

Promoting Environment Management

Establishment of Environmental Vision 2020

In fiscal 2011, we drafted Environmental Vision 2020, which seeks to define what the Group should be in 2020 from an environmental perspective under our Group Mission: “Kawasaki, working as one for the good of the planet (Enriching lifestyles and helping safeguard the environment: Global Kawasaki).” Realization of this vision will be supported by environmental management activities plans, which run for three years. We embarked on the 7th Environmental Management Activities Plan in fiscal 2011, at the same time that Environmental Vision 2020 was launched, with targets to achieve during this three-year period and key strategies to implement in each year of the plan.

Based on the environmental philosophy described in our Environmental Charter, Environmental Vision 2020 will underpin the establishment of three types of societies—a low-carbon society, a sound material-cycle society, and a society that coexists with nature. A fourth component—the establishment of environmental management systems—forms the cornerstone of such societies. Through our Environmental Vision 2020, we aim to contribute to integrating business management and environmental management activities and contribute to a sustainable society.

Flow of Environmental Management



Environmental Charter (Established in 1999, rev. 2010)

Environmental Philosophy

The KHI Group has undertaken business with the advancement of society and the nation through “manufacturing” as our foundation, and has sought to develop a global enterprise in “key industries related to land, sea, and air.” In doing so, we have worked toward resolution of global environmental problems by seeking the “realization of a low-carbon society,” the “realization of a sound material-cycle society,” and the “realization of a society coexisting with nature.” We will contribute to “the sustainable development of society” through business activities that are in harmony with the environment and through the KHI Group’s own products and services that show consideration for the global environment.

Conduct Guidelines

1. Recognizing that global environmental protection is a common and serious issue for humankind, KHI Group will positively volunteer to engage itself in harmonizing with the environment globally. We shall regard this as one of the most important strategies when we deploy our business activities.
2. During its production stages, KHI Group will endeavor to conserve resources, to save energy, to recycle resources and to reduce industrial waste and will promote the reduction of environmental impact.
3. In the new product planning (i.e. research and development) and designing stages, KHI Group will render careful attention throughout the procurement, production, distribution, utilization and material disposal stages in order to minimize the environment impact.
4. KHI Group will minimize the impact of its business activities on ecosystems and proactively protect those ecosystems.
5. In seeking solutions to global environmental issues, KHI Group will do its best to develop and provide new technologies and new products that contribute to environmental protection, energy saving and resource conservation.
6. Not only complying with environmentally related institutional laws, regulations and agreements and voluntary action plans of each industry concerned, but KHI Group will voluntarily institute its own environmental control standards as an appropriate and necessary action in order to strive to improve environmental control levels.
7. Through environmental training and public awareness activities, KHI Group will strive to enlighten all its employees on global environmental issues and will support individual views, lifestyles and will encourage their participation in the social activities and services.
8. KHI Group will implement an environmental management system to promote environmental preservation and conservation, and hold regular conferences to review management systems and maintain continual improvement.



Environmental Vision 2020

- Realization of a low-carbon society
- Realization of a sound material-cycle society
- Realization of a society coexisting with nature
- Establishment of environmental management systems

Three Points of Entry onto the Path Toward Realization of a Sustainable Society

Realization of a low-carbon society

Contribute to the prevention of global warming through **our products and manufacturing that use energy without waste**

Perspective on our activities

In many areas of the world, global warming appears to be driving wide-scale climate change. To address problems like these that affect our planet's sustainability, KHI Group is working to reduce the greenhouse gas emissions associated with our business activities and providing products and services that help reduce those same emissions, thereby contributing to building a low-carbon society.

Ideal in 2020

- 1 Reduce 2020 greenhouse gas emissions in line with national targets.
- 2 Offer customers energy-efficient products and services and reduce emissions of greenhouse gases on planetary scale.
- 3 Promote energy conservation in production and logistics processes and reduce emissions of greenhouse gases.

Realization of a sound material-cycle society

Engage in **manufacturing that uses resources without waste** in order to recycle and fully utilize limited resources

Perspective of our activities

Planetary resources to support human life are now being consumed faster than the earth can naturally replace them. KHI Group endeavors to conduct business and develop products in order to fully use, reuse and recycle limited resources and thereby help achieve a sound material-cycle society.

