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## MESSAGE FROM THE PRESIDENT

**Making "globalization" and "diversity" the new normal.  
We will aspire to be a company like no other in the world where each and every employee thinks for themselves and takes the initiative.**



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More than one year has passed since the massive earthquake and tsunami struck Eastern Japan in March 2011. Immediately after the disaster, employees at our Mie Plant quickly took the initiative and arranged for a truck to transport relief supplies to the area most affected by the quake and tsunami. I was very happy to see that our frontlines quickly took the initiative without first confirming what to do with our corporate head office. This also made me realize once again that the role of senior management is to help foster a culture where such initiative is not only possible, but a daily occurrence.

Following this, Yokohama Rubber continually sent relief supplies and donations to the affected areas, while urged employees to take part in the relief effort as volunteers. At the same time, we also revised our business continuity plan to include tsunami drills at each of our plants. As the next phase of our assistance, we will be actively involved in the construction of "Forest That Protect Lives" along the seashore of the affected areas by leveraging the know-how we have gained from the Yokohama Forever Forest Project to fill in land and plant forests.

### Aspiring to be a Global Company with a Distinctive Presence

2012 marks the first year of the Phase III in our medium-term management plan, the Grand Design 100 (GD100). As part of our efforts, we will once again make the GD100 vision, evoke a distinctive global identity in building corporate value and in building a strong market presence, known to our employees and continually push forward with new initiatives.

As for our Tire Group, first we will build a sufficient mass production system and strive to fix tire supply shortage around the world. Following this, we will focus on developing products that fulfill the needs of differing countries and regions around the world. No matter how high performance it may be, we cannot call a product a good tire if not bought by customers. In this regard, we will revisit our global concept BluEarth and pursue technical development that results in "Gentle for the environment, people and the society"

In addition, from the perspective of reducing our dependence on fossil fuels, we believe one long-term challenge will be ensuring a stable supply of natural rubber to be used as a raw material alternative to synthetic rubber. In this regard, going forward, I believe tire manufacturers around the world will need to consider working together to help support rubber farmers.

As for our Multiple-Business Group, we will promote its global expansion further and aggressively expand into new fields to become a leading company in each respective market, with a focus on core technologies covering the three key words of transport, connect and cushion in which we maintain a competitive advantage. Already we have begun product development on components used in photovoltaic and wind power systems as well as nursing care products. Going forward, I would like us to focus on cultivating our ability to propose solutions that include new products and performance qualities, taking into account the end user and all of society, and not just our direct customer.

We have also made a significant change in our human resource policy for cultivating the people that will help make these initiatives a reality. I believe the key to this will be enabling people from different business sites to learn about each other's strengths, instead of training employees at a single mother factory of our choosing. Of course, to accomplish this we need leaders that will gather information on each business site and lead the way forward for all of our training programs. I believe the synergistic effect of developing such leaders and providing advanced training across our plants will help us to build up a solid foundation for the entire company.

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### Promoting Initiatives Under Our 7 Pillars of Critical Issues

Last year we considered our acquisition of ISO26000 certification as a license for obtaining credibility as a

corporation in global society, and implemented CSR programs under the seven pillars of critical issues that are based on this philosophy. This year we became a signatory to the United Nations Global Compact, and as such, no matter what country or region our employees may work in I fully expect them to recognize and abide by this set of behavioral principles.

As for our environmental initiatives, we began investigating the ecosystem surrounding our Mie, Mishima and Shinshiro plants in an attempt to help conserve biological diversity. We have started a preliminary study for a similar initiative in Thailand and we plan to expand the scope of this study to other regions going forward. Communication with our stakeholders will form an important part of these activities with local communities. We are building solid relationships of trust with our stakeholders through plant visits organized for people living in the local community and the Yokohama Forever Forest Project. These efforts will greatly change the way our company is viewed by the surrounding community, as what once were complaints will now take the form of feedback provided from members of the local community.

In terms of production, we have changed the focus of our plant operations from QCD to SEQDCH. This acronym indicates that safety is of the utmost importance, and only with safety can we improve our environmental impact, quality, delivery and cost. We have established company rules based on this philosophy and by making these rules known to employees we will be able to cultivate the human resources that will form the heart of our operations.

As for human rights, everything starts with the acceptance of diversity. How do we communicate with people from different cultural and religious backgrounds with totally different values? How do we recognize and accept each other's differences? This will undoubtedly become an even more important issue as globalization advances. I also recognize that going forward we will need to expand our vision and take measures to improve human rights throughout our entire supply chain. We have begun implementing measures based on specific targets set for each of the seven critical issues. This is because by doing so we will be able to more clearly see pressing issues that need to be addressed to achieve these targets. During this process we may need to reform or innovate, rather than simply make improvements, and I believe continually pursuing this process will be critical to the future of the company.

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## Enhancing Our Frontline Strengths to Make Strides Toward Becoming an Irreplaceable Company to the World

The year 2017 stands as the final year of GD100. Yet, looking further into the future we find that the words "globalization" and "diversity" will have become the new normal for companies around the world. At the same time, I would like us to make strides toward becoming an irreplaceable company to the world where Yokohama Rubber products have become indispensable to both customers and consumers alike.

Each and every one of our employees thinking and taking action aimed at this future vision will become our frontline strength and enhance the corporate value of Yokohama Rubber in the process. In turn, I believe this will provide new value to society as a whole.

I would greatly appreciate if you could reach through this report, which introduces our progress and challenges, and I welcome your frank feedback so that we may improve the content of future reports.

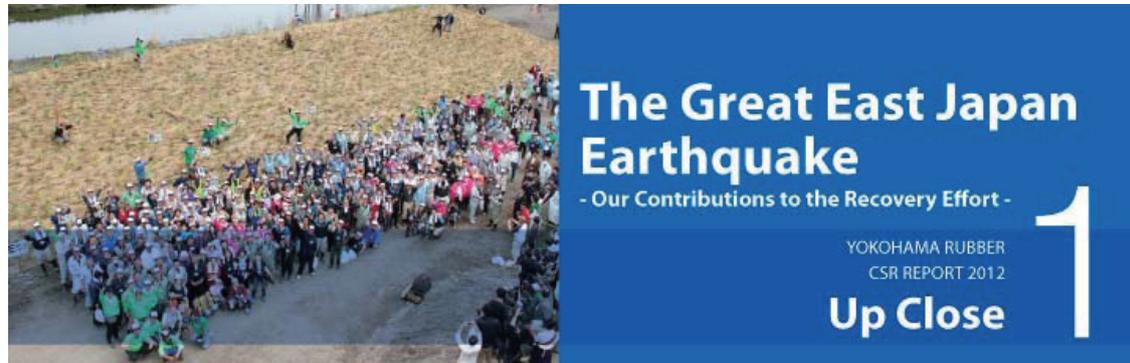
President and Representative Director



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### Leveraging Our Know-how from the Yokohama Forever Forest Project for a Coastal Levee Project in Otsuchi Town

As an advocate of the “Forest That Protect Lives” project being implemented by Otsuchi Town, located in the Kamihei District of Iwate Prefecture, we will support a project that will serve as a model for future activities.

#### Supporting strong and beautiful urban development for the future

Yokohama Rubber is an advocate of the “Forest That Protect Lives” being implemented by Otsuchi Town as part of the vision in its earthquake recovery plan to “our beautiful town, looking out on the sea, inspiring people to take a walk”. As the first step, we will support a tree planting project that will serve as a model for future activities.

A “Forest That Protect Lives” is a concept first created by botanist Dr. Akira Miyawaki, who is currently serving as an advisor to the Yokohama Forever Forest Project. Essentially, trees are planted atop a coastal levee using the Miyawaki method, which involves planting native tree species to create a forest that is as natural as possible. This same method has been used for the Yokohama Forever Forest Project since its inception in 2007. A forest consisting of native tree species that support one another will form a solid forest floor that cannot be uprooted. This will help mitigate damage from tsunami and tidal surges. The lush green forest will also provide a beautiful landscape as well as give a sense of peace and serenity to the people living in the local community.

We hope to utilize the know-how gained from the Yokohama Forever Forest Project for the recovery and revitalization of Otsuchi Town. With this commitment in mind, we will actively implement and support tree planting activities together with members of the local community.

**On April 30, 2012, we held a tree planting event that included volunteers from the community and Yokohama Rubber.**



Tree planting event attended by many in the local community



Regional and Local Map of Otsuchi Town

#### Up Close

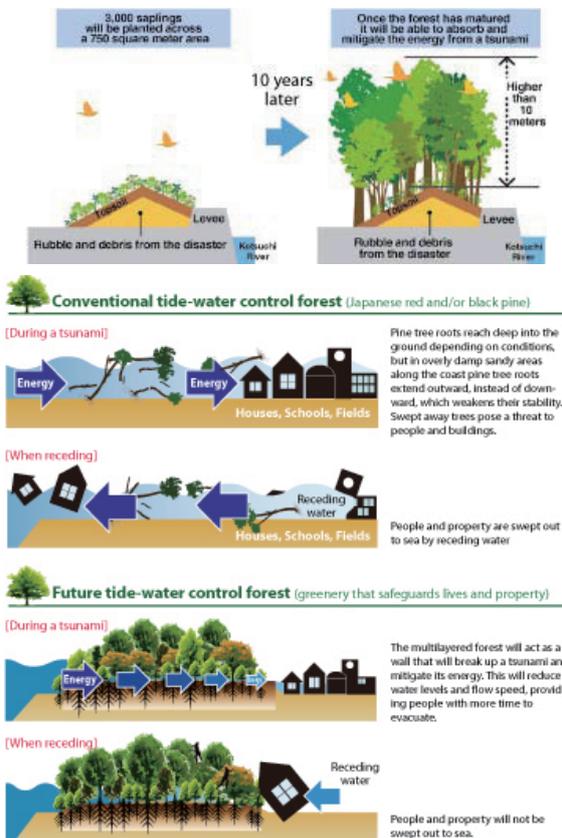
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### Creating a safer, more secure coastal levee by effectively utilizing rubble and debris from the disaster

#### Coastal Levee Plan

A unique feature of the “Forest That Protect Lives” concept is that rubble and debris still remaining from



the disaster will be effectively used in the foundation. First, rubble and debris will be sorted and buried in the ground. On top of this a mound will be formed on which trees will be planted. This will create a layer of air between the rubble and soil, which will enable the roots of the newly planted trees to dig deeper into the ground. The tree roots will envelope the rubble, making the forest above stronger and more stable. Building up the mound will ensure it serves as a safety net against future tsunami, while the act of tree planting will help heighten everyone's awareness toward disaster preparedness.

Conventionally, pine trees, which grow quickly and are tolerant of salt water environments, have been the tree of choice for tide-water control forests. However, research conducted on areas affected by the disaster showed that pine trees were weaker in terms of soil retention and more prone to falling. This demonstrated that pine trees would not function effectively in a tide-water control forest in these areas.

Native tree species planted using the Miyawaki methods are ideal for creating a strong underground root system that provides stability. This will help mitigate tsunami damage and provide additional time to evacuate. At the same time, the forest will also help prevent people from being swept out to sea when a tsunami recedes.

Yokohama Rubber is committed to supporting this "Forest That Protect Lives" because it will help

safeguard the lives of everyone in the local community.

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### ■ Message from the Mayor of Otsuchi



Otsuchi Town,  
Kamihei District,  
Iwate Prefecture  
Mayor  
**Mr. Yutaka  
Ikarigawa**

The rubble and debris from the tsunami symbolizes a part of the lives and in a sense something left behind by those that lost their lives in this disaster. A forest created atop this rubble and debris stands as a final resting place of souls. In this regard, this initiative will be a reminder of this disaster and that we must prevent future occurrences. Reconstructing a town that has lost everything starts from scratch, and in this sense, this forest created atop the ocean in Otsuchi Town will serve as a "Forest That Protect Lives" that helps the entire community drive the recovery effort forward. I am deeply grateful for the extensive assistance being provided by Yokohama Rubber.

### ■ Feedback from a Participant



Yokohama Tire  
Japan Labor Union  
Iwate Branch Head  
General manager  
**Taku Sasaki**

The Sanriku area suffered extensive damage from the tsunami and took countless lives. Among these were our daily business partners, suppliers and the family members of employees. Dealing with such loss has been painful for us all. Since then, I have continually thought of how I, as a local from Iwate, can help restore the once scenic beauty of the Sanriku area. I feel proud of the fact that I was able to take the first step toward this goal by planting trees together with the people of Otsuchi Town. Going forward, I will be closely following the progress of this coastal levee.

## ■ Message to Yokohama Rubber



Plant Ecologist  
**Dr. Akira  
Miyawaki**

Yokohama Rubber has helped to create valuable forest by planting some 500,000 trees of potential natural vegetation both in Japan and overseas under the aim of coexistence with leading technologies. Using this knowledge, Yokohama Rubber has taken the first-ever approach of creating a forest for mitigating disaster damage and conserving the environment from earthquake rubble and debris in Otsuchi Town, which suffered serious humanitarian and infrastructure damage due to the Great East Japan Earthquake. I am deeply appreciative of Yokohama Rubber Chairman Nagumo and President Noji as well as everyone involved in this project for taking the initiative to create a genuine furusato (hometown) forest that coexists with the local economy, helps safeguard members of the local community and protects the entire community from inevitable disasters, such as earthquakes, tsunami or fires. I look forward to the future development and activities of Yokohama Rubber.

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## Helping to mitigate damages caused by a disaster

### ■ The potential of pneumatic fenders

Capitalizing on its long-standing automotive tire technologies, in 1958 Yokohama Rubber became the first company in the world to manufacture a floating pneumatic fender. Since then, our floating pneumatic fenders have been used around the world alongside berthing vessels and on docks. If a fender is mistakenly damaged, it could lead to environmental degradation from an oil spill or result in the injury or death of dock workers. This is why floating pneumatic fenders have helped improve the safety of boarding at sea and also enhanced efficiency.

Many types of fenders are sold today, including solid (made from thick-walled rubber) and pneumatic types. Yet, our pneumatic fenders have come to be known as Yokohama Fenders thanks to their solid reputation internationally. This reputation has helped our pneumatic fenders capture the leading share in markets around the world.

The advantage in our fenders can be found in the fact that we use the compressive elasticity of air from inside the rubber itself. This means that the recovery force gradually increases and the amount of compression is large. Fenders use this softening force to absorb the energy of vessel movements and from mooring cables when berthed. Based on this, Yokohama Rubber has been researching the potential use of fenders to help mitigate tsunami damage.



**Floating  
pneumatic  
fender**



**Fixed  
pneumatic  
fender**

## ■ Message from a Researcher



Industrial Products  
Technical Division  
Senior Engineer,  
Industrial Products  
Technical Dept.  
Dr. of Engineering,  
**Shigeki  
Sakakibara**

I have been engaged exclusively in fender research since joining the company in 1989. Since 2005, I have been working alongside researchers at Kobe University to conduct repeated simulations on pneumatic fenders behave when used on a berthed ship during a tsunami strike.

Our research has shown that compared to solid fenders pneumatic fenders soften the impact on a vessel as well as effectively reduce vessel movement and mitigate the force placed on mooring cables used to secure the vessel in place. Simulations indicated that even when a 2-meter high tsunami strikes the superior spring performance of pneumatic fenders can potentially reduce vessel movements like rolling, especially when used on LNG carriers. Depending on the height of the wave, pneumatic fenders may also help enhance survival mooring capabilities, such as preventing vessels from being swept out to sea. Today, we have are examining ways of how best to respond depending on the height of the tsunami wave.

I hope to share just how hard crew members work to safeguard their ship by showing the force that a vessel receives during a tsunami and its movements quantitatively and in an easy to understand manner. In this regard, I believe my mission is to help reduce damages from disasters. I have always had a strong interest in ships and the ocean, and felt I was very lucky to be able to research both through my work. My commitment to my work has become even stronger after seeing the misery caused by the Great East Japan Earthquake. Going forward, I hope to find even greater possibilities in fenders.

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## Looking back on the post-quake response for hints about future assistance measures

## ■ Roundtable talks led by volunteer participants

We held a roundtable talks on the type of assistance that should be provided to the affected areas and how individuals should get involved with the reconstruction effort. This talk was led by employees that participated in the earthquake recovery effort, including eight from the Yokohama Rubber head office, eight from the Hiratsuka Factory, two from the Onomichi Plant, and seven from the Mie Plant. Roundtable talks held at each business site saw active debate and received many unique ideas because employees took part as volunteers.



**Roundtable talks in which employees participated as volunteers**

Employees volunteered in the recovery effort for a variety of reasons, with more than one individual sharing, "I was hesitant about taking part as an individual, but the company encouraged me to join in and also helped defray the cost," and "I wanted to participate since I had a positive experience volunteering in the wake of the Great Hanshin-Awaji Earthquake." Many of the employee volunteers felt firsthand the tragedy of the earthquake and tsunami, which was much different than watching events unfold on the news. One employee volunteer noted, "You can't really get a sense of the terror caused by this tsunami unless you're actually there at ground zero. There're a lot of things that volunteers can provide, so I felt it was important to get out there and see what I could do to help."

Participants provided many unique ideas in terms of how the company can assist. This included potentially selling locally made produce and products at the coop, providing Yokohama Rubber fenders to help restore rafts used by local oyster farmers, and planting trees in a similar fashion as the Yokohama Forever Forest Project, among others.

Roundtable talk participants also shared some of the problems that took place as well. These included the fact that solicitations for volunteers did not reach certain employees, that volunteering is not firmly rooted in the company's culture, and that no leave was provided to new hires to take part in volunteer activities. We plan to examine each of these issues and make improvements going forward.

[\\*Click here to read feedback from volunteers that participated](#)

## ■ In response to the roundtable talks



**General Manager,  
CSR &  
Environmental  
Affairs Dept.  
Atsushi  
Kanazawa**

For Yokohama Rubber, 2011 was a year in which it began dispatching employee volunteers to the disaster-affected area and initiated corporate volunteer work. These initiatives helped raise awareness within the company, sprouting a culture where each organization proactively dispatches employee volunteers, and we hope to capitalize on this momentum going forward. Between March 2011 and March 2012 a total of 125 employees volunteered in the Kesenuma Oshima, Higashi Matsushima and Onagawa areas. Activities in Kesenuma Oshima organized by Global Compact Japan Network, which accounted for about one-quarter of all Yokohama Rubber employee volunteers, involved the cleanup of rubble and debris.

Through these roundtable talks, we were moved by our employees' awareness and passion to help. This included their awareness that something needed to be done, even by individual people, in the face of unprecedented damages and the fact that some employees had already been involved in volunteer activities prior to the disaster. The

volunteer work of our employees was nothing short of amazing.

Yokohama Rubber became a signatory to the United Nations Global Compact in 2012. As part of this, we launched a cross-divisional workshop that oversees not only volunteer activities, but all of our philanthropic activities as well. Through this workshop, we have also started revising and reviewing our definition of corporate volunteering as well as related programs. The workshop also consists of members that have experience volunteering. Going forward, we will continue to actively take part in aid activities, while clarifying the purpose of pursuing these activities as a corporate entity.

## ■ Innovations made and matters to review following our earthquake reconstruction assistance programs

Innovations made	We fostered an environment that encourages employees to participate by sharing specific volunteer activity program details such as dates, how to get there and accommodations. We decided to fund the cost of transportation to the affected area and local accommodations for employees participating in volunteer activities that assist the Great East Japan Earthquake reconstruction effort.
Matters to review	<ul style="list-style-type: none"> <li>• Employees with less service time at the company are not granted leave for taking part in volunteer activities, making their participation difficult.</li> <li>• Activities for which the company encourages employees to volunteer in should be made more widely known.</li> </ul>

- The company needs to be aware of safety issues regarding the volunteer activities that it encourages employees to take part in (from a Mie Plant employee that helped deliver relief supplies to Onagawa Town on March 19, a little over one week after the earthquake).

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## ■ Held tsunami evacuation drills (at two manufacturing sites and 23 offices)

Yokohama Rubber held tsunami evacuation drills at business sites located inside an either an area where measures against a Tokai earthquake are to be intensified or an area requiring disaster preparedness measures for a Tonankai or Nankai earthquake. These sites are believed to be at risk of damage based on their position on the tsunami hazard map. Onsite disaster handling divisions communicated with Central Disaster Response Headquarters at the head office using three separate modes, including satellite phone, internal line using an IP mobile phone, and public pay phones located inside plants.

This training exercise enabled us to confirm the space and time needed to complete evacuations as well as the distance of the evacuation site to each respective business site. As there were

several changes we needed to make concerning the response of each business site, we plan to hold a second tsunami evacuation drill sometime after September 2012.

### ○ Details of the tsunami evacuation drills

1. Date of drills: Thursday, November 24, 2011  
10:00 am Major earthquakes strike in the Tokai, Tonankai and Nankai areas (scenario)  
10:05 am The Japan Meteorological Agency issues an advisory for a large tsunami advisory (scenario)
2. Purpose:
  - (1) To make the evacuation site and route known to employees in the case an advisory for a large tsunami is used and to practice using this route
  - (2) To confirm the communication system for contacting the Central Disaster Handling Division from the evacuation site

Production sites: Mie Plant and Onomichi Plant  
Sales offices: 2 YMJ offices, 12 YTJ offices, 9 directly-owned tire distributors



## ■ Mie Plant employees help assist Kiho Town after it was damaged by Typhoon Talas

Mie Plant employees, who were among the first to collect relief supplies such as food and daily essentials for the victims of the Great East Japan Earthquake, also actively participated in volunteer activities in Kiho Town, located in the Minamimuro District of Mie Prefecture, after it suffered damage from Typhoon Talas. This is because as a contributing member of the local community the Mie Plant wanted to quickly help out those in need.

Typhoon Talas brought record-breaking rainfall to the Kii Peninsula, which caused damage in Mie, Wakayama and Nara prefectures, in particular. Kiho Town, which is located along the lower reach of the Kumano River, suffered serious damages from flooding and landslides as a result.

The 23 employees that volunteered their time helped to cleanup homes that had been inundated with flood waters, carryout furniture from these homes as well as help remove rubble and debris. The Mie Plant employed a workforce of 1,120 as of December 2011. The plant is known for its high level of team work in the local community where it often takes part in cleanup activities along the Futami Coast, around the plant, and on local rivers. Based on this experience, the plant voluntary takes part in relief aid whenever a disaster strikes. The plant's call for one-coin donations to benefit the Tohoku region continues today.



## ■ Feedback from Volunteers that Participated

Yokohama Rubber began full-fledged efforts to support employee volunteer activities in 2011 following the assistance it provided to the recovery effort in the wake of Japan's earthquake and tsunami disaster. These activities have expanded from the earthquake recovery effort to include helping communities hit by typhoons and tree planting. Here, we have compiled feedback from actual participants so that this information can be used to improve future activities.

Below is a selection of comments provided by employee volunteers that participated in these activities.

### ○ Feedback from Mie Plant Employees that Took the Lead in Supporting the Earthquake

## Recovery Effort

### ■ Impetus for taking action

[Katsuharu Omi, Yukihisa Kubo, Yasu Taniguchi Mie Plant](#)

After seeing the shocking new footage on March 12 and 13, I made up my mind that I needed to go there to help, so I consulted with my colleagues at work. On March 16, we spoke with the general manager of the plant and received his approval. We called for a meeting of plant managers and assigned each a task that included collect relief supplies, arrange for transportation and select a destination. We announced the supplies that we wanted to bring, including tissues, diapers and clothing, and collected these at the plant. Since we had been in contact with the aid acceptance office of Onagawa Town, our plans came together quickly.



We left Mie at 6:00am on March 18, drove all day and all night and finally arrived at Sugo Parking Area early the next morning. The parking area appeared normal, but after closer inspection there were many fire department and Japan Self Defense Force vehicles parked there awaiting orders, which was quite out of the ordinary. We left the parking area at around 7:00am on March 19 and got off at Ishinomaki Interchange. Once off the expressway, the scenery changed dramatically and for the first time we found ourselves in what looked like a war zone. We delivered our relief supplies and on our way back home on March 21 we received word there had been an explosion at the Fukushima Daiichi Nuclear Power Plant. I believe that everyone shares the same thought of wanting to help the disaster-stricken areas and that other people will stand up if presented with the impetus of those around them taking action. The Mie Plant has an assistant manager's meeting where policy is decided. This has helped foster a culture where employees actively take the lead. After work employees are able to speak up more freely and open up, which serves as a sustainable energy for sharing each others' motivation and feelings. In addition, after arriving locally, we found there was a need for special skills and preparation in order to provide relief assistance. I believe this differs from the actual recovery effort that gets started after things have settled down.

[Mie Plant Yukihisa Kubo :](#)

Since first delivering relief supplies to Onagawa Town we have held a one-coin donation campaign at our offices in Japan on the 11th of every month. I believe it was September 11 when one person that brought a donation said to me, "While Tohoku is important, what about Kiho Town?" These words served as an impetus for us to provide assistance to Kiho Town. We will continue to hold this donation campaign each month.

[Mie Plant Toshie Kashiwabashi :](#)

Today, we don't actively solicit for the one-coin donation campaign, but rather simply place a donation box in front of the Operations Department on the 11th of each month. I was moved to see a young employee with a rather unique appearance and hair style stop by after working the night shift to make a donation. I felt the youth of today aren't that bad after all.

### ○ Feedback from Employees that Participated in Global Compact Japan Network Volunteer Activities

#### ■ Expectations of the company

[Onomichi Plant Seiji Nakajima and Takayuki Utsumi :](#)

The receiving end had made advance preparations and I was providing service based on the instructions of people from the local community, so I felt like I was making a difference. I believe simply going there alone and looking for ways to help by talking with members of the local community would be impossible. I believe everyone wants to take part in volunteer activities, but they only need a push. I would like the company to provide this push to get its employees involved.



[Hiratsuka Plant Makoto Chiba :](#)

Information on volunteer activities was not conveyed to the production floor. In this sense, I believe many issues remain in terms of making this information known to all.

[Hamagomu Aicom Inc. Shigeru Sato :](#)

Many people want to participate in volunteer activities, so it's important to provide as many opportunities as possible. Once a person takes part in one of these activities, it lowers the hurdle and changes the way they think. This is why I believe volunteer activities will become more engrained in our culture if we encourage greater participation.

[Hiratsuka Plant Kyoko Ishikawa :](#)

I believe even more people will take part in volunteer activities if the company were to cover their expenses.

[Domestic Tire Technology and Service Department Hiroyuki Narabayashi :](#)

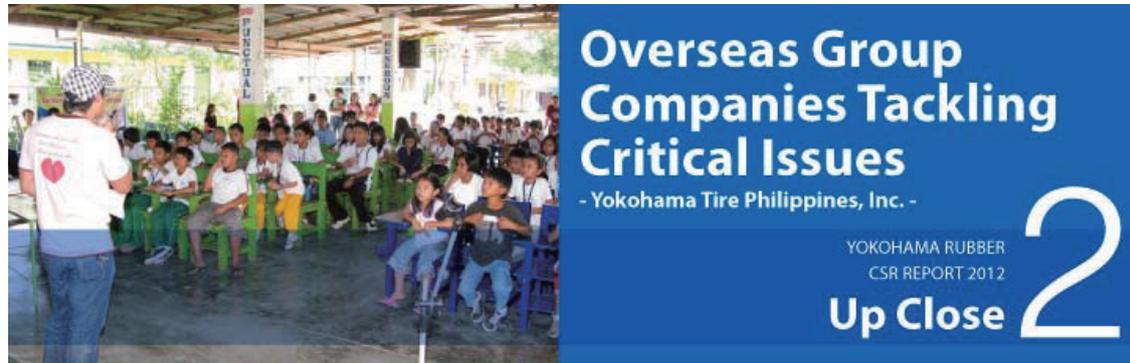
2011 was a year in which we were reminded of the powerlessness of people in the face of a massive natural disaster. However, 2011 was also a year in which we saw that people have the caring hearts to overcome such a display of raw power. There was a part of me that wanted to but couldn't help my friends in Sendai that had suffered, while there was another part of me that hesitated to get those around me involved. This is when I learned of the company's volunteer program. I invited colleagues at work to get involved and together we traveled to Kesenuma Oshima to help out the recovery effort.

The discussions showed that everybody has a different approach. Some people are proactive and willing to jump in, while others have yet to awaken to their desire to help. If an impetus is provided, I believe people can and will awaken to this desire. If the company continues to provide a variety of volunteer opportunities, its employees can become a driving force that make a difference in society.



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The Yokohama Rubber Group is involved, as part of its global expansion, in a variety of activities in each region regarding critical issues, such as environmental protection and improvement of employee workplace environment. Here we will give examples of these using the Yokohama Tire Philippines, Inc. (YTPI), located in Pampanga Province, in the central region of Luzon Island in the Philippines.

## Creating safe and healthy workplace environments

Maintaining a secure and healthy workplace environment where our employees can work safely raises our employees' sense of belongingness to the company and ultimately leads to improvement of the quality of the products and services we provide to society. In recognition of this, YTPI provides support in a variety of ways to ensure the healthy life of its employees and their families both physically and mentally.

Noticing that the rate of occurrence of influenza is higher in Asia than other regions, YTPI began giving influenza vaccinations to its employees in FY 2010. In FY2011, these vaccinations were given to 1,830 employees and their dependents. This prevented influenza from spreading amongst our employees and reduced the number of lost workdays due to illness.

We also began program to provide female employees with vaccinations for the prevention of cervical cancer from FY2011. Cervical cancer puts a high risk amongst young females, but the vaccinations can be used to lessen the risks. In FY2011, a total of 101 female employees received the vaccinations. In addition, we are also putting our efforts in raising awareness and understanding among employees on the causes and ways to lessen the risk cervical cancer.

These vaccination programs we intend to continue in the future to avoid various diseases impacting the health of our employees and their families.



A YTPI employee receiving an influenza vaccination

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## Aid to typhoon-struck regions



### Helping assist those in need following the major typhoon

set up at the YTPI-sponsored Christmas party.

Ultimately, 17,000 pieces of medicine were given through the local governments to the citizens of Iligan which had suffered some of the worst damage. In addition, 27 bags of employees used clothing were distributed throughout Mindanao in cooperation with the local Clark Development Corporation. Cash donations reached 106,040 pesos (about 200,000 yen), given to the local NGO Gawad Kalinga, whose programs include building

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homes and sustainable communities for poverty stricken Filipinos. Going forward, the fund will be used to help building peoples' homes which were lost due to the typhoon.

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## EMS team works to reduce impact on the environment

We are also pursuing various efforts primarily through our EMS (Environmental Management Section) team to reduce environmental impact, a major issue which we must involve ourselves in as a part of our business activities

We are making serious efforts to recycle and reuse waste, currently doing so for 88% of what would otherwise be thrown out as garbage is recycled or reused. For example, we have donated scrap tires to local citizen's group (since November 2011). These are being used to make slippers, pots, fences, etc. Aside from that, we also donate label mounting paper to a local women's group for it to be folded up to make bags or photo frames. In addition, we supplied spent lead batteries to ABS-CBN Foundation, Inc. (AFI), a fund set up by the Philippines largest media organization. AFI sells these batteries into cash through a recycling company. The subsequent profit is used to run a program aimed to raise awareness on environmental protection.



**Handbag created from label mounting paper**

We have also extended efforts for environmental education at local schools to contribute to greater awareness amongst the people for sustainable development and environmental protection. We do this by offering an environmental-themed orientation to give children the necessary knowledge and skills for environmental protection so that they can help sustainable development in their communities and society overall.



**Malabnias Elementary School**



**Sapang Bato High School**

In FY2011 we gave an orientation for a total of 200 students from the local Malabnias Elementary School and Sapang Bato High School. Garbage containers that are manufactured in YTPI from recycled packaging materials were given so that the knowledge on garbage sorting could be immediately put to practical use. Believing that the participating students will share the newly gained skills and knowledge on returning to their schools, having a positive impact on the entire community, we intend to continue such activities in the future.

We have also made strong efforts in environmental protection through tree planting, and are aiming to spread these activities outside, not limiting them to the communities of our offices. In May 2011 teachers and pupils of Sinura Elementary School together with YTPI volunteers planted 100 saplings. In July we planted 600 saplings at Arayat National Park in cooperation with the Philippine Armed Forces, while in October we planted 100 saplings in with the help of pupils of Sto. Rosario Elementary School.

These saplings were grown through the Yokohama Rubber Group's Forever Forest Project, active both in and out of Japan. We hope to increase our tree planting activities to a wider sphere in the future, further contributing to environmental conservation.



**Tree planting activity**

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## Up Close

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### Safeguarding at least the same amount of water used by our factories

Yokohama Rubber products are made using natural resources such as natural rubber and mineral ores, while its manufacturing factories are able to operate thanks to their access to large amounts of water. As a result, we have recognized that we need to find a way to give back to nature. Based on this belief, we began full-scale efforts to conserve biological diversity starting in 2010. We are committed to engaging in long-term efforts on a worldwide scale in order for Yokohama Rubber to coexist with local communities and so that we can mitigate the unavoidable impacts on the environment caused by our business activities.

Our activities in Japan were initially launched at the Mie Plant, and our focus from the start has been on protecting the environment by continually monitoring the natural surroundings and the organisms that live there. The goal of our activities has been to conserve and generate an equal amount of water resources as the amount consumed by our plants.

### ■ Overviews of the study

#### June 2010

Preliminary study at 15 sites in Japan and 15 sites overseas

- Preliminary study conducted on the natural environment in areas around business sites. Sites ranked in order of priority for implementation of future activities.
- Based on the results of the preliminary study, it was determined that the study and activities would be implemented starting first with the Mie Plant.

#### November and December 2010

Field study onsite at the Mie Plant

- Examined what type of study would be required in the future for areas surrounding the plant that are rich in biodiversity and have a capacity to retain large amounts of water, such as wetlands and grasslands.
- Based on the results of the field study, it was determined that a study plan would be formulated.

#### April to November 2011

Study implementation

- In consideration of environmental changes with each season, the study was conducted on four occasions, once in May, August, October and November, respectively.

#### December 2011

Employee

#### Employee workshop

- The results of the study were shared and activities examined

#### Briefing for local communities

- The action plan was shared and feedback received
- Scope to be expanded to the Mishima, Shinshiro, Nagano and Y. T. Rubber Co., Ltd (Thailand)s

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## The Yokohama Rubber Way Together with employees and with local communities

With this study, Yokohama Rubber emphasized its employees should think for themselves and take the initiative in implementing activities. That is, employees are to conduct the study, formulate plans and implement activities, while receiving advice from experts. Our goal is to foster manufacturing plants that always take the initiative in protecting the surrounding environment and that are beloved by the local community.

First, the Mie Plant conducted a study on how much their business activities were impacting the surrounding environment. This study provided results from the natural organism health diagnosis program to safeguard the natural environment, which found that many organisms were living in the two rivers close to the plant and that effluent from the Mie Plant was helping to maintain the water quality of the Hinokijiri River.

The Miya River watershed is home to dragonflies and mayflies as well as many bird species such as grey-headed lapwings, bull-headed shrikes, and great weed warblers. Although parts of it have been polluted by sewage, the Hinokijiri River still is a habitat for killifish, carp, mullet and damselflies as well as larger birds such as the gray heron and great cormorant that fly in to eat the small fish.

In December 2011, the Mie Plant's 41 employees were split into seven groups to discuss some of the actions they could take based on the results of studies conducted to date.



**Employee workshop at the Mie Plant**

developed in the local community."

Based on the results of employee discussions, the next step was to reach a consensus with the local government, media and NPO officials about a plan for conservation activities for both the intake and discharge of water in order to conserve the ecosystem of the Miya River watershed.

A number of meetings were held with the local community to build up a consensus on a plan of action. At these meetings, the head of a local government happily noted, "Until now I held the misconception that Yokohama Rubber was discharging large amounts of polluted water. At



**Plant life study conducted in the coastal grasslands of Futami Town**

One of these teams named themselves Team Bakkon and worked to thin invasive foreign plant species such as cutleaf evening primrose, while also protecting native species, as well as to protect the rare bird species the streaked fantail warbler, which is an environmental indicator species for the ecosystem. Another team aspired to make the Hinokijiri River an ideal habitat for fireflies. Each team presented their ideas on how individuals could help protect nature in the surrounding community, which included monitoring, picking up garbage, exterminating invasive foreign species, cutting grass and protecting killifish. Plant Manager Toru Nakamura, who participated in the workshop, noted, "I was very proud to see the active dialog held between the teams. This area is home to Ise Shrine, mountains, the ocean, and vibrant rivers, so I felt a real sense that everyone wants to do their part to help protect this land in unique ways



**Aquatic organism study on the Hinokijiri River**



**Briefing for local residents**

the last briefing I found that I this was a misunderstanding. Therefore, I went back home and explained this to local residents. Going forward, our residents and I will be avid supporters of Yokohama Rubber.”

This relationship of trust created and nurtured through dialog represents exactly what we are striving to achieve.

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## Expanding this initiative to other sites in Japan and overseas

Using the initiative launched at the Mie Plant as a model, similar activities were started at the Mishima and Shinshiro plants in 2012. Regardless of which site, all of our employees are eager to learn and study firsthand about the impact that our production activities have on the natural environment as well as what they can do to help protect it. We will continue to formulate the most ideal activity plan for each site, based on previous activities conducted at each site as well as requests received through dialog with the local community. We have also initiated studies in Thailand, which represents an important country in terms of the Yokohama Rubber Group’s raw materials procurement, development production and sales processes. Here, we also plan to launch activities that include a focus on sustainable raw materials procurement.



**Water quality survey at the discharge point (Noda River) for the Shinshiro Plant**



**The terraced rice paddies of Yotsuya Senmaida located along the upper reaches of the Toyo River from where the Shinshiro Plant sources its water**



The Yokohama Rubber Group’s activities have only just begun. Although these activities will not yield concrete results immediately, we recognize the importance of carefully monitoring the progress of each. In this regard, going forward, our focus will continue to be on working together with our employees and with our local communities.



**The terraced rice paddies of Yotsuya Senmaida located along the upper reaches of the Toyo River from where the Shinshiro Plant sources its water**



**Receiving a briefing at Khao Sok National Park, which is the source of the water used by the Thailand Plant**

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### Summary of conservation activities at select locations

Shinshiro Plant

Took part in conservation activities at the rice paddies of Yotsuya Senmaida at the foot of Mt. Kuragake.  
Installed biotope for aquatic organisms living onsite.

Mishima Plant

Participated in clean-up activities on the Sakura River and local spring waters.



Visit our corporate website to learn more about the results of the Mie Plant study as well as view an overview of the activity plan and feedback for stakeholders.

### ■ Feedback from a Member of the Local Community

I am pleased to see that Yokohama Rubber is actively engaged in these initiatives, while also having fun at the same time.

Mie Prefectural Government would like to assist in this effort by introducing Yokohama Rubber's initiatives on its website.

Science is fast evolving, so I ask that the company continually keep abreast of new information and always reflect back on whether it is taking the right action. By doing so, I am convinced that Yokohama Rubber's initiatives can become models for the world.

I expect nothing else. I believe there is no right answer when it comes to how to conserve biological diversity. In this regard, I would like the company to share its findings with society and incorporate feedback in future activities.



Department of  
Environment and  
Forestry Mie  
Prefectural  
Government  
**Mr. Kunio  
Yanagita**

### ■ Feedback from a Member of the Local Community

I believe it will be quite meaningful to use the Miya River investigation conducted by the Mie Plant as a good practice that should be rolled out at the company's other sites and plants across Japan. Our organization compiles the initiatives of companies actively working to protect water resources and the environment as well as to promote regional development in the Miya River Project Activity Compilation Guide. Each year we publish about 1,000 copies of this booklet, which is then distributed at the prefectural office and visitors centers for residents to take home and read. First, I would like to introduce Yokohama Rubber's activities in this booklet, which I hope will motivate local residents to get involved after they become aware of these activities.

While initially Yokohama Rubber's activities may still be looking for direction, going forward I hope the company takes progressive action, conducts advanced research and leverages the knowledge of pioneers in the field that came before them.

By having employees take the lead, I believe that this will help change the mindsets of local community members and make these activities even more rooted in the local community.



Miya River  
Watershed  
Renaissance  
Assembly  
**Mr. Yoshihiko  
Fukui**

### ■ Feedback from a Member of the Local Community

Employee workshops saw active discussions, so we are very much looking forward to our future activities. The report briefing held together with members of the local community provided a platform to receive important feedback on our efforts. Based on this, we hope to continue working closely with the local community going forward. Mie Plant employees are very proactive and cooperative in all of these activities. This is why I believe these activities can be successfully used as a model for other sites. For the secretariat, these activities provide a sense of accomplishment and are enjoyable at the same time.

Prior to these activities, we did not have a very close relationship with the local government, but following our participation in cleanup activities in Ise, we began to have more chances to work together.

The more we move forward with these activities the more we discover the deeper meaning behind them. We hope to continue with these activities with a stronger sense of motivation and a greater knowledge of biological diversity.



Mie Plant  
**Hisataka Okada and Hirofumi  
Imamura**

[Yokohama Rubber CSR Web site](#) > [Up Close](#) > Seven Pillars of Critical Issues for Yokohama Rubber to Address



Yokohama Rubber Group has decided to facilitate all of our activities based on our seven critical issues in order to go about our CSR activities in a desirable manner.

The seven pillars of critical issues have been set out through internal discussion based on the concept of ISO26000 issued in November 2010, in the light of considering what are the crucial items for Yokohama Rubber Group and what we should focus on regarding the effect on the society.

From now on, in order to strengthen every action of those pillars, we will continue to facilitate the supervision by our entire group and the strategizing of relevant action plans.

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▶ Overseas Group Companies Tackling Critical Issues – Yokohama Tire Philippines, Inc. – Up Close 2

▶ Protecting water environments near our production sites Up Close 3

### Seven Pillars of Critical Issues for Yokohama Rubber to Address

▶ 1. Advancement of Environmentally Friendly Management

▶ 2. Safe and Healthy Workplace Environment

▶ 3. Safety and Quality of our Products and Services

▶ 4. Human Rights and Labor Practices

▶ 5. Credibility with our Business Partners

▶ 6. Stakeholder Communication

▶ 7. Corporate Governance and Compliance

## 1. Advancement of Environmentally Friendly Management

Guidelines	Our Activities	Our Goals (by FY2017)	FY 2011 target	Evaluation
Following the principle of dealing fairly with society and valuing harmony with the environment, we shall assert our world-class strengths in technologies for protecting the environment. <ul style="list-style-type: none"> <li>Continued improvement of environmental management.</li> <li>Action to combat global warming.</li> <li>Contributing to the creation of a sustainable recycling society.</li> </ul>	1. We will contribute to the realization of a low-carbon society through the development and marketing of our products to contribute towards the environment.	We will turn all our products into environmentally friendly ones We will try to achieve a 25% reduction of greenhouse gases	All our newly developed products are given 100% environmental consideration and will be maintained as such.	Passed
	2. We will realize a society with resource recycling by utilizing natural resources to the fullest and minimizing industrial waste.	We will achieve and maintain total zero-emissions in both in our domestic and overseas offices and intend to keep this up.		
	3. We will continue to enhance our activities related to biodiversity both at our domestic and overseas business locations.	We will enhance the environmental preservation activities in the surrounding areas of both of our domestic and overseas business locations.	We will commence observation of the surrounding natural environment of both our domestic and overseas offices.	

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## 2. Safe and Healthy Workplace Environment

Guidelines	Our Activities	Our Goals (by FY2017)	FY 2011 target	Evaluation
<p>Safety and sanitation are the basis of all our activities. We aim to prevent any occupational injuries, create a pleasant workplace and overall health for our workers under the strong leadership of our managers and supervisors, along with our entire group's employees' cooperation of this matter.</p>	<ol style="list-style-type: none"> <li>1. We will establish a platform of safety sanitation based on the Occupational Health Safety Management System (OSHMS).</li> <li>2. We will nurture people with overall safety..</li> <li>3. We will ensure the safety of all of our facilities.</li> <li>4. We will create a pleasant workplace.</li> <li>5. We will prioritize both the physical and mental health of our human resources.</li> <li>6. We will prevent any traffic accidents.</li> </ol>	<p>We will establish a safety culture aiming for zero risks.</p>	<p>We will obtain OSHMS certification at all domestic production plants by 2011.</p>	<p>In Progress</p>

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### 3. Safety and Quality of our Products and Services



Guidelines	Our Activities	Our Goals (by FY2017)	FY 2011 target	Evaluation
<p>We will contribute to society by planning, designing, producing, and selling attractive products for the satisfaction of our customers while maintaining a quality assurance system in all of our processes, including service. To this end, we will conduct systematic activities to ensure that all the basic steps in our quality assurance activities function properly.</p>	<ol style="list-style-type: none"> <li>1. We will establish a system to reflect in our next product development by gathering and analyzing customer feedback and market evaluation.</li> </ol>	<p>We will improve our support system for various global services.</p>	<p>We will strengthen the training of service engineers both in Japan and overseas (for tire sectors).</p>	<p>Passed</p>
		<p>We will establish our global training facilities (for tire sectors).</p>	<p>We will conduct quality training at domestic production plants (for tire sectors)</p>	<p>Passed</p>
	<ol style="list-style-type: none"> <li>2. We will improve the level of quality at all our plants by conducting education and training by focusing on quality at every hierarchy of our plant workers.</li> <li>3. We will make every effort to improve our product quality at every step; from product planning, design, and production.</li> </ol>	<p>We will improve our customer credibility by continuing to provide quality products all the time (for MB sectors).</p>	<p>We will commence product improvement meetings based on market information (MB).</p>	<p>Passed</p>

#### 4. Human Rights and Labor Practices



Guidelines	Our Activities	Our Goals (by FY2017)	FY 2011 target	Evaluation
<p>We will create an environment in accordance with our management policy of creating a workplace to value, improve, and energize people, where each of our ever-diversifying personnel can equip themselves with the necessary skills and perform by utilizing their capabilities to the fullest. Also, we aim to create a workplace where our employees can realize a work-life balance. We will continue to raise the awareness of our personnel so that they can perform on the global stage and are capable to deliver the business strategy of GD100 and various technical strategies.</p>	<ol style="list-style-type: none"> <li>1. Steady number of employees.</li> <li>2. Framework to facilitate the growth of our human resources.</li> <li>3. Realization of work-life balance.</li> <li>4. Creation of a workplace so that all our diversified personnel will be utilized.</li> <li>5. Respect for the human rights with zero tolerance for harassment.</li> </ol>	<p>Our workplace is structured so that all our diversified personnel can perform to the fullest regardless of age, gender, nationality, etc.</p>	<p>We will establish a special subsidiary that promotes the employment of people with disabilities.</p>	Passed
			<p>We will newly establish vacation periods for male employees so that they can offer support when their spouses give birth.</p>	Passed

#### 5. Credibility with our Business Partners



Guidelines	Our Activities	Our Goals (by FY2017)	FY 2011 target	Evaluation
<p>In order to realize GD100, we will conduct our procurement activities in accordance with the below-mentioned guidelines:</p> <ul style="list-style-type: none"> <li>• Procure optimum raw materials, equipment, and construction.</li> <li>• Trading with fairness and impartiality</li> <li>• Reasonable selection of our partners</li> <li>• Partnership</li> </ul>	<ol style="list-style-type: none"> <li>1. Co-development of CSR activities with business partners using CSR guidelines.</li> <li>2. Promotion of green procurement in cooperation with our partners.</li> <li>3. Thorough compliance of various procurement activities.</li> </ol>	<p>Our company is able to enhance various CSR activities on the global stage by working hand-in-hand with our partners.</p>	<p>We will establish a purchasing code of conduct to be complied with by purchasing managers.</p>	Passed
			<p>We will hold meetings with business partners for studying and exchanging information related to CSR.</p>	In Progress

- Compliance
- Harmony with the environment

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## 6. Stakeholder Communication



Guidelines	Our Activities	Our Goals (by FY2017)	FY 2011 target	Evaluation
We will continue to enhance mutual understandings and credibility by reflecting our stakeholders' feedback onto our corporate activities by conducting two-way communication with both of our internal and external stakeholders while providing information in a timely manner.	<ol style="list-style-type: none"> <li>1. Conducting dialogs with our stakeholders.</li> <li>2. Reduction of any environmental risks such as complaints over the environment from local communities.</li> <li>3. Facilitation of the YOKOHAMA Forever Forest Project.</li> </ol>	A system is in place to apply what stake holders have to say.	We will conduct dialogs with volunteer participants.	Passed
		Five hundred thousand trees have already been planted at both domestic and overseas offices.	We will reduce environmental accidents to zero.	Passed
			We will foster seedlings and provide them external parties.	Passed

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## 7. Corporate Governance and Compliance



Guidelines	Our Activities	Our Goals (by FY2017)	FY 2011 target	Evaluation
Yokohama Rubber Group is making every effort to fortify and improve the support system for corporate governance to be established in order to realize management with transparency and fairness under our Corporate Philosophy. Thereby, this is becoming the management body to maintain our ever evolving corporate value in order for our management to continue to win unshakeable credibility.	<ol style="list-style-type: none"> <li>1. Internal enhancement of CSR guidelines.</li> <li>2. Development of this compliance system at our overseas offices.</li> <li>3. Establishment of BCP system and reorganization.</li> </ol>	Good ethics values based on ISO26000 compliance are well-known throughout our offices.	We will expand compliance systems at overseas group companies.	Passed
		The entire company can visualize the applicable legislations.	We will conduct tsunami evacuation drills.	Passed
		BCP support system is being developed as a group unit.		

