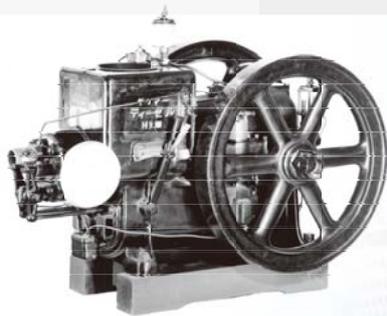


# Corporate Social Responsibility Report **2012**



# Now and in the future, towards a sustainable society

We marked our 100th anniversary in March 2012. Since our establishment, we've spent the last 100 years working on the efficient use of energy, contributing to community development and improving people's lives, towards realizing a sustainable society. As we look towards the next 100 years, delivering value through innovative solutions in our core domains of food production and harnessing power, we're working to realize the dreams of people the world over, for the children of tomorrow.



## Editorial Notes

This report is published every year to inform our diverse stakeholders on our approaches and the current state of the Yanmar Group's CSR efforts, and to present company results for fiscal 2011, with the aim of improving CSR activities through two-way communication.

The information carried in this report was selected from the view of its importance to the Group and to society, in line with the core standards of ISO26000\*. Numeric data and other details and descriptions of past activities are presented on our website.

\* ISO 26000 is a set of international standards on social responsibility published in November 2010 by the International Organization for Standardization (ISO). "ISO 26000 provides guidance on how businesses and organizations can operate in a socially responsible way." (from the ISO website)

## Reference Guidelines

1. "Environmental Report Guidelines (2007)" of the Japanese Ministry of Environment
2. "Sustainability Reporting Guidelines (G3)" of the Global Reporting Initiative
3. ISO26000

## Period

The activities and data disclosed in this report are for the period of fiscal year 2011 (March 21, 2011, to March 31, 2012). However, the Report also includes some items occurring in fiscal 2012.

## Sites

In general, the information in this report applies to the Yanmar Group as a whole. Information specific to Yanmar Co., Ltd. or any particular area or related company is indicated as such in the text.

The term "Shiga Zone" used in this report refers to our facilities located in Shiga Prefecture, Japan: Biwa, Yamamoto, Kinomoto, Omori, Nagahara and Nagahama. The term "Amagasaki Zone" refers to the Amagasaki Plant and the Tsukaguchi Plant, Japan.

## Date of Issue

Published in October 2012 (the next issue is scheduled for October 2013).

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## Yanmar Group CSR Activities

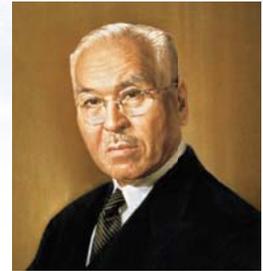
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## Corporate Profile

●The word "Solutioneering" was coined from Solution and Engineering. Through our command of engineering, we seek to create solutions to the problems our customers face.

# The Dawn of a Century of Effort

Yanmar's founder, Magokichi Yamaoka, saw Dr. Rudolf Diesel's engine at the Leipzig Trade Fair in 1932 and was immediately taken by its possibilities. The heavy oil used in diesel engines was less prone to accidentally ignite and cause fires, and was inexpensive compared the fuel used in oil engines. Realizing that no one had yet made a small diesel engine, Yamaoka set to work developing one himself. But the challenge proved more difficult than he had expected and the project was beset by countless difficulties and setbacks. Then, on the 23rd of December, 1933, he succeeded in developing the world's first small diesel engine. This breakthrough powered the mechanization of agriculture, fisheries and manufacturing, and revolutionized industry overnight. The engine was taken up far and wide and put to work both in Japan and around the world, earning high praise for its fuel economy.



Founder **Magokichi Yamaoka**

1912

1933

1945

**1912**

- Founded as YAMAOKA HATSUDOKI KOSAKUSHO, starting production with gas engines



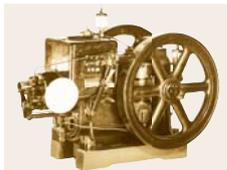
**1921**

- YANMAR brand name adopted
- A horizontal oil engine model launched



**1933**

- December 23: HB model, world's first commercially viable small diesel engine (5-6Hp), launched



The engine's technical merits are recognized in Japan's industrial machinery field, with the certifications and registrations from the related organizations listed below:

- **2007**  
Designated as "Mechanical Engineering Heritage" by the Japan Society of Mechanical Engineers (JSME)
- **2009**  
Certified as "Heritage of Industrial Modernization" by the Ministry of Economy, Trade and Industry
- **2012**  
Registered as "Essential Historical Material for Science and Technology" by the National Museum of Nature and Science

**1936**

- AMAGASAKI PLANT opened in Japan, starting production with S diesel engines



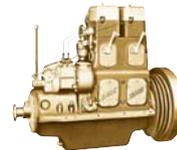
**1937**

- "To conserve fuel is to serve mankind" fundamental principle introduced



**1947**

- LB and 2LB small marine engine models launched

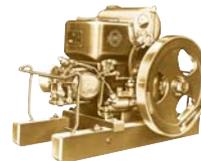


**1949**

- NAGAHARA PLANT opened in Japan, starting production with parts for small diesel engine fuel injection pumps

**1952**

- YANMAR DIESEL CO., LTD. name adopted
- K1, world's smallest 4-cycle horizontal water cooled diesel engine model (1.5-2Hp), launched



- 4MSL medium speed auxiliary engine model (120-130Hp) launched

**1955**

- Awarded the Diesel Gold Medal by the German Inventors' Association for President Magokichi Yamaoka's development and uptake of small diesel engines



**1957**

- Awarded the German Merit Cross
- A Japanese stone garden commemorating Dr. Rudolf Diesel donated to the city of Augsburg, Germany



- YANMAR DIESEL DO BRASIL LTDA. established in Brazil

**1959**

- Yanboh & Marboh mascots weather forecast launched in Japan

1961

- Osaka Head Office opened



1966

- YC and YS diesel power tiller series launched



1971

- YB600 mini excavator series launched



1980

- FZ22 pleasure boat model launched



1982

- AT600, first gas turbine model, launched



1984

- Operation of Yanmar cogeneration systems started at the Antarctica-based Showa Station

1992

- 10 millionth diesel engine produced

1994

- ViO excavator series launched



1995

- BIWA PLANT opened in Japan



2000

- Research & Development Center established in Maibara, Japan



2002

- YANMAR CO., LTD. name adopted

2003

- EPA Tier 2 regulation certification acquired for 3 models of the TNV series of small diesel engines



1960

1970

1980

1990

2000

1967

- KINOMOTO PLANT opened in Japan, starting production with the YM273 tractor model (23Hp)



1968

- Awarded the Deming Prize



1972

- P.T. YANMAR DIESEL INDONESIA established



- YANMAR SHIPBUILDING & ENGINEERING established in Japan, starting production with FRP boats



- RM28 rotary outboard engine model launched

1987

- Gas heat pump air-conditioning systems launched



1988

- YANMAR MARINE FARM established in Japan
- YANMAR EUROPE B.V. established in the Netherlands



1996

- Awarded for the EcoTra tractor series



1998

- YANMAR MANUFACTURING AMERICA CORPORATION established, starting production with small diesel engines

- Became the first enterprise to be awarded marine diesel engine NOx certification by the International Maritime Organization (IMO)



1999

- YANMAR AGRICULTURAL EQUIPMENT (CHINA) CO., LTD. factory opened, starting production with combine harvesters

2007

- YANMAR KOTA KINABALU R&D CENTER SDN. BHD. established in Malaysia



2011

- YANMAR R&D EUROPE S.R.L. established in Italy



- Thailand-based YANMAR S.P. CO., LTD. factory opened, starting production with tractors

2012

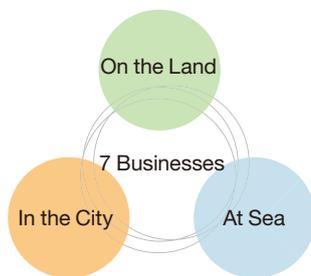
- 100th anniversary of Yanmar foundation marked



# Providing Solutions in 3 Fields

Yanmar provides solutions on the land, at sea, and in the city. Whether it be versatile construction machinery, highly efficient energy generation, our original component business, the driving force of our industrial engines, the high-quality and reliability of our large power products, or marine products in harmony with the environment, Yanmar is hard at work, providing diverse solutions to serve customers on the land, at sea and in the city.

Developing business by solving customer problems and contributing to society



## Industrial Engine Business

As a pioneer in producing compact diesel engines for industrial use, we develop, manufacture, sell, and provide after-sales servicing for our top-class products.

- Products: Compact diesel engines for industrial use, precision components for fuel injection systems, etc.
- ⇒ Environmentally-oriented Products (p. 32)

## Large Engine Business

Development, production, sales, and services are unified, and a business model that aims to increase customer value (LCV) is being developed.

- Products: Marine propulsion and auxiliary diesel engines for ocean-going vessels, land-use diesel engines, gas engines and gas turbines and products related to these systems
- ⇒ Environmentally-oriented Products (p. 32)

## Marine Business

We're providing the global market with commercial and pleasure boat engines that have powerful and stable performance and are highly economical and reliable.

- Products: Small and medium marine diesel engines and related products, marine environment products, FRP pleasure boats, small fishing boats, fish tanks and pontoons, etc.
- ⇒ Environmentally-oriented Products (p. 33)

## Agricultural Machinery Business

We offer products that employ the latest technologies, such as I-HMT (electronically controlled hydraulic continuously variable transmission) and ICT (Information Communication Technology) to monitor the operating conditions of farm equipment.

- Products: Tractors, combines, rice transplanters, power tillers, cultivators, farm facilities, fruit sorting machinery, unmanned helicopters, products and materials for hobby farmers, etc.
- ⇒ Environmentally-oriented Products (p. 34•35)

## Energy System Business

We deploy high-technology solutions in the form of GHPs, cogeneration systems, emergency generators and other energy-saving and disaster response equipment. We're also expanding into new markets, such as solar power generation.

- Products: Products: Micro cogeneration systems, gas heat pumps, main and standby generators, pump drive systems, solar power generation systems, etc.
- ⇒ Environmentally-oriented Products (p. 35)

## Construction Machinery Business

We offer a wide variety of high performance compact construction equipment and general-purpose machinery such as the ViO series of True Zero Tail Swing excavators, the Σ series of boom excavators, portable generators, light towers, etc.

- Products: Backhoes, wheel loaders, carriers, small generators, light towers, etc.
- ⇒ Environmentally-oriented Products (p. 36)

## Component Business

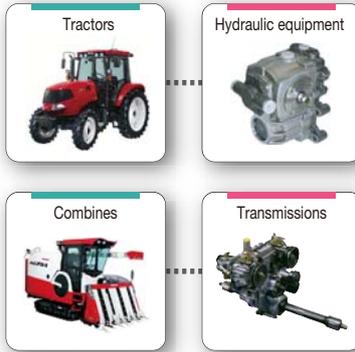
Along with proprietary hydraulic control and gear processing technologies, we are collaborating with various Group companies in the manufacture of distinctive products, such as continuously variable hydromechanical transmissions.

- Products: Hydraulic equipment, gears, transmissions, marine gears, machine tools, etc.



## In the City

With technology ranging from renewables through cogeneration systems that harness heat and electrical energy, Yanmar will deliver the best energy solution for the application, whether business, public facilities, or residential.



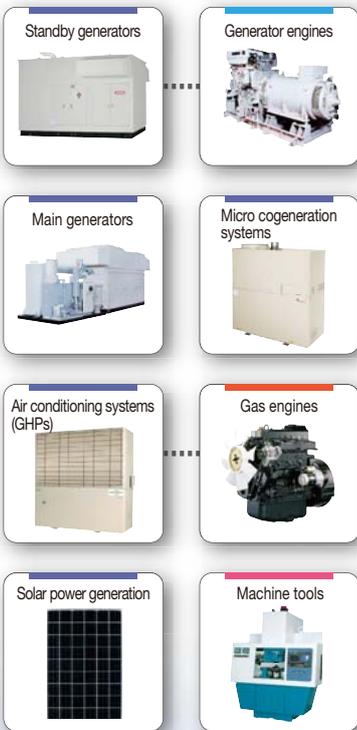
## On the Land

Agriculture supports life. We are engaged in the pursuit of abundant "food" through the development of agricultural machinery for farmers ranging from professionals to hobbyists. In Japan and overseas, with a focus on Asia, we're introducing integrated, mechanized farming methods towards furthering the industrialization of agriculture.



## At Sea

From marine leisure to solutions for the largest working boats, Yanmar develops marine engines and propulsion systems for safe passage of the seas in harmony with the environment. Revitalizing the fishing industry, we are developing aquaculture technology towards our ultimate goal of coexistence between humans and the marine environment.



**Top Message**



# March 2012: 100 years since the founding of Yanmar. Earning a special place in our customers' hearts, we continue to contribute to the realization of a sustainable society, rich in nature's bounty, delivering new value to customers through innovative solutions in the century to come.

March of 2012 marked a century since the founding of Yanmar. That we've made it this far is only thanks to the continued patronage of our valued customers and the long years of unstinting support and helpful guidance from our many partners. I thank you all from the bottom of my heart.

With the Great East Japan Earthquake and Tsunami and the floods that inundated large parts of Thailand, the natural disasters that struck in 2011 had a considerable impact on the manufacturing industry in general and Yanmar in particular. Recovery efforts continue, but much of the devastation remains and survivors are still struggling to put their lives back together. The Yanmar Group is committed to ongoing efforts towards the recovery of these communities.

The Group currently finds itself in treacherous financial waters with Europe's continuing financial crisis and political instability exerting a negative effect on the global economy. However, with North America experiencing a mild recovery and a gradual upswing evident in the emerging economies of Asia, there are signs of economic growth ahead. Although we are now in a situation where a certain level of growth can be expected, the future remains uncertain. What is required is careful stewardship of the Group towards lasting prosperity.

On the occasion of this, our 100th anniversary, the Yanmar Group has announced a new Mission Statement to highlight the right course for our company, display our values and proclaim the contributions we ought to make to society. Establishing the connection between our daily work and the newly established Mission and Guiding Principles, we are moving to instill a thorough understanding of these in each employee. The Mission Statement sets out the purpose of the Yanmar Group, our duty to society and our place in the world, in order to ensure the lasting growth and development of the Group. I ask you all to try to grasp within yourself the true meaning of the Mission, then, taking pride in our work, and with a firm sense of purpose, let us all work towards realizing it. By grasping our calling, our reason

for existence, we can realize the total power of the Yanmar Group. As for myself, I shall take the lead in promoting Mission management, with the entire Yanmar Group united in pursuing implementation of the new Mission.

With this in mind, the first half of this fiscal year's report looks at the 100 year history of the Group and the new Mission Statement, with a special feature on "Challenges Facing the Next 100 Years". "Agriculture", "horticultural facilities" and "aquaculture" are words that will echo loudly in the field of Food Production, while in the domain of Harnessing Power, "the development of next-generation fuel-economical, highly efficient diesel engines" and "the move to hybrid and electric systems in agricultural and construction machinery" have captured much attention. We look at various activities that focus on these important themes.

Then, in the latter half of the report, we introduce case studies of some of our environmental protection measures and efforts in cooperation with local communities. The entire Group is involved in various initiatives aimed at preserving the richness and beauty of nature and realizing a sustainable society. We would very much like to hear your candid opinions on these activities.

Extracting the power from every drop of fuel.

With efficient diesel technology at our core, we strive to ease the backbreaking labor of industry and to better people's lives. Unchanged since the first days of Yanmar, our basic approach, now and for the next 100 years, is still as set out in the fundamental principle of our founder: "To conserve fuel is to serve mankind" and our founder's spirit: "Grateful to serve for a better world."

As we, the Yanmar Group, take our first steps with you all down the next 100 years of our history, we shall strive to hold that cherished place in your hearts.

I ask for your continuous support in the years to come.

Takehito Yamaoka  
President,  
Yanmar Co., Ltd.

山 密 健 人

# Mission Statement



We strive to provide sustainable solutions for needs which are essential to human life. We focus on the challenges our customers face in food production and harnessing power, thereby enriching people's lives for all our tomorrows.

The Yanmar Group has announced its new Mission Statement, on the occasion of its 100th anniversary. The Mission Statement expresses the significance of the YANMAR Group's existence in society and the social duties we take on. This is a declaration to all stakeholders including our customers. At the same time, it clarifies the universal direction of our business, which will not change regardless of changing times and social environment, along with our business fields and the roles we intend to fulfill in society. We believe that putting this Mission Statement into practical use is itself a CSR activity of the Yanmar Group.

## Principles and Policy Deployment Structure

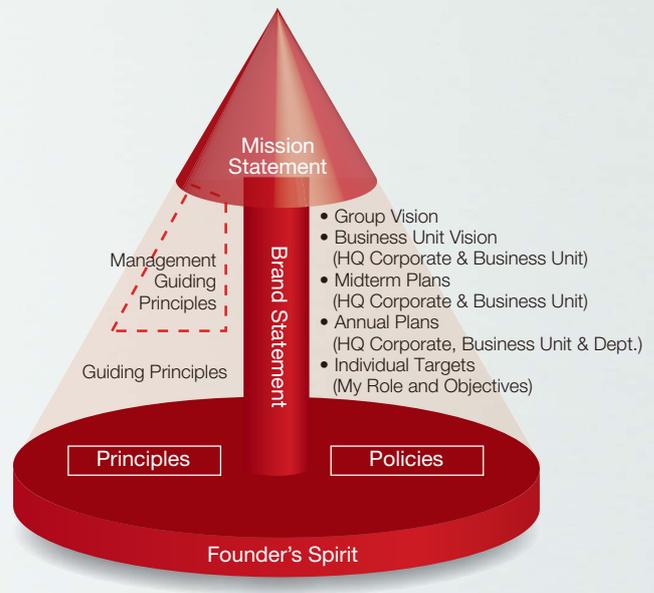
The Principles and Policy Deployment Structure illustrates how the Mission Statement—an expression of the significance of our existence—relates to the Brand Statement, the Principles, the Policies and the Founder’s Spirit (which forms the basis of our YANMAR DNA).

### Principles

The Principles describe the relationship between the Mission Statement and the concepts and actions that allow us to achieve the Mission Statement. The Principles contain the Guiding Principles for employees and the Management Guiding Principles for corporate leadership.

### Policies

The Policies express the development from the Mission Statement to the policies of the organization and from the policies of the organization to the individual roles and objectives required in order to achieve the Mission Statement. They contain the Group Vision, the Business Unit Vision, the Midterm Plans, the Annual Plans and the Individual Targets.



### Guiding Principles (YANMAR 11)

- 1. Focus on the Customer**  
Ask yourself where customer value lies, and use the answer in delivering optimal solutions.
- 2. Grasp the Real Situation**  
Investigate what the actual situation is. Penetrate beyond pre-conceptions and check the actual place, the actual part and the actual condition to get to the truth.
- 3. Success through Perseverance**  
Achieve excellent results through follow up and perseverance. Never give up.
- 4. Initiative**  
Be proactive with minimal supervision and prompting. Start the ball rolling.
- 5. Winning Speed**  
Act swiftly to capitalize on global opportunities.
- 6. Imagine and Do**  
Be creative and question the accepted way of doing things. Don't only accept what worked yesterday.
- 7. Teamwork**  
Work together and remove internal barriers for our common goals. Think globally and act locally.
- 8. Open and Honest Communication**  
Encourage differing views to reach optimal solutions. Don't just follow the general consensus.
- 9. Global Challenge**  
Strive for innovation and continuous improvement to be world class. Don't get too comfortable.
- 10. Personal Development**  
Set goals and challenge yourself to improve.
- 11. Social Responsibility**  
Always act with integrity. Serve and improve the community and the environment.

For all YANMAR employees

The Guiding Principles function as a guideline for the actions and decision making we use to achieve the Mission Statement. They place the principles in order, from activities related to our highly valued customers to the self-improvement and compliance activities necessary for business operations.

### Brand Statement

#### Solutioneering Together

The Brand Statement concisely expresses the essence of the YANMAR Group's Mission Statement in response to changing times and communicates it for internal and external use. It promises customers an enduring commitment to the value provided by the YANMAR Brand and indicates the directions of our business activities.

### Group Vision

#### Maximize Lifecycle Value for the Customer to Win Their Lasting Trust

The Group Vision, which connects the Mission Statement and the Business Unit Vision, suggests the direction we should pursue and conveys our approach to providing value to our customers.

### Founder's Spirit

#### Grateful to serve for a better world To conserve fuel is to serve mankind

The Founder's Spirit is the origin of YANMAR's corporate activities and, at the same time, YANMAR's DNA. These concepts have been handed down from our founder Magokichi Yamaoka for generations and must be passed onto future members of the YANMAR family.



# The Challenges of the Next 100 years

Yanmar has never forgotten its roots in efficient energy use. Ever since we developed the world's first small diesel engine, we've strived to push the evolution of the diesel engine ever further. Solutioneering in the domains of "food" and "energy" was born of that history. Yanmar is pursuing sustainable agriculture and the development of environmentally friendly technologies capable of utilizing biological resources. The challenges of the next 100 years have already begun.