Ideal 2020

- 1 Practice design that uses resources effectively and work to make products lighter, more durable and more recyclable.
- 2 Practice the 3R's (reduce, reuse and recycle of waste) in production activities and achieve zero emissions at all plants.
- 3 Completely and appropriately process all PCB waste and PCB-containing devices.

Realization of a society coexisting with nature

Contribute to reduced environmental impact and conservation of the ecosystem through **manufacturing that is in harmony with the global environment**

Perspective of our activities

Biological diversity sustains the ecosystems that make up our global environment. Biodiversity provides us with food and natural resources, regulates our climate, cycles materials and cleans the environment. We will conduct business activities that lessen our burden on the environment and we will help prevent pollution and protect ecosystems through our products and technologies.

Ideal 2020

- 1 Offer customers products and services that prevent air and water pollution, and advance environment improvements and ecosystem protection.
- 2 Reduce the use of chemical substances in products and production activities.
- 3 Cooperate in regional forest conservation and other activities to protect the environment of ecosystems.

Building a foundation for environmental management

Establishment of environmental management systems

Build a foundation for **environmental management that will realize the Environmental Vision 2020**

Perspective of our activities

We aim to achieve a sustainable society and to contribute to more prosperous lifestyles for the people of the world and a brighter future for the global environment through environmentally conscious business activities and products and services.

Ideal 2020

- 1 Have an environmental management system (EMS) in place at every consolidated subsidiary in Japan and abroad and practice environmental management throughout the Group.
- 2 Comply with environmental laws and regulations and regularly follow up on compliance status.
- 3 Communicate environmental data within and beyond the Group and maintain two-way dialogue while protecting the environment.

Promoting Environment Management

7th Environmental Management Activities Plan Results of Fiscal 2011 and Priority Initiatives for Fiscal 2012

The 7th Environmental Management Activities Plan, which inaugurated the Environmental Vision 2020, runs from fiscal 2011 through fiscal 2013. This plan sets out four themes—the realization of a low-carbon society, the realization of a sound material-cycle society, and the realization of a society coexisting with nature, as well as the establishment of environmental management systems to serve as a foundation for environmental management—that will enable us to realize our vision.

7th Environmental Management Activities Plan (Fiscal 2011–Fiscal 2013)

Realization of a low-carbon society Contribute to the prevention of global warming through our products and manufacturing that use energy without waste

(1) Global warming prevention measures

- A) Reduce CO₂ emissions from our own production activities; make CO₂ more tangible to promote energy-saving activities Groupwide; create a verification system
 - Undertake Groupwide CO₂ reduction measures (energy-saving capital investment)
 - Promote energy savings from logistics as a specified consignor
- B) Acquire emissions credits with KHI Group products and technologies
 - Create a system to acquire emissions credits with KHI Group products and technologies in Japan and abroad (e.g., CDM)
- C) Purchase emissions credits from trading market
 - Take precautionary measures in the event we do not meet CO₂ reduction targets
- D) Acquire emissions credits by endowment or donation

Group target: By fiscal 2013, reduce our average amount of CO₂ basic unit (= CO₂ emissions per net sales) for fiscal 2009 through fiscal 2013 by 10%, compared with fiscal 2008

Realization of a sound material-cycle society Engage in manufacturing that uses resources without waste in order to recycle and fully utilize limited resources

(1) Activities to reduce total waste emissions

- ① Promote resource savings and 3R (reduce, reuse, recycle)
- ② Zero emissions activities, increasing recycling rate

Group target: By fiscal 2013, reduce waste basic unit (= waste emissions per net sales) by 12%, compared with fiscal 2003; maintain zero emissions

(2) Decide on proper treatment plan for PCB wastes and follow through with appropriate measures

Realization of a society coexisting with nature Contribute to reduced environmental impact and conservation of the ecosystem through manufacturing that is in harmony with the global environment

(1) Activities to reduce chemical substances

- Set reduction targets and promote activities (both design and production initiatives)

Group target: Set controlled chemical substances reduction target for fiscal 2011 through fiscal 2013, compared with average for fiscal 2004 through fiscal 2006

(2) Environmental contributions through products and technologies

- ① Activities to reduce environmental impact over product life cycle
 - Prepare foundation for performing product life cycle assessment
- ② Make products greener, promote environmental consciousness in products

(3) Reduce impact on and conserve biodiversity

- Decide on biodiversity action guidelines and promote conservation

Establishment of environmental management systems Build a foundation for environmental management that will realize the Environmental Vision 2020

(1) Build EMS for KHI Group

Group target: Finish building EMS at consolidated subsidiaries in Japan and abroad that are key production bases by fiscal 2013.