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## Advancement of Environmentally Friendly Management

### Stance and policy

Following the principle of dealing fairly with society and valuing harmony with the environment, we shall assert our world-class strengths in technologies for protecting the environment.

- Continued improvement of environmental management. - Action to combat global warming. - Contributing to the creation of a sustainable recycling society.

### Ratio of environmentally friendly products to all products handled

89%

By FY2017, we aim to ensure that all of tire and maker brand products are environmentally friendly products.

### KPI

### Ratio of greenhouse gas emissions compared to base year (domestic group companies)

86.8%

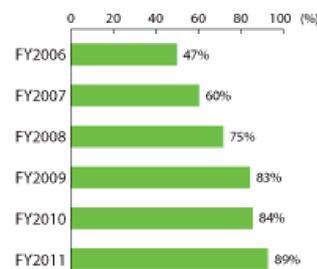
At our domestic group companies, we are working towards reducing the ratio of greenhouse gas emissions by 25% compared to base year by FY2020.

\* Although in principle the base year is 1990, the base year for PFC, HFC, and SF6 is 1995 in accordance with the Kyoto Protocol.

## Environmentally friendly products

In terms of the level of environmental impact (CO<sub>2</sub> emissions) for each stage of the product life cycle from production to disposal, in the case of tires, CO<sub>2</sub> emissions at the use stage account for 80 to 90% of the entire life cycle. For this reason, at the Yokohama Rubber Group we focus on creating environmentally friendly products that allow for low fuel consumption. The Yokohama Rubber Group defines environmentally friendly products as products for which the average score of the four items of global warming prevention, resource recycling, resource conservation, and safety and comfort exceeds 5%; and for which the score for any of these items has not deteriorated. By FY2017, we aim to ensure that all tire and maker brand products are environmentally friendly products. For FY2011, a ratio of 100% was maintained for the ratio of environmentally friendly products to all new products. In terms of the ratio of environmentally friendly products to all products handled, the ratio was 89%, a 5% improvement over the previous fiscal year.

### Ratio of environmentally friendly products to all products handled



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## Reducing the environmental impact of business activities

### Global warming countermeasures

The Group considers global warming countermeasures to be an extremely

### Greenhouse gas emissions

### Up Close

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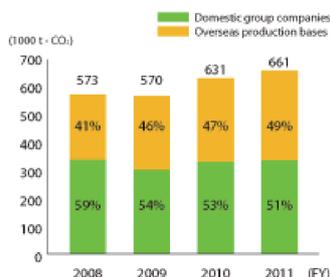
important issue, and in response conducts activities aimed at achieving a low-carbon society. The Group's approach to carbon management include the establishment of a dedicated committee for the adoption of cogeneration systems (CGS), a shift to clean fuels, and the implementation of thorough energy-saving activities.

### Environmental action targets

- **Short-term reduction target**  
Reduce greenhouse gas emissions by an average of 12% compared to the base year at domestic group companies for the five year period from FY2008 to FY2012
- **Medium-term target for FY2020**  
At our domestic group companies, we are working towards reducing the ratio of greenhouse gas emissions by 25% compared to base year by FY2020.

During FY2011, greenhouse gas emissions at domestic group companies and overseas production bases were 661,000 tons CO<sub>2</sub>, with domestic group companies accounting for 51% of emissions, and overseas production bases accounting for 49% of emissions.

\*Although in principle the base year is 1990, the base year for PFC, HFC, and SF6 is 1995 in accordance with the Kyoto Protocol.



The number of overseas production bases increased by one with the addition of a natural rubber processing plant from FY2010.

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### Effective use of resources

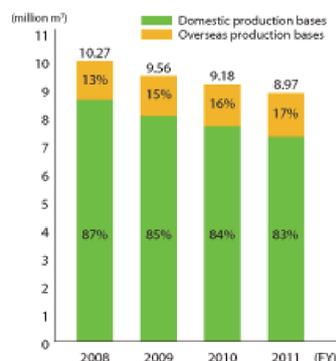
The Yokohama Rubber Group promotes the effective use of the resources that are used in its business activities.

To reduce water intake in production activities, the Group recycles and reuses equipment cooling water, collects vulcanization condensate, implements measures to prevent the overflow of water storage tanks, implements measures to prevent the leakage of underground piping, and thoroughly conducts daily checks and patrols. As a result, the total water intake from water sources at domestic and overseas production bases for FY2011 was 8.97 million cubic meters. Domestic production bases accounted for 7.44 million cubic meters, and overseas production bases accounted for 1.53 million cubic meters.

In order to reduce the quantity of waste matter, all domestic and overseas production bases are working to achieve zero emissions. Currently, we have achieved zero emissions at five production bases in the Asian region.

Although there were no plants that achieved zero emissions for the first time during FY2011, we will promote initiatives to achieve this goal by studying the issues that remain, particularly at US production bases. We will continue with efforts to increase the number of zero emission plants during FY2012.

### Water intake



## FY2012 issues and targets

### Environmentally friendly products

During FY2012, we will implement measures including increasing the adoption of fuel efficient tires and products using recycled raw materials, and ensuring that our maker brand products are energy-saving. We will also maintain a ratio of 100% for the ratio of environmentally friendly products to all new products.

### Global warming countermeasures

We will respond to issues through the deployment of energy-saving activities and the adoption of energy-saving equipment based on the actual place, actual thing principle (genchi genbutsu) as we aim to reduce greenhouse gas emissions by an average of 12% compared to the base year (1990) at domestic group companies for the five year period from FY2008 to FY2012.

### Effective use of resources

#### Water intake

During FY2012, we will continue with efforts to reduce the total water intake from water sources. The target for FY2012 is to achieve a total water intake from water sources of 9.55 million cubic meters at domestic and overseas production bases (7.66 million cubic meters at domestic production bases, 1.89 million cubic meters at overseas production bases). Although product volume will increase for FY2012 over FY2011, we expect to achieve a per-unit reduction of 1% as a result of various initiatives.

#### Waste matter

We will continue with efforts to increase the number of zero emission plants during FY2012.

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[Yokohama Rubber CSR Web site](#) > [Up Close](#) > [Seven Pillars of Critical Issues for Yokohama Rubber to Address 2/7](#) > 2. Safe and Healthy Workplace Environment



### Stance and policy

Safety and sanitation are the basis of all our activities. We aim to prevent any occupational injuries, create a pleasant workplace and overall health for our workers under the strong leadership of our managers and supervisors, along with our entire group's employees' cooperation of this matter.

#### Domestic disabling injury frequency rate

0.36

It has been determined that new initiatives are required because the rate has remained nearly the same as the rate of 0.30 from 2009 and 0.36 for 2010

\* Disabling injury frequency rate = (number of work-related injuries / total working hours) x 1,000,000 hours

#### KPI

#### Number of OSHMS-certified business locations (domestic)

7  
(cumulative total)

During FY2011, two plants acquired OSHMS certification, meaning that seven of our eight domestic business locations are certified. Although the field survey for Onomichi Plant was completed in December 2011, OSHMS certification was acquired in January 2012.

### Working to acquire Occupational Safety and Health Management System (OSHMS) certification

The Group promotes the acquisition of Occupational Safety and Health Management System (OSHMS) certification as we strive for the strong commitment of management, the establishment of organizational frameworks and management systems to ensure this commitment is fully instilled at the work site, and the elimination of risks. During FY2011, OSHMS certification was acquired for the Shinshiro production site (for the 2plants).

In addition, in order to assess the strengths and weaknesses of each business location and promote improvements, we have established common inspection items, and implemented internal safety audits both in Japan and overseas.



**OSHMS certification ceremony for the Shinshiro Plant and Shinshiro-Minami Plant**

### Equipment safety

Using risk assessment methods to serve as a form of preemptive control in response to disasters, we identify and evaluate potential risks associated with existing equipment in order to prioritize the required countermeasures. In addition, in an aim to develop safe and secure equipment, we also use ideas from workers for the production of tools and automation of equipment that will allow problems to be handled without requiring physical interference.



**On-site inspections**



**Holding a review**

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## Nurturing people with overall safety

We aim to develop sensitive human resources that recognize risky situations as being dangerous. For this reason all employees conduct KYT (kiken yochi training, or hazard prediction activities) on a daily basis, improvement activities on a voluntary basis in response to potentially dangerous incidents that have been pointed out, and hands-on safety drills. In addition, plant supervisors implement communication-focused safety training on a one-on-one basis with workers to enable workers to understand the meaning of individual work process so that they can perform safer operations independently. Through these initiatives, we aim to share and stimulate disaster prevention activities for all workers at our business locations.



### Improvement of local ventilation systems

The entire work unit is covered so that the smoke emitted is ventilated

## Creating a pleasant workplace

We improved equipment and promoted the improvement, maintenance, and management of working methods aimed at using working environment measurements in order to maintain a pleasant workplace. In addition, based on the 5S (seiri, seiton, seiso, seiketsu, and shitsuke, or sorting, straightening, systematic cleaning, standardizing, and sustaining) methodology, we promote manufacturing so that the things you need are available when you need them.

## Prioritizing both physical and mental health

To prevent health problems from arising due to overwork and excessive stress, we strive to remain aware of employee working hours and provide guidance and work improvement suggestions in response to workers that work for long hours. Moreover, we provide care in response to mental health issues through preventive management at work sites and the provision of contact points for consultations. We have also started conducting specific medical examinations and providing health guidance for employees in need of specific health guidance.



Motorcycle operations workshop

## Preventing traffic accidents

We will expand the systems, function, and activities of traffic accident prevention organizations at each business location. In particular, we will employ traffic guards holding placards during commuting hours as we continue to conduct accident prevention activities. In addition, we will conduct educational activities in cooperation with local police stations and other traffic safety-related organizations.

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## FY2012 issues and targets

An issue that remains is raising the awareness of our employees towards safety and lowering the risk levels associated with equipment.

Accordingly, we aim to increase the sensitivity of employees towards risk through activities aimed at preventing physical interference with operating equipment and KYT (kiken yochi training, or hazard prediction activities). At the same time, we will strengthen our follow-up system in response to equipment risk assessments in order to reduce risk levels. We will conduct open work observation for the purpose of preparing manuals so that everybody can safely conduct the same work. Moreover, at plants overseas, we will establish and deploy management systems based on OSHMS.

Because the number of accidents are comparatively high for new employees with less than three years of experience and we believe that allowing for the safe conduct of work regardless of experience to be an appropriate means of measuring the completeness of work manuals, we will work towards the goal of not allowing new employees with less than three years of experience to be injured.

## Activities at Yokohama Rubber Group companies : SAS Rubber Company's initiatives



**SAS Rubber Company  
employees and their families**

SAS Rubber Company, which manufactures train and bus window seal materials, various rubber cover materials, and automotive hoses, is actively involved in safety activities, including internal safety audits, hands-on safety drills, countermeasures in response to major disasters at other plants, and the adoption of risk assessment programs. SAS Rubber Company also actively conducts 2S activities (seiri and seiton, or sorting and straightening) in the same manner as in Japan to promote the efficient and safe use of space within plants. On site, these activities are implemented under the name of 3S (safety-first, seiri, seiton) + 3P (promise, profit, persistent).

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## Safety and Quality of our Products and Services

### Stance and policy

We contribute to society by planning, designing, producing, and selling attractive products for the satisfaction of our customers while maintaining a quality assurance system in all of our processes, including service. To this end, we will conduct systematic activities to ensure that all the basic steps in our quality assurance activities function properly.

**Number of graduates from quality training programs at domestic production plants (Tire sectors)**

New for FY2011

73

We aim to improve the skills of our employees by holding hierarchical quality training programs for executives at production plants. The framework requires employees assigned to new posts to receive training. (Domestic production plants)

### KPI

**Number of certified service engineers (Tire sectors)**

New for FY2011

111

We aim to improve the skills of service engineers through a three-rank certification program. The ranks are "beginner" for engineers without hands-on experience, "intermediate" for engineers with the ability to assess complaints made, and "advanced" for engineers with the ability to independently conduct all the work required.

### Ensuring that only high-quality products are provided to customers

#### Employee training to ingrain quality management for the establishment of a quality assurance system

The Yokohama Rubber Group places much importance on quality training. In particular, we aim to improve the skills of engineers through hierarchical quality training at production bases focused on management positions that involve quality control. This training aims to create awareness towards quality and provide the required skills based on the applicable work role.

During FY2011, there were 73 new graduates from quality training programs at four domestic production bases.

In the future these training programs will be incorporated at our business locations overseas while taking into consideration various local cultures and corporate climates as we strive to instill a standardized approach to quality management throughout our global operations so that we can provide higher-quality products to customers around the world.



Confirming issues at the workplace through training

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### Ensuring that the customer's perspective is always considered in the provision of high-quality service

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## ■ Implementing and improving Yokohama service engineer training throughout the world

By constantly providing service in consideration of the customer's perspective, the Yokohama Rubber Group aims to become a company with extremely high customer satisfaction levels and market presence. To this end, we are implementing and improving service engineer training throughout the world. During FY2011, there were 111 new graduates from quality training programs.

As part of this program, at the Tire Service Training Center that was established in Thailand in October 2011, a test course program using actual vehicles was added to the previous training program to provide a hands-on experience of tire and vehicle characteristics so that more practical service in line with the customer's perspective can be provided. In the future, we will increase the number of training programs as we take steps towards developing Yokohama service engineers throughout the world.



**Hands-on training with actual vehicles at the Tire Service Training Center**

### A training program participant



**Yokohama Iberia, S.A.**  
**(Spain, Portugal)**  
**Product Manager**

**Andres Antonio Castro**

I am sure that it is important to ensure appropriate resolution of all tire related technical inquiry with respect to customer satisfaction and the commercial goals of the company.

In fact, I attended Advanced Technical Training Course in Thailand. Through the technical training, I realized that the program gave us a chance not only for learning all aspects of tire technology and manufacturing process, but also for obtaining practical tire service knowledge with damage tire inspection and test driving. The experience of technical training programs helps to provide good quality service for our customers as well as to support sales activities for internal staffs. Besides the technical aspects, it was a rich experience sharing experiences with our colleagues in other markets. These experiences will help us to understand many other aspects, reaching the most important goal for us: "the satisfaction of our customers and high quality service".

## ■ Conducting workshops for dealers and construction companies that handle multi-business products

Because the Group's multi-business products are industrial products, many of them require special skills and knowledge for proper handling. For this reason, regular training is provided on the characteristics and handling methods of these products for the employees of dealers and construction companies that handle them. In this manner, we aim to facilitate the selection of the products that meet the customer's requirements and the provision of prompt and adequate support in the event of defects.

In the future, we will speed up the establishment of our technical service system overseas to support the globalization of our business as we implement product improvements based on an accurate understanding of market conditions and feedback to the relevant departments. Through these initiatives we aim to become a company capable of continuously providing products that satisfy our customers.



**High-pressure hose fitting assembly instruction workshop**

### FY2012 issues and targets

From FY2012, we have revised our CSR and environmental promotion framework, and accordingly the CSR Council is to conduct overall reviews of quality assurance throughout the Group. We will implement uniform activities throughout the Group through the establishment of a quality assurance system for all processes. To achieve this, we will use a common benchmark to evaluate activities in the process of planning, design, production, and marketing of attractive products that will satisfy our customers. In addition, we will constantly strive to improve our quality assurance system in all processes, including service provision.

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### Stance and policy

We will create an environment in accordance with our management policy of creating a workplace to value, improve, and energize people, where each of our ever-diversifying personnel can equip themselves with the necessary skills and perform by utilizing their capabilities to the fullest. Also, we aim to create a workplace where our employees can realize a work-life balance. We will continue to raise the awareness of our personnel so that they can perform on the global stage and are capable to deliver the business strategy of GD100 and various technical strategies.

KPI	<b>Employment rate of people with disabilities</b> ▶ 1.77%	From April 2011 to March 2012, the total employment rate of people with disabilities was 1.77%. Afterwards, six new employees with disabilities were hired on April 1, 2012, resulting in an employment rate of people with disabilities of 1.94% for April 2012. With the recognition of Yokohama Peer Support Co., Ltd. as a special subsidiary for promoting the employment of people with disabilities, a rate of at least 2% is expected to be achieved for FY2012.
	<b>Days of maternity leave taken</b> Total of 615 days	The Group allows the taking of up to 10 days of maternity leave when an employee or the spouse gives birth, up until the child reaches the age of one. Between April 1, 2011 when this system was established and March 2012, 120 employees took maternity leave, for a total of 615 days.

### Promoting the employment of people with disabilities

Up until now new employees with disabilities have been hired on a regular basis for mainly work within our existing operations that could be conducted regardless of their handicaps. In addition, we have now begun to develop new forms of work to increase the employment of people with disabilities. From 2011, we started accepting interns from special support high schools on the assumption of future employment. Two out of seven of these interns that were accepted between April 2011 and March 2012 were employed in April 2012.

### Supporting the development of the next generation

In the past, male employees were able to take two days of paid maternity leave and up to one year of unpaid maternity leave upon the birth of a child. On April 1, 2011, rules regarding maternity leave were changed to allow 10 days of maternity leave to be taken until the child reaches the age of one. This change resulted in an increase in the number of days of maternity leave taken as well as the number of employees that took maternity leave (for FY2010 104 employees took a total of 193 days of maternity leave).

### FY2012 issues and targets

#### Securing stable employment for people with disabilities

Although we did not reach the legally required

#### Supporting the development of the next generation

The increase in the number of days of paid

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rate of 1.8% during FY2011, we plan to secure an employment rate of people with disabilities of at least 1.8% for Yokohama Rubber (non-consolidated) for FY2012. By constantly working in activities such as the operations of Yokohama Peer Support Co., Ltd., we will strive to create a workplace so that all our diversified personnel can perform to the fullest.

maternity leave is an improvement that was conducted faithfully in response to the needs of employees. We believe that it is important to develop systems based on a proper understanding of employee needs in this manner.

### **Establishment of Yokohama Peer Support Co., Ltd. at the Hiratsuka Factory**

The special subsidiary Yokohama Peer Support Co., Ltd. was established on December 9, 2011. Operations commenced from March 2012 and on May 30, it was recognized as a special subsidiary for promoting the employment of people with disabilities. Fifteen disabled employees, mainly with mental disabilities, conduct beautification work, such as cleaning and planting, and mailing and shipping work at the factory. In addition, as a catering service for employees, the sale of coffee and bread made at the Hiratsuka Disabled Persons Community Center is planned. The subsidiary also provides cleaning services at our headquarters.

In the future, there are plans for the subsidiary to increase the number of employees to 30 and expand its operations to include cleaning and beautification work at Yokohama Rubber plants throughout the country, the delivery of tire sales promotion tools, and the preparation of business cards for all Group companies.

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## Credibility with our Business Partners

In order to realize GD100, we will conduct our procurement activities in accordance with the below- mentioned guidelines:

### Stance and policy

- Procure optimum raw materials, equipment, and construction.
- Reasonable selection of our partners
- Compliance
- Trading with fairness and impartiality
- Partnership
- Harmony with the environment

### Local raw materials use rate in overseas plants

70%

(According to our proprietary benchmark that takes into consideration the number of items and weight)

In addition to the benefits of cost-effectiveness and risk avoidance, we promote local production for local consumption by procuring raw materials from the regions where our plants are located as we aim to coexist and prosper with local industries. Because the ASEAN region forms one economic zone, we view the region as one country.

### KPI

### Number of CSR Procurement Committee



6 per year

(Held once every two months)

By holding regular committees attended by the CSR Division and Procurement Division, we aim to study and promote future activities.

- Gathering information and assessing trends related to leading CSR companies
- Assessing and responding to supply chain conditions during earthquakes
- Ensuring the purchasing code of conduct is complied with by departments involved with domestic and overseas procurement
- Improving compliance among business partners by holding CSR study meetings

## Localizing on a global scale: promoting local production for local consumption

With the globalization of the Yokohama Rubber Group's business, we promote local procurement of raw materials while taking into consideration quality and costs in our aim to establish good relationships with local business partners.

At Suzhou Yokohama Tire Co., Ltd. and Hangzhou Yokohama Tire Co., Ltd. in China, the local purchasing division, technical division, and procurement division have worked together to improve the local procurement rate through increased business partner adoption. As a result, even after the Great East Japan Earthquake, the supply chain was not interrupted and we were able to provide our products to customers.

In the future, at our new business locations in Russia and India, we will promote surveys to develop local business partners in an aim to increase the local procurement rate.

## Establishing and deploying throughout the Group a purchasing code of conduct aimed at promoting equitable and fair trade

The Yokohama Rubber Group is working to build relationships of trust based on equitable and fair trade with the business partners in its aim for co-existence, prosperity, and mutual development.

For this reason, in addition to our previously-observed basic purchasing policy, from FY2011 we also established a system of purchasing ethics with the understanding of our purchasing managers. This system of purchasing ethics will be combined with our basic purchasing policy to form a purchasing code of conduct. We will ensure that the entire Group, including overseas subsidiaries, is aware of this purchasing code of conduct.

We aim for this purchasing code of conduct to be an extremely practical code based on incidents that happened in the past at the Group and other related events that occurred at other companies.

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## FY2012 issues and targets

### Localizing on a global scale: promoting local production for local consumption

Ever since we are taking the promotion of our local business partner development and local adoption activities.

During FY2012, in addition to activities that have been conducted in the past, we will use the China Technology Center within Suzhou Yokohama Tire Co., Ltd. in China, as well as an evaluation base in Japan as we promote the speedier adoption of local raw materials to increase the local raw materials use rate. In addition, we will promote the development and adoption of local business partners to increase the local raw materials use rate at existing business locations in Russia, where production was launched in during FY2012 and India, where we plan to launch business in the future.

### Promoting equitable and fair trade

Up until now, we have conducted workshops for business partner liaison managers, business partners of domestic business locations and CSR training for purchasing managers at overseas subsidiaries for the purpose of increasing awareness of CSR both internally and externally. During FY2011, a purchasing code of conduct was established as it was recognized that such a code was needed for purchasing managers. During FY2012, we will hold workshops for the business partners of domestic business locations and ensure that all purchasing staffs are fully aware of the purchasing code of conduct. So that the same business partner workshops can also be held at overseas business locations, we will work to improve training activities and establish systems and frameworks to promote CSR activities at all of our business locations.

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## Stakeholder Communication

### Stance and policy

We will continue to enhance mutual understandings and credibility by reflecting our stakeholders' feedback onto our corporate activities by conducting two-way communication with both of our internal and external stakeholders while providing information in a timely manner.

### Yokohama Forever Forest project Number of seedlings planted during the year

48,980 trees

The project aims to plant 500,000 seedlings mainly in both our domestic and overseas production sites by FY2017. During FY2011, we planted 136,776 trees at domestic business locations along with 96,167 trees at overseas business locations. Although we planned to plant 45,000 trees during FY2011, we managed to plant more trees than planned.

### KPI

### Number of social gatherings held with local citizens at production bases (per year)

2 per year

The number of social gatherings held with local citizens at production bases has been established as a KPI for measuring the level of communication with citizens living in the areas near our production bases. We believe that everyday communication with citizens living nearby is extremely important, particularly for production bases located in urban areas.

## Yokohama Forever Forest project

Through this project, we hope to raise the awareness of the participants towards the environment, create fire prevention programs and forests to preserve the environment, contribute to global warming prevention, maintain biodiversity, and improve communication with the local community. One of the main characteristics of this project is that we are conducting it under the guidance of Dr. Akira Miyawaki, Plant Ecologist and Emeritus Professor of Yokohama National University. In addition to planting, most of the forest-building work is done by our own employees, their family members, and local residents, including the nurturing of soil, collection of acorns, and creation of seedlings in pots.

This project was initiated in Japan in 2007 when our Hiratsuka Factory started planting trees, and the factory has now planted trees for approximately three to four years. Overseas, we plan to deploy this project on a global level, including Asian production bases in countries such as China, Thailand, the Philippines, and Vietnam; our production bases and headquarters in the US; and other business locations overseas and in Japan.

We also provide seedlings to external organizations as a means of fulfilling our corporate social responsibility and have provided a cumulative total of 76,000 seedlings as of FY2011. To measure the effects of planting, we observe wild birds, conduct tests on the fixed quantity of CO2 absorption, and conduct temperature measurements at the Hiratsuka Factory.



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## Social gatherings with local residents and factory tours

During FY2011, we worked to communicate regularly with local communities at each of our business locations through measures such as social gatherings with local residents and local clean-up activities. We plan to promptly respond to the requests and opinions provided by local residents at these social gatherings regarding dust, noise, odors and the idling of large-sized vehicles passing through. The details of these activities are made available through [site reports from each of our business locations](#).



## Working together with regions at business locations overseas and in Japan

At business locations overseas and in Japan, we conduct activities aimed at resolving local issues, including biodiversity surveys near business location and working together with NGOs and NPOs, as well as relief activities in response to disasters.

What do our stakeholders expect of us? Are we satisfying their expectations? By maintaining constant communication with all of our stakeholders, Yokohama Rubber Group is striving to live up to the expectations from our society. Through these initiatives, we hope to increase the vitality of local communities, our employees, and our company.



Social gatherings with local residents

### FY2012 issues and targets

#### Yokohama Forever Forest project

We are working to prepare seedlings for the Tohoku Committee for Promoting Forest That Protect Lives. In this project, the Committee has provided us with seedlings from Tohoku, which we will act as a foster parent for two to three years and then provide to Committee-supervised forests free of charge.

In Otsuchicho, Iwate Prefecture, we are involved with the gathering of acorns which we raise at our plant and use in the creation of Forest That Protect Lives.

#### Communication with local residents

We aim to hold two social gatherings in a year with local residents near our plants in order to establish regular communication with communities. In addition, we aim to conduct social contribution activities in 16 fields at all of our production bases.

<16 fields of social contribution activities>

1. Regional cleaning and beautification, 2. Blood donation, 3. Social gatherings with local residents,
4. Allowing facility visits, 5. Factory tours, 6. Hands-on internships,
7. Regional disaster prevention, 8. Charity events for social welfare donations,
9. General solicitation of donations, 10. Sponsoring regional events,
11. Working to receive commendations from regions, 12. Lifesaving classes,
13. Holding local exchange events, 14. Planning environmental events with external organizations,
15. Regional volunteer work, 16. Cultural exchanges

### Activities at overseas group companies : Y.T. Rubber Co., Ltd. (YTRC) initiatives

Operation at YTRC in Thailand was commenced in May 2010. YTRC currently employs a total of 50 local residents. We strive to provide a reassuring workplace in aspects above and beyond the level of wages provided.

There are many farms and fish and shrimp nurseries nearby YTRC, and for this reason there is a high level of interest related to the aquatic environment due to the strong impact it has on the livelihoods



**The employees are on their way to conduct restoration activities in a boat.**

**We are impressed at the ability of Thai people to smile even at times like these.**

relationship with the region by providing it with the support that it needs in the future.

of local residents. As we aim for YTRC to be accepted by the region as a good corporate citizen, we thoroughly recycle wastewater from our plants and promote open exchanges with local residents by having resident representative observe our plants.

Some employees lost their homes following the heavy rains and floods in the late summer of 2011. Thanks to the goodwill of a local elementary school, these workers were provided a place to live for approximately a month and a half. We would like to express our thanks for the goodwill of the local residents and construct a positive

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## Corporate Governance and Compliance

### Stance and policy

Yokohama Rubber Group is making every effort to fortify and improve the support system for corporate governance to be established in order to realize management with transparency and fairness under our Corporate Philosophy. Thereby, this is becoming the management body to maintain our ever evolving corporate value in order for our management to continue to win un-shakeable credibility.

#### Number of Risk Management Committees

2 per year

The Risk Management Committee is held regularly twice a year to conduct inspections on the risks held by the Group's various committees to identify new risks.

#### KPI

#### Holding of the Compliance Manager Global Meeting

1 per year

This new initiative was commenced in 2011. This meeting is held for compliance and legal staff members at overseas subsidiaries so that local staff can conduct compliance based on their own local laws and regulations. Although only four overseas production subsidiaries participated on this occasion, we plan to expand the scope in the future to include sales companies.

### Holding of the Risk Management Committee

At Yokohama Rubber Group, we work to remain aware of new risks and create preemptive control systems and countermeasures aimed at avoiding and preventing these types of risks. The Risk Management Committee, chaired by the Corporate Social Responsibility Division General Manager, was held twice during 2011 in May and November. We identified the risks that arose over the past half-year and verified countermeasures for the prevention of these risks in the future. Specifically, we assumed the tsunami damage that would be caused by major earthquakes strike in the Tokai, Tonankai and Nankai areas, and conducted tsunami evacuation drills at two production bases and 23 sales locations on November 24. A report was made on the risks that were confirmed and reminders relating to pertinent issues were issued throughout the Group.

### Initiatives aimed at strengthening our compliance system

A Compliance Committee chaired by the President is held four times a year for listening to reports and holding discussions relating to compliance issues that occurred over the past three months. The contents of reports and consultations include various matters, such as suggestions relating to business operation and problems and dissatisfaction relating to human relationships, and we aim to respond sincerely to all matters in order to build up a structure worthy of the confidence of employees making inquiries.

### Initiatives aimed at strengthening our compliance system overseas

In response to strong demands for global compliance in the conduct of everyday business operations, we have launched initiatives aimed at making homogeneous improvements to legal systems and compliance awareness at overseas subsidiaries. From 2011, the Global Compliance Meeting has been held with compliance and legal staff members at overseas subsidiaries for the purpose of sharing the Group's overall basis compliance policies and know-how on compliance activities. In the future, we plan to expand the scope of participating companies to include sales companies.

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## FY2012 issues and targets

### Risk management

We will study and prepare countermeasures based on the earthquake seismic distribution and tsunami height assumptions that were released in March 2012. In addition, we will take the lessons learned from the tsunami evacuation drills that were conducted in fall 2011 and conduct evacuation drills aimed at avoiding the newly discovered risks.

### Improving the global compliance system

We believe that it would be ideal to make homogeneous improvements on a global level to the awareness of employees towards compliance, the contents of training, the assessment of problems that occurred, and the ability to respond. Meetings attended by compliance and legal staff members from each overseas subsidiary will be held continuously for the purpose of making improvements in these aspects.

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[Yokohama Rubber CSR Web site](#) > Activity Report in the Fiscal Year of 2011



## Activity Report in the Fiscal Year of 2011

The Yokohama Rubber Group has prepared this report to show our stakeholders what our ideas are, what we achieved in FY2011, and what issues we face as we strive to build a trusted identity as a contributing member of the global community.

[▶ Corporate Governance and Compliance](#)[▶ Environmental Preservation](#)[▶ Together with our Customers](#)[▶ Together with our Employees](#)[▶ Together with our Business Partners](#)[▶ Together with our Shareholders and Investors](#)[▶ Together with our Society](#)

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## Corporate Governance and Compliance

Yokohama Rubber Group is making every effort to fortify and improve the support system for corporate governance to be established in order to realize management with transparency and fairness under our Corporate Philosophy. Thereby, this is becoming the management body to maintain our ever evolving corporate value in order for our management to continue to win un-shakeable credibility.

### Corporate Governance Support System

Our support system of corporate governance is on top of various organizations stipulated under the Companies Acts (General Shareholder's Meeting, Representative Director, Board of Directors, Board of Auditors, and Accounting Auditors). We have also deployed a Corporate Officer System in order to ensure prompt management decision making and execution of work operations by making clear the supervision of our management and execution of work operations. Also, in order to fortify strategizing functions in our top management, we conduct discussions to understand the current status of various business schemes and business strategies by holding Management Meeting among our Directors as core members. The Chair of the Board Meeting is our Chairman and cannot serve as a Corporate Officer at the same time. Also, we do not appoint any External Directors.

Under our systems, Corporate Officers can get know the status of our business operations by attending various important meetings or committees such as the Management Meeting. We have three pillars in our auditing system; the audits done by our Corporate Officers who supervise work execution by our Directors, accounting audits done by our independent accounting auditors as external audits, finally, the audits done by our Internal Audit Department for work operation by our each corporate division and group companies, plus accounting audits. They function by maintaining each other's independency; by establishing the three pillars of the audit system, our Corporate Auditors can fortify the function of Corporate Auditors by obtaining information from our Accounting Auditors and Internal Audit Department in a timely manner.

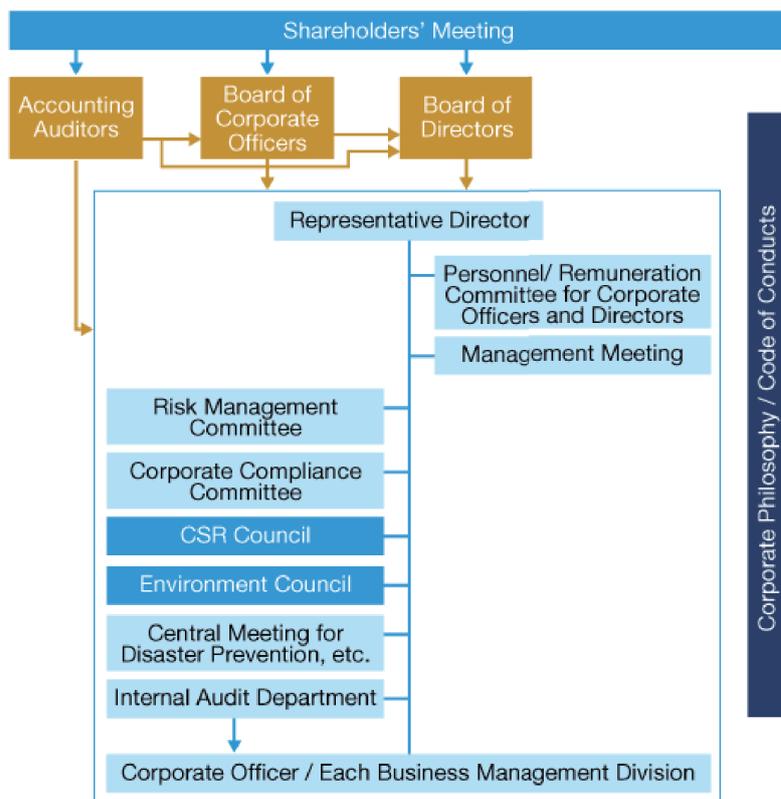
Also, in order to secure transparency and fairness in appointment and various benefits of our Directors, we will determine them at the Board of Directors' Meeting by establishing a Personnel/Remuneration Committee for Corporate Officers and Directors followed by our review. We have deployed the Merit System so that the part of their remuneration is in proportion with our actual business performance. Also, the measurement for critical matters such as conflict of interest will be determined in accordance with the Regulations of our Board of Directors.

#### Corporate Governance Supporting System (as of March 29, 2012)

## Activity Report in the Fiscal Year of 2011

### Corporate Governance and Compliance

- ▶ Environmental Preservation
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▶ Together with our Business Partners
- ▶ Together with our Shareholders and Investors
- ▶ Together with our Society



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## Improvement of our Corporate Governance System

We have made resolutions under the "Basic Guidelines for Corporate Governance in Accordance with Companies Act" during our Board of Directors' Meeting in May 2006. Not only do we follow up with their activity status every year, but also we keep making further enhancements such as our review by aiming for clearer description of the "Guidelines of the Elimination of Anti-Social Behavior" in April 2009. Also, to comply with the J-SOX Law effective from the fiscal year of 2008 (evaluation of support system for financial account in accordance with Financial Instruments and Exchange Act), it has been confirmed that our corporate governance system is effective both in internal and external evaluation in the fiscal year of 2011. We will continue to make improvements on this aspect as well in order to maintain our sustainable and effective functions.

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## Risk Management Support System

We have established a Risk Management Committee to manage risks in a cross-sectional manner and handle properly anything that may impact our company management greatly. Our Risk Management Committee has two functions; to "act promptly in case of any emergency situation occurred" and to "confirm what to do towards potential risks and establish a meticulous risk management supporting system". We have divided potential risks towards the entire Yokohama Rubber Group into Safety, Earthquake/Fire, Compliance, Environment, and so on; followed by our development upon setting up of guidelines and measurements from each Committee and Body for Meeting. Also, each of our business units is addressing not only the preceding descriptions, but also various risks related to quality and business management.

In the wake of the Great Eastern Japan Earthquake that struck the Tohoku region on March 11, 2011, we established a "Central Disaster Handling Division" under our President as the Head, to handle the emergency situation right after the earthquake broke out. The Central Disaster Handling Division gave instructions to our employees on duty remaining in our company premises and office buildings, understanding of damage situation both in human and facilities, any measures to avoid the effect on our customers, and relief goods for our operation sites in the affected area and its surrounding areas. Our Risk Management fulfilled its duties in a sense but it became clear that there are so many areas for further inspection and enforcement needing to be made. We will thereby evaluate the impact of the earthquake in a more holistic way to fortify our risk management support system.

We have begun organizing our response to changes in the expected intensity and tsunami height resulting from a coupled earthquake epicenters in the Tokai, Minami Tokai and Nankai areas, as released by the Cabinet Office of Japan on March 30, 2012. In order to achieve this, we should not ignore any of our activities on normal days; we will continue to work more on our PDCA activities which is to sample any possible risks, discuss what to do with them, let the relevant personnel know about them, followed by our verification.

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## Our Approaches for Corporate Compliance

### Our Basic Notion of Corporate Compliance

Our basic notion of Corporate Compliance is "not just to pursue operational profit, but also to enhance our presence as a corporate citizen by respecting social ethics, high credibility, and fair business, while proactively engaging in the environmental protection".

### Our Supporting System for Corporate Compliance

We are holding meetings under the "Corporate Compliance Committee" to review and confirm any incidents related to corporate compliance and activities as to its enlightenment four times every year. Our President has been appointed as the Committee Chair and its Secretariat is from our Corporate Compliance Department. Every division in Yokohama Rubber is placed with personnel who belong to the Corporate Compliance Department as well, to continue to share the progress of the activities in internal enlightenment and related information in the workplace. In our domestic Group Companies as well, we have appointed our managers to facilitate each of them to develop the same level of activities. We are aiming to do the same for our overseas offices, too; we have completed the appointment of our managers to facilitate all our overseas offices in the fiscal year of 2010.

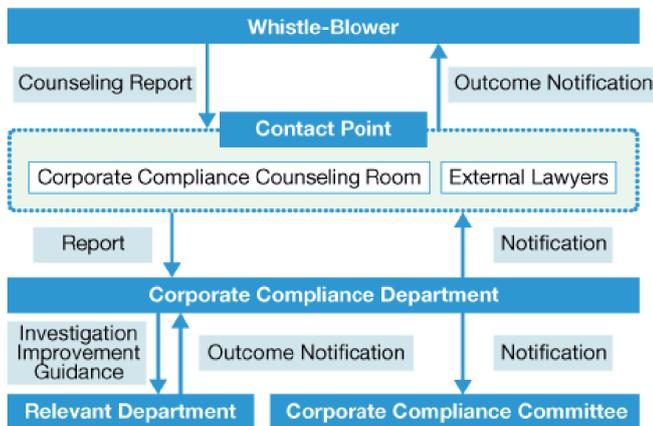
Incidentally, in the fiscal year of 2011, there was no major breach of the Anti-Monopoly Act confirmed; also, no legal sanction has been made against our company.

### Whistle-Blowing System (Corporate Compliance Hotline / General Counselling Room)

The Corporate Compliance Hotline refers to the system to entertain even anonymous whistle-blowing as our Corporate Compliance Department and our external legal office as contact points, being in place in accordance with Whistle-Blower Protection Act. You can find its telephone number, fax number, and e-mail address on "Corporate Compliance Card" to be distributed to all our domestic Yokohama Rubber Group's employees. There were 14 reports in the fiscal year of 2011.

The General Counseling Room is the contact point where all our internal email users can utilize as to any doubt or anxieties at work related to Corporate Compliance. Each case is handled by personnel from the Legal Department. In the fiscal year of 2011, we received 11 cases of questions and concerns for items to confirm or seeking advice.

#### Whistle-Blowing System (Corporate Compliance Hotline)



\*We will notify with the outcome for whistle-blowers who had identified themselves.

### Activities on Seminars and Various Enlightenment

We are trying to be effective in order to have our employees equipped with general knowledge as basic knowledge of Corporate Compliance by combining it with special contents they need to take note of at work. In the fiscal year of 2011, we focused on the education towards our expatriates overseas in order to enhance our Corporate Compliance Support System overseas; also we had conducted the seminar as to Sub-Contracting Acts and Anti-Monopoly Acts towards personnel in charge of procurement.

#### Seminars Conducted (fiscal year of 2011)

Name	Number of participants (people)	Format
Legal compliance	96	Group
Act against Delay in Payment of		

Subcontract Proceeds, Etc. to Subcontractors	263	Group
Harassment	119	Group
Pre-departure orientation for overseas dispatch	33	Group
Middle Eastern Law for distributors	19	Group
English language contracts	28	Group

## ■ Global Compliance Meeting

As a new initiative, we launched the Global Compliance Meeting in which persons in charge of compliance and legal affairs from our overseas subsidiaries gather. If a compliance violation occurs at an overseas subsidiary, local staff must respond in accordance with local laws. This meeting was established in order to foster a consistent approach globally in terms of local staffs' awareness and ability to identify compliance violations. It was held for four overseas subsidiaries in the fiscal year of 2011, and going forward we plan to expand its scope to include distributors as well.

## ■ Privacy Policy for Employees

We strictly manage employees' personal information by obtaining prior consent by quoting the purpose of its usage. We understand the importance of employees' personal information and ensure its proper treatment; we also let our employees know through our internal intranet that we continue to take measures to protect their personal information.

## ■ Measurement against any Violations

- No sanctions against Anti-Monopoly Acts have been imposed on our company.
- No sanctions against fraudulent accounting practice, any discrimination or misconducts at workplace have been imposed on our company.
- No sanctions owing to any violation against environmental regulations have been imposed on our company.
- No complaints have been lodged over the loss of our customers' data.
- There is no case of a breach confirmed against the law with regards to the supply of products, services, and their usages.

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○ Environmental Preservation

Environmental GD100

Following the principle of dealing fairly with society and valuing harmony with the environment, we shall assert our world-class strengths in technologies for protecting the environment.

- Continued improvement of environmental management
- Action to combat global warming.
- Contributing to the creation of a sustainable recycling society.

GD100 guidelines for action on the environment

For the sake of future generations and this irreplaceable planet, we shall act to protect the environment.

**Practice of global environmental management**

We will adopt consistent, high-level environmental management practices at all operations worldwide.

**Contribution to society through manufacturing**

We will take action to minimize the environmental impact in all products.

**We will take action to protect the environment as a duty to society by practicing top-level environmentally conscious production.**

All industrial waste will be recycled.

**Improvement of communication with society and local communities**

Yokohama Rubber Environmental Policy

Following the principle of dealing fairly with society and valuing harmony with the environment, we shall assert our world-class strengths in technologies for protecting the environment.

1. Yokohama Rubber will initiate measures considerate of the environment in all of its activities as well as make all of its manufactured goods environmentally-friendly products. Additionally, we will deepen communication with stakeholders as well as strive to make contributions to local communities and society as a whole.
2. Yokohama Rubber will strengthen its environmental management system to become a company trusted by its stakeholders and will continually strive to help improve the environment through the mitigation of its impacts on the environment as well as through the prevention of environmental pollution and sensory nuisances using preemptive approaches.
3. Yokohama Rubber will comply with all related laws, regulations, and agreements as well as endeavor to continually implement activities that help improve the environment.
4. Yokohama Rubber will strive to prevent global warming, conserve energy and resources as well as promote resource recycling aimed at the fulfillment of a recycling-oriented and low-carbon society.
5. Yokohama Rubber will strive to conserve biological diversity and use organic resources sustainably in its business activities.
6. Yokohama Rubber will promote harmony with local communities as part of its commitment to work with and become a company that is trusted by local communities.

○ Activity Report in the Fiscal Year of 2011

▶ Corporate Governance and Compliance

▼ Environmental Preservation

Environmental Management

Environmentally-Friendly Products

Reduction of Greenhouse Gas Emission

Utilization of Natural Resources / Reduction of Industrial Waste

Management of Chemicals and Emission Provision onto Water, Air, and Soil

Biological Diversity

▶ Together with our Customers

▶ Together with our Employees

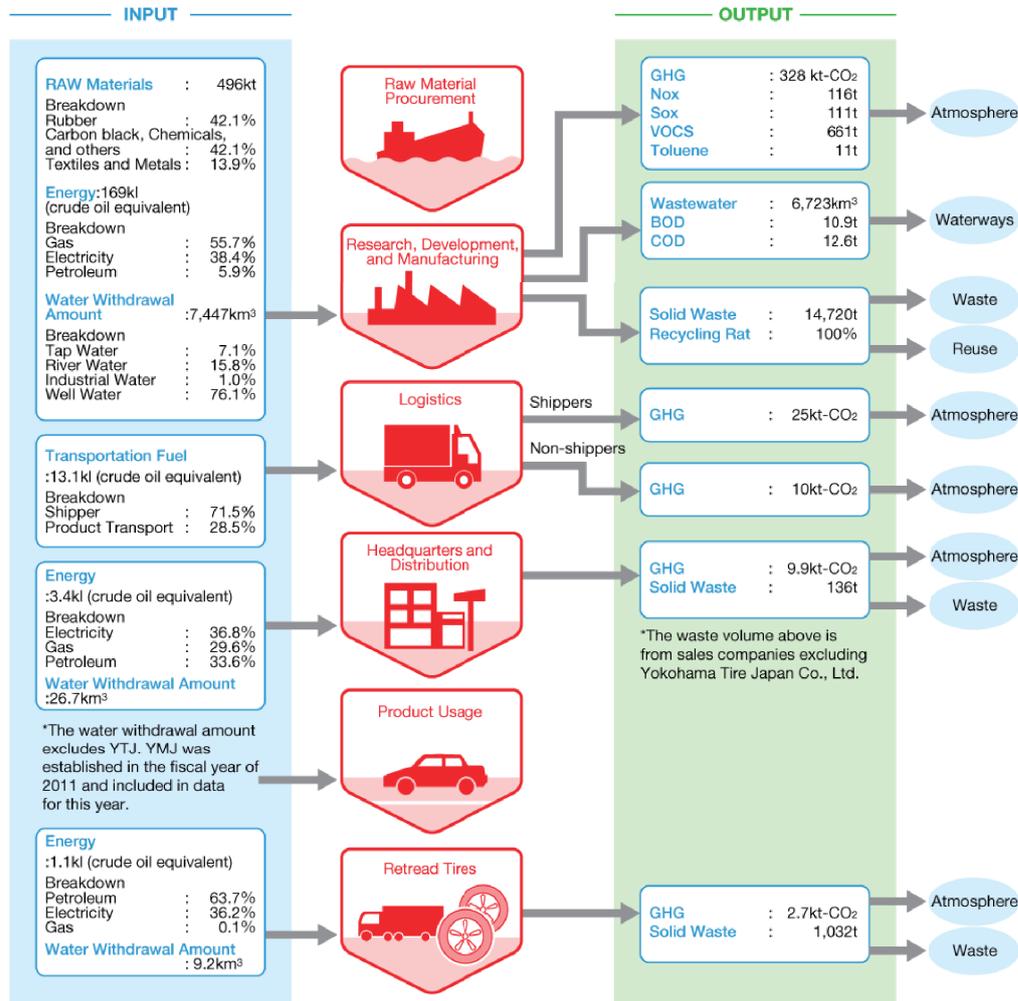
▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

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Overall Picture of Environmental Burden



\*GHG emission is calculated based on the actual emission coefficient.

