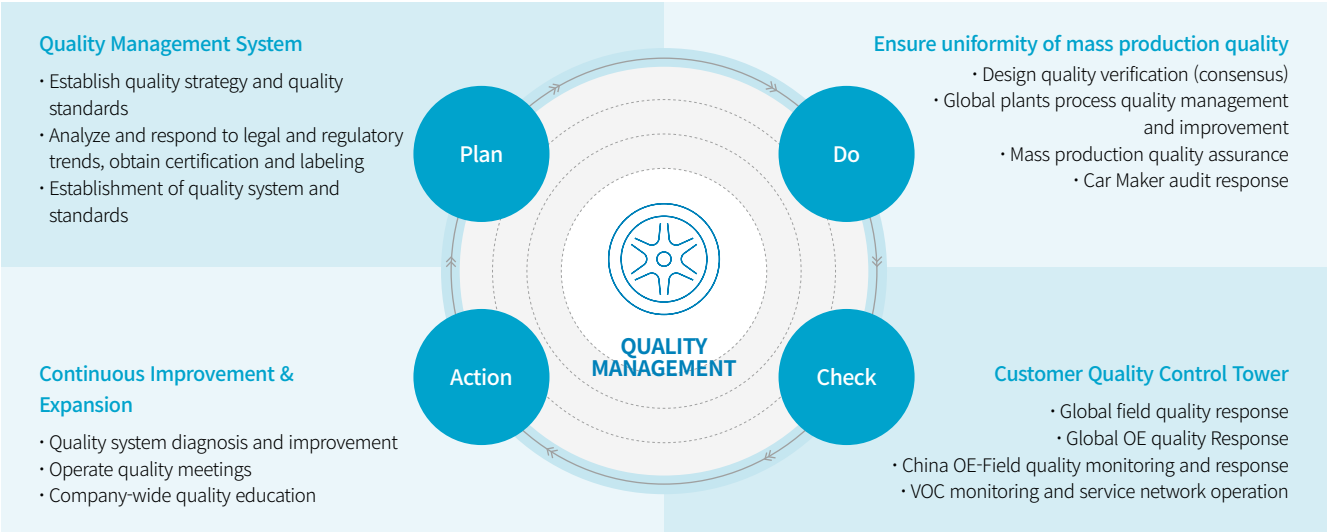
Indicators	Region	Schedule
Global plants quality management	8 Plants in Korea, China, etc.	'22.08 ~ 09
Supplier quality management	91 companies (domestic, overseas)	'22.04 ~ 12
Quality Management System	91 companies (domestic, overseas)	'22.01 ~ 12

Design Quality Verification (Quality Consensus) System

We operate the Quality Consensus System to ensure the safety of consumers from products developed and improved. The Quality Consensus System ensures the quality of developed and improved products in the quality department, and through this, we strive to strengthen the stability of products by conducting various verifications in addition to the verifications agreed upon with the laboratory.

Indicator	Unit	2020	2021	2022
Number of verified products in development stage	Cases	159	290	177
Ratio of evaluated products	%	100	100	100

Quality Management Cycle



Products Quality Assurance

We conduct periodic durability verification to ensure the stability and sustainability of products, as well as the stability of developed and improved products. We also regularly verify the quality of mass-produced products according to labeling standards to meet enhanced legal and regulatory standards. Products that do not meet internal standards for durability and labeling are blocked from the market, and we strive to secure continuous product stability by promoting product improvement.

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

- Human Rights and Diversity
- Increase of Employee Value
- Responsible Supply Chain
- Internalization of Safety and Health

Product Responsibility

- Contribution to Local Community

GOVERNANCE

APPENDIX ▾

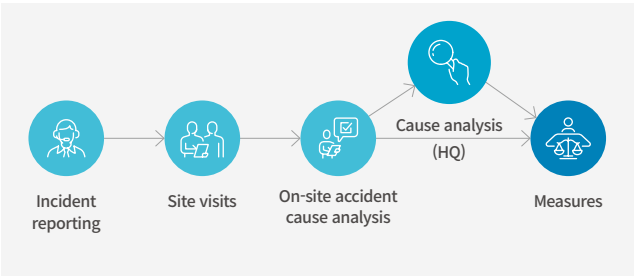
Quality Uniformity Monitoring

Kumho Tire operates the Quality Monitoring System (QMS) that automatically aggregates information on the core quality of processes and factors that affect them, and analyzes process capabilities in real time. By utilizing the QMS to effectively analyze and manage process capabilities, we strive to secure quality uniformity and improve process quality by preventing quality problems in advance and addressing the causes early. In addition, the system indicates the monitoring results of more than 200 management items to easily identify problems in the process and improve quality and productivity. In addition, in the development and mass production stages of products, we apply enhanced standards for various quality verifications such as legal endurance tests, rolling resistance, braking power on wet roads, acceleration noise, and driving stability to ensure stability and improve customer satisfaction.

Quality Risk Management Process

Kumho Tire operates a risk management process for quality in case of product and service safety incidents. In the event of a quality issue for customers, our domestic and overseas representatives visit the site without delay to analyze the cause of the accident, and if the cause cannot be determined immediately, the product is handed over to our quality analysis laboratory for analysis. In addition, we intensively monitor the market quality of new products in accordance with NP-3Y (New Product-3 Years) policy to secure new product quality.

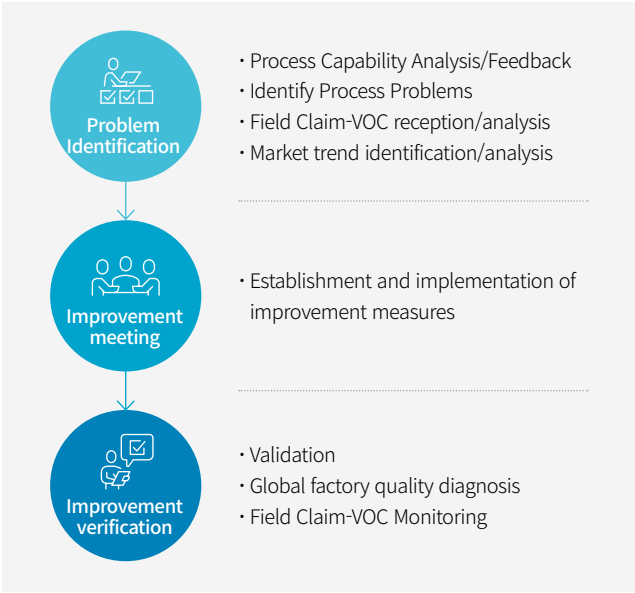
Quality risk management process



Quality Meetings

In order to improve VOCs, field and process issues, and secure preventive quality, we convene the monthly meeting where members of the research division, plants, quality, sales, and marketing can discuss issues freely. Through this, we are strengthening our quality competitiveness by identifying improvement tasks. We also operate Quality Council organized by management every two months to ensure product reliability.

Quality Improvement Process



Strengthening Quality Management Capabilities

To secure quality competitiveness and satisfy customer needs, we provide training to strengthen quality management capabilities. We have established the company-wide quality education system, conducting quality management training and job-specific training organized by the quality department, and regular training to expatriates in Korea. In 2022, we resumed face-to-face training, which had been suspended due to COVID-19, and conducted various trainings to improve quality management capabilities regarding processes, quality systems, and certifications.

	Unit	2020	2021	2022
Quality Management System Training	Persons	8	20	17
Quality Certification System Training	Persons	0	30	12
Domestic employee training	Persons	0	23	8
Total	Persons	8	73	37

Recall System

We operate the recall system to ensure the health and safety of customers from defective products. First, we monitor quality information and analyze customer claims, and evaluate product quality verification accordingly. Based on the results, we decide whether to implement a recall, review national laws and regulations, and establish a recall plan. If a recall is implemented, we publicize and report to authorities to increase the return rate. We report the results of the recalled products and take necessary process measures, reproduction, sales, and aftercare.

	Unit	2020	2021	2022
Product Recalls	cases	0	0	0
Warranty provision at beginning of year	₩ million	21,479	19,649	18,077
Warranty expenditures incurred during the period	₩ million	5,027	4,989	3,986

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

- Human Rights and Diversity
- Increase of Employee Value
- Responsible Supply Chain
- Internalization of Safety and Health

Product Responsibility

- Contribution to Local Community

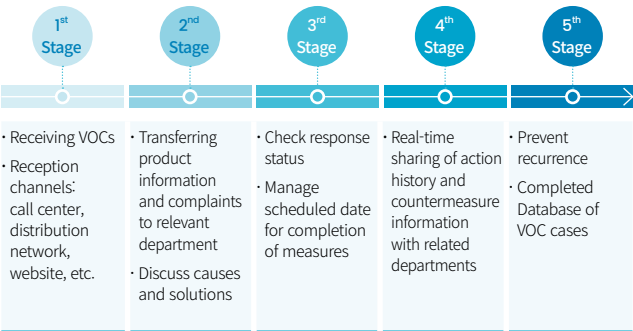
GOVERNANCE

APPENDIX ▾

Enhance Customer Communication

Comprehensive VOC Management System

Kumho Tire conducts real-time monitoring through various channels such as call centers, distribution networks, and websites to collect customer needs and opinions quickly. We receive complaints and manage them systematically, and received opinions are immediately transmitted to the relevant departments for prompt response and best services. We also thoroughly analyze cases where measures have been taken to prevent recurrence. To improve customer satisfaction, we set a customer satisfaction goal of 4.8 points (out of 5) every year, and monitor customers satisfaction after receiving and handling complaints.



Customer Satisfaction Index

	Unit	2020	2021	2022
Number of complaints	Cases	32	22	18
Happy Call Customer Satisfaction	Index	4.79	4.88	4.88

Online Customer Communication Channels

As a global tire company, we operate 21 websites in 18 countries around the world to quickly deliver more accurate information to customers around the world. We also operate official social media channels such as Facebook, Instagram, and YouTube to actively communicate with customers. In particular, our official YouTube channel, "ECSTA TV," has earned the industry's first Silver Button (100,000 subscribers), and in 2023 we launched an Instagram cartoon using our official characters, "Thoro & Roro," to become a more friendly brand. In the future, we plan to develop various communication channels and increase contact with global customers.

Warranty Program

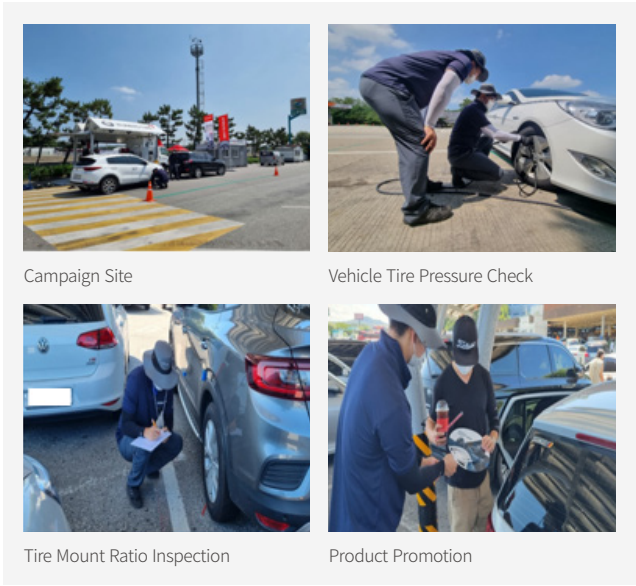
Kumho Tire has the warranty system to ensure customer safety and enhance customer trust. When a complaint about a product is received, our domestic and overseas representatives determine whether the product is defective and compensate according to internal standards. In 2022, we launched the "Kumho Satisfaction Guarantee," a special warranty program offered to customers who purchase new SUV tires.



Kumho Satisfaction Guarantee System

Customer Safety Check Campaign

Kumho Tire conducted face-to-face safety inspection campaigns in 2022 due to the easing of COVID-19 regulations. Service vehicles visited government offices and companies to check tire pressure and appearance. We also conducted drive-through Highway Safety campaigns during the summer vacation season and distributed safety guides for customers visiting the sites.



Kumho Tire Safety Inspection Campaign

Customer safety and health violations

	Unit	2020	2021	2022
Fines or penalties	Cases	0	0	0

Contribution to Local Community

Social Contribution Strategy

Kumho Tire is promoting three social contribution activities ‘Neighbor’, ‘Children and Youth’, and ‘Environment’ through social contribution projects linked to the UN 17 Sustainable Development Goals. Through business-related social contribution activities, we aim to create social value together with our stakeholders.

Mid- to Long-Term Planning for CSR Activities



Social Contribution Indicators

Indicator	Unit	2020	2021	2022
Social Contribution Donations	₩ million	232	155	162
Charities	₩ million	154	62	64
Local communities	₩ million	58	63	78
Commercial Initiatives	₩ million	20	30	20
Donations by resource	₩ million	751	659	565
Social charitable donations	₩ million	232	155	162
Associations and tax-exempt organizations	₩ million	519	504	403
Lobbying and political	₩ million	0	0	0
Number of beneficiaries	Persons	4,349	4,621	5,810
Number of education beneficiaries	Persons	4,190	4,621	5,810
Number cultural support recipients	Persons	159	0	0

Social Contribution Activities

Kumho Tire conducts social contribution activities centered on three social contribution areas: educational donations to foster future talents, support for the vulnerable in the community, and carbon reduction. In addition, we aim to contribute to the spread of social influence by continuously discovering and promoting various social contribution activities.

Educational Giving

"Stop & Go through Arts" Traffic Safety Education for Kids

Teaching elementary school students the seven essential traffic safety rules through art activities.

Total 15 schools
4,019 participants



Traffic Safety Education for Children

Youth Bullying Prevention Musical "I AM"

Awareness of the seriousness of bullying, prevention education, and establishment of self-identity based on Hermann Hesse's 'The Glass Bees'.

Total 3 schools
1,680 participants



Youth Bullying Prevention Education

Giving to the Vulnerable

Mentoring Children of Victims

Providing emotional support, improving educational environment, and customized career consulting programs to children of families affected by traffic accidents

50 children in total, 94.4% satisfaction

Kumho Tire Santa Corps

Sponsoring underprivileged children for six consecutive years

58 children in total

'Han-Sarang Association' Donation

An in-house volunteer group that has been active since 2000, where employees voluntarily collect donations for the underprivileged in the local community.

Cumulative donations of KRW 11.4 billion

Together GREEN Study Room of Hope

Support for improving learning and living environments for youth from low-income families

29 sites open in 7 years



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

- Human Rights and Diversity
- Increase of Employee Value
- Responsible Supply Chain
- Internalization of Safety and Health
- Product Responsibility

Contribution to Local Community

GOVERNANCE

APPENDIX ▾

Carbon Reduction Activities

Forests in Classroom Project

Kumho Tire planted about 19,000 trees to absorb a total of 1,379 tons of carbon dioxide over the next 30 years through the Mt. Bukhan and Mt. Inwang Carbon Offset Forests, which were implemented from 2015 to 2019. As it was suspended due to the impact of COVID-19, we have identified additional activities that can contribute to climate change response and are implementing Forests in Classroom Project. The Forests in Classroom Project, which targets elementary school students in Seoul, not only helps children realize the seriousness of climate change and environmental pollution issues, but also contributes to improving the classroom environment through the distribution of indoor plants. In 2022, we distributed about 500 trees to 21 classes to create classroom forests, and donated more than 500 ash trees to forest degradation areas in Gangwon-do Province to help prevent forest fires and reduce carbon emissions.



