

Corporate Social Responsibility



The Nippon Kayaku Group stands firmly committed to fulfilling its responsibilities to society and maximizing corporate value by providing excellent products to its customers that were developed with all of society in mind.

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<p>▶ Corporate Governance</p>	<p>▶ Compliance</p>	<p>▶ CSR Activities Fulfilling Economic Responsibilities</p>
<p> Learn about our management transparency and self-directed governance system.</p>	<p> Find out about our measures to strengthen compliance globally as part of our efforts to gain greater trust from society.</p>	<p> Read about our departments involved in CSR and our R&D initiatives.</p>
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<p> Learn about our initiatives with our customers, for society and for our employees.</p> <ul style="list-style-type: none"> • Initiatives with Our Customers • Initiatives with Our Business Partners and Investors • Initiatives for Society • Initiatives for Employees 	<p> Find out about our organized activities under the Nippon Kayaku Group Declaration on Health, Safety, Environmental Protection and Quality.</p> <ul style="list-style-type: none"> • Environmental, Health, Safety and Quality Assurance Management System • Health and Safety and Quality (Assurance) Initiatives • Reducing Our Environmental Impact 	<p> Read a third-party review on our CSR report.</p>

Message from the President



For the Nippon Kayaku Group, CSR management means steadily following through on its mid-term business plan and the KAYAKU spirit in the lead up to its 100th anniversary

The Nippon Kayaku Group's corporate motto the KAYAKU spirit refers to the vision of "continuously providing society with the best products through ceaseless progress and the combined forces of our consciences." The Nippon Kayaku Group also started its three-year mid-term business plan this year called "Challenge 100A!" that runs through the end of fiscal 2015 and will guide the company to its 100th anniversary in 2016. Under this plan, each and every Group company will engage in business activities that help realize the meaning of the KAYAKU spirit in accordance with the Mid-term CSR Action Plan. This plan calls for promoting a form of CSR management that fulfills the trust of all stakeholders by passing down the company's long-standing manufacturing prowess and to that end it has set ambitious targets. In addition, we have redefined our corporate brand image this year as a "Smart Chemicals Company." This means that we will aim to continually provide smart products made from our long-standing, cutting edge chemical technologies that have unique features and are considerate of both the environment and safety.

The Nippon Kayaku Group CSR Report 2013 highlights the personification of the KAYAKU spirit in our employees and a number of initiatives being undertaken to establish important issues to address for achieving CSR management and to resolve these important issues facing the company. I ask that readers take a look at the concise printed digest version of this report as well as the more detailed information found here on this website to gain a deeper insight into our CSR activities as well as feel motivated to assist us in our efforts as we move forward.