## Cleaner engines through electronic control technology

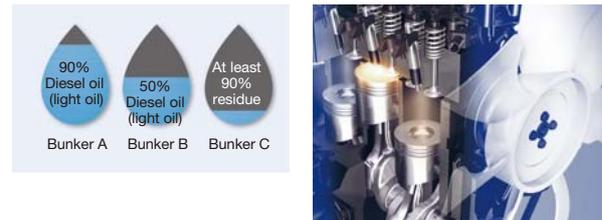
Diesel engines have high thermal efficiency and can run on a variety of fuels, such as low-grade bunker C heavy oil or fuels derived from biomass. On the down side, they have a reputation for producing black smoke.

Common rail engines are completely electronically-controlled, and increase the rate of fuel combustion by using high-pressure fuel injectors to introduce a fine mist of fuel into the combustion chamber. This has greatly changed the reputation of diesel engines. Not only are fumes significantly reduced, but the high degree of control realized in processes such as multiple-stage fuel injection, has resulted in large cuts in NOx (nitrogen oxide) emissions.

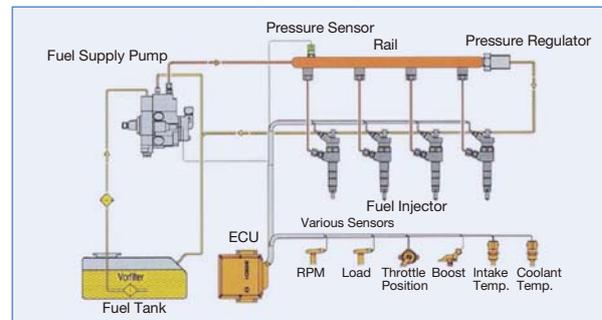
Ever since Yanmar introduced Eco-governor (an electronically-controlled governor) to its compact engines, the company has been active in meeting the demand for environmentally friendly diesel engines. This continues today in our common rail diesel engines.

The next challenge is harmful air-borne exhaust particles and NOx. Filters can capture a considerable amount of particulate matter, while NOx can be chemically reduced to nitrogen and CO<sub>2</sub>. With greater mastery of these technologies, diesel engines are now approaching gasoline engines in terms of cleanliness.

### Rates of residue for bunker A- C heavy oils



### Common rail fuel-injection system



## Marine engines evolve to meet emissions regulations

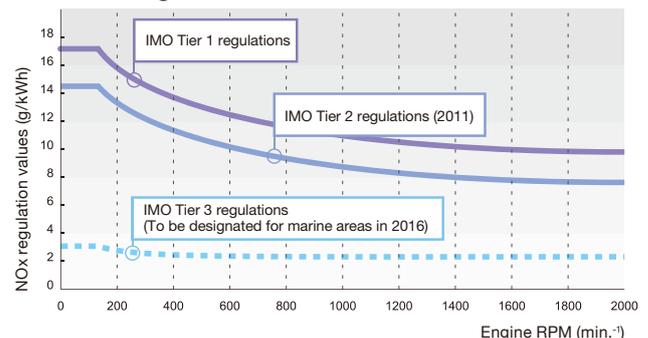
Tier 1 regulations for nitrogen oxide (NOx) emissions under the IMO (International Maritime Organization) came into effect from 2000, and Tier 2 regulations apply to vessels built from January 2011. The Tier 2 regulations require a 20 percent cut from levels stated in Tier 1, while Tier 3 regulations (planned to be applied from 2016) call for an 80 percent cut from Tier 1 levels. NOx is produced when the combustion products react with oxygen at a high temperature for too long.

In order to comply with the Tier 1 regulations, Yanmar developed the ASSIGN combustion system. Engineers optimized the design of the combustion chamber and the placement of the fuel injection nozzles to improve the mixing of fuel and air. This approach reduces the formation of NOx by shortening the combustion period and improving combustion efficiency.

Furthermore, in order to comply with Tier 2 regulations, the high-pressure Miller cycle system was developed. This is designed to further reduce the amount of NOx emissions and improve fuel efficiency by combining a supercharger for high-compression ratios with a Miller type camshaft.

Yanmar will continue to develop clean diesel technology towards improvements in fuel consumption and reductions in NOx levels.

### IMO NOx regulation



## Development of Biofuel Engine Technology



### It all started in the 1980s

After the second oil shock in the 1980s, Yanmar began research into using vegetable oils as biofuel in diesel engines. The research looked at palm oil and rapeseed oil, as well as jatropha, an oil that is not used as a food and therefore does not threaten food production. At the same time, technological development got under way into biogas, as a way to process wastes from livestock and lessen the burden of garbage disposal. In addition, Yanmar was working on the development of cogeneration, which produces electricity while making efficient use of waste heat, and, in the 1990s, water treatment and resource recycling systems were commercialized, mainly for the agricultural machinery and marine businesses.

The New Energy Business Development Office was inaugurated at the start of the 2000s. In charge of research and development for biofuels, it was part of a fully-fledged system towards exploitation of biofuel. Then, in 2008, the Yanmar Kota Kinabalu R&D Center Sdn. Bhd. was established in Malaysia, and research and development into biofuels got well under way.

### The possibilities for biofuels

Biofuels are a type of fuel converted from biomass (biologically derived organic resources). Types of biomass that can be used as fuel include waste from livestock, sewage sludge, human waste and wood. Agricultural residue (non-edible parts that remain after the harvest of cultivated vegetables and other crops), which was dumped in the past, is also used.

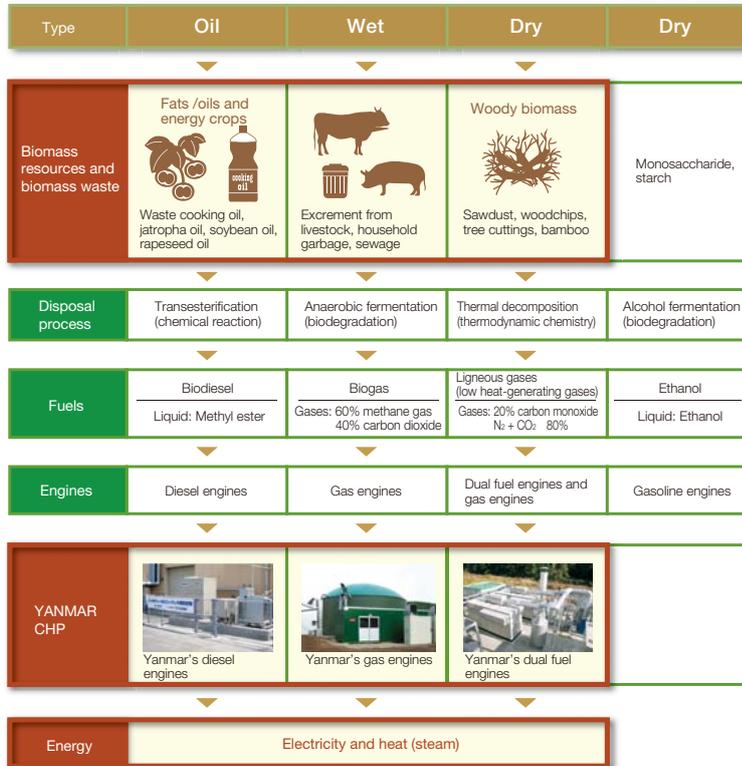
With biomass, CO<sub>2</sub> balances out (it is "carbon neutral") over its entire lifecycle as a fuel. Even though biomass is used as a fuel, CO<sub>2</sub> is not produced beyond the amount that is absorbed through photosynthesis during the growth process of plants, which serve as the raw material.

In addition, as long as biomass is regenerated, biofuels are a form of renewable energy. This is the biggest difference between biofuels and fossil fuels, whose supply is finite.

Biofuels have drawn attention as an alternative to fossil fuels and now are used widely to reduce emissions of greenhouse gases. In recent years, bioethanol has increasingly been used as an alternative to gasoline in

# The Challenges of the Next 100 Years

## Yanmar's biomass Solutioneering



automobiles, with biodiesel used as an alternative to regular diesel. We have now entered a new stage of development in the use of biomass in biofuels, with biomass making significant contributions towards building a sustainable society and the efficient use of resources.

## An R&D base for biofuels

In 2008, Yanmar established the Yanmar Kota Kinabalu R&D Center Sdn. Bhd. (YKRC) in the state of Sabah on the island of Borneo in Malaysia, a location blessed with an abundance of biomass. The move was aimed at accelerating our research and development into biofuels and it marked a step forward in biomass Solutioneering.

YKRC, our first overseas R&D base, is a hive of activity, busily developing and establishing technologies towards environmental sustainability. Its staff members conduct research on the compatibility of engines with biodiesel as well as endurance testing and analyses and evaluations of biodiesels and lubricants.



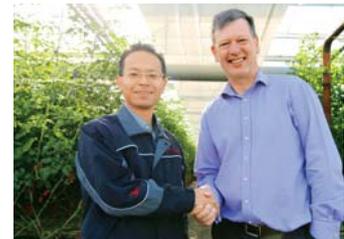
## Turning on the lights: an electrification project in Mali



In 2010, Yanmar donated a biodiesel generator to the Republic of Mali in western Africa. The country is working on building a system for self-sufficiency in electricity which involves purifying jatropha, a biomass raw material, into biodiesel fuel.

Yanmar has provided a total solution that resolves such problems as how to purify biofuel in an area that lacks electricity, and we have plans to provide active support in the future as well.

## Biogas from tomato plant waste



One thing that can never be avoided in farm management is the production of agricultural waste. Yanmar has introduced a biomass cogeneration system to a tomato farm on the outskirts of Manchester in England, with proof-of-concept tests continuing. The idea is to supply electricity and warm water needed for tomato cultivation by purifying agricultural residue into biogas which is then converted into energy. In addition, CO<sub>2</sub> produced at the plant is returned to greenhouses, where it is used to promote tomato growth.



# Challenge 1

## Solutioneering for Food Production

The Challenges of the Next 100 Years

As the world's population continues to grow and emerging nations experience rapid economic growth accompanied by structural changes in food consumption, reduced harvests and serious imbalances in food supplies are emerging, with the decline in the number of farmers, water shortages, drought and flooding all playing a part. With the aim of redressing these imbalances, Yanmar has proposed innovations from its three business fields that tie in with Solutioneering in food production, as the company takes the initiative in creating and offering new value.



## Agricultural innovations

Eating habits in some newly emerging nations have diversified, from rice which has been relied on to provide the bulk of calories, to vegetables, wheat, meat and seafood. Food consumption is soaring, reflecting how those countries' eating habits continue to move towards the patterns in developed countries.

To respond to such changes, it has become necessary to produce food that is high in quality and low in cost, and moreover, can be harvested in short periods. It's also important to establish supply systems that, as much as possible, implement local production of such products, for local consumption.

At Yanmar, we realize that it is essential that we come up with agricultural management suited to these regions and the realities of this new era. We are committed to actively going into these regions to initiate Solutioneering in a wide range of fields. This may involve research into rice and vegetable production integrated at the regional level, as well as introduction of agricultural machinery and systems, or the

provision of technologies towards agricultural instruction and the training of human resources in agriculture, or any combination of these.



## Topics

### Implementing agricultural training at model farms

The Yanmar No. 1 Farm (4.6 ha in 2010, expanding to 10.6 ha in 2012) was established in Seracho, Hiroshima Prefecture. The facility accepts agricultural trainees from farming corporations and companies planning on entering the field of agriculture. Since October 2010, it has been working to nurture the agricultural leaders of the next generation, as part of its agricultural innovation plan. While pursuing agricultural management as a business model, the Yanmar No.1 Farm has worked to develop and disseminate agricultural methods through actual farm operations, with 22 program graduates over the past two years and 16 agricultural trainees in the current fiscal year.

## Greenhouse horticulture innovation

Yanmar is also active in the area of greenhouse horticulture, working on innovations towards realizing agricultural production that gives soil cultivation a greater degree of stability.

The aim is to develop and put into practice sustainable greenhouse technologies, by developing energy systems based on natural and renewable energies.

One such project at tomato cultivation facilities in England involves the conversion of agricultural residue into biogas, a renewable energy source. A cogeneration system which uses this biogas as a fuel is being put into operation, with generated electricity and heat used at the facility. By working to control the growing environment, the project is looking to realize results through innovation.

Not only is Yanmar providing agricultural machinery and systems, we are also actively taking up challenges in cultivation technology fields that support sustainable agriculture.



This cogeneration system utilizes agricultural residue at a tomato cultivation facility.

## Aquaculture innovation

Nurturing a rich harvest of fish and shellfish, Yanmar works towards productive fisheries, applying its innovation to the realm of aquaculture.

With closed-circulation, onshore aquaculture systems that enable the cultivation of fish and shellfish, even in a desert, and feed production systems for fisheries, Yanmar has a wide range of sustainable aquaculture systems.

Furthermore, utilizing our accumulated expertise in fish and shellfish feed production systems, we are looking into intensive use of microalgal culture technologies to extract biofuel from the biomass of algae. We aim to further expand

this field through applied research into medicine, medical supplements and fuels of the future.



Feed production systems for fish and shellfish



The Challenges  
of the Next 100  
Years

## Solutioneering for the Effective Use of Energy

Yanmar's calling is to realize the creation of "more food," "better cities" and a "better living environment" using "less energy," towards greater affluence and comfort 100 years from now. To achieve this, Yanmar is conducting Solutioneering for the effective use of energy, embarking on research into three important areas of energy technology.

# Challenge 2



## Further engine evolution

Diesel engines have the highest thermal efficiency among internal combustion engines. They are also able to use a diverse range of fuels, being compatible not only with diesel oil but also kerosene and a variety of other fuels.

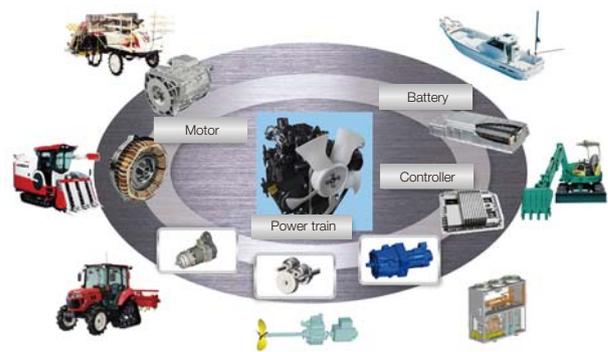
In the 100 years since they were first developed, diesel engines have evolved toward ever greater power. High levels of power improve engine fuel efficiency and allow for small and lightweight designs. These compact and light weight engines then contribute to improved fuel efficiency in marine

and other applications. With the appearance of new technologies such as common rail, the evolution of the diesel engine continues.

Yanmar is now launching research into next-generation engines, driving the evolution of the diesel engine ever further. We are convinced that success with these challenges will lead to great strides ahead in the development of highly fuel efficient industrial machinery.

## Electric and hybrid technologies

In the past, engines and drive trains have had the lion's share of the job of harnessing power. Yanmar is now considering ways of combining motors, batteries and inverters with engines and powertrains. We believe that through the establishment of hybrid technologies and electro-motive systems, it will be possible to provide our customers with new value. By combining engines with motors, or generators with batteries, it becomes possible to vastly improve output characteristics, fuel consumption and the quietness of the power source or energy-supply source. In particular, the effective application of electric motors, which compare favorably with engines in terms of outstanding responsiveness and improved control, could realize new features and configurations, new modes of operation and high levels of accuracy. We believe this trend will give a tremendous boost to the evolution of industrial machinery.



### Topics

A fully electric riding mower that enhances operation and comfort

We are also launching research into electric work vehicles as part of our "fusion with power electronics." Ongoing research efforts focus on the theme: "Realizing the potential of hybrid and electric technology in work vehicles to offer new value to our customers"



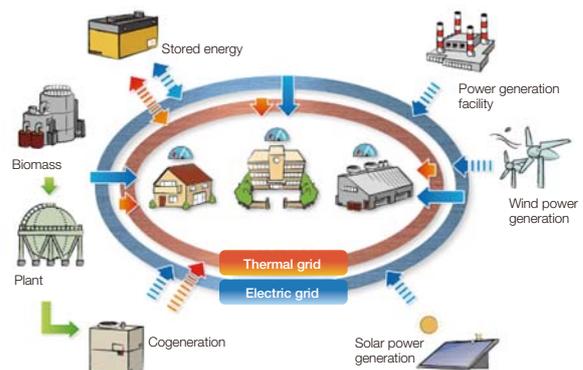
## The supply of renewable energy

Yanmar has long played a part in energy supply through electric generators and cogeneration systems. With a view to establishing a renewable energy grid, Yanmar has set out to develop the three technologies outlined below.

The first is the construction of biomass generation systems that harness the diverse fuels compatible with diesel and gas engines. Thermal energy often goes to waste in traditional grids, so the second focus involves the creation of cogeneration technology to match thermal energy to various purposes and supply it in useable forms. The third is the establishment of thermal and electrical storage technology. We believe that this energy storage technology will be an important tool in facilitating the use of renewable energy, including natural energy.

The effective use of energy will impact greatly on quality of life in the coming century. Contributing to society, Yanmar

will employ Solutioneering to set out our course forward in the 21st century.



# Challenge 3

## India

### Integrated rice cultivation systems



### The Challenges of the Next 100 Years

### The Development of Global Solutioneering

In 1933 Yanmar was the first in the world to develop the small horizontal water-cooled diesel engine and, a mere five years later, exports got under way to various countries in Asia. This development marked the realization of our company founder's wish to: "ease the heavy labor of village life" and, his desire to: "strive for the effective use of energy."

Yanmar continued to pour its efforts into business activities overseas, mainly through the export of its products, and, nowadays, products bearing the Yanmar brand are loved in more than 130 countries throughout the world, mainly in the three great economic spheres of Asia, Europe and the United States.

Even as we have steadily expanded our areas of business, we have continued to deliver solutions tailored to the distinctive conditions of the regions in which we work, towards improving people's lifestyles and supporting social development. Let's look at some of the ways that Yanmar is actively utilizing its technology and knowhow to foster and encourage the growth of communities.

India is an agricultural giant, with more than 40 percent of its land devoted to farming, however, its rice crop is largely cultivated by hand. In an attempt to improve the situation, YANMAR INDIA PRIVATE LIMITED has been working to encourage the use of integrated rice cultivation systems that mechanize operations, from tilling, planting, harvesting and drying to final sorting and quality control.

Yanmar's rice transplanters have taken the lead in this initiative. Not only do they conserve energy and vastly reduce the time taken to plant rice, they also increase yields by ensuring uniform and homogeneous planting. Naturally, their diesel engines are prized for their superior fuel consumption and durability.

Rice planting operations are now moving to a new stage. Starting three years ago, engineers from Japan were invited to hold training demonstrations throughout India on the vital task of raising seedlings, as part of efforts to promote mechanization.

India hopes to earn foreign exchange through exports of rice and wheat. If integrated systems for rice farming take hold, agricultural incomes will increase and GDP will grow. These moves are expected to have a large impact on Indian agriculture.



## Malaysia

### Local production for local consumption with environmentally sustainable aquaculture



Yanmar's first overseas research and development base was the Kota Kinabalu R&D Center in Sabah State, in the northern part of Borneo, Malaysia. One particular line of research involves both plant cultivation and aquaculture, with a project underway that combines the cultivation of plants for fuel with freshwater aquaculture.

Using Yanmar's expertise in hydroponic technology, the waste from freshwater fish farming is used as fertilizer for hydroponic growth of plants for fuel and vegetables. The result is that the fish tanks are cleaner and vegetables and fresh fish are consumed in the area where they are produced. As the local area is blessed with an abundance of biomass, the motive power, electricity and heat used at the aquaculture facilities are generated from biodiesel made from biofuel, making the construction of a zero-emission system a possibility.

Currently, cultivation of jatrofa with drip-cultivation technology that uses water discarded from freshwater fish breeding is under development. The goal is to use this technology to grow greenery, even in dry regions where rainfall is scarce; Solutioneering agriculture in the desert.

## Australia

### The "Sensui-kun" net cleaner takes on the world



Few people may realize it, but the cleaning of aquaculture nets is an important job in the breeding of tuna and other fish. When algae grow on the nets, fish enclosures can become dirty, having a detrimental effect on the growth of the fish. Clean Seas, a company that manages aquaculture facilities in three locations in Australia and New Zealand, used to haul up its aquaculture nets and clean them once every two weeks. However, the job relied heavily on manual labor, resulting in mounting costs.

Power Equipment Pty. Ltd., a Yanmar distributor for the Australia region, had been consulted on how to resolve this problem. After numerous discussions, the company proposed "Sensui-kun", Yanmar's automated robot that uses a high pressure spray to clean the aquaculture nets from inside the enclosure. As a result of using the robot, not only were big cost reductions realized, but, unexpectedly, yields also rose. Yanmar will continue to provide full support in this task, as we share in the goals of our customers. This is what Yanmar's Solutioneering is all about.

## Japan, China and the Philippines

### Training engineers to support safe navigation



In order to raise the level of confidence in Yanmar's global Solutioneering, it is essential that we train the next generation of engineers to meet the demands required of them. The Technical Training (TT) School, which is open in three locations: Japan (Amagasaki), China (Dalian) and the Philippines, is tasked with this role.