<Statistics Source>

Research, Development, and Manufacturing:  
Yokohama Rubber's 8 domestic operation sites

Headquarters and Distribution:  
Headquarters Building, YTJ, Tire Distribution Companies, YMJ

Retread Tires:  
Yokohama Tire East Japan Retread Co., Ltd. and Sanyo Retread Co., Ltd.

The accounting period for the fiscal year of 2011 is from April to December. Data from January to March 2011 has been added to this to provide a tally for the January to December 2011 period.

▶ Environmental Management

▶ Environmentally-Friendly Products

▶ Reduction of Greenhouse Gas Emission

▶ Utilization of Natural Resources / Reduction of Industrial Waste

▶ Management of Chemicals and Emission Provision onto Water, Air, and Soil

▶ Biodiversity



## Environmental Preservation

### Environmental Management

[Guidelines](#)
[Achievements](#)

#### Guidelines

### Supporting System of CSR & Environmental Affairs

Yokohama Rubber has established a system to plan for and examine important social responsibility issues facing the entire Yokohama Rubber Group, with the ultimate goal to build a trusted identity as a contributing member of the global community. Our CSR and environmental promotion system consists of the CSR Council\*1 led by the chairman and CEO as well as the Environmental Council\*2 chaired by the president. Each of these councils meets twice per annum. The CSR Council deliberates safety, quality, human rights, labor practices, social contribution activities, corporate governance and compliance matters. The Environmental Council evaluates the performance of the Yokohama Rubber Group's environmental activities and proposes improvements for subsequent fiscal years.

We also have three task forces, six committees, and one sub-council that promote CSR and environmental activities as sub-bodies within both councils.

To practice consistent and high-level environmental management in all our operations worldwide, we hold a Global Environment Council meeting each year, which is a gathering of managers from all of our overseas production sites. Nineteen people, including from all overseas production sites and core distribution subsidiaries, attended the FY2011 event held on December 15. On the day of the meeting, all attendees engaged in a discussion focusing on environmental policies and initiatives. This helped to reaffirm the same consistent high-level environmental management and promotion of CSR activities at our sites outside of Japan.

\*1: The CSR Council has been chaired by the chairman and CEO since April 2012.

\*2: The Environmental Council has been chaired by the president since March 2012.

[Click here to refer to our Supporting System of CSR and Environmental Promotion Framework](#)

### Enforcement of Global Environmental Management Based on ISO14001

We aim to keep up with the high-quality environmental management under the same standard both in domestic and overseas group companies; thereby we have placed ISO14001 which is the international standard of Environmental Management System as the basis of our management.

We are trying to get all our operation sites to obtain ISO14001; so far, a total of 15 operation sites in Japan, comprising ten from Yokohama Rubber and five from our group for domestic operations have obtained it, whereas overseas a total of 13 operation sites have been certified.

In addition, our non-manufacturing sites are promoting environment management in accordance with GD100 and our approach to the environment. The Yokohama Rubber head office in Japan and a Group distribution subsidiary in Australia have acquired ISO14001 certification, under which they are further advancing their environmental management.

In June 2011, Yokohama Tyre Australia Pty., Ltd (YTA), a tire distribution subsidiary in Australia, acquired ISO14001 certification.

In the fiscal year of 2012, we will aim to acquire blanket ISO14001 certification for the Yokohama Rubber head office as well as 10 production sites in order to further integrate our environmental management.

### Activity Report in the Fiscal Year of 2011

▶ Corporate Governance and Compliance

▼ Environmental Preservation

#### Environmental Management

Environmentally-Friendly Products

Reduction of Greenhouse Gas Emission

Utilization of Natural Resources / Reduction of Industrial Waste

Management of Chemicals and Emission Provision onto Water, Air, and Soil

Biological Diversity

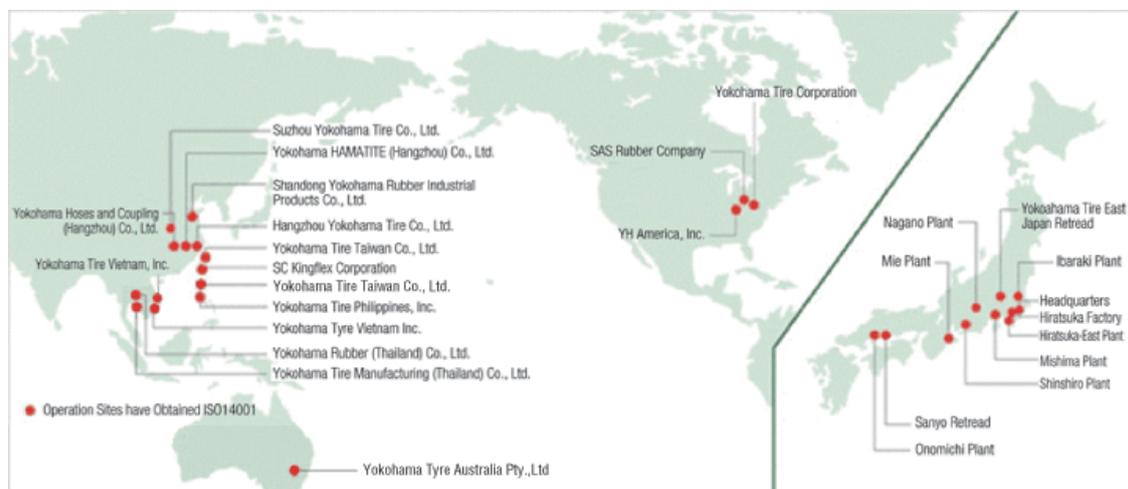
▶ Together with our Customers

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▶ Together with our Society



## Participation in Worldwide Approaches

Yokohama Rubber is working on various approaches such as surveys of various possibilities for tires that might impact the environment and people's health; this is a common issue in the tire industry in accordance with the Tire Industry Project being established under the WBCSD (World Business Council for Sustainable Development; headquartered in Geneva).

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## Achievements

### Execution of Comprehensive Environmental Audit

We are conducting audits as to continual progression for improvement on the management system of environmental management, improvement on the environmental performance, and minimizing environmental risks per operation unit by conducting corporate-wide environmental audits, external audits (ISO14001), and internal audits (ISO14001) by scheduling well in advance. Also, our CSR and Environmental Affairs Department is checking and verifying the score of self-evaluation at each site in accordance with the guidelines of the "Environment GD100" for domestic distribution companies within our group. Incidentally, there was no suspected item as to any violation against environmental legislation among all the auditing items in the fiscal year of 2011.

#### ■ Corporate-Wide Environmental Audit

Other than external audit (regular/renewal) and internal audit based on ISO14001 management system, we are conducting corporate-wide environmental audits done by our headquarters upon setting forth important items from a corporate-wide perspective towards each operation site. In the fiscal year of 2010, we thoroughly audited the chemical substance control system mainly for our production sites. Also, we were promoting various activities to contribute to the society and having more communication with local residents nearby which is initiated by each of our operation site. From now on, we will continue to enhance our "blending with local communities, cultural interaction, and social contribution".

#### ■ External Audit (ISO14001)

In the fiscal year of 2011 as well, we were able to confirm that all our existing certifications can be retained and renewed upon regular audit and for renewal at all our operation sites of Yokohama Rubber; these are conducted by ISO's screening and registration agencies without any major implications of our management systems' shortcomings.

#### ■ Internal Audit (ISO14001)

According to our manual of ISO14001, we conducted likewise at all our certified operation sites in the fiscal year of 2011 as well.

Through our internal audit, we can make sure of our continual leverage of the function levels from our environmental management system. We conducted our audit not just to operate and maintain the "Environmental Management System", but also by setting our common themes as "whether our system is duly functioning for our purposes, whether each of our group is walking the talk by reviewing and setting up the guidelines, purposes, and target by shifting more focus on the reduction of environmental burden even more proactive manners during their normal business activities."

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## Enforcement of Environmental Training and Enlightenment

### ■ Environmental Training

We have incorporated environmental training as one of the subjects for newly hired employees. Also, we are holding a "Techno College" which is CSR and environmental training by targeting our technicians who have been with our company for two to three years. Incidentally, a total of 42 persons attended this seminar in the fiscal year of 2011.

Meanwhile, in order for our employees under managerial and supervisor level to thoroughly understand ISO14001, we are conducting "training classes for environmental internal auditor". Including 175 personnel who have completed this course to get certified in the fiscal year of 2011, currently total 1,266 personnel have been registered and are already active as our internal auditors.

### ■ Enhancement of our Personnel Enlightenment

As part of our activities for personnel enlightenment for the environment, we are conducting something to aim for improvement by getting involved with our entire personnel by sending our President's message towards all our employees in the Energy Saving Month in February and the Environment Month in June every year. During our Energy Saving Month in February, we are open for any proposals with regards to energy saving from all our employees, followed by awarding the ones among all the entries which have brought about significant improvement effect for energy saving. Also, in addition to our proposals for improvement, we are internally gathering environmental slogans and environmental posters. In the fiscal year of 2011, we were able to receive 4112 entries for slogans and 87 entries for posters.

#### Environmental Poster



### ■ President's Award for Environmental Contribution

As a part of our strategy to raise awareness and enlighten with regards to the environment through our work operation, we have been giving out a "President's Award for Environmental Contribution" through our system. The fields for the award consists of a "Factory Award" for the production group, a "Products Award" for the groups of development and designing of environmentally-friendly products, and an "Office Award" and "Special Award" for secretarial groups such as sales and administrative teams.

We select these upon screening and reviewing as to their activities for the past one year per case description of their field from all our groups of our entire corporation. The award winning groups from each award will receive the certificate from our President every year in June.

By implementing this "President's Award for Environmental Contribution", it is evident that all our employees can have even better awareness of "Getting involved with environmental contribution" from their daily operation work.

#### The List of our President's Award for Environmental Contribution in the Fiscal Year of 2011

	Fields of Environmental Contributions Award	Award Winning Groups
Factory Award	Award for Excellence	Mishima Plant
	Effort Award	Shinshiro Plant / Shinshiro-Minami Plant
	Effort Award	YOKOHAMA MOLD CO., LTD.
	Effort Award	YOKOHAMA TIRE MANUFACTURING(THAILAND)CO.,LTD.
	Effort Award	Ibaraki Plant
Product Award	Award for Excellence Development of Compound with Low-RRC and High-WET quality	Tire Materials Development Dept.
	Effort Award GEOLANDAR SUV	Tire Designing Dept. No.1
	Effort Award BluEarth-A	Tire Designing Dept. No.1 / PC Tires Product Planning Dept.
	Effort Award TBS STL ZEN 903ZW	TB & OTR Tires Product Planning Dept. No.3
	Effort Award Pneumatic fender comprehensive monitoring system	Industrial Products Technical Dept. / R & D Dept.
Office Award	Award for Excellence	YTJ Kanto-Koshinetsu Sales Dept.
	Effort Award	YMJ Tokyo Hamatite Company
	Effort Award	Hamagomu Engineering Co., Ltd
	Effort Award	Headquarters
	Effort Award	YMJ Kyushu Company
Special Award	Overseas Social Contribution Award	YOKOHAMA EUROPE GmbH
	Domestic Social Contribution Award	Mie Plant

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## Black Illumination

### ■ Our Operation Sites Participated in Light-Down Campaign

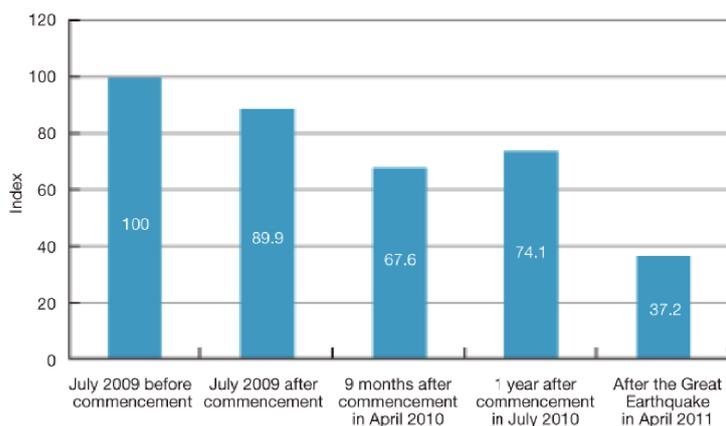
Yokohama Rubber Group participated in the CO2 Reduction / Light-Down Campaign in the fiscal year of 2011 as a member of Challenge 25. A total 767 of our operation sites conducted light-down, including headquarters, tire distribution companies, directly-owned tire shops, plants, and so on. This campaign was started upon proposals by the Ministry of the Environment in 2003 under the theme of "let us consider global warming issues by turning our lights off".

In 2011 we held our annual summer lights off and Tanabata lights off campaigns on June 21 and July 7 respectively, in which we encouraged lights to be turned off for a two-hour period between 8pm and 10pm each night. In addition, during the period between June 22 and August 31, when electricity conservation is particularly needed, we called for a voluntary initiative to turn off the lights in the afternoon and evening. In the end, many companies, facilities and organizations participated in our call.

### ■ Corporate-Wide Black Illumination

As a part of our electric energy saving activities of office buildings and administrative areas of our plants, we have been trying to promote our campaign to have all our personnel leave the office without any overtime work by setting up a Black Illumination Day; three days a week (basically on Monday, Wednesday, and Friday) from the fiscal year of 2009 onwards. During Energy Saving Month in February, we conduct mutual patrol activities at each workplace throughout our offices in order for our employees to have a better awareness. Also, we are encouraging them to acquire a habit to make sure to turn off the lights for their colleagues' who are away, or to switch off any standby electricity such as PCs or office automation equipment when they go home.

### Reduction of Electricity Consumption through BI (Black Illumination Day) at Hiratsuka Factory Research and Development Integrated Centre No. 1 Comparison of Total Electricity Consumption per Day



## Compliance with Various Legal Restrictions

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### ■ Zero Environmental Accidents

There was no incident of Environmental Accident in the fiscal year of 2011.

### ■ Strengthening our Compliance with various Regulated Parameters

From fiscal year of 2008 onwards, we are trying to strengthen our control measures by setting up our voluntary control values in order to ensure our compliance of regulated parameters. We are reviewing our voluntary control values on a regular basis based on our measurement value in the past by reflecting onto statistical index. Also, we are fortifying our control system by internally defining terminologies such as "Environmental Trouble, Major Environmental Near-Accident, and Environmental Near-Accident".

We will act immediately for corrective measures in the event of any environmental trouble or major environmental near-accident occurring. In the fiscal year of 2011 we made further changes to the definitions of these terms.

#### ○ Definition of Terminologies

- Environmental Accident
  1. An accident that causes significant damage outside the company and was covered in the newspaper or other news media.
  2. An accident that results in a government cease and desist order, such as improvement order or suspension of use order.
- Environmental Trouble
  1. A situation that results government warning or instruction.
  2. A situation where the company failed to meet a pollution regulation requirement.
  3. A situation where an environmental pollutant such as carbon, waste oil or solvent is leaked or emitted into the environment from a factory, resulting in minor pollution.
  4. A situation deemed as an environmental trouble by the company's environmental officer (General Manager of the CSR & Environmental Affairs Department).
- Major Environmental Near-Accident
  1. A near-accident in which environmental pollution was not caused outside the business site, but a liquid pollutant leaked or was at risk of leaking into the drainage canal or the street gutter connected to the drainage canal.
  2. A situation deemed as a major environmental near-accident by the company or site's environmental manager because it has been identified as an emergency situation in advance after it exceeded the predetermined environmental impact score set for each site.
- Environmental Near-Accident
  1. A minor leakage of a liquid pollutant or scattering of a powdered pollutant not considered as an environmental accident, environmental trouble or major environmental near-accident above.
  2. A situation where the leakage of a liquid pollutant or scattering of a powdered pollutant was about to occur or was anticipated to occur.

### ■ Our Response to Environmental Troubles

There were four cases of environmental troubles (three cases in Onomichi Plant, one case in Mie Plant) in the fiscal year of 2011; we had thereby taken corrective measures accordingly.

During the accounting period from April to December there was only one environmental trouble, which occurred at the Mie Plant. However, when adding the last quarter of the previous reporting period (January to March 2011), there were a total of four environmental troubles.

For any environmental troubles unable to comply with regulated values, we reported to the governmental body immediately after such occurrence.

### ■ Our Response to Major Environmental Near-Accident

There were 23 cases of major environmental near-accident in the fiscal year of 2011; 18 cases for water quality (including non-conformity of voluntary control value of water discharge) and five cases for atmosphere (including scattering of carbon); we thereby took corrective measures accordingly.

During the accounting period from April to December there were 10 cases of water quality pollution (including non-conformity of voluntary control value of water discharge) and one case of atmospheric pollution (including scattering of carbon). However, when adding the last quarter of the previous reporting period (January to March 2011), there were a total of 23 major environmental near-accidents.

For major environmental near-accidents which exceeded their voluntary control values, we reviewed each case based on our measurement value in the past by reflecting onto a statistical index.

[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2011](#) > [Environmental Preservation](#) > Environmentally-Friendly Products



# Environmental Preservation

## Environmentally-Friendly Products

[Guidelines](#)

[Achievements](#)

[Case Introduction \(Tires\)](#)

[Case Introduction \(MBs\)](#)

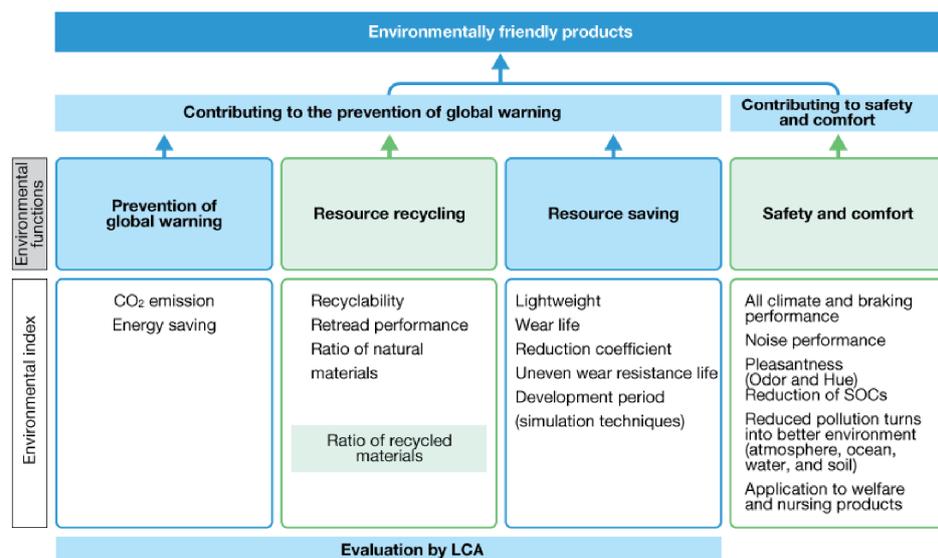
### Guidelines

#### Our Notion for Environmentally-Friendly Products

It is our desire to continue to support co-existence and growth for both people and automobiles through providing tires as our main products. In order to achieve this, we wish to contribute to our customers' happiness and wellbeing by continually providing products that can meet diversified requirements such as not just products to pursue environmental design, but also products mainly for sport purposes that can incorporate environmental design whilst aiming to balance environmental design and the drivers' sense of joy for racing. Furthermore, it is a vital mandate of manufacturers to contribute to society through providing "quality products (goods)". Yokohama Rubber's Basic Policy from the latest Mid-Term Management Plan (GD100), which started from the fiscal year of 2006, reads that "we will deliver the best products at competitive prices and on time"; we target to switch all the products from Tire and MB Groups into environmentally products by the fiscal year of 2017.

Incidentally, our definition of "Environmentally-Friendly Products" is products that exceed 5% or more on the average under four categories; "prevention of global warming", "resource recycling", "resource saving", and "safety and comfort" whilst no deterioration is observed from all categories.

#### 4 Pillars of Environmental Function and its Index



#### System Creation so that only Environmentally Products can turn into Commodities

By using "Product Assessment Check Sheet", Yokohama Rubber is screening our new products' design adaptability to the environment. The Product Assessment Check Sheet refers to the scores in 17 items in total from planning to production stage of the products, CO<sub>2</sub> emissions during usage, ELV compliance in Europe, and

### Activity Report in the Fiscal Year of 2011

▶ Corporate Governance and Compliance

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Environmental Management

#### Environmentally-Friendly Products

Reduction of Greenhouse Gas Emission

Utilization of Natural Resources / Reduction of Industrial Waste

Management of Chemicals and Emission Provision onto Water, Air, and Soil

Biological Diversity

▶ Together with our Customers

▶ Together with our Employees

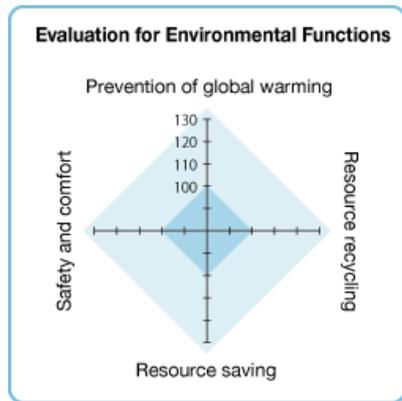
▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

so on. Upon conducting judgment of the total score both in initial development stage and prior to mass production, we only go ahead with mass production for products that can meet those standards. Also, we are deploying our evaluation method called the Environmental Design Radar Chart in order to improve our company's comparison method of our products. This is our method to digitize by comparing with our benchmark (products in 1998) by roughly classifying environmental design into four categories (prevention of global warming, resource recycling, resource saving, and safety and comfort). Our evaluation is made more objective by digitizing the degree of improvement by comparing with our existing products. Currently, we define our Environmentally-Friendly Products as ones that exceed 5% or more of each index on the average under four categories whilst no deterioration is observed from all categories; we strictly set the rules that any products other than environmentally products will not be approved as new products. By applying this, now, it is no longer easy to develop new products anymore as it has become compulsory even for special sport tires that used to require travelling performance only to clear the preceding criteria as well. We will continue to fulfill our responsibility as a contributing member of the global community as we have our systems in place so that "we will not produce other than environmentally-friendly products". From now on as well, we will contribute to society through our manufacturing by utilizing our various performance simulation technologies and material technologies, not just to reduce rolling resistance only, but by thoroughly discussing from the developing concept stage as to which items can meet the standards of environmentally-friendly products in the light of comprehensive aspects.

**Radar Chart of our Evaluation for Environmental Function**



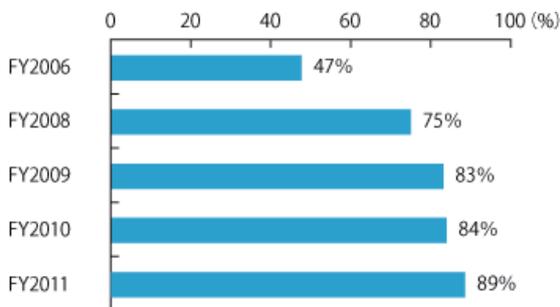
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**Achievements**

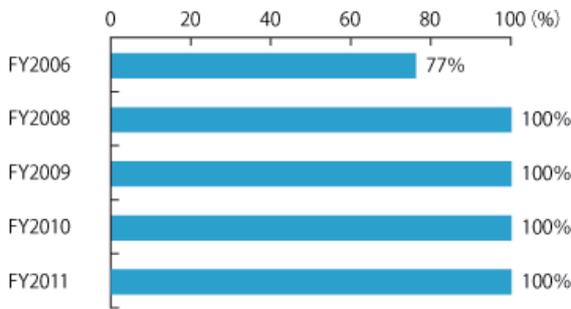
**Ratio of our Environmentally-Friendly Products in the Fiscal Year of 2011**

From the fiscal year of 2006 onwards, we started to aggregate the ratio of our environmentally-friendly products versus our entire product line-ups. We are calculating the share ratio versus both in our entire product line-ups and our new products; in the fiscal year of 2011, the share ratio in our entire product line-ups has resulted in 89% which is a 5 point increase compared to the fiscal year of 2010, whereas the share ratio in our new products has achieved 100% from the fiscal year of 2008 onwards. From now on, we will continue to make various efforts to aim for 100% by the end of the fiscal year of 2017 as to share ratio in our entire product line-ups.

**Share Ratio of our Environmentally-Friendly Products versus our Entire Product Line-Ups**



**Share Ratio of our Environmentally-Friendly Products versus our New Products**



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## Case Introduction (Tires)

### LCA Evaluation for Tires

LCA (Life Cycle Assessment) refers to the method to understand the environmental load (CO<sub>2</sub> emission) in numeric data of each stage of the products from production to disposal. For the case of tires, since 80 – 90% of CO<sub>2</sub> emission would take place during usage period of their entire life cycle. Yokohama Rubber is focusing on "coming up with environmentally-friendly products to realize low fuel consumption".



\*The graph above shows approximate values as to products from Yokohama Rubber

### Yokohama Rubber's Manufacturing Philosophy Imputed in "BlueEarth"

Yokohama Rubber has been pursuing technology and product development by focusing on the improvement of fuel consumption by reducing rolling resistance, along with our major launch of "eco tire DNA" since 1998 well ahead of our competitors. However, pursuing fuel efficiency and environmental friendliness would not suffice to fulfill our responsibility as a tire manufacturer. In order to win even better customer satisfaction, not just "fun" and "joy" that can contribute to motorization per se, we need to realize product development of the next stage under a new concept of being "gentle to people and society". Yokohama Rubber has been working on product development for a number of years to aim for the realization of those performances.

- Technology to maintain fuel efficiency and less hassle for maintenance work called "AIRTEX" – our endeavour to achieve "zero" air leak
- Natural material and material technology to reduce WET stress called "Orange Oil"
- Evaluation technology to digitize the relativity between human muscle force and stress called "Biological Monitoring"
- Technology for relativity detection between aerodynamics of the tires and travel resistance



### Technical Development aimed at a Sustainable Society

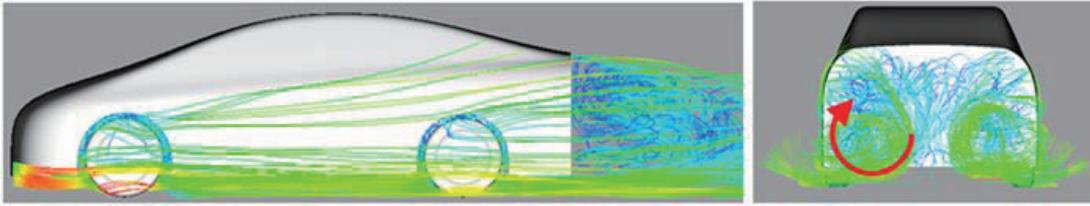
#### Technologies using tire design to reduce a vehicle's drag

Roll resistance is one way in which a vehicle's tires help improve fuel efficiency. Whereas, drag is a major factor that inhibits a vehicle's fuel efficiency. Drag accounts for 65% of a vehicle's resistance, while roll resistance accounts for 20%. Although the concept of reducing the drag of tires has been around for some time, Yokohama Rubber considers the tire to be an aerodynamic device and has been actively involved with research and development from the all-new perspective of reducing a vehicle's drag by changing the way air flows around the vehicle.

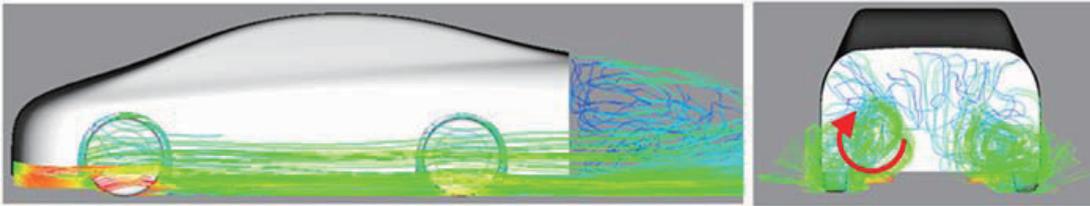
BluEarth-1, which was released last year, employs a dimple design. Figure 2 illustrates simulation results of this evolved aerodynamic design as it compares to conventional tires. A vehicle's drag is said to be derived from large vortexes that occur behind the vehicle. This new aerodynamic tire design can reduce the size of these vortexes. It also reduces the flow of air from the upper wheel housing to the upper lateral sides of the vehicle.

As a result, the vehicle's overall drag is reduced, which has been confirmed in wind tunnel testing. We are pushing forward with industry-academia collaborative projects in order to accelerate research and development in this field. While cooperating with our joint research partners, we are conducting aerodynamic simulations, wind tunnel testing and design exploration in order to place our discoveries on the next generation of BluEarth tires.

**Figure 1: Flow of air around a vehicle with conventional tires (left: side view; right: back view)**



**Figure 2: Flow of air around a vehicle with new aerodynamic tires (left: side view; right: back view)**

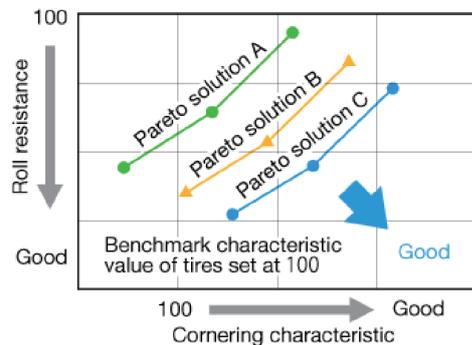


### ■ Technologies that help awaken engineers to new design space possibilities

The development of fuel efficient tires involves not only reducing roll resistance, which impacts fuel economy, but also simultaneously fulfilling other performance needs that are often at odds with one another. To accomplish this, it is important to examine design spaces, or the causal relationship between each characteristic value and design parameters in the basic design stage.

Yokohama Rubber is actively exploring new designs (technologies that help visualize design spaces) using simulations in order to help awaken its engineers to new design possibilities. The exploration of new designs enables the visual analysis of the relationship between characteristic value balance (Pareto solution) and design parameters, which often stand at odds to one another. This also enables engineers to uncover ideas (design parameters) in order to further improve the direction of more advanced Pareto solutions. Figure 1 illustrates the Pareto solution for cornering characteristic and roll resistance obtained through design exploration. As the figure shows, we were able to recognize the positive trend of the Pareto solution as it moved from A to B to C (expansion of design space) and in the process uncover the key design parameter. We plan to move on to the next stage of development in order to utilize this design expertise in the next generation of BluEarth tires. We can not only uncover the relationship between the characteristic value and design parameter of the Pareto solution, but also take one step forward toward effectively uncovering important design parameters for improving the Pareto solution. This will empower us to pursue product development in parallel and move forward with industry-academia joint research on multipurpose optimization.

**Figure 1: Explorations results of factors that can improve characteristic value**



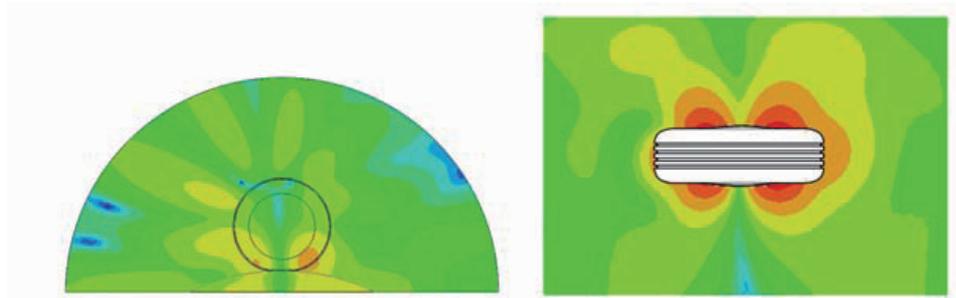
### ■ Simulation technologies that make invisible pass-by noise visible

We are working to improve pass-by noise as part of our efforts to enhance environmental performance. Tire noise consists of noise that can be heard inside the vehicle's cabin and noise that can heard outside the vehicle itself. Here, we will introduce the development of a forecasting technology for the noise heard as a vehicle passes by.

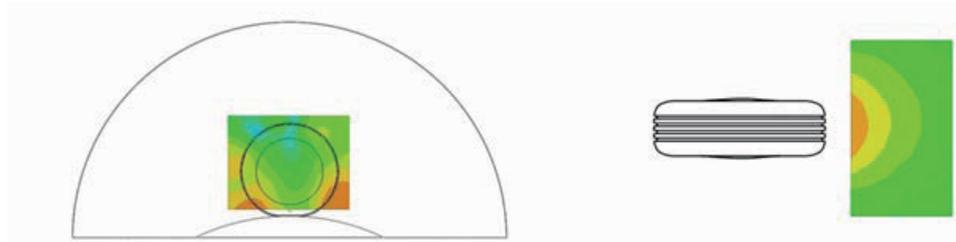
Today, we are working to counteract noise that occurs when the tire tread pattern contacts the road surface and noise created by the flow of air around the tire. For the former, we have developed a simulation technology that predicts the surrounding sound pressure distribution level from tire vibrations originating from the tread pattern. The two figures illustrate the sound pressure distribution level from simulations (Figure 1) and the sound pressure distribution level seen in experiments in an anechoic chamber (Figure 2). The results of which

match up comparatively well, which confirms the validity of simulations. Going forward, we will aspire to development technologies that can be employed in our tire development. These technologies will be utilized in the next generation of BluEarth tires that will be much quieter than previous versions.

**Figure 1: Sound pressure distribution level obtained from simulations (left: side view; right: top view)**



**Figure 2: Sound pressure distribution level obtained from experiments (left: side view; right: top view)**



## Fuel Efficient Tires

### Fuel efficient tires for environmentally-friendly vehicles

Automakers are intensifying their efforts to develop environmentally-friendly cars, including hybrid vehicles, and original equipment tires installed on new vehicles must now meet stringent environmental performance standards, including lower roll resistance. Yokohama Rubber is proactively developing original equipment tires based on a new environmentally-friendly concept embodied by its BluEarth series. In addition to improving environmental performance, we have helped reduce the burden on drivers, passengers and the surrounding environment with standards that clear the strict targets set by automakers. The sidewall of Yokohama Rubber's environmentally-friendly tires installed on new vehicles feature the BluEarth logo.

### The BluEarth A34 installed on a new environmentally-friendly vehicle



### GEOLANDAR SUV

GEOLANDER SUV is a fuel efficient SUV tire developed with the BluEarth concept in mind that forms part of our GEOLANDER series of tires for SUVs. Featuring an exclusive structure and new tread pattern developed for SUV tires as well as the core compound technology of nano-blended rubber found in the BluEarth series of environmentally-friendly tires, GEOLANDER SUV achieves a 16% reduction in roll resistance, a 6% improvement in weight braking performance, a 21% improvement in pattern noise performance, and a 13% reduction in road noise compared to the GEOLANDER H/T-S. As a result, the tire offers superior fuel efficiency, while enhancing safety, reducing noise, and enabling SUVs to drive on a wide range of road surfaces. GEOLANDER SUV features the BluEarth logo on the tire side wall as proof that it offers superior environmental performance.

### GEOLANDAR SUV



## ■ Truck and bus tire ZEN

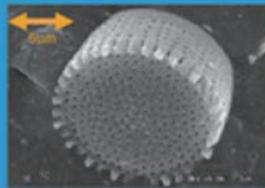
First released in 2007, our truck and bus tire brand ZEN was designed based on the concept of taking total environmental performance to the extreme. ZEN stands for Z.ENVIRONMENT. Featuring an extended life casing and tread as well as reduced fuel consumption through lowered roll resistance, each of which are key to improving the environmental performance of truck and bus tires, ZEN is a tire brand with a total commitment to the environment that helps to reduce impacts on our natural environment. ZEN's lineup includes the ZEN 701ZE, a premium all season tire dedicated to improving wear performance, the ZEN 702ZE-I, a premium all season tire dedicated to improving fuel efficiency, the ZEN102ZE, a ribbed tire dedicated to improving fuel efficiency and reducing maintenance, and the ZEN 902ZE, a studless tire dedicated to improving fuel efficiency. In September 2011, we released the ZEN 903ZW, a studless tire dedicated to improving drivability on snowy and icy roads. The ZEN 903ZW is an all-new studless tire design that improves drivability on snowy and icy road surfaces, which is an essential element of a studless tire, while also lessening its impact on the environment through improvements in fuel efficiency and reduced wear. The ZEN 903ZW has also been recognized with a Good Design Award for its unique design qualities and superior environmental performance.

### ZEN 903ZW



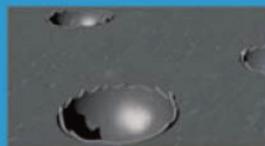
#### Water-absorbing honeycomb silica

The honeycomb structure absorbs water from icy surfaces. It also improves grip on icy surfaces by digging into the surface of the ice.



#### Micro water-absorbing balloon II

The cavity of the water-absorbing balloon absorbs water from icy surfaces. It also improves drivability on icy surfaces by gripping the surface of the ice with the tips of the tire tread.



Conceptual image

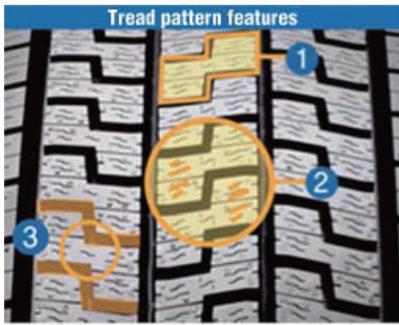
#### High density reinforced rubber structure II

Balances anti-wear performance on dry and slick road surfaces with pliant rubber contact effective on icy roads.



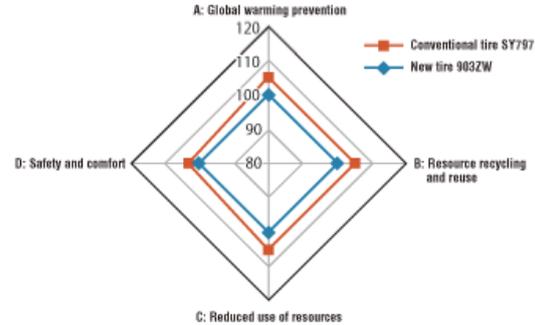
Conceptual image

Rubber reinforcing agent  
Pliant rubber (Nano-order)



1. **Triple traction Z block**  
Increase in circumferential direction materials improves controllability. It also reduces uneven wear with higher block rigidity.
2. **Closed truss type**  
Improves controllability by increasing the edge materials while ensuring block rigidity.
3. **Wide transverse grooves**  
Wider grooves help prevent accumulations of snow.

### Environmental initiatives



	Indicator	Features / Comments
A: Global warming prevention	105	Reduced roll resistance (+10% compared to existing tires)
B: Resource recycling and reuse	105	Enhanced durability with ZEN casing (+10% compared to existing tires)
C: Reduced use of resources	106	Extended wear life (+13% compared to existing tires)
D: Safety and comfort	103	Enhanced control on icy surfaces (+10% compared to existing tires)
Composite Index	105	

## Environmentally-Friendly Tire Related Products

### Tire pressure monitoring system HiTES

We released a new updated version of HiTES in 2009. This is a tire monitoring system that enables the user to check tire pressure and internal air temperature of all tires in real time from the cabin of the vehicle. Information from air pressure and temperature sensors placed inside each tire is sent and received wirelessly to the driver's side instrument cluster. Once a decrease in air pressure or increase in temperature is detected, the driver is immediately alerted with a noise and light. For example, the detection of a decrease in air pressure will help identify a possible puncture before it happens, prevent poor fuel efficiency due to increased roll resistance, ensure the safe operation of the vehicle, help protect the environment and realize cost savings. Since its release, this tire pressure monitoring system has received strong remarks from customers that transport hazardous materials, that operate highway inter-city bus services, and that operate transportation systems.

This tire pressure monitoring system is essential for super single tires that have seen an increase in use recently. A super single tire refers to a super flat tire where only two are used on a single rear axle compared to four for conventional tires. In this regard, we have seen an increase in the use of our tire pressure monitoring system.

HiTES's temperature measurement system has also successfully helped to prevent vehicle fires, which are often caused by heat from brake friction.

Given these features, HiTES was honored with the Eco Products Awards Steering Committee Chairperson's Award in the Products Category at the 6th Eco -Product Awards of Japan.

#### HiTES Display Monitor

#### Super Single Tire





■ Sound Absorbing Materials to Reduce Tire Noise called "Silent Ring"

The "Silent Ring" refers to a module in ring form dedicated to developed sound absorbency which is excellent in acoustic absorption and durability. It reduces tire noise by absorbing air noise vibration in the tire (air hole resonance) arises from shocks from road surface as it is installed inside of the tire. It makes the operation work easy during flat tire repair for being a separate module of the tire; it has also enabled the use of flat tire repair kits such as "AIR LOCK".

A "Silent Ring" is a product that enhances the level of comfort as we were successfully able to improve the noise performance of well-reputed "DNA dB super E-spec" even further. This tire is ideal especially for hybrid cars that require fuel saving and noise performance.

Image of the Installation of Silent Ring



AIR LOCK



## ■ The Latest Material to Realize Lighter Weights called "Air Transmission Control Film"

Air pressure in the tire would greatly impacts the fuel efficiency of the car. We are working on the development of inner liners that can retain excellent air transmission control functions; under-inflated tires would not be able to fulfill their tire performance to the fullest, they also might jeopardize safety during driving.

"Air Transmission Control Film", which is already applied to our numerous commodities, refers to the film that controls air seeping by pasting inside the tire; it is a new material of our own technology that has blended the special resin with conventional rubber for the inner liner. It contains smoothness whilst being high in density; henceforth we were able to significantly reduce the natural air seeping from the tire. Also, we have achieved approximately 1 out of 5 with its thickness to fulfill a comprehensive fuel saving effect such as contribution to making a lighter weight tire.

This technology has won "the 22nd Award by Society of Rubber Industry, Japan" which is the awarding system organized by the Society of Rubber Industry, Japan. For "Award by the Minister of Education, Culture, Sports, Science and Technology under the Science and Technology Fields in the fiscal year of 2011" organized by Ministry of Education, Culture, Sports, Science and Technology, we were able to win the Science and Technology Award (Development Sector) under our project title of "Development of inner-liner by deploying rubber and polymer



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## Case Introduction (MB)

### Environmentally Products by our MB Group Applicable to Wide Range of Industrial Fields such as Land, Ocean, and Air

MB stands for Multiple Business; this term implies the ever diversifying and expanding businesses of nowadays. Mainly it consists of four fields such as Hose and Couplings (high-pressure hoses, steel joints, etc.), Adhesives and Sealants (for construction, automobiles, etc.), Industrial Products (conveyor belts, seismic isolation rubbers, etc.), and Aerospace Division to develop diversified line-ups of products catering to a wide range of industry.

#### ■ Sealants and Adhesives for Solar Panels

For solar panels which are drawing attention as the energy source for next generation, we are trying to develop products such as rapid hardening adhesives for edge seal materials and current-collection box.

The edge seal materials "M-155" and "M-155P" are used to seal the solar panel itself and the outer frame. It helps to keep the panel performance for long period of time not just by preventing water immersion into the panels, but also by retaining insulation qualities. Meanwhile, adhesives for the current-collection box called "FLASH ONE" fix the current-collection box in the backside of the panel. This helps to retain water-tightness at the same time. "FLASH ONE", like the edge seal, has obtained UL Certification,\* an internationally authorized safety standard of the products.

\* UL Certification: It refers to safety standard to be authorized by Underwriters Laboratories Inc. in the United States, a safety standard development agency with the longest history, being established in 1894. On top of the products for various fields such as electrical products, they also screen their parts, materials, and more.

#### ■ Windmill Hose for Wind Electricity

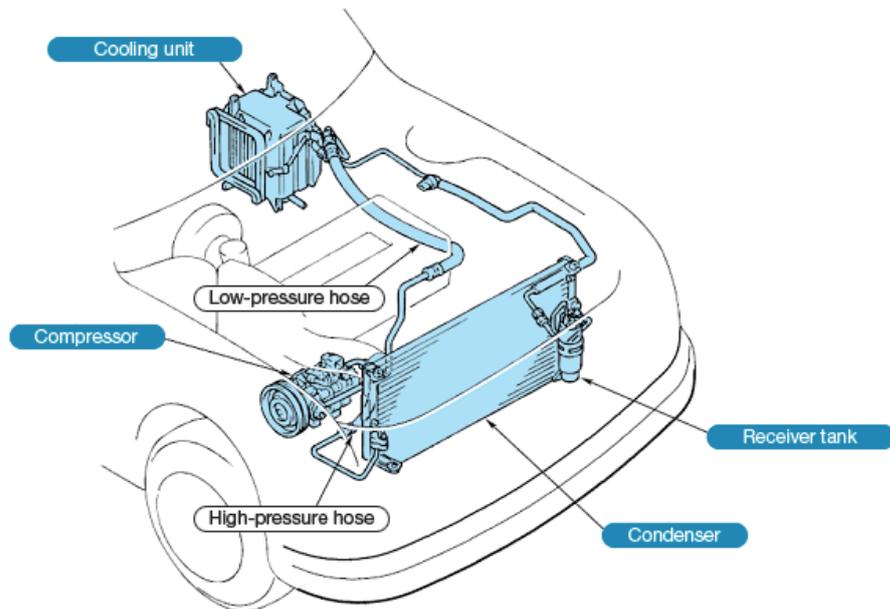
These days, wind-powered electricity is gaining more attention than ever. Windmills have the function to change their angles of their blades depending on the wind speed in order to convert the wind power more efficiently; a hydraulic pressure hose is used as their driving systems.

Our hoses in the LEVEX (NWP) series have been selected as hydraulic pressure coupling hose for windmills. We were able to realize compact couplings by developing ORS type metals in order to improve the sealing part of the mouth ring of large calibre hoses.



## ■ Hoses for Car Air Conditioners Complied with New Cooling Medium

Until recently, the HFC-134a has been deployed as a cooling medium for car air conditioners; however, owing to its higher coefficient in terms of global warming, currently it is under review and we are inclined to switch to HFO-1234yf, the latest type of cooling medium with a lesser coefficient for global warming. To cope with this issue, we have developed a hose for car air conditioners complying with the latest cooling medium which excels as durable cooling medium, transparency, and durable hose.



## ■ Container for the Sealing Materials for Construction (e-can)

"e-can" refers to the container of sealant materials to be applied as a construction joint mainly for buildings and apartment complexes. Despite its sturdiness, it can be dismantled rather easily after use; we started its actual launching from 2002 onwards as a container that can substantially reduce the volume of waste cans compared to conventional tin cans. In 2005, we collected the "e-can" free of charge to develop nationwide (excluding Okinawa prefecture) material recycling to re-use as raw materials of our products. Every year its collection ratio is increasing; in the fiscal year of 2010, we were able to collect about 65% among our entire products that we delivered. We will turn collected "e-cans" into regenerated pellets upon pulverizing and powdering to be recycled as raw materials of plastic pallets or artificial wood.

Furthermore, "e-can" has been awarded with the "Chairman Award of Clean Japan Centre" in the fiscal year of 2010, following our winning of the "Encouragement Award" in the fiscal year of 2008 under their awarding system called the "Circular Resource Techniques and Systems Award" which holds the longest history in the field of 3R\*2, supported by the Clean Japan Center (CJC)\*1.

\*1: CJC is a public-service corporation established in 1975 to serve as the national center to promote recycling, jointly supported by the public and private sectors, including the Ministry of Economy, Trade and Industry (METI), the Japan Chamber of Commerce and Industry (JCCI), Nippon Keidanren, etc. It plays a leading role in promoting creation of a sustainable resource-saving society, including solutions for waste and resource issues through the 3R's.

\*2: 3R refers to reducing waste generation ("Reduce"), reusing goods ("Reuse"), and effective usage of recycled materials ("Recycle").

## ■ ECO FINLEX

ECO FINLEX refers to environmentally friendly hydraulic hoses used in forklifts, power shovels, and other construction equipment. Since they are made of chlorine-free materials, there is no danger of dioxin emissions or suchlike after incineration disposal; these are the products being developed whilst aiming for the facilitation of thermal recycling after use.



### ■ STAIRCASE MODULE for Boeing 747-8

We are providing aircraft staircases for the Boeing 747-8 Intercontinental Airliner. The Boeing 747-8 Airliner refers to the latest model affectionately known as the Jumbo,, whereas the Intercontinental Airliner refers to a jumbo passenger craft with two stories.

The biggest feature of the aircraft staircase we have developed this time is the highest standard of design; it provides sophisticated and comfortable space for passengers with its elegant and characteristic appearance by drawing gentle curves through numerous curved lines and curved surfaces. In addition, the rich deployment of metal parts for the outer surface, such as stainless steel and aluminium, gives it a high quality appearance. Also, in addition to implementing lightweight and long lasting LEDs for all the lighting, we have optimized forms and materials for each part during design. We are contributing to a craft that is proud of its high fuel efficiency and noise performance by our meeting strict requirements from Boeing as to durability and weight by realizing a high level of its design.