(2) Thoroughly comply with environmental laws and regulations

- Prevent recurrence of environmental accidents, etc.

(3) Practice environmental communication

- Promote environmental dialog with all stakeholders

Main initiatives of 7th Environmental Management Activities Plan

● **Realization of a low-carbon society**

We are aiming to achieve our company-wide Fiscal 2013 objective for greenhouse gases, which is to reduce the average basic unit of emissions (meaning CO₂ emissions/sales) for Fiscal 2009-2013 by 10% compared with the level of Fiscal 2008. This objective represents a specific initiative to counter global warming.

● **Realization of a sound material-cycle society**

Our measures to reduce total waste emissions include promoting conservation and the 3R movement.

● **Realization of a society coexisting with nature**

We have engaged in measures to reduce chemical substances, environmental contributions through our products and technology, and the like.

● **Establishment of environmental management systems**

We have committed ourselves to promoting the establishment of EMS in all consolidated subsidiaries in Japan and overseas.

Also, we have committed ourselves to environmental risk management and employee education.

Evaluation: ◎ Achieved ○ Greater than 70% achieved △ Less than 70% achieved

Results of Fiscal 2011	Evaluation	Priority Initiative for Fiscal 2012
<p>1. Global warming prevention measures</p> <p>A) Reduce CO₂ emissions from our own production activities</p> <ul style="list-style-type: none"> ● Make CO₂ emissions tangible and verifiable (includes response to Revised Energy-Saving Law) ● Take Group-wide CO₂ reduction measures (energy-saving capital investment) ● Strengthen voluntary reduction initiatives of each department and follow through on plans <p>B) Acquire emissions credits with KHI Group products and technologies</p> <ul style="list-style-type: none"> ● Give indirect support for activities of each department for reducing CO₂ with UN CDM program, etc. ● Participate in CO₂ reducing project in Japan. <p>C) Purchase emissions credits from trading market</p> <ul style="list-style-type: none"> ● Examine burden of purchasing portion of reduction targets not achieved <p>D) Acquire emissions credits by endowment or donation</p> <ul style="list-style-type: none"> ● Study forest conservation activities and use of green electric power, etc. 	○	<p>1. Global warming prevention measures</p> <p>A) Reduce CO₂ emissions from our own production activities</p> <ul style="list-style-type: none"> ● Introduce system to make CO₂ emissions tangible (includes response to Revised Energy-Saving Law); operate system at pilot plant and collect and distribute energy-saving know-how in-house; operate corporate data system and promote tangible system at factories ● Undertake Groupwide CO₂ reduction measures (energy-saving capital investment) ● Implement energy-saving capital investment (factory and office lighting, energy-saving inverters) and verify the results of such energy-saving measures ● Strengthen energy-saving activities in each segment and follow through on plans ● Establish corporate energy-saving promotion structure <p>B) Acquire emissions credits with KHI Group products and technologies</p> <ul style="list-style-type: none"> ● Consider responses to new measures that fight global warming <p>C) Purchase emissions credits from trading market</p> <ul style="list-style-type: none"> ● Examine burden of purchasing portion of reduction targets not achieved <p>D) Acquire emissions credits by endowment or donation</p> <ul style="list-style-type: none"> ● Forest conservation activities, use of green electric power, etc.
<p>1. Activities to reduce total waste emissions</p> <ol style="list-style-type: none"> 1) Activities to reduce three substances with greatest waste emissions (metal scrap, waste oil, wood scrap) 2) Promote resource savings and 3R 3) Maintain and enhance zero emissions status 4) Promote implementation of electronic manifests 	○	<p>1. Activities to reduce total waste emissions</p> <ol style="list-style-type: none"> 1) Activities to reduce three substances with greatest waste emissions (metal scrap, waste oil, wood scrap) 2) Promote resource saving, 3R 3) Maintain and enhance zero emissions status 4) Promote implementation of electronic manifests 5) Establish and operate waste management system (incorporated into electronic manifests)