Trainees from around the world gather at the TT Schools, where they study to extend their knowledge and polish their skills in the field of engine related technologies and operations, as well as service and maintenance. The next generation of engineers receives practical training in engine fundamentals and applications, as well as the disassembly and assembly of real machinery and verification and adjustment operations. In addition, a broad curriculum is being prepared to cover explanations of the latest technologies and new types of machinery.

A wide variety of people will be eligible to become trainees, including ship owners, shipyards, sailors and maritime engineers, as well as distributors and dealers. Yet everyone's shared goal will be to master the technology and knowhow behind the stable operation of engines and to learn the skills and procedures necessary to avoid problems. This will thus become our contribution to safe maritime navigation throughout the world.



**Yukio Nishizawa**  
Branch Manager,  
Oshimizu Branch,  
Chubu Kinki Company  
YANMAR AGRICULTURAL  
EQUIPMENT SALES CO. LTD.

### Guiding Principle 1: Focus on the Customer

In the early days of doing sales of agricultural machinery, an elderly couple offered me words of gratitude, saying, "Thanks to Yanmar, we can produce rice. Thank you." I wonder how often people have said "thank you" to the Yanmar Group. I want to put solutions into practice so that many more people say "thank you," by having an acute sense of customers' needs and instantly taking action on them.



**Seiichi Koga**  
Production Planning Group,  
Production Planning Dept.,  
Manufacturing Management Dept.,  
Yanmar Construction  
Equipment Co., Ltd.

### Guiding Principle 2: Grasp the Real Situation

Work is a series of problem solving. When we say "Grasp the real situation," it means investigating an issue by using our own hands, feet, eyes and ears, without making any judgments based on guesswork and without any prejudice, and I believe problems can be fully solved by getting to the definite source of the problem. Therefore, it seems important to have concern for the situation at hand, and to feel and realize it during daily operations and duties, and then share it with colleagues, and always set high targets as you continue with your challenges.

## The Challenges of the Next 100 Years

## From Our People



**Ichiro Fuwa**  
Yanmar Asia (Singapore)  
Corporation Pte. Ltd.

### Guiding Principle 5: Winning Speed

It's been about a year since I moved overseas. Compared to working in Japan, I could feel the intensity of competition more intimately here. Thus, I keenly realize that a sense of speed in my thoughts, judgments and actions is indispensable to come out winning. For Yanmar, "individuals" as well as "organizations" will take action with a greater sense of speed, and I would like to contribute to this, so that all the employees can greet the next 100 years with a smile.



**Mitsuru Takayama**  
Transaxle Manufacturing of  
America Corp.

### Guiding Principle 6: Imagine and Do

I once visited a client in India. They had just introduced state-of-the-art production machinery at the factory and the executive there said, "The employees at our company can finally commute to work by motorcycle, not bicycle." This is the kind of manufacturer we compete against. If we stand still, our technological dominance will probably be overtaken in no time. We need to move forward faster, based on bold ideas.



**Gilberto Saito**  
Production Manager  
Yanmar South America  
Indústria de Máquinas Ltda.

### Guiding Principle 8: Open and Honest Communication

Brazil will be one of the largest food producers in the world. I sincerely believe that Yanmar can and should contribute greatly in this process. To achieve this, it is important to understand the needs of our Customers and propose solutions that can meet their aspirations. Be willing to accept different ideas from ours is the first step. You must be ready to listen, analyze and discuss other ways of thinking, so as you be able to find the best solutions for our Customers. Work hard with dedication and optimism, believing in the potential of the Brazil and in our products to achieve this growing market is what I wish for the coming years.



**Daisuke Kajita**  
Group 2,  
Engine Engineering Dept.,  
Engine Development Dept.,  
Power System Operations Division

### Guiding Principle 9: Global Challenge

This principle doesn't only call for us to go actively overseas, as the wording states, but I think it also contains the meaning of resolutely challenging new fields and to not be afraid of challenges. Even if small, the accumulation of challenges and reforms of things, one by one, are linked to the invigoration of the entire company, and that will probably enhance the company's competitive power. As we face the next 100 years, I hope we will entrench a culture of challenge at Yanmar.



**Hajime Hirai**  
 Manager,  
 Planning Group,  
 Planning and Administrations Dept.,  
 Marine Operations Division

**Guiding Principle 3:  
 Success through  
 Perseverance**

By having pride in the matching with the environment and society and working to resolve customers' problems, I am motivated to push forward with my duties to make the customers happy. In addition, I establish my own plans and targets in all sorts of different duties and follow up the results. I believe that the accumulation of these kinds of activities will build up the Yanmar brand for the next 100 years.



**Kenichi Nakao**  
 Overseas Sales Dept.,  
 Yanmar Energy System Co., Ltd.

**Guiding Principle 4:  
 Initiative**

Whether outside or inside the company or department, the right amount of power is necessary when things move forward. No matter how big the imagined problem, there is the question of whether you tend to react passively. In my own case, I want to be able to admonish myself, as there are situations where I realize myself that I'm being passive, to the point where there is no need for someone else to point this out to me.

Every single employee has renewed his or her commitment at the various workplaces and is taking the initiative in their day-to-day duties, after receiving the Yanmar Group Guiding Principles (Yanmar 11). This is a concrete plan that can be referenced for actions and judgments so that we turn the new Mission Statement into a reality. We are aiming to be a company where our employees, through their own self-motivation and creativity, firmly take up the challenge in discovering our customers' problems and offer solutions.

# Challenge 4



**Tilly Dobbe**  
 Executive Assistant,  
 Yanmar Europe B.V.

**Guiding Principle 7:  
 Teamwork**

Besides the importance of brand awareness and recognition it's also important to keep in close contact with our customers and colleagues. Share information, knowledge & experiences. Be open minded, curious, exploring and resourceful, see challenges instead of obstacles. Only this way we can improve and innovate our product & service, and hopefully we can contribute to environmentally sustainable society and make a difference for this generation and the next.



**Yuka Katashima**  
 Human Resources Group,  
 Human Resources Division

**Guiding Principle 10:  
 Personal Development**

As we promote the Mission penetration activities, I strongly believe that all employees of the Yanmar Group should appreciate the New Mission and the Guiding Principles and they should have a positive effect on each of the work duties. Therefore, through my own activities, I am working hard on deepening the appreciation of the Mission and the Guiding Principles, and on having them reflected in day-to-day work duties.



**Saya Kimura**  
 Legal & Business Ethics Group,  
 Corporate Social Responsibility  
 Dept.

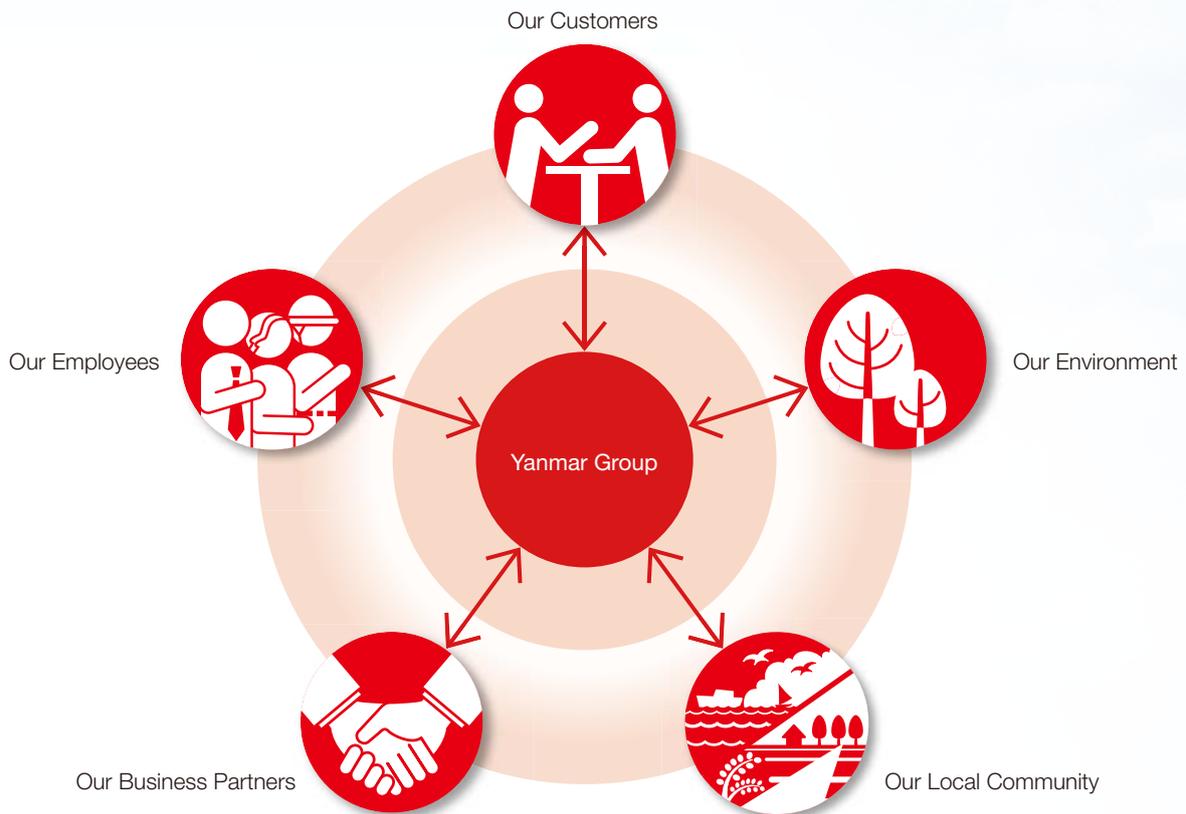
**Guiding Principle 11:  
 Social Responsibility**

As I belong to the Legal & Business Ethics Group, it is imperative that I comply with social norms. However, it is also a major assumption that not only legal departments but all departments must comply with social norms. As I take a hard look at enhancing the compliance mindset of the departments consulted, I am constantly focusing my efforts on verification work for written contracts and legal consultation.

# Promoting CSR through Discussions with Stakeholders

The Yanmar Group places great importance on performing its Corporate Social Responsibility (CSR) duties to meet the expectations of its many stakeholders (those with an interest in or connection to the Yanmar Group). It is our new Mission Statement (see P8 for details) that guides our actions and acts as a cohesive force for the Group towards achievement of these duties.

Engaging in sincere discussions with our stakeholders both in Japan and around the world, we strive towards the implementation of our Mission Statement. By meeting our social responsibilities as a corporation, we are working to increase the value of the Yanmar Group, and, through our efforts, we are contributing to the creation and growth of a sustainable society.



■ Stakeholder initiatives

Stakeholders	Outline of initiatives	Related pages
 <p>All Our Stakeholders</p>	<p>In order for Yanmar to continuously increase its corporate value, we need to be able to make quick decisions and accurately assign responsibility. Yanmar has organized a system of corporate governance that ensures healthy management systems with a high degree of transparency as well as strong internal controls. Yanmar is striving to build a better relationship with its stakeholders, through measures such as handling information disclosure in a timely and appropriate manner via the company website.</p>	<p>Organizational Governance P24</p>
 <p>Our Customers</p>	<p>We prize the ties of trust that we have with our customers around the world. Implementing our proprietary quality assurance systems and the principles of universal design, Yanmar strives to create inspiring value to drive both ourselves and our customers forward. Moreover, we are planning to develop a system that can respond more rapidly to feedback from our customers as well as improving our after-sales services.</p>	<p>Consumer Issues P46</p>
 <p>Our Employees</p>	<p>We aim to foster human resources that can play an active role globally and we place importance on initiative and creativity. At the same time, we cherish diversity in our employees and support this in a number of ways. Moreover, we have implemented measures to improve the work/life balance, and promote healthy lifestyles for our employees and have reinforced health and safety supervision in the workplace.</p>	<p>Human Rights and Labour Practices P26</p>
 <p>Our Business Partners</p>	<ul style="list-style-type: none"> <li>■ <b>Our Sales Offices and Agents</b> Our network of sales offices and agents covers all of Japan as well as locations worldwide and helps us share information about our products as well as spread our management philosophy. Our aim is to become the No. 1 company in the world in terms of customer satisfaction.</li> <li>■ <b>Our Suppliers</b> In order to further deepen mutual understanding with our suppliers both at home and overseas, we take a variety of approaches to communication. We are taking the lead in developing partnerships with enterprising businesses involved in the protection of the natural environment all over the world, as well as promoting Green Procurement (procurement that is sensitive to the environment).</li> </ul>	<p>Fair Operating Practices P44</p>
 <p>Our Local Community</p>	<p>Our aim is to move in step with our local community and society at large, and, as a result, we are committed to making contributions, both at home and overseas, through reinvigorating agriculture, supporting education and sports, as well as donations, etc.</p>	<p>Community Involvement and Development P48</p>
 <p>Our Environment</p>	<p>Based on the theme of “Coexisting with Nature,” Yanmar is dedicated to developing environmentally-oriented products, pursuing production processes that preserve the environment and engaging in environmental communication activities.</p>	<p>The Environment P28</p>

# Organizational Governance

The Yanmar Group is working to increase the transparency of its management processes as well as promoting the completion of its internal control system and strengthening our management systems to prevent risks before they become apparent.

## Corporate governance system

Yanmar has created a corporate-governance system complete with a sound management system with a high degree of transparency and with an internal-control system for speedy decision-making and clear allocation of responsibility. The efforts are aimed at the ongoing improvement of corporate value.

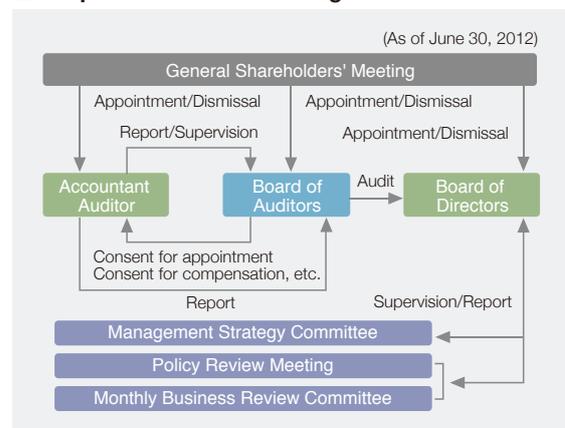
As for our management system, we introduced an executive-officer system from 2000 in order to split management supervision from execution of duties. Members of the Board of Directors are now specialized in decision-making or supervision of execution of duties.

Under the Board of Directors, there are a Management Strategy Committee (which has substantial decision-making power on matters concerning the entire Yanmar Group) and the two other bodies – Policy Review Meeting and Monthly Business Review Committee (which carry out PDCA management for business execution). This arrangement enhances management efficiency.

In addition, Yanmar turns to two external auditors out of its four-member team, whose job is to monitor

managerial operations to reinforce check-and-balance capabilities and deterrent capabilities with respect to professional duties. This arrangement enhances transparency of our corporate behavior.

### Corporate Governance Organization Chart



### Basic Policies for Formation of the Internal Control System (outline)

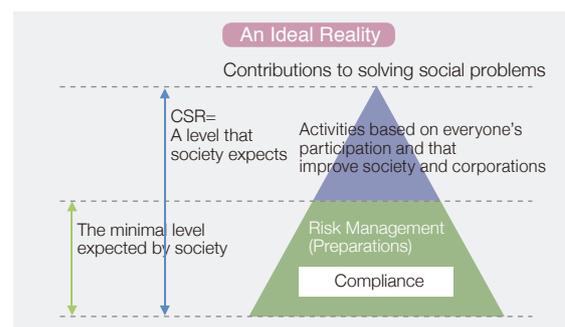
- A system to ensure that the execution of professional duties by board members and employees conform to the law and to our Articles of Incorporation
- A system concerned with the storage and management of information related to the execution of professional duties by board members
- Regulations and other systems concerned with controlling the danger of losses
- A system to ensure that the execution of professional duties by board members is conducted efficiently
- A system to ensure the appropriate nature of business operations for the corporate Group overall
- A system to ensure that the auditors' duties are being carried out efficiently, and securement of the independence of the auditors' assistant

## Promotion of CSR activities

Yanmar established its "CSR Department" in March 2008 in order to promote CSR as an activity to be undertaken by the entire Group. The department is involved in setting the direction of the Yanmar Group's CSR activities and in communication both inside and outside the company.

With regard to employees of the Yanmar Group, articles related to CSR — *Minna de Kangaeyo! CSR* (Let's Think About CSR Together!) — appear in the internal Group Publication. Articles address topical issues and also serve to promote CSR activities.

### Involvement With CSR and Other Activities



## Risk management promotion

Yanmar has established a Group Risk Management Committee. The goal is to manage and carry out measures to deal with the various risks that business operations can become involved in. The committee

studies the policies and direction for overall risk-management efforts and holds conferences that cover the subject of risk-management promotion and its countermeasures.

### Using the Risk Case Report Database

Risk-management officers enter progress made on cases that occur within the Yanmar Group companies whenever such cases occur. The content is shared among the top management echelon. Ten cases were reported in fiscal 2011.

### Using the Emergency Communication Network

An emergency communication network is available to respond to emergency situations occurring on holidays and late at night, with tests conducted to the network every three months.

### Establishing section meetings

Three section meetings were established: Disaster/Accidents, Labor Administration, and Business Connections. The idea was to equalize and upgrade efforts on core-risk reduction.

In FY2011, a project was launched to review the emergency procedure manual outlining how to respond to an earthquake or natural disaster. An Emergency Response Procedure manual (ERP) and a Business Continuity Plan (BCP) were created as the Company continues to increase the level of preparation for a major disaster or incident.

### Applying the Safety Confirmation System

In the event of an earthquake or a wind- or water-based disaster, Yanmar has implemented a system to confirm the safety of employees and their families, as well as ascertaining the status of any damage, casualties and/or injuries, etc. In order to prepare for any eventuality, all employees of the Yanmar Group undergo training in January and September of each year.

Organizational Governance

## Stakeholder engagement

Each year, the Yanmar Group holds an event "Read the CSR Report; Think About CSR Issues" for Group employees. In addition to soliciting opinions from employees regarding the content of the CSR report, these events provide a forum for an exchange of opinions as to how the Yanmar Group should implement

CSR activities going forward.

In FY2011, the event was held in two locations, at the Research & Development Center and at Seirei Industry Co., Ltd. and a lively discussion took place with many opinions being shared.



Research & Development Center



Seirei Industry Co., Ltd.

# Human Rights and Labour Practices

**The Yanmar Group respects the personality and diversity of all our employees, as well as ensuring that our employees can work in a safe working environment that is also a lively and pleasant place to work.**

## Basic policy toward personnel

In order for Yanmar to survive amid global competition, we want to build up not just our products but also our human resources, called “true Yanmar

employees,” through recognizing the need for each of the organizations and individuals to grow in strength.

- In addition to securing, training and deploying the personnel we need to realize our corporate mission and corporate strategy, we are looking to maximize the passion our employees have for their work as well as the capabilities of the employees of the Yanmar Group through motivating them in their activities towards realizing our mission.
- With the aim of increasing the degree of satisfaction felt by employees of the Yanmar Group, we are looking to manage the company in a fair and just manner with due consideration for the work–life balance.

## Employing diverse human resources

Yanmar employs a variety of human resources for the purpose of “securing professional human resources who can work globally, regardless of nationality, gender or age.” At the end of March 2012 Yanmar had 3,329 employees, of which non-Japanese employees numbered 27 as well as 424 female employees (12.7%).

There are also 241 employees that have been re-employed following retirement.

As we continue to expand employment opportunities for persons with disabilities, we are also taking steps to increase the rate that disabled employees stay at the company after they have joined Yanmar.

## Global talent development

Yanmar is supporting systems of skill development throughout the Group with the view of nurturing human resources who are suited to the expanding realm of global business.

In addition to training basic skills at factories in order

to bolster our manufacturing power, we are also conducting education aimed at broadening our employees’ characters, through such programs that encourage the teaching of knowledge in related fields of business.

## Flexible as well as systematic deployment of human resources

We deploy and exchange our human resources flexibly and systematically. Apart from regular personnel changes, Yanmar has also introduced a “personal reporting system concerning changes,” by which the people concerned directly report their desired changes to the human-resource offices; the “Yanmar Dreams

Come True Program,” an in-house recruiting system; and also the “Career Development Program,” which is a skills-development program that systematically nurtures human resources who possess broad perspectives as well as high levels of knowledge about their profession.

## Nurturing human resources capable of thinking proactively from the position of the customer

Yanmar offers opportunities for skill development, through such things as “(basic) engineer education,” “selective workshops (‘Challenge Seminars’)” and

“correspondence education,” in order to train human resources capable of successfully contributing to customers’ problem solving.

## Nurturing human resources capable of business on a global scale

We are engaged in training and fostering human resources capable of performing on a global stage, starting with personnel exchange programs with our offices overseas, and through language training programs, training for overseas business skills (such as

programs in English composition, giving presentations and engaging in negotiations in English, etc.), and training for foreign postings (problem solving, overseas risk management training, etc.).

## Nurturing human resources responsible for management

We have established the Yanmar Management School to improve management skills of human resources who will be tasked with corporate management

responsibilities in the future. We also support skill development for overseas communication, leadership and other subjects.

## Work-life balance

Yanmar is striving to create a workplace where employees can continue to work with peace of mind, where they are making the most of their abilities both at work and at home, through solid systems that provide time off work for people raising children and providing nursing care as well as a system of storing up paid leave days. Moreover, we are introducing a system whereby

women that leave their jobs due to marriage or childbirth can return to the workplace.

