

Komatsu Sustainability-Linked Bond Framework

September 2022

1. Introduction and background

1.1 Outline of the issuer

Komatsu group (hereafter “Komatsu”), founded in Komatsu City, Ishikawa Prefecture in May 1921, engages in an extensive range of operations from research and development, production, marketing, sales and service to retail financing in three business segments of Construction, Mining and Utility Equipment, Retail Finance, and Industrial Machinery and Others in Japan and abroad. Komatsu upholds the management principle of maximizing its corporate value, i.e., the total sum of trust from society and all its stakeholders, as it remains committed to Quality and Reliability. As its business operations, together with its customers, Komatsu is working to achieve safe, highly productive, smart and clean workplaces of the future.

1.2 Sustainability initiatives

1.2.1 Resolved Sustainability Policy

In April 2021, Komatsu defined the corporate identity, and articulated the purpose as “Creating value through manufacturing and technology innovation to empower a sustainable future where people, businesses, and our planet thrive together.” Additionally, resolved Komatsu’s Sustainability Policy in December 2021. The policy is designed to achieve a sustainable society and facilitate business growth, as Komatsu continues to meet a wide range of changes in the external business environment including climate change worldwide. As described below, Komatsu will continue to address issues that are important to both a sustainable society and our business, grow as a corporate group that can flexibly respond to changes in society and the external environment, further enhance our corporate governance, and contribute to society with our stakeholders.

KPI measurement, SPT or any other ESG targets are based on not calendar year but Komatsu’s fiscal year of April 1 through March 31.

Sustainability policy

Since Komatsu's founding, we have always pursued "Quality and Reliability," and have made efforts to build strong relationships of trust with our stakeholders based on our "Management Principle" of maximizing the total sum of trust from all stakeholders, including society.

Our pursuit of coexistence has been handed down through generations, and our basic stance is to contribute to society through business activities.

Our purpose is "Creating value through manufacturing and technology innovation to empower a sustainable future where people, businesses, and our planet thrive together."














We will continue to address issues that are important to both a sustainable society and our business, grow as a corporate group that can flexibly respond to changes in society and the external environment, further enhance our corporate governance, and contribute to society with our stakeholders.

What we do to empower a sustainable future where people, businesses, and our planet thrive together

With people	With business	With the planet
<ul style="list-style-type: none"> • We provide an environment where diverse and global employees can work safely and healthily as one team, with respect for each individual, and with satisfaction and pride. • We nurture employees who can take on challenges at various job sites and in different regions, create new value together with customers, and contribute to the realization of a sustainable society. • As Komatsu Group, we shall respect human rights related to all of our business activities. 	<ul style="list-style-type: none"> • We contribute to society through our business activities by providing our customers with safe and highly productive products, services, and solutions that realize sustainable infrastructure development, resource development, and a recycling-oriented society. • We build relationships with our business partners and local communities that enable mutual trust, fairness, co-existence, and co-prosperity. • We comply with the rules of society, including laws and regulations, and strive to respond sincerely to the requests and expectations of all stakeholders, including society. 	<ul style="list-style-type: none"> • Through all of our business activities, we strive to reduce our environmental impact and preserve the global environment through the use of advanced technologies. • We strive to increase both global environmental conservation and business growth through manufacturing and technological innovation. • We pursue collaboration and value creation with our stakeholders toward a sustainable planet and future.