#### STAIRCASE MODULE



### ■ Transmission Coupling for Highly-Efficient Sport Cars

We have developed transmission coupling for highly-efficient sport cars by realizing non-spill configuration, low pressure drop, high in durability, lightweight, and compactness. As for low pressure drop, we were able to achieve energy saving, i.e. a 60% reduction compared to conventional products by optimizing the performance of flow-volume through computer analysis.



### ■ Wear-Resistant Belt with Flame-Resistance and Anti-Cut under JIS

Since blast furnace conveyor belts mainly transmit sinter or coke, they require excellent anti-cut functions and flame-resistance at the same time, in addition to wear-resistance when transmitted materials are being shot onto the conveyor belt. Through the wear-resistant belt with flame-resistance and anti-cutting under JIS we have developed this time, we were able to achieve reduction of waste materials by enhancing its cutting function compared to the existing products by our competitors, plus prolonging its life expectancy due to wear by 28% to surely reduce the frequency of belt replacement whilst maintaining existing flame-resistance performance at the same time.

### ■ Simplified Steel Joint

As a part of the project to prolong the life span of bridges, we came to know that demand for minor extension joints made of steel for maintenance work is growing. We have launched some joints with 20mm type of extension made of steel called "YHT-20" and "YFS-20", plus 30mm type of extension called "YHT-30Ⅲ" and "YFS-30Ⅲ". They are low in height compared to conventional products as we have made some modification with their configurations; they have led to environmental contributions by reducing the volume of materials and CO<sub>2</sub> emission during transportation as we have achieved significantly lighter weights.

## ■ Adhesives with Insulated and Super Heat Conductive Type

As a part of our effort to reduce environmental burden, Yokohama Rubber is trying to expand our products from "Electric Material Division".

For electronic devices to be used for various electronics, it is inevitable that most of the input electricity ends up with generating heat; the approach to radiation has become the most important technological item in the light of reliability of electronic device and durability. Also, heat conductivity is greatly related to power saving effect by reducing the time elapsed from switching on the power until it starts running. Our "Adhesive with Insulated and Super Heat Conductive Type YB Series" is equipped with insulation with excellent in heat conductivity; also it has cleared various regulated values for the environment being required for electronic devices such as RoHS, REACH, halogen free, and so forth.

We have maintained a good reputation as it is deployed for wide range of electric appliance manufacturers' DVDs, or TV sets, decks, and personal computers equipped with Blue-Ray, and more. We will continue to apply this for wide range of electronics parts from now on.

## ■ Hard Coat for Plastic Display

"Y-coat" VH series refers to coating onto polycarbonate, PMMA resin, etc.; it provides outstanding anti-scratch function whilst being excellent in transparency; this product is suitable as a hard coat for displays.

Also, it is equipped with the grade where stains or thumb prints can be easily wiped out by compounding fluorine, plus another grade with improved functionality of touch panels, etc. by providing slip characteristics; this gives another level of comfort for smartphones.

## ■ Development of Offshore Cargo Loading and Unloading Support Systems

Yokohama Rubber's mooring monitoring and dual vessel operations system is a comprehensive monitoring system for managing cargo loading and unloading between two vessels and the status of pneumatic fenders used as shock-absorbing materials between two vessels when transferring crude oil or liquefied natural gas (LNG) between two tanker ships at sea. This particular system represents the world's first-ever commercialized system to comprehensively monitor fenders wirelessly (see Figure 1).

This same system uses a proprietary developed wireless pressure sensor (see Figure 2) installed inside a pneumatic fender to remotely monitor changes in internal air pressure and compression in real time during the mooring of two vessels as well as during loading and unloading of cargo at sea. Using GPS, the system can also monitor the position and speed of the two mooring vessels.

This system also enables ship captains and cargo handling officers to monitor pneumatic fenders and the status of both vessels from the vessel's bridge. This assures the quick detection of issues in real time, such as over-compressed fenders, reduced internal air pressure, or excessive speed as the two ships approach one another, whereby preventing major accidents such as collisions and resulting oil or gas spills. This system's safety warnings and recording functions can also be effectively utilized to confirm the safety of cargo loading and unloading operations, to formulate operating standards, and to analyze the cause of an accident. In turn, this will help to improve the safety of vessel operations as well as play an integral role in achieving economic efficiencies and protecting the environment (see figures 3 and 4).

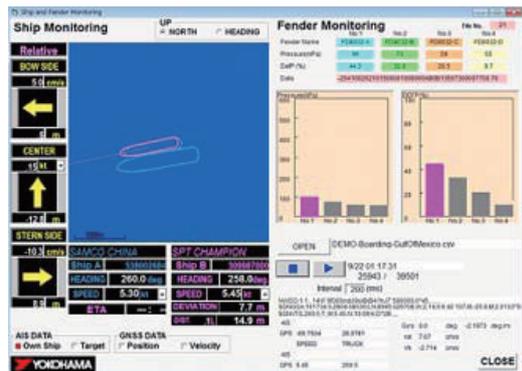


Figure 1: Monitoring screen of the mooring monitoring and dual vessel operations system



Figure 2: Proprietary developed wireless air pressure sensor



**Figure 3: Pneumatic fenders placed between two vessels**



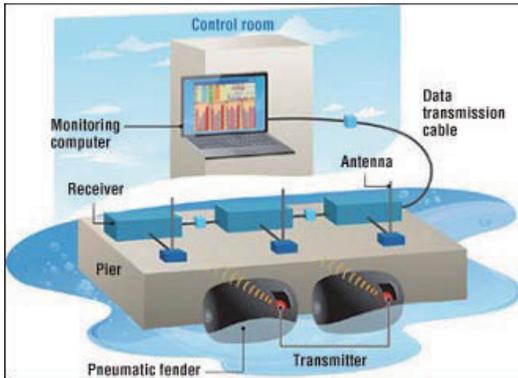
**Figure 4: Transfer of LNG cargo between two vessels**

### ■ Developed comprehensive pneumatic fender monitoring system

Yokohama Rubber's fender monitoring system comprehensively monitors pneumatic fenders used as shock-absorbing materials when large vessels berth at a pier.

By collecting air pressure data from inside the fender wirelessly, the system can monitor the status of a fender remotely away from the pier. Furthermore, the system can also remotely monitor conditions from a central command center located several kilometers away using data transmitted over a fiber optic cable. This particular system represents the world's first-ever commercialized system to comprehensively monitor fenders wirelessly (see Figure 1).

The system can estimate the movements of vessels berthed at a pier by converting air pressure data into data on deformation volume, reaction force and energy being absorbed. This enables it to detect dangerous situations such as excessive movements, in advance, which helps prevent major accidents, such as damage to cargo loading or unloading facilities like loading arms, a vessel's hull, or pier, and any possible resulting oil spills. This system's safety warnings and recording functions can also be effectively utilized to confirm the safety of cargo loading and unloading operations, to formulate operating standards, and to analyze the cause of an accident, if one were to occur (see Figure 2).



**Figure 1: Operational diagram of Yokohama Rubber's fender monitoring system**



**Figure 2: Pneumatic fenders positioned between the vessel and pier**

### ■ Discovering the potential of pneumatic fenders as tsunami countermeasures

Yokohama Rubber has made wide reaching contributions to the safety and efficiency of cargo loading and unloading operations as well as vessel operations by capitalizing on the unique qualities of pneumatic fenders through simulations on the movement of vessels berthed in a harbor (see figures 1 and 2). Using these simulations and the cooperation of Kobe University Professor Emeritus Masayoshi Kubo (Faculty of Maritime Science), we are in the process of developing a simulation method for vessel movements during an earthquake and tsunami.

In order to accelerate research and development in this field, we are also attempting to advance tsunami simulations, conduct field-studies on damages incurred by vessels berthed in harbors during the Great East Japan Earthquake and tsunami, and re-enact damage scenarios using simulations (see Figure 3).

Our research and development will help to determine whether a moored vessel should leave port or seek shelter during an earthquake or tsunami. It will also provide information on potential secondary damages (environmental problems) from vessels breaking free or being carried out to sea, and as a result, it will play a key role in helping to reduce damages from a disaster.



Figure 1: Pneumatic fender being used on the landing bridge of an LNG carrier

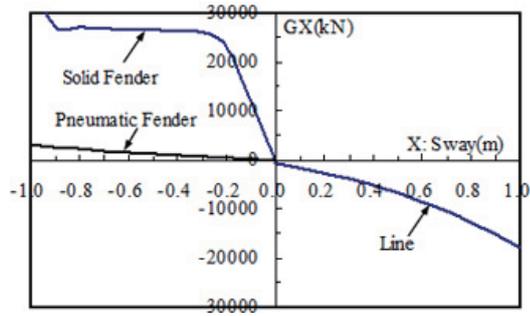


Figure 2: The swaying force of a berthed vessel

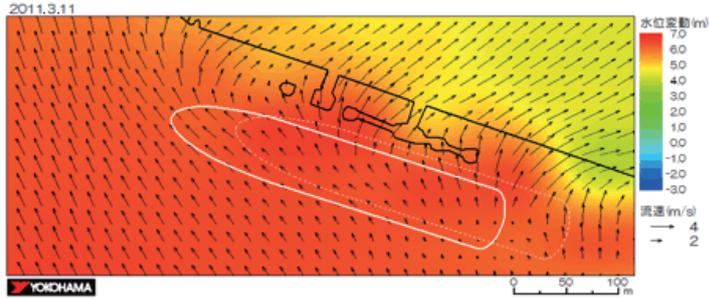


Figure 3: Simulation re-enacting vessel movements and tsunami waves around a large oil tanker damaged in the Great East Japan Earthquake and tsunami

### Radio propagation technologies supporting new technologies

Yokohama Rubber has developed a range of unique products that combine sensors with radio waves, such as its tire air pressure monitoring systems HITES and AIRwatch, its comprehensive pneumatic fender monitoring system, and its dual vessel operations monitoring system.

We have used our proprietary radio propagation simulation technology to become the first in the world to successfully identify and visualize radio waves emitted from tires and pneumatic fenders. This enables us to quantitatively ascertain radio propagation phenomena, including the directional characteristic and decay of radio waves (see figures 1 and 2). Using this data, we have enabled long-distance communication after researching and developing a compact and high efficiency transmitter and receiver antenna (see Figure 3).

Today, society demands products that are safe, secure, comfortable and considerate of the environment. Yokohama Rubber is committed to moving forward with promoting development centered on radio propagation technologies and in the process tackling the challenge of developing products that are safer and more considerate of the environment through combining and accumulating elemental technologies further.

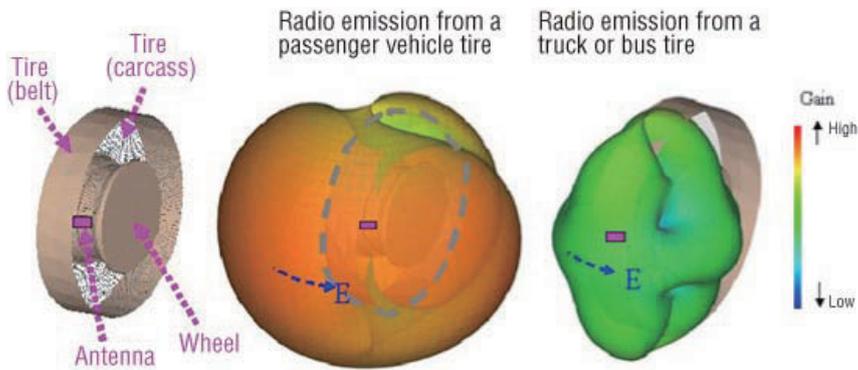
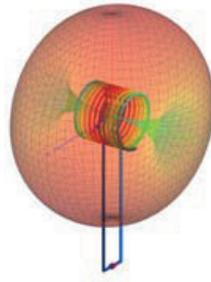
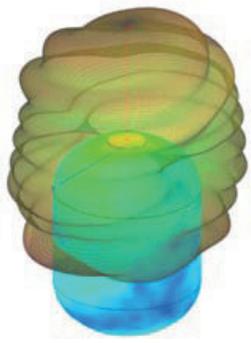


Figure 1: Radio emission from a tire



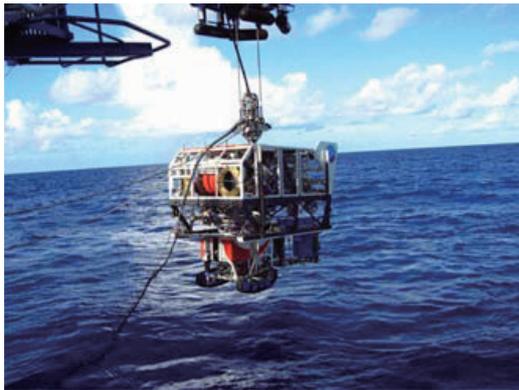
**Figure 2: Radio emission from a pneumatic fender** **Figure 3: Radio emission from an antenna**

### ■ High performance floating buoyant material

Yokohama Rubber has successfully developed a high performance floating buoyant material in a joint research project with the Japan Agency for Marine-Earth Science and Technology, a leader in maritime research in Japan. An underwater research vehicle requires stable buoyancy, to prevent it from moving up or down, in order to maintain mobility when exploring the seafloor. As such, a floating buoyant material is necessary for providing the buoyancy to balance the weight of the underwater research vehicle. On this occasion, we have developed a high-strength, low-density material with a low specific gravity to absorb water pressure based on the depth of the exploration.

Our floating buoyant material is now being used to explore the deepest depths of the ocean in the Marianas Trench. This material must be able to withstand the more than 1 ton of pressure per square centimeter that occurs at depths of about 11,000 meters without breaking. Yokohama Rubber is committed to helping advance maritime research and development in Japan through the provision of its floating buoyant material.

### Deep sea compact unmanned underwater research vehicle ABISMO \*1



\*1 Image courtesy of: Japan Agency for Marine-Earth Science and Technology

### ■ "Medi-Air1" Air Cell Cushions for Preventing Wheelchair Pressure Sore

Air-cell cushion "Medi-Air" for wheelchairs is effective to stimulate blood circulation always maintains the condition to optimally disperse body pressure catering to each user's body contour or body weight by automatically regulating the air pressure through its sensory-and-control function at the base. Also, since its air-cells keep repeating a pinch-and-swell motion in an alternate way to prevent pressure sores, it stimulates blood circulation around humans' hip bones. The body pressure sensing, preventing hip bones from pressing directly on the wheelchair seat, also pressure sores are all operated automatically; users can customize air pressure setting by using remote controllers according to their preference.

This product has received a certification on October 1, 2010 from the Ministry of Health, Labor and Welfare in Japan under the category of completed parts of the seat position retention equipment; this is subject to the subsidiary for assistive device in accordance with Services and Supports for Persons with Disabilities Act in Japan. Currently, disabled persons are able to receive subsidies according to their purchased amount once they are approved by their Rehabilitation Counseling Office of their municipal government.

Medi-Air1 has also been certified as an approved rental device under Japan's nursing care insurance program. When its use is deemed necessary due to the condition of the user, Japan's nursing care insurance program will provide a subsidy for the rental of this product.

### Medi-Air1



#### ■ Significantly reduced environmentally hazardous substances used in PRGR golf clubs

Some weights used to adjust swing balance when assembling golf clubs as well as pigments used in golf club paints contain lead, which could negatively affect the environment after the golf club has been disposed of. In 2009, we made changes to the materials that we use in golf clubs to reduce the amount of lead. The golf industry does not have any specific standards or regulations in place concerning the use of hazardous substances. We were among the first in the industry to actively reduce our use of lead, which is an environmentally hazardous substance, and today all of our golf clubs contain reduced amounts of lead. We are firmly committed to taking proactive and sustained Group-wide measures to address environmental issues so that we can mitigate our impact on the environment during every phase of our product's life cycle, from production through to disposal, which includes not only the product itself but also raw materials, parts and the manufacturing process.

#### ■ Providing manifolds for the H-2A and H-2B rockets – Helping launch satellites for observing our planet's environment

Yokohama Rubber supplies manifolds and couplers used in the H-2A and H-2B rocket engines that are regularly launched into space by the Japan Aerospace Exploration Agency (JAXA). Manifolds used in the main LE-7z engine and two-stage LE-5B engine are made from stainless steel or inconel, a high heat resistance metal. We manufacture a broad range of manifolds and couplers that range in size from thick 8-inch diameter models to smaller more finely designed models.

In the fiscal year of 2012, a total of four H-2A or H-2B rockets are scheduled to be launched into space. Payloads for these rockets will include unmanned cargo transporter Konotori, which will take supplies to the International Space Station (ISS), and a satellite that will be used for observing changes in the planet's water environment, Shizuku. In this regard, our manifolds and couplers used to launch satellites for observing our planet's environment will help to advance research on global warming and to enable observations of our environment on a truly global scale.



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# Environmental Preservation

## Reduction of Greenhouse Gas Emission

[Guidelines](#)

[Achievements](#)

[Case Introduction](#)

### Guidelines

#### Targets

By positioning ourselves for various countermeasures for global warming, one of our most important issues to tackle, we are trying to develop our activities to realize a low-carbon society by developing approaches on carbon management such as deployment of co-generation systems (CGS), changing into clean fuel, and thorough energy-saving activities by establishing our Expert Committee.

#### Our Target for Environmental Activities

- Short-term reduction target value  
"Reduce GHG emission within our domestic group by 12% on the average compared to the benchmark year over the five years from fiscal year 2008 to fiscal year 2012."
- Mid-term target in 2020  
"By the fiscal year of 2020, try to reduce GHG emissions within our domestic group by 25% compared to our benchmark year."

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#### Financial Risks of our Businesses where Climate Change may Impact

##### 1. Critical Risks due to Regulations

At this moment, we should be able to achieve a reduction target which is 12% or more compared to our benchmark year in accordance with the Target Value of Japan (6% reduction) under the category of the Reduction of Greenhouse Gases as per Kyoto Protocol; in the event of any stricter target value being set by Post Kyoto Protocol (for example -25%), our critical issue would shift accordingly to achieve the revised rate.

##### 2. Critical Risks due to Physical Influence

Our company is producing and distributing seasonable commodities such as snow tires; amount of snowfalls or fluctuation of outside temperature owing to climate change might make our business performance rather unstable. Also, any climate change in the production areas of natural rubber may affect the steady procurement of raw materials.

##### 3. Other Critical Risks

There should be some cost involved to meet "the requirements from society" which is to reduce the burden of biodiversity arise from greenhouse gases. Also, there is another risk that the number of vehicles may be reduced due to any change in their ownership structure.

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### Activity Report in the Fiscal Year of 2011

▶ Corporate Governance and Compliance

▼ Environmental Preservation

Environmental Preservation

Environmentally-Friendly Products

#### Reduction of Greenhouse Gas Emission

Utilization of Natural Resources / Reduction of Industrial Waste

Management of Chemicals and Emission Provision onto Water, Air, and Soil

Biological Diversity

▶ Together with our Customers

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

## Financial Opportunities through Climate Change

### 1. Major Opportunities through Regulations

As the need for development and launching for "the commodities to meet environmental regulations" may grow rapidly, it might lead to great business opportunities as we go about the development of products to meet those requirements.

Example 1: Product development of regenerative energy such as solar energy generation, or product development and launching that can meet stricter regulations on low fuel consumption tires.

Example 2: Product development and launching of tires along with the ratio increase in electrical cars.

Example 3: Product development along with the ratio increase in electrical cars (fuel batteries, high-pressure hydrogen hose, etc.)

Example 4: Mandatory installation of tire pressure monitoring system along with the legal regulations of air pressure control of tires.

Example 5: Inner tire materials with lesser tire pressure leaks according to the legal regulations as to tire pressure control.

### 2. Major Opportunities through Physical Influence

Actualize the needs of marine related products due to water surface elevation and their product development.

Product development of sealing materials to alleviate temperature rises in the house, thermal insulation materials on the rooftop, etc.

Providing heavy equipment related to the construction to brace for flood (example: high-pressure hoses, conveyor belts or that kind, or tires for heavy construction vehicles).

### 3. Other Major Opportunities

Boost the sales of environmentally-friendly products (our commodities to alleviate climate change).

We can expect sales growth on a consolidated basis; alleviation and adaption to climate change is a worldwide issue and such business management should become global as well.

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## Participation in "National Campaign" to Prevent Global Warming

We are participating in a "National Campaign" (Challenge 25) to prevent global warming as a nation. As a member of Challenge 25, we post our President's message for both the Environment Month in June and Energy Saving Month in February; also, we are trying to promote corporate-wide Cool Biz and Warm Biz for our personnel to adopt. Also in the fiscal year of 2011 as well, we participated in the CO<sub>2</sub> Reduction / Light-Down Campaign; our 767 offices including our headquarters, tire distribution companies, our directly-owned tire shops, and our plants got involved with this light-down campaign.

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## Achievements

### Emission Volume of Greenhouse Gases within Domestic and Overseas Group Companies

Emission volume of greenhouse gases within the domestic Yokohama Rubber Group had exceeded our national reduction target as per Kyoto Protocol; 15.5% reduction which is the average of four years from the fiscal year of 2008 to fiscal year of 2011 in terms of actual emission coefficient\*2, whereas a reduction of 19.2% for adjusted emission coefficient\*3 by comparison with our benchmark year\*1.

\*1 benchmark year: basically it is the year 1990 except HFC, PFC, and SF<sub>6</sub> that are set as year 1995 in accordance with Kyoto Protocol.

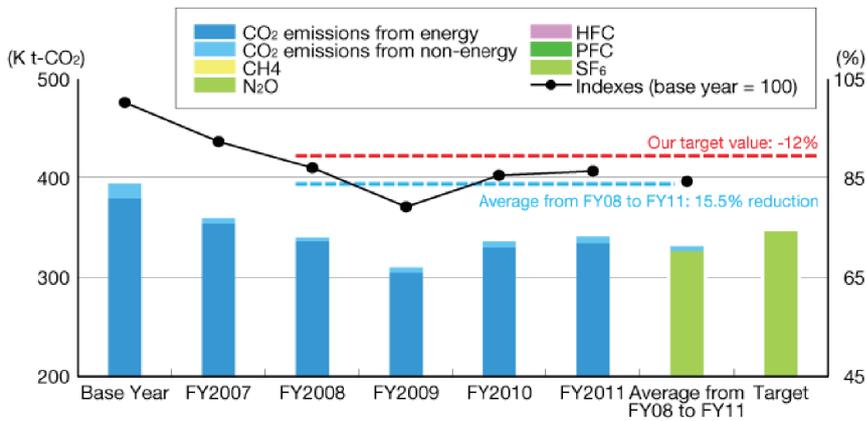
\*2 actual emission coefficient: the amount of CO<sub>2</sub> emissions in order for the electricity company to generate 1kWh of electrical power

\*3 adjusted emission coefficient: coefficient by reflecting Kyoto mechanism credits onto actual emission coefficient

\* Calculation method of greenhouse gas (GHG): we are complying with the "Manual for Greenhouse Gas Emission Volume Calculation and its Reporting" issued by Ministry of the Environment and Ministry of Economy, Trade and Industry. Incidentally, as for the calculation method of GHG through purchased electrical power in fiscal year 2010 and April to December fiscal year 2011, we are deploying emission coefficients and adjusted emission coefficients per appointed electricity company as announced by the Minister of the Environment.

\* The accounting period for the fiscal year of 2011 is from April to December. As such, data for the generated amount from January to March 2011 (fiscal year of 2010) has been added to this to provide a tally for the full calendar year.

### Domestic Yokohama Rubber Group's Total Greenhouse Gas Emission and Comparison with Benchmark Year (actual emission coefficient)

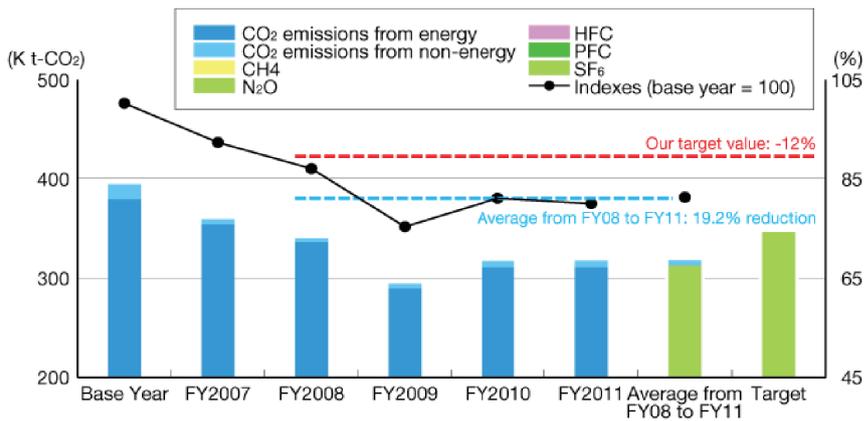


\* Targeted fiscal year is the average from FY08 to FY12 which is the same with Kyoto Protocol.

### Breakdown per Substance of Greenhouse Gas Emission Volume in FY2011

	%
	FY2011
CO <sub>2</sub> emissions from energy	98.14
CO <sub>2</sub> emissions from non-energy	1.76
CH <sub>4</sub>	0.02
N <sub>2</sub> O	0.08
HFC	0
PFC	0.001
SF <sub>6</sub>	0
Total Greenhouse gas	100

### Domestic Yokohama Rubber Group's Total Greenhouse Gas Emission and Comparison with Benchmark Year (adjusted emission coefficient)



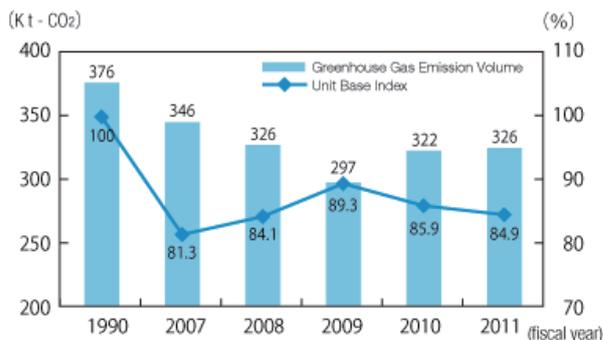
\* Targeted fiscal year is the average from FY08 to FY12 which is the same with Kyoto Protocol.

	%
	FY2011
CO <sub>2</sub> emissions from energy	97.99
CO <sub>2</sub> emissions from non-energy	1.89
CH <sub>4</sub>	0.02
N <sub>2</sub> O	0.09

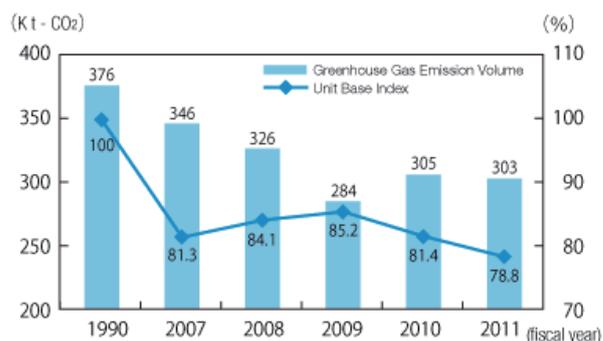
HFC	0
PFC	0.001
SF <sub>6</sub>	0
Total Greenhouse gas	100

The unit base per production amount in our domestic operation sites has improved by 1.2% compared to the fiscal year of 2010 as it resulted in 15.7% reduction compared to the benchmark year of actual emission coefficient. Meanwhile the adjusted emission coefficient has resulted in 21.2% reduction which is 3.3 of improvement compared to fiscal year of 2010.

### Our Domestic Production Sites' Greenhouse Gas Emission Volume and Unit Base Index of Production Amount (Actual Emission Coefficient)



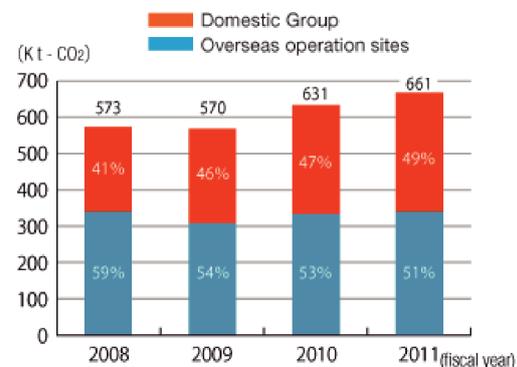
### Our Domestic Production Sites' Greenhouse Gas Emission Volume and Unit Base Index of Production Amount (Adjusted Emission Coefficient)



Our greenhouse gas emission volume in our entire group company both in domestic and overseas in the fiscal year 2011 resulted in 661,000 tons-CO<sub>2</sub>; the breakdown is 51% for Japan and 49% for overseas.

As for our overseas production sites in the fiscal year of 2010, we have expanded one of our operation sites which is natural rubber processing plant.

### Emission Volume of Greenhouse Gas both by Domestic and Overseas Group Companies



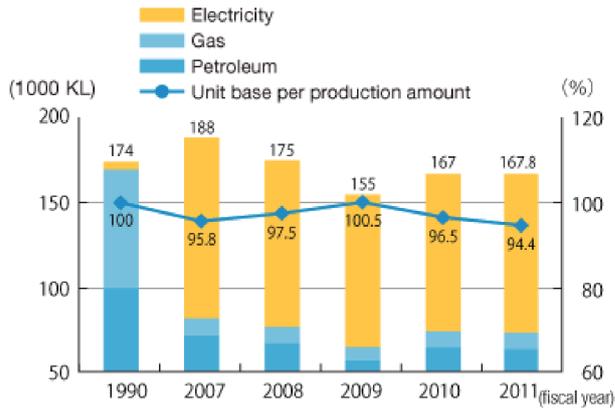
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### Addressing on Energy Saving by our Domestic Operation Sites

In the fiscal year of 2010, in order for our Global Warming Countermeasures Committee to go about fundamental technical innovation, we have practically started considering energy saving activities from the specification stage by newly forming two subcommittees from Technical Groups both from Tire and MB Groups. As for the energy base unit from our domestic operation sites in fiscal year of 2011, we were able to improve by

2.2% compared to the fiscal year of 2010 because of the recovery of production amount and the effect of our energy saving activities.

### Our Domestic Operation Sites' Energy Consumption Volume and Base Unit Index of Production amount



\* The accounting period for the fiscal year of 2011 is from April to December. As such, data for the generated amount from January to March 2011 (fiscal year of 2010) has been added to this to provide a tally for the full calendar year.

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### To meet trial emission trading scheme

We decided to take part in the trial emission trading scheme with our ten domestic production sites, and achieved to meet our target of the fiscal year of 2010. Our performance was inspected by the third party verification institution and examined by the jurisdiction bureau and executive office.

The purpose of our participation was to verify our structured mechanism to count GHG emissions. Our mechanism was proven to be fine.

Although the emission allowance was provided to us, we do not intend to trade (sell) our allowance, because the trade does not affect global CO<sub>2</sub> emission volume.

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### Addressing on CO<sub>2</sub> Emission Volume and Logistics during Transportation

Since Yokohama Rubber is classified as Known Shipper, we are conducting our reduction measures by establishing an aggregation system to manage CO<sub>2</sub> emission volume, energy consumption, and so on within the limit of property rights set forth by the law such as products, half-finished products, industrial waste, and so forth.

In order to address these, we are developing various reduction activities by targeting 1% improvement of the unit base per energy consumption every year; as for CO<sub>2</sub> emission volume, we are targeting a 25% reduction (compared to the fiscal year of 2006) by the fiscal year of 2020 as a long-term goal.

#### ■ Addressing on Tires Group

1) Advancement of modal shift

- Increasing adoption of ferries to transport tire products to the particular areas (Sapporo, Fukuoka, Sendai)
- Expansion of rail road routes

2) Addressing on effective transportation

- Improvement of loading efficiencies at factory and distribution center shipments, and increasing size of transportation vehicles
- Reduction of unnecessary transportations introducing proper volume of inventories and placement of transportation bases.

#### ■ Addressing on MB (multiple business) Group

Advancement of modal shift

- Expansion of rail road routes in remote transportation

CO<sub>2</sub> emission volume for a year from January to December 2011 amounted to 24,800 tons, reduced by 12% compared to the fiscal year of 2006.

Unit base of the energy improved by 3.2%, which fell short of the initial target improvement of 5% compared to the fiscal year of 2006, owing to the change of transportation routes by the impact of the Great East Japan Earthquake and the decrease of ferry transportations.

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## Streamlining of Transport Energy

As Yokohama Rubber Group's effort to reduce CO<sub>2</sub> emission volume and unit base of the energy in the fiscal year of 2011, we have made effort to promote expansion of modal shift, utilization of domestic vessel, and reduction of the transportation amount of industrial waste.

As for the expansion of modal shift, our Tire Group has increased by 3% for using freight ferries for product transportation to certain areas within the country (Sapporo, Fukuoka, and Sendai); meanwhile our MB Group has increased by 2% for freight with JR (Japan Railway) and freight ferries.

As for utilization of domestic vessels for the transportation of tire products, we made use of domestic vessels to transport snow tires from the Chubu region to Sendai; as for reduction of the transportation amount of industrial waste, we were able to reduce the transportation amount by 8% compared to the fiscal year of 2009 by working together with the Tire and MB Production Environmental Task Force.

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## Case Introduction

### Approach Cases in the Fiscal Year of 2011

We conducted various energy saving activities as we describe as follows.

As a result of those activities, we were able to reduce energy volume by about 3,900kl annually.

#### ■ Implementation of Regenerative Energy

We implemented some regenerative energy; we adopted a solar energy system of 10kW class for Hiratsuka Factory and 70kW class for our overseas plant in China in the fiscal year of 2010.

We are planning to introduce more regenerative energy system, but there was no case of implementation in fiscal year of 2011.

#### Solar Energy System Installed at our Hiratsuka Factory in Japan



#### Solar Energy System Installed at our overseas Plant in China



#### ■ Improvement on Energy Saving Sites through Lagging Material by Deploying Silicon Series Heat-Resistant Materials

Since 2007 at our Mie Plant, we have started to install some lagging materials to cover steam pipework called "Improvement at the sites – humble energy saving activities with minimal cost involved".

At our Shinshiro Plant, their plant-wide improvement effort on energy saving is going on by incorporating their own ideas by each workplace.

The total number of installation at our entire production sites has resulted in more than 64,000 sheets.



## ■ Expansion of Energy Saving Sites through Lagging Material by Deploying Heat-Resistant Materials

Since 2007, we have propelled energy saving activities to prevent heat release installing some lagging materials to cover steam pipework.

In 2011, we expanded the coverage and installed large sized machines. We measured on sites, had hard time to form them, which brought deep emotion to us when we completed.

### Before installment



### After installment



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## ■ Lagging Materials Made by our "Heat Tech Ladies"

We hardly encounter the size available from general lagging materials in the market which is catered to the size of each pipework of our facilities. The steps for production and installation of lagging materials will start from (1) measurement at the sites and actual materials → (2) cut thermal-insulation materials → (3) cut covering materials → (4) sewing operation by using sewing machines → and finally move on to (5) the installation of lagging materials at the sites. Compared to lagging materials available in the market, internal sewing operations reduce costs to a fifth, which is a great way of saving our costs.

Those operation works from (1) to (4) are done by a group of 4 ladies who primarily possess advanced technique of sewing machine operation called "Heat Tech Ladies" who are making various lagging materials with optimum sizes. The picture below is one of the ladies from "Heat Tech Ladies" who is skilfully operating sewing machine to make lagging material.

### Operation Scene by Using Industrial Sewing Machine



## ■ Installation of Lagging Materials

It is essential for lagging materials to be easily dismantled for facility inspection and maintenance.

In the past, thermal covers, etc. would crack when being dismantled during facility inspection and maintenance,

and are quite cumbersome to re-install; this is why we used to leave some of them as they are without installing any lagging materials. We have therefore made installation and dismantling work easy during facility inspection and dismantling by making use of Velcro tape.

### Appearance of Lagging Materials and Installation Work

#### Temperature Control

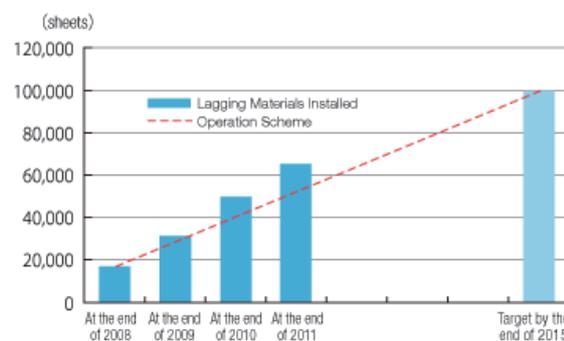


#### Pipework



### Achievements of the Number of Lagging Materials and Target

#### Installation Work



As of 31 December, 2011, we had installed about 64,000 sheets of thermal mat in our entire corporation.

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### Effect Estimation through Installation of Lagging Material

Setting flange size of 15A\* as our primary size for effect calculation, our standard effect calculation is where the surface temperature under 180°C will isolate the heat to 60°C on the surface of lagging materials.

The thermal effect of the entire corporation is estimated to be the reduction of approximately 2,560t-CO<sub>2</sub> with 64,000 sheets of lagging materials being installed based on 15A which is our primary size for conversion.



\*15A refers to the pipework length under JIS standard. The primary size will be 21.7mm as outer diameter with 68.1mm<sup>2</sup> as cross-sectional area.

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### Energy Saving Efforts at our Headquarters

Yokohama Rubber considers it is important to act for GHG reduction applied not just for our operation sites but to the entire group's buildings and offices to fortify our activities. Also, we endorsed the EEB Manifest (energy

savings at buildings/offices) required by World Business Council for Sustainable Development (WBCSD) which we participate in to realize sustainable development; as a starter, we are proceeding with our activities by setting up the below-mentioned targeted values for our headquarters buildings being set forth by our Global Warming Countermeasures Committee in February, 2011.

1. Setting fiscal year of 2009 as benchmark year, we will reduce GHG emissions by 25% in 2020.
2. In order to achieve this, we will facilitate various hardware aspects such as energy saving activities and measures by getting everybody involved, installing high-efficient lightening such as LED lighting, improvement on air-conditioning facilities, heat insulation construction of the premises, energy savings for OA machines, upgrading power machines into top-runner products and more.
3. Manage the progress of various activities on a regular basis by managerial levels

We have achieved 32.6% reduction with the GHG emission volume at our headquarters building in the fiscal year of 2011, compared to the benchmark year which is the fiscal year of 2009.

#### ■ Green drapes

We reared morning glories and bitter gourds outside of the office windows at each production site in Japan. The grown features of these plants after our effort of soiling and watering look like green drapes. The green drapes had an effect of cooling down inside the rooms, soothing our soul while working.

Green drapes outside



Green drapes inside



#### ■ Conversion of boiler fuels to gas in Onomichi Plant

In 2011, we converted a part of boiler fuels from A type heave oils to town gases. We plan to reduce CO<sub>2</sub> emission volume by 2,700 tons per year converting all boiler fuels to town gases.

Boiler equipment



Town gas meter



#### ■ Adoption of highly efficient motors

We could achieve 50% of energy saving effect by renewing highly efficient motors with the proper motor capacities in our production facilities.

Highly efficient motor equipment



## ■ Our activities in energy saving's month

We have carried a slogan that "Targeting to zero energy of no use when we do not operate production facilities" at our factories.

We started preparations three months prior to our energy saving's month in February. Our energy savings efforts working with production department, equipment maintenance department and administration department collected pieces of energy saving devices, which eventually ended up with substantial outcome.

Energy saving drill in the company



## ■ Cases of energy savings with equipment

1. Renewal to highly efficient lighting equipment and expanded adoption of LED lamps
2. Renewal to highly efficient heat pump air conditioners
3. Renewal to highly efficient power transformer
4. Increasing adoption of power inverters in fan pumps
5. Introduction of sprinkler systems for outdoor units of air conditioners
6. Adoption of eco-venders
7. Decrease of compressed air pressure in factories

## ■ Cases of energy savings with administration

1. Continuation and expansion of light down in the office
2. Implementation of coolbiz (cool business attire) from June 1 to September 30, warmbiz (warm business attire) from December 1 to March 31
3. Thorough light out when moving from desk and switching off of stand by office equipment electricity when going home
4. Operation of save energy patrol by the heads of departments in our energy saving month of February
5. Improvement of energy savings awareness by visualizing electricity consumption in offices
6. Expansion of energy savings arranging the improvement cases in database
7. Energy savings activities through reviewing manufacturing process (shortening the processing time, etc.)

## ■ Cases of dealing with electricity usage restrictions (15% reduction) within the area of TEPCO service

1. Cutting down on lighting
2. Introduction of power generators, engine compressors
3. Continuous monitoring of electricity used
4. Full operation of CGS (co-generation system) to maximize electricity generation
5. Reduction of pressure on industrial water
6. Stop equipment during the time zone of peak electricity consumption during the day
7. Alteration of holidays
8. Stagger office hours



# Environmental Preservation

## Utilization of Natural Resources / Reduction of Industrial Waste

[Guidelines](#)

[Achievements](#)

### Guidelines

#### Reduction Target of Industrial Waste

In our domestic operation sites, we have worked to achieve our target of Phase II (35% reduction compared to fiscal year of 1996) as our first priority.

#### Our Target for Zero-Emission

We have been working so that more of our operation sites can achieve total zero-emissions within our group both in our domestic and overseas operation sites.

### Achievements

#### Our Addressing the Reduction of Industrial Waste

#### Generated Amount of Waste Materials and its Unit Base

The generated amount of waste materials\*1 in the fiscal year of 2011 resulted in 14,720 tons, a 9% increase compared to the fiscal year of 2009; we were unable to achieve the target (35% reduction compared to fiscal year of 1996) of the period of Phase II (from fiscal year of 2009 to fiscal year of 2011). We were able to reduce the unit base of the generated amount of waste materials (per net sales) by 2.5% compared to the fiscal year of 2010, but the total generated amount of waste materials increased over the fiscal year of 2010. In phase III (2012 to 2014), which will begin in the fiscal year of 2012, we will continue with efforts to achieve the targets that were not attained during phase II. In this regard, our primary focus in the fiscal year of 2012 will continue to be on minimizing product scrap.

\*1 Refers to any waste materials as a result of normal production activities including everything such as industrial waste, general waste, and valuable resources. Incidentally other than that, there were 1,926 tons of waste generated by the disposal of some facilities that are excluded from our target management in the fiscal year of 2011.

#### Changes in Generated Amount of Waste Material and its Unit Base



- Activity Report in the Fiscal Year of 2011**
  - ▶ Corporate Governance and Compliance
  - ▼ Environmental Preservation
    - Environmental Management
    - Environmentally-Friendly Products
    - Reduction of Greenhouse Gas Emission
  - Utilization of Natural Resources / Reduction of Industrial Waste**
    - Management of Chemicals and Emission Provision onto Water, Air, and Soil
    - Biological Diversity
      - ▶ Together with our Customers
      - ▶ Together with our Employees
      - ▶ Together with our Business Partners
      - ▶ Together with our Shareholders and Investors
      - ▶ Together with our Society

\*This indicates the amount generated during the accounting years from 2007 to 2010 (April to March period). The accounting period for the fiscal year of 2011 is from April to December. As such, data for the generated amount from January to March 2011 (fiscal year of 2010) has been added to this to provide a tally for the full calendar year.

Fiscal year of 2011 (April to December)

Generated amount of industrial waste: 9,592 tons; general waste: 528 tons; valuable resources: 4,600 tons; unit base of generated amount: 53.35 kg / million yen

Fiscal year of 2010 (January to March 2011)

Industrial waste: 2,899 tons; general waste: 135 tons; valuable resources: 1,508 tons

## ■ Achievement of 100% Recycled Resources from Industrial Waste of our Domestic Operation Sites

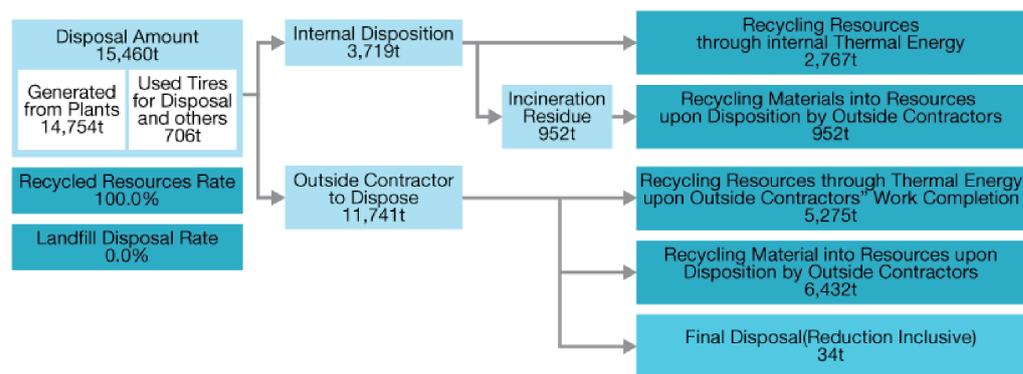
Since Yokohama Rubber has achieved Total Zero-Emissions\*2 in all our domestic operation sites in March 2006, we have been working on "100% recycled resources\*3 from our industrial waste".

As a result, we were able to achieve our target of "recycling 100% of our industrial waste into resources" in all our domestic operation sites in the fiscal year of 2009. We maintained this in the fiscal year of 2011 as well; we will continue to do likewise from the fiscal year of 2012 onwards.

\*2 Definition of total zero-emissions: not generating any direct landfill disposal at all.

\*3 Definition of 100% recycling resources is not to leave any disposal (= direct landfill disposal + incineration amount of the materials without any useful purposes) until the end.

### Flowchart of Industrial Waste Disposal (FY2011) \*From April to December



## ■ Promotion of Zero-Emissions

We are promoting activities aimed at achieving complete zero-emissions status at our overseas production sites in order to promote environmental activities that are consistent with our approach taken in Japan.

As a result of these efforts, thus far five of our production sites in Asia have achieved complete zero-emissions status. Although no additional production sites achieved complete zero-emissions status in the fiscal year of 2011, we investigated issues primarily at our production sites in the United States and promoted initiatives aimed at attaining this status. In the fiscal year of 2012, we will continue with our efforts to increase the number of production sites that have achieved the status of complete zero-emissions.

## ■ Management of Proper Disposition with Waste Disposal Contractors

In order to prevent any case of unlawful disposal such as unauthorized dumping, every year we are conducting onsite audits based on Yokohama Rubber's own auditing standard. We have conducted 87 cases of audits in the fiscal year of 2011 in total. As a result, we were able to confirm that all our contractors are handling our disposal in the proper manner.

## ■ Storage and Disposal of PCB-Containing Waste

We are properly storing and disposing of used machines that contain PCB such as transformers or condensers in accordance with our national legislation (Law Concerning Special Measures against PCB Waste).

In the fiscal year of 2011, we had completed the disposition of 64 machines in total that contain PCB in Mie Plants. From fiscal year of 2012 onwards, as for our machines that contain PCB registered in advance, we will continue to store them properly and wait for the notification of availability for disposal.

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## Consideration towards Raw Materials for Product

### ■ Proactively Utilizing Non-Fossil Raw Materials

We are promoting the use of non-fossil fuel derived raw materials in order to expand our use of natural resources. As part of this effort, we have significantly increased the amount of silica used to manufacture our tires.

## ■ Increasing the Ratio of Regenerated Rubber Used

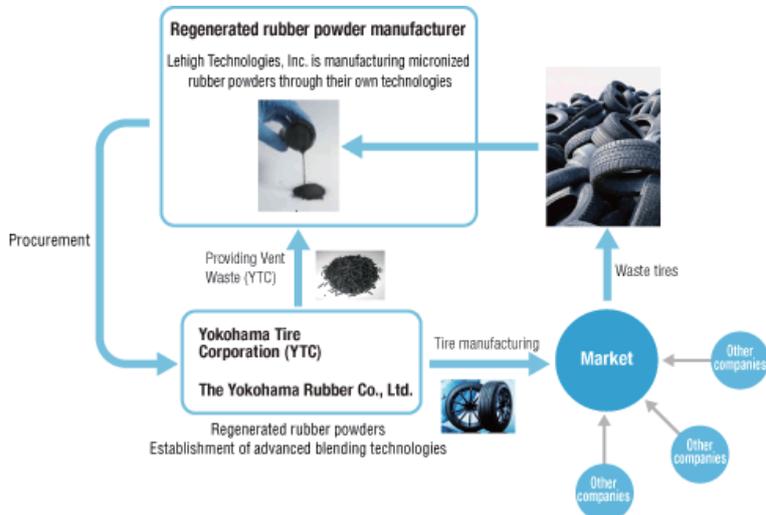
The Yokohama Rubber Group is actively working to effectively utilize recycled raw materials and increase the use of various forms of regenerated rubber in its tires.