In order to achieve a better work-life balance and to improve efficiency at work, some sections of our research and development and staffing departments have implemented a flextime system and a system of flexible working hours.

## Promotion of health improvement

Yanmar operates training sessions for those in high-level leadership positions, which include a broad explanation of mental health and self-awareness and awareness by surrounding people.

Furthermore, Yanmar arranges for a lecture on health to be delivered once a year by Dr. Kondo of the Industrial Medicine Kondo Clinic.

The Health Management and Promotion Committee at

Yanmar is made up of representatives from the health insurance union, the Human Resource Division, the business headquarters General Affairs Dept., and labor union members. The Committee holds meetings on matters related to the promotion of health (such as periodic medical checks and measures to mitigate metabolic syndrome, etc.).

## Labor-management relationship

Yanmar maintains a stable relationship with the Yanmar Labor Union and the Yanmar Employee Union, and engages in periodic negotiations and discussions on the workplace environment and employee working conditions, etc.

We also have the opportunities to explain and discuss the financial conditions of the company by holding meetings to explain the corporate condition and other labor-management meetings, etc.

## Occupational health and safety

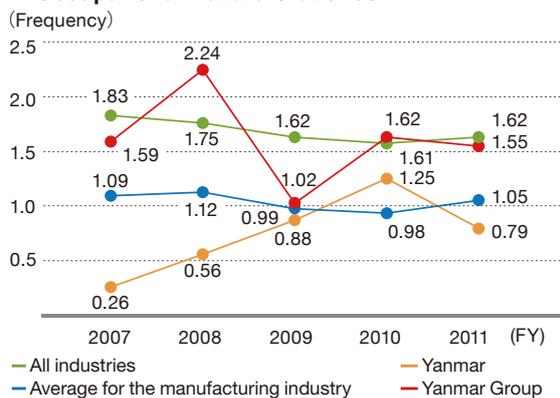
Each plant at Yanmar utilizes its own management system since the working environment differs from plant to plant.

Each plant has a health and safety committee that works towards reinforcing health and safety management through organizing health and safety patrols, etc. as well as planning the thorough implementation of health and safety practices in the workplace, in addition to education and training seminars and workplace-based training to improve accident and disaster prevention.



Safety Patrol at Yanmar Construction Equipment Co., Ltd.

### Occupational Hazard Statistics



\* Frequency: Fatalities or injuries per one million working hours  
\* Subject period: From January 1, 2011, to December 31, 2011

### Voices from the field

### We are running detailed checks on-site to ensure that no-one falls down and injures themselves at the workplace



**Junji Iribe** Production Administration Group Production Administration Dept. Yanmar Construction Equipment Co., Ltd.

Safety management in the workplace is an indispensable part of what is required for our plants and employees to keep pace with the work schedule. In FY2012 we decided to emphasize the safety aspects of "checking where you stand" on our safety patrols. We ask the employees on our production lines to

minimize any unnecessary movement, but in this environment there are a number of heavy devices, such as tools that are held, so it is important to watch where you step to check for bumps or curbs in order to prevent slipping or tripping up.

The Yanmar Group has identified the protection of the global environment as one of the most important management policies, and as a result the Company is promoting environmental management and sensitivity towards the environment as a fundamental part of its business activities.

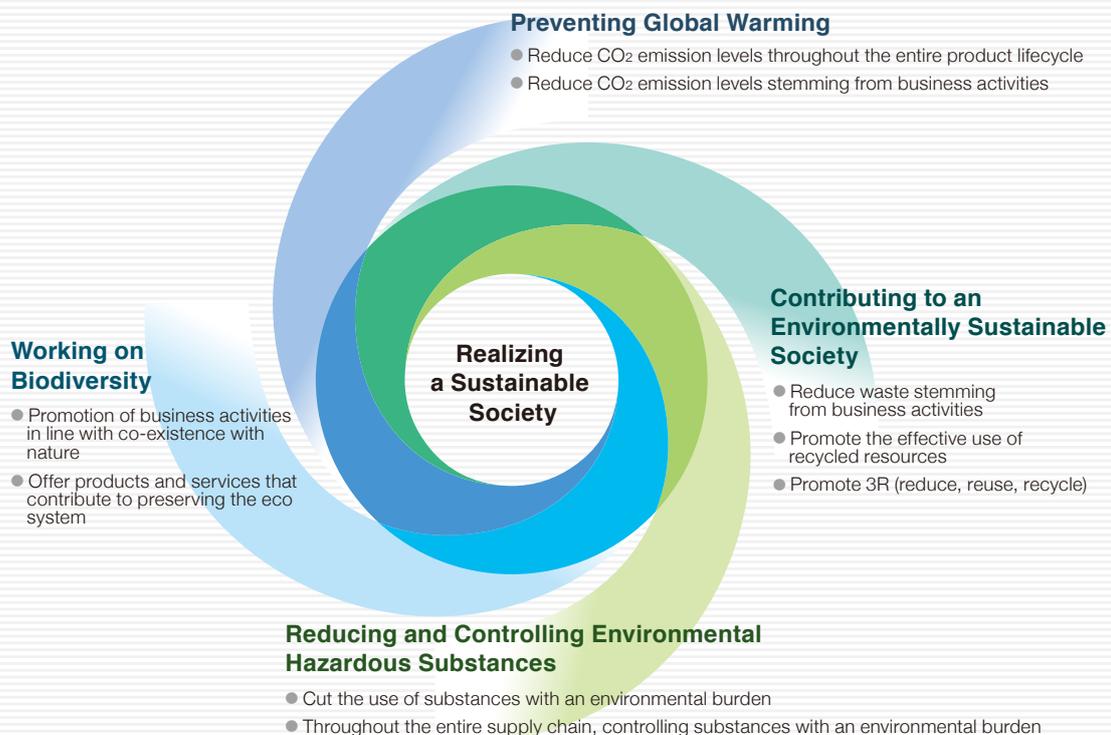
## Deciding on the Group's Environmental Vision 2020

The Yanmar Group has drawn up its Environmental Vision 2020 as we approach FY2020, the international target year for reducing global-warming gases.

The plan has set the direction for the Group's environmental activities.

### Group's Environmental Vision 2020

The Yanmar Group is conscious of the fact it handles products that can have an environmental impact. As a pioneer in energy technology, we are working towards the realization of a sustainable society.



#### 1 Preventing Global Warming

- We contribute to reducing the emissions of greenhouse gases through energy conservation, the creation of energy-conserving products and the extensive use of biomass fuels. In addition, we carry out thorough improvements in the efficiency of current products. Through these efforts, we aim to cut emissions of greenhouse gases throughout the product lifecycles by 25% on average (compared to 1990 levels).
- We aim to cut emissions of greenhouse gases stemming from business activities by 25% (compared to 1990 levels).

#### 2 Contributing to an Environmentally Sustainable Society

- We carry out reductions in the amount of industrial waste for landfill disposal stemming from business activities.
- We strive to improve our input rate of recycled resources to whole input resources for our business activities.
- We carry out design work that is in harmony with the environment and strive toward improvements in the 3R (reduce, reuse, recycle) of our products.

#### 3 Reducing and Controlling Environmental Hazardous Substances

- At production sites, we implement cuts in substances that place a burden on the environment.
- Within the supply chain, we control substances used in products that place a burden on the environment and offer products and services that conform to the latest regulations on chemicals.

#### 4 Working on Biodiversity

- We strive toward business activities that are capable of co-existing with nature.
- We contribute to preserving the eco-system through offering new products and services.

## Environmental management structure

### Implementation structures

The Yanmar Group established the Yanmar Group Global Environmental Committee, consisting of top executives from each Group company, in 2002 to promote high-level environmental management for the Group as a whole.

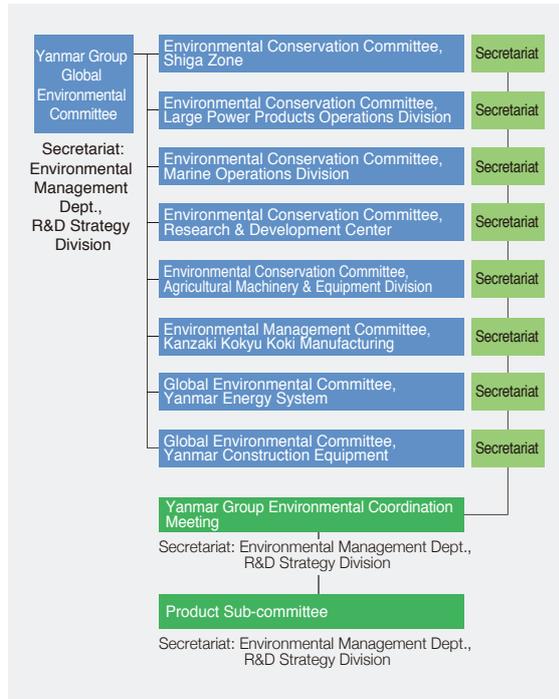
Each Group company has its own Environmental Conservation Committee or Global Environmental Committee that takes the initiative in promoting environmental conservation activities under the leadership of the top management of the company. The Yanmar Group Environmental Coordination Meeting is also formed by the secretariats of those company-level committees as a subordinate organization of the Yanmar Group Global Environmental Committee, and engages in the communication of activity policies and discussion of activity status.

In addition, the Product Subcommittee, consisting of people responsible for product development at all the companies, was established and undertakes various activities to improve the environmental performance of our products.



Yanmar Group Global Environmental Committee

### Organization Chart of the Yanmar Group Global Environmental Committee (As of July 2012)



### Acquisition of ISO 14001 certification, and supporting Group companies to acquire it

The Yanmar Group promotes the creation of environmental management systems based on ISO 14001, an international standard, to vitalize the unique features of each office and to make environmental compliance more reliable.

Environmental management activities are inspected periodically once certification has been obtained, and we are working on elevating this issue to a higher level through the creation of structures that promote continuous environmental conservation activities.

We support efforts for Group companies to obtain ISO 14001 certification as part of our promotion of

continuous and efficient environmental-conservation activities.

We also help group companies planning to acquire ISO 14001 certification establish their own environmental management systems that respond to forms of business and environmental-impact situations so as to ensure smooth activities toward acquisition.

We endeavor to encourage both domestic and international non-producing facilities to acquire certification.

### Environmental audits

ISO 14001 certified facilities are committed to continuously improving their environmental management systems. Specifically, their environmental policies are disclosed and their environmental performance periodically audited to ensure ISO compliance.

Internal audits are conducted annually, likewise third-party examinations by an external certification

organization.

Regular environmental compliance audits are carried out at the main sites of the Yanmar Group, such as production plants and research facilities, etc.

During FY2011, an environmental compliance audit was carried out at the following 3 sites: the Amagasaki Plant, the Okayama Site of Seirei Industry Co., Ltd. and Kohrin Engineering Co., Ltd.

# The Environment

## Targets of the 3rd Environmental Mid-term Plan (2011 - 2015) and the Status of Achievement

Category	Item	Mid-term targets (2015)	2011 Group Goals
Environmental conservation structure	Expansion of the Group Global Environmental Committee's scope	1. Expand activities for domestic and overseas companies	<ul style="list-style-type: none"> <li>• Scope of environmental data coverage expansion (on domestic and overseas companies)</li> <li>• Promotion of education to introduce environmental conservation activities</li> </ul>
		2. Global Environmental Committee Meeting to be held	
		3. Establishment of overseas environmental committees in every region	
Environmental Management	Mutual support for activities within the Group	1. Environmental education by environmental staff to be mutually implemented	<ul style="list-style-type: none"> <li>• Realizing environmental conservation activities through mutual cooperation among entities</li> <li>• Strengthening information exchanges related to environmental-conservation activities</li> </ul>
		2. Environmental conservation activities through mutual cooperation among business units to be implemented	
	Strengthening of environmental conservation efforts at domestic and overseas companies	Expansion of items of environment data and of environmental conservation activities	<ul style="list-style-type: none"> <li>• Implementation of in-house education for Environmental Compliance Audit</li> <li>• Introduction of environmental management information systems to domestic and overseas companies</li> </ul>
Responses to greenhouse gas emissions	1) Reducing emissions from products		
	Determining and reducing the amount of greenhouse gas emissions throughout entire product lifecycle	1. Establishment of methods to determine emission volume	<ul style="list-style-type: none"> <li>• Introduction of lifecycle assessments (LCA)</li> <li>1) Establishment of Group committees and implementation of employee education</li> <li>2) LCA trials with representative models</li> </ul>
		2. Reduction of energy consumption and emission volume (15% reduction compared to FY 1990)	
	Introduction of new methods for reducing greenhouse gas emissions	1. Development of carbon-neutral products	• Feasibility studies of introduction of renewable energy
		2. Examination of introduction of carbon footprints	• Surveys into social demands and trends within the industry
	Acquisition of certifications related to the environment for products	1. Compliance with regulations that cover the exhaust emissions of engines	<ul style="list-style-type: none"> <li>• Attainment at early date of emission gas regulations</li> <li>• Examination of certification (such as labels indicating energy saving) acquisition for products</li> <li>• Increase in sales of environment-oriented products</li> </ul>
		2. Certifications related to energy-savings and environmental-burden reduction of work equipment to be acquired	
		3. Environmentally oriented goods to be developed/commercialized	
	2) Reduction of emissions from business activities		
	Reduction of greenhouse gas emissions produced at domestic production sites	Reduction of energy consumption and greenhouse-gas emissions in unit requirements to be 13% from FY2005 (1.3% each year) [Converted to total volume: 15% reduction from FY2005 (1.5% each year)]	<ul style="list-style-type: none"> <li>• Reduction of at least 7.8% (a total volume of 9%) from FY2005 in unit requirements</li> <li>• Trials into "Visualization of Electric Power"</li> </ul>
Reduction of greenhouse gas emissions generated at logistics stage	1. Scope of data compilation to be expanded	• Begin logistics data compilation for products and parts	
	2. Reductions of energy consumption and greenhouse gas emissions in unit requirements to be 36% from FY2009 (6.0% each year) [Converted to total volume: 6.6% reduction from FY2009 (1.1% each year)]	• Reduction of at least 12% (a total volume of 2.2%) from FY2009 in unit requirements	
Reduction of greenhouse gas emissions produced at domestic and overseas companies	1. Scope of data compilation to be expanded	• Begin data compilation of each uncounted company	
	2. Reductions of energy consumption and greenhouse-gas emissions at domestic offices in unit requirements to be 36% from FY2009 (6.0% each year) [Converted to total volume: 24% reduction from FY2009 (4.0% each year)]	• Reduction in unit requirements of at least 12% (a total volume of 8%) from FY2009	
Contributions to a society that recycles	Improvements to input rates of recycled resources	1. Scope of determination for new resources inputs to be expanded	<ul style="list-style-type: none"> <li>• Survey on present situation with Yanmar</li> <li>• Establishment of data compilation implementation plan</li> </ul>
		2. Amount of water-supply resources inputs in unit requirements to be reduced 40% from FY2005 (4% each year)	• Reduction of at least 24% from FY2005 in unit requirements
		3. Amount of paper resources inputs as unit requirements to be reduced 20% from FY2005 (2% each year)	• Reduction of at least 12% from FY2005 in unit requirements
		4. Volume of total resources inputs and recycled-resource utilization rates to FY2014 to be determined	—
		5. Reduction targets for new resources-input rates to be established	—
	Improvements to green purchasing rates	Green purchasing rate of office supplies, etc. to achieve 70% or greater increase	<ul style="list-style-type: none"> <li>• Start of data compilation of uncounted bases</li> <li>• Determine the items targeted for green purchasing</li> </ul>
Reduction of landfill disposal volume of waste	Introduction of environmentally harmonious designs	1. Total volume of waste produced in unit requirements to be reduced 20% from FY2005 (2% each year)	<ul style="list-style-type: none"> <li>• Reduction of at least 12% from FY2005 in unit requirements</li> <li>• Information sharing within the Group on reductions of waste, etc.</li> </ul>
		2. Volume of landfill disposal to be just under 5% of all waste and other items produced. (Just under 1% for each of Yanmar's business units.)	
		3. Recycle rate of waste at least 70%	
Responses to environmentally hazardous substances	Reductions of substances with environmental burden at production sites	1. Volume of PRTR substances handled in unit requirements to be reduced by 20% from FY2005 (2% each year)	<ul style="list-style-type: none"> <li>• Reduction of at least 12% from FY2005 in unit requirements</li> <li>• Respond to substances subject to the new regulations under the revised PRTR law</li> <li>• PCB control, disposal at early date</li> </ul>
		2. Disposal of PCB to end (by 2016)	
	Implementation of information management for environmentally hazardous substances contained in products	1. Creation of information-management system	<ul style="list-style-type: none"> <li>• Start of system introduction and survey</li> <li>• Implementation of training for employees and suppliers</li> </ul>
		2. Creation of information-management system that includes supply chain	
Responding to biodiversity	Tackling efforts in business activities to achieve co-existence with nature	1. Voluntary standards to be decided, maintained and managed on environmental burden to air and water	<ul style="list-style-type: none"> <li>• Establishment of voluntary emission standards at specified facilities</li> <li>• Periodic review of specified emissions standards</li> <li>• Expand green areas at business sites and buildings, as well as area of environmental facilities</li> <li>• Promote exchanges with regional residents through cleanup activities</li> </ul>
		2. Planting and cleaning activities at business sites and their vicinities implemented	
		3. Creation of new energies to replace fossil fuels	
	Offering of products and services that contribute to eco-system conservation	1. New businesses linked to conservation of eco-system to be developed	<ul style="list-style-type: none"> <li>• Planning, implementation of activities that contribute to conservation of ecosystem, including the honeybee project</li> <li>• Proposing new contribution activities that utilize business activities and regional exchanges</li> </ul>
2. Environments that grow organisms anew through regional interchange to be presented			
Social contribution	Continued contributions to residents in vicinity of company sites	1. Joint volunteer activities with nearby residents	• Implementation of at least one event at one business site
		2. Friendship activities with customers, nearby residents to be implemented	<ul style="list-style-type: none"> <li>• Open business sites to the public</li> <li>• Actively hold, support friendship events</li> </ul>

 Target achieved
  Partly achieved (more than 70%)
  Not achieved (less than 70%)