Distribution of pet plants at Cheongnyong Elementary School in Seoul



Citizen's Forest Creation Site in Hongcheon-gun, Gangwon-do

Climate and Environmental Sensibility Program for Future Generations

Kumho Tire operates the 'Green Campaigner' program, a climate and environmental education program for elementary school students. In 2022, a total of 1,083 elementary school students from 16 schools were educated to cultivate the competencies and awareness that children should have as climate citizens. After the theoretical learning, they had a chance to carry out campaigns on- and off-campus in order to improve awareness, and to participate in climate actions on their own.



Campaign on the Climate Crisis



Green Campaigner Promotional Poster

Highlight

Social Contribution Awards

In recognition of the commitment to social responsibility, Kumho Tire received two plaques of appreciation and commendations in 2022. At the 'Forest ESG Performance Sharing Meeting' hosted by the Korea Forestry Promotion Institute, we received thanks for our contribution to the creation of forests in local communities. We participate in the creation of forests through various activities, including carbon offset forests, Forest in Classroom, and forest recovery in Gangwon Province, thereby contributing to reducing greenhouse gases. At the '2022 Sponsorship Appreciation Day' organized by Child Fund Korea on the same day, we received the Seoul Mayor's Award in the category of the Disadvantaged and Meritorious. We have been sponsoring underprivileged children and families for seven years, conducting learning and living environment activities such as the Study Room of Hope and Santa Corps. Kumho Tire will continue to implement various social contribution activities for a better future for local communities and stakeholders.



Awarded the plaque of appreciation by the Korea Forestry Promotion Institute



Awarded the plaque of appreciation by the Mayor of Seoul at Sponsorship Appreciation Day of Child Fund Korea



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical
Management

Information Security and
Risk Management

APPENDIX ▾

GOVERNANCE

68

Responsible Governance

74

Compliance and Ethical Management

78

Information Security and Risk Management

Responsible Governance

Board of Directors Composition

As of May 2023, Kumho Tire's board of directors consists of a total of 9 members, including 2 executive, 2 non-executive, and 5 independent directors, and independence and diversity of the board of directors are secured with a majority of independent directors. The chairman of the board of directors is Chai Yong Sen, chairman of Double Star Group, a major shareholder of Xingwei Korea Co., Ltd. (a major shareholder of Kumho Tire), separated from the CEO. Subcommittees under the board of directors include the Strategic Steering Committee, Audit Committee, Independent Director Nominating Committee, Compensation Assessment Committee, and ESG Committee, with each committee member satisfying qualifications and independence.

Category	Recommender	Conditions for Appointment
Executive directors	Board of Directors (Shareholders' Meeting)	① A majority of the voting rights of shareholders present
		② ¼ or more of the total issued stocks
Independent directors	Independent Director Nominating Committee	Consensus of all directors in attendance

In particular, in the case of independent directors, the qualifications of the candidates are thoroughly reviewed by the Independent Director Nominating Committee including their share-holding status and employment in subsidiaries, in compliance with Paragraph 3 of Article 382 and Paragraph 8 of Article 542 of the Commercial Act. In addition, in accordance with Article 542 of the Commercial Act, in the case of notification or announcement of the general meetings of shareholders, details of activities and remuneration of independent directors, and details of transactions with the largest shareholder are transparently disclosed.



Disqualifications of independent directors (Paragraph 3 of Article 382 of the Commercial Act)

01. Directors, executive directors and employees who are engaged in the regular business of the relevant company, or directors, auditors, executive directors and employees who have engaged in the regular business of the relevant company within the latest two years;
02. The principal, his/her spouse, lineal ascendants, and lineal descendants, in cases where the largest shareholder is a natural person;
03. Directors, auditors, executive directors and employees of the corporation, in cases where the largest shareholder is a corporation;
04. The spouses, lineal ascendants, and lineal descendants of directors, auditors and executive directors;
05. The directors, auditors, executive directors and employees of a parent company or a subsidiary company of the relevant company;
06. Directors, auditors, executive directors and employees of a corporation which has a significant interest in the relevant company, such as business relations with the company;
07. Directors, auditors, executive directors and employees of another company for which directors, executive directors and employees of the relevant company serve as directors and executive directors.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical Management

Information Security and Risk Management

APPENDIX ▾

Board Skills Matrix

	Iltaik Jung	Yangki Chae	Chai Yong Sen	Zhang Jun Hua	Jonggil Kim	Hongyup Choi	Hansuh Gu	Jinyoung Kim	Moonsun Song	Ratio
Management	●	●	●				●	●		55.5%
Law					●	●				22.2%
Finance·Accounting				●			●		●	33.3%
ESG						●				11.1%
R&D	●									11.1%
Press								●		11.1%
Relevant Industry Experience	●		●	●						33.3%
Risk Management	●	●	●	●						44.4%
Sales · Marketing	●						●			22.2%
*Independence					●	●	●	●	●	55.5%
Gender	Male	Male	Male	Female	Male	Male	Male	Male	Male	11.1%
Nationality	Korea	Korea	China	China	Korea	Korea	Korea	Korea	Korea	22.2%
Type	Executive (CEO)	Executive	Non-Executive (Chairman)	Non-Executive	Independent	Independent	Independent	Independent	Independent	

Committee	Iltaik Jung	Yangki Chae	Chai Yong Sen	Zhang Jun Hua	Jonggil Kim	Hongyup Choi	Hansuh Gu	Jinyoung Kim	Moonsun Song	Ratio
Strategic Steering Committee	●	○	○	○			○			
Audit Committee					○		○		●	
Independent Director Nominating Committee				○	●	○				
Compensation Assessment Committee	○			○			●			
ESG Committee	●							○	○	

* As of May 2023

Strategic Steering Committee

The committee supports strategic decision-making of the board of directors by reviewing management goals and management strategies of and collecting opinions on important issues. It is composed of experts from various fields such as management, finance, and accounting in order to enable various approaches to Kumho Tire's management strategy.

Audit Committee

The Audit Committee that conducts audits related to internal finance, accounting, internal control, etc. in order to comply with transparency and fairness in accounting and overall operation of the company. The committee is composed solely of independent directors (3 members) to secure independence.

Independent Director Nominating Committee

In accordance with relevant laws and regulations, the company's articles of incorporation and the board of directors' regulations, the committee comprehensively review the qualifications of candidates and recommend final candidates for independent directors. In order to maintain independence, the majority of the committee is composed of independent directors.

Compensation Assessment Committee

The committee aims to establish and operate a fair assessment and compensation system for executives and employees within the organization, discuss major HR policies, and proceed with deliberation and approval of the right to appoint and dismiss major executives.

ESG Committee

In May 2023, the ESG committee was established under the BOD in order to integrate non-financial issues into management strategy and promote sustainable management. The committee consists of a total of 3 members, and more than half of them are independent directors to ensure independence and diversity.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical Management

Information Security and Risk Management

APPENDIX ▾

Independence of the Board

In accordance with the Commercial Act and our independence guidelines, Kumho Tire strictly reviews disqualifications and requirements for independence, and proceeds with the appointment process through recommendation by the Independent Director Nominating Committee.



Guidelines for Independence of Independent Director

- 01. Must not have been hired by the company for an executive position within the last 3 years
- 02. Must not accept or have a family member who accepts any payments from the company or a financial benefit in excess of \$60,000 from the company or its parent or subsidiaries during the fiscal year
- 03. Must not have a family member working for the company or be an executive of a parent or subsidiary company
- 04. Must not be advisors, consultants, senior management of the company nor affiliated with the company
- 05. Must not be affiliated with a major customer or partner
- 06. Must not have personal business relationship with the company or senior management
- 07. Must not be affiliated with a non-profit organization that receives substantial financial support
- 08. Must not be an external audit partner or employee during the past year
- 09. Must not have a conflict of interest that would lead to a loss of independence

Board Diversity and Expertise

In order to ensure the diversity and expertise of the board of directors, Kumho Tire does not discriminate against gender, ethnicity, race, or nationality when organizing the board of directors and appointing independent directors. Members of the board of directors have professional experience in various fields such as finance, accounting, law, corporate management, and media. Diversity is also ensured by consisting of two Chinese and one female director. The board of directors supports the activities of each subcommittee based on their diversity and expertise.

Board of Directors Operation

The Board of Directors deliberates and resolves on major management decisions. The resolution of the board of directors is made with the attendance of a majority of the directors and approved with a majority of the directors present, and special stakeholders cannot exercise their voting rights in relation to the resolution. As of 2022, Kumho Tire held a total of 7 board meetings and deliberated and resolved 18 agenda items. As a result of the voting, all of the relevant agendas met the resolution requirements and were passed as original proposals.

Board Operation Status

Category	Unit	2020	2021	2022
BOD Meetings Held	Times	9	9	7
Agendas Reported and Resolved by BOD	Cases	20	35	18
BOD Meetings Attendance Rate	%	94	95	94
Resolutions and Percentage of Agreement	Cases (%)	20 (100)	34 (100)	16 (100)

Number	Date	Details of Agenda	Approval Status	Attendance Rate	Approval Rate
1	2022.01.03	Approval of the conclusion of the deposit pledge agreement	Approved	100%	100%
2	2022.02.14	Approval of the 19th financial statement and annual report	Approved	100%	100%
		Approval of Investment in US sales corporation and occupational safety and health plan	Approved	100%	100%
3	2022.03.14	Approval of the 19th financial statement and annual report	Approved	100%	100%
		Approval of investment in US sales corporation and natural rubber purchase contract	Approved	100%	100%
		Approval of appointment of independent directors and audit committee members	Approved	100%	100%
		Approval of the 20th director remuneration limit and the 19th regular general meeting of shareholders	Approved	100%	100%
4	2022.05.13	Approval of overseas corporation payment guarantee	Approved	88.89%	100%
5	2022.08.12	Report on 2Q 2022 business performance	-	100%	-
6	2022.09.30	Approval of contribution to employee stock ownership, and overseas corporation payment guarantee	Approved	88.89%	100%
7	2022.11.11	Report on 3Q 2022 business performance	-	77.78%	-



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical Management

Information Security and Risk Management

APPENDIX ▾

Executive Liability Insurance

Kumho Tire has subscribed to executive liability insurance for executives in order to strengthen legal liability for economic damage that may occur in relation to all important business decisions and regular business within the company and for executives' management responsibility.

Category	Status	2020	2021	2022
Subscription status	O/X	O	O	O

Board Training and Plan for Improving Expertise in ESG

Directors need sufficient time and efforts to improve their expertise in order to properly understand their duties and make important decisions. In order to improve the board's understanding of ESG and strengthen its expertise, we are planning to conduct training on overall ESG management, including environment, society, and governance, for board members.

Director Remuneration

Kumho Tire transparently discloses the total remuneration of executive directors, non-executive directors, independent directors through the Corporate Governance Report. The remuneration of registered directors is determined at the general shareholders' meeting and is paid according to the payment regulations established by the Compensation Assessment Committee within the approved remuneration limit.

Category	Number of persons	Total Remuneration (KRW million)	Average Remuneration per Person (KRW million)
All directors and auditors	10	821	82
Registered directors (Excluding independent directors and members of the audit committee)	4	573	143
Independent director(Excluding audit committee members)	2	100	50
Audit committee members	4	149	37

Transparent Audit Organization

Operation of Audit Committee

Kumho Tire's Audit Committee is composed of three independent directors with expertise in accounting and finance in accordance with relevant laws and internal regulations to ensure independence and transparency. The Audit Committee audits the company's accounting and business operations to ensure transparency in accounting and legality in corporate operations, and, if necessary, investigates and supervises the business and property status of directors and subsidiaries. During 2022, the Audit Committee held a total of five committee meetings and reviewed the audit matters of external auditors and audit teams, quarterly and annual settlement results, and the operation status and results of the internal accounting control system. In addition, Kumho Tire conducts training for audit committee members on a regular basis every year to strengthen the expertise of audit committee members and provide them with training necessary for job performance.

2022 Audit Committee Composition Status

Name	Independent Director	Accounting and Finance Expertise	Attendance Rate
Moonsun Song (Chairperson)	O	Experienced in accounting, finance, or supervision at financial companies, government agencies, etc.	100%(3/3)*
Jonggil Kim	O	Experienced in accounting and finance	100%(5/5)
Hansuh Gu	O	Experienced in accounting and finance for listed companies	100%(5/5)

* Participated in all three audit committee meetings since the appointment on March 30, 2022.

Annual Report

2022 Audit Committee Member Training Status

Date	Topic	Attendees	Key Contents of Training
2022.11.30	Seohyun Accounting Corporation	Moonsun Song, Jonggil Kim, Hansuh Gu	Issues regarding Introduction of Consolidated Internal Accounting Management System and Responding Strategies



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical
Management

Information Security and
Risk Management

APPENDIX ▾

Internal Accounting Management System

Since 2019, Kumho Tire has been conducting control activities in accordance with internal accounting management regulations. The CEO and internal accounting manager evaluate the operation status and results of the internal accounting management system, and report the results to the Audit Committee, Board of Directors and general shareholders' meeting.

Kumho Tire classifies and manages control types into the Entity Level Control (ELC), Information Technology General Control (ITGC), and Transaction Level Control (TLC) to effectively evaluate the operation of the internal accounting control system. In addition we also establish and operate an internal accounting management system for 10 overseas corporations (including 4 subsidiaries located in China) considering local circumstances. For efficient operation, the Internal Accounting Management Team has staffed up from just 2 members to 6 in total, including IT experts.