President



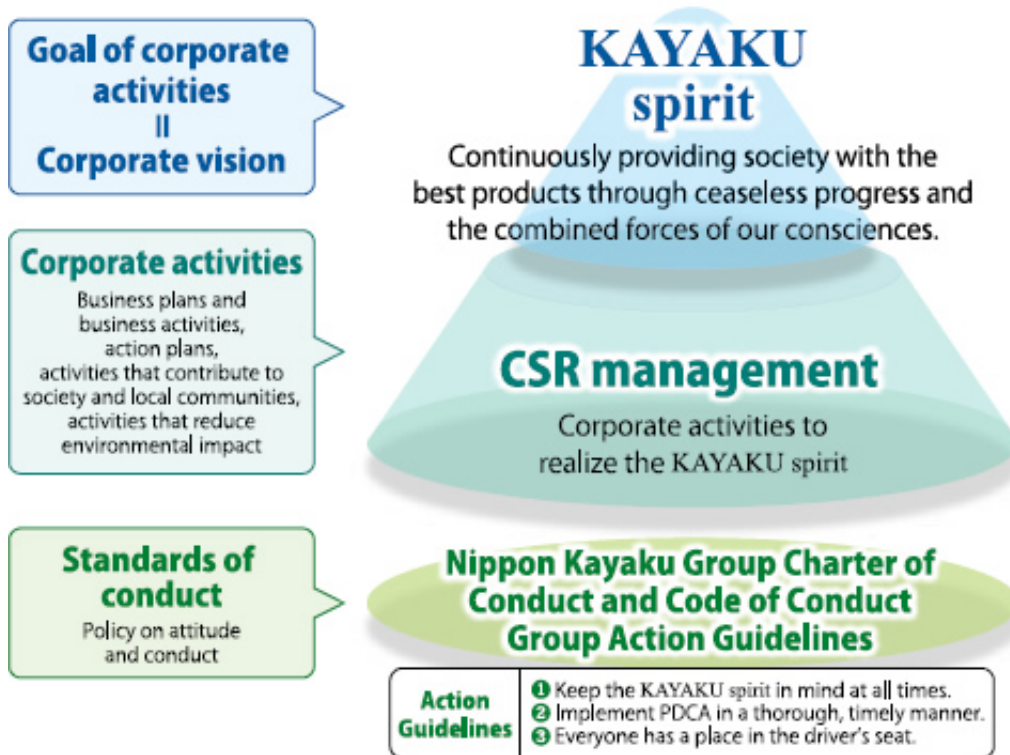
Fundamental CSR Activities

Corporate Vision and CSR Activities

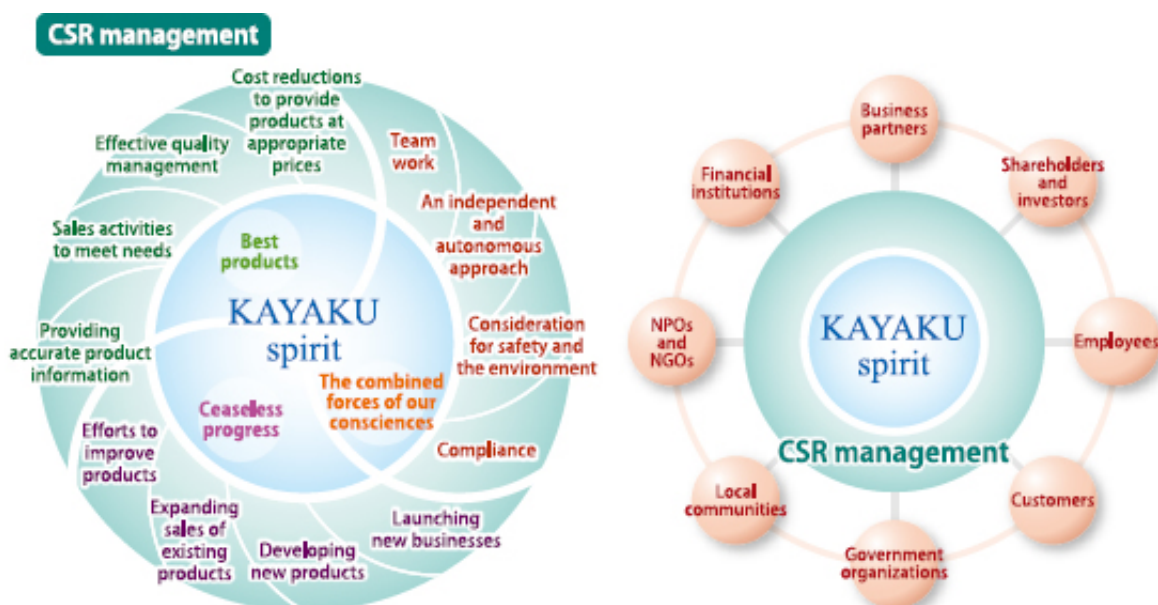
The Nippon Kayaku Group is implementing CSR management that fosters trust among all stakeholders through its focus on the KAYAKU spirit, which calls for "continuously providing society with the best products through ceaseless progress and the combined forces of our consciences."

The KAYAKU spirit and CSR Management

The KAYAKU spirit, or "continuously providing society with the best products through ceaseless progress and the combined forces of our consciences," stands as the Nippon Kayaku Group's global vision. The KAYAKU spirit is based on the company creed created more than half a century ago and has represented our core belief in CSR management over the years. Today, the Nippon Kayaku Group has business operations in nine countries where its people have different job descriptions and cultural backgrounds. Given this, we have made the KAYAKU spirit a shared belief of all employees to promote greater solidarity as we strive to reach our goals together.



CSR management is positioned as a key corporate activity for achieving the vision outlined in the KAYAKU spirit



All of our business activities are grounded in the vision embodied by the KAYAKU spirit. We will foster trust among all of our stakeholders through CSR management that aspires to fulfill this KAYAKU spirit.

Initiatives to achieve CSR management

In June 2010, Nippon Kayaku established the CSR Management Committee chaired by its President. This committee, whose members consist of executive officers in charge of each of our business divisions, ensures that we have a structure that can monitor all of our business activities from a CSR perspective. CSR management is also considered an important management policy of the Nippon Kayaku Group and to that end we continue to educate senior management about CSR management.

Beginning in 2009, we launched an organization-wide internal project aimed for strengthening our CSR promotion structure that has enabled us to promote company-wide initiatives. We also hold dozens of CSR and compliance training sessions throughout the year in order to spread our corporate vision and CSR-focused mindsets to all of our employees. We have also translated the KAYAKU spirit as well as pamphlets and portable cards on our form of CSR management into six languages that are in turn shared across the entire Nippon Kayaku Group. In fiscal 2012, we prepared poster boards on the KAYAKU spirit and Group Action Guidelines in each local language and displayed them at all of our workplaces around the world.



Corporate vision board at INDET SAFETY SYSTEMS a.s. in the Czech Republic



Mid-term CSR Action Plan and Corporate Image

We have compiled a Mid-term CSR Action Plan for the period of the Mid-term Business Plan "Challenge 100A!" to clarify the relationship between our approach to CSR management and the Mid-term Business Plan. In addition, we have created a new corporate image as "Smart Chemicals Company". This means that we will strive to develop smart products that are considerate of the environment and management the company in a smart manner.



Initiatives to Spread the KAYAKU spirit NIKKA FINE TECHNO CO., LTD.

As part of its initiatives to instill the KAYAKU spirit in its employees, NIKKA FINE TECHNO Co., Ltd. holds compliance training every month at its head office in Tokyo as well as offices in Osaka and Hokuriku (Fukui) as part of general sales meetings and department-level meetings where employees are required to read the Nippon Kayaku Group Charter of Conduct and the Nippon Kayaku Group Code of Conduct. Through greater employee awareness of these important guidelines, NIKKA FINE TECHNO is striving to fulfill its responsibilities to society through compliance with relevant laws, a commitment to corporate ethics and in accordance with principle of personal responsibility.