2011 Group Results	Evaluation	2012 Group Goals	Related information
<ul style="list-style-type: none"> <li>Started environmental data compilation on some domestic and overseas companies</li> </ul>		<ul style="list-style-type: none"> <li>Ongoing expansion of scope for environmental data compilation (for domestic and overseas companies)</li> <li>Promotion of environmental conservation activities in cooperation within related Group companies</li> </ul>	P29
(No notable results from activities)		<ul style="list-style-type: none"> <li>Promotion of environmental conservation activities through mutual cooperation among entities</li> <li>Strengthen information exchanges related to environmental-conservation activities</li> </ul>	—
<ul style="list-style-type: none"> <li>Education for staff implemented at time of Environmental Compliance Audit</li> </ul>		<ul style="list-style-type: none"> <li>Joint implementation of Environmental Compliance Audit</li> </ul>	P29
<ul style="list-style-type: none"> <li>Introduction started of environmental management systems for domestic and overseas companies</li> </ul>		<ul style="list-style-type: none"> <li>Expand introduction of environmental management systems to domestic and overseas companies</li> <li>Follow up on developing Group environmental policies</li> </ul>	—
<ul style="list-style-type: none"> <li>Creation of LCA section meeting, training implemented for committee members responsible</li> <li>LCA trials on representative products (backhoes)</li> </ul>		<ul style="list-style-type: none"> <li>Introduce and continue development of LCA               <ol style="list-style-type: none"> <li>Analyze previous fiscal year, expand to other products</li> <li>Examine Group product emissions at FY1990 base year</li> </ol> </li> </ul>	P37
<ul style="list-style-type: none"> <li>Examination into products utilizing biomass, electrification of work machines</li> </ul>		<ul style="list-style-type: none"> <li>Examine introduction of renewable energies</li> <li>Examine electrification and hybridization of work machines</li> </ul>	—
<ul style="list-style-type: none"> <li>Information compilation utilizing activities in the industry and information services</li> </ul>		<ul style="list-style-type: none"> <li>Survey social demands, trends in the industry</li> <li>Examine feasibility of introduction to Group products</li> </ul>	—
<ul style="list-style-type: none"> <li>Attainment at early date of certification on emission gas regulations</li> </ul>		<ul style="list-style-type: none"> <li>Attainment of gas emission regulations at early date</li> <li>Examine certification acquisition (such as labels indicating saving) for products</li> </ul>	—
<ul style="list-style-type: none"> <li>31.5 billion yen in FY2010 ⇒ 31.0 billion yen in FY2011</li> </ul>		<ul style="list-style-type: none"> <li>Increase in sales of environment-oriented products</li> </ul>	P32-36
<ul style="list-style-type: none"> <li>Reduction of 8.3% (greenhouse gases) in unit requirements</li> <li>Trials into "Visualization of Electric Power"</li> </ul>		<ul style="list-style-type: none"> <li>Reduction of at least 9.1% (a total volume of 10.5%) from FY2005 in unit requirements</li> <li>Horizontal expansion of visualization of electric power to the Group companies</li> </ul>	P37-40
<ul style="list-style-type: none"> <li>Logistics data compilation on LCA for products and parts begun</li> </ul>		<ul style="list-style-type: none"> <li>Expand scope of logistics data compilation</li> <li>Examine reducing domestic transport volume through effective management</li> </ul>	—
<ul style="list-style-type: none"> <li>Reduction of 0.3% (energy) in unit requirements</li> </ul>		<ul style="list-style-type: none"> <li>Reduction of at least 18% (a total volume of 3.3%) from FY2009 in unit requirements</li> </ul>	P37
<ul style="list-style-type: none"> <li>Data compilation begun on some domestic and overseas companies</li> </ul>		<ul style="list-style-type: none"> <li>Expand data compilation bases</li> </ul>	—
<ul style="list-style-type: none"> <li>Domestic business sites: Total increase of 13.1% (greenhouse gases)</li> <li>Overseas business sites: Data compilation starts at some bases</li> </ul>		<ul style="list-style-type: none"> <li>Reduction of at least 18% (a total volume of 12%) from FY2009 in unit requirements</li> </ul>	P37
(No notable results from activities)		<ul style="list-style-type: none"> <li>Survey on present situation of Yanmar</li> <li>Planning and presentation of data compilation implementation plan on resource input volume and waste disposal data</li> </ul>	—
<ul style="list-style-type: none"> <li>Reduction of 40% in unit requirements</li> </ul>		<ul style="list-style-type: none"> <li>Reduction in unit requirements of at least 28% from FY2005</li> </ul>	P42
<ul style="list-style-type: none"> <li>Reduction of 12.8% in unit requirements</li> </ul>		<ul style="list-style-type: none"> <li>Reduction in unit requirements of at least 14% from FY2005</li> </ul>	—
—	—	—	—
—	—	—	—
<ul style="list-style-type: none"> <li>Green purchasing rate of 66.7%</li> </ul>		<ul style="list-style-type: none"> <li>Expand data compilation bases</li> <li>Determine goods eligible for green purchasing</li> </ul>	—
<ul style="list-style-type: none"> <li>Reduction of 8.3% in unit requirements</li> <li>Providing information at Group Global Environmental Committee and other in-house meetings</li> </ul>		<ul style="list-style-type: none"> <li>At least 14% reduction from FY2005 in unit requirements</li> <li>Creation of information sharing system related to reduction of waste, etc.</li> <li>Determine waste emission volume from domestic companies</li> </ul>	P42
<ul style="list-style-type: none"> <li>Determination and compilation of waste and resource inputs at some business locations started</li> </ul>		<ul style="list-style-type: none"> <li>Establish specifications for 3R implementation, and make them known throughout the Group</li> </ul>	—
<ul style="list-style-type: none"> <li>Reduction of 17.4% in unit requirements</li> <li>Materials targeted determined, management implemented</li> </ul>		<ul style="list-style-type: none"> <li>Reduction of at least 14% from FY2005 in unit requirements</li> </ul>	P41
<ul style="list-style-type: none"> <li>Partial treatment of high-density waste waste completed</li> <li>Initiative taken on treatment at early date of residual waste including low-density waste</li> </ul>		<ul style="list-style-type: none"> <li>Management of products with high density of PCB and their treatment at an early date</li> <li>Examine treatment methods for products with low PCB density</li> </ul>	—
<ul style="list-style-type: none"> <li>Information management, survey systems introduced</li> <li>Employee training and explanations to suppliers implemented</li> </ul>		<ul style="list-style-type: none"> <li>Implementation of survey on chemical substances by survey system</li> <li>Respond to inquiries from clients and customers</li> </ul>	P41
<ul style="list-style-type: none"> <li>Green procurement guidelines and in-house regulations reformed</li> </ul>		<ul style="list-style-type: none"> <li>Continue to determine trend of regulations by laws and treaties and develop these within the Group</li> <li>Management of latest version of green procurement guidelines and in-house regulations</li> </ul>	P41
<ul style="list-style-type: none"> <li>Switchover implemented on substances yet to be switched over</li> <li>Surveys promoted by survey system</li> </ul>		<ul style="list-style-type: none"> <li>Promote switchover from substances whose use is banned under the voluntary regulations for 4 substances and under the other regulations</li> <li>Implement survey on chemical substances based on green procurement guidelines and compile the results</li> </ul>	—
<ul style="list-style-type: none"> <li>Review implemented on voluntary standards at some domestic plants</li> </ul>		<ul style="list-style-type: none"> <li>Newly establish and review voluntary standards in light of the social situation</li> </ul>	P41
<ul style="list-style-type: none"> <li>Planting and greenery promoted mostly at plants</li> <li>Cleanup activities expanded for plants and surrounding areas</li> </ul>		<ul style="list-style-type: none"> <li>Expand greenery at business sites and buildings and the area of environmental facilities</li> <li>Promote exchanges with regional residents through cleanup activities</li> </ul>	P53
<ul style="list-style-type: none"> <li>Examinations, etc. on products utilizing biomass and electrification of work machines</li> </ul>		—	—
<ul style="list-style-type: none"> <li>Continuation of honeybee project</li> <li>Planning, implementation of new contribution activities aimed at co-existence with local areas</li> </ul>		<ul style="list-style-type: none"> <li>Continuation of activities that can contribute to ecosystem conservation, including honeybee project</li> <li>Proposing new contribution activities that utilize business activities and regional exchanges</li> </ul>	P50
<ul style="list-style-type: none"> <li>Planning, implementation of volunteer activities, mainly local cleanup campaigns</li> </ul>		<ul style="list-style-type: none"> <li>Implementation of at least one event at one business site</li> </ul>	P53
<ul style="list-style-type: none"> <li>Opening business sites, grounds, implementation of residents invitations and supporting friendship events</li> </ul>		<ul style="list-style-type: none"> <li>Holding, supporting ongoing open events of business sites, friendship events</li> <li>Regional contributions through 100th anniversary of founding</li> </ul>	—

## Yanmar's Environmentally Oriented Products

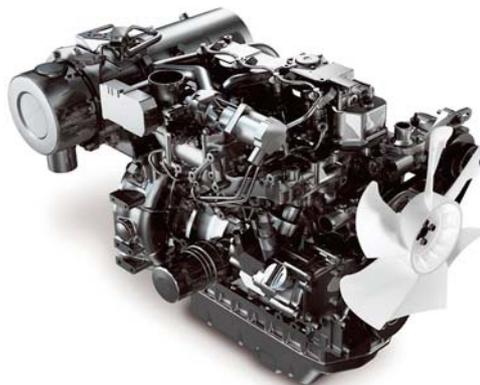
TNV/TNM Series Vertical Water-Cooled Diesel Engines **Industrial Engine Business**

### Aiming to be the cleanest industrial diesel engine in the world

Building on our advanced proprietary direct injection (DI) combustion technology and electronic engine control technology, Yanmar integrated a common rail injection system, a new diesel particulate filter (DPF) and employed an optimized exhaust gas recirculation (EGR) system to become the first in the world to achieve certification for Tier 4 CARB (California Air Resources Board) standards on exhaust gas emissions (for engine output in the 19-56kW class).

These standards, among the strictest in the world, require diesel engines to cut over 90% of the particles found in exhaust gas emissions, etc. and in 2013 Japan, Europe and the rest of North America will implement similar regulations.

**The first manufacturer in the world to have been certified by the California Air Resources Board (CARB) for diesel engines in the range 19 to 56kW, compliant with Tier 4 standards**



Yanmar Gas Engine AYG20L-GT for land use

**Large Engine Business**

### Delivering high efficiency and high power output while reducing the burden on the environment

**20% increase in power output compared to previous models**



This gas engine manages to reduce NOx emissions while delivering a high power output by combining main chamber-type lean-burn combustion with the Miller Cycle, which reduces the work of compression whilst maintaining a high expansion ratio.

In particular, due to the development of GQCL controls (Gas Quality Closed Loop), which automatically adjust the air-fuel ratio to compensate for changes in the load or the gas heat value, the engine is able to maintain stable combustion at a level close to the knocking limit. As a result, the AYG20L-GT delivers a power output 20% greater than that of previous AYG20L-SE models.

The level of NOx in the exhaust gases, with no post-processing, meets strict standards such as the Tier 3 limits of the US Environmental Protection Agency (EPA) which have been enforced since 2006, as well as the TA-LUFT atmospheric pollution prevention guidelines in Europe.

This engine will be provided for sale to the Indian and Indonesian markets.

## Harnessing two technologies to reduce environmental burdens and boost economic performance

Both marine propulsion and land engines employ the ASSIGN fuel combustion method, which results in shorter combustion times and better combustion efficiency. These gains are achieved by optimizing the shape of the combustion chamber and improving the layout of the fuel injection nozzle spouts, etc. A special cam arrangement allows exhaust gases to recirculate in the cylinder by temporarily opening the exhaust valve during the intake stroke.

As a result the NOx emissions have been reduced by 20% or more compared to a conventional engine, while delivering an 8% improvement in fuel efficiency at cruising power. The 12AY series means improved environmental sensitivity and lower costs.

The marine propulsion specifications of the 12AY series are compliant with the Tier 2 regulations of the International Maritime Organization (IMO) and the electronic governor fitted as standard delivers a 70% cut in black exhaust emissions when the engine is used as a land engine (compared with conventional models).

**Reduction in NOx emissions  
of over 20%**  
**Approx. 8% improvement in fuel  
economy (compared with  
conventional models)**



## Stable cruising and enhanced ride comfort — a commemorative edition fishing boat to mark a special anniversary

**Improved fuel economy  
in a lightweight boat  
with a long service life**



Employing a novel exterior design, the Toprun FX24EZ incorporates convenience and usability throughout. The V-shaped hull, featuring a new bottom design and a fin keel, is the result of our know-how cultivated through many years of developing and manufacturing fishing boats, and delivers enhanced stability and comfort. Moreover, the cabin interior is quieter, thanks to noise reduction and low vibration technology, making the cruising experience more comfortable.

The diesel engine delivers approximately 66% better fuel economy compared with a 4-stroke outboard gasoline motor-powered boat of the same class, and the hull is fashioned from FRP (fiberglass reinforced plastic), which makes it lightweight, giving the vessel a long service life and superior cost performance.

The 24-foot Toprun FX24EZ commemorates the centenary of the founding of Yanmar.

## Yanmar's Environmentally Oriented Products

### New EG200 Tractor Series

### Agricultural Machinery Business

#### Improved usability and safety, further evolutions in performance

Non-clutch J-change technology has been implemented across the entire EG200 series allowing the operator to shift lightly and easily through the 10 gears, moving from creeping speed through to the optimal operational speed. This means a longer working life for these tractors with reduced fatigue due to the elimination of gear-change "shock", and also makes it easier to turn tight corners in a square cultivated field. The usability of the tractor as well as the operational safety of the unit have been considered with features such as the ability to freely adjust the fuel tank feeder height and the addition of a large-sized rearview mirror, giving the operator a clear view of what is behind the tractor.

At home in tough agricultural environments such as very wet, muddy fields, the tractor has ample power and traction to ensure workability in these most challenging of conditions. Additionally, the demanding EcoTra DELTA specifications deliver improved fuel economy, reduced vibration and noise, and the implementation of universal design principles means that the tractor can be easily operated, even by the elderly.

**Improved fuel economy, reduced vibration and noise**



### Head-feeding Combine Harvester AG6100/6114/7114

### Agricultural Machinery Business

#### Advanced features deliver outstanding performance in this environmentally friendly combine

**Reduced emissions of CO<sub>2</sub>, NO<sub>x</sub> and PM**



Yanmar has developed a full product line-up of head-feeding combine harvesters, starting with the standard AG6100 model for 6-row reaping, which is powered by a 100HP engine. The work rate for the 114HP engine high-speed AG6114 (6-row reaping) is the fastest in the industry for its class at 2m per second, an improvement of approximately 9% on previous Yanmar models. The high performance 114HP AG7114 (7-row reaping) head-feeding model has a work rate of 1.75m per second and the design means less turning in cultivated fields, which delivers a 12% improvement in operational efficiency.

These combine harvesters feature an electrically driven FDS (full-time drive system) in addition to a host of leading functions such as highly rigid wide crawler tracks, gate-type transmission, vertical exhaust muffler, and a high-speed dual drum threshing system that deliver improved energy efficiency and significantly reduce emissions of CO<sub>2</sub>, NO<sub>x</sub> and PM. Fuel economy has also been improved and noise reduced.

## Improved functionality eases the toil of rice planting

Yanmar has long pioneered rice transplanting technology to reduce the hard labor associated with planting rice seedlings in the paddy. The new paradigm of “sparse planting” reduces the number of seedlings planted per square meter, widening the spaces between seedlings and decreasing planting density, without significantly reducing overall harvests. Yanmar has developed rice transplanter models with standard 40-seedling/m<sup>2</sup> transplanting to enable sparse planting. By employing this approach, the number of seedling trays required is reduced, saving labor and time in replenishing the seedling trays, and reducing operating costs.

Moreover, the float design means that the rice seedlings can be transplanted without the ground preparation work that was previously required as turning tracks left by the machine are leveled while transplanting. This is especially advantageous when using the transplanter on an irregularly shaped rice paddy.

The emissions from the on-board engine meet Tier 2 regulations issued by the Environmental Protection Agency (US EPA).

**Standard 40-seedling transplanting**



## Achieving top-class electricity generation efficiency while reducing the burden on the environment

**Generating efficiency of over 40% at NOx of less than 200ppm**



In 2011 Yanmar developed and released the 700kW-rated output class EP700G gas cogeneration system, building on the concept of highly efficient electricity generation and aiming to reduce the burden on the environment, improve ease of installation and achieve continuous operation.

The EP700G has a maximum generating efficiency of 41.8%, the best in its class. NOx emissions come in at under 200ppm, which means the EP700G does not require a denitrifying device, delivering energy savings while reducing the burden on the environment.

Moreover, the specifications of this system are such that it can be split into three parts for shipping. The modular design allows for ease of installation, even in existing structures, where space is at a premium.

Previous versions of the generator management system automatically shut down the engine when it detected operation outside of accepted parameters, to protect the engine from damage. The newly developed system can evaluate whether the exceptional event is likely to cause damage, and if not, will continue to run the generator at a lower output, in order not to interrupt the power supply. In the event of a disaster or incident, even if the unit cannot be accessed for maintenance, the system will continue to operate.

## Yanmar's Environmentally Oriented Products

Crawler Backhoe ViO30-6, ViO35-6

Construction Machinery Business

### Environmental performance with a cleaner exhaust and even better fuel economy

The ViO30-6 and ViO35-6 crawler backhoes feature diesel engines that comply with EPA Interim Tier 4 emissions standards. These engines emit a cleaner exhaust with reduced levels of NOx, PM, HC and other pollutants. In addition to a newly developed hydraulic system and reworked hydraulic circuit, as part of our relentless pursuit of efficiency, these units feature an eco-mode function and an auto-deceleration function. The latter will automatically reduce engine revolutions to diminish fuel consumption and noise, when the backhoe is not working. The benefits to the environment are significant. Compared to previous Yanmar models in the same class, fuel costs have been reduced by 20%.

Moreover, this model employs the principles of universal design, based on the concept that the machinery should be easy to operate. The bonnet and sheet steel panels are easily repaired or replaced when damaged, and consideration has been given to future recycling.

20% reduction in fuel costs



## Topics

### Earning the highest environmental rating for 7 straight years

In December 2011 Yanmar acquired the Development Bank of Japan's (DBJ) highest rating for its environmental management. It was the seventh consecutive year that Yanmar has achieved such a rating. Yanmar received environmental rated financing based on this system from DBJ and Shiga Bank Ltd. The money will be used as capital for product research and development into environmental improvements.

※ DBJ environmental rating: A company's degree of environmental management is rated according to criteria developed by DBJ. The best companies are selected and a financing menu is drawn up. Interest rates are set in three stages, according to a company's environmental ranking and in line with the environmental rating earned.

#### The factors behind the environmental rating

Yanmar...

- Conducts R&D into designs that reduce the environmental burden of a product at the manufacturing stage and also over the entire life of the product, deploying these technologies into other product ranges.
- Takes the lead in R&D into alternative energy for Yanmar's core engine business.
- Maintains a high-level environmental management system and integrates it with Yanmar's core business.



In December 2011 Yanmar received a DBJ loan based on its being rated at the highest grade in DBJ's four-grade environmental rating schedule for its particularly impressive environmental programs.

## Efforts to prevent global warming

### Reducing CO<sub>2</sub> emissions over a product's lifecycle

The Yanmar Group is moving ahead with the introduction of LCA (Life Cycle Assessment) that assigns and quantitatively ascertains the degree of consideration for the environment of a product at each stage of its lifecycle, from the procurement of raw materials, development, production and distribution, through use and consumption to final disposal of the product.

In FY2011 we conducted LCA at our construction machinery departments in order to deepen our

understanding of the process. In order to apply these concepts properly, we set up LCA Workshops for all related companies in the Yanmar Group and worked to spread awareness and knowledge about LCA.

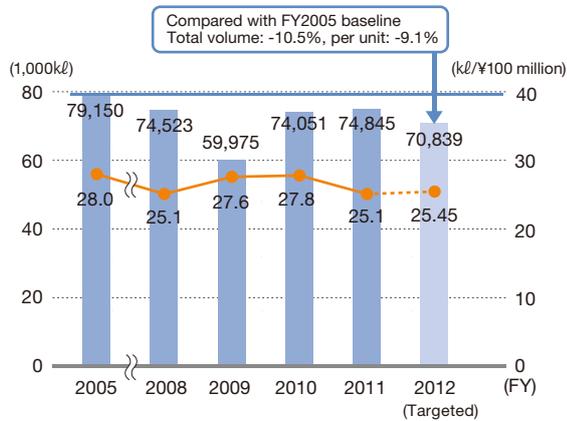
Going forward, Yanmar plans to implement LCA across other product divisions as well, placing more emphasis on employee training in addition to updating and reviewing manuals.

### Reducing CO<sub>2</sub> emissions to realize efficient energy use

The Yanmar Group's approach is to use power and fuel, and indeed, any kind of energy, efficiently in production at all sites throughout Japan, in order to tackle the challenge of reducing the amount of CO<sub>2</sub> emissions.

The Yanmar Group has also set energy conservation targets for 2015 of a 13% reduction in both total energy consumption and on a per unit basis, with 2005 as the baseline year, and is pursuing the same reductions in CO<sub>2</sub> emissions.

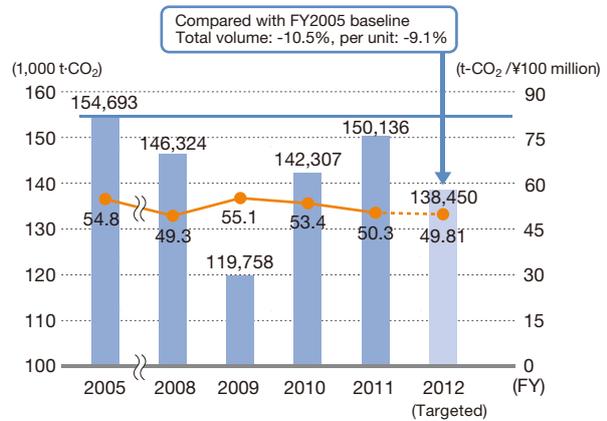
#### Total Energy Consumption and Consumption per Unit



■ Energy consumption (crude oil equivalent)  
● Energy consumption per unit

\*Since 2009 this data includes figures from Kohrin Engineering Co., Ltd.

#### Total CO<sub>2</sub> Emissions and CO<sub>2</sub> Emissions per Unit



■ CO<sub>2</sub> emissions  
● CO<sub>2</sub> emission per unit

\*Since 2009 this data includes figures from Kohrin Engineering Co., Ltd.

## Developing energy conservation activities

The Yanmar Group has approached the issue of energy conservation in the workplace in a variety of ways, both during the summer months and throughout the year. This includes measures such as installing lighting fixtures in our offices and staff cafeterias that reduce the amount of illumination depending on the time of day, as well as using air conditioning units that only run at certain times, sensors that detect the presence of people in order to activate lighting in toilets and changing rooms, and implementing “light-down” days in our offices and plants, when lighting is reduced or turned off altogether.

At the Yanmar Tsukaguchi Plant, a large pump for the circulation of cooling water was remodeled to use as an inverter. Started in February 2012, this approach works to efficiently supply only the minimum amount of cooling water necessary to meet the variable cooling demands of the operating devices, and resulted in reduced electrical power consumption.

Furthermore, 63 bitter melon plants were grown along the south-facing side of the general administration building. This green curtain controlled the rise in wall-surface temperature during the summer months thereby reducing cooling needs and ensuring that air conditioning was not running at an excessively high level. On the north side of the plant 644 marigolds and pansies were grown in planters for their greenery. With the walkway on the north side improved with the addition of flora, as part of Yanmar’s efforts to improve the visual aspect of the workplace, not only is energy conserved, but the area now looks and feels cooler.

At Kanzaki Kokyukoki Mfg. Co., Ltd., part of the Yanmar Group, large compressors that consume a great deal of electrical power were put under the control of a unit control system, as part of our promotion of better operational management. In order to further improve the degree of precision, we undertook a full review of the operational status of the compressors and the supply pressure. A survey was taken of the minimum required supply pressure during overtime and night operating hours (6pm to 8am the following day). Based on this data we were able to reduce the pressure setting by

0.08Mpa (megapascals), easing electrical power demand and contributing to our energy conservation efforts.