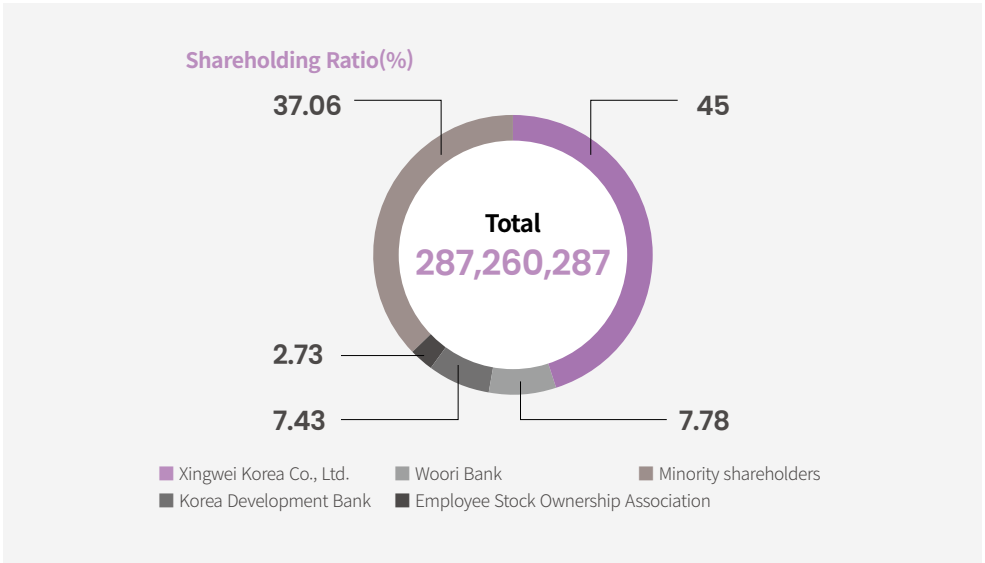
Selection Process for External Auditors

Under the periodic auditor designation system introduced in 2018, Kumho Tire is required to be audited from 2020 to 2023 by an independent external auditor designated by the Securities & Futures Commission. Samjong KPMG in 2019, Deloitte Anjin in 2020, and EY Hanyoung from 2021 to 2023 were selected as external auditors for the quarterly review, period-end audit, and internal accounting management system. Kumho Tire received appropriate opinions from external auditors regarding the 19th and 20th (current year) financial statements and internal accounting management system. The Audit Committee holds quarterly meetings with external auditors to communicate with the external auditors on matters that can have a significant impact on the judgment of stakeholders in the financial statements. Kumho Tire has already established an appointment system and assessment process for the free appointment of external auditors, which is to be introduced after the periodic designation system. We will also select the optimal external auditor by evaluating the concreteness of the auditing strategy, feasibility of implementation, and audit fees in order to ensure fairness and transparency of accounting information.

Strengthening Shareholder Rights

Shareholder Composition Status

In accordance with the Commercial Act and the Articles of Incorporation, Kumho Tire guarantees all shareholders, excluding treasury stock, one vote per share. As of the end of 2022, the total number of issued shares is 287,260,287, and Xingwei Korea Co., Ltd., the largest shareholder, holds a 45.0% of the total shares (129,267,129 shares).



Number of Shares

Shareholder	Shareholding Ratio (%)	Numebr of shares
Xingwei Korea Co., Ltd.	45	129,267,129
Woori Bank	7.78	22,357,561
Korea Development Bank	7.43	21,339,320
Employee Stock Ownership Association	2.73	7,836,013
Minority shareholders	37.06	106,460,264
Total	100	287,260,287

(As of 2022.12.31)



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical
Management

Information Security and
Risk Management

APPENDIX ▾

Shareholder Rights Protection

Kumho Tire respects the voting rights and shareholder rights of all shareholders, and guarantees that voting rights can be exercised through a proxy if necessary for the agenda presented at the general shareholders' meeting.

Kumho Tire holds all regular shareholders' meetings within three months after the end of each business year, and holds extraordinary shareholders' meetings when necessary. In addition, the announcement date for convocation is disclosed about two weeks prior to the general meeting of shareholders, and all matters are disclosed in the notice of convocation, and all other relevant matters related to the general meeting of shareholders are disclosed on the company website and electronic disclosure system. Some important agendas, such as changes to the Articles of Incorporation, are presented separately from ordinary agendas, ensuring shareholders' right to speak and vote on each major agenda.

A total of 213,823,601 shares attended Kumho Tire's 20th general shareholders' meeting, and all agenda items were approved as originally proposed with direct participation and proxy. In addition, in order to provide fair and timely information, the results of all shareholders' meetings are disclosed on the same day.

Year	Announcement Date of Convocation	Date of holding general meeting of shareholders
2023	14th March (16 days prior)	30th March

Communication with Shareholders

Kumho Tire held a total of 27 face-to-face IR meetings and conference calls in 2022 with 40 domestic and foreign institutions, including analysts at securities companies and fund managers at asset management companies, to enhance communication with shareholders and all stakeholders, and actively share information and vision. Based on the IR meeting, a total of 8 securities company reports were issued through 5 securities companies in order to share accurate investment and vision information with shareholders and domestic and foreign investors.

In addition, Kumho Tire discloses its performance and major management issues through regular annual, semi-annual, and quarterly disclosures every year, and is making great efforts to provide a variety of information suitable for shareholders.

IR Disclosures

IR Meeting Status

IR Meeting Status	IR Meeting Status	Number of Meetings	
		Institutional Investor	Securities Company
1Q 2022	Face-to-face meeting	2	4
	Conference calls	0	1
2Q 2022	Face-to-face meeting	6	2
	Conference calls	3	2
3Q 2022	Face-to-face meeting	1	1
	Conference calls	3	0
4Q 2022	Face-to-face meeting	0	0
	Conference calls	2	0
2022	Face-to-face meeting	9	7
	Conference calls	8	3



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical Management

Information Security and Risk Management

APPENDIX ▾

Compliance and Ethical Management

Compliance Management System

Kumho Tire is continuously developing the management system that complies with all business laws and ethical regulations for sustainable compliance management.

Compliance Self-Audit

Kumho Tire conducts self-audit on compliance and prevents risks in advance. Under the guidance of a compliance officer (team leader level) appointed through the board of directors, each department conducts self-audit on 348 items in a total of 17 fields targeting all domestic and foreign departments, increasing in the number of inspection areas and items compared to the previous year. The compliance officer reports the audit results to the board of directors at least once a year, and continuously monitors the corrective status of non-compliance items after establishing corrective plans.

Key Items of Self-Audit in 2022

Sales	Monopoly Regulation and Fair Trade Act, Act On The Regulation Of Terms And Conditions, Personal Information Protection Act, Tax Act, etc.	Purchase	Fair Transactions In Subcontracting Act, Fair Trade Act (large-scale internal trading), Customs Act, Act on Promotion of Mutually Beneficial Cooperation Between Large Enterprises And Small And Medium Enterprises, Chemical Substances Control Act, Foreign Trade Act, etc.
Data Privacy	Personal Information Protection Act, Act On Promotion Of Information And Communications Network Utilization And Information Protection, Credit Information Use And Protection Act, etc.	Environment	Sewerage Act, Clean Air Conservation Act, Waste Control Act, Soil Environment Conservation Act, Hazardous Chemical Substances Management, Framework Act on Green Growth, Chemical Substances Control Act, Water Environment Conservation Act, etc.
Intellectual Property Rights	Copyright Act, Design Protection Act, Patent Act, Utility Model Act, Invention Promotion Act, Trademark Act, etc.	Industry Safety	Occupational Safety and Health Act, Framework Act on Fire Protection, Industrial Accident Compensation Insurance Act, Act On The Safety Control Of Hazardous Substances, Building Act, etc.
Marketing	Trademark Act, Fair Labeling and Advertising Act, Copyright Act, etc.	Fire Safety	Framework Act on Fire Protection, Act On Installation And Management Of Firefighting Systems, etc.
Labor	Labor Standards Act, Act On The Protection Of Temporary Agency Workers, Trade Union and Labor Relations Adjustment Act, Act On The Guarantee Of Employees' Retirement Benefits, Fixed-term and Part-time Employees Protection Act, Equal Employment Opportunity And Work-family Balance Assistance Act, Act On The Promotion Of Employees' Participation And Cooperation, etc.	Customer Service	Act On The Regulation Of Terms And Conditions, claim handling, Product Liability Act, Framework Act On Consumers, and Consumer Damage Regulations, etc.
Treasury	Commercial Act, Fair Trade Act (related to disclosure), Foreign Exchange Transactions Act, Financial Investment Services And Capital Market Act, etc.	Export	International treaties and agreements, Foreign Trade Act, FTAs, Customs Act, etc.
Accounting	Corporate Accounting Standards, Act on External Audit of Stock Companies, various tax laws, etc.	Business Support	Civil Act, Commercial Act, Civil Execution Act, Debtor Rehabilitation and Bankruptcy Act, Commercial Building Lease Protection Act, etc.

Internal Diagnostic System

As part of the internal control system, Kumho Tire introduced an internal accounting management system based on the relevant regulations and a compliance officer system, as well as an internal diagnosis system to check risk items that may occur during the approval and daily work by department, so that we can improve risk management capabilities of all the executives and employees.

Compliance and Corruption Risk Assessment

Kumho Tire prepares its own risk evaluation matrix to prevent corruption and manages potential risk factors. Through this, risk factors that fall under company rules and regulations are evaluated for each inherent and residual risk, and appropriate inspection procedures and control measures are in place for each risk factor.

In addition, in order to raise employee awareness and operate efficiently, training for integrated certification auditors and internal auditors was conducted for each person in charge. We are improving our internal processes to obtain ISO37001 and ISO37301 certification within the second half of 2023.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical Management

Information Security and Risk Management

APPENDIX ▾

Ethical Management System

Kumho Tire aspires to become a company trusted by all stakeholders by not only complying with economic and legal responsibilities, but also conducting business activities that meet the ethical expectations demanded by society. To this end, we are practicing ethical management through organization composition, system establishment, and training to develop the ethical management system and strengthen the ethical awareness of executives and employees.

Establishment of the Anti-Corruption and Compliance Policy

In order to found an anti-corruption and compliance management system and to practice sustainable ethical management, Kumho Tire established the Anti-Corruption and Compliance Policy in March 2023, so that all employees can abide by and practice in regular business, and disclosed through the official website.

 [Anti-Corruption and Compliance Policy](#)



Anti-Corruption and Compliance Policy


01. The company, all executives, and employees respect the local regulations of business, and comply with anti-corruption and compliance obligations, including all laws and internal regulations.
02. All executives and employees maintain an honest and fair attitude, and do not accept any form of financial gain or gifts or entertainment elements that may undermine fair judgment in relation to their duties, as well as improper solicitation.
03. All executives and employees do not engage in immoral or unethical behaviors that can be criticized by customers, colleagues, partners, and the community in relation to daily life and work, and fulfill their responsibilities.
04. The person in charge of anti-corruption and compliance has independent authority over the operation of the anti-corruption and compliance policies and integrated management system (anti-corruption and compliance), and makes direct and regular reports to the board of directors.
05. If an executive or employee violates the obligations of anti-corruption and compliance with regulations or does not take reasonable measures to prevent the violation even after knowing the fact, the company does not take responsibility on behalf of the executive and employee and takes disciplinary action according to internal regulations.
06. The company applies the principle of zero tolerance to violations of its executives and employees' obligations to prevent corruption and comply with the norms.
07. All stakeholders subject to the anti-corruption and compliance policy can report violations or problems of compliance obligations through the person in charge of anti-corruption and compliance or the 'Cyber Reporting Office'. The contents and personal information of the informant are kept confidential, and any disadvantages or discrimination in terms of working conditions are prohibited on the grounds of reporting.
08. The company establishes, continuously manages, and improves a management system that can achieve the goals of anti-corruption and compliance management.
09. The company discloses this policy and prepares a communication channel so that changes in the environment and requirements for anti-corruption and compliance with standards can be reflected at all times.

Code of Ethics Revision

Kumho Tire recognizes that creating an ethical corporate culture is essential in order to become a sustainable corporation. In 2022, the Code of Ethics was revised to reflect the latest ethical trends and issues required by the times, such as human rights, intellectual property rights, and compliance of overseas business sites. We internally publicize so that all executives and employees can apply the revised Code of Ethics and Rules of Ethics to their daily tasks. We will create an ethical corporate culture where all employees, including overseas business sites, can make decisions based on the Code of Ethics.

 [Code of Ethics](#)

 [Bylaws of Ethics](#)

 [Rules of Ethics](#)

Implementation of Clean Contract System

Starting in 2020, Kumho Tire is implementing a clean contract system to prevent unethical practices that may occur in the entire process from contract to purchase. Persons in charge of contract work are required to submit a pledge to perform duties in a fair and transparent manner in the process of contract execution.



Main Contents of Clean Contract System

- Compliance with the Kumho Tire Code of Ethics
- Prohibition of requesting and receiving money, valuables and entertainment other than transaction
- Good faith and legal compliance
- Enhancement of win-win cooperation with business partners by providing fair and transparent opportunities
- Prohibition of coercion of unfair trade using superior position in the process of contract signing and execution
- Expansion of ethical management through contract restrictions of unethical partners



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical Management

Information Security and Risk Management

APPENDIX ▾

Report

Reporting Channel

Kumho Tire operates a cyber reporting office to effectively detect unfair business practices and misconduct by employees and to guarantee the anonymity of informants. In addition, related reports are received through various channels such as official website, phone, mail, and e-mail. Reporting channels and methods for receiving reports are regularly announced through the groupware once a half year to encourage reportings, and related information is provided in Chinese and English to improve the accessibility at overseas business sites.

Through the reporting channel, stakeholders such as employees, partners, and contractors can report all cases of violations of laws and company regulations and unethical behavior, such as bribery and unfair trade practices. Reports can be submitted anonymously or under real name, and the results of the investigation and action taken are notified through the cyber reporting office and the informant's e-mail (in the case of a real-name report).

Kumho Tire complies with strict informant and whistleblower protection principles. The body of protection for whistleblowers is the Audit Committee, and we are taking all measures and efforts to protect the anonymity and identity of informants and whistleblowers, such as limiting access to only a few authorized personnel.



Cyber Reporting Office <https://cyberreport.kumhotire.co.kr/>
Hot-line (Tel) 02-733-6566
E-mail khethics@kumhotire.com
Postal Address Audit Division, Kumho Tire, 16th fl. 68 Saemunan-ro, Jongno-gu, Seoul



Informants and Whistleblower Protection Principles

01. The Audit Committee must treat informants and whistleblowers anonymously when handling reports and cases.
02. If necessary, the case itself must not be disclosed even after the closure.
03. The audit committee shall make every effort to ensure that informants and whistleblowers do not suffer any disadvantages thereafter.

Reward System for Informants

Kumho Tire rewards for the informant based on the amount recovered and the level of contribution at least KRW 500,000 to a maximum of KRW 1 billion. We are continuously announcing the informant reward system on the groupware to encourage reportings.

Ethical Audit

Internal audit activities are becoming more important for corporate sustainable growth and preemptive risk management, and Kumho Tire conducts regular and occasional audits. Through audit activities, we promote company-wide risk diagnosis and management, such as ethical management implementation, corruption identification, and purchase transparency, and discuss violations and improvements derived from inspection results with each department to strengthen the company-wide risk management system. Through the daily audit and internal diagnosis system, work processes and compliance with regulations are constantly checked by departments at all business sites, and audits are conducted based on the reports and orders according to internal procedures.