Each page of the KAYAKU spirit pamphlet is covered in these training sessions to help broaden understanding of the Nippon Kayaku Group's corporate vision, CSR management and Group Action Guidelines.

NIKKA FINE TECHNO is committed to making itself a good corporate and strong corporate that can bridge Nippon Kayaku and its customers as a trading company focused on "continuously providing society with the best products through ceaseless progress and the combined forces of our consciences."

- [NIKKA FINE TECHNO CO., LTD.](http://www.nikkafine.com) 

Fundamental CSR Activities

CSR Action Plan

The Nippon Kayaku Group practices CSR management by realizing the KAYAKU spirit, which calls for "continuously providing society with the best products through ceaseless progress and the combined forces of our consciences." The following section provides a closer look at the CSR Action Plan and how it is linked to our business activities.

Targets and Results of the Fiscal 2012 CSR Action Plan

The following table comprises a summary of Nippon Kayaku's self assessment of its Fiscal 2012 CSR Action Plan and linkages with business activities.

CSR Activities	Action Plan	FY 2012 Targets	FY 2012 Results	Assessment	
Traditional CSR activities	Secure business continuity	Advance BCP (business continuity) and disaster recovery plans	Continued improvement of BCP, revised the disaster management manual and the disaster management committee composition	○	
	Reduce our carbon footprint and CO ₂	Continued with energy-saving measures and enhanced controls	Continued with energy-saving measures, including the introduction of energy-saving equipment	○	
	Provide compliance	Continued with compliance training and enhanced controls	Continued with compliance training and enhanced controls	○	
Social Responsibility (non-financial)	Recycle kitchen waste and products	Support 3 Clean waste themes for customer group activities	Recycling of kitchen waste and products	△	
	Customers	Use fair	Provide to business information based on the Guide for Transparency between Business Partners and Supplier/Commissioner	Continued to provide information to business partners and suppliers	○
		Contribute to the health of society	Continue Plus Million activities	Continued with Plus Million activities	○
	Society	Improve work environment	Continue to improve work environment	Continued to improve work environment	○
		Provide a safe and secure environment	Continue to improve work environment	Continued to improve work environment	○
	Employees	Work-life balance	Continue to improve work environment	Continued to improve work environment	○
		Develop a healthy environment	Continue to improve work environment	Continued to improve work environment	○
		Develop a sustainable work environment	Continue to improve work environment	Continued to improve work environment	○
		Develop a sustainable work environment	Continue to improve work environment	Continued to improve work environment	○
	Environmental (non-financial)	Expand green procurement	Continue to improve work environment	Continued to improve work environment	○
Society		Reduce environmental impacts of products and services	Continue to improve work environment	Continued to improve work environment	○
		Reduce environmental impacts of operations	Continue to improve work environment	Continued to improve work environment	○
Employees		Reduce environmental impacts of products and services	Continue to improve work environment	Continued to improve work environment	○
		Reduce environmental impacts of operations	Continue to improve work environment	Continued to improve work environment	○
Other (non-financial)		Reduce environmental impacts of products and services	Continue to improve work environment	Continued to improve work environment	○
		Reduce environmental impacts of operations	Continue to improve work environment	Continued to improve work environment	○
		Reduce environmental impacts of products and services	Continue to improve work environment	Continued to improve work environment	○
		Reduce environmental impacts of operations	Continue to improve work environment	Continued to improve work environment	○
		Reduce environmental impacts of products and services	Continue to improve work environment	Continued to improve work environment	○
	Reduce environmental impacts of operations	Continue to improve work environment	Continued to improve work environment	○	

- [Fiscal 2012 CSR Action Plan PDF](#)

Mid-term CSR Action Plan

In April 2013, the Nippon Kayaku Group commenced its new three-year Mid-term Business Plan "Challenge 100A!" that runs until its 100th anniversary in the year 2016. In conjunction with this, we also drafted an Mid-term CSR Action Plan that runs parallel to Challenge 100A!. Going forward, we will take steps to ensure all executives and employees understand the Mid-term CSR Action Plan to raise awareness toward CSR management and promote inclusive efforts involving all employees.