Cooling water pump motor (Tsukaguchi Plant)



Green curtain (Tsukaguchi Plant)

## Topics

### Achieving a 15% cut in electricity consumption in the Tokyo Yaesu Underground Shopping Mall

With a movement to conserve electrical power sweeping Japan, the Yaesu Shopping Mall Co., Ltd., part of the Yanmar Group, implemented an electrical power conservation action plan, called Setsuden (Power Conservation) Action, under the auspices of the Japanese Ministry of Economy, Trade and Industry, and formed a power conservation team within the company.

The Yaesu Shopping Mall Co., Ltd. was able to secure the cooperation of all of the retailers in its underground shopping mall before it proceeded with this initiative. Of paramount importance was the comfort of the customer, but tenants agreed to reduce the number of lighting fixtures in their retail locations and to switch to more efficient LED lighting, as well as to use cheaper nighttime electricity to cool the mall during the hot daytime hours via an ice thermal storage system. These efforts resulted in a 15% reduction in electricity consumption as well as an “Electricity Conservation Achievement Certificate” from the Agency of Natural Resources and Energy, Ministry of Economy, Trade and Industry, Japan.

Going forward, the Yaesu Shopping Mall Co., Ltd. is committed to continuing to implement energy-saving measures, regardless of what happens with the situation regarding power generation in Japan.



## Topics

### Recipient of the FY2011 Modal Shift Superior Service Shipping Award

In March 2012 Yanmar Logistics Service Co., Ltd. was awarded the FY2011 Modal Shift Superior Service Shipping Award for environmentally sustainable cargo forwarding by the Chugoku District Green Logistics Partnership Association\*. The Association promotes collaboration among distribution enterprises and active reduction of CO<sub>2</sub> emissions during transportation.

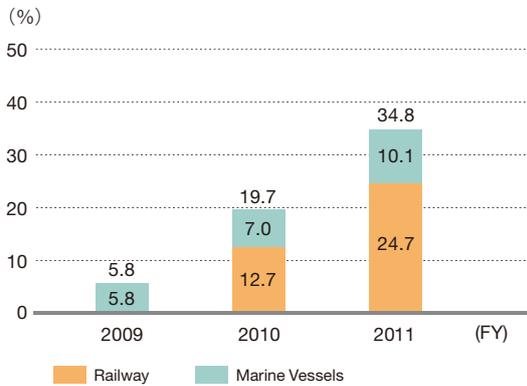
From October 2010, Yanmar Logistics Service committed to railroad transportation a portion of its agricultural machinery cargo previously carried by trucks from Okayama to the Kanto Region, as part of sustained activities aimed at reducing environmental impact. This has resulted in a reduction of CO<sub>2</sub> emissions to 85.7% of

previous levels, whilst maintaining the same high quality shipping service.

YLS is looking to increase its modal shift from truck to railroad and marine freight, and in addition to saving energy by improving loading efficiency, YLS is also implementing further advances in environmental protection such as the use of recyclable materials.

\* Chugoku District Green Logistics Partnership Association was established in February 2006. Its secretariat is located at the Chugoku District Economy and Industry Bureau of the Ministry of Economy, Trade and Industry, Japan and the Chugoku District Transportation Bureau of the Ministry of Land, Infrastructure, Transport and Tourism, Japan

#### Rate of Modal Shift



The Environment



Working to load containers



Unloading containers at the station



Securing products for transport

## Topics

### Supporting the Cerezo Osaka CO<sub>2</sub> Zero Challenge

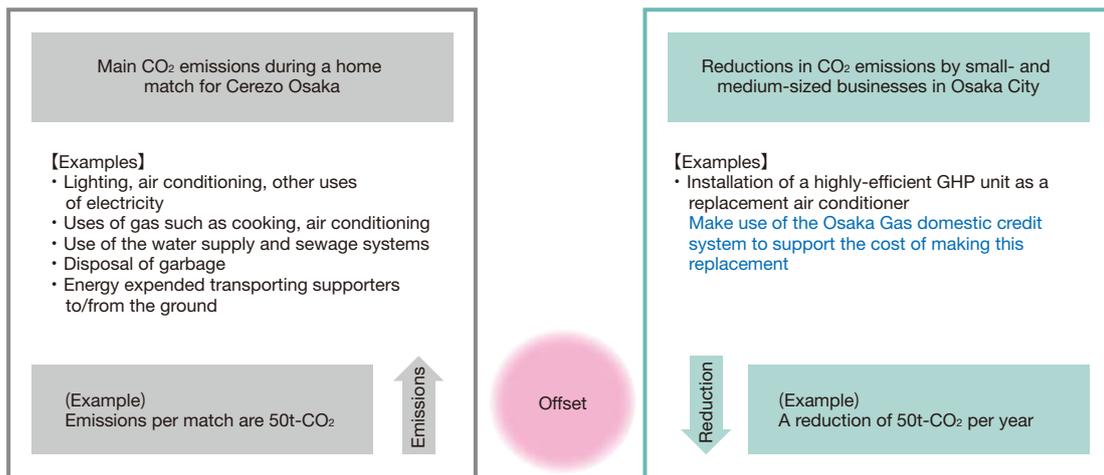
Yanmar has announced its support of the “CO<sub>2</sub> Zero Challenge”, an initiative of its sponsored soccer team Cerezo Osaka. Soccer matches involve the use of stadium lighting, retail concessions and the transportation used to take supporters to and from the ground, etc. and are responsible for emissions of around 400 to 500 tons of CO<sub>2</sub> per year. Cerezo Osaka has taken on the “CO<sub>2</sub> Zero Challenge”, launched in FY2012, with the aim of preventing global warming. Yanmar is supporting the initiative by pledging to offset all CO<sub>2</sub> emissions from Cerezo’s home matches using the domestic credit system.

The Domestic Clean Development Mechanism is a scheme that allows large enterprises to provide and install highly efficient machinery, equipment and facilities that serve to reduce CO<sub>2</sub> emissions to small and medium-sized companies involved in CO<sub>2</sub> emission reductions. The resulting offset can then be passed on to the larger corporation as a domestic carbon credit. At Yanmar, CO<sub>2</sub> emissions can be offset by the use of domestic credits obtained by highly efficient gas airconditioning systems such as the GHP (Gas Engine Heat Pump Air Conditioner).

Yanmar is participating in the first CO<sub>2</sub> offsetting project involving a J-League team and this use of local small- and medium-sized companies to promote measures to reduce CO<sub>2</sub> emissions.



#### ■ Outline of carbon offsetting for a Cerezo Osaka home match



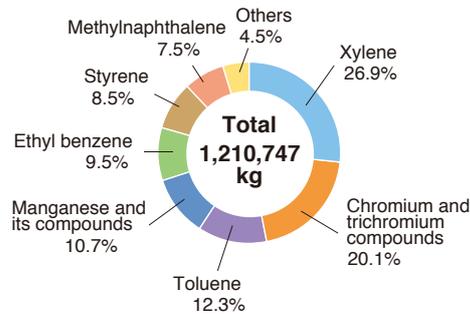
## Reducing and controlling environmentally hazardous substances

### Reduction in chemical substance emission

The Yanmar Group is working to manage the quantities consumed and reduce emissions of chemical substances designated under the PRTR Act, as part of its efforts to develop environmentally friendly products and reduce environmental risks. The amount of PRTR-controlled substances used in FY2011 showed a reduction of 17.4% on a per-unit basis, compared with the baseline year of 2005.

Going forward, we will promote the purchase of alternative materials to those containing these controlled substances. Our mid-term policy goal is to register a 20% reduction on a per-unit basis by 2015 in substances covered by the PRTR Act, compared with the baseline year of 2005.

#### Use of PRTR Substances



### Managing environmentally hazardous substances across the entire supply chain

We check materials and parts provided by suppliers for environmentally hazardous substances on the basis of our green procurement guidelines.

Since 2008, we have been receiving information from suppliers with regard to environmentally hazardous substances. In addition, we have started to construct a database to facilitate the integrated management of Products Containing Environmentally Hazardous Substances. Going forward, we are promoting the management of information on chemical substances contained in Yanmar products.

With regard to voluntarily controlled materials, our

internal application standards are being decided and reductions are progressing systematically.

#### Voluntarily Controlled Substances

Substances voluntarily controlled by Yanmar

Lead and its compounds, mercury and its compounds, cadmium and its compounds, and hexachromium and its compounds

### Legal compliance and prevention of pollution

In order to reduce the burden we place on the environment, the Yanmar Group is focused on compliance with environmental legislation and regulations on a day-to-day basis, in addition to regular checks of data and readings taken to measure the status of environmental pollution.

During FY2011 the Yanmar Group did not violate any

environmental legislation. However there was one incident where some dust particles were inadvertently released into the atmosphere. We reacted quickly to the situation and this incident led to comprehensive checks being carried out across all of our work facilities and measures implemented to prevent the reoccurrence of a similar incident.

### Consideration for the local environment

In order to prevent the pollution of the air, land and water by the plants of the Yanmar Group, the Group has implemented policies to ensure that the surrounding area and environment are maintained in good order.

For example, the exhaust gases released during endurance testing of engines — our major product — either during development or prior to shipping, are recovered to ensure that they do not pollute the atmosphere.

Moreover, as part of our efforts to reduce the burden on the environment, facilities are maintained and updated on a regular basis in order to prevent any oil seepage from

aging facilities contaminating the soil or water.

It is also an essential part of our plant operations to implement measures to counteract noise and odors. Yanmar Construction Equipment Co., Ltd., part of the Yanmar Group, experienced an issue with a water circulation tank for its painting process, which was emitting a foul odor outdoors due to a leak from this tank. In order to prevent this incident from occurring again, aeration devices have been fitted to stop the residue circulating in the tank from decomposing, as well as the installation of an atmospheric chamber, to prevent a reoccurrence of the emission.

## Contributions to an environmentally sustainable society

### Reducing waste and promoting recycling

The Yanmar Group is making efforts to curb the generation of waste from production processes and also decreasing the total amount of waste disposal by promoting the recycling of waste by type, converting the waste into material with value.

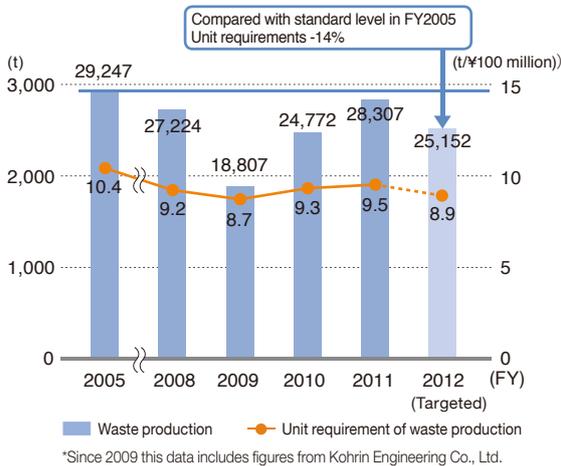
To ensure thorough separation of waste at each plant, employees are frequently informed of the importance of waste separation by a list of waste separation rules posted at necessary locations, including waste storage sites in plants, worksites and offices. Employee-education programs are being implemented and further recycling efforts, including the

introduction of returnable pallets, are taking place.

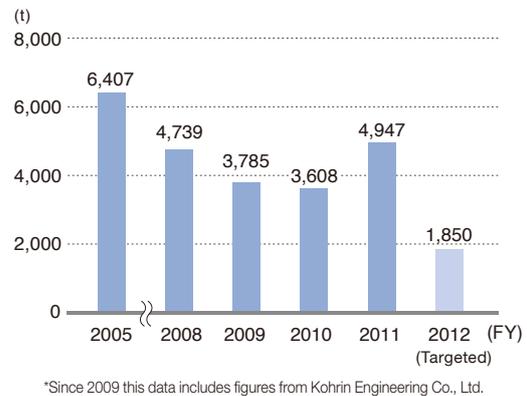
Waste oil is also converted into a valuable resource by using production processes that prevent foreign materials from mixing with the oil. Other actions taken to reduce costs include the reuse of cardboard materials and the recycling of shredded paper waste.

We set a target of a greater than 12% reduction in unit requirement of waste production for FY2011 in comparison with 2005. However the Yanmar Group registered a reduction of 8% and so the target was not achieved.

#### Waste Production and Unit Requirement of Waste Production



#### Amount of Final Disposal Waste

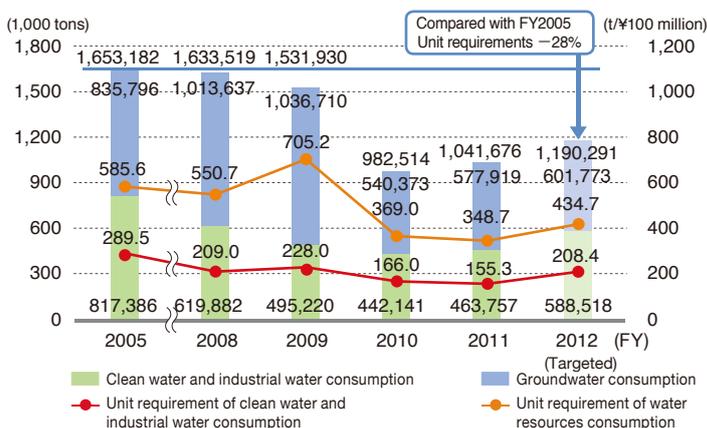


### Reduction in water resource consumption

The Yanmar Group is promoting the recycling of factory water as an effort to conserve resources. As for use of water resources, we had aimed to curb

consumption by about 24% in FY2011 relative to the standard level of 2005 in unit requirements, and we managed to achieve this target.

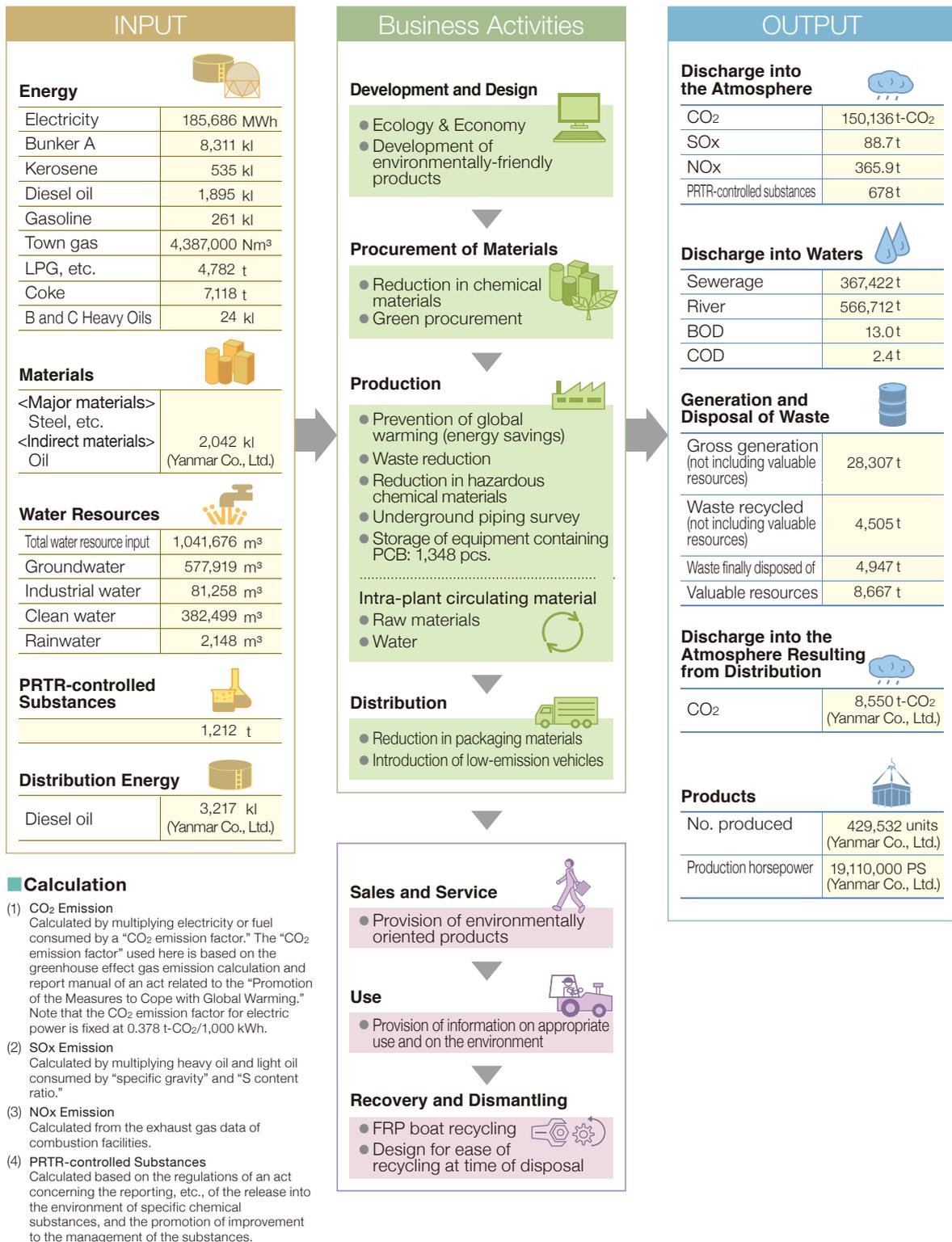
#### Water Consumption and Unit Requirements for Water Consumption



## Overview of environmental load

The Yanmar Group understands the need to quantitatively measure and ascertain the environmental loads created by all stages of its business activities, namely from raw material procurement to production, transportation, distribution, use and disposal. It is also essential that we strive as required to reduce these loads.

In fiscal year 2011, environmental loads continued to be measured at production plants of Group companies to gather the necessary data. We will be striving to analyze and determine the environmental loads created at each stage of the product life cycle.



# Fair Operating Practices

**The Yanmar Group is promoting the establishment of a system of internal controls to ensure that our corporate ethics are carried out without exception, as well as building discussion and dialogue with our suppliers to build sound partnerships.**

## Compliance promotion system

The Yanmar Group has constructed a system to prevent issues related to compliance, centered on the Group Compliance Committee. This system and these activities are continuously promoted within the Yanmar

Group, as we recognize that spreading awareness of compliance with corporate ethics as well as the law forms are the basis for our CSR activities for all Group employees as well as top management.

## Managing the internal reporting system 'Complaint Box for Ethics'

The Complaint Box for Ethics handles over 20 cases a year on average and is available for all employees of the Yanmar Group to use. Separate to the Complaint Box for Ethics is the Compliance Committee Secretariat, which receives around 40 consultations and reports from each of the divisions and departments within the Group.

Internal cases (reports) are reviewed by fact-finding investigations to determine whether they constitute a violation of compliance rules, and if so, the employees involved are punished appropriately and in line with office regulations while measures are tackled to ensure the problems are not repeated.

## Compliance training, public awareness activities

Compliance training is carried out on an annual basis for all employees who have newly joined the company and for all employees who have just taken on a management position. In addition, training at individual offices or seminars on other themes, such as Antitrust Law and Subcontract Law, is conducted when required.

Public awareness activities are introduced, utilizing in-house intranet, and include such topics as "Compliance Violation Case Studies that Occur Frequently Within Group Companies" and "A Compilation of Taboos Overseas." The aim is to raise corporate ethical awareness.

## Global CSR Meeting

As our companies located overseas use a fiscal year that runs from January to December, and in order to reflect on the likely results of their activities for the coming fiscal year, each year in November the CSR managers from our regional headquarters (RHQ) gather at our Head Office to hold a meeting to address the strengthening of responses to risk, compliance and

related legal affairs, in addition to exchanging and sharing information related to these issues.



## Surveys on corporate ethics

In order to grasp the extent that awareness of corporate ethics has filtered through to our workforce, we implement an annual survey on 20% of our Group employees, selected as a random sample. The aim of the survey is mainly to ascertain the degree of awareness and/or knowledge regarding compliance. Last fiscal year the survey was given to all Group employees and this year the survey focused on our internal reporting system and this was addressed to all of the employees of the Yanmar Group.

The results of the survey showed that around half of the Group employees made use of the internal reporting system, with around half choosing not to use the

service. As for the reasons given why employees would not use to file an internal report, one notable response stated that: "even though the report is anonymous, I feel that it would be clear who filed this report and that it would impact on me in a negative way". In order to make it easier and more convenient to use the reporting system, on July 2, 2012 in addition to the dedicated and independent phone number (calls are charged), a free-of-charge phone number was established to solicit reports. Going forward, we plan to promote and improve the counseling and reporting system to give more peace of mind to any employee wishing to make use of the service.

## Activities during Corporate Ethics Promotion Month

Corporate Ethics Promotion Month is held each October by the Keidanren (Japan Business Federation) and to mark this event we hold activities to deepen the understanding and awareness of compliance issues.

Last year "Regulations to Eliminate Organized Crime" was implemented across the whole of Japan. Accordingly, at Yanmar we invited a member of the

Osaka Prefectural Police to join our seminar for members of the Compliance Committee, as well as managers entrusted with promoting and implementing compliance.