1.2.2 Mid-term Management Plan

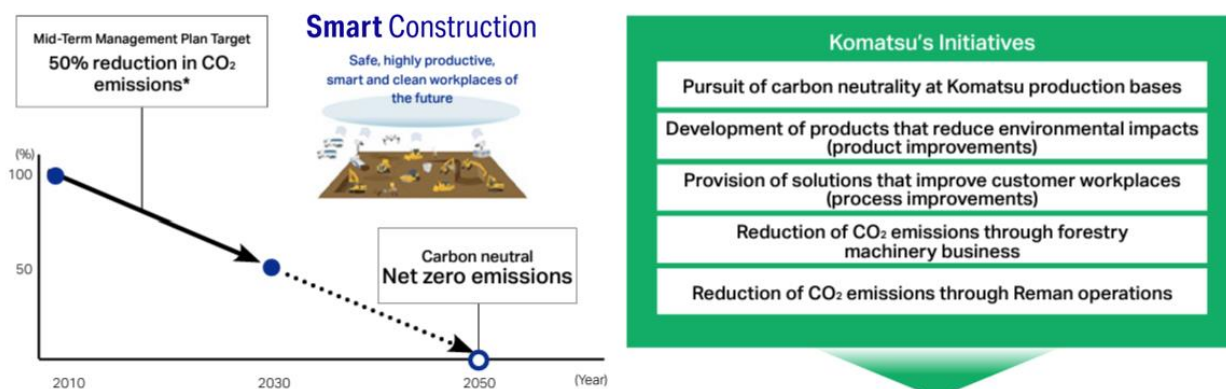
Under the three-year mid-term management plan, "DANTOTSU Value Together, to "The Next" for sustainable growth", to be completed in the fiscal year ending March 31, 2025, Komatsu is upholding three pillars of growth strategies, namely, "Accelerate growth by means of innovation", "Maximize earnings power", and "Enhance corporate resilience". Based on the concept of resolution of ESG issues through business activities, Komatsu will create a positive cycle of resolving ESG issues and improving earnings through the growth strategy to achieve sustainable growth. KPIs have been defined to guide efforts for resolving ESG issues through growth strategies, and progress toward accomplishing the targets for these KPIs will be monitored.

	Relationship with SDGs	Materiality	Key activity themes for resolving ESG issues (main KPI)
With people	 Gender equality  Partnerships for the goals	[Employees] [Human rights] <ul style="list-style-type: none"> Diversity and Inclusion Skills development and workplace retention Employee engagement and job satisfaction Occupational safety and health and wellbeing Respect for human rights 	Build workplaces that are safe and secure (occupational injury related indicator)
	 Decent work and economic growth  Reduced inequalities		Increase employee engagement (engagement survey score) Promote diversity and inclusion (ratio of female managers and people with disabilities) Develop individuals' skills and achieve business growth (develop talent in DX/AI) Promote human rights due diligence (disclosure of performance)
With business	 Industry, innovation and infrastructure  Partnerships for the goals	[Customers][Ethics / Governance] [Communities] <ul style="list-style-type: none"> Provision of solutions Product safety and quality Governance Compliance Contributions to local communities 	Improve productivity of construction workplaces by promoting smart construction (Number of workplaces where smart construction solution is applied)
	 Sustainable cities and communities  Responsible consumption and production		Provision of products and solutions that enable sustainable resource development (Cumulative units of AHS dump truck) Solutions for improving safety and productivity at customer workplaces (technological development stages for automation, safety device, etc.) Building of value chain adaptable to environmental and demand changes (Aftermarket business: sales growth rate / multi-sourcing parts ratio) Strengthen governance and ensure thorough compliance (disclosure of performance)
With the planet	 Affordable and clean energy  Climate action	[Environment] <ul style="list-style-type: none"> Development of low-carbon/low-emissions products, solutions and business models Resource recycling and remanufacturing Forest conservation through business activities Reduction of energy usage and GHG emissions 	Plants with zero environmental impacts (CO2 reduction, use of renewable energy, water usage)
	 Industry, innovation and infrastructure  Life on land  Partnerships for the goals		Reduction of CO2 emissions at customer workplaces (CO2 reduction from products in use / Development of electrified equipment) Provision of solutions that support sustainable, recycling-oriented forestry business (Forestry machinery business related indicators: sales growth rate, afforestation, Smart Forestry, etc.) Promotion of recycling-oriented business (reman) (reman business-related indicator: sales growth rate)

With the increasing frequency of abnormal weather events, climate change is having an ever-greater impact on our lives. The adoption of the Paris Agreement sparked a large global movement toward the realization of a low-carbon society. In recognition of this issue, Komatsu added new ESG management targets in the three-year mid-term management plan, to be completed in the fiscal year ended March 31, 2022, upholding the targets of reducing environmental impact. Specifically, Komatsu is working to reduce CO2 emissions to 50% in 2030 from 2010 and to increase the ratio of using renewable energy to 50% of total energy use in 2030. In addition, Komatsu has upheld the new long-term vision of achieving carbon neutrality, virtually zero carbon emissions, by 2050, in the integrated report in 2021. Furthermore, Komatsu has set a new ESG target of the challenge to become “carbon neutral by 2050” in the three-year mid-term management plan, to be completed in the fiscal year ending March 31, 2025.