Category	No.	Challenge /Mid / Term CSR Action Plan	FY 2013 CSR Action Plan	Response to SDG/SDG						
				Quantified Achievement	Score Ratio	Label	Score Ratio	Label	Score Ratio	Label
Foundational	1	Improve employee awareness of CSR and compliance	Implemented CSR and compliance training including Group companies	○					○	
	2	Reduce business continuity during the event of an emergency	Maintained BCP Manual, including disaster response, and implemented training	○					○	
Social Responsibility	3	Strictly adhere to regulations on chemical substances	Enhanced in-house instructional programs related to chemical substance regulations and appropriately disclosed CSR				○	○		
	4	Conduct high quality research through research, development, and provision of product information on safety and secure-related fields	Brought safety-related products to market and progressed with development of products, chemicals and various drugs						○	○
	5	Thoroughly ensure the education of employees	Implemented a rank-based education program taught by the employees safety maintenance team							○
	6	Continue conducting safety instruction efforts for safe agricultural use	Carried out vehicle safety checks (120 units per year, per sales representative)				○	○		○
	7	Enhance CSR procurement in cooperation with suppliers	Formulated CSR procurement criteria						○	
	8	Work toward proactive measures against occupational injuries and occupational diseases from major accidents	Major accidents, lost workday accidents, technology-related accidents: 0 cases T-0 (no open non-fatal workday accident rate) of accidents				○	○		
	9	Reduce customer complaints and quality process malfunctions	High level complaints (those of ¥10,000,000 or more): 0 cases						○	○
	10	Communicate with the local community	Supported clean water-related events and CSR forums, to develop mutual trust							○
	11	Provide timely and appropriate disclosure of information to stakeholders	Provided communication with stakeholders and made the Company website user-friendly				○			○
	12	Utilize and foster diverse human capital	Improved our degree of worker diversity and our hiring rate for workers with disabilities, promoted the appointment of female managers, utilized the skills of workers of advanced age				○	○		
Environmental Responsibility	13	Use our contribution to employee health and safety, and provide a working environment that allows for a good work-life balance	Monitor health training for creating a healthy workplace: 3 months of training programs Participation in the training: 100% Participation in health check-ups: 100%				○	○		
	14	Protect human rights and privacy	Appropriately operated the whistleblower hotline, implemented human rights and privacy management training				○	○		
Environmental Responsibility	15	Expand our green procurement rate	Assessed the status of our green procurement through the promotion of our indirect materials purchasing system						○	○
	16	Reduce third party environmental impacts with full consideration of the environment	Reduced emissions of chemical substances, followed initiatives directed toward achieving the interim environmental targets set for FY 2020						○	
	17	Improve water quality treatment technology and respond to environmental regulations	Reviewed, including at Group companies, various, the development of new technology for water water treatment, reviewed dry-cleaning technology through the advanced treatment of dry-cleaning waste water						○	
Economic Responsibility	18	Strive to be a business with ever lower energy consumption	Formulated energy consumption action plans for each business site						○	
	19	Secure stable earnings as a sustainable business group	Enhanced Group management, utilized Group companies through a share value support framework from the next fiscal year						○	
	20	Launch products that contribute to the environment and society	Brought new high performance thermal conductive adhesive sheets and optical carrier films to market without delay						○	○
	21	Bring high quality pharmaceutical products that reduce economic burdens	Brought boundaries to market as quickly as possible, worked to bring generic and generics drugs to market without delay							○
Economic Responsibility	22	Utilize our own sustainable safety devices using our proprietary technologies to a global market and contribute to global safety	Started new business business bases and expanded production facilities							○
	23	Secure the continued existence of manufacturing plants by handing down expert "monozukuri" technology	Provided company-wide presentation gatherings related to "monozukuri," promoted in-house education and joint sharing of information				○	○		
	24	Promote and implement sustainable research programs	Built out a complete structure conducive to the sustainable creation and implementation of projects				○			○

- [Mid-term CSR Action Plan PDF](#)

Targets and Results of the Fiscal 2012 CSR Action Plan

This table lists the Nippon Kayaku Group's Fiscal 2012 CSR Action Plan as it relates to the Group's activities. Also included are self-assessments of those activities.