Following the seminar, we added a new clause to our contracts with our suppliers and partners that stipulates the elimination of organized crime.

## Purchasing measures

### Purchase policy briefing

The Yanmar Group engages in various forms of communication in order to deepen mutual understanding with its suppliers. A purchase policy briefing is held at the beginning of every year at seven locations in Japan for our major suppliers to explain the policies for the fiscal year and the mid-term.

In February 2012, we established cost-reduction targets for five years (2011-2015). In order for the entire Group to fulfill these targets, the suppliers were encouraged to propose various ideas for cost reductions and help us together to review product functions, sharing of parts, and enhancement of productivity.

#### Fundamental purchase policy

##### ■ Reinforcement of Partnerships

From a long-term perspective, we promote the deepening of mutual understanding and trust with suppliers.

##### ■ Stable Supply

We audit suppliers in terms of their management situation, productivity, risk avoidance system and supply from overseas bases, provide the necessary instructions concerning those matters, and promote partnerships with suppliers to ensure the stable acquisition and timely delivery of materials and parts from those suppliers.

##### ■ Quality Assurance

We aim to ensure the appropriate quality of parts delivered by suppliers by taking various actions, including quality audits and guidance to suppliers, a quality committee, the initial stable management of new products, and implementation of the Quality Priority Management System\* and Quality Control Excellent Certification System.

\* Quality Priority Management System: System to provide special quality instructions every year to suppliers with low-rated quality evaluations.

##### ■ Cost Reduction

We set up cost targets and target cost reduction with this in mind.

##### ■ Legal Compliance

We comply with social norms, laws, regulations, and their spirit and ensure thorough compliance with security protection.

Fair  
Operating  
Practices

### Green procurement

Since the establishment of the Yanmar Green Procurement Guideline, we have been promoting the procurement of safe parts and components designed and produced in an environmentally friendly way while collaborating with our suppliers in various parts of the world.

In selecting suppliers, we prioritize transactions with suppliers enthusiastic about environmental

conservation activities with an established environmental management system in addition to such evaluation items as value, price and delivery time.

#### ● Green Procurement Guideline :

<http://www.yanmar.co.jp/en/csr/report/greenGuideline.html>

### Supporting suppliers' efforts for improvement

The Procurement Department of the Yanmar Group selects several companies each year on the basis of Q (quality), C (cost), and T (time) and provides instructions for improvement.

Furthermore, since FY2007 we have been promoting YWKS activities to enhance the constitutional improvement of suppliers and to reinforce our partnerships with them, toward quality improvement, productivity enhancement and inventory reductions.

#### Activities with YWKS

(The Yanmar Way by Kaizen with Suppliers)

These activities expand the YWK to suppliers. YWK (Yanmar Way by Kaizen) activities are ongoing improvement activities conducted by the Yanmar Group and specifically include efforts to reduce defect ratios and achieve lead time and production cost reduction at seven divisions and 17 plants in Japan.



### Voices from the field

#### Working to reform our constitution starts with cooperating to utilize our mutual specialties



**Akira Terai** Administration Group, Production Planning Dept., Manufacturing Management Dept., Power System Operations Division

Our suppliers that are engaged in YWKS activities all possess excellent technology in their field of expertise. By bringing together this expert technology with the Yanmar production system, we are cooperating to strengthen our manufacturing systems to higher levels of QCT

(Quality, Cost and Time). Furthermore, in order to promote collaboration between our suppliers, each year we hold a seminar where business results are released and reviewed. Each day we are working to build solid partnerships with our suppliers.

In order to ensure that we deliver safe, high quality products with a high degree of customer satisfaction, the Yanmar Group has established a quality assurance system based on feedback from the customer.

## Efforts to improve quality

### Our fundamental approach

The first priority of the Yanmar Group is aiming to find ways to address and resolve the needs of our customers around the world by considering the customer's problem together and offering solutions. Each employee strives to earn the full trust and satisfaction of customers on a daily basis by responding to the needs of society as well as providing prompt and suitable products and services that solve our customer's problems.

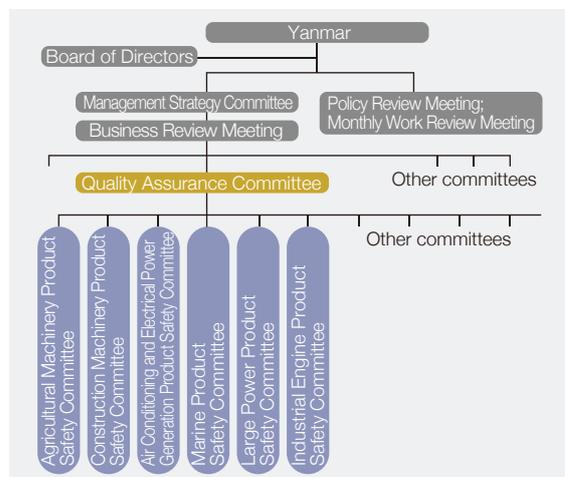
In 1968, we were the engine industry's first winner of the Deming Application Prize, in recognition of the company's commitment to quality management. Using this as a turning point, Yanmar launched its Total Quality Management (TQM) activities and all Yanmar employees continue to strive to improve product quality through activities such as QC circles, etc.

Moreover, at each stage of product planning, development, manufacturing, sales and after-sales service, etc., Yanmar has implemented systematic activities aimed at confirming product safety and quality. In particular, the issue of safety, both at home and abroad, is not merely about adhering to laws and regulations and in response to this issue we have introduced our original, in-house safety standards. Yanmar has also established strict checks on both product quality and safety at each stage of new product development as a form of risk assessment that looks to evaluate hazards before they occur, as well as design reviews that examine product design from a variety of perspectives.

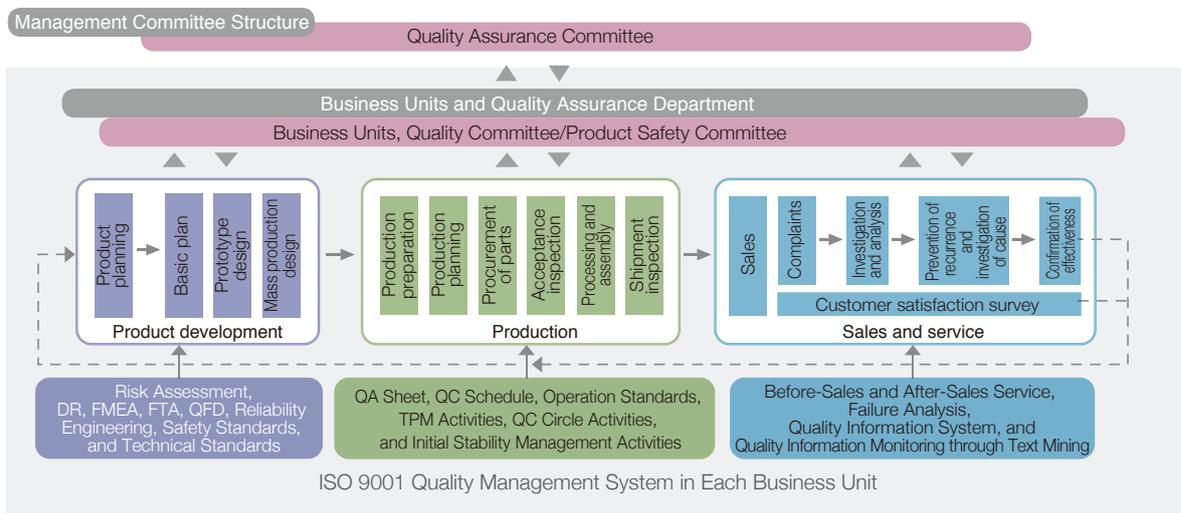
### Our quality assurance system

Yanmar is engaged in the integration quality assurance activities in all stages of business activities, ranging from the planning and development of products to production, sales and service, with the quality assurance department of each business unit serving as the general contact.

Every business unit has a Product Safety Committee in place to ensure product safety. The entire Group is being monitored for quality assurance by the Group-wide Quality Assurance Committee. We have also obtained ISO 9001 certification at 30 units, including some overseas.



### Yanmar's Quality Assurance System

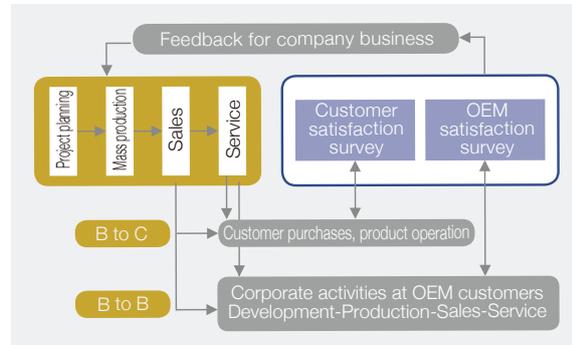


## Carrying out a 'Comprehensive Customer Satisfaction Survey'

Yanmar is striving to improve the level of its after-sales services by undertaking an annual questionnaire survey of customers to find out their thoughts on Yanmar's business, services and products as well as issuing certificates of free inspections of products and service records, etc.

In particular Yanmar undertakes a "Comprehensive Customer Satisfaction Survey" of the customers that have purchased agricultural machinery. In addition to reflecting opinions and requests to the company found in the survey on the planning and development stage of new products, Yanmar also strives to improve and bolster its services and sales accordingly.

### Customer Satisfaction Survey

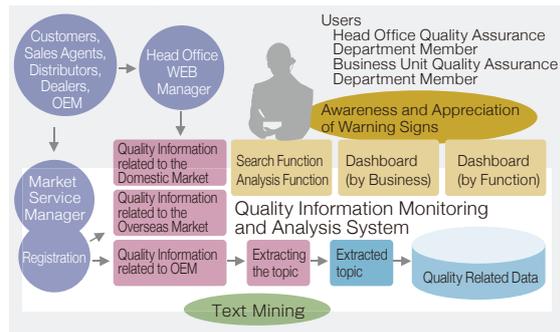


## Building a quality information monitoring and analysis system

In order to detect problems related to quality at an early stage, Yanmar has created a quality information monitoring and analysis system both at home (YTIS) and for overseas markets (e-Claim, Warranty-pro, OEM information). This system makes the process of collecting information and identifying important problem areas quicker and more efficient.

In the event of a clear problem related to quality, once all of the information related to this issue has been analyzed, each business department in charge will receive feedback concerning the relevant information.

### Quality Information Monitoring and Analysis System



Consumer Issues

## Voices from the field Aiming for the optimal solution based on Japanese quality



**Shinichiro Ishida** Manager, Special Projects, Quality Assurance Dept., Agricultural Machinery & Equipment Division

The tractors, combines and rice transplanters that make up the main product line for our agricultural machinery and equipment represent the final product that is delivered directly to the customer. As global development gains pace, we are finding more channels to market in other countries. Our aim is to deliver Japanese quality

to all of our customers, as this represents the best solution for their needs. We put our heart and soul into developing products that earn the trust of our customers as well as putting a smile of their face. This is why we engage in quality assurance on a daily basis.

## Response to recalls

In case a problem arises affecting products and action is judged necessary, Yanmar will swiftly implement appropriate actions, including the recovery, repair, inspection or replacement of products with customer safety and damage prevention as top priorities. In case of a recall, we shall notify the relevant organizations<sup>1</sup> and disclose this information on our website, and if necessary in recall notices in newspapers. In this way we are continuing to make improvements to our compliance with recall rules.

### Important News on Quality (Japanese Only)

<http://www.yanmar.co.jp/important/index.html>

### Number of Recalls in Japan<sup>2</sup>

FY	2007	2008	2009	2010	2011
Number of recalls	6	1	8	7	5

<sup>1</sup> Ministry of Land, Infrastructure, Transport, and Tourism, Ministry of Economy, Trade and Industry, Ministry of Agriculture, Forestry and Fisheries, the Japan Boating Industry Association, etc.

<sup>2</sup> Number of reported cases of product recalls based on Land Ministry recalls, improvement measures and the Consumer Product Safety Act.

The Yanmar Group's basic philosophy is to coexist and progress together with society. All of its plants, offices and affiliates, both in Japan and overseas, are working to make unique contributions to their regional communities.

## Activities to support recovery efforts in areas affected by the Great East Japan Earthquake and Tsunami

### Participation in projects towards the resumption of agriculture and regional regeneration

The Agricultural Machinery & Equipment Division is participating in two projects to support the recovery effort.

In the first project, launched by the Ministry of Agriculture, Forestry and Fisheries of Japan in December 2011, Yanmar is a subcontractor on research aimed at developing decontamination technologies for agricultural facilities, the ridges between rice paddies and farm roads, etc., and is working to develop decontamination technology for farm roads as well as irrigation and drainage ditches. By finding efficient ways to decontaminate land that has been affected by radioactive materials, Yanmar is working to support the rapid resumption of agriculture in these areas.

The first requirement for decontamination is the removal of the contaminated topsoil. On the unpaved sections of farm roads a stone crusher is used to crush the top layer, making it easier to remove. A front loader connected to a tractor then scrapes off and collects the top 4-5cm of contaminated soil. This process reduces by 90% the degree of radioactive contamination in the soil.

In order to collect contaminated soil that has built up in irrigation and drainage ditches, a small backhoe has been modified to allow the hydraulic arm to extend a maximum of 1.2m perpendicular to the machinery, in order to remove this contaminated soil. The bucket width has also been reduced to 25cm and the shape of the bucket has been altered to enable the unit to effectively scoop and remove soil from the U-shaped ditches. This has been successful in reducing the amount of radioactivity by some 50%.

All of these approaches make use of agricultural equipment that farming professionals have become accustomed to using. Tests have established that there

were no problems with regard to the operation and control of this machinery and equipment. Furthermore, as there is no alternative to manual labor for the proper removal of contaminated material, an increasing amount of attention is being paid to the role of construction machinery in this process.

The second project looks to expand cutting-edge technology to drive the regeneration of food-producing regions. It was launched in Miyagi Prefecture and aims to revive Miyagi as a new food producing region. The project is intended to be a model for the future of Japanese agriculture and is backed by the Reconstruction Agency as well as the Ministry of Agriculture, Forestry and Fisheries of Japan. It will run for 8 years starting in fiscal 2012.

Mechanization allows the introduction of a uniform and systematic approach to seasonal vegetable cultivation in these projects. This approach utilizes ICT (Information Communication Technology) in business management and cultivation management techniques found in large-scale rice paddy agriculture, with harvest yields measured by full-feeder combines.



Tractors used to decontaminate farm roads



Contaminated soil that has built up in cultivation ditches is removed using a small backhoe.

### Voices from the field

### Seeing the devastation first-hand drove home to us what we need to do here



**Kazuo Kotake** Senior Manager, Development Management Dept., Agricultural Machinery & Equipment Division

Last year we traveled to Iitate village to conduct an on-site survey. As we traversed the last mountain ridge the radiation meter we were using suddenly triggered its alarm and the reading jumped by a decimal point. I remember a feeling of tension; of feeling threatened by the radiation, but I was dumbfounded when I saw this ghost town, this human settlement that had been completely deserted.

This year I have been back many times to Iitate village, and where I saw fields and rice paddies last year, now there is just a great expanse of weeds — so much so that one cannot make out the fields anymore. It really hit home how important it is that we make progress with the decontamination effort and the important role Yanmar machinery can play in helping these communities recover from this disaster.

## Starting to reinvigorate the local fishing industry

The Sanriku coastline, which stretches from central Miyagi Prefecture up to Iwate Prefecture, is one of the most important bases for offshore and deep-sea fishing in Japan. The area is well known for the volume of fish caught by these coastal communities, while the quieter bay areas boast a thriving aquaculture industry. However, the disaster has had a huge impact on this entire coast and the numerous aquaculture farms that supported the regional economy are in urgent need of rebuilding.

Yanmar, as part of its efforts to help in the recovery of the area, is working in conjunction with the Ofunato Fishery Cooperative Association in Iwate Prefecture to run verification tests with the aim of introducing and implementing efficient bivalve mollusk farming technologies. This is the first step in developing a regional brand that will drive the regeneration of the local fishing industry as well as adding value to their products.

Using Yanmar's proprietary bivalve fry production technology, onshore cultivation of bivalve seedlings is combined with accelerated growth in offshore facilities. Compared to traditional bivalve aquaculture, this approach offers dramatically improved survival rates for

the seedlings, improving yields and efficiency while reducing the manpower required to operate a farm.

Local fishermen have come together to work with Yanmar to set up this revolutionary approach to bivalve production. Building on the successful results for fiscal 2012, Yanmar will continue to deliver solutions towards restoration of the area's fisheries.



Local fishermen

## Implementing on-site recovery support activities

The earthquake struck just as farmers in the Tohoku Region were preparing to welcome in the spring. The timing and the scale of the disaster dealt a serious blow to many farmers in the region. The damage to the agricultural machinery that these farmers use on a daily basis was significant and, left unaddressed, this was an issue which would prevent farmers from carrying out their jobs. To tackle this problem, technicians from each of the plants, as well as Yanmar's collaborative partners, were sent to the affected areas for 2 months from the end of March to repair damaged equipment and machinery and restore engines to working order.

The technicians also made Agricultural Machinery & Equipment Division repair manuals available to farmers in the affected areas, and removed equipment that was damaged beyond repair. Volunteers from the Power System Operations Division came to support the

recovery activities. The Company as a whole is mobilized in support of the region as it strives to restart its agriculture industry as quickly as possible.



Supporting recovery efforts

## A vote of confidence in Fukushima rice

The earthquake and resulting devastation had a significant impact on agricultural production in the Tohoku Region. The damage caused by the subsequent accident at the nuclear power station has been compounded by harmful rumors and misinformation, and this has led to bottlenecks in the shipping of agricultural produce from the area. In order to lend some support to the affected areas, the company cafeteria at the Yanmar Head Office used Fukushima rice supplied with the kind cooperation of the Zen-nou Fukushima Prefecture Agricultural Cooperative. Yanmar was proud to use rice from Fukushima Prefecture in the meals prepared in its cafeteria. The rice was used in plain steamed rice as well as omuraisu (a serving of fried and seasoned rice wrapped in an omelette), *donburi* rice bowls, curry and rice, fried rice, and all other dishes featuring rice.



Eating Fukushima rice to support the recovery effort

## Regional activities

### Supporting the Umeda Honeybee Project

The Umeda Honeybee Project was born from a proposal from employees, and has been supported by Yanmar since September 2010.

The aim of the project is to promote urban greenery, create a sustainable natural environment in the city and forge associations with the wider community by raising

honeybees in beehives on the roof of the Yanmar Osaka Head Office building.

Any honey that is produced by the bees is donated for use during a variety of local events, ensuring that this project plays a role in invigorating the local community.

#### List of Events for Fiscal 2011

Date of Event	Event Outline
May 13	Volunteers helped move planters for the Nanohana Walk 2011 as well as picking rapeseed.
May 21	Held a vegetable planting class.
June 18	Held a class on harvesting vegetables and making oil from rapeseed.
July 6	Donated rapeseed oil to Tsunashiki Tenjinsha Shrine for ceremonial use during the Tanabata Festival.
July 7	Supported the Heisei Osaka Amanogawa Legend 2011 event, held at Kitahama. The frappe at the Le Pont de Ciel booth were made with honey donated by the Umeda Honeybee Project.
July 14 - 15	Participated in an event held to celebrate the 50th anniversary of the Yanmar Head Office building. Participants were given cheese canapés with honey from the Umeda Honeybee Project hives as well as pasta using vegetables grown in the Yanmar Head Office rooftop garden.
September 17 - 19	Supported the Michinokuni Festival, held in Namba, Osaka to aid the recovery efforts of the Tohoku Region. The crepes on sale at the L'Ecole Vantan booth were made with Umeda Honeybee Project honey.
October 9 - 10	Supported the MBS Happy Hour Festival, held in Umeda. Honey donated to Dojima Sweets, who used it to bake madeleines.
October 22 - 23	Operated a booth at the Suito Osaka Festa 2011, held on the island of Nakanoshima.
December 14	Supported the 1-million Candle Night @Osaka City held in Chayamachi. A donation of honey was given to the Hotel Hankyu International, who used it to make pound cake. Candles made from beeswax were displayed at the Yanmar Head Office.
December 25	Supported the Snowman Festival, held at Chayamachi, Osaka. Honey donated to the Hotel Hankyu International, who used it to make pound cake.
February 6	Supported the Hankyu Men's Osaka event, held in Umeda. Honey donated to Bar Augusta and used to make honey cocktails.
March 31	Supported the MBS Spring Cherry Blossom Festival, held in Umeda. Honey donated to the Mainichi Broadcasting Corp. and used to make sweets and confectionary.



Exhibiting at an event



Promoting greenery activities



Honeybees require day-to-day care

## Traveling vegetable class

Yanmar, as a partner in the Ministry of Agriculture, Forestry and Fisheries FOOD ACTION NIPPON program to promote and expand the consumption of domestic food produce, has developed a traveling vegetable class to support the aims of the program. Yanmar collaborates with teachers and children and the class covers all aspects of farming, from tilling, planting through to harvest, offering guidance and support on agricultural practices. The class has become part of the food education module.

In fiscal 2011, the class was held at 21 locations, including elementary schools, kindergartens, nursery schools and nurseries, etc. 1,371 children have participated in the program.