Item	Index	Target
Growth	Sales growth rate	Growth rate above the industry's average
Profitability	Operating profit ratio	An Industry's top-level profit ratio
Efficiency	ROE	10% or higher
Financial position	Net D/E Ratio	Industry's top-level financial position
Retail finance business	ROA	1.5% to 2.0%
	Net D/E Ratio	5 times or less
ESG	Reduction of environmental impact	<ul style="list-style-type: none"> CO2 emissions: Decrease by 50% in 2030 from 2010 Become carbon neutral by 2050 (Challenging goal) Renewable energy use: Increase to 50% of total energy use in 2030
	Evaluation by external organizations	<ul style="list-style-type: none"> Selected for DJSI* (World & Asia Pacific) Selected for CDP** A-List (Climate Changes and Water Risk)
Shareholder return	Consolidated payout ratio	<ul style="list-style-type: none"> Keep a fair balance between investment for growth and shareholder return (incl. stock buyback), while placing main priority on growth investment. 40% or more

To achieve carbon neutrality by the end of 2050, an extended target of ongoing efforts, Komatsu is also extending its efforts of reducing CO2 emissions to customers' total workplace operations, while working to cut down CO2 emissions at its business sites (Scope 1 and Scope 2) and from the use of its products (Scope 3, Category 11). Specifically concerning customers' workplace operations, Komatsu is committed to optimizing construction, for example, by evolving Smart Construction solution, expanding the forestry machinery business, which supports a sustainable forest management cycle of planting, cultivating and harvesting, and strengthening the remanufacturing ("Reman") operations in which Komatsu remanufactures and reuses used components. By further strengthening these business efforts, Komatsu hopes to not only contribute to CO2 reductions in society as a whole, but also achieve DANTOTSU Value (a positive cycle of improving earnings and solving ESG issues through the creating of customer value).



Identify business opportunities associated with carbon neutrality to drive Komatsu's growth strategies

1.3 Carbon neutrality initiatives

1.3.1 Carbon neutrality at Komatsu bases

After achieving a 50% reduction in CO₂ emissions from 2010 in 2030, Komatsu will work to achieve net zero CO₂ emissions (carbon neutrality) from our production activities by 2050. In addition, Komatsu will deploy the relevant technologies at material suppliers and other partners to help them also achieve carbon neutrality in their operations. In implementing its policies for carbon neutrality initiatives at production bases, Komatsu will prioritize energy conservation initiatives for reducing energy consumption through production technology innovation, then energy generation initiatives for producing renewable energy in-house, and lastly, purchases of renewable energy.

1.3.2 Carbon neutrality from product use

Komatsu is adopting a two-pronged approach toward reducing the amounts of CO₂ emitted during the use of its products. The first prong is improvements to products. Initiatives in this regard will include increasing the work efficiency of equipment, pursuing steadfast improvements in fuel efficiency, and transitioning from diesel and other internal combustion engines to cleaner power sources, including hybrid and electric engines and fuel cells. The second prong is improvements to processes. Specifically, Komatsu looks to lower CO₂ emissions by optimizing customers' workplace operations and processes in order to reduce the amount of equipment needed along with the operating times of this equipment.

1.3.3 Development of products that reduce environmental impacts (Product improvements)

The workplace conditions under which construction and mining equipment developed and produced by Komatsu is used can vary based on model and output. Accordingly, Komatsu is incorporating cutting-edge technologies to eliminate CO₂ emissions from products by model and by output class. At the same time, Komatsu is sharing its roadmap for carbon neutrality with external development partners and customers while making steady progress based on this map.

1.3.4 Provision of solutions that improve customer workplaces (Process improvements)

Smart Construction is a solution that contributes to the optimal deployment of construction equipment, dump trucks for transporting dirt and materials, and all other equipment. This solution can be applied to Komatsu construction equipment as well as to that made by other companies. Optimizing all processes throughout a workplace makes it possible to reduce the amount of equipment needed, cut back on operating and idling time, and lower workloads, thereby contributing to reductions in fuel consumption and consequently CO₂ emissions.