CSR Activities		Action Plan	FY 2012 Targets	FY 2012 Results	Assessment
Foundational CSR Activities		Assure business continuity	<ul style="list-style-type: none"> Enhance BCP procedures and manual Implement instruction and training 	<ul style="list-style-type: none"> Enacted 6 regulations regarding the BCP; revised the Hazard Management Manual and the Hazard Management Committee's regulations Implemented BCP drills 	◎
		Promote our corporate vision and CSR	<ul style="list-style-type: none"> Continue with training sessions and enhance content Manage organization of CSR-related projects in a trans-divisional fashion Continue with promotional activities through meetings and internal company magazine 	<ul style="list-style-type: none"> Continued implementing CSR educational training: 14 sessions Managed CSR projects (11 divisions with 13 participants) Continued carrying out promotional activities (6 notices in the internal company magazine; continued promotion in various meetings) 	○
		Promote compliance	<ul style="list-style-type: none"> Implement compliance training in pharmaceutical sales offices (not covered in FY 2011) as part of compliance training for all employees Further update the compliance survey (enhance question and answer choices) 	<ul style="list-style-type: none"> Held 41 compliance training sessions for 2,669 employees Revised questions in the survey to include specific mention of laws, internal regulations, and harassment 	○
		Resolve business issues proactively	<ul style="list-style-type: none"> Register 110 or more themes for creative group activities 	<ul style="list-style-type: none"> Held a meeting to discuss enhancing our creative group activities; held socializing/exchange events Registered 78 themes (for creative group activities) 	△
Social Responsibility CSR Activities	Customers	Gain trust	<ul style="list-style-type: none"> Prepare to disclose information based on the Guide for Transparency between Nippon Kayaku and Health Care Institutions (Confirm cumulative statistics for each disclosure item. Implement practice simulation in preparation for disclosure.) 	<ul style="list-style-type: none"> Currently in preparation for disclosure 	○
			<ul style="list-style-type: none"> Continue conducting onsite instruction efforts for the safe use of agrochemicals 	<ul style="list-style-type: none"> Conducted onsite instruction for the safe use of agrochemicals; increased the number of instruction briefings over last year 	○
	Society	Contribute to the health of society	<ul style="list-style-type: none"> Continue Pink Ribbon activities Expand distribution of campaign awareness products company-wide (3 additional business offices) Continue internal Pink Ribbon website 	<ul style="list-style-type: none"> Employees wore Pink Ribbon badges, made use of bumper stickers Distributed campaign awareness products (6 business offices) Continued internal Pink Ribbon website 	◎
			<ul style="list-style-type: none"> Continue managing and operating Asunaro House Review management practices in order to make the House as user-friendly as possible 	<ul style="list-style-type: none"> 153 families used Asunaro House in the 2012 calendar year Re-equipped all rooms with new AC units 	○
			<ul style="list-style-type: none"> Factory festivals visitors: 10,000 Enthusiastically promote public lectures and open house tours 	<ul style="list-style-type: none"> Plant festivals (9,000 visitors to 5 sites) Public lectures and open house tours (4 events) 	○
	Employees	Provide a safe workplace environment	<ul style="list-style-type: none"> Expand disaster preparation measures at each business location 	<ul style="list-style-type: none"> Reinforced business locations according to earthquake resistance standards Completed stocking each branch and sales office with emergency food supplies with 25-year expiration dates 	○
			<ul style="list-style-type: none"> Major accidents, lost worktime accidents, non-injury-related accidents: 0 cases; 1.0 or lower non-lost worktime accident rate (5 accidents) Achieve a vehicle accident rate of 4% or lower during work tasks or commuting by pharmaceutical MRs 	<ul style="list-style-type: none"> Major accidents, lost worktime accidents, non-injury-related accidents: 0 cases; non-lost worktime accident rate: 0.43 (2 accidents) Work-related vehicle accident rate: 11.9% (40 accidents) 	◎
			<ul style="list-style-type: none"> With an aim to raise the level of safety, continue implementing explosives safety instruction through the education program in place to promulgate safety awareness 	<ul style="list-style-type: none"> Implemented safety education and safety testing for employees with fewer than 5 years of experience at plants and research centers Occurrence of accidents related to explosives: 0 cases 	○
		Work-life balance	<ul style="list-style-type: none"> Raise the utilization rate of paid leave days Implement well-designed programs for staggered work schedules and no-overtime days 	<ul style="list-style-type: none"> Increased the number of paid leave days utilized per employee (from 9.3 days to 10.0 days on average) Implemented performance assessments twice a year at each business office with the Work Load Advisory Committee comprised of members from both labor and management 	○
			<ul style="list-style-type: none"> Mental health training: achieve 100% participation in lectures as per a newly commenced 3-year plan Health check-ups: continue 100% participation rate High workload employees: achieve 100% participation rate in consultations 	<ul style="list-style-type: none"> Mental health training: participation in lectures is on-going as per the 3-year plan (which is in its 1st year) Health check-ups: 100% participation rate High workload employees: 100% participation rate in consultations 	○
			<ul style="list-style-type: none"> Actively continue hiring workers with disabilities 	<ul style="list-style-type: none"> Began periodic hiring from a special school for the disabled 	○
			<ul style="list-style-type: none"> Use a working committee for the Act on Advancement of Measures to Support Raising Next-Generation Children to increase awareness inside the workplace of related programs and possible work environment improvements 	<ul style="list-style-type: none"> Implemented further awareness activities by updating the internal website 	○
			<ul style="list-style-type: none"> Post whistleblower hotline Q&A entries in the internal company magazine and work to spread understanding of the hotline Respond appropriately to future reports to the whistleblower hotline 	<ul style="list-style-type: none"> Posted whistleblower hotline Q&A entries in the internal company magazine and worked to spread understanding of the hotline Responded appropriately to 9 reports to the whistleblower hotline 	○
Share information internally	<ul style="list-style-type: none"> Communicate information and share internal company news using the internal company magazine and intranet 	<ul style="list-style-type: none"> Published the internal company magazine (20 issues) 	○		