## Yanmar supports the Kotonarie Summer Festa

Held on August 6 -15, 2011 at Hibari Park, Higashi Omi City, Shiga Prefecture, the theme of the Kotonarie Summer Festa was "Power-up – Bringing cheer through light! With hope for Recovery." Together with people directly affected by the Great East Japan Earthquake and using lessons learned from this disaster, the importance of energy and preserving the natural environment was passed on to attendees. The event was marked with the spirit of everyone coming together to work towards recovery.

A total of 250,000 light bulbs were used to illuminate various art installations placed around the park. Some of the illuminations were powered by a Yanmar diesel generator (model AG25SS) running entirely on domestic

vegetable oil that had been used and then refined into a biofuel.



Community Involvement and Development

## Foundation activities – education support

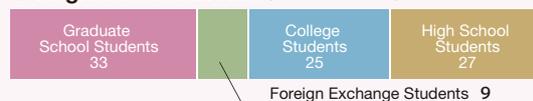
Yanmar's founder Magokichi Yamaoka established the Yamaoka Education Foundation in 1950 to develop human resources capable of contributing to world peace and prosperity and cultural improvement. His commitment to this project has been passed down through successive generations, and today the Foundation still makes scholarship grants and loans available to high school, college and university graduate students as well as foreign exchange students. So far over 5,200 people have received these scholarships and moved on to perform active roles in various fields.

In December 2011, the Yamaoka Education

Foundation was reclassified as a public interest incorporated foundation.



### Registered students (as of March 2012)



\*In order to encourage academic endeavor and friendship between scholarship students, the foundation hosts research seminars at Yanmar's Maibara Research & Development Center and a hotel in Hikone for graduate school students studying technical subjects, and also funds research trips for foreign students to world heritage sites in Japan.



Research seminar



Research trip

## Reinvigorating agriculture

### Yanmar student essay contest

Since 1990 Yanmar has held an annual thesis and essay contest and awarded prizes for the best compositions from students on the future of agriculture and agricultural communities.

The theme for 2011, the 22nd year that the contest has been held, was “Evolving Agriculture. Challenge, create and harness value for the future. Life-giving food; Food-producing agriculture; Environmental rural communities.”

Submissions were sent in from all over Japan, with a total of 76 theses and 518 essays received. The winning entry in the thesis section was submitted by Misaki Shichinohe and Takeshi Saito, both in the first year of their studies in animal husbandry at the Aomori Prefectural University of Agriculture, and was titled: Living with Cattle – Learning from Experiencing Disaster; A New Approach to Branding and Producing Our

Regional Beef. The winning essay was submitted by Hatsuko Sakata, a freshman student on the Agricultural Course, Education Department at the Aichi Prefectural University of Agriculture, titled: Musings on Cows.



### Children's picture exhibition

Yanmar wants to help children discover the wonder of rural life, while encouraging greater interest in the land and the sea. The National Federation of Land Improvement Associations holds an annual painting contest for children based on theme of “Rural life: rice paddies and streams” and Yanmar is an enthusiastic supporter of the contest.

In 2011 (the 12th time that the contest has been held) there were 10,807 entries of which 22 were awarded prizes, 105 were officially selected and 68 were awarded prizes from regional organizations. The Yanmar Prize

went to Motoko Tashiro (a sixth grade student at Tomizu Elementary School, Odawara City, Kanagawa Prefecture) and her entry, titled Planting Rice.



## Support for sports

From its origins as the Yanmar Football Club, Cerezo Osaka enjoys the support of countless fans in its current status as a J-League team. Yanmar supports the activities of Cerezo Osaka as an operating organization for the team together with Osaka City and leading Japanese companies as part of our efforts to help promote sports culture in the local community.

In 2012 Yanmar also entered into a sponsorship agreement with Manchester United as one of the club's Official Global Partners following the Champion Partner agreement concluded with Borussia Dortmund in 2011.

In addition, Yanmar supports YANMAR Racing, a professional yachting team led by Peter Gilmour, a world-renowned yachtsman. Yanmar is contributing to the culture of sport all over the world.



## Each Yanmar location and group company is active in their home community

### Yanmar volunteers participate in the “100,000 Person Clean City” project

On May 17, 2011, the Large Power Products Operations Division (Amagasaki Plant) participated in the annual “100,000 Person Clean City Project” – a neighborhood beautification movement held since the city celebrated the 80th anniversary of its incorporation. Yanmar participates as a local enterprise volunteering its services to clean and beautify the locality.

This was the 15th year that the event had been held. Yanmar employees collected refuse and cleaned the roads surrounding the Yanmar plant of drinks cans, PET bottles and cigarette butts, contributing to an ongoing reduction in the amount of refuse in the environment.

Yanmar, as a local business and, at the same time, a member of the local community, will continue to actively

support the community in its efforts to create a beautiful environment.



### The 2nd year of the Manyo Forest Sabokugaoka Park Regeneration Project

The Manyo Forest has a long history and the banks of the Mogawa River in Amagasaki City sustain a rich ecosystem of riverside forest grown with Japanese hackberry and althea. The area has become a focus for the bio-diversity movement as well as a place where local children can come and learn about the local environment and history. The Manyo Forest Sabokugaoka Park Regeneration Project was launched in September 2010 with the aim of creating a natural park for the citizens of Amagasaki.

Kanzaki Kokyukoki Mfg. Co., Ltd., part of the Yanmar Group, is located to the west of the Mogawa River and to the south of the Sabokugaoka Park and the company is an enthusiastic supporter of the project. As a local business, Kanzaki participates in environmental preservation activities in the area such as helping clear hemp palm from the park as well as planting Japanese

hackberry and cleaning up the general area.

A dearth of natural light made the park a haven for illegal dumping. By removing litter and other garbage, the project aims to make Sabokugaoka Park a pleasant and relaxing place where citizens can enjoy the forest.



### Coming together: The Awa Odori Project

The individual work sites and companies that make up the Yanmar Group are engaged in activities to deepen their connections with their local communities. In 1996 the Yanmar Head Office Cultural Club launched the Awa Odori Project, in order for the company to send a “ren” or group to the Awa Odori, one of the ‘big three’ o-bon dance gatherings in Japan. Each year many Yanmar employees participate in the project.

Since 2008, Yanmar has distributed tourist association pamphlets at the Awaji Service Area with the cooperation of the Honshu-Shikoku Bridge Expressway Co., Ltd., as well as arranging a photo session for participants with the Yanboh and Marboh characters. 2011 marked the 15th anniversary of this project.

On August 13, 2011 the Yanmar dancers performed at the Minamiuchimachi Theater for the 10th year running. Moreover, at the entrance to the Higashi Shinmachi Shopping Arcade, the largest of its kind in the

city, the dancers were assigned the final performance at the Shinmachibashi Theater and they responded with a rousing performance of Yanboh and Marboh that brought the house down.



## Social contributions and activities overseas

As Yanmar deploys its production facilities and sales outlets around the world, we seek to put down roots in the local community, fitting in in order to better contribute to society.

### Donations of pump engines, etc. (Thailand)

On November 9, 2011 Yanmar S.P. Co., Ltd. donated pump engines to the government of Thailand, to assist those who had been affected by the flooding. A total of 35 horizontal water-cooled engines worth 1 million baht were given, as well as a check from the Yanmar Head Office for 1 million baht which was handed in person to the Prime Minister of Thailand, Ms. Yingluck Shinawatra.



### Donations for Children's Day 2012 (Thailand)

On January 13, 2012 Yanmar S.P. Co., Ltd. lent its support to the Children's Day event held by Ayutthaya City. Yanmar donated a gift to each of the 360 elementary school children from the 3 elementary schools taking part in the event.



### A "Litter Free Company" for the second year running (Malaysia)

Yanmar Kota Kinabalu R&D Center Sdn. Bhd. (YKRC) was designated as a Litter Free Company by Kota Kinabalu City Hall in 2011. This is the second year in succession that YKRC has been acknowledged in this way.



### Work experience for local university students (Malaysia)

YKRC is hosting students from the Sabah College of Malaysia University as part of a study program to give students vital work experience before they graduate and begin to enter the workforce.



### Fostering an interest in chemistry in the younger generation (Malaysia)

2011 was World Chemistry Year and YKRC had a booth at the Malaysia Chemistry Carnival 2011 (K2M), which was held over May 17-20, 2011.

The aim of this event was to increase young people's interest in chemistry and inspire the development of future scientific technologies, while fostering human resources for industry. The Malaysia Chemistry Carnival 2011 was held in 7 locations around Malaysia, including Kota Marudu in Sabah State. Some 800 students and educators participated in the event.

The Yanmar booth focused on the efforts of the company in Sabah State and Malaysia as a whole, as well as the challenges of bio energy and global warming. Examples of Solutioneering as a supplier of biofuel-powered engines were also presented at the Yanmar booth.



## Contributing to local society as a “foster company” (North America)

Tuff Torq Corporation, based in Morristown, Tennessee, is active as a “foster company” for elementary school children.

This program challenges local businesses to foster and support elementary school children, by supplying ingredients for a Christmas meal, Christmas presents, etc. to low-income families with children. The program is part of Yanmar’s ongoing commitment to give back to local communities.



## Free loans of tractors to local farmers (North America)

Yanmar America Corporation lends tractors free of charge to the Adairsville Calhoun Community Glory Community Garden in Adairsville, Georgia, where the company has established a base for its activities. This helps farmers increase their harvests.



## Volunteering to build homes (North America)

Every year, the President of Transaxle Manufacturing of America Corporation and other employees, come together to build houses in the suburb of Rock Hill, where the company is located. Working with the NGO Habitat for Humanity, these Yanmar volunteers build simple, decent and affordable homes for the local community.



## Supporting the development of a simple, cheap and tough BUV (North America)

Tuff Torq Corporation was a supporter of the 11th BUV Competition, held in Indianapolis over April 15-16, 2011.

A BUV (Basic Utility Vehicle) has to be simple yet tough. These vehicles are designed for use mainly in developing countries. The competition tests the creative and technical prowess of students, as they compete to design and assemble a prototype BUV, with the proviso that it must be able to be built in a developing country at low cost.



Community  
Involvement  
and  
Development

## Other Social Contributions Overseas (2011)

Region	Country	Company Name	Activity
Europe	The Netherlands	Yanmar Europe B.V.	<ul style="list-style-type: none"> <li>Donations from employees to those affected by the Great East Japan Earthquake (total: €10,000)</li> <li>As part of a donation to the Stichting Philomela, Yanmar supported concerts by the Dutch opera singer Merel Huizinga and Japanese pianist Rie Tanaka, who performed at various venues such as a home for the aged, etc.</li> <li>Yanmar is a sponsor of the Van Gogh Museum</li> </ul>
The Americas	North America	Yanmar America Corp.	<ul style="list-style-type: none"> <li>Tractors and construction machinery were provided free of charge to staff and areas affected by tornado damage</li> </ul>
	North America	Tuff Torq Corporation	<ul style="list-style-type: none"> <li>Tsunami t-shirts were displayed at the Summer Fun EXPO (held between March 31 and April 3, 2011) and over \$18,000 was raised to aid the recovery efforts following the Great East Japan Earthquake</li> <li>Yanmar participated in Career Day at the local elementary school, with the directors responsible for marketing and engineering paying a visit to Whitesburg Elementary School in Tennessee. Schoolchildren were shown the safe way to cut grass, as well as being given an introduction to the Tuff Torq product.</li> </ul>
	North America	Transaxle Manufacturing of America Corp.	<ul style="list-style-type: none"> <li>Newspapers in Education</li> <li>Yanmar staff participate in the National Multiple Sclerosis Society</li> <li>Donations to aid recovery following the Great East Japan Earthquake (\$13,918)</li> <li>Donations to support the York Technical College Foundation</li> <li>Donation of Christmas presents for children supported by community social welfare programs and services</li> </ul>
Asia	Malaysia	Yanmar Kota Kinabalu R&D Center Sdn.Bhd.	<ul style="list-style-type: none"> <li>Donation to aid recovery efforts following the Great East Japan Earthquake</li> </ul>
	Thailand	Yanmar S.P. Co., Ltd.	<ul style="list-style-type: none"> <li>Donation to aid recovery efforts in affected areas following the flooding in Thailand</li> </ul>

# Corporate Profile

## Corporate Profile

Trade name	Yanmar Co., Ltd.	Honorary Chairman	Tadao Yamaoka
Head Office	Umeda Gate Tower, 1-9, Tsurunocho, Kita-ku, Osaka, Japan	President	Takehito Yamaoka
Tokyo Office	2-1-1 Yaesu, Chuo-ku, Tokyo, Japan	Net Sales (FY2011)	¥551.1 billion (consolidated base) ¥311.6 billion (company base)
Founded	March 22, 1912	Employees (as of March 31, 2012)	15,643 (consolidated base) 3,329 (company base)
Capital	¥6.3 billion		

## Major Changes in FY2011

- Yanmar Construction Equipment Sales Co., Ltd. merged into Yanmar Construction Equipment Co., Ltd. (March 2011)
- A research and development center, YANMAR R&D EUROPE S.R.L., was established in Florence, Italy (April 2011)
- The Yanmar Head Office was temporarily relocated to the nearby Umeda Gate Tower (December 2011)



Exterior of the Umeda Gate Tower (temporary location for the Head Office)

## Awards

- The Research & Development Center (Maibara, Japan) won the 2011 Good Design Award (October 2011)



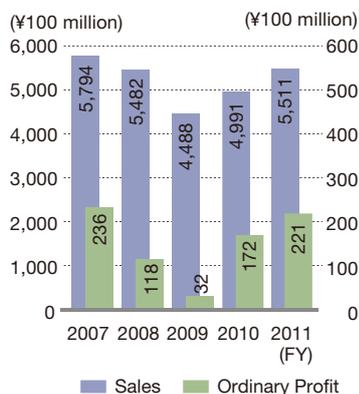
Research & Development Center

- Yanmar Logistics Service Co., Ltd. won the FY2011 Modal Shift Superior Service Shipping Award (March 2012)

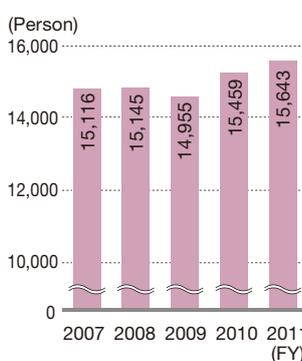


## Major Indicators

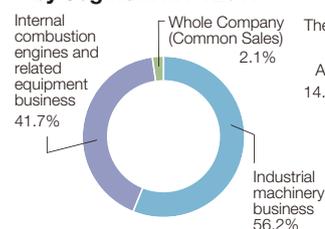
### Consolidated Sales and Ordinary Profit



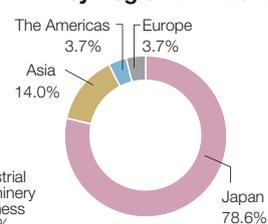
### Employees (Consolidated)



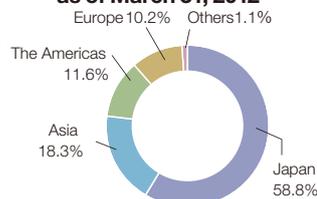
### Consolidated Sales by Segment in FY2011



### Consolidated Sales by Region in FY2011



### Employees by Region as of March 31, 2012



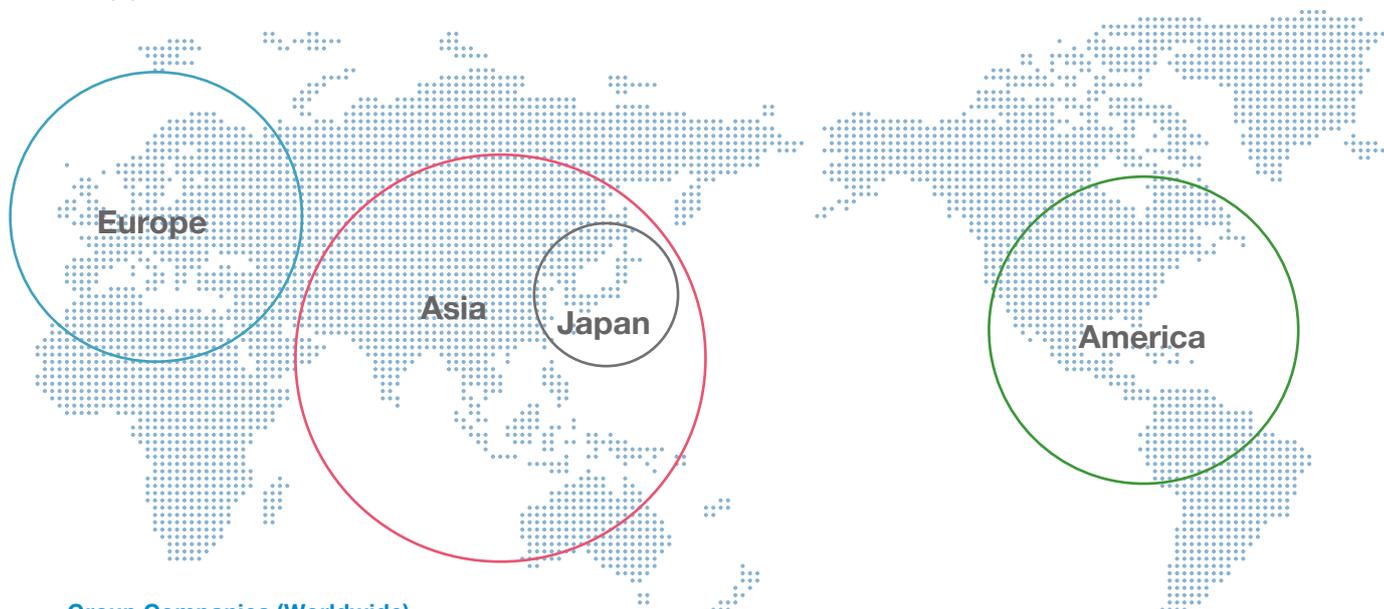
## The Yanmar Group Network

### Yanmar Co., Ltd.

- Power System Operations Division
  - Biwa Plant ● Yamamoto Plant
  - Kinomoto Plant
  - Oomori Plant ● Nagahara Plant
  - Nagahama Site
- Large Power Products Operations Division
  - Amagasaki Plant
- Marine Operations Division
  - Tsukaguchi Plant
- Agricultural Machinery & Equipment Division

### Group Companies (Japan)

- Yanmar Agricultural Equipment Sales Co.,Ltd.
- Yanmar Agricultural Machinery Manufacturing Co.,Ltd.
- Seirei Industry Co.,Ltd.
- Kanzaki Kokyukoki Mfg. Co.,Ltd.
- Yanmar Energy System Co.,Ltd.
- Yanmar Energy System Mfg. Co.,Ltd.
- Yanmar Construction Equipment Co.,Ltd.
- Yanmar Marine System Co.,Ltd.
- Yanmar Shipbuilding & Engineering Co.,Ltd.
- Yanmar Casting Technology Co.,Ltd.
- New Delta Industrial Co.,Ltd.
- Kyoritsu Metal Industrial Co.,Ltd.
- Yanmar Logistics Service Co.,Ltd.
- Kohrin Engineering Co.,Ltd.
- Yanmar Green System Co.,Ltd.



### Group Companies (Worldwide)

#### Europe

- YANMAR EUROPE B.V.
- YANMAR MARINE INTERNATIONAL B.V.
- YANMAR INTERNATIONAL EUROPE B.V.
- YANMAR BENELUX B.V.
- YANMAR NORGE A.S.
- YANMAR SVERIGE A.B.
- YANMAR CONSTRUCTION EQUIPMENT EUROPE S.A.S.
- YANMAR ITALY S.p.A.
- YANMAR R&D EUROPE S.R.L.
- YANMAR MARINE IBERICA S.L.

#### Asia

- YANMAR ASIA (SINGAPORE) CORPORATION PTE. LTD.
- P.T. YANMAR INDONESIA
- YANMAR S.P. CO., LTD.
- YANMAR CAPITAL (THAILAND) CO., LTD.
- P.T. YANMAR DIESEL INDONESIA
- P.T. YANMAR AGRICULTURAL MACHINERY MANUFACTURING INDONESIA
- P.T. YKT GEAR INDONESIA
- YANMAR INDIA PRIVATE LIMITED
- YANMAR KOTA KINABALU R&D CENTER SDN. BHD.
- YANMAR AGRICULTURAL MACHINERY (KOREA) CO.,LTD.
- YANMAR ENGINE (SHANGHAI) CO., LTD.
- YANMAR AGRICULTURAL EQUIPMENT (CHINA) CO., LTD.
- YANMAR ENGINE (SHANDONG) CO., LTD.

#### The Americas

- YANMAR AMERICA CORPORATION
- TUFF TORQ CORPORATION
- TRANSAXLE MANUFACTURING OF AMERICA CORPORATION
- MASTRY ENGINE CENTER LLC., a YANMAR COMPANY
- YANMAR SOUTH AMERICA INDUSTRIA DE MAQUINAS LTDA.

### Overseas representative offices

- YANMAR CO., LTD.- MOSCOW REPRESENTATIVE OFFICE



Please direct inquiries about  
this Corporate Social Responsibility Report to:

**Planning Group**  
Corporate Social Responsibility Dept.

**Yanmar Co., Ltd.**

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