Regenerated rubber powder is recycled rubber in a powdery state created by pulverizing waste tires, which are typically used mainly for heat. This regenerated raw material greatly contributes to resource conservation and resource recycling. Conventionally, it has been difficult to use regenerated rubber powder in tire applications because the particle size has been large, leading to a weaker physical property when combined with rubber. However, Yokohama Rubber has established a compounding technology that improves this physical property by blending rubber with finely ground regenerated rubber powder. We began mass producing tires with this blend of rubber and regenerated rubber powder in February 2009. Over the last three years we have expanded our use of regenerated rubber powder and as a result increased the ratio of regenerated rubber used in our tires by 2.2 times compared to 2008.

Following its use in Japan and the United States, today we are utilizing regenerated rubber powder at our production sites around the world in various compounds found in PC, TB and OR tread liners manufactured at our plants in the Philippines, Thailand and Vietnam.

Since first using regenerated rubber powder in the United States in 2006, the Yokohama Rubber Group now uses an amount equivalent to 357,000 waste tires, as calculated by a major regenerated rubber powder manufacturer. This is equivalent to saving some 28,000kl of crude oil and 89.8 million kWh of electricity. This also means that we have been able to reduce some 10,528 tons of CO<sub>2</sub> emissions into our atmosphere. Moving forward, we will continue to promote the manufacture of tires with regenerated rubber powder at our new or expanding overseas production sites as part of our commitment to effectively utilize recycled raw materials on a worldwide scale.

### Resources Circulation by Using Regenerated Rubber Powder



### Environmental Impact Reduction Effect from the Use of Regenerated Rubber\*1

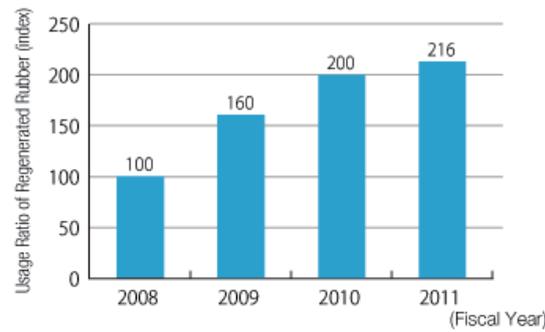
Helping Tire Companies  
Create the Greenest Tires Possible



**Dates**  
-----  
Cumulative:  
January 2006 to  
December 31, 2011  
  
4th Quarter 2011

Product	Waste Description	Landfill Avoidance
Pinvents & Rubber Powder (Salem, VA plant)	Yokohama Closed-Loop	} 357,178 tires* *passenger tire equivalents
Rubber Powder (Japan)	End-of-Life Tire	
<b>Oil Saved</b>	<b>28,000 kℓ</b>	
<b>Energy Saved</b>	<b>89,800,000 kWh</b>	
<b>CO<sub>2</sub> Emissions Saved</b>	<b>10,528 t</b>	

## Changes in Usage Ratio of Regenerated Rubber\*2



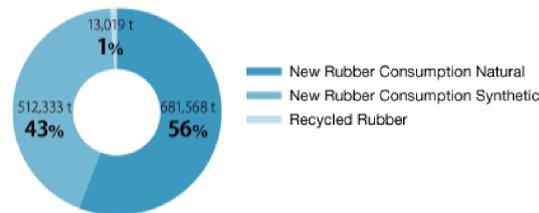
\*1: Data provided by Lehigh Technologies

\*2: Ratio of new rubber consumption based on results of acceptance inspections

## Ratio of Recycled Raw Materials being Used

In 2011, the usage ratio of recycled rubber for production operations of tire products was 1% of the entire tire industry.

## Consumption Figure of Raw Materials for Automobile Tires and Tubes in 2011



Source: data from the website of Japan Automobile Tyre Manufacturers Association

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## Addressing Cases in the Fiscal Year of 2011

### Addressing by our Retread Tire Business

#### Expansion of the Usage of Recycled Tires through Regeneration

All Yokohama Rubber's tire products for trucks and buses are designed to deploy retread tires. Currently, Yokohama Tire East Japan Retread Co., Ltd. and Sanyo Retread Co., Ltd. are expanding this business by replacing the ditched parts of used tires (tread part) with new ones, followed by providing them to their customers.

Currently the ratio of regenerated tires is about 21.3% of the tires for trucks and buses (source from Council of Regenerated Tires in Japan) but in the midst of growing demand for retread tire as recycled resources, we are trying to expand their sizes and attend to more diversified needs.

### Reuse of Used Vulcanized Bladder as Raw Materials

In 2007, we successfully commenced our internal mass production of used vulcanized bladder\*2; this is the very first case in our industry by establishing technologies for mass production of recycled rubbers to be reused as raw materials of tire products. Since recycled rubbers being produced through twin axis screw extruders which we deployed for treatment facilities are able to produce raw materials for rubber with relatively higher quality compared to conventional technologies, the great feature is they can be used as raw materials of tire products, etc. without compromising their quality.

In the fiscal year of 2011, we reused about 70% of the bladder rubber that was generated, and the usage amount increased by about 50% compared to the previous year. As for tire products, we are using them mainly for tires for passenger cars and part of the tire parts for trucks and buses. Also, regenerated rubbers available in the market are to be used more widely other than tire products such as a part of raw materials of industrial rubber products like conveyor belts; we are also considering their deployment for the tires of construction vehicles. We will continue to expand their usage by applying them to tire products and rubber products from now on.

\* Refers to sub-material made of rubber to be used during vulcanization process of tire manufacturing; it will be blown like a balloon to press tires from inside onto the mold.

## Bladder



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## Consideration towards Water Source

### ■ Total Water Usage, Usage of Reused and Recycled Water, and Water Circulation Rate

In the fiscal year of 2011, total water usage in our domestic operation sites resulted in 85,430,000 m<sup>3</sup>; the breakdown is 7,799 m<sup>3</sup> for the usage amount of reuse and regeneration and 7,440,000 m<sup>3</sup> for water withdrawal amount; the water circulation rate was as good as 91.3%.

The accounting period for the fiscal year of 2011 is from April to December. Data from January to March 2011 has been added to this to provide a tally for the full calendar year.

### ■ Total Water Withdrawal Amount

In the fiscal year of 2011, our total water withdrawal amount from water source resulted in 9,270,000 m<sup>3</sup> both in our domestic and overseas operation sites. The breakdown is 7,440,000 m<sup>3</sup> from domestic operation sites and 1,530,000 m<sup>3</sup> from overseas operation sites.

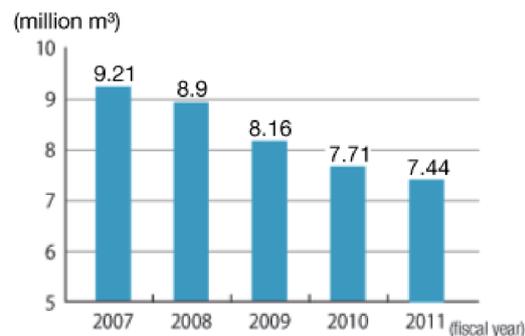
### ■ Addressing to Reduce Water Withdrawal by our Domestic Operation Sites

In the fiscal year of 2011, with anticipation of the recovery of production quantity we developed our activities by targeting 1.3% (100,000 m<sup>3</sup>) increase from 7,710,000 m<sup>3</sup>, which is the result in the fiscal year of 2010; consequently, we were able to achieve our target with 7,440,000 m<sup>3</sup>, which is a decrease of 5%. The breakdown of water withdrawal from water source in the fiscal year 2012 was 530,000 m<sup>3</sup> for clean water, 1,170,000 m<sup>3</sup> for river water withdrawal, 70,000 m<sup>3</sup> for industrial water, and 5,789,000 m<sup>3</sup> for well water withdrawal.

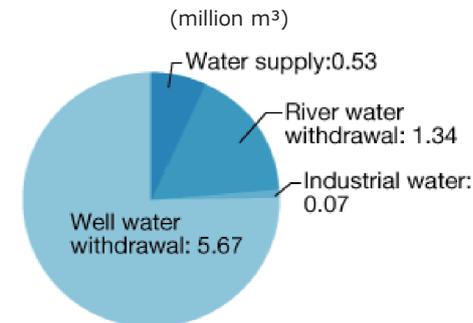
### ○ Primary Actions for Water Resource Preservation

1. Usage of the circulated facility cooling water
2. Collection of steam condensate from vulcanization process
3. Conduct overflow prevention of our reservoir tanks
4. Conduct water leak prevention measure of underground piping
5. Ensuring of daily inspection and patrol and repairing leaking points

### Changes in Water Withdrawal Amount at our Domestic Operation Sites



### Breakdown of Water Withdrawal Amount from Water Source in the Fiscal Year of 2011

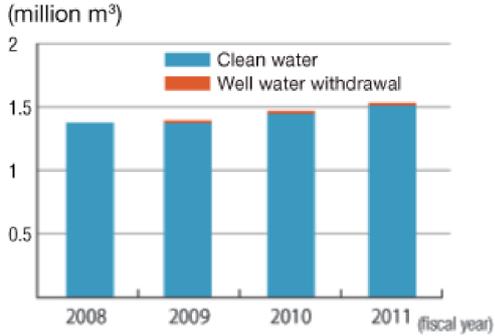


### ■ Addressing to Reduce Water Withdrawal by our Overseas Operation Sites

In the fiscal year of 2011, with anticipation of the increase of production quantity we developed our activities by targeting a 10% (150,000 m<sup>3</sup>) increase from 1,470,000 m<sup>3</sup>, which is the result in the fiscal year of 2010;

consequently, we were able to achieve our target with 1,530,000 m<sup>3</sup>, which is a decrease of 5%. The breakdown of water withdrawal from water source in the fiscal year 2011 was 1,529,000 m<sup>3</sup> for clean water and 1,000 m<sup>3</sup> for well water withdrawal.

**Changes in Water Withdrawal Amount at our Overseas Operation Sites**



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[Yokohama Rubber CSR Web site](#) > [Activity Report in the Fiscal Year of 2011](#) > [Environmental Preservation](#) > Management of Chemicals and Emission Provision onto Water, Air, and Soil



# Environmental Preservation

## Management of Chemicals and Emission Provision onto Water, Air, and Soil

[Guidelines and Supporting Systems](#)

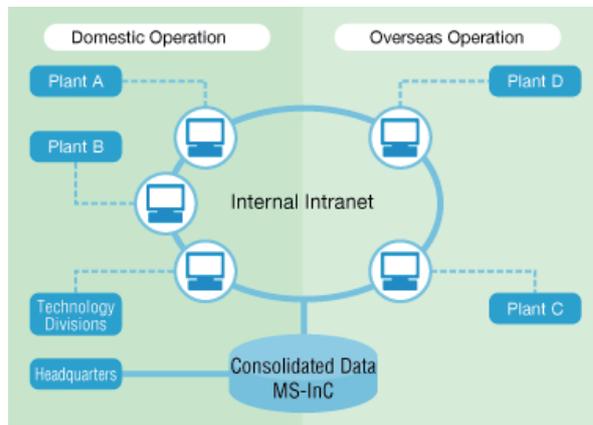
[Achievements \(Initiatives\)](#)

### Guidelines and Supporting Systems

#### Establishment of Chemical Control Supporting System

In order to structure exhaustive measurements as to chemical control both in domestic and overseas operation sites and cross-sectional chemical control supporting system, we have established our corporate-wide management tool common for the entire company (raw materials, sub-materials, and parts) and consolidated management system as to information on purchased items. We are trying to make further improvements on our database by adding our data earned from our consolidated management onto our internal chemical data's consolidated management system called "MS-InC". Also, through this database, we are controlling materials contained within our sub-materials that are used both by domestic and overseas operation sites.

#### Overview Diagram of MS-InC



As for our overseas operation sites, they are trying to structure their supporting system for non-containing guarantees of environmentally burdening materials (SOC) for their purchased sub-materials and parts (establishment of the non-containing evidence of SOC and development in MS-InC) in order to ensure of proper chemical control. For example, we were able to complete the examination at our overseas operation sites (6 sites) by going about our understandings of various issues on SOC management through self-evaluation and related activities for improvement which had started from the fiscal year of 2010. From now on, we will conduct the same measures for the balance of our overseas operation sites, aiming to complete this by March 2013. By doing so, we can work on the establishment of the system to maintain and improve the same level of SOC management of our domestic operation sites by applying it likewise to our overseas operation sites.

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### Achievements (Initiatives)

#### Reduction in Water Discharged and Enforcement of Water Quality Control

#### Activity Report in the Fiscal Year of 2011

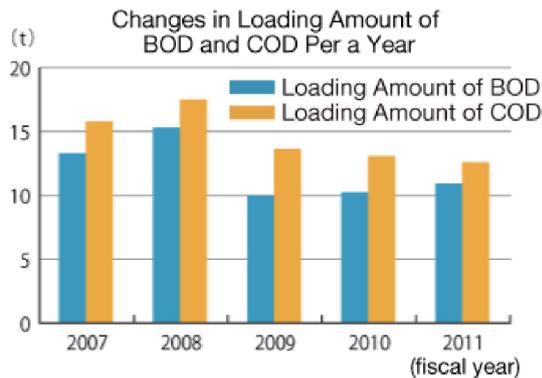
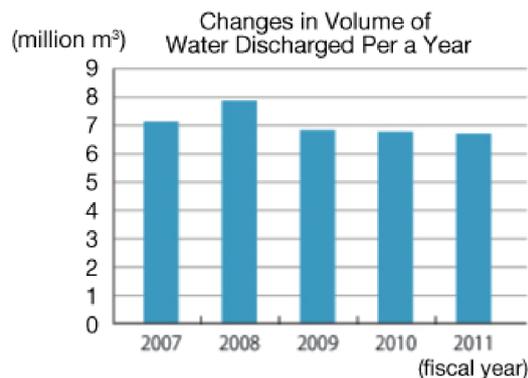
- ▶ Corporate Governance and Compliance
- ▼ Environmental Preservation
  - Environmental Management
  - Environmentally-Friendly Products
  - Reduction of Greenhouse Gas Emission
  - Utilization of Natural Resources / Reduction of Industrial Waste
- Management of Chemicals and Emission Provision onto Water, Air, and Soil**
- Biological Diversity
- ▶ Together with our Customers
- ▶ Together with our Employees
- ▶ Together with our Business Partners
- ▶ Together with our Shareholders and Investors
- ▶ Together with our Society

As for water quality control of discharging water, we are trying to enforce our management system by setting up our "Voluntary Set Parameter Value" which is stricter than the parameter set by the law. From fiscal year of 2011, we have newly started its operation by setting up a definition of environmental accidents, environmental troubles, any major environmental near-accidents, and environmental near-accidents. "Environmental Accident" refers to any incident that was picked up by media such as newspapers. There was no incident of "Environmental Accident" in the fiscal year of 2011. In any event where a level slightly exceeding the parameter set by the law is observed it is defined as "Environmental Trouble", whereas a "Major Environmental Near-Accident" refers the level of parameter exceeding our voluntary set value; we would immediately act on any corrective measures to conduct cross-sectional development to each operation site. Environmental troubles that occurred in the fiscal year of 2011 include a leakage of water-soluble paint at some plants, resulting in a slight overage of pH and oil content readings in sewerage reference values. This was reported to authorities and cleaned up using proper means. However, there were no environmental troubles leading to significant damage outside the company. During the 2011 accounting period from April to December there was only one water quality related environmental trouble, which involved the leakage of water-soluble paint. However, when adding the last quarter of the previous reporting period (January to March 2011), there were a total of three environmental troubles.

As for reduction of discharge water, in accordance with our reduction measures for water usage, we were able to reduce our water discharge by 51,000 m<sup>3</sup> compared to the fiscal year of 2010. Our Mie Plant is discharging water into the Hinokijiri River, our Mishima Plant into the Goten River, our Shinshiro Plant into the Noda River, our Shinshiro-Minami Plant into the Kuroda River, and our Ibaraki Plant into the Sonobe River. The average parameter of each plant was relatively low at 2.2mg/l for BOD density whereas 2.8mg/l for COD density; there was no impact on the river at a 10.9 ton s BOD loading amount and a 12.6 tons COD loading amount.

### ■ Definition of Terminologies

- Environmental Accidents
  1. An accident that causes significant damage outside the company and was covered in the newspaper or other news media.
  2. An accident that results in a government cease and desist order, such as improvement order or suspension of use order.
- Environmental Trouble
  1. A situation that results government warning or instruction.
  2. A situation where the company failed to meet a pollution regulation requirement.
  3. A situation where an environmental pollutant such as carbon, waste oil or solvent is leaked or emitted into the environment from a factory, resulting in minor pollution.
  4. A situation deemed as an environmental trouble by the company's environmental officer (General Manager of the CSR & Environmental Affairs Department).
- Major Environmental Near-Accident
  1. A near-accident in which environmental pollution was not caused outside the business site, but a liquid pollutant leaked or was at risk of leaking into the drainage canal or the street gutter connected to the drainage canal.
  2. A situation deemed as a major environmental near-accident by the company or site's environmental manager because it has been identified as an emergency situation in advance after it exceeded the predetermined environmental impact score set for each site.
- Environmental Near-Accident
  1. A minor leakage of a liquid pollutant or scattering of a powdered pollutant not considered as an environmental accident, environmental trouble or major environmental near-accident above.
  2. A situation where the leakage of a liquid pollutant or scattering of a powdered pollutant was about to occur or was anticipated to occur.



## Enforcement on Atmosphere Control

We are trying to enforce our management system by setting up our voluntary set parameter values in order to comply with various regulated values.

Since our fiscal year of 2010, we have newly commenced this operation by setting definitions of environmental accidents, environmental trouble, any major environmental near-accidents, and near environmental accidents. In the fiscal year of 2011 we made further changes to the definitions of these terms. We now consider cases that exceed voluntary set parameter values to be a major environmental near-accident and have established a policy to take corrective measures.

Incidentally, there were five exceeding cases of voluntary set parameter values in the fiscal year of 2011.

Also, we reviewed our voluntary set parameter values at some of our plants.

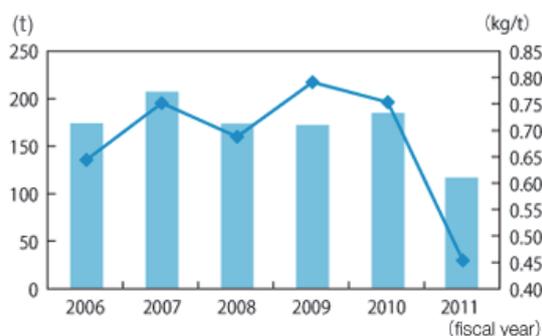
During the 2011 accounting period from April to December there was only one case where a voluntary set parameter value was exceeded. However, when adding the last quarter of the previous reporting period (January to March 2011), there were a total of five major environmental near-accidents.

### Discharging Volume of NOx and SOx, plus Production Quantity per Base Unit

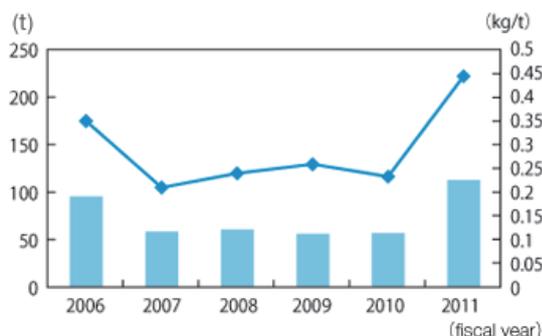
We carefully manage the concentration of our NOx and SOx emissions to fully comply with parameters set by the law, and there was no case where we exceeded our voluntary set parameter value.

In the fiscal year of 2011, we were able to reduce our NOx emissions compared to the fiscal year of 2010, but SOx emissions increased year-on-year. In addition, the reason for the increase in SOx emissions was a higher analysis value of SOx concentration seen in regular measurements.

#### Loading Amount of NOx Emission and its Unit Base



#### Loading Amount of SOx Emission and its Unit Base



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## Emission of Ozone-Depleting Substances

We used to deploy as a metal cleanser chlorofluorocarbon-141b (HCFC-141b), which is controlled under Montreal Protocol as ozone-depleting substance; as such we had completely abolished using it effective from September 2007 by making some improvements with our cleansing methods. Since then, we no longer use or emit any ozone-depleting substances anymore.

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## Our Measurements on Contaminated Soil

We are regularly conducting water quality inspections by installing a shallow well for observation purposes in seven of our domestic operation sites (for our Nagano Plant, we are conducting direct soil analysis as they are located high in the water vein, whereas for our Onomichi Plant, we are conducting the analysis of leachate as they are located on the land reclaimed from the sea). In the fiscal year of 2011 as well, we have cleared all the standards as to controlled substance according to soil contamination measurement law. Also, even though our Hiratsuka Factory had exceeded the standard on chlorine-organic solvents in the past, currently they are still continuing with the cleansing treatment through aeration; now their density of underground water is below standard for the underground water environment.

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## Our Measurements for Dioxide

Our Mie Plant has a waste incinerator is equipped and they are regularly conducting measurement of its density once a year.

They have cleared the regulated parameter in the fiscal year of 2011 as well.

### Result of Measurement for Dioxide at our Mie Plant

Office Names Facility Names	Items	Regulated Parameters	Value of FY2011	Legal Names
Mie Plant	Gas Emission (ng-TEQ/m <sup>3</sup> N)	10	0.0010	Act on Special Measures against Dioxins
Incinerator	Water Discharge (pg-TEQ/L)	10	0.0010	
	Residue in the Incinerator (ng-TEQ/g)	3	0	
	Scattered Ash (ng-TEQ/g)	3	0.18	

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## Measurement for Legal Regulations

### ■ Measures on Revised Chemical Substance Control Law in Japan

In lieu of the revision of the Japanese Chemical Substance Control Law\*1, it became compulsory to register any chemical substance being manufactured or imported at more than one ton annually. As part of our efforts to comply with this change, we plan to make our filing on the quantity and application of chemical substances being imported by the end of June.

\*1 The Japanese Chemical Substance Control Law refers to legislation related to the control over screening and manufacturing of chemical substances (from 2011 we have commenced our registration of existing chemical substances).

### ■ Our Measures for Chemical Substances under European Directives

We are currently addressing as to our measures on REACH/CLP mainly by our REACH Sub-Committee which is a cross-sectional organization to comply with the REACH Directive\*2 and CLP Directive\*3 in the EU.

As for chemical substances subject to registration under the REACH Directive (two kinds), we completed their registration in November 2010. Meanwhile, some of the approved substances such as DEHP (diethylhexyl phthalate) and BBP (butyl benzyl phthalate) were also subject to replacement in the light of their risk management aspect; we have completed their replacement with alternative substances excluding certain specifications. Also, we are conducting surveys to ensure our supply chain suppliers intend to register required substances stipulated under the REACH Directive per each raw material, by following up to make sure they have been duly registered according to the survey result. From now on as well, we will work together with our suppliers to ensure our compliance with the REACH Directive.

Additionally, we are investigating the amount of SVHC\*4 contained in our products and are taking regular measures to comply with disclosure requirements.

As for our measures for the CLP Regulation, we have completed our registration for required substances by compiling distribution quantity, purpose of usage, and substance information related to any contained chemical therein (CAS number, content percentage, etc.) as per product number being sold in Europe.

\*2 The REACH Directive refers to regulations as to registration, evaluation, approval, and control over chemical substances in Europe

\*3 The CLP Regulation refers to regulations as to classification, labelling, and package as to substance and blended materials in Europe.

\*4 SVHC: An acronym for substance of very high concern as defined in Article 57 of the REACH Regulation.

### ■ Our Measures for ELV (Heavy Metals) Directives

By working together with our suppliers, we have been trying to procure raw materials, sub-materials, and parts which do not contain any heavy metals such as lead, hexavalent chromium, cadmium, and mercury, major chemical substances (SOC); ultimately, we intend to totally abolish the usage of these.

Continuing from fiscal year of 2007, in the fiscal year of 2011 we have completed the process of non-containing guarantee of those four substances for our newly deploying brands. Also, we are trying to strengthen our SOC management supporting system under the operation of our internal management standard towards both of our domestic and overseas operation sites.

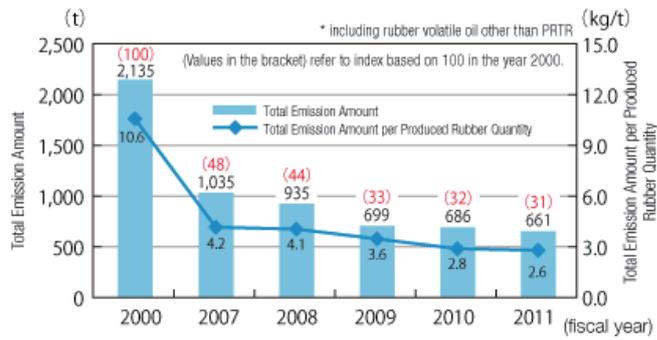
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## Reduction of VOCs

As a result of our effort to reduce volatile organic solvent (VOCs) which is the major substance as to emission amount, we were successfully able to reduce by 3.7% compared to the previous fiscal year while 2.7% of production increase in the fiscal year 2011. This is because of our deployment and operation of solvent collection facilities, plus our operation to collect a part of VOCs which we used to emit in the atmosphere in the

past; we will continue to promote the reduction of emission amounts from now on.

### Total Amount of VOCs Emission and Base Unit of Production Quantity



The bars above refer to the total emission amount (emission amount + shifted amount) expressed by the unit [ton].  
The line above refers to the emission amount per produced rubber quantity expressed by the unit [kg/ton].

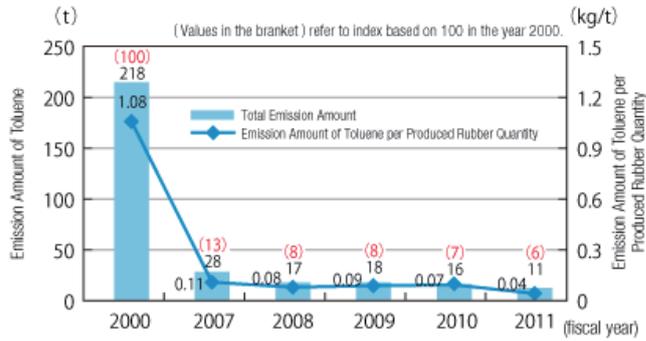
- Calculation formula of unit base = total emission amount / produced rubber quantity
- Including rubber volatile oil other than PRTR (Pollutant Release and Transfer Register)
- Total Emission Amount = Emission Amount + Amount to be Disposed as Industrial Waste (equivalent to shifting portion under PRTR)

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### Reduction of Chemical Substance under PRTR\*

In the fiscal year of 2011, the total of emissions and shifting amount of chemical substances under PRTR was 157.5 tons, which was a reduction by 56.0% compared to the fiscal year of 2000. Especially toluene, which used to be the majority of our emissions to the atmosphere, was reduced by 95.0% compared to the fiscal year of 2000.

### Emission Amount of Toluene and Production Amount per Base Unit



\* PRTR refers to a system to register emission and shifting amount of chemical substance. This is a system to understand the source and emission amount of any toxic chemical substances followed by announcing them to the public.

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# Environmental Preservation

## Biological Diversity

[Guidelines](#)

[Achievements](#)

### Guidelines

#### Formulation of Guidelines on Biodiversity

The "Basic Law on Biodiversity" was announced and became effective in June 2008, followed by the "Biodiversity Declaration – Action Guidelines and its Guidance" by the Japan Business Federation, and the "Guidelines of Public Participation on Biodiversity" that announced by the Ministry of the Environment in Japan in the following year of 2009. Since Yokohama Rubber is in the same line of those concepts, we have established "Yokohama Rubber's Guidelines on Biodiversity" in order to facilitate corporate-wide approaches on biodiversity.

#### Basic Guidelines

We are running our business by heavily relying on the grace given by nature. We should pass on this rich nature to our future generations by addressing the preservation of biodiversity and utilization of sustainable biological resources through our business activities, whilst recognizing the fact that the "linking diversified lives equals to biodiversity", which is the basis of this grace, has been dwindling rapidly on a global scale lately.

#### Action Guidelines

##### 1. Recognition as a Management Issue

Since Yokohama Rubber is directly using biological resources and conducting business activities that may affect biodiversity, we recognize the importance and risks towards the grace of nature. Therefore we will address the preservation of biodiversity from a long-term perspective.

##### 2. Participation by All Employees

We will raise the awareness of our employees in regards to the grace of nature. All our employees will contribute to the preservation of biodiversity both at work and their local communities.

##### 3. Determine the Effect on Biodiversity and its Reduction

We will determine the effect that our business activities may have on biodiversity, and shall thereby try to avoid or minimize such effect.

##### 4. Preservation of Biodiversity through the Supply Chain

In order to preserve biodiversity, by understanding that it is important to be considerate as early as the stage of resource extraction, we shall contribute to the preservation of biodiversity at resource mining sites through cooperation with relevant personnel of the supply chain.

##### 5. Sustainable Usage of Biological Resources

We will work on any sustainable usage of biological resources by gathering knowledge with regards to biodiversity, and also through technological development, innovation of design and production, or approaches to biodiversity in the value chain.

##### 6. Information Sharing and Communication

We will work on the information gathering or social requirement as to preservation of biodiversity; we shall thereby disclose our activities and achievements proactively to facilitate dialogue and tie-ups with our stakeholders, such as customers, local communities, NGOs, and the government.

## Activity Report in the Fiscal Year of 2011

▶ Corporate Governance and Compliance

▼ Environmental Preservation

Environmental Management

Environmentally-Friendly Products

Reduction of Greenhouse Gas Emission

Utilization of Natural Resources / Reduction of Industrial Waste

Management of Chemicals and Emission Provision onto Water, Air, and Soil

### Biological Diversity

▶ Together with our Customers

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

## Addressing the Preservation of Biodiversity

Yokohama Rubber has started our preliminary exploration of the surrounding area of our offices (15 offices in domestic and 15 offices in overseas) in order to ensure that none of our activities are affecting biodiversity in those areas. During this exploration work, we intended to check whether there is rich nature near our offices, then shortlisted some as adjacent to areas with richer nature. From now on, we are considering proceeding with our necessary approaches by studying the effect on biodiversity of such surrounding areas, followed by making our objectives clear. From April 2011, we have started our exploration of the current situation for the midstream and downstream of Miyagawa River, and on the riverside of Hinokijiri River. We are planning to conduct explorations three times in total by December 2011.

Our company is currently in the middle of the "YOKOHAMA Forever Forest" Project which is to plant about 500,000 trees in our operation sites both domestically and overseas based on the potential natural vegetation. This is done together with our residents in local communities under the guidance of Dr. Miyawaki, Professor Emeritus at Yokohama National University, by 2017 to commemorate our company's 100th anniversary of establishment. In order to confirm whether this "YOKOHAMA Forever Forest" project is generating richer forests in terms of biodiversity as well, some of our offices have started exploration of the birds inhabiting the forest. Also, our company is conducting business activities by utilizing biological resources, metal and mining resources primarily as natural rubber. Among them, natural rubber is produced in the farms of South East Asia which is considered to be impacting the biodiversity of those areas. The majority of those rubber farms are small-scale and usually run as a family business; we are procuring from them through processing companies or several intermediary distribution companies. As such, it is not easy for our company to get involved with those farms that belong to the top of supply chain to contribute to the preservation of biodiversity, but we would like to do our best as far as our authority can prevail from a long-term and global perspective in order to contribute to the preservation of biodiversity.

### ■ Current Status of Protected Areas and Surrounding Areas

We have conducted our explorations at our operation sites (15 from domestic, another 15 from overseas) to see whether they are adjacent to the areas rich in biodiversity. Our exploration method is as follows: first we conducted a visual exploration of the environment near our offices by using Google Map and aerial photos from Google Earth, followed by individual exploration for those offices with rich nature (eg. greenery, river) to a certain degree. The current status of the environment adjacent to our offices per location (outcome of simplified exploration) is as follows. You may wish to refer to the description below as for the classification type.

#### 1. Mie Plant

Our Mie Plant is located alongside the Miyagawa River. The Classification Type of Environmental Standard as to contaminated water quality for the Miyagawa River is the most stringent Classification Type AA, applicable to water area requiring preservation of the natural environment. Mud flats and seaweed beds still remain in the outlet area; this is a place extremely rich in nature where loggerhead turtles may lay eggs or little terns may breed; both are endangered species under RED by the Ministry of the Environment in Japan. Its upstream possesses the forest of Ise Shrine. In order to review our consideration towards biodiversity there, we have conducted another exploration by inviting some experts of that field. We conducted it first by confirming what kind of consideration is needed. Before our first exploration took place, we reported to the governmental agencies such as the prefectural government and city hall, followed by conducting briefing sessions towards local associations of forest, fishery, and local residents.



## 2. Shinshiro Plant, Shinshiro - Minami Plant

Our Shinshiro Plants are located alongside the Toyokawa River. The Toyokawa River is a medium-sized river with the Hokusetsu Mountainous Region as its source with numerous rapid flows and brinks in its upstream; you can even find species of catfish inhabiting it (under RED by the Ministry of the Environment in Japan, and also specified as a National Natural Treasure). The Classification Type of Environmental Standard of the Toyokawa River is under Classification Type either AA or A which is applicable to water areas requiring preservation of the natural environment. From the Furi Dam in the upstream as far as the downstream is classified as Biology B.



## 3. Nagano Plant

Our Nagano Plant is located alongside the midstream of the Tenryu River. It is located in Inadani Valley, the central point between the Central Alps and Southern Alps; adjacent greenery can be utilized as a stopping point for birds flying from both Alps. The Tenryu Koshiu Water System Prefectural Park and Nobeyama Natural Park are both in the area, which is a Local Environmental Preservation Area. The area of the midstream of the Tenryu River is designated as Classification Type A for Environmental Standard.

## 4. Yokohama Tire East Japan Retread Co., Ltd. – Hokkaido Plant

Their adjacent "Utonai Lake and Surrounding Wetland" was the first wet bog designated by the Wild Bird Society of Japan in 1981 as Sanctuary, also being designated as a National Beasts and Birds Preservation Area in 1982, followed by being designated as a registered wetland under "the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) in 1991. Currently, four Rangers are stationed full-time from the Wild Bird Society of Japan.

"Utonai Lake" is a fresh water lake 9 km in circumference, 275 ha in area, 0.6 m in average depth; its entire area for preservation including the surrounding wetland is approximately 510 ha. It is a lagoon visited by more than 20,000 winter birds flying in spring and fall, such as Geese, Ducks, and Swans. Other than those birds, there are also some animal inhabitants like Red Fox, Yezo Deer, chipmunks and more. This is also a place where Bean Geese, species under RED by the Ministry of the Environment in Japan, fly in to visit. Incidentally, the upstream of the Yufutsu River is designated as Classification Type AA.

## 5. SAS Rubber Company (SAS)

Located by facing the Mentor Marsh State Nature Preserve; Lake Erie which is one of the Great Lakes, and also the Headlands Beach State Park via Grand River about two kilometers distance apart.

## 6. Y. T. Rubber Co. Ltd. (YTRC)

Y.T. Rubber is surrounded by rubber tree plantations that are mainly operated as small farming businesses. Rubber plantations are a cultivated ecosystem that fosters biological diversity in much the same way as a rice paddy would in Japan. Natural rubber in Thailand has great potential for playing a role in biological preservation in the country.

## ○ Description as to Classification Type of Environmental Standard with Regards to Living Environment Preservation in the River

There are six Classification Types designated by the Ministry of the Environment in Japan as to environment standards with regards to living environment preservation in the river from AA, A, B, C, D, to E. For example, the description of AA and A is as follows.

		BOD (Biochemical Oxygen Demand)	DO (Dissolved Oxygen)
AA	In accordance with the First Grade of Tap Water, Nature Environment Preservation, plus any items stipulated under category A or below.	1mg/l or less	7.5mg/l or more

A	In accordance with the items under Second Grade of Tap Water, First Grade for Fishery, and Water Bathing.	2mg/l or less	7.5mg/l or more
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Also, as environmental standard in the light of adaptability of the inhabitants of water creatures in the river, there are four classification types which are Biology A, Biology Special A, Biology B, and Biology Special B. For example, the descriptions for Biology A, Biology Special A, and Biology B are as follows.

Biology A	Water area inhabited by water creatures that relatively prefer low temperature regions such as char, salmon, salmon trout, and so on, and their accompanying microorganisms.
Biology Special A	Among water areas of Biology A, water area needing special preservation as egg-laying sites (farm) or nursing ground for baby fish of water creatures indicated in Biology A thereof.
Biology B	Water area inhabited by water creatures that relatively prefer high temperature regions such as carp, gibel, and so on and their accompanying microorganisms.

### ■ Features of Value Chain of Rubber Manufacturing Industry

As we utilize numerous kinds of raw materials (major categories: natural rubber, synthetic rubber, carbon, various blending agents, fibres, and metals), our supply chain is spreading all over the world, mainly overseas. The greatest impact to be made on biodiversity is "natural rubber" and "metals". Natural rubber is being produced from the farms that are being established by developing the areas rich in biodiversity of Southeast Asia. Metals are being extracted in the mines from developing countries.

### ■ Supply Chain of Natural Rubber

Regions of Southeast Asia where natural rubber is being produced (Thailand, Malaysia, Indonesia, and so on) are rich in biodiversity; but at the same time they almost match with "Biodiversity Hotspots", i.e. areas with high risk of destruction; it requires consideration towards nature preservation when conducting development and procurement in those areas.

The supply chain of natural rubber consists of (1) farms, (2) processing companies, (3) several intermediary distribution companies, (4) trading companies, and so on; the majority of the capital for establishment of such farms comes from local conglomerates or English companies from Malaysia. The structure of the farms is Small Holders (tenant farming) in Thailand, and mainly plantations in Indonesia and Malaysia; this type is currently spreading into Laos, Myanmar, and so on as well.

The majority of the processing companies and intermediary companies upstream consist of local capital mainly held by Chinese Immigrants. Due to their stringent concern for interests it is very difficult for foreign capital to intervene; it is therefore not easy to secure traceability of raw materials or apply development of our CSR procurement.

### ■ Bird Watching Initiative at the Hiratsuka Plant

The Hiratsuka Plant has been involved in tree planting activities as part of the Yokohama Forever Forest Project since 2007.

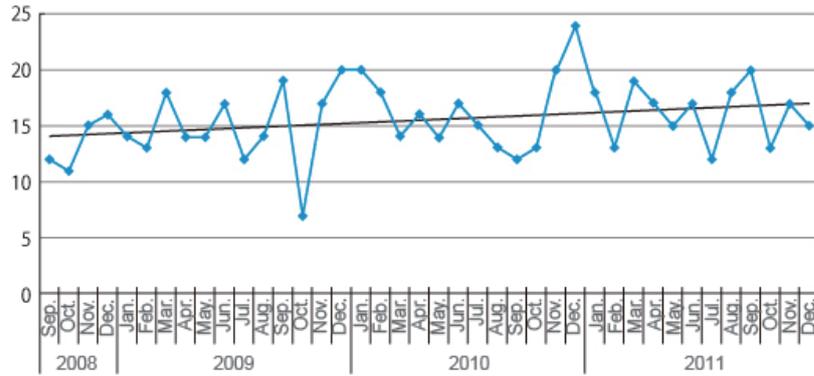
Beginning in 2008, the Hiratsuka Plant began monitoring changes in wildfowl that visited these newly grown forests. These activities involve monthly bird watching events led by employee members of the Hiratsuka Bird Watching Club.

Bird watching events are also presided over by members of Komatan, a bird watching club active in the Hiratsuka and Oiso areas. From March 2012, the Hiratsuka Plant became a corporate member of the Wild Bird Society of Japan as part of an effort to expand the scope of its activities.





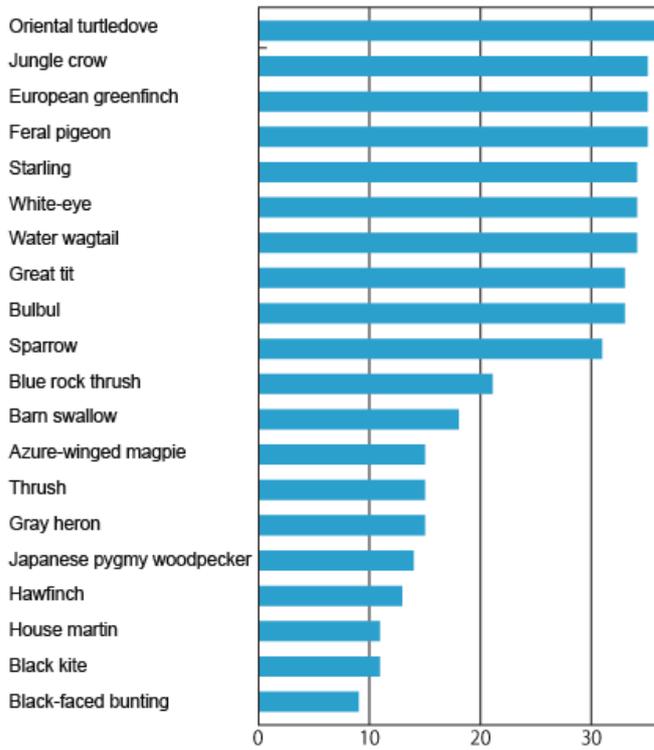
Number of birds spotted



Overall there has been an increase in the number of birds spotted. This number was small in the winter of 2011 compared to other years, but overall the number of birds spotted throughout Japan was small during this period.

**Top 20 bird species spotted (Sept. 2008 to Aug. 2011)**

### Bird Watching Initiative at the Hiratsuka Plant



36th bird watching event shows that oriental turtledoves can be spotted at each event

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### Initiatives in the Fiscal Year of 2012

Starting in the fiscal year of 2011 we have been moving forward with greater initiatives to better manage the water quality of effluent released into rivers.

As part of our initiatives in the fiscal year of 2012, we conducted a biological diversity survey in the Miyagawa River watershed near our Mie Plant. In addition to conventional water quality management, we began a biological diversity initiative that surveys the ecosystem for aquatic organisms, river flora and wildfowl. Production sites besides the Mie Plant are also continuing to take part in clean-up activities held on local rivers together with people from the local community.

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## ○ Together with our Customers

### Guidelines

#### Fundamental Policy on Customer Satisfaction

We contribute to society by planning, designing, producing, and selling attractive products for the satisfaction of our customers while maintaining a quality assurance system in all of our processes, including service. To this end, we will conduct systematic activities to ensure that all the basic steps in our quality assurance activities function properly.

#### Establishment of CSR Council and Consistent Company-wide Quality Assurance Activities

In 2012, we changed to our CSR and environmental promotion framework, the CSR Council is now also responsible for deliberating quality assurance initiatives for the entire company, in order to implement the activities throughout the company.

In order to achieve this, we plan, design, produce and sell the attractive products that satisfy our customers, while enhancing our quality assurance system at all process by adopting the company-wide guidelines.

▶ Assurance of the Safe Tire Products

▶ Assurance of the Safe MB Products

▶ Communication with our Customers (in order to select our products correctly)

## ○ Activity Report in the Fiscal Year of 2011

▶ Corporate Governance and Compliance

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### ▼ Together with our Customers

Assurance of the Safe Tire Products

Assurance of the Safe MB Products

Communication with our Customers ( in order to select our product correctly)

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## Assurance of the Safe Tire Products

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### Guidelines

#### Basic Notion of the Activities for Quality Assurance

The basic notion of our quality assurance activities at the Tire Group is expressed by our Tire Group President under the "Quality Guidelines" in our quality manual in accordance with Yokohama Rubber's Corporate Philosophy; "We will enrich people's lives and contribute to their happiness and wellbeing by devoting our wholehearted energies and advanced technologies." We are continually working on our daily operation with quality assurance based on these quality guidelines.

#### Quality Guidelines

1. We will continually provide quality products so that our customers from all over the world can purchase with confidence followed by their sense of satisfaction. We will thereby grow as a corporation and contribute to society by maintaining proper profits through not just customer satisfaction, but also winning their sense of trust afterwards.
2. We will continue to make improvements on our activities of the entire process of Tire Group in order to meet our customers' requirements, as well as to comply with the entire regulations related to all the products we provide, plus any requirements of the quality management of ISO9001 and ISO/TS16949 by aiming for the establishment of even better corporate structures.
3. In order to realize these quality guidelines, each division will set forth their own quality targets, review their status, followed by ensuring their achievements.
4. We will get all our relevant directors and employees thoroughly familiarized with these quality guidelines.

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### Achievements

#### Our Approaches for Quality Assurance

#### Our Approaches for Customer Service

We swiftly share the product information given by our customers to the respective sections in our company. We always develop our business activities to meet our customers' expectations, promptly solving issues indicated by our customers coordinating with our related sections.

#### Flow Chart of our Customer Feedback and its Notification

### Activity Report in the Fiscal Year of 2011

▶ Corporate Governance and Compliance

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▼ Together with our Customers

#### Assurance of the Safe Tire Products

Assurance of the Safe MB Products

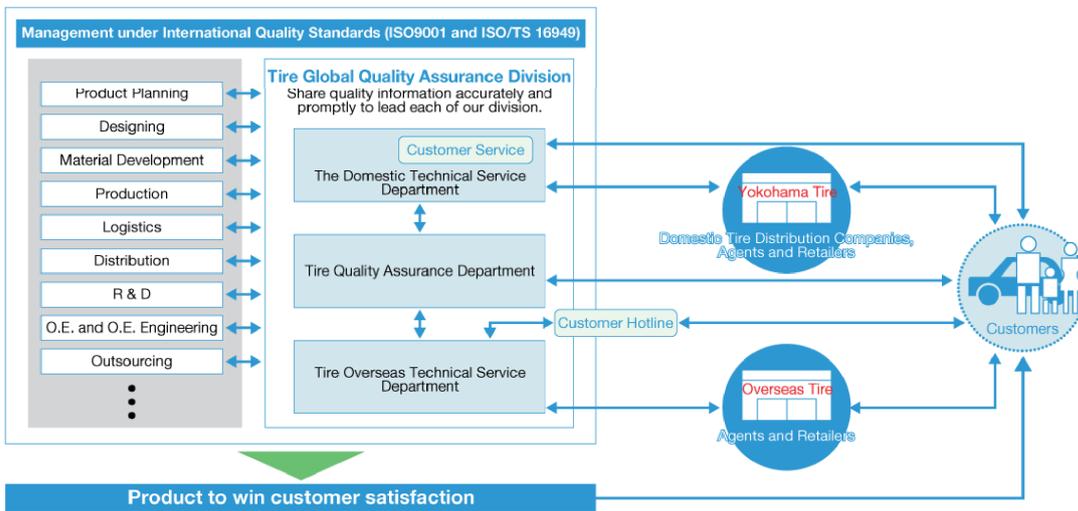
Communication with our Customers ( in order to select our product correctly)

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society



Thin arrows in the diagram refer to information flow; the thick arrows refer to the providing flow.

## ■ Activities for Quality Assurance

### 1. Approaches for ISO9001/TS16949 (Establishment of Quality Management System)

The basis of the supporting system of quality assurance in automobile industry is to comply with ISO/TS16949. This is the quality management system standard required by major automobile industry which is a prerequisite in order for us to develop our various businesses on a global scale. So far, our three domestic plants, plus four plants overseas in which tires for passenger cars, trucks, and buses have obtained preceding certifications are manufactured; we are about to expand this on a global stage.

Also, we are proactively facilitating so that our managerial level of supervisors of each division can obtain qualification as internal auditor; we have newly registered 195 personnel in the fiscal year of 2012 through our various training sessions and seminars.

### Status of Certification Obtaining as to International Quality Standards (the Latest Year/Month for Renewal)

		ISO9001	ISO/TS16949
Domestic	Mishima Plant	Jan. 2010	Jan. 2010
	Shinshiro Plant	Jan. 2010	Jan. 2010
	Mie Plant	Jan. 2010	Jan. 2010
	Onomichi Plant	Jan. 2010	—
Overseas	Yokohama Tire Corporation	Dec. 2009	—
	Yokohama Tire Philippines Inc.	May. 2008	July. 2010
	Hangzhou Yokohama Tire Co., Ltd.	Oct. 2009	Oct. 2009
	Yokohama Tire Manufacturing (Thailand) Co., Ltd. *	Aug. 2009	Aug. 2009
	Suzhou Yokohama Tire Co., Ltd.	Apr. 2009	—

\* Obtained at 2 plants; tires for passenger car plus tires for trucks and busses

### 2. Improvement of the Support System of Quality Assurance from the Perspective of our Customers

In order to improve our supporting system of quality assurance, we are trying to leverage the level of our quality system aiming for the solution for any issues being identified from our customers' perspective through our internal quality audit.