1.3.5 CO₂ emissions reduction from forestry machinery business

By supporting forest management cycles as a cyclical business, Komatsu aims to help mitigate global warming while contributing to the realization of a carbon-neutral society.

Komatsu is working to mechanize forestry operation processing, including planting, cultivating, and harvesting trees, to contribute to sustainable forestry. In the realm of planting, we have developed subsoiling machines and automated tree planters based on its bulldozers, and we are introducing these machines. These machines have transformed the process of planting trees, which had previously been performed by people under the heat of the blazing sun, making it possible to plant 900 trees in one hour with exceptional speed and precision. In addition to mechanizing forestry processes, Komatsu is developing forest management solutions for analyzing data on tree numbers, height, and other metrics measured using drones and satellites. Through such efforts, Komatsu is supporting customers in improving safety and productivity at their workplaces while also contributing to carbon neutrality.

1.3.6 CO2 reductions through Reman operations

Komatsu is engaged in global Reman operations in which it restores the engine and transmission components collected during regular replacements to the same status as if they were new so that these products can once again be sold on the market. Restoring these products entails a process with various steps including disassembly, washing, parts replacement, reassembly, painting, and shipping inspections. Reman operations are made possible by Komatsu's in-house development and production of key components. Moreover, these operations are based on the principles of the 3Rs (reduce, reuse, and recycle) as they help cut back on waste by restoring and reusing components and thereby contributing to reductions in CO2 emissions.

2.Sustainability-Linked Bond Framework

Sustainability-Linked Bonds ("SLBs") are bonds where the financial and/or structural characteristics can vary depending on whether the issuer achieves predefined Sustainability and ESG objectives. In that sense, issuers are committing explicitly to future improvements in sustainability outcomes, within a predefined timeline, that are relevant, core and material to their overall business. SLBs are a forward-looking performance based instrument.

This Framework is aligned to the 2020 Sustainability-Linked Bond Principles published by the International Capital Markets Association ("ICMA").

The following five components form the basis of the Framework:

1. Selection of Key Performance Indicators (KPIs)
2. Calibration of Sustainability Performance Targets (SPTs)
3. Bond characteristics
4. Reporting
5. Verification

2.1 Selection of Key Performance Indicators

With Climate change affecting society seriously, Komatsu is upholding the target of the challenge to become carbon neutral by 2050. Additionally as a milestone for carbon neutrality in 2050, Komatsu has defined the targets of reducing CO2 emissions by 50% by 2030 from 2010 levels. To contribute to CO2 reductions across society, Komatsu will extend the efforts to reduce CO2 emissions throughout customer workplaces, not just at their production sites and from the use of their products, by optimizing customers' construction activities. Komatsu has two KPIs in this frame work as below.

- KPI1: CO2 emissions from production (Intensity)
- KPI2: CO2 emissions from product use (Intensity)



Scope 3 emissions, which are not produced by Komatsu itself but by those that it's indirectly responsible for up and down its value chain account for over 90% of CO2 emissions across the supply chain for Komatsu products. Scope 3 is divided into 15 categories including Category 11: Use of sold products, the most significant source of CO2 emissions from across the supply chain, which accounts for roughly 90% of total. Komatsu's CO2 reduction objectives below have renewed certification by SBTi as of March, 2022, as the target to limit global temperature increase "Well Below 2°C", compared to pre-industrial levels.

- Scope1+2: 30% reduction by 2030 vs 2019 base year (Target Year 2030; Base Year 2019)
- Scope3: 15% reduction by 2030 vs 2019 base year (Target Year 2030; Base Year 2019)

As KPIs for this framework, Komatsu has selected KPI1:CO2 emissions from production (Intensity) , which contributes to Scope1 and Scope2 CO2 emission reduction, and KPI2: CO2 emissions from product use (Intensity), which contributes to total Scope3 CO2 emission reduction by reducing CO2 emission from Scope 3 Category 11. KPIs and SPTs set in this framework is in align with Komatsu's CO2 reduction objectives verified by SBTi.