Environmental Responsibility CSR Activities	Customers	Expand green procurement	<ul style="list-style-type: none"> Implement aggregate accounting for quantities of raw materials and indirect materials acquired through green procurement 	<ul style="list-style-type: none"> Ratio of raw materials and indirect materials acquired through green procurement: 23% and 6% respectively, based on total purchase amounts 	○
		Strictly adhere to regulations on chemical substances	<ul style="list-style-type: none"> Spearheaded by the newly formed Chemical Substances Control Office, Enhance instructional programs related to chemical substance regulations and promote chemical substance compliance from the bottom up Advance the effective use of MSDgen and respond swiftly to issuing and revising SDS for products on the market and products under development Further encourage suppliers and users to share REACH importer information by using OR2IS within the supply chain 	<ul style="list-style-type: none"> Spearheaded by the Chemical Management Office, Carried out instruction and set in place legal checks and rules regarding imports/exports and sample products Improved the quality of SDS and shortened delivery times by enhancing our approval framework Ensured that REACH importer information from users was reported to Nippon Kayaku's ORs (Only Representative) and suppliers 	○
	Society	Reduce environmental impacts of overseas production bases	<ul style="list-style-type: none"> Continue to further implement measures to remove pigments from waste water while reducing COD Zhaoyuan Advanced Chemical Co., Ltd. (China): commence operation of waste water electrolysis equipment Wuxi Advanced Kayaku Chemical Co., Ltd (China): expand scale of activated sludge treatment equipment and prepare for the introduction of new products 	<ul style="list-style-type: none"> Measures to remove pigments from wastewater while reducing COD: Zhaoyuan Advanced Chemical Co., Ltd. (China): installed absorption cohesion treatment equipment; reduced COD and dye levels; responded to new wastewater standards Wuxi Advanced Kayaku Chemical Co., Ltd (China): improved activated sludge removal rate by investing in chemical treatment facilities handling pre-treatment → completed preparations for wastewater measures related to new products to be introduced in the next 5 years 	◎
		Reduce emissions of chemical substances	<ul style="list-style-type: none"> Mid-term environmental targets up to FY 2020 VOC emissions: reduce annual aggregate emissions of all organic chemical compounds released into the atmosphere to 45 tons or less (applicable not only to those compounds stipulated by government or JClA regulations) COD emissions: hold to 180 tons or less annually 	<ul style="list-style-type: none"> Results (in-progress) up to FY 2012: VOC emission: 81.4 tons (11.1% reduction over 92 tons last FY) COD emissions: 124.1 tons (no YoY change) 	○
		Minimize production of wastes	<ul style="list-style-type: none"> Mid-term environmental targets up to FY 2020 Total waste produced: 30,000 tons or less Total landfill waste produced: 3% or lower zero emission rate Improve recycling rate: 70% or better 	<ul style="list-style-type: none"> Results (in-progress) up to FY 2012: Total waste produced: 20,423 tons (8.4% reduction over 22,298 tons last FY) Total landfill waste produced: 7.9% zero emission rate (5.2% decrease over the 13.1% rate last FY) Recycling rate improvement: 61.8% (2.8% worse than the 63.5% rate last FY) 	○
		Prevent global warming	<ul style="list-style-type: none"> Mid-term environmental targets up to FY 2020 Achieve a 15% reduction (over FY 1990 levels) of energy-derived CO₂ emissions, including business office divisions 	<ul style="list-style-type: none"> Results (in-progress) up to FY 2012: Energy derived CO₂ emissions, including business office divisions: 729,00 tons or a 24.2% reduction over FY 1990 levels (3.8% decrease over 758,00 tons last FY) 	○
Financial Responsibility CSR Activities	Customers	Develop products that benefit patients	<ul style="list-style-type: none"> NK105 polymeric micelle anti-cancer drug: commence phase III trial; NK012: complete phase I and plan phase II Biosimilars: prepare for application and formulate plans for phase I/II comparative clinical trials Embolic microsphere products: follow up on application for marketing approval 	<ul style="list-style-type: none"> Commenced phase III trial for NK105 polymeric micelle anti-cancer drug Biosimilars: preparing for marketing approval (application submitted in September 2013) Embolic microsphere products: applied for marketing approval (marketing approval received in June 2013) 	○
		Increase number of environmentally friendly products	<ul style="list-style-type: none"> Functional chemical products: achieve a 2% year-on-year increase in net sales of ecofriendly semiconductor encapsulation materials Automotive safety parts: set targets for weight reduction for each part and continue moving forward with development Review new agrochemicals that use food additives for ingredients 	<ul style="list-style-type: none"> Ratio of ecofriendly materials (including ecofriendly semiconductor encapsulation materials) in relation to total sales of epoxy resin-related products: 70.1% (approx. 5% YoY increase) Developed new products (the first of which is scheduled for launch in FY 2013) through SE (Simultaneous Engineering) 	○
		Enhance information disclosure practices	<ul style="list-style-type: none"> Use the new cancer-specialist MR system and boost the level of MR competency Establish a framework for promptly responding to drug side effect issues using the new information devices 	<ul style="list-style-type: none"> Proceeded with development of insecticides that work by obstructing the spiracles (respiratory organs) of insects Began operation of a specialist MR training system Established and began operating a framework for promptly responding to drug side effect issues using new information devices 	○
		Provide the best products to customers	<ul style="list-style-type: none"> High-level complaints (claims with damages amounting to ¥10 million or greater): zero High-level quality process mishaps (incidents with damages amounting to ¥10 million or greater): zero 	<ul style="list-style-type: none"> High-level (those of ¥10 million or greater) complaints: 1 High-level (those of ¥10 million or greater) quality process mishaps: 1 	△
		Develop products gentle on the users	<ul style="list-style-type: none"> Contribute to enhancing technology for further safeguarding vehicle passengers and pedestrians through the development of gas projection devices for use in pop-up engine hoods and seat lifting mechanisms 	<ul style="list-style-type: none"> Gas projection devices for pop-up engine hoods: 2 products brought to market 	○
	Shareholders	Boost information dissemination and continue information disclosure	<ul style="list-style-type: none"> Continue holding appropriate financial results briefings, responding to interview requests, and disclosing information to further earn the confidence of shareholders 	<ul style="list-style-type: none"> Held two financial results briefings, responded to interview requests, and disclosed information on the Company website 	○