### 3. Conducting Quality Examination by our Top Executives

We believe that any activities on quality improvement can be achieved only through high awareness of our top executives including our President in order to motivate our workers at our various operation sites; further actions for improvement could even accelerate and fortify it. Therefore our company is conducting "Quality Examination by our Top Executives" to examine annually each of our plants and divisions by our management team.

### 4. Improvement on the Performance Level by Plant Supervisors

In order to fortify our strength at operation sites, our Tire Global Quality Assurance Division is continually conducting Enlightenment and Training Programs by focusing on the quality of each hierarchy, primarily

plant supervisors, to improve our overall quality level at all our plants.

#### 5. Quality Assurance Activities Related to Development Operation

We are striving to deliver products with quality assurance by conducting Design Reviews to evaluate achievements for each step from product planning, designing, to production. Also we follow up with our customers how much they are satisfied after sales, followed by feedback to our development operation team in order to develop and provide even better products all the time.

#### 6. Safety Assurance through the Entire Life Cycle of Tires

In order for our customers to continue to use our safe products comfortably, we handle promptly in the event of any incident that may cause inconvenience to our customers such as product recall by notifying to our customers as soon as possible.

Incidentally, there is no incident to cause our customers inconvenient in the fiscal of 2011.

We will continue to make various efforts in order to provide safe products so that our customers can continue to feel comfortable with our products.

## Our Approaches for our Domestic Tire Service

### ■ Basic Notion of the Activities for Domestic Services

The basic guidelines as to quality of our Tire Group are set forth in our "Quality Guidelines". Tire Domestic Technical Service is always developing service activities from our customers' perspective in order for them to duly satisfy with our products and establish a sense of trust according to those guidelines.

### ■ Supporting System of our Services

In order to facilitate obtaining highly-accurate market information and prompt action in case of any defect of our products, our supporting systems are already in place as follows:

- We have placed our personnel from the Tire Domestic Technical Service Department in six cities nationwide in Japan (Sapporo, Sendai, Tokyo, Nagoya, Osaka, and Fukuoka).
- We have formed our service network by operating our qualification system (YFS = YOKOHAMA FIELD SERVICE)\* applicable to our regional distribution companies and sales offices in Japan (357 nationwide).
- We are holding seminars and reporting sessions for our regional distribution companies and sales offices to introduce our new products, develop our service guidelines, and share some market information.

\* Qualification system (YFS = YOKOHAMA FIELD SERVICE) refers to our system to grant qualifications to eligible personnel as to product knowledge, judgement over products upon customer complaints and so on upon training and testing at our seminar organized by the Tire Domestic Technical Service Department. There are 677 individuals who possess this qualification at the point of fiscal year of 2011.

### ■ Obtaining Market Information and Application to our Products

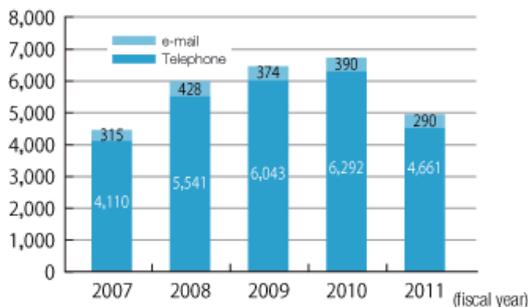
We have our framework in place to obtain and analyse customer feedback and market evaluation, develop them internally, and apply them into our next products in order to provide products to ensure we win continual customer satisfaction.

#### 1. Obtaining Market Information

Our personnel from Tire Domestic Technical Service Department are conducting hearings from our customers and surveys of actual tires based on the information from our distribution companies. The gathered information will be developed internally as Technical Correspondence to improve the strength of our products and apply it into our next products as well. 629 pieces of correspondence were issued in the fiscal year of 2011, in contrast to 673 in the fiscal year of 2010.

#### 2. Development of Gathered Information at our Customer Service

##### Changes in the Number of Cases Directed to our Customer Service



\*The number in 2011 is from April to December.

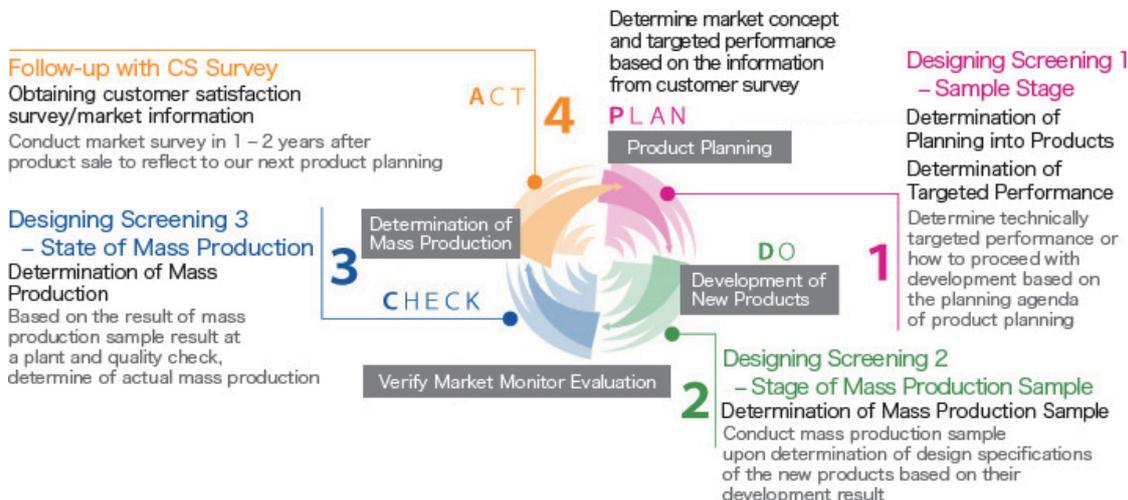
Our Customer Service team stationed in our headquarters is handling customer inquiries as to tires including obtaining information such as market evaluation or complaints as to our products. They are dealing directly with

our customers through telephone or e-mail, followed by developing such precious information gathered throughout the company in a prompt manner. This is to help improve our product performance, catalogue, and our homepage. Also, we gather and analyze information from our customers, or for any information related to quality issue, followed by reporting internally to apply them into our next product.

### 3. Holding Reporting Sessions for Customer Satisfaction (CS Reporting Session) of our New Products

We are obtaining and analyzing market evaluations as to our new products by holding CS Reporting Sessions together with our Development Division to apply such information into our next products. We held such sessions seven times in the fiscal year of 2011(March to December).

#### Flow Chart of our Market Adaptability Verification



### Market Enlightenment Activities - Customer Seminar

We are conducting various activities that will lead to customer satisfaction; as we hope that we could draw more interest and attention from many of our customers into tires by enlightening them with proper usage of tires. We have conducted such Customer Seminars 78 times in the fiscal year of 2011.

#### Filling Operation of Tire Air - Special Seminar

It is required by law to conduct special seminars and so on under Ordinance on Industrial Safety and Hygiene (Ministerial Order by Department of Labor) towards the workers who are involved in the filling operation of tire air.

Yokohama Rubber is conducting various seminars in accordance with our regulations conducted by our personnel of Tire Domestic Technical Service Department or employees at our distribution companies who are qualified as a lecturer for Filling Operation of Tire Air - Special Seminar mainly for our valued customers from Tire Distributors and Transporting Companies.

#### Seminars for Drivers (Mainly our Valued Customers from Bus Companies and Transporting Companies)

We are conducting various seminars as to basic knowledge of tires plus daily inspection and maintenance work in order for professional drivers, i.e. our valued customers who deal with precious passengers and cargoes, to keep making improvements with their safety driving, economical driving, and quality transportation. These days since we have noticed that many of our valued professional drivers are more inclined to be concerned about environmental issues and various approaches on cost cutting, we are bringing up the relativity of tire and fuel efficiency as well.

#### Sample of the Materials from Filling Operation of Tire Air - Special Seminar



## Materials of our Seminars for Drivers



### Approaches of Overseas Tire Service

#### ■ Basic Notion of Overseas Service Activities

To embody our company's basic guidelines into our service activities, we set forth that "we will always conduct service activities from our customers' perspective by aiming to become a corporation with extremely high in customer satisfaction and market position" as our basic guidelines.

#### ■ Execution of Market Adaptability Verification for Product Development

We are conducting the below-mentioned activities in each step from the stage of product planning to after service.

1. Prior to Market Launching: Market adaptability verification of new products through utilization of market monitor
2. After Marketing Launching: Obtain market quality information and conduct customer satisfaction survey
3. Planning Stage: Propose objectives of new products based on market information

You may wish to refer to [Our Approaches for our Domestic Tire Service](#) for the Flow Chart of our Market Adaptability Verification.

#### ■ Expansion of our Service Network that Covers All over the World

We are conducting the below-mentioned measures in order for our customers located all over the world to be able to use our products with a great level of satisfaction as we expand our service network that covers all over the world.

1. We have placed our Technical Service Personnel in each of our regional offices in North America, China, Europe, Asia, Central and South America, and Africa.
2. We have established the network by technical staff from each distribution companies and agencies under our regional offices. This is to provide our technical service to each country all over the world excluding Japan.
3. Obtain highly accurate information as to product usage and requirements from our products for each region and country.

#### ■ Training for service engineers

##### ○ Establishment of the Tire Service Training Center in Thailand

October 2011 saw the inception of the Company's tire service training center in Thailand as part of wider efforts to reinforce the training of Yokohama Rubber service engineers around the world. Service engineers engage in technical services such as the collecting of market and quality information as well as technical information initiatives designed to further increase customer satisfaction. This tire training center is a facility for producing service engineers capable of engaging in practical service provision, as much as possible from the perspective of customers. As training content without precedent, a hands-on training program has been added that uses a test course for experiencing actual tire and vehicle properties. Through this kind of training, service engineers all over the world are able to participate in practical training content based on identical training programs. This effort is designed to additionally enhance the technical service capabilities around the world and to further increase the customer trust and confidence in the Yokohama brand.

#### Training for service engineers



### ○ Training surrounding vehicle tires for construction and industrial use

For service engineers in Asia (Indonesia, Thailand, and Malaysia) engaged in sales and technical services surrounding vehicle tires for construction and industrial use such as on construction sites and in mining operations, in July 2011 the tire production plant in Onomichi was the location of highly specialized training session covering the range from manufacturing processes to design methods and knowledge, as well as analysis techniques using actual tires as study materials. Through this kind of training the Company continues in its efforts to enable system engineers to provide the high technical service levels that match and satisfy the requirements of customers for vehicle tires for construction and industrial use.

### Training surrounding vehicle tires for construction and industrial use



### ○ Training surrounding tires for motor sports

In May 2011, service engineers from around the world received motor sports hands-on training at three actual racing locations in Thailand and in Guangzhou and Macau in China. Training in practical skills related to basic on-site safety considerations and actions, methods for measuring the temperature of tires after racing to gain information for optimal specifications selection, and specialist knowledge and methods necessary for dealing with conceivable problems, among other matters.

The experience and knowledge communicated through this training enable service engineers to provide technical services for motor sports tires, and by swiftly responding and meeting customers' expectations further strengthen the trust and confidence of customers in the products of the Company.

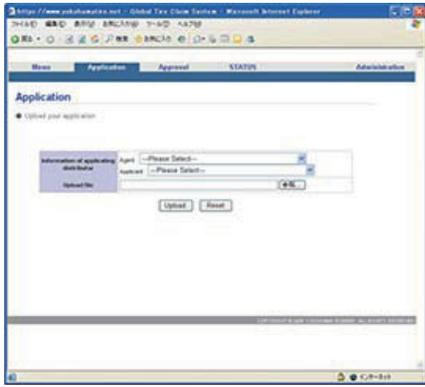
### Motor sport training



### ■ Quality information aggregation system

The quality information aggregation system initiated in 2010 is currently in use in 25 countries (as of December 2011). Information collected through this system serves to further enhance the manufacture of the products of the Company.

### Web-based information aggregation system



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## Assurance of the Safe MB Products

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### Guidelines

#### Basic Notion of the Activities for Quality Assurance

Our MB Group sets forth its mid and long term guidelines as to "raise customer credibility by continually providing high quality products all the time". We are trying to facilitate to enforce our quality assurance supporting system in mid and long term by ensuring safety for not just our primary customer mainly manufacturers, but subsequent secondary, tertiary users, and every consumer's life being surrounded by products from our MB Group, followed by granting them with peace of mind.

#### ■ MB Group – Mid and Long Term Approach Guidelines as to Quality Assurance

We will raise customer credibility by continually providing high quality products all the time.

In order to gain customer credibility, we will ensure:

1. Customer-centric systematic quality management and product development
2. Effectuation of quality control system and continuation of autonomous quality improvement activities
  - (1) Attainment of zero complaints outflow
  - (2) Operation of quality management system in consideration of QCD (quality, cost, delivery), (introduction of the system in new locations, businesses at ease)
3. Preparation of crisis management system and continuous correspondence to it
4. Continuation of customer-centric technical service activities
5. Global development of above mentioned guidelines

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### Achievements

#### Our Approach for Quality Assurance

#### ■ Work Operations by our MB Group

Our MB Group is dealing with various commodities for mainly hoses and couplings, industrial products, adhesives and sealants, and aerospace products. Our mainstay products are industrial rubber products such as various hoses and conveyer belts, adhesives, various sealing materials, fuel tanks for aircraft, lavatory units and more; our major customers are the manufacturers of automobiles, construction equipment, air frames, vehicles, industrial facilities, public corporations, and construction companies. Our products will be delivered to our customers through our distribution companies and agencies. In addition to those B-to-B products, we are manufacturing various B-to-C products as well, such as golf goods.

As for those products, we will ensure safety assurance through incoming goods inspections for raw materials to use, half-finished goods inspections such as blended rubber materials, product inspections for final products; we are also trying to secure quality with their design by conducting designing screening from the stage of product planning, the stage of designing, and the stage of process designing.

## Activity Report in the Fiscal Year of 2011

▶ Corporate Governance and Compliance

▶ Environmental Preservation

▼ Together with our Customers

Assurance of the Safe Tire Products

### Assurance of the Safe MB Products

Communication with our Customers ( in order to select our product correctly)

▶ Together with our Employees

▶ Together with our Business Partners

▶ Together with our Shareholders and Investors

▶ Together with our Society

## ■ Lecture classes related to customers' correspondence in our company

In "Industrial Technology & Sales Department" which was launched in June 2009, experienced engineers with products knowledge related to industrial materials, HAMATITE, hose plumbing stay at each representative sales company. They develop activities to hold lecture classes for products knowledge and handlings to develop human resources and enhance communication at the sales companies and locations, aiming at smooth correspondence to our customers.

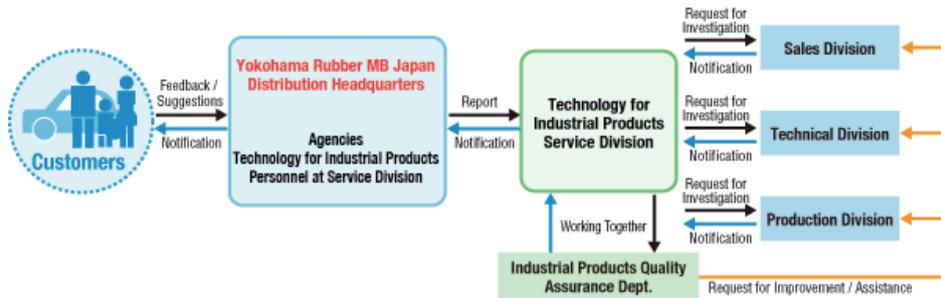
43 lecture classes were held in fiscal year 2011 (from April to December)



## ■ Approaches for our Customers

New company "Yokohama Rubber MB Japan" was launched in October 2010, Integrating a part of function in MB sales companies and industrial products marketing department of our head office. With this, we integrated marketing power of sales companies which were close to our customers and back up function of manufacturers, we plan to introduce system development with a feeling of identification and swift decision making. We deploy a staff member from quality assurance department of a manufacturing company, who improves consciousness of product quality of our staff during the course of lecture related to product quality to our sales staff members, and are working to continuously provide our customers with safe and high quality products.

### Flow Chart of our Customer Feedback and its Process



## ■ Our Internal Activities for Quality Assurance

### 1. Risk Management – Dealing with Customers

We are operating under, and revising the requirements of the "Measurement Action for the Market" in emergency situations in order to act promptly and accurately for various business practices of diversified product lines of our MB Group by making clear about actions and supporting system for our MB products' safety issues. Also, in the event of any quality issues or complaints in the market over our products already delivered to our customers, not just we act promptly to solve the problems, but also we take actions to avoid any recurrence. As for preventive measure for recurrence, we will verify its validity by conducting quality audit on a regular basis whilst checking whether corrective measures are duly conducted.

Also, we have our framework called the "Meeting for Product Improvement" where relevant divisions get together to lead to product improvement based on quality information in the market not to allow any quality issue to occur. We are aiming for the improvement on CS by relevant divisions to get together through this framework. There was no case of violation on product safety in the fiscal year of 2011.

### 2. Activities on Quality Improvement – Framework to be in place to maintain customer credibility

Our MB Group has formed their activities on quality improvement by reflecting their mid and long term guidelines to facilitate their activities.

1. We are continually making improvements based on the verification of international quality management systems such as "ISO/TS-" per sector. Our Industrial Products Business Group has obtained this certification by establishing quality assurance supporting system with more clear regulations and structures as to their operational responsibility at our Technology, Production, and Sales Division; upon integration and organizational shifting based on their functions as Industrial Products, Adhesives and Sealants, and Hoses

and Couplings Businesses. We continuously acquire certification "ISO/TS" at our overseas production bases as well.

**Acquisition of "ISO9001, ISO/TS16949" at our production sites in Japan and overseas (year and month of the latest update)**

	Production sites		ISO9001	ISO/TS16949
Domestic	Ibaraki Plant		January 2012	January 2012
	Nagano Plant		January 2012	January 2012
	Hiratsuka East Plant		January 2012	January 2012
	Hamatite Nakahara Plant		January 2012	-
	Hamatite Ibaraki Plant		January 2012	-
	Plant of Industrial Material		January 2012	-
Overseas	YH AMERICA INC.	KENTUCKY HOSES DIV.	-	January 2010
		KENTUCKY HAMATITE DIV.	-	February 2010
		SOUTH CAROLINA HOSES DIV.	-	August 2012 (scheduled)
	SAS RUBBER COMPANY	HOSES DIV.	January 2011	-
		INDUSTRIAL DIV.	August 2010	-
	SHANDONG YOKOHAMA RUBBER INDUSTRIAL PRODUCTS CO., LTD.		August 2011	-
	YOKOHAMA HOSES & COUPLING (HANGZHOU) CO., LTD.		March 2009	-
	YOKOHAMA HAMATITE (HANGZHOU) CO., LTD.		October 2010	-
	SC KINGFLEX CORPORATION		March 2011	-
	YOKOHAMA RUBBER (THAILAND) CO., LTD.	HOSES DIV.	April 2009	April 2009
HAMATITE DIV.		April 2009	-	

2. Our internal audit and examination activities have been conducted throughout all the plants, technical divisions, and overseas operation sites of MB Group; we are trying to facilitate to raise awareness of quality and activities for improvement including "Quality Examination by our Top Executives" conducted by our Directors. Also, for the purpose of fortifying our quality framework, we are promoting the obtainment of qualifications as internal auditor; about 270 employees have obtained this qualification at the point of March 2012.



### 3. Fortification of Global Quality Assurance Supporting System

MB Group has overseas operation sites; 2 in North America, 3 in China, 1 in Taiwan, and 1 in Thailand. We are expanding our activities by aiming for our universally common quality standard by summarizing various rules on quality assurance activities, by making clear about the authorities on responsibilities between overseas operation sites and relevant domestic divisions from product planning to quality assurance supporting system after sale. Enlightenment materials for quality for both expatriate staff and local staff are duly utilized in all our operation sites.



#### ■ Supporting System for Customer Complaints by Working with YAA

Our Aerospace Division is producing a Lavatory Module (a unit for washroom) for 737 passenger aircraft to be manufactured by Boeing in the USA. They are manufactured in our Aerospace Products Plants in our Hiratsuka Factory; only Lavatory Modules which have passed our final inspection will be shipped out to the USA. Lavatory Modules which have been installed in the passenger cabin of 737 passenger craft by Boeing in the USA will be subject to appearance checks and various performance tests (turning on the lights, fire alarms, water for hand-washing, etc.); a Non-Conformance Tag would be issued as a countermeasure for the problems in the event of any irregularities being detected at this stage.

Our Quality Assurance Department is always monitoring Boeing's website (exclusive site for Yokohama Rubber); we would immediately contact via e-mail to our personnel of quality assurance of YAA (YOKOHAMA AEROSPACE AMERICA, INC.) to request to find out the situation along with investigation at Boeing. Based on the discussion at YAA, investigation result, internal discussion, and its investigation result, we are trying to improve Yokohama Rubber's credibility by filing an appeal to Boeing if necessary.

YAA is also working as a marketing front of spare parts of Lavatory Modules, and contribute to improvement of product quality and customer satisfaction, communicating with Boeing and many airlines which operate 737 passenger aircrafts, and absorbing complaints and demand from the airlines and passengers ,and coordinating them liaising the information to Yokohama Rubber.

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## Communication with our Customers ( in order to select our product correctly)

[Guidelines](#)
[Achievements](#)

### Guidelines

#### Our Basic Stance and Attitude

Yokohama Rubber's Corporate Code of Conduct, that "we will win customer satisfaction and credibility through developing and providing socially valid products and services with meticulous consideration for safety", comprises Yokohama Rubber's strong intention to deliver correct product information to our customers as per described below.

#### Our Ideas towards Advertisement and Rules to Comply

We are paying attention all the time as to how our advertisement and promotion styles ought to be in order for more people to understand our products, services, and corporate activities as much as possible. We are trying to disseminate the latest information accurately and in a timely manner through our home page or press releases to all our stakeholders. Especially, our website consists of two structures; one is the homepage to provide information on entire Yokohama Rubber Group's business including Yokohama Rubber and our Affiliated, another one is the homepage by mainly focusing on providing product information such as domestic tires for mending, hoses and couplings, adhesives and sealants, industrial products, aerospace, golf products and more. Also as a member of the Tire Fair Trade Council, we are striving in various advertising and promotion activities in accordance with applicable regulations by regularly attending and cooperating with the respective committees in charge of various levels derived by formulating the regulations of the said Council along with its actions, and also, by conducting status surveys in the market to make sure that members are strictly complying with the notion of fair competition. There is no case to violate the regulations in the fiscal of 2011. The same notion for advertisements can be applied to our overseas offices as well.

#### Attending to Customer Inquiries

Product inquiries can be made through [Homepage](#) in addition to via telephone. We will try to attend to your inquiry as soon as possible from our relevant department.

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### Achievements

#### Product Labeling

Japan Automobile Tyre Manufacturers Association has established a Grading System by integrating the "performance on rolling resistance" of tires and "wet grip performance" as an effort in order to facilitate the promotion of low fuel consumption tires; not just to define as low fuel consumption tires for those tires meeting certain parameters, but also that they have a labelling system (display method) in place to provide correct information for our customers started from January 2010. Incidentally, there was no case of violation as to information provided on performance through labelling in the fiscal year of 2011.

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Assurance of the Safe Tire Products

Assurance of the Safe MB Products

[Communication with our Customers \( in order to select our product correctly\)](#)

▶ Together with our Employees

▶ Together with our Business Partners

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One of the Examples of the Label



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## Together with our Employees

### Guidelines

#### Guidelines about "People"

We will create an environment in accordance with our management policy of creating a workplace to value, improve, and energize people, where each of our ever-diversifying personnel can equip themselves with the necessary skills and perform by utilizing their capabilities to the fullest. Also, we aim to create a workplace where our employees can realize a work-life balance.

We will continue to raise the awareness of our personnel so that they can perform on the global stage and are capable to deliver the business strategy of GD100 and various technical strategies.

[▶ Employment](#)[▶ Workplace with Safety and Health](#)[▶ Enlightenment and Training](#)[▶ Work-Life Balance](#)[▶ Diversity in human resources](#)[▶ Human Rights](#)

## Activity Report in the Fiscal Year of 2011

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### ▼ Together with our Employees

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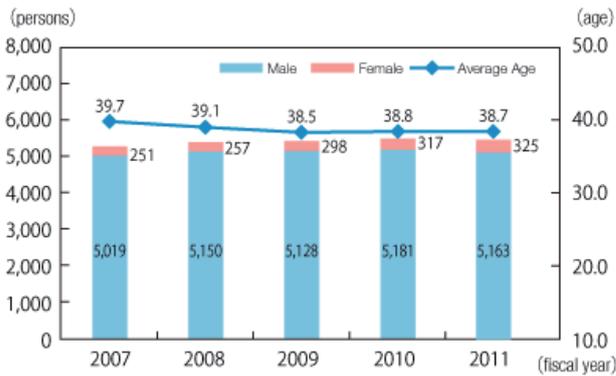


○ Employment

Achievements

Status of Employment

Number of Employees per Gender and Average Age



Yokohama Rubber Group's Number of Employees per Region (unit)

	FY2007	FY2008	FY2009	FY2010	FY2011	
Japan	10,110	10,311	10,531	10,472	10,422	
Overseas	North America	1,907	1,821	1,932	2,040	2,150
	Asia	4,018	4,565	5,024	5,730	6,384
	Europe	64	75	79	223	316
Total	16,099	16,772	17,566	18,465	19,272	

\* Consolidated Number of Employees: number includes personnel of our affiliates

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Stable Employment

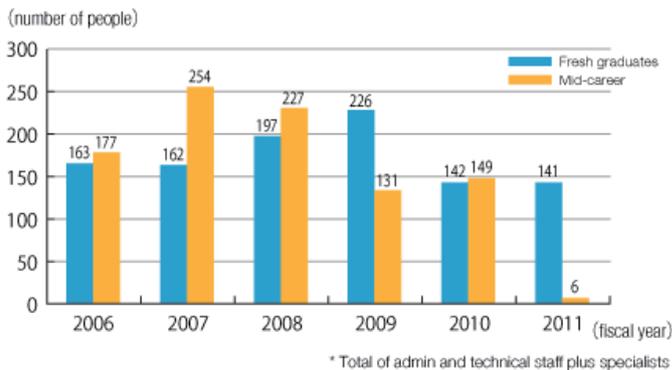
■ Stable Employment of Fresh Graduates and Mid-Career Employment Depends on our Business Strategies

We are employing a stable number of fresh graduates from a long-term perspective. Also, we are employing professionals with relevant experience (mid-career employment) depending on our business operation needs.

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## Changes in the Number of Hiring



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## Employee Benefits and Welfare

Yokohama Rubber has various types of Employee Benefit packages in place so that our employees can continue to work and live comfortably. As for accommodations, we provide a dormitory for single employees who have met certain criteria; also, we provide company apartments for those who relocate together with their family members, whereas we provide housing allowance for those who are with family members but have no history of relocation. Also, all our offices have a canteen for employees where healthy and affordable meals are provided; company canteens are used as a place for communication and mingling such as for social gathering at night time under the theme of local gourmet dishes. Temporary or contract workers are also allowed to use company canteens. Other than that, we are also supporting a part of employees' lives such as group insurance covering the entire employees of the domestic Yokohama Rubber Group.

### ■ Retirement Allowance System

Our pension consists of a one-time retirement lump sum grant and defined contribution pension; the ratio is about 60% and 40%, respectively. The one-time retirement lump sum refers to a one-off payment only without subsequent pension receivable.

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## Status of Labor-Management Relationship

We have established a Labor-management consultation system in a wide spectrum such as employment, work conditions and employee benefits under the recognition that company growth and employees' stable life are common goals both by Labor and management. Our Labor-Management Council consists of the Central Labor-Management Council and Local Labor-Management Council located in each office, and various types of Labor-management committees to conduct discussion by reviewing various important issues. Specific items with regards to any changes in work operation shall be usually discussed in the committee meeting to be held one month in advance.

### Ratio of Union Members/Non-Union Members (as of December 2011) (unit: person)

Union Members	4,944
Non-Union Members	544
Total	5,488

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## Workplace with Safety and Health

[Guidelines](#)[Achievements](#)

### Guidelines

#### Basic Guidelines

Safety and sanitation are the basis of all our activities.

We aim to prevent any occupational injuries, create a pleasant workplace and overall health for our workers under the strong leadership of our managers and supervisors, along with our entire group's employees' cooperation of this matter.

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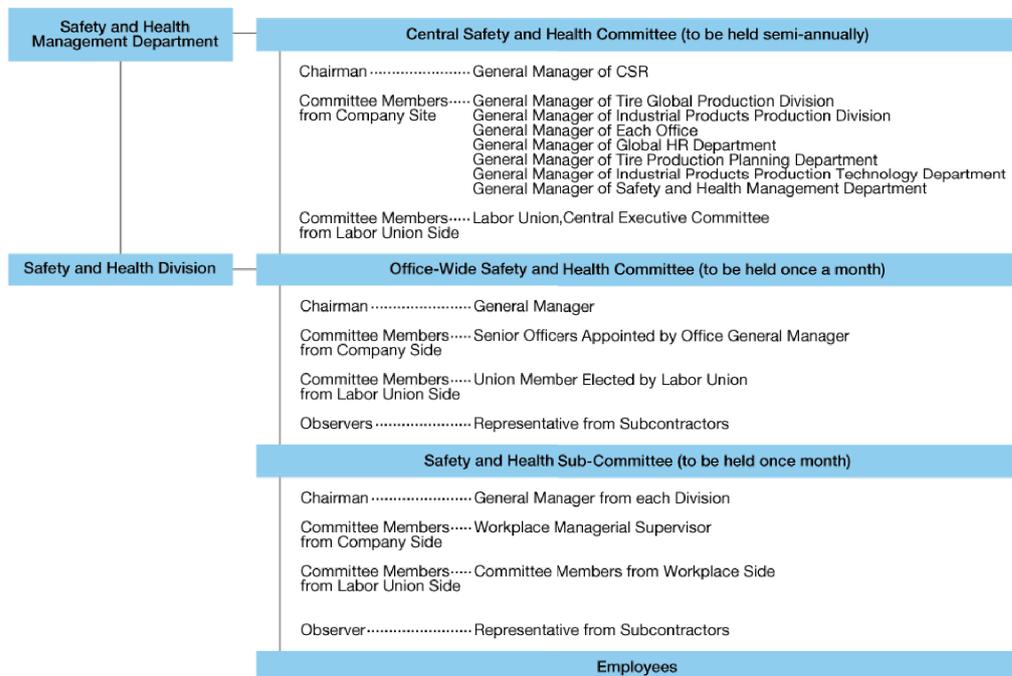
#### Supporting System of Safety and Health Management

We formed the "Safety and Health Sub-Committee" per division and workplace and the "Office-Wide Safety and Health Committee (legally stipulated)" per office under our Central Committee of Safety and Health, which consists of one representative out of about 200 persons (0.5%). Activities on safety and health are an important approach common in companies and unions. Through interaction with the Japan Rubber Manufacturers Association and Japan Rubber Workers Union Confederation to share safety information with other companies and other union confederation members, we are also trying to facilitate those by labor and management sides getting together. We also share our activities with our subcontractors by having them join their respective committees. As for our various overseas offices, they have their own supporting system in place according to the prevailing law under their country's governance.

#### Our Supporting System of Safety and Health Management

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## Achievements

### Status of the Occurrence of Occupational Disasters

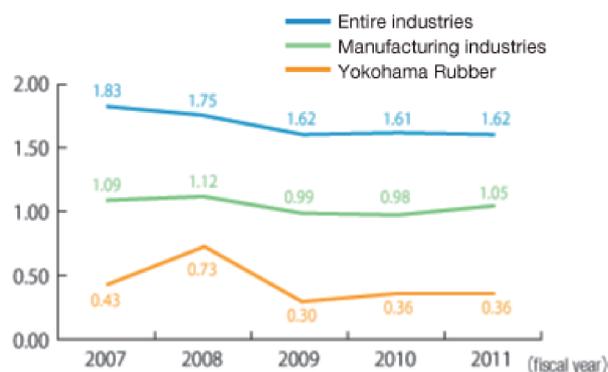
In our domestic operations, the percentage of workers' leave in the fiscal year of 2011 was 0.36, the same as the previous fiscal year at 0.36. The total number of leave arising from disaster is five; one out of these incidents were owing to work operation without following the troubleshooting procedures of the equipment. In order to prevent such accidents, we will continue to improve the situation by raising awareness of safety such as proactively stimulating various activities at each workplace. Examples include visualizing our activities by using a safety activities board. From now on, we will continue to make improvements to leverage our awareness levels by identifying potential risks as well.

\* Percentage of workers' leave = (number of the case of occupational disaster / total work hours) x 100 million hours

\* Every piece of data is an aggregated value per year (from January to December)

\* All industries (excluding general construction industry), manufacturing industries are based on "Survey on Recent Occupational Accidents"; statistics announced by Ministry of Health, labor and Welfare

### Frequency of Occupational Accidents (Percentage of Workers' Leave)



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### Six Pillars of Approaches Aiming For Safety Workplace

Yokohama Rubber Group is conducting six pillars of approaches in our domestic operation sites in order to fortify safety and accident prevention even further. Also, we have conducted "Corporate-Wide Convention for Safety and Accident Prevention" for entire domestic operation sites grouped together, pledging to "aim for a workplace environment without any existence of risks" as an entire corporation as a team by sharing various activities with regards to safety and health, plus accident prevention from each operation site.

In our overseas offices, each of our operation sites is conducting their own convention for safety and accident prevention to promote various approaches towards safety.

## 1. Establishment of Occupational Health Safety Management System (OSHMS)

Out of the strong intention by our management to aim for the establishment of organization systems or management systems in order for our operation sides to duly fulfill to bring about total zero risks, we are trying to get each of our offices to obtain the certification of Occupational Health Safety Management System (OSHMS); as a result, five of our offices were able to obtain in the fiscal year of 2011.

Also, in order for us to keep making improvements by understanding each office's strengths and weaknesses, we are conducting internal audits for safety both in domestic and overseas offices by setting up our auditing items all in common in our entire corporation.

## 2. Making our Facilities Safer

We have taken measures by utilizing the method of risk assessment that can be "pre-emptive management" of accident prevention, conducting identification and evaluation of any potential risks in our existing facilities, followed by prioritizing them. Also by gathering our workers' ideas, we are creating repair tools and facilitating automation of the facilities so that they can still be processed without workers acting when trouble occurs; this is how we aim to create various facilities that ensure safety and comfort.

## 3. Further Enlightenment for Safety

We are trying to train our workers for good sensibility; who can foresee risks in any potential incident. We are conducting KYT (Kiken [Risk] Yochi [foresee] Training) which is to be done by every worker every day, along with sampling and improvement for Hiyari Hatto (a near accident) incident that are voluntary activities to be attended by everybody. We are also conducting training at Taikan Dojo (training through actual experience for accident prevention). Also, we have facilitated enlightenment on safety by focusing on communication like supervisor interacting with a worker one-by-one whilst understanding the meaning of each operation until they can have autonomy to conduct safe operations on their own. Through those approaches, we are trying to share and utilize our activities for accident prevention towards all entire workers in all our premises.



## 4. Creating Comfortable Workplaces

We have been proceeding with facility maintenance, improvement on work method, maintenance management in order to maintain comfortable work sites by conducting measurement of the work environment. Also, using 5S as a basis (Seiri [tidiness], Seiton [being organized], Seisou [cleanliness], Seiketsu [hygiene], and Shitsuke [discipline]), we are trying to facilitate efficient manufacturing such as required products when needed, and at required quantity only.

## 5. Promoting Workers' Mental and Physical Health

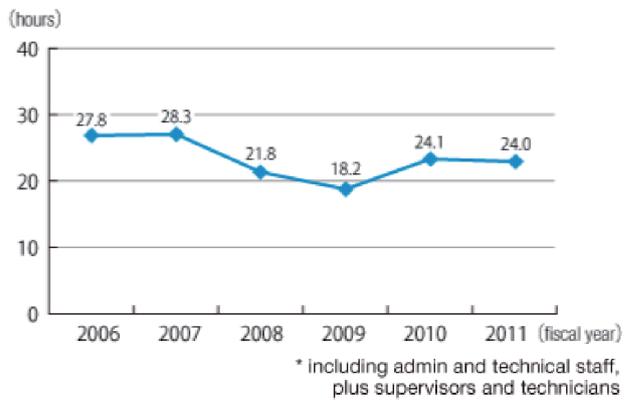
In order to prevent overworking or health hazard that comes from overstress, we are monitoring workers' working hours, also, we are providing counseling session or making improvement of work operation for our workers who engage in long hours. Also, we have set up our company's preventative management and placed a counseling care as our activities for workers' mental health. Furthermore, we are conducting special health screening as well; we have started giving medical guidance for those who are subject to special medical guidance.

### ○ Establishment of Measurement as to Working Long Hours and No Overtime Work Days

We are trying to shorten working hours by specifying the days for workers to go home without any overtime work; this is determined by our each office.

Also, when the special provisions as to Overtime Work Agreement were to be applied, both labor and management sides verify the legitimacy in advance, make sure such overtime work cannot be habitual from now on; we are also conducting a hearing session along with future improvement plans.

### Changes of our Average Overtime Work Hours



#### ○ How to Deal with our Personnel who are Working Long Hours

We are conducting counseling by our company doctor or giving guidance according to the working hours based on our guidelines by properly managing workers' hours spent in the premises and their actual working hours.

#### ○ Measurement for Workers' Mental Health

We are providing various counseling sessions by psychiatrist, specialized counselor, or counseling on the phone; we are also conducting consultation by company doctor to prevent any health hazard arise from overworking.

#### ○ Counseling Support System and Program to Assist Workers to Return to Work

As for returning work for those workers on a long leave associated with mental health, we are trying to have them return by planning as follows; upon conducting hearing session with him or her in person, checking with his/her doctor-in-charge, company doctor, and company, followed by reviewing its method, timing, or any restriction for work. Even after their return, we are still conducting 3-party counseling by himself/herself, company doctor, and company to release any restrictions on work gradually; we are following up until it there are totally no restrictions with him/her at all.

### 6. Prevention of Traffic Accidents

All our offices are continually conducting traffic accident prevention activities by fortifying supporting system, functions, and activities to prevent traffic accidents especially through standing on the side of the road in traffic by holding a placard during rush hours. Also, we are conducting enlightenment activities under the cooperation with local police or agency related to traffic safety.

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## Enlightenment and Training

### Achievements

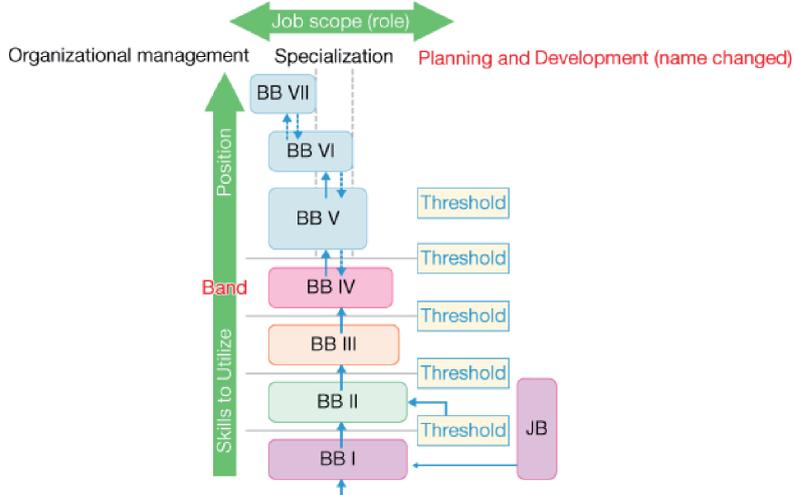
#### Guidelines on Training our Personnel

We are fully supporting aforementioned notion based on the idea that it is growth of every single one of our employee that will lead to our company's growth. We have an enlightenment system in place to train "professional personnel" with a strong desire for achievement and wide spectrum, and those who fulfill their performance by influencing people around them.

#### Training of the Candidates as Core Personnel

We are trying to develop our personnel's individual skills such as required mind-set, capabilities, and development of various skills to expand our businesses on a global scale, as well as leadership skills per hierarchy, problem solving skills related to workplace, presentation, and negotiation. Our new Human Resources System called GLOBAL which has been implemented in 2010 is focusing on personnel training for those who are able to perform on a global stage. For example, we have set up seven hierarchies from new entry level to divisional General Manager; each threshold must be cleared in order to go up to the next level. The threshold comprises of performance evaluation, work experience (total number of work rotation), compulsory training, and language skills; this way, relevant personnel can acquire necessary skills as a candidate so he/she can perform on the global stage by clearing each threshold one-by-one.

#### Overview of GLOBAL, our New Human Resource System



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#### Our Various Personnel Training Program

##### ■ Brother System for Fresh Graduates

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This is our system for senior employees to take care of our fresh graduates both for their work and personal lives for the next two years from their commencement. This system has been around for as long as 20 years already; initially it started as a system to give man-to-man training by seniors to nurture young technicians, now it has been spread to the entire fresh graduates under comprehensive work position (main career track).

### ■ "Advanced Specialist" and "Technical Masters" to Accumulate and Inherit our Technologies and Skills

We are certifying our personnel as "Advanced Specialists" with a top level of specialization in a technology area those who have contributed greatly among them and those who are necessary to fortify our businesses so that they can focus on their activities on technology. Also, we are certifying from our personnel as "Technical Masters" those who are able to train juniors by utilizing their specialized skills and knowledge among our employees in the technical fields in order to inherit our technology to the new generation. We have certified 22 Advanced Specialists and 25 Technical Masters at the point of December 2012.

### ■ Conducting Overseas Training for Fresh Graduates

Starting from the fiscal year of 2009, we have been providing training for all our fresh graduates under comprehensive work position in our overseas group offices for about two months plus in order to have them enhance their sensibility towards different cultures through hands-on experience of diversified culture while they are young.

### ■ Voices from Training Attendees

- Trainee, female (Training site: China, July to August 2011)  
Spending time with associates from group companies in countries with different cultures and value preferences gave me a keen notion of the importance not only of language study but also of communication. Another experience was that once one understands how cultures are not the same one is able to accept many of the things that are different.
- Trainee, male (Training site: Thailand, July to August 2011)  
While mingling and working with local staff in a country with a different culture, communication worked just fine also without knowing the language by using gestures, numbers, and symbols. As the mutual feeling of distance gave way, making oneself understood started taking less time. The experienced taught me the importance of communication.
- Trainee, male (Training site: Philippines, July to August 2011)  
Kaizen activities with local shop-floor staff who spoke no English were a serious challenge. But the communication through the work each day generated a shared feeling of purpose and direction which dramatically reduced the sense of distance. It helped me understand the importance of communication also when one does not speak the language.
- Trainee, male (Training site: U.S., July to August 2011)  
In the U.S. the interest that people take in sports such as baseball and basket ball is much higher than in Japan, and sports marketing ranks highly in formulating sales policies. I felt a gap with Japan's culture and value preferences and also felt that I would like to know more about other countries in the world.

### ■ Enlightenment for Company Expatriates and their Family Members

Amid global expansion of our businesses, currently about 100 employees are working overseas and their number is on the rise every year. Starting from the fiscal year of 2009, we are providing overseas pre-relocation seminars to enlighten them with mainly how to proceed with work operation in different cultures. The seminar consists of any necessary formalities, safety lecture per destination region (necessary knowledge as to status of their public order and ensure safety), language training, and information on schooling for their dependent family members.

### ■ Group-Wide Development Activities to Eliminate Redundancy

To encourage our production sites to utilize own creative ideas, we are expanding group-wide development activities (activities to eliminate redundancy) to aim for efficient usage of time, materials, space, stocks, and so on by all our production divisions including our overseas subsidiaries. The number of the cases where such improvement plans are executed is as follows.

#### Achievements in FY2011 (number of the cases where improvement plans are completed)

Total	465 cases
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### ■ Incentive to Obtain Official Certifications

We have an incentive system for our employees to obtain official certifications which are advanced levels which may not be easy to obtain but yet are essential for our company growth; the company is thereby trying to encourage our personnel to obtain as many as possible.

Certification	Incentive Amount	Number of Achievement Cases			
		2008	2009	2010	2011
Radiation Protection Supervisor	JPY 100,000	0	1	0	1
Certified Measurer	JPY 100,000	1	0	2	0
Special Class Boiler Expert	JPY 100,000	0	1	0	0
Qualified Energy Manager	JPY 60,000	5	5	0	1
Class-1 Health Supervisor	JPY 20,000	4	6	1	7
High Pressure Gas Production Safety Manager	JPY 20,000	5	2	1	1
Class-2 Boiler Expert	JPY 20,000	1	1	1	4
Operations chief of radiography with X-rays	JPY 20,000	1	2	1	1
Class-3 Electrical Chief Engineer	JPY 20,000	0	0	0	1
Manager in Charge of Pollution Control	JPY 20,000	1	0	0	0

### ■ Personal Information Sharing for Training (Personal Folders)

We have our personal folders in place which are open to both comprehensive work positions and administrative staff so that the staff him/herself or their supervisors can view through their PC for their employment history, training history, language skills, and so on. This is meant as an assistant tool to set up their future training plans by verifying their background.

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### Human Resource Evaluation System Aiming for Personal Growth (C2S)

C2S is an acronym of Challenge & Communication System; this has been in place for active interaction between organization and individuals by realizing fair remuneration through objective human resource information as much as possible. Every half year supervisors have a discussion with their subordinates where employees will set their challenges to address upon hearing action suggestion as to their challenges and roles. There will be another dialogue in the end of the term to verify their achievements and growth, followed by supervisor's evaluation. Individual employees will grow through pertinent guidance and advice from their supervisors. C2S is subject to all the personnel in comprehensive work position in YRC unit.

Implementation Ratio of C2S (comprehensive work position/all the personnel): 29.2%

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**Work-Life Balance**

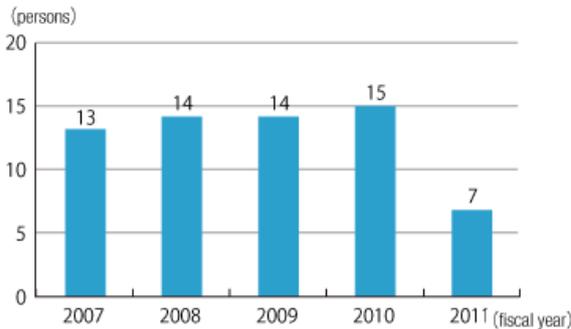
**Achievements**

**Support through our Systems**

**Childcare Leave System**

Since 1992, we have been supporting our employees with a child less than 1 year old (up to 1 year and 6 months if certain criteria are met) by establishing some regulations for childcare leave.

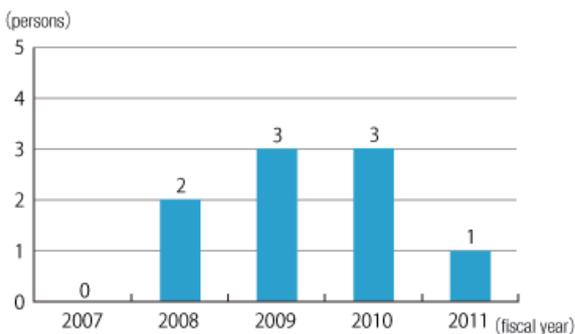
**Changes in the Number of Employees who have Taken Childcare Leave (unit: person)**



**Family-Care Leave System**

Since 1994 we have deployed a system to support our employees with family members who need nursing care on a steady basis. Also, we are expanding the range for "nursing leave for children" (5 days/annually) which is to take care of the children who became ill, until their children graduate from primary school.

**Changes in the Number of Employees who have Taken Nursing Leave for Children (unit: person)**



**Shorter Working Hour Scheme**

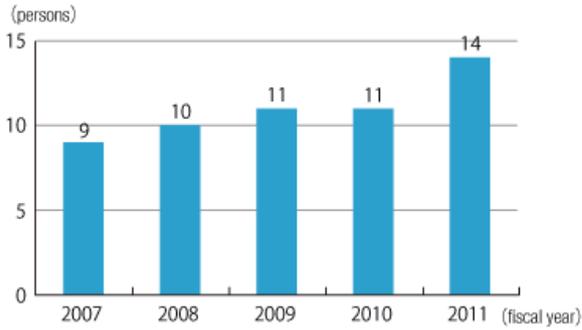
Employees may utilize our a shorter working hour scheme for those who have pre-school children or any family members who need nursing care upon the relevant employees' request. Also, we have a staggered working

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hour system for those who have children with in the third year of primary school or younger. Furthermore, since fiscal year of 2010 we have deployed a system for employees those who wish, located in the assigned area only without having relocation for the next two years.