KPI1 : CO2 emissions from production (Intensity)

Definition	Intensity direct emissions of CO2 (Scope1) from Komatsu during its fuel combustion and indirect emissions of CO2 (Scope2) due to energy use in Komatsu such as CO2 emissions produced at power generation due to use of purchased electricity
Baseline	Set CO2 emissions from production (Intensity) in 2010 as 100. Given that production had been unstable for several years impacted by Great East Japan Earth quake in March 2011 and the ratio of thermal power generation in sources of energy significantly increased since the earthquake, Komatsu has set 2010, which was the least

	impacted by external factor, as the baseline year.
Related Sustainability Goal	50% reduction of CO2 emissions from production (Intensity) by 2030 from a 2010
2021 Performance	37% reduction
Calculation Methodology	<p>Numerator : Total of both direct CO2 emission (Scope1*1) and indirect CO2 emission (Scope2*2) from each factory</p> <p>Denominator : Manufacturing Cost (Direct labor costs + Variable indirect cost)</p> <p>*1 Scope1 calculated on the basis of the Greenhouse Gas Protocol (GHG Protocol)</p> <p>*2 Scope2 calculated on the basis of GHG Protocol</p>
SDG Alignment	 

KPI2: CO2 emissions from product use (Intensity)

Definition	CO2 emissions from the operation of Komatsu's products(such as construction, mine, and forestry equipment). Improvement in this KPI will contribute to the reduction of Scope3 Category11, which accounts for roughly 90% of Scope3 CO2 emission.
Baseline	<p>Set CO2 emissions from product use (Intensity) in 2010 as 100.</p> <p>Given the productive activity had been unstable for several years impacted by Great East Japan Earth quake in March 2011 and the ratio of thermal power generation in sources of energy significantly increased since the earthquake, Komatsu set 2010 as the baseline year, which was the least impacted year by any external factor.</p>
Related Sustainability Goal	50% reduction of CO2 emissions from product use (Intensity) by 2030 from 2010
2021 Performance	19% reduction
Calculation Methodology	<p>Compare the performance of the current year's products to the products of base year (FY2010) and estimate CO2 reductions through the improvement of fuel consumption and work efficiency.</p> <p>Numerator : CO2 emissions over the life of each model</p> <p>Denominator : Product Operation</p>

SDG Alignment



2.2 Calibration of Sustainability Performance Targets

Each SPT is set in line with Komatsu's ESG target as below. For each Sustainability-Linked Bond issued under this Framework, the applicable SPTs and the dates at which compliance with the SPT will be assessed (the Target Observation Date(s)) will be detailed in the relevant documentation relating to the Sustainability-Linked Bonds.

KPI1: CO2 emissions from production (Intensity)

- SPT1.1: 45% reduction of CO2 emissions from production (Intensity) by 2024 from 2010
- SPT1.2: 50% reduction of CO2 emissions from production (Intensity) by 2030 from 2010

Final and intermediate targets and KPI historical data

	2010	2019	2020	2021	2024	2030
SPTs	100	70	70	63	55	50

Action plan and strategies to achieve the SPTs

In implementing its policies for reducing at CO2 emissions from production, Komatsu will prioritize 1. Energy conservation initiatives for reducing energy consumption through production technology innovation, then 2. Energy generation initiatives for producing renewable energy in-house, and lastly, 3. Purchases of renewable energy.

1. Energy conservation

- Reduction of Energy Consumption through Exhaustive Productivity and Efficiency Improvements: Komatsu will exhaustively reform and improve the efficiency of energy intensive processes, such as casting, forging, and heat treatment processes
- Upgrades to High-Efficiency Next-Generation Structures: Whenever an aged structure built more than 50 years ago is replaced in the future, Komatsu will replace it with a zero emissions structure that uses sustainable energy

2. Energy generation

- Introduction of Cutting-Edge Renewable Energy Facilities (Solar Power, Biomass Power, and Others): Komatsu will embrace cutting-edge renewable energy facilities through means such as using lightweight, high-efficiency solar panels when installing solar power generation

facilities to greatly increase per-area efficiency and generation capacity.

- Effective Utilization of Generated Energy through High-Efficiency Storage Batteries : The output of solar power and other renewable energy systems can vary greatly as a result of weather. For this reason, storage batteries are imperative to the reliable use of such systems. Komatsu is actively employing the latest storage battery technologies to ensure that it can utilize energy generation systems to the greatest extent possible.