Category	2020	2021	2022
Ehtical Audit	28	29	17

Status on Ethical Management and Countermeasures Taken

	2020	2021	2022
Dismissal	0	0	1
Suspension	1	2	0
Pay Cut	3	0	11
Reprimand	5	2	3
Warning	10	3	5
Total	19	7	20

Number of Reports in 2022

Category	Cyber Reporting	Hotline	Mail	E-mail (Ethical Management Counselling Center)	Total
Number of Cases	46	0	0	0	46



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical Management

Information Security and Risk Management

APPENDIX ▾

Internalization of Ethical Management

To ensure ethical management, Kumho Tire conducts training on the Code of Ethics every year for all office workers. Through cyber training, we are learning the contents of the code of ethics, the importance of compliance and examples of violations of the code of ethics, and countermeasures for violations. Afterwards, the ethical management level of the organization and executives and employees is evaluated and improved by taking a pledge to comply with the Code of Ethics and preparing a self-evaluation.

Ethical Management Campaign

Kumho Tire conducts campaigns such as ‘Clean Holiday Campaign’ to strengthen employees’ ethical awareness and encourage ethical management. We operate a gift return center and voluntary reporting channel so that executives, employees and suppliers who have received unjust enrichment or unfair profits such as gifts, money and articles, can voluntarily report and return them. The campaign is actively promoted through groupware.

Ethical Training

Category	Number of Persons Completing Training and Completion Ratio					
	2020		2021		2022	
	Number of Completion	Completion rate	Number of Completion	Completion rate	Number of Completion	Completion rate
Code of Ethics Training	1,489	100%	1,498	100%	1,450	100%
Code of Ethics Compliance Pledges	1,489	100%	1,498	100%	1,441	100%
Code of Ethics Compliance Self-evaluation	1,489	100%	1,498	100%	1,491	100%

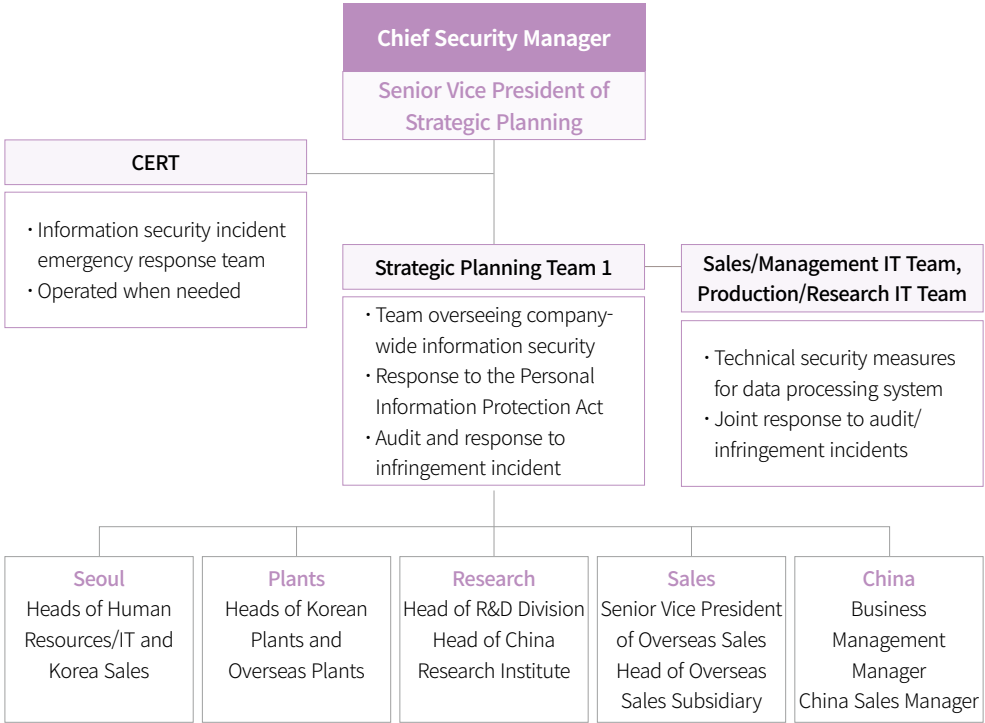
* Ethics training, pledges, and self-evaluation are conducted for all office workers, and the number of total employees may change depending on the implementation period.

Information Security and Risk Management

Information Security Management System

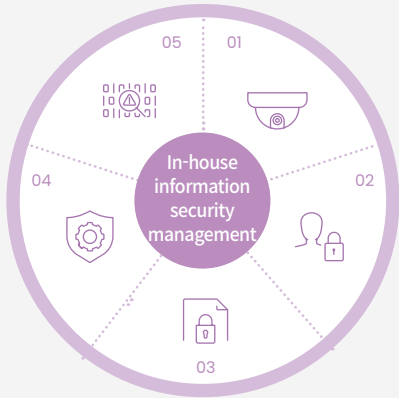
Information Security Governance

Kumho Tire's information security organization is operated under the supervision of the chief security manager, and company-wide security and business site managers conduct regular and special diagnosis, and follow-up actions for information security to ensure a stable information management. In addition, in the event of an information security incident, we promptly respond to the incident and prevent its spread, and continuously improve the information security management process in order to minimize damages.



Information Security Management Elements

- 01 Facility Information Security**
 - Access control, bringing in and out of information assets, etc.
- 02 Personnel Information Security**
 - Employees/partners/retirees management, security training, etc.
- 03 Document Information Security**
 - Secret production, display, viewing, registration, management, records, etc.
- 04 Data Information Security**
 - Data equipment/network security, computer data transmission/reception, etc.
- 05 Information Security Diagnosis**
 - Compliance check with information security of facilities, documents, personnel and information systems
 - Confirmation of information security training results
 - Review of the appropriateness of information security control activities and processes
 - Compliance confirmation with information security laws
 - Management of outsourced personnel and subcontractors





INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical
Management

Information Security and
Risk Management

APPENDIX ▾

Expanding Cybersecurity Investment

Kumho Tire is expanding investments in various information security systems, such as cyber harmful site blocking systems and Internet firewalls, to efficiently respond to increasingly intelligent cyber threats. In 2022, approximately KRW 18.1 billion was invested in the operation of the personal information protection operating system and research security solution. In addition, we are disclosing the current status of information security in accordance with the information protection disclosure obligations supervised by KISA (Korea Internet & Security Agency), which has been enforced since 2021.

[Disclosure Information](#)

2022 information Technology and Protection Related investment Status

Category	Amount (million won)	Main investment item
Investment in Information Technology Sector	16,624	Personal information protection operation system, research security solution operation, etc.
Investment in Information Protection Sector	1,490	

Improvement on Information Security System

Due to the recent increase in smart connected cars, cyber attacks and terrorism related to the cars are on increase. In order to protect automobiles and their confidential information, the German Automobile Manufacturers Association (VDA) has established TISAX, a standardized global information security certification system for automobile manufacturers around the world. We are preemptively inspecting and improving the company-wide security system to obtain TISAX certification required in Germany, Europe and the global automotive industry supply chain. We have identified items that need improvement in the areas of documentation and IT investment that are required at the corporate level, and have invested for the improvement. We plan to acquire TISAX by September 2023 for a total of seven business sites, including major business sites in Seoul, Gwangju, and Gokseong, as well as the European Technical Center (KETC) and China Research Institute (KCTC).

System improvement Process

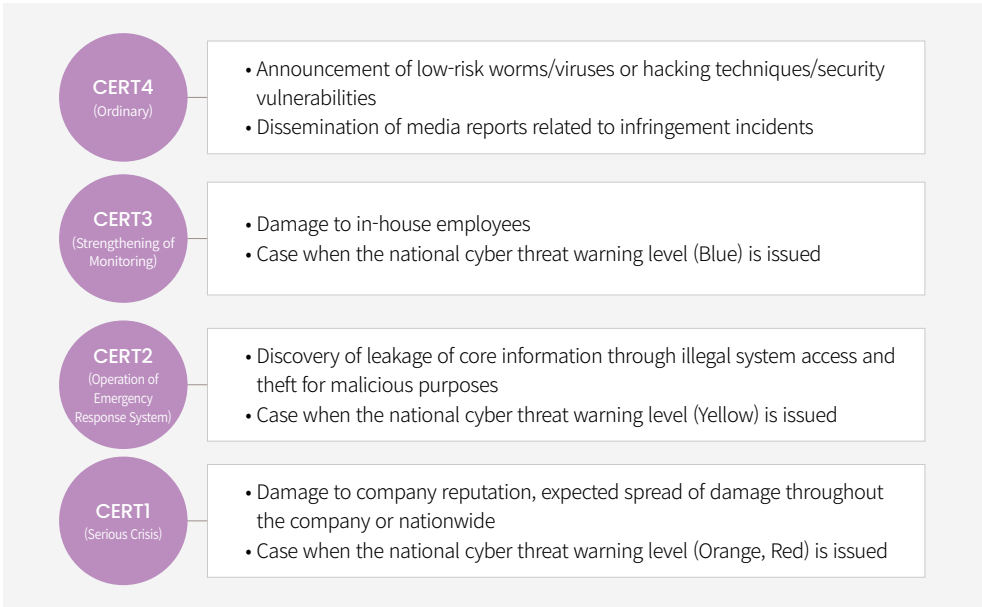
Improvement on IT Investment	Plan	Improvement of Documentation	Plan
• Completion of EU GDPR (Personal Information Protection Act) • Introduction of biometric security authentication system, MDM and security control system	• Improving in-house governance based on relevant regulations • Relevant investment review and system introduction	• Security management system and information	• Complementing related process and documentation

Information Security Incident Response System

Kumho Tire internally classifies and manages the types and grades of information security incidents, and improves the efficiency of system operation by setting the upper limit of reporting (Chief Security Manager or CEO) and the person in charge (company-wide and business site information security departments) differently according to the incident grade.

Security Incident Grade and Incident Type

In order to prevent the spread of information security damage of the incident, the company investigates the cause, secures analysis evidence, and takes countermeasures after taking preemptive measures by grade in accordance with the manual. In addition to assigning dedicated staff, if necessary, with the help of external experts, fundamental countermeasures are prepared by comprehensively determining the causes and problems to prevent recurrence.



Vulnerability Insepection and Improvement Actions

Kumho Tire conducts regular diagnosis activities (special diagnosis if necessary) and vulnerability inspections at least once a year for all business sites. The department in charge of information security implements improvement and preventive measures based on the results of diagnosis on potential security vulnerabilities, and periodically reports the progress of improvement to the management.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical
Management

Information Security and
Risk Management

APPENDIX ▾

Personal Information Protection

Personal Information Management

Recently, cases of personal information hacking due to neglect of access control management of backup files containing personal information of customers and users are continuously increasing. In order to prevent such accidents, there is a need to establish a more strengthened personal information management system than before in accordance with the amendment to the Personal Information Protection Act, which will take effect in September 2023. As of 2022, the number of users of Kumho Tire's personal information increased by 22.4% compared to the previous year due to the increase in the number of Tire Pro (non-member) and website (non-member) users. In preparation for this increasing trend, Kumho Tire safely manages the personal information data of customers, members, and employees of each agency that is stored and managed in all industries operated by the company through its own security system. As a representative example, ‘Tyre Pro’, Kumho Tire’s tire-specialized distribution brand, safely manages customers’ personal information while complying with the obligations to consent and notify information collection under the Personal Information Protection Act. Based on these efforts, in 2022, we have recorded 0 complaints related to customer privacy violations and loss.

Customer Personal information Protection Management Status

		Unit	2020	2021	2022
Number of complaints regarding customer privacy violation verified	Complaints raised externally and verified internally	Cases	0	0	0
	Complaints raised by regulatory authorities		0	0	0
	Violation of autonomous regulations		0	0	0
Number of complaints related to customer data loss	Verified customer data leaks, thefts, and losses		0	0	0

Personal Information Protection Compensation Liability Insurance

In accordance with the Enforcement Decree of the Act on Promotion of Information and Communications Network Utilization and Information Protection, we have been compulsorily subscribed to personal information protection liability insurance since 2020. We prepare for loss, theft, leakage, or damage of core and personal information and minimize risks related to information security accidents.

Personal Information Protection Training Status

In preparation for the ever-evolving cyber terrorism (hacking mail, DDoS attack, etc.) and the loss, theft, leakage, or damage of personal information of all stakeholders, including customers, employees, and suppliers, we conduct mandatory information security training for executives and employees twice a year.

Personal Information Protection Training Completion Status in 2022

Category	Number of Attendees (100% Office Worker)	Training Topic	Completion Status
1st	1,499	Prevention of loss due to information leakage by protecting information assets and raising security awareness	100%
2nd	35		100%

Cyber Hacking Mock Training

In May 2023, we have conducted mock hacking response training for 357 domestic employees in collaboration with the Korea Internet & Security Agency (KISA) to raise employee awareness of security incidents and prevent cyber attacks. Through mock training, we trained how to respond to and report actual hacking situations, and plan to regularly conduct mock training at least twice a year to strengthen information security risk management and raise employee awareness in the future.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical
Management

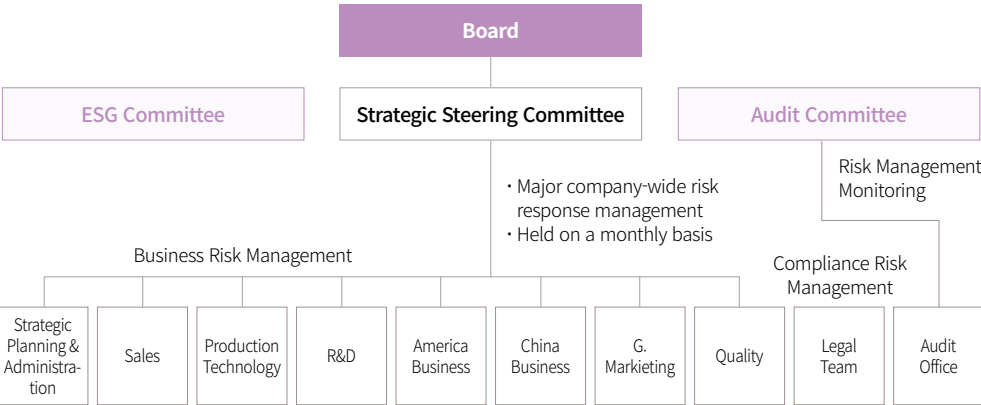
Information Security and
Risk Management

APPENDIX ▾

Risk Management System

Risk Management Governance

Kumho Tire operates a company-wide risk management system to respond to crises that may arise from the rapidly changing industrial ecosystem. The Strategic Steering Committee under the Board of Directors is held once a month where reports on key business decisions are being made together with the preparation of countermeasures. In addition, the company's compliance risk management activities are regularly monitored and managed through the Audit Committee. The ESG Committee reports major trends in legislation in terms of sustainability and the latest trends for risk prevention to the management, prepares countermeasures, and supports the department in charge.