#### Changes in the Number of Employees who have Taken Shorter Work Hour Scheme (unit: person)



#### ■ Volunteer Leave System

Since 2008, we have established our volunteer leave system up to five days annually to provide the environment for our employees so that they can get involved with some volunteer activities rather easily. In the fiscal year of 2011, 44 personnel took the leave to support the affected areas of the Great East Japan Earthquake.

#### ■ Leave System for Jury

We have established a jury-leave system since fiscal year of 2009.

#### ■ Child-birth leave and child-care leave

So far male employees have been entitled to take a paid two-day child-birth leave and an unpaid one-year child-care leave. The amendment on April 1, 2001, to up to ten days of leave until the child is one year old marks not only an increase in the number of leave days but also the number of leave takers has gone up by a wide margin. Compared with 2010, the total days of leave taken have increased from 193 to 615 and the number of leave takers increase from 104 to 120.

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### Assistance through Various Seminars

#### ■ Second Life Seminar

We are holding seminars for our employees in their 50's to assist their lives during employment and their plans after retirement as much as possible; this is being held under co-organization by labor and management sides every year. The seminar consists of Yokohama Rubber's pension plan, briefing over re-employment system, purpose to set up their life plans, pension scheme, know-how on fund operation, and so on by bringing up some actual cases. Since the seminar contents may be peculiar depends on their region, this is organized and conducted by each of our offices.

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## Diversity in human resources

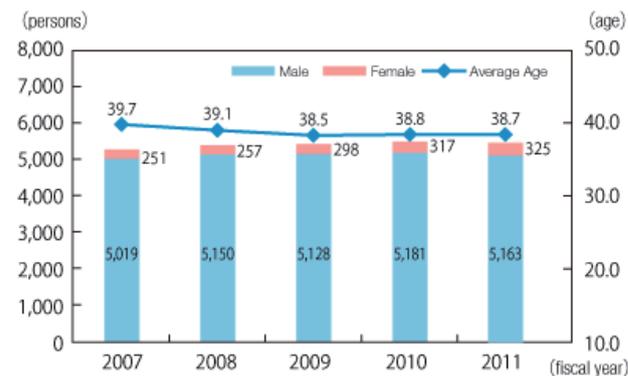
### Achievements

In order to continue to survive in the global business world by achieving our various goals as set forth in GD100, we need to facilitate utilizing our personnel with diversified value more than ever before. We will continue to make efforts to create workplaces so that all our employees including foreigners, female workers, and disabled persons can work together as a team with passion and enthusiasm.

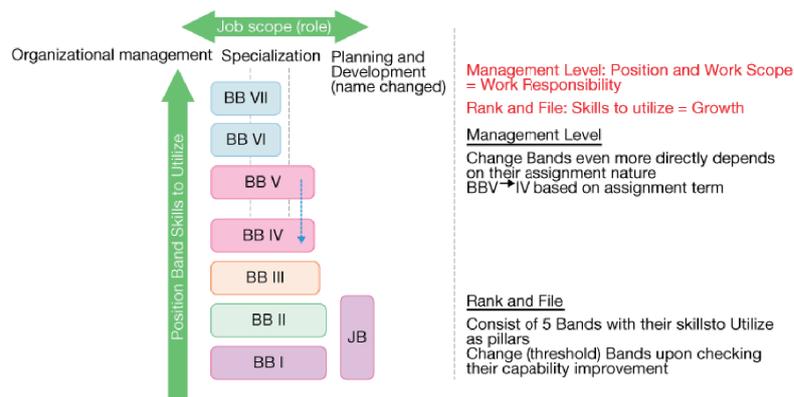
### Diversified hiring of general-career-path employees

Hiring decisions of the Company do not consider nationality or gender. The Company's human resources system GLOBAL, introduced in July 2010, has significantly widened the regulations for changing from clerical to general-career-path employee with the objective of providing ambitious and capable employees with the opportunity to take a proactive work approach. In April 2011 the system was used by 41 employees who changed their career path. Notably, the Company has no gender gap in basic work compensation. Moreover, as of the end of fiscal year 2011, the Company (non-consolidated) had 35 foreign employees in Japan, four of them in managerial positions.

### Number of male and female employees and average age



### Our Human Resource System GLOBAL



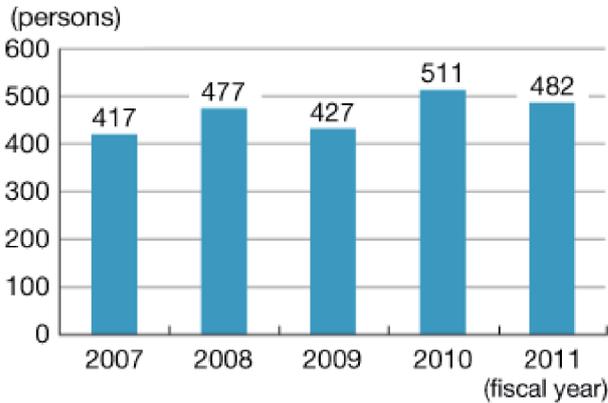
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## Utilization of Re-Employment for 60 years old or above

At the end of December 2011, the Company had about 482 employees re-hired under the "Partner Program" introduced in 2006 for re-hiring after reaching mandatory retirement at age sixty. To be eligible, applicants must (1) be willing to work; (2) satisfy certain assessment standards; and (3) have taken a recent health examination certifying that nothing stands in the way of resuming employment, among other conditions. In fiscal year 2011, 82% of mandatory retirees used the program. They are working at the Company as an active force with high skill levels who pass on their technical knowledge to junior staff. Notably, the Company promotes also regulations providing for short work hours so as to preserve post-retirement employment and to provide work flexibility.

### Change in the Number of Re-Employment

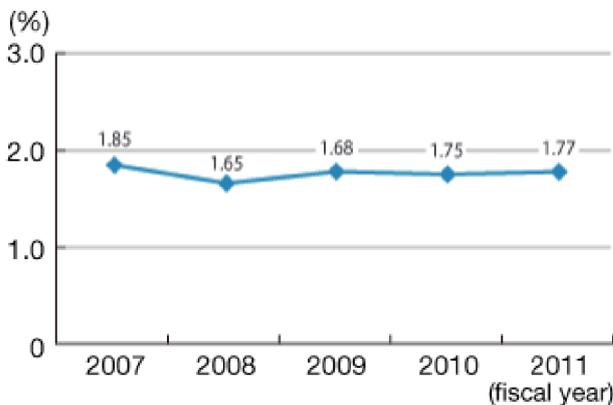


## Employment of staff with disabilities

To date, the Company has been hiring at its operating sites at regular intervals graduates with disabilities, centered on work content within the scope of existing job duties that is manageable regardless of a disability. In order to widen the scope of hiring employees with disabilities, the Company started to develop new business operations. Thus, in the period from April 2011 to March 2012 the Company took on eleven staff out of whom two were hired in April 2012. Regrettably, in fiscal year 2011 (April 2011 to March 2012) the employment ratio could not be reached. Nonetheless, as a result of these efforts, the employment ratio at the parent company reached 1.94% on a monthly basis in April 2012.

Moreover, in March 2012, in order to offer work places to an increased number of hires with disabilities, the Company launched operations at Yokohama Peer Support Co., Ltd., established for the employment of persons with disabilities. Subsequently, on May 31 the entity acquired recognition as a Special Provision Subsidiary under the Act for the Promotion of Employment of Persons with Disabilities (Disabled Persons Employment Promotion Act). In order to promote the employment of persons with disabilities, the Company and domestic group companies will continue to create work places where staff members with a diversity of backgrounds are able to proactively apply their capabilities.

### Changes in the Employment Ratio of people with disabilities



## Establishment of Yokohama Peer Support Co., Ltd. and comments from workers

Yokohama Peer Support Co., Ltd. was established in December 9, 2011, with the aim to obtain recognition as a Special Provision Subsidiary for the employment of persons with disabilities. Hiring commenced in January 2012 centered on persons with hypophrenia. Operations at the Hiratsuka plant (Hiratsuka city, Kanagawa prefecture) started in March. As of the end of May, fifteen persons with disabilities were in employment. Activities involve mainly cleaning of the plant premises, greening work including planting, and mail dispatch, among others. For the future it is planned to extend operations to Company headquarters and production sites in Japan with a view to raise the number of employees with disabilities to around thirty. Comments from two employees who started working this March are quoted below.

**Ayako Kokubun**



I joined because I can use my previous experience and can commute from home, and based on a recommendation from the employment center. Although I joined only recently I feel at ease that I can get along well with my colleagues. It is important for me that I can work in an environment that has such an open atmosphere.

**Hiroaki Ito**



At my previous company I had a long 90-minute commute and I switched to here when I heard about the start of operations at Peer Support. I have previous work experience in examining and sorting products, and it looks like I can use it also in my work here. Of late people passing by while we are doing our cleaning work have started greeting us. If it changes how people feel if their surroundings are cleaned, to me it is rewarding.



**Cleaning the greenery on the plant premises**

**General Manager, Hiratsuka Factory  
Keizaburou Abe / General control division,  
Eirin Nonaka**



Currently, operations involve fifteen additional new hires and fifteen staff (including three with disabilities) who transferred from a different subsidiary, for a total of thirty staff. Since we have only just started, I expect there will be problems on the way, but Yokohama Peer Support draws much strength from meeting its responsibilities to the community and from having consideration for others. Things will be just fine if we can spread these notions across all of Yokohama Rubber.

**Board director Kazutoshi Morimoto, General control division Yoshinao Yamashita**

How we are going to expand the scope of this program, that is the main point. A close look at each plant tells me there are jobs for each of us that we will be able to do. I would like to aggregate that work and get started on it, taking into consideration our capabilities. In the future, probably we will need to increase the scope further.

**■ YPS corporate philosophy**

We promise to work in a brightly, cheerfully, lively and safely.

- Greet others and respond to others' greeting in a firm and cheerful manner.
- Engage in mutual support and say thank you.
- Avoid rushing and hurrying, adhere to the rules, and practice work place safety.

## ■ YPS Greetings for Business

Good Morning  
Your goodwill is greatly appreciated.

Thank you for your support.  
Excuse me please.

Thank you.  
I am sorry.  
Your goodwill is greatly appreciated.

I am leaving for the day. Have a good evening.  
Have a good evening.

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Human Rights

Achievements

Respecting Human Rights and Legal Compliance

Compliance Card

We are ensuring a sense of respect for human rights by distributing cards with descriptions herein for all our domestic employees that reads; "We (Yokohama Rubber and Group Companies) will act based on the following eight pillars of principles, regardless of being inside or outside of the country, respecting all kinds of human rights, complying with related legislations, international rules, and their spirits, in order to create a sustainable society by applying good common sense all the time."

As for our overseas offices, each subsidiary has their own code of conduct catered to their region based on these principles.

1. Provide socially useful products and services, followed by securing customer satisfaction and credibility
2. Fair, transparent, and free competition with proper trading
3. Fair disclosure of company information
4. Realize employees' comfort and affluence
5. Proactive approach for environmental issues
6. As "good corporate citizens"
7. Protection and management of company assets and information
8. Contribute to each country or region by complying with their prevailing laws

Countermeasures for Sexual Harassment

We have set forth our basic guidelines as to workplace without any form of sexual harassment; we have placed it on our "Human Resources Corner" of our internal intranet with its supporting system such as where to contact for counseling and to lodge complaints. There were 11 cases reported to our Compliance Hotline (Whistle-Blowing System) as to harassment and we have settled all the cases in the proper manner in the fiscal of 2011.

Countermeasure for Power Harassment

We have set forth our tips to solve any form of power harassment; we have placed it on the "Human Resources Corner" of our internal intranet with its supporting system such as where to contact for counseling and handling complaints.

Also, we have conducted a seminar at all of our offices to prevent power harassment targeted at our managerial positions based on our guides and actual cases where 92 managers have attended for 120-minute-long lecture in the fiscal year of 2011.

Survey of Labor Laws and Labor Practices at our Group Companies

Every year, we are conducting a survey with regards to labor conditions or CSR on human resources at our group companies both in domestic and overseas to ensure they comply with the prevailing legislations.

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## Together with our Business Partners

### Together with our Business Partners

#### Guidelines

Yokohama Rubber Group is aiming for co-development under fair and equal trading as our basis, by establishing the sense of trust to realize our co-existence and co-prosperity. Especially, we will proceed with our activities to establish our credibility; for example by developing our CSR activities to our business partners, green procurement, and co-research as examples.

#### Basic Guidelines of Yokohama Rubber's Procurement

In order to realize GD100, we will conduct our procurement activities in accordance with the below- mentioned guidelines:

#### Basic Guidelines

- **Procure optimum raw materials, equipment, and construction.**

In order to provide better products, we will continue to procure optimum raw materials, materials, and construction

- **Trading with fairness and impartiality**

We will conduct fair and equal trading based on the notion of free competition. Also, we source all our business partners from all over the world through global perspective.

- **Reasonable selection of our partners**

As for the selection of our partners, we will determine them based on economical reasonability under consideration of comprehensive perspectives; their quality, price, stable supply, ability for technology development, and environmental friendliness.

- **Partnership**

We will establish an equal and fair cooperative relationship through healthy trading with our business partners; we will enhance mutual understandings and credibility to achieve growth with one another.

- **Compliance**

During our procurement activities, we will abide by all the related regulations and social standards in addition to not disclosing any confidential information we came to know during trading.

Also, we will try not to conduct any misleading behavior by reflecting onto our socially accepted ideas.

- **Harmony with the environment**

We will try to purchase raw materials with a lesser burden to the earth environment.

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## with Local Communities

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Due to the globalization of its business, the Yokohama Rubber Group promotes the use of locally sourced raw materials in consideration of quality and cost. These activities enable us to avoid supplier risk by diversifying our procurement sources and to reduce logistics as well as inventory costs. This also helps us to contribute to the development of local industries and build good relationships with our local suppliers. Suzhou Yokohama Tire Co., Ltd. and Hangzhou Yokohama Tire Co., Ltd. of China have teamed up to increase the percentage of raw materials being sourced locally through joint procurement involving their procurement, technological and production departments. Going forward, we will strive to further increase the percentage of raw materials being procured locally China as well as investigate and identify new local suppliers at our newest overseas sites in Russia and India raise the percentage of locally sourced raw materials.

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Development of CSR to our Business Partners

Achievements

We are trying to establish a reliable relationship one another based on fair and equal trading; we will continue to ensure our co-existence and co-prosperity and leverage our service levels as a partner through our various CSR activities.

Workshops together with Suppliers and the "Purchasing Code of Conducts"

We have held workshop about the requirement of CSR for inner staff and outside supplier in order to deepen their understanding of CSR in our domestic sites. Also we hold workshops for overseas staff in charge of purchasing. In the fiscal year of 2011, we established the "Purchasing Code of Conducts", and started to enlighten our staffs in charge of purchasing.

In domestic business site, aiming at the concrete outcome of our CSR activities, we will advance the install of the "Purchasing Code of Conducts" through workshops with suppliers in fiscal 2012. Also, in overseas business sites, we will conduct education for all staff in charge of purchasing for holding the same workshop with suppliers as in domestic, and establish the system and structure to progress CSR activities in each business site. Through the studies of compliance with laws and biodiversity, etc., we will deepen our understanding of CSR together with our partners.

Workshop at Hiratsuka Factory and Mishima Plant



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## Together with our Business Partners

### In Order to Establish Credibility with Business Partners (Fair and Equal Selection of Partners)

#### Achievements

#### Fair and Equal Selection of Business Partners

We select our business partners based on the notion of "open trade, fair and equal free competition". We are proactively recruiting new business partners by fully utilizing such methods as obtaining quotations from multiple companies, determination of the supplier through auction, and so on.

#### Purchasing Code of Conduct Formulated and in Practice

In 2011, we prepared a new set of ethics on purchasing that defines matters that must be considered in the selection of fair and equal trade in our Fundamental Procurement Policy as well as shows ethical problems that must be avoided. Together with our fundamental policy, this set of ethics was formulated into the Purchasing Code of Conduct. This code of conduct was distributed to all of our business sites, including those outside of Japan, in order to once again reaffirm the proper mindset required of purchasing officers and to provide further training on our stance regarding this matter.



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#### Compliance and Guidance towards Overseas Plants

We are trying to enhance the above-mentioned by reviewing the contents on a regular basis to meet the requirements of TS16949 (quality standards mainly for automobile industry), proper procurement operation and law-abiding, and to prevent any fraudulent activities. Also, we issue Basic Requirements of Material Procurement by incorporating the preceding items for our overseas plants in order to guide them with their proper work operations.

#### ■ Compliance with Subcontracting Law and Supervision of Procurement Operation

We conduct internal training for personnel in charge of materials and subcontracting as to Subcontracting Law, followed by having them attend external seminars for Subcontracting Law on a regular basis. Our Global Procurement Division pays a visit to all the Material and Subcontracting Division in our offices regularly, to ensure there is no case of breach against any items under Subcontracting Law by conducting operational audit,

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in order to maintain our law-abiding stance.

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## Joint Research with our Business Partners

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Currently, we are proactively working together with ZEON Corporation, a manufacturer of environmentally friendly products, especially synthetic rubber which is optimum material for fuel efficient tire or lightweight tire, and a synthetic rubber manufacturer to develop steel code, in addition to Tokyo Rope Manufacturing Co., Ltd., a manufacturer of steel code. Also, we are conducting joint research together with Songkran University in Thailand, one of the major production sites, to utilize resources at the production site of natural rubber and to contribute to the improvement of work conditions of rubber farmers there.

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## Together with our Business Partners

### Green Environment

#### Achievements

Yokohama Rubber has been working on the development and usage of raw materials to contribute to the environment under the cooperation of our business partners with preservation of forest resources, control global warming, usage of recycled raw materials, and expansion of non-petroleum raw materials as the main themes.

#### Preservation of Forest Resources

In order to preserve forest resources, we have abolished wooden pallets or wooden crates which we used to deploy massively in the past. We have almost completed switching all of them into recyclable metal pallets or plastic pallets. As for imported raw materials, we used to have some problems with extra costs incurred by using used pallets for re-export but this issue was closed at the last half of fiscal year 2009. These days we are trying to apply the same approaches at our overseas operation sites.

Also as for the paper made of wood as raw material, we were able to significantly reduce the amount of importing by addressing the company-wide reduction effort on paper usage.

The amount of our paper purchase from April 2011 to March 2012 resulted 66.1% in comparison to that in fiscal year 2006. As for the type of paper to use, we purchase paper classified as eco-friendly as the first priority.

#### Changes in Amount of Purchased Paper

Fiscal Year	2006	2007	2008	2009	2010	2011 (from April 2011 to March 2012)
Purchased Amount (JPY1000)	10,458	10,108	9,206	8,245	7,083	6,906
Comparison with FY2006	100%	97%	88%	79%	68%	66.1%

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#### Control Global Warming

We are currently working on the development of resin for air-conditioning for automobiles by collaborating with downstream automobile manufacturers and upstream raw material manufacturers. This is in accordance with the scheme to switch to CFC 134a with high in coefficient for global warming into CFC with lesser coefficient for global warming. Also in terms of the transportation of raw materials, we contribute to the reduction of CO<sub>2</sub> emissions by trying to have our overseas plants procure their raw materials from local suppliers to reduce CO<sub>2</sub> through logistics operations.

#### Development of Resin for AC Hose to Cope with New CFC

Since CFC 134a, which is a cooling medium for the hose of air-conditioning for automobiles, has a high coefficient for global warming, it will be switched to 1234f, which has a lesser coefficient for global warming. We are also in the middle of the development of the hose of air-conditioning for automobiles by using resin; whilst proceeding under collaboration with resin manufacturers as a conventional nylon-kind resin low in durability which requires some development into a new type of resin.

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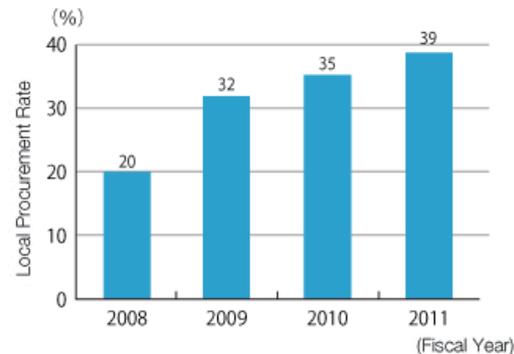
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## ■ Reduction of CO<sub>2</sub> Emission through Transportation (Facilitation of Local Procurement)

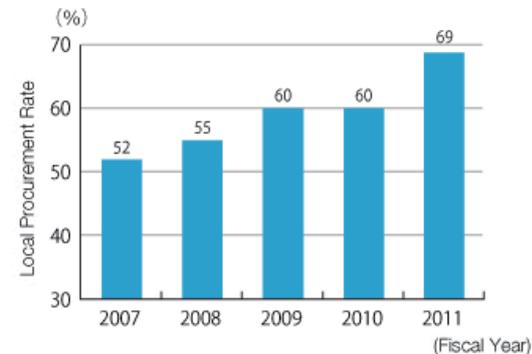
Our plants in China made a big improvement in terms of local procurement. Also, our plants in the USA used to import some of the raw materials from Japan due to being unable to arrange them locally, but now they are able to purchase them from the local market.

### ○ Changes in Local Procurement in China

#### Changes in Local Procurement in our Suzhou Plant



#### Changes in Local Procurement in our Hangzhou Plant



\* The accounting period for the fiscal year of 2011 is from April to December. As such, data for the generated amount from January to March 2011 (fiscal year of 2010) has been added to this to provide a tally for the full calendar year.

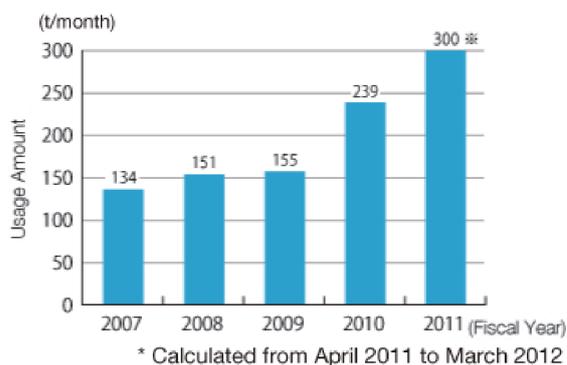
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## Expansion of Recycled Raw Materials

In the past, recycled rubber used to be widely deployed as recycled raw materials for tires. However, blending this recycled rubber deteriorates their physicality, so the applicable range of their parts was quite limited; we had some limitations as to its usage. Also, as for rubber powder generally available in the market, it is likewise with recycled rubber; it used to greatly deteriorate the physicality and was unable to be used for tires. Yokohama Rubber had signed the Agreement of Co-Development with Lehigh Technologies, Inc. in the USA with "Micronized Rubber Powders" to undertake further fining down of rubber powders to go about research on the usage of rubber powder for tires.

As a result, if rubber powder is micronized, its physical property decreases very little. It was understood that the manufacturing cost (mainly electricity) of Lehigh Technologies would not increase so much. As a result micronized powder from rubber was enabled to be arranged into various kinds of compounds, which led to increase the usage of the recycled materials substantially. We anticipate the further expansion in the future.

### Changes in Usage of Recycled Raw Materials (Recycled Rubber and Rubber Powders)



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## Be Away with Petroleum-Based Raw Materials

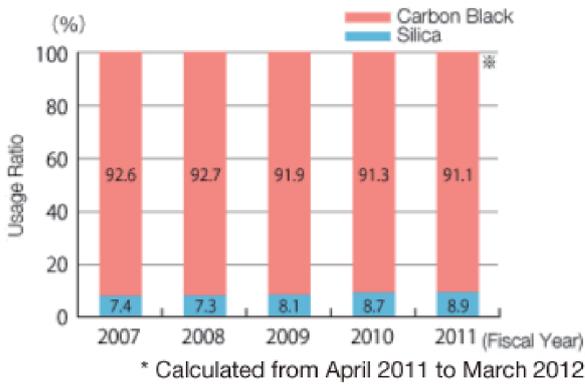
In order to phase out from raw materials being dependent on petroleum as soon as possible, we are currently in the midst of development under collaboration with our business partners to develop non-petroleum-based raw materials as our main raw materials.

### ■ Switching from Carbon Black into Silica

Carbon black is the essential raw material for rubber; it is manufactured through imperfect combustion of petroleum-based oil or charcoal-based (tar-based) oil, as such it is not considered as high in extraction rate. At

the same time, silica's basic raw material is from sand, which is almost unlimited in supply; the good thing about silica is to limit the usage of petroleum-based resources but its negative aspect is it is fairly expensive and not easily being blended with rubber. We are thus able to overcome this problem by selecting Silane Coupling Agent and development of blending machines; upgrading to the preceding methods is currently taking place gradually.

#### Changes in our Purchasing Amount of Carbon Black and Silica



#### ■ Usage of Plant-Based Oil

In the past, petroleum-based oil was the mainstream as the oil for rubber. Plant-based oil was unable to be used due to its poor compatibility with synthetic rubber such as natural rubber or SBR. Under collaboration with our business partners, we were able to develop orange oil which is high in compatibility with the preceding rubber types; we are now able to use it as high grip oil.

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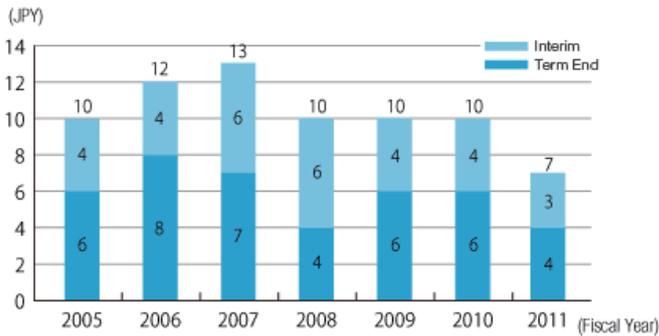
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Guidelines

Guidelines as to Dividends

We are in the stance of applying necessary internal reserves in order to achieve our future business development and enhance our management quality; our fundamental guidelines are to maintain a stable amount of dividends.

Changes in Dividends per Share



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Development of our Proactive IR Activities

Achievements

**Holding Briefing Sessions as to Financial Closing**

We are holding briefing sessions as to financial closing for security analysts and corporate investors. Since the last half of the fiscal year of 2006, we have been conducting such briefing sessions at the timing of each financial closing per quarter.

In March 2012, we conducted questionnaires with some security analysts about our briefing sessions as to financial closing. It was indicated that while there is still room for improvement in the time allocation, they were satisfied with the presentations and the Questions and Answers. Though the reflection of shareholders' wishes and ideas, we will continue to engage in appropriate information disclosures.

**Information Disclosure on our IR Homepage**

We have upgraded our [Exclusive Homepage](#) for our shareholders and investors, where a variety of IR information, i.e. not just Messages from our Presidents, Information Related to Financial Closing, or Mid-Term Management Plans, but also Introduction of our Businesses, Explanation over Various Tables Related to Finance, can be found.

**Distribution of IR Information Tools**

In addition to our distribution of Interim and Term-End Financial Reports to our shareholders and investors, we are issuing our Annual Report (Report on Financial Closing in English) as well. Also, we create our Annual Report in a Japanese version and all the contents therein can be found in our homepage. From the fiscal year of 2008 onwards, in order to provide the material of briefing sessions for our shareholders and investors in an even more timely manner, we are currently providing such information on our homepage in PDF format.

**Conducting of Individual Meetings**

We also conduct individual meetings with our security analysts and corporate investors.

**Conducting of General Meeting for Shareholders**

During our annual General Meeting for Shareholders, we are trying to provide our business reports for our shareholders by continuing to make improvements to present it in a straightforward manner.

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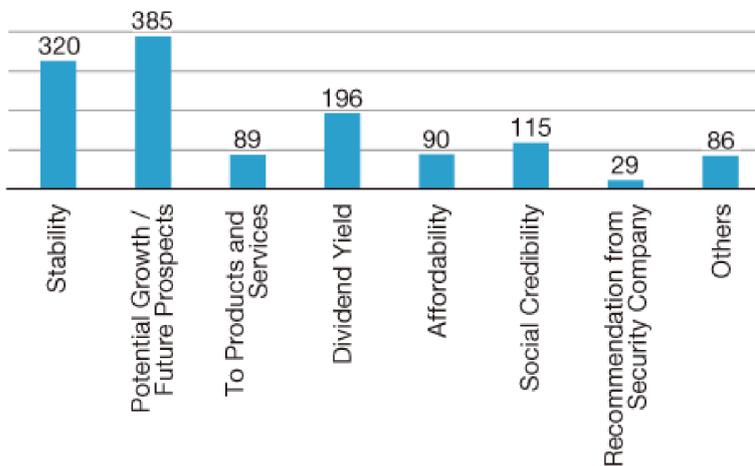
**In Order to Hear from our Shareholders**

**Achievements**

**Conducting Questionnaires with our Shareholders**

We are conducting annual questionnaires with our shareholders at the same time as the issuance of our Term End Financial Report in order to hear from them later on. We started this from the fiscal year of 2004 and have conducted seven times in total so far. In the fiscal year of 2011, we were able to hear from 751 respondents as to their Motivation of the Purchase of our Shares and Information Usable for some Improvement in the Future. Based on the opinions and requests received, we have been playing a video in a visual form so that they can have a clearer picture as to our information on performance, activities, and products. Also, we have made some improvements mainly on our structure of Term End Financial Reports to present it in a more straightforward manner. We will hereby continue to utilize such information to keep improving our IR activities.

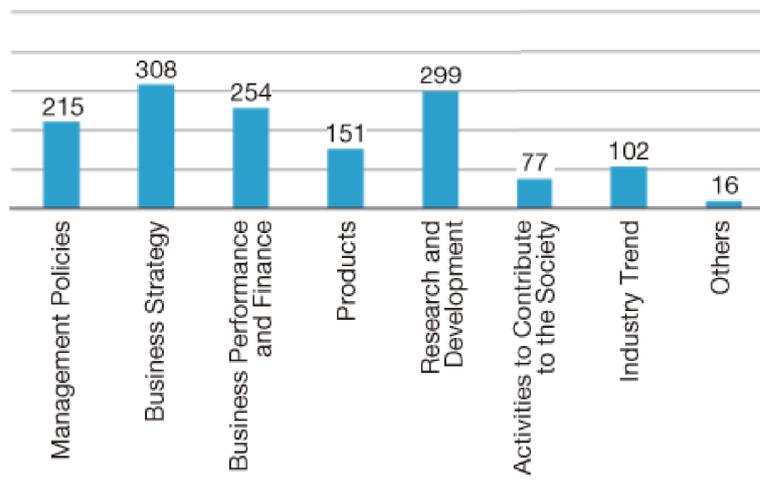
**Motivation of the Purchase of our Shares (Multiple Replies)**



**Information Usable for some Improvements in the Future (Multiple Replies)**

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## Together with our Society

### Guidelines

#### Basic Stance

We will continue to enhance mutual understandings and credibility by reflecting our stakeholders' feedback onto our corporate activities by conducting two-way communication with both of our internal and external stakeholders while providing information in a timely manner. The communication with local communities at the locations of individual operating sites is described in the section on "[Site Date](#)."

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### ▼ Together with our Society

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How we Handled External Complaints

Achievements

How we Handled External Complaints

Yokohama Rubber has reviewed our complaint handling procedure manual to handle any complaint at our domestic operation sites in order to cope with the same quality and the same level, and also try to get as accurate information as possible.

Also, we will verify the situation upon receipt of any complaint by visiting the person who provided such information. We shall thereby notify the result after conducting relevant countermeasures in a proper manner. We are applying numerous measures in order to achieve zero complaints from our local residents.

For fiscal 2011, we have continued the pollution source control sources and environmental patrols. As a result, three cases were recorded (one each for odor, air (soot scattering), and other causes (umbrella establishing contact with tree), compared with the target of eight or less.

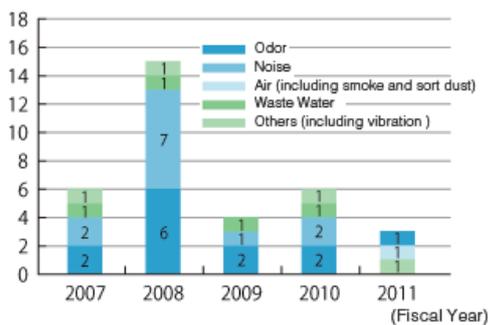
In the fiscal year of 2012 we aim at six or less cases per year. As for the measure against odor, we plan to increase additional facilities overseas. Moreover, As for the measure against noise and vibration, we will continue the pollution source control.

\* The accounting period for the fiscal year of 2011 is from April to December. Data from January to March 2011 has been added to this to provide a tally for the full calendar year.

The Number of Complaints against our Operation Sites and their Measures

Items	Our Goals (by FY2017)	Achievement of FY2011	Evaluation	FY2012 target
Complaints from Outside	0	Achieved with 3 cases (target was 8 cases or less)	Passed	6 case or less of complaints

Changes in the Number of Complaints



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We were assessed as follows by the public from January 2011 to February 2012

**1. "BlueEarth-1", a flagship of fuel-efficient tire, was awarded the environmental award on the tire business fair in France**

BlueEarth-1 which is the flagship tire of the BlueEarth fuel-efficient tire brand was selected as the environment award of Pneu Expo Innovations Trophy at the tire business specialist trade fair PNEU EXPO held from February 7 to 9, 2012, in France.

The PNEU EXPO is the largest tire business fair where all of tire related companies and organizations, and specialists across the range of manufacture, import, supplies, service, systems, and media, etc. participate. The Pneu Expo Innovations Trophy comprises the three categories of 1. Environmental Actions, 2. Shop Equipment Innovations, and 3. Service Innovations, and commends particular excellence found in any one of these categories. We were announced as a winner of the Environmental Actions which honors activities, products, and services that contribute to the protection of the environment. We were presented with this honor because BlueEarth-1 was recognized for its excellent fuel economy performance and its ability to reduce impact on people and society, while the company was recognized for its long-standing development of fuel efficient tires.

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**2. "BlueEarth", a next-generation environmental tire concept, and "ZEN 903ZW", a studless tire for trucks and buses, were selected together as the Fiscal Year 2011 Good Design Award.**

On October 3, 2012, the BlueEarth next-generation environment tire concept and the ZEN 903ZW studless tire for trucks and buses were honored with the Fiscal Year 2011 Good Design Award.

BlueEarth marks the Company's next-generation environmental tire concept which combines outstanding environmental properties with universal design considerations for product performance that is light on people and communities. Based on this concept, the Company has been advancing tire development for secondary markets and for new vehicles. The application of various new technologies resulted in less stress involved in driving and tire maintenance while achieving high-level fuel efficiency and safety performance. Moreover, by reducing the external noise from passing vehicles, the burden on surrounding residential environments could be lowered. This development approach from an innovative perspective and radically new technology combined with beautiful design were highly appreciated.

"ZEN 903ZW" offers further enhanced performance on wet ground and on snow required of studless tires. As environmental performance features common to the ZEN series, product development pursued 1. reusability (resource recycling and reconstitution) as retread tires through improved casings (the basic tire structure), long life through improved wear resistance performance (resource conservation), and 3. fuel efficiency through reduced roll resistance (resource preservation and prevention of environmental warming). The award honors the Company's development approach, which contributes to a sustainable society through reducing, reusing, and recycling ("3R") as well as outstanding product performance.

The Good Design Award relates to the comprehensive design assessment system incepted in 1998 by the Japan Institute of Design Promotion (now the Japan Institute of Design Promotion, Public Interest Incorporated

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Foundation) and is the successor to the Good Design Product Election System established in 1957 by the Ministry of International Trade and Industry (now the Ministry of Economy, Trade and Industry). Many Japanese and foreign firms and organization participate in this contest, which attracted 3,162 entries this year.

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### 3. Chairman Award of the "Resource Recycling Technology and Systems Award" in the second consecutive year

The Company's efforts to contribute to resource preservation were honored with the Clean Japan Center "Chairman Award" of the Fiscal Year 2011 Resource Recycling Technology and Systems Award sponsored by the Clean Japan Center (CJC). The object of recognition was the "Reduction of the amount of rubber used in inner liners of pneumatic tires." The ceremony took place on October 31, 2012, at the Chiyoda Ward Uchisaiwai Hall (Chiyoda ward, Tokyo). In the year earlier, the Chairman Award of the Fiscal Year 2010 Resource Recycling Technology and Systems Award honored the Company twofold for the "Reduction in industrial waste through the recycling of spent vulcanized bladders" and the "Development and propagation of e-can containers as a countermeasure to industrial waste generation for 2-component type sealant materials." The Company is pleased to receive the award in the second consecutive year.

Inner liners are glued to the inside of tires as a material to suppress the natural air leakage. "AIRTEX Advanced Liner," an inner liner developed by the Company, is made of a new material that combines the low permeability of resin with the flexibility of rubber, with one-fifth the thickness of earlier products. This reduces the quantity of rubber and contributes to a lighter tire. Notably, "AIRTEX Advanced Liner" was announced as the winner of "the 22nd Award of the Society of Rubber Science and Technology, Japan" in June 2010, and "the Commendation for Science and Technology (Development) of the Minister of Education, Culture, Sports, Science and Technology" in May 2011 received.

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### 4. Commendation for Science and Technology (Development) of the Minister of Education, Culture, Sports, Science and Technology awarded two employees for the development of tire fuel-efficiency improving inner liner technology

Two employees were awarded the Fiscal Year 2011 Commendation for Science and Technology (Development) of the Minister of Education, Culture, Sports, Science and Technology for the development of tire inner liner technology development. This technologies brings to bear the respective properties of rubber and resin to form a new-type inner liner material which substantially reduces the amount of air leakage from tires and thereby contribute to raising vehicles' fuel efficiency.

Description of the award

■ Topic: Development of inner lining using rubber and resin polymer alloy

■ Awardees:

Yuichi Hara

Group leader, R&D Group No. 2, R&D Dept., Research & Development Center

Yoshiaki Hashimura

Group leader, R&D Group No. 3, R&D Dept., Research & Development Center

■ Technical information:

Inner liners are glued to the inside of tires to mitigate air leakage. Tires' natural air leakage reduces air pressure, which increases rolling resistance with adverse effects on fuel efficiency. The inner liner developed by Yokohama Rubber uses a new material with a high-dimensional balance between the low permeability of resin and the flexibility of rubber. The result is substantially lower air leakage. Moreover, with just one-fifth the thickness of conventional liners, the new product offers a reduced air leakage and lower tire weight. The award comes not only in acknowledgment of improved fuel efficiency from lower roll resistance and lighter weight, but recognizes also the conservation of resources. The inner liner came to market in 2009 under the name AIRTEX Advanced Liner.

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## Other Social Activities

### Participation of Various Initiatives both Domestically and Overseas

#### ■ United Nations Global Compact

Yokohama Rubber approved and signed the initiative of the "Global Compact" advocated by the United Nations in May 2012. Yokohama Rubber and its affiliates will support, observe, and practice the ten principles of corporate social responsibility related to human rights, labor standards, the environment, and the prevention of corruption which the Global Compact requires companies

#### ■ United Nations World Food Programme

Yokohama Rubber endorses the United Nations World Food Programme (WFP) in undertaking to eradicate hunger and poverty and supports the activities of the WFP as a trustee.

#### ■ Challenge 25 Campaign

Yokohama Rubber has been participating and acting in accordance with "Challenge 25", a national program to help prevent global warming that has been developing since January 14, 2010.

#### ■ Japan Business Federation's "Biodiversity Declaration" - Facilitation Partners

Yokohama Rubber is in accordance with the idea of "Japan Business Federation's Biodiversity Declaration" and their facilitation partners since 2009 to develop various approaches for "preservation of biodiversity". Basic policies and action guidelines have been set forth as "Yokohama Rubber's Guidelines on Biodiversity" thereto.

#### ■ Japan Business Federation's "Implementation Scheme for a Low Carbon Society"

Yokohama Rubber is in accordance with, and participating in various activities for Japan Business Federation's "Implementation Scheme for a Low Carbon Society" under the vision of "Japanese industries playing a role as core functions with their technological strength in order to achieve our target which is to halve the greenhouse gas emission of the world in 2050".

#### ■ WBCSD (World Business Council for Sustainable Development)

WBCSD refers to the unified association consists of top executives from global corporations in order to perform their leadership in their industry, have lively discussion, and propose policies with regards to the environment and sustainable development. Yokohama Rubber is participating in the Tire Industry Project which is to conduct surveys pertaining to possible impact on the environment and health to be made by tires, and to promote various activities to save energies in the buildings and offices.

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## Related Information on CSR Report

### ○ Related Information on CSR Report

The information contained in the CSR report is shown here.

[▶ Third-Party Opinion](#)

[▶ Reference Table for GRI Guidelines](#)

[▶ Editorial Policy for Online Edition](#)

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## Related Information on CSR Report

### Third-Party Opinion

Continuing from the 2009 CSR Report, YRC received a third-party opinion from Mr. Hideto DeDe Kawakita, CEO of the International Institute for Human, Organization and the Earth (IIHOE).

IIHOE(International Institute for Human, Organization and the Earth)

CEO

IIHOE : The International Institute for Human, Organization and the Earth is a non-profit organization established in 1994 for the democratic and balanced development of all the lives on the earth. Although it mainly provides management support for citizens' groups and welfare workers, the group is also heavily involved in providing CSR support to major companies.

<http://blog.canpan.info/iihoe/> (Japanese language only)



The description herein refers to the opinions based on CSR REPORT 2012 and this website, and also some interviews conducted with each personnel from YRC's Raw Material Procurement, Human Resources, General Affairs, and CSR division. Suffice to say, YRC's various approaches toward CSR are steadily progressing with the PDCA Management cycle, especially with regard to the reduction of environmental burdens.

### Truly Commendable Areas

- Regarding the Yokohama Forever Forest Project, in only five years since the project was launched, YRC has planted more than 230,000 trees with sufficient consideration towards the preserving and improvement of biodiversity both in their domestic and overseas offices. They nurtured the seedlings on their own, and not only were 78% supplied within the YRC Group in the fiscal year of 2011, but also in Japan, they have been providing more than 70,000 trees so far to municipal governments and other companies. In particular, I commend the company for playing a leading role in the life-saving green coastal levee project planned for areas affected by the Great East Japan Earthquake. I also truly commend this program for contributing to society to preserve and improve forest ecosystems and greeneries, without a doubt they deserve the highest standard of the world. Going forward, I hope that the Yokohama Forever Forest Project website will also evolve into a portal that also introduces many examples of similar initiatives being implemented by other companies.
- Regarding [Conservation of Biological Diversity](#), I commend YRC for performing a study at its Mie Plant as well as hosting employee-led workshops and briefings for the local community, based on the preliminary studies implemented at 30 of the company's business sites both in Japan and overseas in the fiscal year of 2010. Through this initiative the company is helping to foster a correct understanding of ecosystems as well as the positives and negatives of the company's impact. Going forward, I hope that the company will steadily expand the scope of this initiative to its other business sites.
- Regarding [CSR Promotion System](#), while I commend the company for establishing interim targets up to 2017 and promoting initiatives using key performance indicators (KPI) based on core subjects from ISO26000, going forward I encourage the company to use targets and measures created using a bottom-up approach at its domestic and overseas sites. I also hope that the company will introduce in greater detail initiatives being implemented by group companies both in Japan and overseas as part of future reports. Much like the biological diversity conservation program started at the Mie Plant, I encourage greater stakeholder

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involvement required of ISO26000 by establishing opportunities for continuing dialog with NPOs and other organizations located in communities where the company has important operations.

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### While Approving of Progression, Areas may need Improvement

- Regarding [Reduction of Environmental Burden](#), while commending the company for making progress in reducing the impact its products have on the environment, which includes increasing the use of recycled powdered rubber by some 40% compared to last year, at the same time, it is worrisome that the generation of waste material and the emission of greenhouse gasses have greatly increased due to recovery in their production quantity compared to last year. From now on as well, I strongly expect them to facilitate with that. Non-fixation of energy usage adjustable to the fluctuation of production quantity (Just-In-Time for Energy) by going thoroughly about with the visualization of challenges and methods, and also sharing the same support system among their divisions and overseas sites.
- As for [CSR at Suppliers](#), I commend the company for launching CSR workshops and developing a system by formulating purchasing rules. In order to more specifically and effectively improve initiatives being undertaken by suppliers, from now on as well, I strongly expect them to establish a supporting system to mingle with them for sharing, appraisal, and problem solving of actual cases.
- Regarding [Improvement of Workplaces to Retain Employees](#), I commend the fact that 2.60% of YRC employees took the system for paid vacation, leave of absence or shorter work hours in order to care for a child or family member in need thanks to the establishment of a new paternity leave program. Going forward, I strongly urge the company to establish an environment where employees can continue to work while also taking leave, such as by introducing examples of people that have taken nursing care leave. In terms of mental health care, while commending the company for conducting stress screening for all of its employees, going forward I hope the company will promote even more effective measures aimed at preventative care, such as establishing a hotline where employees can discuss personal problems.
- As for the enhancement of a human resource portfolio required as a global corporation in mid-term, I think it is good that the company started taking actions on the consistent evaluation process as a group corporation for those who belong to managerial layer, meanwhile, going forward, I strongly encourage the company to accelerate its development of the next generation of executives at both its head office and overseas sites.
- [Employment of Persons with Disabilities](#), I commend the company for establishing Yokohama Peer Support Co., Ltd. and for establishing a system through receiving approval for special subsidiary company status. I ask that the company work more proactively to achieve the statutory employment rate of persons with disabilities and implement measures to ensure that employees with disabilities are retained over the long term.

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### ■ Upon Acknowledgement of Third-Party Opinion

**Kinya Kawakami**  
**Director and Managing Corporate Officer, General Manager.**  
**Corporate Social Responsibility Division**



We have received guidance from Mr. Hideto Kawakita, CEO of IIHOE pertaining to a wide range of issues, from reducing our impact on the environment to the social contribution activities we should implement as a company and our assistance in the wake of the Great East Japan Earthquake.

With regards to reducing our impact on the environment, we are continuing to reduce the environmental impact of our products by among other things further increasing the amount of recycled powder rubber used in our tires and products.

In addition, we are pushing forward with a shared system at our overseas sites to better visualize issues and methods, such as Just-In-Time for Energy that promotes the fluid use of energy to adapt to fluctuations in production volume.

As for improving workplaces to retain employees, we will establish an environment where employees can continue to work while taking leave, a hotline to provide more effective mental health care services, and measures that ensure employees with disabilities are retained over the long term.