<p>2. Decide on proper treatment plan for PCB wastes and follow through with appropriate measures</p> <ol style="list-style-type: none"> 1) Follow through on JESCO commissioned processing 2) Follow through on processing trends and number of processed units of equipment containing low-density PCBs 	○	<p>2. Decide on proper treatment plan for PCB wastes and follow through with appropriate measures</p> <ol style="list-style-type: none"> 1) Follow through on JESCO commissioned processing 2) Follow through on processing trends and number of processed units of equipment containing low-density PCBs
<p>1. Activities to reduce chemical substances</p> <ol style="list-style-type: none"> 1) Perform critical point follow-through in departments stepping up reduction measures in seventh plan <ul style="list-style-type: none"> ● Acknowledge and organize usage status, clarify issues and set targets 	△	<p>1. Activities to reduce chemical substances</p> <ol style="list-style-type: none"> 1) Perform critical point follow-through in departments stepping up reduction measures in 7th Plan <ul style="list-style-type: none"> ● Acknowledge and organize usage status, clarify issues and set targets ● Promote implementation and follow through with low-VOC paints as well as heavy-metal-free painting and surface-processing technologies
<p>2. Environmental contributions through products and technologies</p> <ol style="list-style-type: none"> 1) Activities to reduce environmental impacts over product life cycle <ul style="list-style-type: none"> ● Select model products and examine evaluation techniques ● Report environmental contributions from products and technologies 2) Make products greener <ul style="list-style-type: none"> ● Respond thoroughly to laws and regulations (RoHS Directive, REACH Regulations, etc.) ● Promote green procurement (set a green purchasing rate and take measures to achieve it) 	△	<p>2. Environmental contributions through products and technologies</p> <ol style="list-style-type: none"> 1) Activities to reduce environmental impact over product life cycle <ul style="list-style-type: none"> ● Assess CO₂ reduction effects on products related to energy and transportation ● Consider evaluation techniques for life cycle assessment ● Report environmental contributions from products and technologies 2) Make products greener <ul style="list-style-type: none"> ● Respond thoroughly to laws and regulations (RoHS Directive, REACH Regulations, etc.) ● Set standards for green products and boost sales of such products
<p>3. Activities to protect biodiversity</p> <ol style="list-style-type: none"> 1) Promote initiatives within works 	△	<p>3. Activities to protect biodiversity</p> <ol style="list-style-type: none"> 1) Set corporate policy on initiatives and follow through with appropriate measures
<p>1. Build an EMS at KHI Group</p> <ol style="list-style-type: none"> 1) Devise and promote plan for building EMS at consolidated subsidiaries in Japan and abroad 2) Collect major environmental data for entire Group (energy, waste, chemical substances, etc.) 	○	<p>1. Build EMS for KHI Group</p> <ol style="list-style-type: none"> 1) Devise and promote a plan for building EMS at consolidated subsidiaries in Japan and abroad <ul style="list-style-type: none"> ● In fiscal 2012, introduce EMS at five domestic subsidiaries and five overseas subsidiaries 2) Collect major environmental data for entire Group (energy, waste, chemical substances, etc.) <ul style="list-style-type: none"> ● Collect information from Group companies on energy/CO₂ emissions and disclose data to public ● In fiscal 2012, collect environmental data from 46 domestic subsidiaries and 24 overseas subsidiaries
<p>2. Thoroughly comply with environmental laws and regulations</p> <ol style="list-style-type: none"> 1) Activities of Environmental Law and Regulation Compliance Status Review Committee 2) Follow up on environmental law revisions, etc., and implement throughout the Group 	◎	<p>2. Thoroughly comply with environmental laws and regulations</p> <ol style="list-style-type: none"> 1) Activities of Environmental Law and Regulation Compliance Status Review Committee 2) Follow up on environmental law revisions, etc., and implement throughout the Group
<p>3. Practice environmental communication</p> <ol style="list-style-type: none"> 1) Awareness-raising activities for KHI Group employees (environmental education) 2) Disclose environmental data within and beyond Group (issue environmental news, CSR report, etc.) 3) Company forest restoration program 	◎	<p>3. Practice environmental communication</p> <ol style="list-style-type: none"> 1) Awareness-raising activities for KHI Group employees (environmental education) 2) Disclose environmental data within and beyond Group (issue environmental news, CSR Report, etc.) 3) Company forest restoration program