Emerging Risk

Category	EU Deforestation Regulation Legislation	Changes in the mobility industry due to autonomous driving technology
Background	For the first time in the world, the European Union's Regulation on Deforestation free products was finally approved by the EU Council in May 23 to prevent deforestation and forest degradation. The main goal of EU companies is to fulfill the obligation to prove that the products and raw materials handled are not related to new deforestation and devastation after 2021. In addition, it is necessary to manage not only the relevance of deforestation in the supply chain, but also whether human rights regulations are violated.	The rapid development of autonomous driving and AI technologies is emerging as a new topic in the mobility and tire industries. Self-driving cars require more detailed technical readiness of smart tires as they have to respond based on their own data for driving and vehicle inspection without the help of the driver. In addition, new risks in the tire industry include cyber security for tires and parts, costs due to replacement of existing parts and sensors, and other business risks.
Countermeasures	<ul style="list-style-type: none">• Expansion of natural rubber and supply chain inspections• Preliminary investigation and planning for preparation of certificate of due diligence of origin• Expansion of ESG evaluation for suppliers and human rights due diligence	<ul style="list-style-type: none">• Continued acquisition of patent technologies related to autonomous driving, such as sensor modules and wireless communication devices• MOU agreement for bus monitoring total solution• Expansion of smart tire-related business partnerships

Integrated Risk Management

Kumho Tire manages environmental and safety risks that can affect sustainable management activities according to 7 major categories and 20 detailed categories, and has established departmental organizations that respond in detail to each risk, possibility of occurrence and ripple effects, etc. In addition, we select potential risks that can have a significant impact on our business depending on the domestic and global business environment, and preemptively manage them through monitoring with key risk management items.

Risk Type

Financial Risk	Environmental Safety Risk	Human Risk	Social Risk
Economic crisis Non-performing loans	Safety accident, natural disaster and environmental pollution, global environmental regulation	Human risks, illnesses and disabilities	Social Risk, labor-management consultation issues
IP Risk*	Fabrication Risk	Market Risk	
Technology-related crisis, information leakage	Crisis in production and sales process, inspection disabled state, power outage, quality assurance	Expansion of application of imported tires by manufacturers, new competitors, intensifying competition in the domestic tire market, customer-related crisis	

*IP (Intellectual Property) Risk: Risk related to intellectual property



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

ENVIRONMENT

SOCIAL

GOVERNANCE

Responsible Governance

Compliance and Ethical
Management

Information Security and
Risk Management

APPENDIX ▾

Tax Risk Management

Kumho Tire recognizes the importance of the social and economic impact of all of its business activities, and seeks to fulfill its social responsibilities in the tax sector by faithfully fulfilling its tax obligations. Our overseas related parties, including our company, comply with each country's tax laws and OECD transfer pricing guidelines in all transactions.

Transparent Tax Policy

1. Compliance

- In accordance with the tax policy, we comply with the tax laws and regulations of all countries where our business sites are located, faithfully fulfilling our legal tax reporting and payment obligations.
- We have established transfer pricing policies in accordance with global standards, including the OECD Transfer Pricing Guidelines, and are applying them to all business activities. We are also faithfully fulfilling our obligation to submit reports on BEPS (Base Erosion and Profit Shifting).
- We timely check laws and policies that we must comply with, such as international tax laws, tax treaties, and amendments to the OECD Transfer Pricing Guidelines, and report important revisions to management.
- We abide by the principle of creating a transparent and cooperative relationship with the tax authorities of all countries where our business sites are located.

2. Tax Risk Management

- Tax risks always exist due to factors such as difficulties in understanding, complexity, and overdue application due to occasional amendments to tax laws and related regulations. Hence we are implementing our best efforts to minimize uncertainty and eliminate risks.
- Major tax risks are continuously being managed and monitored, and risks are minimized through consultation with external tax experts.
- We are lowering global tax risks by supporting overseas related parties' tax reporting and tax payment obligations, including corporate tax, and submission of data by country.

3. Global Standard Application

- We fulfill our tax obligations with good faith and sincerity, complying with our responsibilities as taxpayers in all countries where we operate.
- We do not engage in transactions using tax havens, nor do we transfer income between countries using the tax structure of low-tax countries.
- We do not use a tax structure that has no commercial substance nor engage in tax avoidance or income transfer by taking advantage of unfair tax burden reduction or deficiencies in the international tax system.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

- Materiality Assessment
- Stakeholder Engagement
- Financial Performance
- GRI Context Index
- TCFD Index
- SASB Index
- UN Global Compact
- WEF IBC Stakeholder Capitalism Metrics
- UN SDGs Contribution
- Domestic Greenhouse Gas Emission Verification Statement
- Overseas Greenhouse Gas Emission Verification Statement
- Scope 3 Greenhouse Gas Emission Verification Statement
- Independent Assurance Statement
- Awards
- About This Report

APPENDIX

Materiality Assessment	85
Stakeholder Engagement	89
Financial Performance	90
GRI Context Index	91
TCFD Index	95
SASB Index	96
UN Global Compact	97
WEF IBC Stakeholder Capitalism Metrics	98
UN SDGs Contribution	99
Domestic Greenhouse Gas Emission Verification Statement	100
Overseas Greenhouse Gas Emission Verification Statement	101
Scope 3 Greenhouse Gas Emission Verification Statement	102
Independent Assurance Statement	103
Awards	105
About This Report	106



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

Materiality Assessment

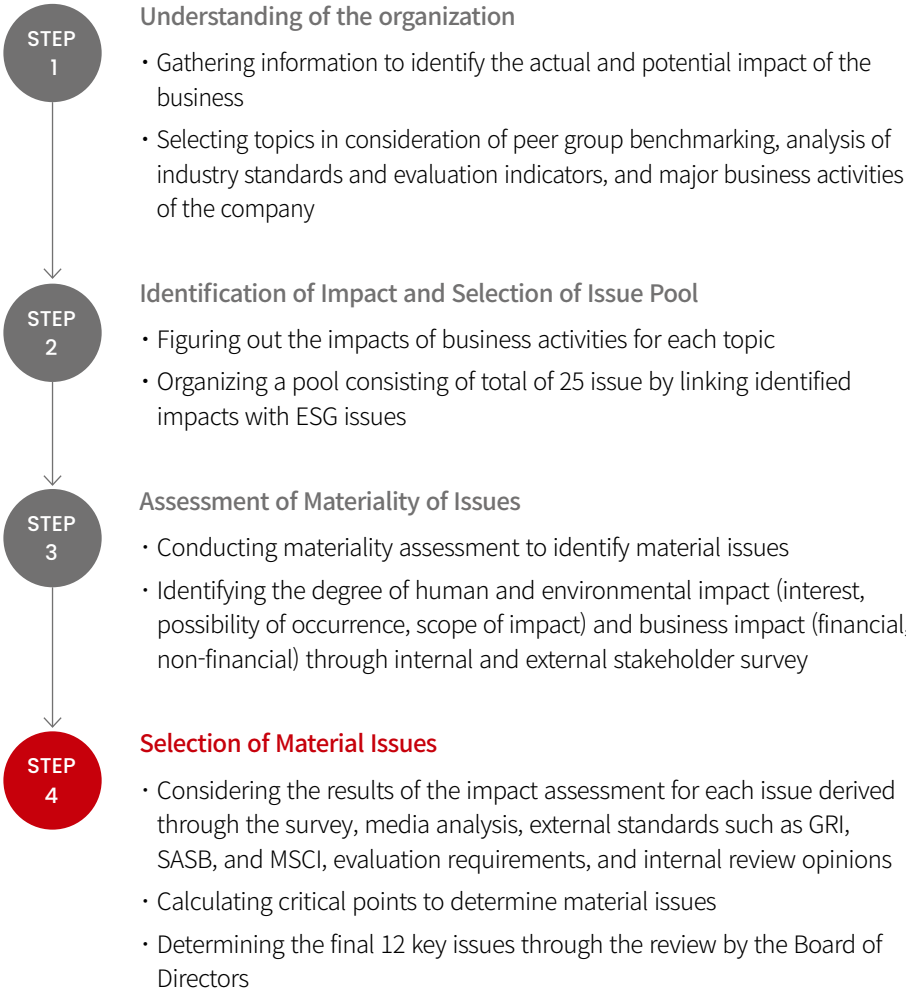
Materiality Assessment Process

Double Materiality Assessment

Kumho Tire selects and reports major issues that affect the company's business and stakeholders each year based on the GRI (Global Reporting Initiative) Standards, an international sustainability reporting guideline. Material issues were selected through a double materiality assessment that considers both the impact of issues generated by a company's business activities on the environment and society (outward, impact materiality) and the financial impact on the company (inward, financial materiality).

Materiality Assessment Process

We selected 25 key topics for the Sustainability Report by analyzing the impact of the organization's business activities. And then, by reflecting internal and external stakeholder surveys and internal evaluations, 12 material issues requiring intensive management were identified. Material issues were finalized through the review process of the board of directors, and strategies, action plans, activities, and performance related to the issues were transparently disclosed in the sustainability report.





INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

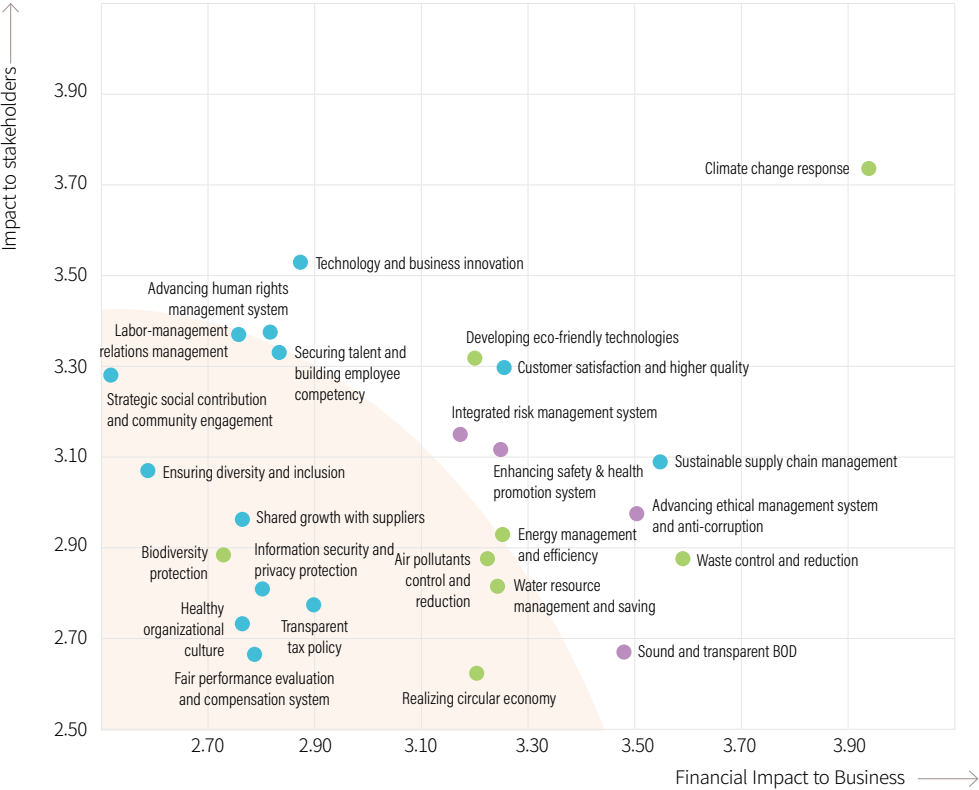
Materiality Assessment

- Stakeholder Engagement
- Financial Performance
- GRI Context Index
- TCFD Index
- SASB Index
- UN Global Compact
- WEF IBC Stakeholder Capitalism Metrics
- UN SDGs Contribution
- Domestic Greenhouse Gas Emission Verification Statement
- Overseas Greenhouse Gas Emission Verification Statement
- Scope 3 Greenhouse Gas Emission Verification Statement
- Independent Assurance Statement
- Awards
- About This Report

Materiality Assessment

Kumho Tire selected 12 priority topics through a double materiality assessment matrix that applied the viewpoints of the impact of issues arising from business activities on the environment and society (Outward, Impact Materiality) and the financial impact on the company (Inward, Financial Materiality).

Materiality Assessment Matrix



No.	Area	Issue	Customers	Employees	Shareholders & Investors	Suppliers	Government, Community and NGOs
1	Environment	Climate change response	●		●		●
2	Society	Sustainable supply chain management				●	
3	Society	Customer satisfaction and higher quality	●	●	●		
4	Environment	Developing eco-friendly technologies	●				●
5	Governance/Economy	Advancing ethical management system and anti-corruption		●			●
6	Environment	Waste control and reduction	●				●
7	Governance/Economy	Technology and business innovation	●	●	●		
8	Society	Enhancing safety & health promotion system		●		●	●
9	Governance/Economy	Integrated risk management system		●			●
10	Environment	Energy management and efficiency	●				●
11	Society	Advancing human rights management system		●		●	
12	Society	Securing talent and building employee competency		●		●	



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

- Stakeholder Engagement
- Financial Performance
- GRI Context Index
- TCFD Index
- SASB Index
- UN Global Compact
- WEF IBC Stakeholder Capitalism Metrics
- UN SDGs Contribution
- Domestic Greenhouse Gas Emission Verification Statement
- Overseas Greenhouse Gas Emission Verification Statement
- Scope 3 Greenhouse Gas Emission Verification Statement
- Independent Assurance Statement
- Awards
- About This Report

Materiality Assessment

12 Material Issues

Management Approach by Material Issue

Kumho Tire identifies the business impact of material issues identified through materiality assessment in terms of risks and opportunities, and discloses strategies, activities, and performance for those issues through our sustainability report.