3. Purchases of renewable energy

- CO2 emissions that cannot be curbed through energy conservation and energy generation will be offset through the purchase of certified green power or carbon credits.

KPI2: CO2 emissions from product use (Intensity)

- SPT2.1: 24% reduction of CO2 emissions from product use (Intensity) by 2024 from 2010
- SPT2.2: 50% reduction of CO2 emissions from product use (Intensity) by 2030 from 2010

Final and intermediate targets and KPI historical data

	2010	2019	2020	2021	2024	2030
SPTs	100	86	86	81	76	50

Action plan and strategies to achieve the SPTs

Komatsu is adopting a two-pronged approach toward reducing the amounts of CO2 emitted during the use of its products as below:

1. Reduction of CO2 emissions through DANTOTSU Products

- Komatsu provides products which have been designed to operate with great fuel efficiency while reducing gross CO2 emissions. Assuming the hybrid hydraulic excavator which Komatsu introduced in 2008, marked as the first of its kind to be introduced into the market
- Transitioning from combustion engines to cleaner power sources, including electric engines and fuel cell

2. Reduction of CO2 emission by products through DANTOTSU Service

- The Komatsu Tracking System “Komtrax” is a system developed by Komatsu that automatically gathers the operational information/health information of its construction vehicles that operate all over the world and the data is communicated to our customers. Information with regards to operation times, fuel consumption, and other such relevant data is then analyzed to create opportunities for improvement. This enhanced operational efficiency helps to reduce fuel consumption.

Key risks that may impact the ability to meet the targets

Events which might delay key initiatives defined in mid-term management plan(FY2022-2024) as below:

- Budget Freeze for capital expenditure caused by dramatically changed business environment
- Slowdown of business as usual caused by pandemic
- Extraordinary event such as natural disasters or wars

2.3 Bond characteristics

For any bonds issued under this Framework, if the SPT has not been achieved by the Target Observation Date, or Komatsu fails to comply with certain reporting and verification obligations, a premium will be payable. The financial characteristics of any security issued under this Framework, including a description of the selected KPI, SPT, or the premium payment amount, will be specified in the relevant documentation of the specific transaction (e.g., the prospectus or offering memorandum for the relevant SLB).

Baseline recalculations

In the event of significant or structural changes in Komatsu (including acquisitions, divestiture, mergers, insourcing or outsourcing), KPI methodology changes, changes in data reported due to improved calculation methodologies or better data accessibility, or key risks that may impact the ability to meet the target, Komatsu may, in good faith and at its sole discretion, make adjustments to the boundary of the KPI, calibration of the SPTs or the Baseline stated in the Framework, as applicable. Any future adjustments to the KPI or Baseline will maintain or increase the proposed level of ambition of the SPTs stated in this Framework and will be disclosed in Komatsu's website or Komatsu report and will be accompanied by a verification statement from an independent qualified external reviewer.

2.4 Reporting

Komatsu will disclose the performance of the KPIs on an annual basis on its website, or through the publication of Komatsu Report or ESG data book. This reporting will include relevant information on KPI as below:

- Up-to-date information on Komatsu's performance on the KPIs, including the base line where relevant, and a discussion of the progress towards the SPTs
- A verification assurance report relative to the performance of KPIs
- Any other relevant information enabling investors to monitor the progress of the SPTs

When feasible, the reporting may also include:

- Qualitative or quantitative explanations of the contribution of the main factors behind the evolution of the performance/KPIs on an annual basis
- Illustration of the positive sustainability impacts of the performance improvement;
- Any re-assessments of the KPIs and/or restatement of the SPTs and/or pro-forma adjustments

of baselines, including baseline recalculations

2.5 Verification

Komatsu will obtain verification of the performance of the KPIs by independent external reviewer at least once a year, until achieving the deadline of the SPTs, and in any case for any date/period relevant for assessing the SPT performance leading to a potential adjustment of the SLB financial and/or structural characteristic. The verification of the performance of the KPI will be made publicly available on Komatsu's website.

2.6 External review

Second Party Opinion (SPO)

Komatsu has commissioned DNV to conduct an external review of its SLB Framework, and to issue a SPO on the Framework's alignment with the Sustainability-Linked Bond Principles (2020). The SPO will be made available on DNV and Komatsu's website.