◎ : target achieved ○ : almost achieved △ : under-going efforts toward improvement

MID-TERM CSR ACTION PLAN

In April 2013, the Nippon Kayaku Group commenced its new three-year Mid-term Business Plan " **Challenge 100A !** " that runs until its 100th anniversary in the year 2016. In conjunction with this, we also drafted an Mid-term CSR Action Plan that runs parallel to **Challenge 100A !**. Going forward, we will take steps to ensure all executives and employees understand the Mid-term CSR Action Plan to raise awareness toward CSR management and promote inclusive efforts involving all employees.

Category	No.	Challenge 100A ! Mid-Term CSR Action Plan	FY 2013 CSR Action Plan	Response to ISO26000						
				Organizational Governance	Human Rights	Labor Practices	Environment	Fair Operating Practices	Consumer Issues	Community Involvement and Development
Foundational	1	Improve employee awareness of CSR and compliance	Implemented CSR and compliance training including Group companies	◎				○		
	2	Assure business continuity during the event of an emergency	Maintained BCP Manual, including disaster responses, and implemented training Assured reduced disaster risks to IT systems and measures for a prompt recovery response (will be completed in FY 2014)	◎				○		
Social Responsibility	3	Strictly adhere to regulations on chemical substances	Enhanced in-house instructional programs related to chemical substance regulations and appropriately disclosed SDS				◎	○		
	4	Continue to make societal contributions through research, development, and provision of product information on cancer and cancer-related fields	Brought embolic microsphere products to market and proceeded with development of polymeric micelle anti-cancer drugs Worked toward safety management and quality improvement by further enhancing the Medical Information Service Center					○	◎	
	5	Thoroughly ensure the education of employees in knowledge and skills related to handling explosives	Implemented a rank-based education program taught by the explosives safety maintenance team						◎	
	6	Continue conducting onsite instruction efforts for safe agrochemical use	Carried out visits to sales outlets (150 visits per year, per sales representative)				○		◎	
	7	Promote CSR procurement in cooperation with suppliers	Formulated CSR procurement criteria					◎		
	8	Work toward preventative measures against environmental impacts and occupational injuries from major accidents	Major accidents, lost worktime accidents, non-injury-related accidents: 0 cases 1.0 or lower non-lost worktime accident rate (5 accidents) Vehicle accident rate during work tasks or commuting by pharmaceutical MRs: 4% or lower	○		○	◎			
	9	Reduce customer complaints and quality process mishaps	High-level complaints (claims with damages amounting to ¥10 million or greater): zero High-level quality process mishaps (incidents with damages amounting to ¥10 million or greater): zero					○	◎	
	10	Communicate with the local community	Supported children with intractable diseases, and their families, by operating Asunaro House Carried out Pink Ribbon activities and plant festivals; as well as social events, local cleanups, and public lectures with the local community							◎
	11	Provide timely and appropriate disclosure of information to stakeholders	Promoted communication with stakeholders and made the Company website user friendly Promoted earlier disclosure of financial results and prepared for compliance with IFRS (International Financial Reporting Standards)	◎					○	
	12	Utilize and foster diverse human capital	Improved our degree of worker diversity and our hiring rate for workers with disabilities; promoted the appointment of female managers; utilized the skills of workers of advanced age Worked to educate employees as global managers as part of our response to globalization; bolstered our instruction programs for non-Japanese hirees; maintained and expanded our various support systems in these areas		○	◎				
	13	Give due consideration to employee health and safety, and provide a working environment that allows for a good work-life balance	Mental health training for creating a healthy workplace: 3 years of training programs Participation in the training: 100% Participation in health check-ups: 100% Improved utilization rate of paid leave as part of improving employee work-life balance; encouraged support measures for training the next generation of workers. Participation rate in consultations for high workload employees: 100%		○	◎				
	14	Protect human rights and privacy	Appropriately operated the whistleblower hotline; implemented human rights and power harassment awareness training		◎	○				
Environmental Responsibility	15	Expand our green procurement ratio	Assessed the status of our "green procurement" through the promotion of our indirect materials purchasing system				◎	○		
	16	Achieve mid-term environmental targets with due consideration of the environment	Reduced emissions of chemical substances: followed initiatives directed toward achieving the mid-term environmental targets set for FY 2020				◎			
	17	Improve waste water treatment technology and respond to environmental regulations	Reviewed, including at Overseas Group companies, the development of new technology for waste water treatment; reviewed dye-removal technology through the advanced treatment of dye-containing waste water Reviewed new methods for nitrogen removal for waste water containing high concentrations of nitrogen. Researched new organic compound decomposition systems				◎			
	18	Strive to be a business with ever lower energy consumption	Formulated energy conservation action plans for each business site				◎			
Financial Responsibility	19	Assure stable earnings as a sustainable business group	Enhanced Group management; vitalized Group companies through a more robust support framework from the Head Office Efficiently utilized capital; optimized our balance sheets; pursued cost effective purchasing	◎				○		
	20	Launch products that contribute to the environment and to energy conservation	Brought new high performance thermal conductive adhesive sheets and optical control films to market				○		◎	
	21	Provide high quality pharmaceutical products that reduce economic burdens	Brought biosimilars to market as quickly as possible; worked to bring generic anti-cancer drugs to market without delay						◎	
	22	Roll out low-cost automobile safety devices, using our proprietary technologies, to a global market in order to contribute to protecting lives	Started new overseas business bases and expanded production facilities						◎	
	23	Ensure the continued existence of manufacturing plants by handing down Japan's "monozukuri" technology	Promoted company-wide presentation gatherings related to "monozukuri"; promoted in-house education and joint sharing of information	○		◎				
	24	Create and implement sustainable research programs	Built out a corporate structure conducive to the sustainable creation and implementation of projects	○					◎	

Special Feature: “Meeting of the Movement for Tomorrow” Presentation



The Nippon Kayaku Group holds a company-wide presentation event every year called the “Meeting of the Movement for Tomorrow” In 2013 this event was held for the 54th time.