Area	Issue	Business Impact	Impact	Strategy and Response	GRI	Page
Environment	Climate change response	As the transition to a carbon-neutral society is accelerating and car makers at home and abroad are demanding carbon neutrality, Kumho Tire has declared 2045 Net-Zero, established a carbon-neutral roadmap, and actively been implementing greenhouse gas reduction measures.	Cost	- Declaration of 2045 Net-Zero - Establishing Net-Zero roadmap - Implementing greenhouse gas reduction measures	305(Emissions)	18-23p
Society	Sustainable supply chain management	Considering the impact of the Corporate Sustainability Due Diligence Directive (CSDDD) introduced by the EU, which will take effect from 2024, we will manage to minimize all ESG risks that may occur throughout the supply chain.	Risk	- Strengthening ESG items in supplier evaluation - Suppliers' pledge on the Code of Conduct - Regular and ad-hoc evaluation of suppliers - Establishing policies related to conflict minerals	414(Supplier Social Assessment)	51-56p
Society	Customer satisfaction and higher quality	To strengthen reliability with all stakeholders and maintain customer satisfaction, we establish a quality management system and establish a mid- to long-term roadmap to minimize quality risks.	Sales	- Establishing mid- to long-term roadmap for quality management - Ensuring the uniformity of mass production	417(Marketing and Labeling)	62-65p
Environment	Developing eco-friendly technologies	In response to the demands of stakeholders to minimize environmental impacts from production stage to use and disposal of products, Kumho Tire will develop technologies to reduce environmental impacts to become a leading eco-friendly tire company.	Sales	- Establishing advanced technology roadmap - Developing sustainable materials - Expanding eco-friendly tires	416(Customer Safety and Health)	24-29p
Governance /Economy	Advancing ethical management system and anti-corruption	To ensure sustainable compliance management, we will prevent all unfair and unethical behaviors by continuously advancing ethical management and anti-corruption management systems and cultures related to business.	Risk	- Obtaining anti-corruption and compliance management system (ISO 37001 & 37301) certification - Revising the Code of Ethics/Bylaws and Anti-Corruption/Compliance Policy - Conducting employee training on ethical management and fair trade - Operating autonomous compliance check system and cyber reporting system	205(Anti-corruption), 206(Anti-competitive behavior)	74-77p
Environment	Waste control and reduction	In line with the trend of strengthening domestic and international regulations, Kumho Tire has established a target to improve waste recycling rate and is operating a waste treatment process.	Cost	- Establishing waste recycling rate targets - Utilizing the Allbaro system	306(Waste)	39p
Governance /Economy	Technology and business innovation	As electric vehicles become popular, the demand for EV tires is also increasing. Accordingly, Kumho Tire has been developing EV tires and related technologies, while producing existing tires in an eco-friendly way and conducting related research.	Sales	- Future-oriented high-tech R&D and new technology innovation - Launching EV tires and developing related technologies - Eco-friendly tire production and R&D	301(Raw Materials)	27-29p



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

Materiality Assessment

Area	Issue	Business Impact	Impact	Strategy and Response	GRI	Page
Society	Enhancing safety & health promotion system	To create a healthy workplace with safety and health as the top priority, we strive for safety and health management based on the principles of safe workplaces, employee health management, and accident prevention and response.	Cost/Risk	- Revising safety and health policy - Expanding safety and health communication channels - Establishing safety and health management system and renewing ISO45001 certification	403 (Occupational Health and Safety)	57-61p
Governance /Economy	Integrated risk management system	In response to constantly changing risks such as global environmental regulations, we have established and operate a preemptive risk management system, and created corporate culture to promptly and effectively mitigate risks.	Cost/Risk	- Continuously updating risk type, likelihood, and ripple effects to relevant departments - Operating efficient risk response organization and process - Conducting risk response simulation training for each business site - Conducting risk management training for employees and including as a performance evaluation factor	201 (Economic Performance), 207(Tax)	81-83p
Environment	Energy management and efficiency	To save energy, we operate the Energy Management Committee, increase the proportion of renewable energy, and systematically manage energy by utilizing the factory energy management system.	Cost	- Operating the Energy Management Committee - Utilizing FEMS (Factory Energy Management System) - Constructing new renewable energy (solar power) facilities	302 (Energy)	33-34p
Society	Advancing human rights management system	With increased demands on corporate human rights management in domestic and international guidelines, as well as enhanced evaluation criteria of ESG ratings agency, we intend to revise and manage our human rights policy.	Risk	- Implementing human rights impact assessment - Conducting awareness training to prevent bullying in the workplace - Revising and distributing human rights policy	405(Diversity and Equal Opportunity) 406(Non-discrimination)	40-43p
Society	Securing talent and building employee competency	We are endeavouring to secure core talents and to improve capabilities of employees, which are the backbone of the company. In addition, we strive to secure work-life balance for employees and create a good work culture.	Sales	- Improving position and personnel evaluation system - Expanding incentive system - Expanding training programs for new hires	401 (Employment)	44-47p



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement






Independent Assurance Statement

Awards

About This Report

Stakeholder Engagement

Kumho Tire derived the scope of stakeholders in accordance with the 'Stakeholder Identification and Engagement Procedure' of AA1000, GRI, and ISO26000 and classified stakeholders based on responsibility, influence, proximity, dependence, and representation. By establishing communication channels tailored to the characteristics of stakeholders, various opinions are collected and key issues are identified and integrated into management activities.

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Stakeholder	Customers	Employees	Shareholders & Investors	Suppliers	Government, Community and NGOs
Communication channel	<ul style="list-style-type: none">• Customer satisfaction survey• Operation of SNS such as YouTube• Quality Meetings• Process inspection, etc.	<ul style="list-style-type: none">• Labor-Management Council• Collective bargaining rights• Labor-Management Joint Development Committee for Employment Safety• Presentation on management status• Staff meeting• Human rights impact assessment	<ul style="list-style-type: none">• Board of Directors• General shareholders' meeting• Disclosure of Sustainability Report, etc.• Earnings release conference• IR briefing, etc.	<ul style="list-style-type: none">• Supplier Satisfaction Survey• Regular supplier evaluation• Support for supplier training• Agency policies briefing and discussion meetings	<ul style="list-style-type: none">• Communication with authorities related to environment and safety regulations• Promotion of government tasks• Social contribution (Hansarang Volunteer Group)• Contribution to biodiversity (cleaning campaign for Jangnok Wetland)• Improving educational environment for the socially vulnerables in cooperation with NGOs (ChildFund Korea)
Major interests of stakeholders	<ul style="list-style-type: none">• Product and service quality• Responsible manufacturing• Customer safety• Green technology	<ul style="list-style-type: none">• Stabilization of labor-management relations• Welfare benefit• Employment security• Employee safety and health	<ul style="list-style-type: none">• Climate change response• Financial performance• Sound governance• Compliance• Enhancement of market competitiveness	<ul style="list-style-type: none">• Shared growth• Fair trade• Supply Chain ESG management• Sustainable supply chain	<ul style="list-style-type: none">• Contribution to community development• Social contribution activities• Stimulating the local economy
Kumho Tire's countermeasures	<ul style="list-style-type: none">• Implementation of quality management roadmap• Quality uniformity monitoring• Operation of Quality Meetings• Customer satisfaction survey• Customer safety inspection campaign• Free warranty system	<ul style="list-style-type: none">• Operation of labor-management council• Improvement of work environment• Establishment of safety and health management policy• Safety and health management system certification• Employee health management program• Improvement of personnel evaluation system• Certification on Exemplary Laboratories	<ul style="list-style-type: none">• Creation of economic performance• Publication of Sustainability Report• Advancement of ethical management• Establishment of risk management system	<ul style="list-style-type: none">• Regular supplier evaluation and satisfaction survey• Suppliers' pledge on ethics• Anti-corruption management system• Support for strengthening the capabilities of suppliers and sales agencies	<ul style="list-style-type: none">• Community-based social contribution• Carbon reduction activities• Climate environment education and campaign for children• Traffic safety education for children and school violence prevention education for teenagers• Donation to the underprivileged• Industry-linked social contribution activities



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

Financial Performance

Economic Performance

Summarized Income Statement (consolidated)

Item	Unt	2020	2021	2022
Sales	KRW million	2,170,677	2,601,223	3,559,158
Cost of goods sold		1,698,239	2,138,314	2,954,774
Gross profit		472,438	462,909	604,385
Selling and administrative expenses		476,909	504,427	581,249
Operating income (loss)		-4,471	-41,518	23,136
Net non-operating expenses		82,390	33,649	107,179
Profit (loss) before tax		-86,861	-75,167	-84,044
Income tax expenses		-3,922	-3,316	-6,574
Current net profit (loss)		-82,939	-71,851	-77,470

Summarized Financial Position (consolidated)

Item	Unt	2020	2021	2022
Current assets	KRW million	1,154,989	1,553,029	1,764,940
Non-current assets		2,675,804	2,775,311	2,916,571
Non-current assets held for sale		15,409	13,866	13,474
Total assets		3,846,202	4,342,206	4,694,985
Current liabilities		950,431	1,500,526	2,342,836
Non-current liabilities		1,728,177	1,560,112	1,107,594
Total liabilities		2,678,607	3,060,638	3,450,430
Paid-in capital		1,436,301	1,436,301	1,436,301
Capital surplus	KRW million	224,985	224,985	224,985
Other capital		-19,538	-19,538	-19,538
Non-controlling interests		-	108,562	118,438
Accumulated other comprehensive income		8,017	94,526	98,710
Retained earnings		-482,171	-563,269	-614,340
Total equity		1,167,595	1,281,568	1,244,556
Total liabilities and equity		3,846,202	4,342,206	4,694,985

Tire Manufacturing

Classification	Unit	2020	2021	2022
Number of tires manufactured	1,000 units	37,290	42,609	48,351

Raw Materials for Tire Manufacturing

Classification	Unit	2020	2021	2022
Input amount (rate) of natural rubber	USD 1,000 (%)	155,336 (23.9)	219,852 (23.5)	260,264 (21.7)
Input weight (rate) of natural rubber	Tons (%)	107,477 (23.3)	121,605 (23.1)	137,369 (23.0)
Input amount (rate) of synthetic rubber	USD 1,000 (%)	158,947 (24.4)	221,651 (23.7)	276,971 (23.1)
Input weight (rate) of synthetic rubber	Tons (%)	100,735 (21.8)	113,157 (21.5)	127,176 (21.3)
Input amount (rate) of cord ply	USD 1,000 (%)	130,168 (20.0)	185,126 (19.8)	221,772 (18.5)
Input weight (rate) of cord ply	Tons (%)	58,126 (12.6)	66,253 (12.6)	74,436 (12.5)
Input amount (rate) of carbon black	USD 1,000 (%)	71,529 (11.0)	122,573 (13.1)	182,574 (15.2)
Input weight (rate) of carbon black	Tons (%)	96,213 (20.8)	108,762 (20.7)	122,139 (20.5)
Input amount (rate) of bead wire	USD 1,000 (%)	18,398 (2.8)	25,975 (2.8)	33,541 (2.8)
Input weight (rate) of bead wire	Tons (%)	18,403 (4.0)	21,318 (4.1)	24,535 (4.1)
Input amount (rate) of other raw materials	USD 1,000 (%)	116,565 (17.9)	161,000 (17.2)	226,701 (18.9)
Input weight (rate) of other raw materials	Tons (%)	80,984 (17.5)	94,612 (18.0)	110,489 (18.5)
Ratio of reclaimed rubber use	%	0.58	0.57	0.61



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

GRI Content Index

GRI Standards	Category	No.	Disclosure Name	Page	Remark	
Universal Standards						
GRI 2 : General Disclosures 2021	The organization and its reporting practices	2-1	Organizational details	4-5		
		2-2	Entities included in the organization’s sustainability reporting	4-5, 106	Reporting scope	
		2-3	Reporting period, frequency and contact point	106		
		2-4	Restatements of information	106		
		2-5	External assurance	103-104		
	Activities and workers	2-6	Activities, value chain and other business relationships	4-9		
		2-7	Employees	44-50		
		2-8	Workers who are not employees	44-50		
	Governance	2-9	Governance structure and composition	12-17, 68-73		
		2-10	Nomination and selection of the highest governance body	68-73		
		2-11	Chair of the highest governance body	68-69		
		2-12	Role of the highest governance body in overseeing the management of impacts	68-73		
		2-13	Delegation of responsibility for managing impacts	68-69		
		2-14	Role of the highest governance body in sustainability reporting	12-17		
		2-15	Conflicts of interest	-	Refer to Annual Report	
		2-16	Communication of critical concerns	89		
		2-17	Collective knowledge of the highest governance body	70		
		2-18	Evaluation of the performance of the highest governance body	-	Refer to Annual Report	
		2-19	Remuneration policies	-	Refer to Annual Report	
		2-20	Process to determine remuneration	-	Refer to Annual Report	
		2-21	Annual total compensation ratio	-	Refer to Annual Report	
		Strategy, policies and practices	2-22	Statement on sustainable development strategy	3, 12-13	
			2-23	Policy commitments	31, 40, 51, 56, 57, 75	Refer to disclosure on homepage
	2-24		Embedding policy commitments	32, 42, 51, 56, 58-59, 75-77		
	2-25		Processes to remediate negative impacts	81-83		
	2-26		Mechanisms for seeking advice and raising concerns	12-17, 75-77		
	2-27		Compliance with laws and regulations	74~77		
	2-28		Membership associations	15, 105		
	Stakeholder engagement	2-29	Approach to stakeholder engagement	89		
		2-30	Collective bargaining agreements	48-49		
Material Topics						
GRI 3: Material Topics 2021	Disclosures on material topics	3-1	Process to determine material topics	85-88		
		3-2	List of material topics	85-88		
		3-3	Management of material topics	85-88		



GRI Content Index

INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

- Materiality Assessment
- Stakeholder Engagement
- Financial Performance
- GRI Context Index**
- TCFD Index
- SASB Index
- UN Global Compact
- WEF IBC Stakeholder Capitalism Metrics
- UN SDGs Contribution
- Domestic Greenhouse Gas Emission Verification Statement
- Overseas Greenhouse Gas Emission Verification Statement
- Scope 3 Greenhouse Gas Emission Verification Statement
- Independent Assurance Statement
- Awards
- About This Report

GRI Standards	Category	No.	Disclosure Name	Page	Remark
Economics					
GRI 201: Economic Performance 2016	Economic Performance	201-1	Direct economic value generated and distributed	9	
		201-2	Financial implications and other risks and opportunities due to climate change	20	
		201-3	Defined benefit plan obligations and other retirement plans	44-45	
		201-4	Financial assistance received from government	-	N/A
GRI 202: Market Presence 2016	Market Presence	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	-	
		202-2	Proportion of senior management hired from the local community	-	
GRI 203: Indirect Economic Impacts 2016	Indirect Economic Impacts	203-1	Infrastructure investments and services supported	9	
		203-2	Significant indirect economic impacts	9	
GRI 204: Procurement Practices 2016	Procurement Practices	204-1	Proportion of spending on local suppliers	51-56	
GRI 205:Anti-corruption 2016	Anti-corruption	205-1	Operations assessed for risks related to corruption	74-77	
		205-2	Communication and training about anti-corruption policies and procedures	74-77	
		205-3	Confirmed incidents of corruption and actions taken	76	
GRI 206: Anti-competitive Behavior 2016	Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	54	
GRI 207: Tax 2019	Tax	207-1	Approach to tax	83	
		207-2	Tax governance, control, and risk management	83	
		207-3	Stakeholder engagement and management of concerns related to tax	83	
		207-4	Country-by-country reporting	83	
Enviromental					
GRI 301 : Materials	Materials	301-1	Materials used by weight or volume	90	
		301-2	Recycled input materials used	28, 90	
		301-3	Reclaimed products and their packaging materials	39	
GRI 302: Energy 2016	Energy	302-1	Energy consumption within the organization	33-34	
		302-2	Energy consumption outside of the organization	33-34	
		302-3	Energy intensity	33-34	
		302-4	Reduction of energy consumption	33-34	
		302-5	Reduction in energy requirements of products and services	33-34	
GRI 303: Water and Effluents 2018	Water and Effluents	303-1	Interactions with water as a shared resource	37-38	
		303-2	Management of water discharge-related impacts	37-38	
		303-3	Water withdrawal	37-38	
		303-4	Water discharge	37-38	
		303-5	Water consumption	37-38	