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## Related Information on CSR Report

### Reference Table for GRI Guidelines

Items	Index	Page to Refer
<b>1 Strategy and Analysis</b>		
1.1	Statement from the most senior decisionmaker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy.	<a href="#">Message from the President</a>
1.2	Description of key impacts, risks, and opportunities.	<a href="#">Message from the President</a>
<b>2 Organizational Profile</b>		
2.1	Name of the organization.	<a href="#">Yokohama Rubber Group at a Glance</a>
2.2	Primary brands, products, and/or services.	<a href="#">Yokohama Rubber Group at a Glance</a>
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	<a href="#">Yokohama Rubber Group at a Glance</a>
2.4	Location of organization's headquarters.	<a href="#">Yokohama Rubber Group at a Glance</a>
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	<a href="#">Yokohama Rubber Group at a Glance</a>
2.6	Nature of ownership and legal form.	<a href="#">Yokohama Rubber Group at a Glance</a>
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	<a href="#">Yokohama Rubber Group at a Glance</a>
2.8	Scale of the reporting organization, including: <ul style="list-style-type: none"> <li>• Number of employees;</li> <li>• Number of operations;</li> <li>• Net sales (for private sector organizations) or net revenues (for public sector organizations);</li> <li>• Total capitalization broken down in terms of debt and equity (for private sector organizations); and</li> <li>• Quantity of products or services provided.</li> </ul>	<a href="#">Yokohama Rubber Group at a Glance</a>
2.9	Significant changes during the reporting period regarding size, structure, or ownership including: <ul style="list-style-type: none"> <li>• The location of, or changes in operations, including facility openings, closings, and expansions; and</li> <li>• Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations).</li> </ul>	<a href="#">Editorial Policy for Online Edition</a>

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2.10		Awards received in the reporting period.	<a href="#">Together with our Society (Evaluation from the Society)</a>
<b>3 Report Parameters</b>			
<b>Report Profile</b>			
3.1		Reporting period (e.g., fiscal/calendar year) for information provided.	<a href="#">Editorial Policy for Online Edition</a>
3.2		Date of most recent previous report (if any).	<a href="#">Editorial Policy for Online Edition</a>
3.3		Reporting cycle (annual, biennial, etc.)	<a href="#">Editorial Policy for Online Edition</a>
3.4		Contact point for questions regarding the report or its contents.	<a href="#">Editorial Policy for Online Edition</a>
<b>Report Scope and Boundary</b>			
3.5		Process for defining report content, including: <ul style="list-style-type: none"> <li>• Determining materiality;</li> <li>• Prioritizing topics within the report; and</li> <li>• Identifying stakeholders the organization expects to use the report.</li> </ul>	<a href="#">Editorial Policy for Online Edition</a>
3.6		Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers).	<a href="#">Editorial Policy for Online Edition</a>
3.7		State any specific limitations on the scope or boundary of the report.	<a href="#">Editorial Policy for Online Edition</a>
3.8		Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	<a href="#">Editorial Policy for Online Edition</a>
3.9		Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.	<a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
3.10		Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/ acquisitions, change of base years/periods, nature of business, measurement methods).	<a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
3.11		Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	<a href="#">Editorial Policy for Online Edition</a> <a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
<b>GRI content index</b>			
3.12		Table identifying the location of the Standard Disclosures in the report.	<a href="#">Reference Table for GRI Guidelines</a>
<b>Assurance</b>			
3.13		Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s).	<a href="#">Third-Party Opinion</a>
<b>4 Governance, Commitments, and Engagement</b>			
<b>Governance</b>			
4.1		Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	<a href="#">Corporate Governance and Compliance</a>
4.2		Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement).	<a href="#">Corporate Governance and Compliance</a>

4.3		For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	<a href="#">Corporate Governance and Compliance</a>
4.4		Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	<a href="#">Corporate Governance and Compliance</a> <a href="#">Together with our Employees (Employment)</a> <a href="#">Together with our Shareholders and Investors (In Order to Hear from our Shareholders)</a>
4.5		Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	<a href="#">Corporate Governance and Compliance</a>
4.6		Processes in place for the highest governance body to ensure conflicts of interest are avoided.	<a href="#">Corporate Governance and Compliance</a>
4.7		Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	<a href="#">Corporate Governance and Compliance</a>
4.8		Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	<a href="#">Corporate Philosophy and Yokohama Rubber Group's Approach to CSR</a>
4.9		Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	<a href="#">Corporate Philosophy and Yokohama Rubber Group's Approach to CSR</a> <a href="#">Corporate Governance and Compliance</a>
4.10		Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	<a href="#">Corporate Philosophy and Yokohama Rubber Group's Approach to CSR</a> <a href="#">Corporate Governance and Compliance</a>

#### Commitments to External Initiatives

4.11		Explanation of whether and how the precautionary approach or principle is addressed by the organization.	<a href="#">Environmental Preservation (Environmental Management)</a> <a href="#">Emission Provision onto Water, Air, and Soil)</a> <a href="#">Together with our Customers (Understanding the Needs of Safe Products (Quality) - MB Group)</a>
4.12		Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	<a href="#">Environmental Preservation (Environmental Management)</a> <a href="#">Together with our Society (Other Social Activities)</a>
4.13		Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization: <ul style="list-style-type: none"> <li>• Has positions in governance bodies;</li> <li>• Participates in projects or committees;</li> <li>• Provides substantive funding beyond routine membership dues; or</li> <li>• Views membership as strategic.</li> </ul>	<a href="#">Together with our Society (Other Social Activities)</a>

#### Stakeholder Engagement

			<a href="#">Corporate Philosophy and</a>
--	--	--	--

4.14		List of stakeholder groups engaged by the organization.	<a href="#">Yokohama Rubber Group's Approach to CSR</a>
4.15		Basis for identification and selection of stakeholders with whom to engage.	<a href="#">Corporate Philosophy and Yokohama Rubber Group's Approach to CSR</a>
4.16		Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	<a href="#">Together with our Customers</a> <a href="#">Together with our Employees</a> <a href="#">Together with our Business Partners</a> <a href="#">Together with our Shareholders and Investors</a> <a href="#">Together with our Society</a>
4.17		Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	<a href="#">Together with our Customers</a> <a href="#">Together with our Employees</a> <a href="#">Together with our Business Partners</a> <a href="#">Together with our Shareholders and Investors</a> <a href="#">Together with our Society</a>

## 5 Management Approach and Performance Indicators

### Economic

		Disclosure on Management Approach	<a href="#">Yokohama Rubber Group at a Glance</a> <a href="#">Together with our Shareholders and Investors</a>
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### Aspect: Economic Performance

EC1	CORE	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	<a href="#">Yokohama Rubber Group at a Glance</a>
EC2	CORE	Financial implications and other risks and opportunities for the organization's activities due to climate change.	<a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
EC3	CORE	Coverage of the organization's defined benefit plan obligations.	<a href="#">Together with our Employees (Employment)</a>
EC4	CORE	Significant financial assistance received from government.	<a href="#">Yokohama Rubber Group at a Glance</a>

### Aspect: Market Presence

EC5	ADD	Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.	-
EC6	CORE	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	-
EC7	CORE	Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation.	<a href="#">Together with our Employees (Our Diversified Personnel)</a>

### Aspect: Indirect Economic Impacts

EC8	CORE	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	<a href="#">Together with our Society</a>
EC9	ADD	Understanding and describing significant indirect economic impacts, including the extent of impacts.	-

### Environmental

		Disclosure on Management Approach	<a href="#">Environmental Preservation</a>
--	--	-----------------------------------	--

### Aspect: Materials

			<a href="#">Environmental Preservation</a>
--	--	--	--

EN1	CORE	Materials used by weight or volume.	<a href="#">(Overall Picture of Environmental Burden)</a>
EN2	CORE	Percentage of materials used that are recycled input materials.	<a href="#">Environmental Preservation (Utilization of Natural Resources / Reduction of Industrial Waste)</a>
<b>Aspect: Energy</b>			
EN3	CORE	Direct energy consumption by primary energy source.	<a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
EN4	CORE	Indirect energy consumption by primary source.	<a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
EN5	ADD	Energy saved due to conservation and efficiency improvements.	<a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
EN6	ADD	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	<a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
EN7	ADD	Initiatives to reduce indirect energy consumption and reductions achieved.	<a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
<b>Aspect: Water</b>			
EN8	CORE	Total water withdrawal by source.	<a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Utilization of Natural Resources / Reduction of Industrial Waste)</a>
EN9	ADD	Water sources significantly affected by withdrawal of water.	There is no water withdrawal from specially protected aquatic zone. Also, we are not withdrawing any water from the area registered under the Ramsar Convention.
EN10	ADD	Percentage and total volume of water recycled and reused.	<a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Utilization of Natural Resources / Reduction of Industrial Waste)</a>
<b>Aspect: Biodiversity</b>			
EN11	CORE	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	<a href="#">Environmental Preservation (Biodiversity)</a>
EN12	CORE	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	<a href="#">Environmental Preservation (Biodiversity)</a>
EN13	ADD	Habitats protected or restored.	<a href="#">Environmental Preservation (Biodiversity)</a>

EN14	ADD	Strategies, current actions, and future plans for managing impacts on biodiversity.	<a href="#">Environmental Preservation (Biodiversity)</a>
EN15	ADD	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	<a href="#">Environmental Preservation (Biodiversity)</a>
<b>Aspect: Emissions, Effluents, and Waste</b>			
EN16	CORE	Total direct and indirect greenhouse gas emissions by weight.	<a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
EN17	CORE	Other relevant indirect greenhouse gas emissions by weight.	<a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
EN18	ADD	Initiatives to reduce greenhouse gas emissions and reductions achieved.	<a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
EN19	CORE	Emissions of ozone-depleting substances by weight.	<a href="#">Environmental Preservation (Management of Chemicals/ Emission Provision onto Water, Air, and Soil)</a>
EN20	CORE	NO, SO, and other significant air emissions by type and weight.	<a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Management of Chemicals and Emission Provision onto Water, Air, and Soil)</a>
EN21	CORE	Total water discharge by quality and destination.	<a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Management of Chemicals and Emission Provision onto Water, Air, and Soil)</a>
EN22	CORE	Total weight of waste by type and disposal method.	<a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Utilization of Natural Resources / Reduction of Industrial Waste)</a>
EN23	CORE	Total number and volume of significant spills.	<a href="#">Environmental Preservation (Environmental Management)</a> <a href="#">Environmental Preservation (Management of Chemicals/ Emission Provision onto Water, Air, and Soil)</a>
EN24	ADD	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention	There is no direct transportation of industrial waste from Japan to

		Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	overseas for the items subject to Basel Convention.
EN25	ADD	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	<a href="#">Environmental Preservation (Biodiversity)</a>
<b>Aspect: Products and Services</b>			
EN26	CORE	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	<a href="#">Environmental Preservation (Environmentally-Friendly Products)</a>
EN27	CORE	Percentage of products sold and their packaging materials that are reclaimed by category.	<a href="#">Environmental Preservation (Environmentally-Friendly Products)</a>
<b>Aspect: Compliance</b>			
EN28	CORE	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations.	<a href="#">Corporate Governance and Compliance</a> <a href="#">Environmental Preservation (Environmental Management)</a> <a href="#">Environmental Preservation (Overall Picture of Environmental Burden)</a> <a href="#">Environmental Preservation (Management of Chemicals and Emission Provision onto Water, Air, and Soil)</a>
<b>Aspect: Transport</b>			
EN29	ADD	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	<a href="#">Environmental Preservation (Reduction of Greenhouse Gas Emission)</a>
<b>Aspect: Overall</b>			
EN30	ADD	Total environmental protection expenditures and investments by type.	-
<b>Labor Practices and Decent Work</b>			
		Disclosure on Management Approach	<a href="#">Together with our Employees</a>
<b>Aspect: Employment</b>			
LA1	CORE	Total workforce by employment type, employment contract, and region, broken down by gender.	<a href="#">Together with our Employees (Employment)</a>
LA2	CORE	Total number and rate of new employee hires and employee turnover by age group, gender, and region.	-
LA3	ADD	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation.	<a href="#">Together with our Employees (Employment)</a>
<b>Aspect: Labor/Management Relations</b>			
LA4	CORE	Percentage of employees covered by collective bargaining agreements.	<a href="#">Together with our Employees (Employment)</a>
LA5	CORE	Minimum notice period(s) regarding operational changes, including whether it is specified in collective agreements.	<a href="#">Together with our Employees (Employment)</a>
<b>Aspect: Occupational Health and Safety</b>			
LA6	ADD	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	<a href="#">Together with our Employees (Workplace with Safety and Health)</a>
LA7	CORE	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities, by region and by gender.	<a href="#">Together with our Employees (Workplace with Safety and Health)</a>
			<a href="#">_____</a>

LA8	CORE	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	<a href="#">Together with our Employees (Workplace with Safety and Health)</a>
LA9	ADD	Health and safety topics covered in formal agreements with trade unions.	<a href="#">Together with our Employees (Workplace with Safety and Health)</a>
<b>Aspect: Training and Education</b>			
LA10	CORE	Average hours of training per year per employee by gender, and by employee category.	-
LA11	ADD	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	<a href="#">Together with our Employees (Work-Life Balance)</a>
LA12	ADD	Percentage of employees receiving regular performance and career development reviews, by gender.	<a href="#">Together with our Employees (Enlightenment and Training)</a>
<b>Aspect: Diversity and Equal Opportunity</b>			
LA13	CORE	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	<a href="#">Together with our Employees (Our Diversified Personnel)</a>
LA14	CORE	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.	<a href="#">Together with our Employees (Our Diversified Personnel)</a>
<b>Human Rights</b>			
		Disclosure on Management Approach	<a href="#">Together with our Employees</a>
<b>Aspect: Investment and Procurement Practices</b>			
HR1	CORE	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.	-
HR2	CORE	Percentage of significant suppliers, contractors, and other business partners that have undergone human rights screening, and actions taken.	<a href="#">Together with our Business Partners (Development of CSR to our Business Partners)</a>
HR3	ADD	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	<a href="#">Together with our Employees (Human Rights)</a>
<b>Aspect: Non-Discrimination</b>			
HR4	CORE	Total number of incidents of discrimination and corrective actions taken.	<a href="#">Together with our Employees (Human Rights)</a>
<b>Aspect: Freedom of Association and Collective Bargaining</b>			
HR5	CORE	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.	<a href="#">Together with our Employees (Human Rights)</a>
<b>Aspect: Child Labor</b>			
HR6	CORE	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.	<a href="#">Together with our Employees (Human Rights)</a> <a href="#">Together with our Business Partners (Development of CSR to our Business Partners)</a>
<b>Aspect: Forced and Compulsory Labor</b>			
HR7	CORE	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.	<a href="#">Together with our Employees (Human Rights)</a> <a href="#">Together with our Business Partners (Development of CSR to our Business Partners)</a>

<b>Aspect: Security Practices</b>			
HR8	ADD	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.	-
<b>Aspect: Indigenous Rights</b>			
HR9	ADD	Total number of incidents of violations involving rights of indigenous people and actions taken.	-
<b>Society</b>			
		Disclosure on Management Approach	<a href="#">Corporate Governance and Compliance</a>
<b>Aspect: Local Communities</b>			
SO1	CORE	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	-
<b>Aspect: Corruption</b>			
SO2	CORE	Percentage and total number of business units analyzed for risks related to corruption.	<a href="#">Corporate Governance and Compliance</a>
SO3	CORE	Percentage of employees trained in organization's anti-corruption policies and procedures.	<a href="#">Corporate Governance and Compliance</a>
SO4	CORE	Actions taken in response to incidents of corruption.	<a href="#">Corporate Governance and Compliance</a>
<b>Aspect: Public Policy</b>			
SO5	CORE	Public policy positions and participation in public policy development and lobbying.	-
SO6	ADD	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	-
<b>Aspect: Anti-Competitive Behavior</b>			
SO7	ADD	Total number of legal actions for anticompetitive behavior, anti-trust, and monopoly practices and their outcomes.	<a href="#">Corporate Governance and Compliance</a>
<b>Aspect: Compliance</b>			
SO8	CORE	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations.	<a href="#">Corporate Governance and Compliance</a>
<b>Product Responsibility</b>			
		Disclosure on Management Approach	<a href="#">Together with our Customers</a>
<b>Aspect: Customer Health and Safety</b>			
PR1	CORE	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	<a href="#">Together with our Customers (Understanding the Needs of Safe Products (Quality) - Tire Group)</a> <a href="#">Together with our Customers (Understanding the Needs of Safe Products (Quality) - MB Group)</a> <a href="#">Environmental Preservation (Environmentally-Friendly Products)</a>
PR2	ADD	結果別に記載	<a href="#">Corporate Governance and Compliance</a>
<b>Aspect: Product and Service Labeling</b>			
PR3	CORE	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	-
PR4	ADD	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and	<a href="#">Together with our Customers (Communication with our</a>

		service information and labeling, by type of outcomes.	<a href="#">Customers)</a>
PR5	ADD	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	<a href="#">Together with our Customers</a>
<b>Aspect: Marketing Communications</b>			
PR6	CORE	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	<a href="#">Together with our Customers (Communication with our Customers)</a>
PR7	ADD	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.	<a href="#">Together with our Customers (Communication with our Customers)</a>
<b>Aspect: Customer Privacy</b>			
PR8	ADD	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	<a href="#">Corporate Governance and Compliance</a>
<b>Aspect: Compliance</b>			
PR9	CORE	Monetary value of significant fines for noncompliance with laws and regulations concerning the provision and use of products and services.	<a href="#">Corporate Governance and Compliance</a>

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[Yokohama Rubber CSR Web site](#) > [Related Information on CSR Report](#) > Editorial Policy

## Related Information on CSR Report

### Editorial Policy

#### Editorial Policy

#### Information Disclosure both through Booklet and Online

We are disclosing our information by separating into booklets and online considering the nature of the mediums used.

**Booklets:** Mainly contains future directions and examples of our activities from the "Seven Critical Issues"

Yokohama Rubber should address, which is sampled based on the core subjects of ISO26000. It has been edited with our utmost efforts to convey what the Yokohama Rubber Group is doing on the global stage as clearly as possible.

**Online:** Created based on our GRI guidelines as a website that can contain more information. It contains various reports per stakeholder and Site Reports from both of our domestic and overseas operation sites.

#### Self-Evaluation by using GRI Guidelines

This report has been created based on the reporting framework of GRI. By reflecting the application level as per indicated in the table below, the application level of this report has been classified as B.

Report Application Level	C	C+	B	B+	A	A+
Information Disclosures of G3 Profile	Report 1.1 2.1-2.10 3.1-3.8,3.10-3.12 4.1-4.4,4.14-4.15	Report Externally Assured	Report 1.2 3.9,3.13 4.5-4.13,13.4,16-4.17	Report Externally Assured	Same as requirement for Level B	Report Externally Assured
Information Disclosures of G3 Management Approach	Not Required Items		Management Approach Disclosures for each Indicator Category		Management Approach disclosed for each Indicator Category	
Performance Indicators of G3 and Sector Supplemental Documents per Business Type	Report fully on a minimum of any 10 Performance Indicators, including at least one from each of: social, economic, and environment.		Report fully on a minimum of any 20 Performance Indicators, at least one from each of: economic, environment, human rights, labor, society, product responsibility, and environment.		Respond on each core and Sector Supplement* indicator with due regard to the materiality Principle by either: a) reporting on the indicator or b) explaining the reason for its omission.	

\* Sector supplement in final version

#### Period of Information Disclosure

Basically, it contains the fiscal year of 2011 (from April 2011 to December 2011).

\* It contains the status until July 2012 should there be any major progress.

\* Depending on the cases, some data in the period from January to March 2011 are also included.

#### The Range of this Report

It covers the Yokohama Rubber and its Group Companies both domestically and overseas.

Economic Aspects

Yokohama Rubber and their Subsidiaries under consolidated account

### Related Information on CSR Report

- ▶ Third-Party Opinion
- ▶ Reference Table for GRI Guidelines
- ▶ **Editorial Policy**
- ▶ PDF Downloads / Previous Reports

Environmental Aspect	It contains the data from 30 of our operation sites both domestically and overseas, and all of our domestic sales companies.
Social Aspect	It contains a part of our various activities at Yokohama Rubber Headquarters, our eight domestic operation sites, and our Group Companies both domestically and overseas.

### ■ Guidelines for Reference

"Environmental Reporting Guidelines 2007" by the Ministry of the Environment in Japan  
 GRI "Sustainability Reporting Guidelines 2006"

\*GRI=Global Reporting Initiative

### ■ Yearly Upgrading History of our CSR Online Edition

Once a year

\*The previous time was in August, 2011.

\*The next time is scheduled for July, 2013.

### ■ Editor Contact of this Report

CSR and Environmental PR Committee

Contact

Corporate Communications Department: +81-3-5400-4531

CSR & Environmental Affairs Department: +81-463-35-9512

### ■ Notes Concerning Forward-Looking Statements

This report contains projections, statements regarding plans and objectives, and other forward-looking statements. All such statements are made based on the assumptions and judgments derived from information available at the time of printing (July 2012), and are subject to risks and uncertainties that could cause actual performance to differ, including not only the business activities of the Yokohama Rubber Group but also global and economic trends and changes in the global environment. This report is translation of "Yokohama Rubber CSR Web Site 2012 (Japanese version)", and its content is identical to the Japanese version. We hope all our readers understanding in advance the preceding description.

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[Message from The President](#)

[Up Close](#)

[Activity Report in the Fiscal Year of 2011](#)

[Site Data](#)

[Related Information on CSR Report](#)

[Company Overview / CSR Management](#)

[Yokohama Rubber CSR Web site](#) > [Company Overview / CSR Management](#)



## Company Overview / CSR Management

An introduction to the Yokohama Rubber Group and our concepts and systems for promoting CSR.

[▶ Yokohama Rubber Group at a Glance](#)

[▶ Corporate Philosophy and Yokohama Rubber Group's Approach to CSR](#)

[▶ Our Products](#)

## Company Overview / CSR Management

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## Company Overview / CSR Management

### Yokohama Rubber Group at a Glance

#### Yokohama Rubber Group at a Glance (as of December 31, 2011)

Company Name	The Yokohama Rubber Co., Ltd.	Number of Employees	19,272 (consolidated)
Establishment	October 13, 1917	Number of Shareholders	15,171
Paid-in Capital	JPY 38,909 million	Number of Shares Issued and Outstanding	342,598,162
Net Sales	JPY 465,133 million (consolidated)	Number of Consolidated Subsidiaries	120
Fiscal Year End	December 31 *	Number of Affiliates Accounted for by the Equity Method	2
Chairman and CEO and Representative Director	Tadanobu Nagumo	Stock Exchange Listings	Tokyo, Osaka, and Nagoya
President and Representative Director	Hikomitsu Noji	Our Worldwide Locations	Japan, the USA, Canada, Australia, Germany, the Philippines, Vietnam, China, Thailand, Russia, etc.
Head Office	36-11 Shimbashi 5-chome, Minato-ku, Tokyo, Japan 105-8685	Website	<a href="http://www.yrc.co.jp/english/">http://www.yrc.co.jp/english/</a>

\*In order to be consistent with our overseas subsidiaries for consolidated accounting, we decided to shift our financial closing date from March 31 to December 31 as of the fiscal year of 2011.

#### ■ Net Sales and Net Income (consolidated)

#### ■ Total Assets and Equity Ratio (consolidated)

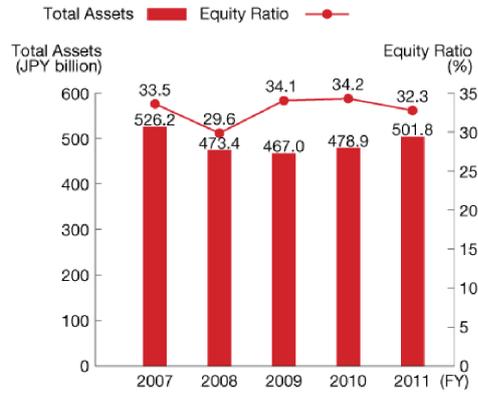
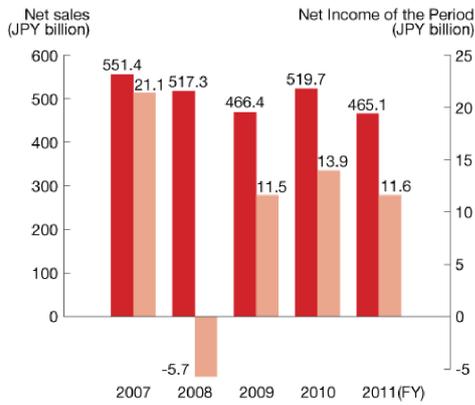
### Company Overview / CSR Management

#### ▶ Yokohama Rubber Group at a Glance

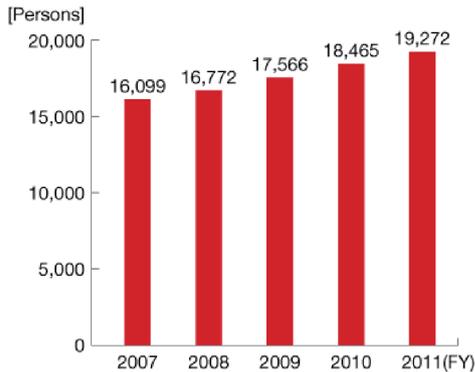
▶ Corporate Philosophy and Yokohama Rubber Group's Approach to CSR

▶ Our Products

Net Sales ■ Net Income of the Period ■



## ■ Number of Employees (consolidated)



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## Economic Dividends to our Stakeholders

Stakeholders	Dividends Amount (unit: JPY million)		Calculation Method
	FY2011	FY2010	
Partners	240,632	272,486	Cost of Sales + Sales Admin Fee (excluding labor costs)
Employees	36,729	48,028	Cost of Sales + Sales Admin Costs (labor costs)
Shareholders	3,014	3,347	Payment of dividends
Creditors	1,887	2,315	Interest expense
Government	2,806	3,996	Corporate income tax, etc.
Society	36	83	Donation (entertainment) and others <research labs for high schools and universities>
Internal	8,604	10,576	Net income less dividend payments

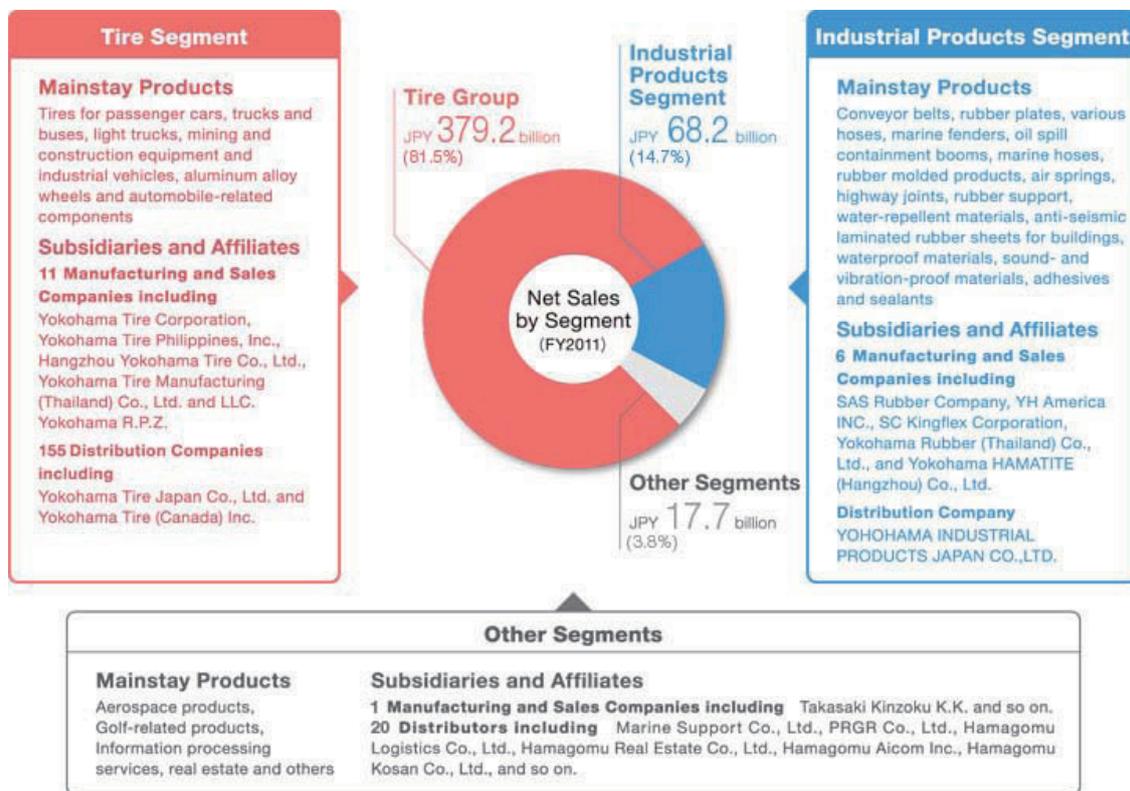
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## Financial Support Received from Government

The total amount of the financial support for tax or subsidiary from national or municipal government in the fiscal year of 2011 was JPY 21 million from corporate tax relief due to donation expenses due to extraordinary amortization of assets under the regulations for peninsula development.

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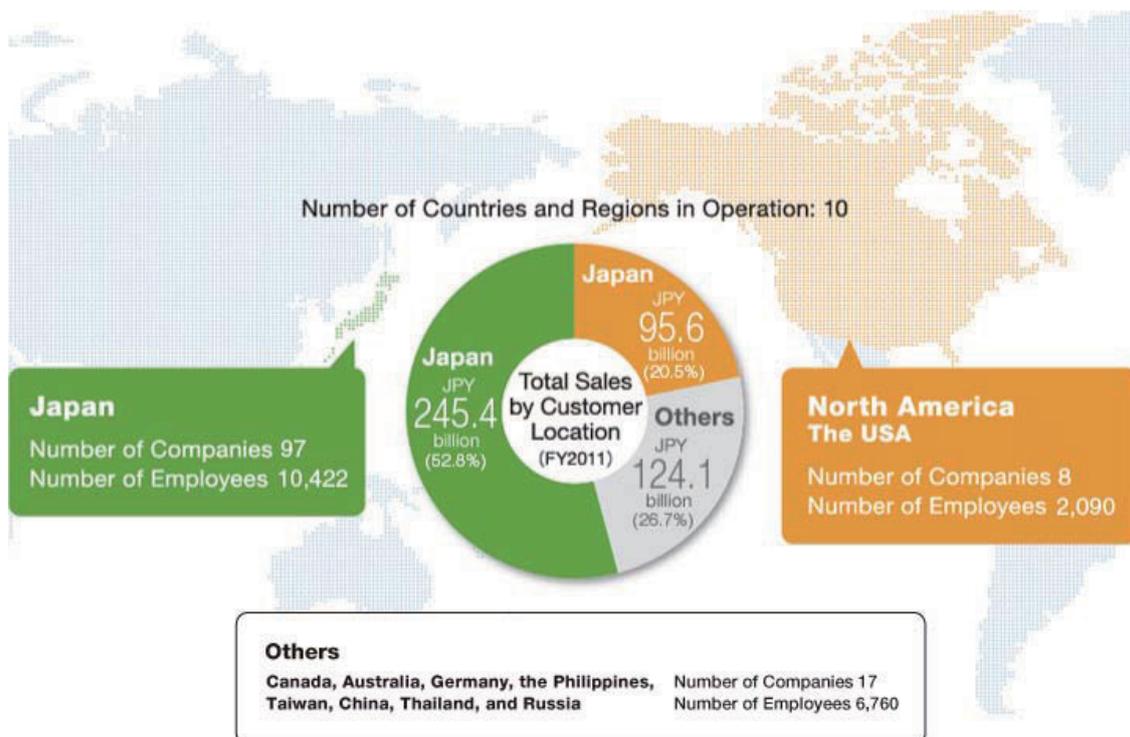
## Mainstay Products and Group Companies by Segment



In the past we used to separate "Tires" and "MB" for segment classifications, however, effective from this term, we have revised this as it is required to use the same classifications with our internal performance evaluation unit in accordance with our accounting procedures.

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**Breakdown of Operations by Region** Number of Companies: Consolidated Subsidiaries and Affiliates  
Accounted for by the Equity Method Number of Employees: Yokohama Rubber Co. and Consolidated Subsidiaries



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## ○ Corporate Philosophy and Yokohama Rubber Group's Approach to CSR

### Corporate Philosophy and Yokohama Rubber Group's Approach to CSR

Corporate and CSR Philosophies Yokohama Rubber established its corporate philosophy in 1990. It consists of the Basic Philosophy, Management Policies, Action Guidelines, and Corporate Slogan. The Basic Philosophy embodies the types of business where Yokohama Rubber commits itself in all activities. The Management Policies outline basic administrative principles for upper-level management to commitment themselves to. The Action Guidelines are the code of conduct for each employee to comply with.

In 2006, we drew up a medium-term management plan, the Grand Design 100 (GD100), and set a clear target of becoming a global company with one trillion yen in net sales by FY2017. Also, since our Basic Philosophy has been compiled based on the strong awareness of the expectations and needs arising from the international community, the plan places a strong emphasis on CSR by adopting these two basic points; to assert world-class strengths in technologies for protecting the environment, and fostering a customer-oriented corporate culture as our first priority by respecting higher standards of corporate ethics. In 2008, we reformed our corporate structure by establishing the CSR Division, followed by announcing our vision of CSR management both internally and externally. Our vision, to build a trusted identity as a contributing member of the global community, incorporates our desire to change the letter "R" in CSR to "Reliability", instead of the original "Responsibility." By doing so, we are hoping to make the concept more accessible and practical in our daily operations.

Incidentally, Yokohama Rubber still maintains the cautionary tale by Suekichi Nakagawa, who was president at the time of the inauguration of our Yokohama Plant (located in Tsurumi-ku, Yokohama-shi) in 1929 as our Founding Spirit. This tale comprises the balancing of both sociality and economic efficiency; it still greatly relates to today's notion of CSR management.

#### ■ The Founding Spirit

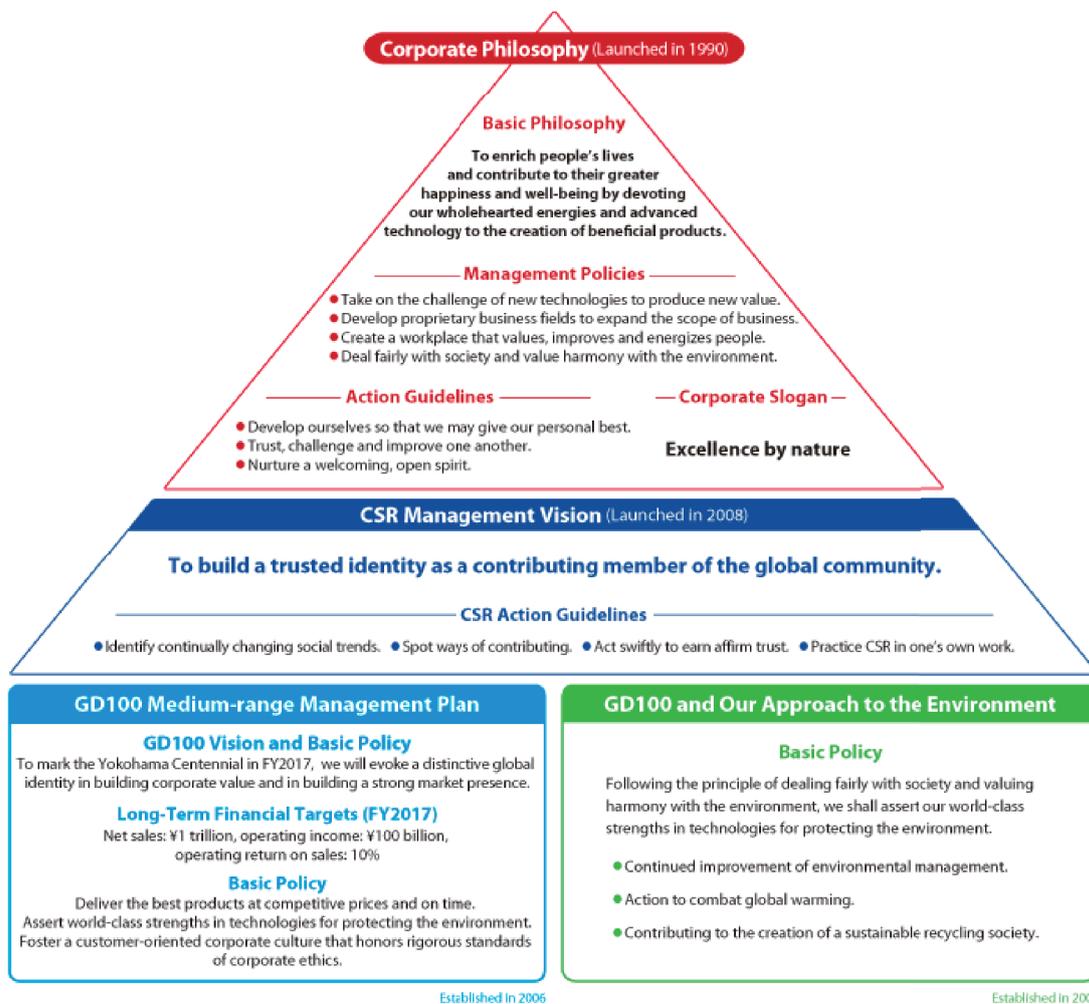
1. Production is a social service. Its purpose is to make people's lives more convenient and enjoyable. Its aim should be to offer good, useful products at moderate prices.
2. There must be a basic commitment to delivering quality products unrivaled by those of competitors.
3. Management should adhere to the principles of fairness and consideration. The mission of a fair, honest management is to ensure capital, share the fruits of endeavor with its workers, and fulfill its responsibilities to consumers – to act, in other words, rationally.
4. A company should have as few employees as possible and make the best use of the productivity of machines. This is the great secret for improving efficiency.
5. The success or failure of a business depends on how much one is willing to study, and with how much determination, to mutually improve and grow. Accordingly, one must make a great effort.

## ○ Company Overview / CSR Management

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## Mid-Term Management Plan - Grand Design 100 (GD100)

Since the fiscal year of 2006, Yokohama Rubber has launched an initiative called Grand Design 100 (GD100), part of its Mid-Term Management Plan. The purpose of GD100 is to become "a Global Company with a unique presence in terms of both corporate value and market position" by 2017, the 100th anniversary of the company, by targeting JPY 1 trillion in net sales, JPY 100 billion in operating income, and an operating margin of 10%. In order to ensure steady growth, we have divided the next 12 years until the fiscal year of 2017 into four phases, defining themes, business strategies, and financial targets for each. We completed Phase I at the end of the fiscal year of 2008; and currently we are in Phase II, which ends in the fiscal year of 2011.

### ■ Establishment of High-Quality Corporate Groundwork in Phase II

Upon completion of Phase I, we started anew with Phase II from April, 2009. In Phase II, over the three years from the fiscal year of 2009 under the theme of "High-Quality Growth", we aim to establish a high-quality corporate groundwork so that we can still maintain sustained growth, despite the uncertain business outlook.

The Fiscal year of 2011 is shortened to nine months due to the change of the fiscal year reporting period, but even so, we aim to achieve JPY 471 billion in net sales, JPY 21 billion in operating income, and a operating margin of 4.5%.

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## Environmental GD100

We are promoting CSR and environmental management by integrating environmental aspects and social aspects into GD100.

### ■ GD100 Basic Policy on the Environment

Following the principle of dealing fairly with society and valuing harmony with the environment, we

shall assert our world-class strengths in technologies for protecting the environment.

- Continued improvement of environmental management.
- Action to combat global warming.
- Contributing to the creation of a sustainable recycling society.

## ■ GD100 guidelines for action on the environment

For the sake of future generations and this irreplaceable planet, we shall act to protect the environment.

### Practice of global environmental management

#### **We will contribute to society using an approach to manufacturing that focuses on environmental management of the same high standard at all our overseas sites**

We will take action to minimize the environmental impact in all products

#### **We will take action to protect the environment as a duty to society by practicing top-level environmentally conscious production**

All industrial waste will be recycled.

### Improvement of communication with society and local communities



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## Our Stakeholders

Following the establishment of our CSR Division in 2008, we have organized the social responsibility issues we need to address in our day-to-day and future activities, and also we have appointed our stakeholders as listed below. During our selection process, we consulted the GRI Guidelines, ISO26000, and Nippon Keidanren's Charter of Corporate Behavior, and other descriptions thereto.

### ■ Customers

We will enrich people's lives and contribute to their greater happiness and well-being by devoting our wholehearted energies and advanced technologies; this basic philosophy is our declaration to put our customers first. We seek to develop a corporate culture where the customer's interests are the top priority.

### ■ Employees

We believe that being considerate to the rights and safety of the workers and providing an environment to maximize their potential are the greatest driving forces for a corporation with sustainable growth. This is clearly stated in our management policies that reads, "create a workplace that values, improves, and energizes people".

### ■ Business Partners and Suppliers

We are expanding our businesses by working together with a variety of suppliers and partners who procure raw materials, parts, equipment, etc. By practicing fair and free trade with business partners, we will continue to build relationships of mutual sustainment and being beneficial to each other.

### ■ Shareholders and Investors

By taking on any challenges to develop innovative technologies to generate new value, we will realize our sustainable growth and return of reasonable profits. Also, we will be happy to provide any information in an appropriate manner to meet the expectations of all of our stakeholders and investors.

### ■ Local Communities

As a globally active business, we relate to local communities in a number of domains – the natural environment,

law, culture, customs and the economy. We will strive to build a healthy relationship for various local communities together with our both domestic and overseas offices.

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## CSR and Environmental Promotion Framework

Twice a year, we hold a CSR Council where our company Chairman and CEO serves as a chairperson, and an Environmental Council where our company President serves as a chairperson. These councils are part of an organizational framework that was set up to discuss and develop plans for addressing the social responsibility issues currently Yokohama Rubber Group is facing, with the ultimate goal to build a trusted identity as a contributing member of the global community. We have three task forces, five committees, and two sub-councils who promote environmental activities as sub-bodies within the Environmental Council. Every year the CSR Council and Environmental Council evaluate the performance of CSR activities carried out by the Group in accordance with the Seven Pillars of Critical Issues and develop plans for improvement in the subsequent fiscal year.

To pursue our effort on practicing consistent and high-level environmental management in all our operations worldwide, we also annually hold a Global Environment Council, which is a gathering by managers from all of our overseas production operations. The council for FY2011 was held on December 15 to engage in discussions focusing on environmental policies and initiatives at the overseas production operations and core distribution subsidiaries. In FY2012, the Council will push forward such efforts to promote CSR activities and put into practice consistent and high-level environmental management.



(As of March 29, 2012)

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## CSR and Environmental Mid- to Long-Term Action Plans

Yokohama Rubber has defined seven critical issues to address based on the core subjects of ISO26000. For each subject, we will manage our PDCA cycle by defining each goal for the mid- and long-term as well as each single year.

Click here to see our CSR and Environmental Mid- and Long-Term action plans   
(Released January, 2013)

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## Company Overview / CSR Management

### Our Products

#### Next Generation Products Offered by the Yokohama Rubber Group

Yokohama Rubber offers an extensive lineup of products that span from its core tire products to multi-business products that play an important role in society and the lives of people.

The following section introduces a selection of our next generation products that will help us to build a trusted identity as a contributing member of the global community.

#### ■ **BlueEarth-1 AAA spec - Highest AAA rating for reduced rolling resistance**

##### A new flagship tire with the highest fuel efficient grade rating

BlueEarth-1 is a fuel efficient tire that has been given the highest AAA rating for rolling resistance, which serves as an indicator for the environmental performance of a tire. This tire features Yokohama Rubber's proprietary nano-blend rubber featuring a golden ratio of differing performances, AIRTEX, which prevents air leaks, a dimpled wall design that reduces air resistance, and a silent ring that reduces road noise when driving. These features ensure the tire is both people and society friendly, a goal Yokohama Rubber aspires to achieve.



#### Winner of environmental award in France

In February 2012, Yokohama Rubber was announced as the winner of the environmental category for the Pneu Expo Innovations Trophy at the PNEU EXPO, an exclusive trade show for tire companies held in France. Yokohama Rubber was presented with this honor because BlueEarth-1 was recognized for its excellent fuel economy performance and its ability to reduce impacts on people and society, while the company was recognized for its long-standing development of fuel efficient tires.

#### ■ **Medi-Air Sky - A cushion helping to make wheelchair users more comfortable**

The Medi-Air series is a wheelchair cushion lineup that was the first in the world to use a built-in bottoming out detective sensor. Conventional model, Medi-Air 1, was designed to automatically adjust air volume to distribute the air pressure and partially release pressure on the posterior after detecting the bottoming out. In contrast, Medi-Air Sky offers users the chance to manually adjust air volume by using a manual pump. Medi-Air Sky was mainly developed to help manual wheelchair users to more easily and freely enjoy outings.



#### ■ **World's First! Pneumatic fender monitoring system and cargo**

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## handling support system

Fenders are used between vessels for cargo transportation (Ship to Ship operation) and as a cushioning material when a vessel berths at a pier (Ship to Terminal operation). Yokohama Rubber has utilized its pneumatic fender design technologies and vessel movement analysis technologies to develop two different monitoring systems.

These two systems, both world firsts, are able to prevent damage to vessels, piers and cargo handling equipment, which in turn helps to prevent serious maritime accidents such as oil spills.

Please see page 10 to learn more about pneumatic fenders.



**Pneumatic fenders deployed between two vessels**

### ○ Integrated pneumatic fender monitoring system

The first of these two systems is the fender monitoring system, which comprehensively monitors the status of pneumatic fenders. This system collects data on the internal air pressure of pneumatic fenders wirelessly, making it possible to monitor internal air pressure from a remote location.

### ○ Support system for cargo handling at sea

The second of these systems is the dual vessel operation and mooring monitoring system, which uses pneumatic fender design technologies and vessel movement analysis technologies. This system simultaneously monitors the status of pneumatic fenders used as a cushioning material between two vessels and the status of vessel operations when two oil tankers are moored together to transfer crude oil or LNG offshore.

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## Site Information - Head Office/Domestic Subsidiaries and Affiliates

<a href="#">Head Office</a>	<a href="#">(3P 863KB)</a>
<a href="#">Yokohama Tire East Japan Retread Co., Ltd.</a>	<a href="#">(2P 999KB)</a>
<a href="#">Sanyo Retread Co., Ltd.</a>	<a href="#">(2P 804KB)</a>
<a href="#">Yokohama Mold Co., Ltd.</a>	<a href="#">(2P 1,292KB)</a>
<a href="#">Yokohama Tire Japan Co., Ltd.</a>	<a href="#">(2P 669KB)</a>
<a href="#">Domestic Sales Group Companies Other Than YTJ</a>	<a href="#">(1P 485KB)</a>

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## Site Information - Domestic Production Sites

<a href="#">Hiratsuka Factory</a>	<a href="#">(6P 1,249KB)</a>
<a href="#">Mie Plant</a>	<a href="#">(5P 1,809KB)</a>
<a href="#">Mishima Plant</a>	<a href="#">(4P 1,205KB)</a>
<a href="#">Shinshiro Plant</a>	<a href="#">(6P 1,459KB)</a>
<a href="#">Onomichi Plant</a>	<a href="#">(4P 1,736KB)</a>
<a href="#">Ibaraki Plant</a>	<a href="#">(3P 893KB)</a>
<a href="#">Nagano Plant</a>	<a href="#">(4P 1,574KB)</a>
<a href="#">Hiratsuka East Plant</a>	<a href="#">(4P 1,423KB)</a>
<a href="#">Yokohama Engineering, Ltd.</a>	<a href="#">(2P 629KB)</a>
<a href="#">Safety Evaluation of Domestic Facilities</a>	<a href="#">(1P 684KB)</a>

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## Site Information - Overseas Subsidiaries and Affiliates

<a href="#">Yokohama Tire Corporation</a>	<a href="#">(3P 1,296KB)</a>
<a href="#">SAS Rubber Company</a>	<a href="#">(2P 1,092KB)</a>
<a href="#">YOKOHAMA AEROSPACE AMERICA INC.</a>	<a href="#">(2P 1,028KB)</a>

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<a href="#">YH America, Inc.</a>	 <a href="#">(2P 667KB)</a>
<a href="#">Suzhou Yokohama Tire Co.Ltd.</a>	 <a href="#">(2P 738KB)</a>
<a href="#">Hangzhou Yokohama Tire Co., Ltd.</a>	 <a href="#">(2P 836KB)</a>
<a href="#">Yokohama Tire Taiwan Co., Ltd.</a>	 <a href="#">(2P 794KB)</a>
<a href="#">YOKOHAMA ASIA CO., LTD.</a>	 <a href="#">(2P 756KB)</a>
<a href="#">YOKOHAMA TIRE PHILIPPINES, INC.</a>	 <a href="#">(32P 4,742KB)</a>
<a href="#">Yokohama Tire Manufacturing (Thailand) Co., Ltd.</a>	 <a href="#">(4P 1,945KB)</a>
<a href="#">Yokohama Tyre Vietnam Inc.</a>	 <a href="#">(2P 923KB)</a>
<a href="#">Shandong Yokohama Rubber Industrial Products Co.,Ltd.</a>	 <a href="#">(2P 881KB)</a>
<a href="#">Yokohama HAMATITE (Hangzhou) Co., Ltd.</a>	 <a href="#">(2P 1,056KB)</a>
<a href="#">Yokohama Hoses &amp; Coupling (Hangzou) Co.,Ltd.</a>	 <a href="#">(2P 1,056KB)</a>
<a href="#">SC Kingflex Corporation</a>	 <a href="#">(3P 1,263KB)</a>
<a href="#">Yokohama Rubber (Thailand) Co., Ltd.</a>	 <a href="#">(2P 720KB)</a>
<a href="#">Yokohama industrial Products Europe GmbH</a>	 <a href="#">(2P 729KB)</a>
<a href="#">YOKOHAMA TYRE AUSTRALIA PTY., LTD.</a>	 <a href="#">(2P 716KB)</a>

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