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

GRI Content Index

GRI Standards	Category	No.	Disclosure Name	Page	Remark
GRI 304: Biodiversity 2016	Biodiversity	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	-	N/A
		304-2	Significant impacts of activities, products, and services on biodiversity	39	
		304-3	Habitats protected or restored	-	N/A
		304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	-	N/A
GRI 305: Emissions 2016	Emissions	305-1	Direct(Scope 1) GHG emissions	23, 35	
		305-2	Energy indirect(Scope 2) GHG emissions	23, 35	
		305-3	Other indirect (Scope 3) GHG emissions	23, 36	
		305-4	GHG emissions intensity	35-36	
		305-5	Reduction of GHG emissions	18-23, 35-36	
		305-6	Emissions of ozone-depleting substances (ODS)	-	N/A
		305-7	Nitrogen oxides(NOx), sulfur oxides(SOx), and other significant air emissions	36	
GRI 306: Waste 2020	Waste	306-1	Waste generation and significant waste-related impacts	39	
		306-2	Management of significant waste-related impacts	39	
		306-3	Waste generated	39	
		306-4	Waste diverted from disposal	39	
		306-5	Waste directed to disposal	39	
GRI 308: Supplier Environmental Assessment 2016	Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria	51-53	
		308-2	Negative environmental impacts in the supply chain and actions taken	51-53	
Social					
GRI 401: Employment 2016	Employment	401-1	New employee hires and employee turnover	44-47	
		401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	49-50	
		401-3	Parental leave	50	
GRI 402: Labor/Management Relation	Labor/Management Relations	402-1	Minimum notice periods regarding operational changes	-	
GRI 403: Occupational Health and Safety 2018	Occupational Health and Safety	403-1	Occupational health and safety management system	57	
		403-2	Hazard identification, risk assessment, and incident investigation	58	
		403-3	Occupational health services	58-61	
		403-4	Worker participation, consultation, and communication on occupational health and safety	58	
		403-5	Worker training on occupational health and safety	58-59	
		403-6	Promotion of worker health	61	
		403-7	Prevention and mitigation of occupational health and safety impact directly linked by business relationships	57-61	
		403-8	Workers covered by an occupational health and safety management system	57-61	
		403-9	Work-related injuries	57-61	
		403-10	Work-related ill health	57-61	



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

GRI Content Index

GRI Standards	Category	No.	Disclosure Name	Page	Remark
GRI 404: Training and Education 2016	Training and Education	404-1	Average hours of training per year per employee	47	
		404-2	Programs for upgrading employee skills and transition assistance programs	46-47	
		404-3	Percentage of employees receiving regular performance and career development reviews	46	
GRI 405: Diversity and Equal Opportunity 2016	Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	43, 69-70	
		405-2	Ratio of basic salary and remuneration of women to men	-	Refer to Annual Report
GRI 406: Non-discrimination 2016	Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	42	
GRI 407: Freedom of Association and Collective Bargaining 2016	Freedom of Association and Collective Bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	-	No worksite with significant risk
GRI 408: Child Labor 2016	Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	-	No worksite with significant risk
GRI 409: Forced or Compulsory Labor 2016	Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	-	No worksite with significant risk
GRI 410 : Security Practices	Security Practices	410-1	Security personnel trained in human rights policies or procedures	-	
GRI 411: Rights of Indigenous Peoples 2016	Rights of Indigenous Peoples	411-1	Incidents of violations involving rights of indigenous peoples	-	No violations
GRI 413: Local Communities 2016	Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs	66-67	
		413-2	Operations with significant actual and potential negative impacts on local communities	-	No worksite with significant risk
GRI 414: Supplier Social Assessment 2016	Supplier Social Assessment	414-1	New suppliers that were screened using social criteria	51-53	
		414-2	Negative social impacts in the supply chain and actions taken	51-53	
GRI 415: Public Policy	Public Policy	415-1	Political contributions	66	No political contributions
GRI 416: Customer Health and Safety 2016	Customer Health and Safety	416-1	Assessment of the health and safety impacts of product and service categories	62-65	
		416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	65	No violations
GRI 417: Marketing and Labeling 2016	Marketing and Labeling	417-1	Requirements for product and service information and labeling	-	Performance testing and labeling for all products
		417-2	Incidents of non-compliance concerning product and service information and labeling	-	No violations
		417-3	Incidents of non-compliance concerning marketing communications	-	No violations
GRI 418: Customer Privacy 2016	Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	78-80	No complaints



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

TCFD Index

Kumho Tire strives to implement climate change response activities in accordance with the TCFD recommendations. The recommendations consist of governance, strategy, risk management, and metrics and targets, and we intend to disclose climate change-related risks transparently to stakeholders including investors, integrating risks into ESG management actions.

Topic	TCFD Recommendation	Page	Details	CDP Linked Items
Governance	a) Describe the board’s oversight of climate-related risks and opportunities	18-19	· Establishment of ESG Management Committee under the Board of Directors · Holding ESG Management Committee meetings quarterly	C1.1b, C1.2, C1.2a
	b) Describe management’s role in assessing and managing climate-related risks and opportunities	18-19	· Review of ESG-related agenda and performance	C1.1b, C1.2, C1.2a
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	20	· Acceleration of transition to a carbon-neutral society · Carbon neutrality declaration by domestic and foreign car makers · Increased interest in eco-friendly products	C2.1a, C2.2a, C2.3, C2.3a, C2.4, C2.4a
	b) Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning	20	· Climate change-related risks, opportunities, and response activities · Increased facility investment costs for carbon neutrality	C2.3a, C2.4a, C3.a, C3.3, C3.4, C3.5, C3.5a
	c) Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	20-22	· Management strategy reflecting climate change scenarios · Integrating climate change-related risks and opportunities within the ESG management system · Scenario-based impact analysis according to changes in the number of heat wave days and precipitation intensity	C3.2, C3.2a, C3.2b
Risk Management	a) Describe the organization’s processes for identifying and assessing climate-related risks	12-17, 20-22	· ESG management system · Risk identification and management process	C2.1, C2.1a, C2.1b, C2.2, C2.2a
	b) Describe the organization’s processes for managing climate-related risks	12-17, 20-22	· ESG management system · Risk identification and management process	C2.1, C2.1a, C2.1b, C2.2
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management	12-17, 20-22	· Identification and management of critical risks by the ESG Management Committee · Establishment of action tasks for 5 Working Groups	C2.1, C2.2, C3.3, C3.4
Metrics and Targets	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	23, 33-36	· Disclosure on energy usage and GHG emissions from domestic and overseas sites	C8.2, C8.2a, C8.2b, C8.2c, C8.2d, C11.3a
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	23, 35-36	· Disclosure on Scope 1 and 2 emissions · Disclosure on Scope 3 emissions in major categories	C6.1, C6.2, C6.3, C6.5, C7.1a, C7.2, C7.3b, C7.5, C7.6b
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	23	· Declaration of 2045 Net-Zero plan · Establishment of Net-Zerol roadmap	C4.1, C4.1a, C4.2, C4.2a, C4.2c



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

SASB Index

Kumho Tire provides various stakeholders including investors with useful information that will assist in their decision-making process by reporting the SASB Framework, the voluntary disclosure standards for sustainable issues by industry developed by the Sustainability Accounting Standards Board (SASB). Based on the sustainable industry classification system, we reported sustainability information for the Auto Parts Industry Standard of the Transportation Sector.

Topic	Code	Metrics	Unit	Page	Details
Operational Emissions	TR-AP-130a.1	1) Total energy consumed	GJ	33	11,939,834 GJ
		2) Percentage grid electricity	%	33	72.45% (Ratio of power energy)
		3) Percentage renewable	%	33	0.004%
	TR-AP-150a.1	1) Total amount of waste from manufacturing	Ton	39	13,886.2 tons (domestic), 9,962.5 tons (overseas)
		2) Ratio of hazardous waste	%	39	8.1% (domestic)
		3) Ratio of recycling	%	39	80.1% (domestic), 36.9% (overseas)
Product Safety	TR-AP-250a.1	Number of recalls issued, total units recalled	Cases	64	None
Design for Fuel Efficiency	TR-AP-410a.1	Revenue from products designed to increase fuel efficiency and/or reduce emissions	%	27	Ratio of eco-friendly products: 31.1%
Materials Sourcing	TR-AP-440a.1	Description of the management of risks associated with the use of critical materials	-	56	Participation in Global Platform for Sustainable Natural Rubber (GPSNR)
Materials Efficiency	TR-AP-440b.1	Percentage of products sold that are recyclable	%	Annual report	99.6% (tire sales out of total sales on a consolidated basis)
	TR-AP-440b.2	Percentage of input materials from recycled or remanufactured content	%	90	0.61% (Proportion of using recycled rubber)
Anti-competitive Behavior	TR-AP-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	KRW	54	None

Activity Metrics

Topic	Code	Metrix	Unit	Page	Details
Activity Metrics	TR-AP-000.A	Number of products/parts produced	units	90	48,351 thousand units



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

UN Global Compact

UN Global Compact (UNGC) is an international convention to encourage and support corporate sustainability, which is composed of 10 principles in 4 sectors of human rights, labor, environment, and anti-corruption. Kumho Tire supports the 10 UNGC principles and spares no effort to abide by these principles throughout its management.



This is our **Communication on Progress** in implementing the Ten Principles of the **United Nations Global Compact** and supporting broader UN goals.
We welcome feedback on its contents.

Category	Principles	Page
Human Rights	1. Businesses should support and respect the protection of internationally proclaimed human rights; and	40-43
	2. make sure that they are not complicit in human rights abuses.	40-43
Labour	3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	48-49
	4. the elimination of all forms of forced and compulsory labour;	40
	5. the effective abolition of child labour; and	40
	6. the elimination of discrimination in respect of employment and occupation.	40-43
Environment	7. Businesses should support a precautionary approach to environmental challenges;	18-23
	8. undertake initiatives to promote greater environmental responsibility; and	31-39
	9. encourage the development and diffusion of environmentally friendly technologies.	24-29
Anti-corruption	10. Businesses should work against corruption in all its forms, including extortion and bribery.	74-77



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

WEF IBC Stakeholder Capitalism Metrics

Theme	Metrics		Page	Remark
Governance				
Governing purpose	Setting purpose	Business purpose related to value creation	4	
Quality of governing body	Governing body composition	Composition of subcommittees under the Board of Directors	68-69	
Stakeholder engagement	Material issues impacting stakeholders	Materiality assessment	85-88	
Ethical behavior	Anti-corruption	Anti-corruption prevention activities (training, etc.)	77	
	Protected ethics advice and reporting mechanisms	Internal and external ethics advisory and reporting mechanisms	74-77	
Risk and opportunity oversight	Integrating risk and opportunity into business process	Identification of risks and opportunities and response	81-83	
Planet				
Climate change	Greenhouse gas (GHG) emissions	Greenhouse gas emissions by category	35-36	
	TCFD implementation	TCFD recommendation index on information disclosure	18-23, 35-36, 95	
Nature loss	Land use and ecological sensitivity	Business site information related to biodiversity	39	
Freshwater availability	Water consumption and withdrawal in water-stressed areas	Water stress-related workplace information	37-38	
People				
Dignity and equality	Diversity and inclusion	Staff composition by type	43, 45	
	Pay equality	Employee wage by type	-	
	Wage level	Wage rate	-	
	Risk for incidents of child, forced or compulsory labor	Information on worksites with risks	-	No worksite with significant risk
Health and well-being	Health and safety	Safety accident indicators and health services	57-61	
Skills for the future	Training provided	Time and cost spent on training	46-47	
Prosperity				
Employment and wealth generation	Absolute number and rate of employment	Recruitment and turnover	44-45, 47	
	Economic contribution	Creation and distribution of economic value	9	
	Financial investment contribution	Shareholder return	9	
Innovation of better products and services	Total R&D expenses	R&D cost	9	
Community and social vitality	Total tax paid	Tax information	9	



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement












Independent Assurance Statement

Awards

About This Report

UN SDGs Contribution

The Sustainable Development Goals (SDGs) resolved at the 70th UN General Assembly 2015 are the 17 goals to realize the idea of sustainable development. Kumho Tire supports the slogan “leave no one behind” and strives to actively respond to universal problems shared by the humankind as global corporate citizens.

Materiality	SDGs	Social Issues (related keyword)		Kumho Tire's Initiative	KPIs
SUSTAINABLE BUSINESS	 8.2 8.3 8.4 8.5	SDG 8.	Promotion of Sustainable Economic Growth and Decent Work	· Securing new growth engines for the future · Preparing for the era of advanced mobility · Sustainable materials · Win-win partnership · Promoting diversity and inclusion	· Securing 171 technologies by 2024 · Introducing 100% sustainable raw materials by 2045 · Achieving 100% due diligence on suppliers by 2030 · Conducting in-depth ESG diagnosis on the bottom 10% and building mitigation measures by 2030
	 9.4 9.b			· Enhancing global R&D	-
ENVIRONMENTAL	 3.6 3.9	SDG 3.	Good Health and Well-Being	· Managing chemical substances · Customer safety check campaign	· Maintaining zero serious accidents by 2030
	 11.6	SDG 11.	Sustainable Cities	· Air pollutants management · Waste management	· Realizing 90% waste recycling rate by 2030
	 12.2 12.4 12.5	SDG 12.	Sustainable Consumption and Production	· Global platform for sustainable natural rubber · R&D of eco-friendly tires based on the LCA	-
	 13.1 13.2 13.3	SDG 13.	Climate Action	· Declaration of 2045 Net-Zero · Greenhouse gas reduction · Expanding the proportion of eco-friendly tires	· Realizing Net-Zero by 2045
	 15.2 15.4	SDG 15.	Preserving Land Ecosystem	· Expanding the Classroom Forest project · Programs aimed at raising the sensibility of climate environment for next generations · Contributing to biodiversity	-
	 1.2 1.4	SDG 1.	No Poverty	· Kumho Tire Santa Expedition · Donation of Hansarang Volunteer Group	-
SOCIAL	 4.5 4.7	SDG 4.	Inclusive and Fair Quality Education	· Programs aimed at raising the sensibility of climate environment for next generations · Children's traffic safety education "Stop & Go with Art" · Youth School Violence Prevention Musical "I AM" · Study room for hope together · Mentoring for bereaved children of traffic accident victims	-
	 5.4 5.5	SDG 5.	Gender Equality	· Great place to work	· Achieving 75 points in employee satisfaction by 2030
	 10.2	SDG 10.	Reduce inequality within and among countries	· Human rights management	· Achieving 100% in human rights impact assessment rate by 2030
	 16.3 16.5	SDG 16.	Peace, Justice, and Inclusion	· Advancing compliance and ethical management · Global initiatives and performance	· Achieving 100% in compliance with the code of ethics by 2030 (all employees) · Achieving 80% in ethical training completion rate by 2030 (all employees)



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

Domestic Greenhouse Gas Emission Verification Statement

Creative Sustainable Registrar(CSR) was engaged to conduct and independent verification of the greenhouse gas (GHG) emissions reported by Kumho Tire Co., Ltd(Kumho Tire) for the period stated below. The verification opinion declaration applied to the related information included within the scope of work described below.

1. Objective

- The objective of this verification is to verify:
- Conformance with applicable verification criteria;
 - The organization’s GHG inventory of GHG emissions.

2. Organizational Boundaries for Reporting GHG emissions and Energy Use:

- Operational control: Scope1 & 2 (Scope 3 excluded)
- 32 business sites in Korea of Kumho Tire

3. Type of GHGs:

- CO2, N2O, CH4, HFCs, PFCs, SF6

4. Period covered by GHG emissions verification:

January 1, 2022 to December 31, 2022

5. GHG Emissions Statement:

Year	Scope1	Scope2	Total Emission
2022	89,899.771 tCO2e	174,605.313 tCO2e	264,492 tCO2e

6. Criteria against which verification conducted:

‘Guideline for emission reporting and certification of greenhouse gas emissions trading Scheme’ (Notification No. 2021-278 of Ministry of Environment) (Scope 1 & 2)

7. Reference Standard:

‘Verification Guideline for Greenhouse Gas Emission Trading System Operation’ (Notification No. 2021-112 of Ministry of Environment)

8. Level of Assurance and Qualifications

- Reasonable level of assurance
- The verification used a materiality threshold of +/- 5% of total emission for errors and omissions in sampled data

9. GHG Verification Methodology:

CSR used a risk-based approach throughout the assurance engagement, concentrating on the area that we believe are most material for both Kumho Tire and its stakeholders.

10. Verification Opinion:

- Based on the process and procedure conducted by CSR, we provide a reasonable assurance of the GHG assertions. The GHG emissions statement shown above:
- is materially correct and is a fair representation of the GHG emissions data and information; and
 - has been prepared in accordance with the paragraph 7. Above (Scope 1 & 2).

It is our opinion that Kumho Tire has established appropriate systems for the collection, aggregation and analysis of quantitative data for determination of these GHG emissions for the stated period and boundaries.

11. Independence and impartiality:

CSR was not involved in the preparation of any part of Kumho Tire’s data or report. We adopt a balanced approach towards all stakeholders when performing our evaluation.

June 7th, 2023

CEO Chun-Seong Choi
Creative Sustainable Registrar(CSR)



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

Overseas Greenhouse Gas Emission Verification Statement

Verification Target

Korean Foundation for Quality (hereinafter "KFQ") has conducted a verification of "Greenhouse Gas Emissions (hereinafter "Inventory Report") of KUMHO TIRE CO., INC. (hereinafter the "Company") for 2022.

Verification Scope

KFQ's verification scope covered on all facilities and emission sources of 13 corporations under the operational control and organizational boundary of KUMHO TIRE CO.,INC during 2022.

Verification Criteria

The verification process was based on 'ISO14064-1' and 'ISO14064-3'.

Level of Assurance

The Verification has been planned and conducted as the 'Rules for verification of operating the greenhouse gas emission trading scheme', and the level of assurance for verification shall be satisfied as limited level of assurance.

Verification Limitation

The verification shall contain the potential inherent limitation in the process of application of the verification criteria and methodology.

Verification Opinions

Regarding to the data of the Greenhouse Gas Emission Consumption through the verification, KFQ provides our verification opinions as below;

- 1) The Inventory Report has been stated in accordance 'ISO14064-1'.
- 2) The data and information used in calculating the Greenhouse Gas emission were appropriate, reasonable, and no significant errors or omissions could affect verification statement were not found;
- 3) Therefore, KFQ provides an unmodified opinion on the Greenhouse Gas Emissions of Company in 2022 as follows.

(Unit : tCO ₂ eq)		
Scope1	Scope2	Total
62,498.977	208,249.173	270,742

※ There is a difference between the total emissions and the sum of Scope1,2 emissions by business site (truncated emissions by business site are added together by company).

June 22th, 2023
CEO Ji-Young Song
Korean Foundation for Quality

Ji Young Song



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

Scope 3 Greenhouse Gas Emission Verification Statement

Verification Target

Korean Foundation for Quality (hereinafter ‘KFQ’) has conducted a verification of Scope3 Greenhouse Gas Emissions (hereinafter ‘GHG Inventory’) of Kumho Tire Co.,INC.(hereinafter “Company”) for 2022.

Verification Scope

The verification Scope covered the emission categories selected by the company and the emissions between January 1st, 2022 to December 31st, 2022.

Verification Criteria

"WBCSD/WRI, Corporate Value Chain (Scope 3) Accounting and Reporting Standard", "ISO14064-3". In addition, the following criteria and coefficients used by the company were applied.

- **Criteria**
 - ISO14064-1:2019, GHG Protocol Corporate Standard
- **Coefficient**
 - WRI GHG Protocol Quantis Scope 3 Evaluator
 - Ecoinvent database
 - Carbon Emission Factor (Korea Environmental Industry Institute)
 - Rules for verification of operating the greenhouse gas emission trading scheme (Notification No. 2022-279 of Ministry of Environment)

Level of Assurance

The verification was performed in accordance with the procedures specified in ISO 14064-3 and the assurance level of the verification was performed to satisfy the limited assurance level.

Verification Limitation

This verification is not intended to verify the validity of the calculation criteria set by the company itself. Assurance results contain inherent limits of uncertainty inherent in the company's own calculation standards. Depending on our own calculation standards, significant differences may occur in the emission calculation results, which may affect comparability.

Verification Opinions

Through the verification process according to the ‘ISO 14064-3:2018’ KFQ could obtain reasonable basis to express following conclusion on the Greenhouse Gas Emission Report.

1) Scope 3 emissions for 2022 of the company were properly calculated according to the verification standards.

- 2) For Scope 3 emissions, no material errors or omissions were found, except for emissions information not considered within the selected category range.
- 3) The criteria and process established or estimated/assumed by the company to calculate emissions were transparently reflected in the internal calculation process.

Appendix A. Summary of Scope3 GHG Emission Results

Organization

Kumho Tire Co.,INC.

Emission calculation period

The emission calculation period is from January 1st to December 31st, 2022.

Company Scope3 Emissions verification Results		(Unit: tCO ₂ eq)
Category		Scope3 emissions
1	Purchased goods & services	963,007
4	Upstream Transportation and Distribution	758,670
9	Downstream Transportation and Distribution	54
10	Processing of sold products	65
11	Use of Sold Products ¹⁾	4,914,880
12	End-of-Life Treatment of Sold Products	96,179
Total		6,732,855

1) The category calculates the impact on the vehicle's energy consumption as emissions based on the performance of the tire, not direct energy consumption of the tire

June 22th, 2023

CEO Ji-Young Song
Korean Foundation for Quality



Ji Young Song



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

Independent Assurance Statement

To readers of Kumho Tire Sustainability Report 2023

Introduction

Korea Management Registrar (KMR) was commissioned by Kumho Tire to conduct an independent assurance of its Sustainability Report 2023 (the “Report”). The data and its presentation in the Report is the sole responsibility of the management of Kumho Tire. KMR’s responsibility is to perform an assurance engagement as agreed upon in our agreement with Kumho Tire and issue an assurance statement.

Scope and Standards

Kumho Tire described its sustainability performance and activities in the Report. Our Assurance Team carried out an assurance engagement in accordance with the AA1000AS v3 and KMR’s assurance standard SRV1000. We are providing a Type 2, moderate level assurance. We evaluated the adherence to the AA1000AP (2018) principles of inclusivity, materiality, responsiveness and impact, and the reliability of the information and data provided using the Global Reporting Initiative (GRI) Index provided below. The opinion expressed in the Assurance Statement has been formed at the materiality of the professional judgment of our Assurance Team.

Confirmation that the Report was prepared in accordance with GRI standards 2021 was included in the scope of the assurance. We have reviewed the topic-specific disclosures of standards which were identified in the materiality assessment process

- GRI Sustainability Reporting Standards 2021
- Universal standards
- Topic specific standards
 - GRI 201 : Economic Performance
 - GRI 205 : Anti-corruption
 - GRI 206 : Anti-competitive Behavior
 - GRI 207 : Tax
 - GRI 301 : Materials
 - GRI 302 : Energy
 - GRI 305 : Emissions
 - GRI 306 : Waste
 - GRI 401 : Employment
 - GRI 403 : Occupational Health and Safety

- GRI 405 : Diversity and Equal Opportunity
- GRI 406 : Non-discrimination
- GRI 414 : Supplier Social Assessment
- GRI 416 : Customer Health and Safety
- GRI 417 : Marketing and Labeling

As for the reporting boundary, the engagement excludes the data and information of Kumho Tire’s partners, suppliers and any third parties.

KMR’s Approach

To perform an assurance engagement within an agreed scope of assessment using the standards outlined above, our Assurance Team undertook the following activities as part of the engagement:

- reviewed the overall Report;
- reviewed materiality assessment methodology and the assessment report;
- evaluated sustainability strategies, performance data management system, and processes;
- interviewed people in charge of preparing the Report;
- reviewed the reliability of the Report's performance data and conducted data sampling;
- assessed the reliability of information using independent external sources such as Financial Supervisory Service’s DART and public databases.

Limitations and Recommendations

KMR’s assurance engagement is based on the assumption that the data and information provided by Kumho Tire to us as part of our review are provided in good faith. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. To address this, we referred to independent external sources such as DART and National Greenhouse Gas Management System (NGMS) and public databases to challenge the quality and reliability of the information provided.



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

Independent Assurance Statement

Conclusion and Opinion

Based on the document reviews and interviews, we had several discussions with Kumho Tire on the revision of the Report. We reviewed the Report’s final version in order to make sure that our recommendations for improvement and revision have been reflected. Based on the work performed, it is our opinion that the Report applied the GRI Standards. Nothing comes to our attention to suggest that the Report was not prepared in accordance with the AA1000AP (2018) principles.

Inclusivity

Kumho Tire has developed and maintained different stakeholder communication channels at all levels to announce and fulfill its responsibilities to the stakeholders. Nothing comes to our attention to suggest that there is a key stakeholder group left out in the process. The organization makes efforts to properly reflect opinions and expectations into its strategies.

Materiality

Kumho Tire has a unique materiality assessment process to decide the impact of issues identified on its sustainability performance. We have not found any material topics left out in the process.

Responsiveness

Kumho Tire prioritized material issues to provide a comprehensive, balanced report of performance, responses, and future plans regarding them. We did not find anything to suggest that data and information disclosed in the Report do not give a fair representation of Kumho Tire’s actions.

Impact

Kumho Tire identifies and monitors the direct and indirect impacts of material topics found through the materiality assessment, and quantifies such impacts as much as possible.

Reliability of Specific Sustainability Performance Information

In addition to the adherence to AA1000AP (2018) principles, we have assessed the reliability of economic, environmental, and social performance data related to sustainability performance. We interviewed the in-charge persons and reviewed information on a sampling basis and supporting documents as well as external sources and public databases to confirm that the disclosed data is reliable. Any intentional error or misstatement is not noted from the data and information disclosed in the Report.

Competence and Independence

KMR maintains a comprehensive system of quality control including documented policies and procedures in accordance with ISO/IEC 17021:2015 - Requirements for bodies providing audit and certification of management systems. This engagement was carried out by an independent team of sustainability assurance professionals. KMR has no other contract with Kumho Tire and did not provide any services to Kumho Tire that could compromise the independence of our work.

June 2023 Seoul, Korea

CEO *E. J. Hwang*



SRV1000
Sustainability Committee Assurance



AA1000
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INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

Awards

Awards

Year	Awarded by	Award Title	Category
2023	Design Zentrum Nordrhein Westfalen, Germany	Red-Dot Design Award	Product (Road Venture AT52)
	International Forum Design, Germany	iF Design Award	Concept (Airborne)
2022	Korea Management Association Consulting (KMAC)	Korean Net Promoter Score (KNPS)	No. 1 in the passenger car tire sector in durable goods manufacturing (brand sector)
	Japan Industrial Design Promotion Organization (JIDPO)	Good Design Award	Main Prize in product design (Road Venture AT52)
	Korea Management Association Consulting (KMAC)	Korean Customer Satisfaction Index (KCSI)	No. 1 in the passenger car tire sector in durable goods manufacturing (product technology sector)
	Design Zentrum Nordrhein Westfalen, Germany	Red-Dot Design Award	Design concept (Airborne)
	International Forum Design, Germany	iF Design Award	Transport device (ECSTA HS52), design (Fin Sread)
	China Red Dot	China Contemporary Good Design Award	Design (ECSTA PS71, Solus HS63)

Association Membership

Association
Korea Tire Manufacturers Association, KOTMA
Korea Chamber of Commerce and Industry
Korea Listed Companies Association
Korea Exchange, KRX
Korea Industrial Technology Association, KOITA
Korea International Trade Association; KITA
Korea Listed Company Audit Association
KOREA Investor Relations Service
Korea Automobile Manufacturers Association, KAMA
Korea Automobile Importers & Distributors Association, KAIDA
Korea Rubber Industry Association
Korea TCFD Alliance

Sustainability Initiatives

Initiative
UN Global Compact
CDP (Carbon Disclosure Project)
SBTi (Science Based Targets initiative)
WBCSD-TIP (World Business Council for Sustainable Development - Tire Industry Project)
GPSNR (Global Platform for Sustainable Natural Rubber)



INTRODUCTION ▾

ESG HIGHLIGHTS ▾

ESG FACT BOOK ▾

APPENDIX ▾

Materiality Assessment

Stakeholder Engagement

Financial Performance

GRI Context Index

TCFD Index

SASB Index

UN Global Compact

WEF IBC Stakeholder Capitalism Metrics

UN SDGs Contribution

Domestic Greenhouse Gas Emission Verification Statement

Overseas Greenhouse Gas Emission Verification Statement

Scope 3 Greenhouse Gas Emission Verification Statement

Independent Assurance Statement

Awards

About This Report

About This Report

Kumho Tire publishes its 11th Sustainability Report in 2023 to communicate its economic, social, and environmental value creation performance in transparent manner with various stakeholders.

Reporting Principle

This report was prepared in accordance with the GRI Standards, which are the guidelines for sustainability reporting. It also reflected global initiatives including SASB (Sustainability Accounting Standards Board), TCFD (Task Force on Climate-related Financial Disclosures), WEF (World Economic Forum), UN Global Compact, UN SDGs in a comprehensive way. Financial information is based on the consolidated Korea International Financial Reporting Standards (K-IFRS).

Reporting Period

Reporting period of quantitative data covers from January 1, 2022 to December 31, 2022, and for some activities, it is extended to the first half of 2023. To help stakeholders understand the continuity of our performances, data and target achievement rates for the last three years (2020-2022) were reported.

Reporting Cycle

We have been publishing Sustainability Report annually, with the latest report published in August 2022.

Reporting Scope and Boundary

This report covers Kumho Tire’s Seoul office and domestic and overseas worksites. As for data with differing reporting ranges, the applicable reporting ranges have been separately specified in the footnote.

Assurance

To secure the reliability of the reported information, it was verified by the Korea Management Registre, a third-party verification agency. Assurance statement is available on pages 103 and 104 of this report.

Inquiries on this report

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KUMHO TIRE

All-Ways. Go With you