After receiving the Deming Prize*1 in 1963, we launched the Company Quality Control Circle Conference in 1966 as a platform for presenting Quality Control activities conducted during the modernization effort after the award was received.

In 1995, the name was changed to the “Meeting of the Movement for Tomorrow.”

Overseas Group companies have participated since the 47th time this meeting was held in 2005, making it truly an event involving the entire Nippon Kayaku Group. Presentations focused on necessary actions*2 being undertaken, such as operational improvements, cost reductions, the 5S*3, development of the next generation, and energy conservation activities.

Through this meeting, we are working to improve the problem detection, problem solving and creative abilities of Nippon Kayaku Group employees and it is our hope that it will serve as a platform for resolving workplace issues and fostering greater communication across the group.



Active discussions involved participants from Overseas Group companies as well (left)
 Presentation from Kayaku Safety Systems de Mexico (right)

*1 Deming Prize: Established by the Union of Japanese Scientists and Engineers in 1951, the Deming Prize is awarded to companies that conduct systematic quality control efforts, have been recognized as making remarkable improvements in results during the fiscal year, and that are seen as making further progress in quality control in the future. The prize was created by Dr. W Edwards Deming, a leading authority in quality control from the United States, to commemorate his friendship with Japan and the results of quality control efforts.

*2 Actions: Activities that are constantly aware of costs and creating added value. An original word unique to the Nippon Kayaku

Group.

*3 5S: The acronym for a workplace organization method that emphasizes sort, straighten, systematic cleaning, standardize and sustain.

[Comments from the Executive Committee Chair] 54th Meeting of the Movement for Tomorrow

Event Slogan: Develop Our Strong Points and Leap Forward to Our 100th Anniversary

Event Concept: Based on the KAYAKU spirit, "Let's Continue with Refined Work, Fill Ourselves with Confidence and Pride, and Produce the Results for the Next Stage"

The 54th "Meeting of the Movement for Tomorrow" was held in Takasaki City, Gunma Prefecture at Nippon Kayaku's pharmaceutical manufacturing plant on February 21 and 22, 2013. This year more than 250 employees took part in the meeting, including those from our subsidiaries in China, the United States, the Czech Republic and Mexico.

This year the meeting's slogan was "Develop Our Strong Points and Leap Forward to Our 100th Anniversary" and the event concept was "Based on the KAYAKU spirit, 'Let's Continue with Refined Work, Fill Ourselves with Confidence and Pride, and Produce the Results for the Next Stage'." These messages were thought up by members of the Takasaki Plant for the lead up to our 100th anniversary in the year 2016.

This meeting showcased not only the innovations and improvements that form the driving force behind individual workplace growth, but also collaborative activities spanning different workplaces, and was used as a platform for exchanging ideas collectively to enhance our technological prowess. Presentations from overseas business sites were also very dynamic and I felt that activities are helping to strengthen workplaces. As for domestic business sites, presentations focused mainly on pressing challenges, such as energy conservation, cost improvement and development of the next generation. I believe this was an ideal platform to confirm the entire Nippon Kayaku Group's commitment to sharing information and achieving its mid-term business plan Challenge 100A ! .



Hirokazu Sekiguchi
Chief Executive Officer of the meeting
Pharmaceuticals Manufacturing Department
Takasaki Plant

54th Meeting of the Movement for Tomorrow Awards (Fiscal 2012)

<Award of Excellence>

Theme	Inventory Control of Naked Initiators
Workplace	Kayaku Safety Systems de Mexico, S.A. de C.V. (production plant for automotive safety components)
Details	Reduced inventory by a little less than 40% after identifying the fundamental cause for the sharp increase in naked initiators.
Theme	Improving WAC Water Processing Performance with Effective Use of Biological Processing
Workplace	Wuxi Advanced Kayaku Chemical Co., Ltd. (WAC) (dyeing plant)
Details	There are various effluent controls placed on COD*4 value by Wuxi City, where WAC is located. As a result, significant improvements to effluent treatment methods were examined that helped improve the COD elimination factor and reduce operating costs.

<Honorable Mention>

Theme	3M*5 Improvements at Plant
Workplace	NIPPON KAYAKU FOOD TECHNO CO., LTD. (manufactures and sells food related products)
Details	Competition among competitors remains fierce for deoxidizers because of the low prices involved, making products that are high quality but cost less the key to any battle. Cost reductions were achieved through lean manufacturing and the 3Ms.
Theme	Energy Conservation Activities and Results

Workplace	Himeji Plant (production plant for automotive safety components)
Details	The amount of energy being consumed continues to increase each year due to increases in production volume. The promotion of greater energy conservation efforts helped to reduce energy below the absolute value thought to be impossible.

The Meeting of the Movement for Tomorrow represents an important platform that can produce new amalgamations through information sharing, communication, as well as better awareness of goals and problems by all Nippon Kayaku Group employees. Going forward, the Nippon Kayaku Group will continue to hold this event to generate new technological combinations that will help to evolve its proprietary technologies. The results of which will also be utilized to achieve further growth for the Nippon Kayaku Group and for the benefit of society.

- *4 COD: Chemical Oxygen Demand. An indication of the amount of oxygen needed to oxidize a subject compound by oxidizing subject compounds under a predetermined condition using oxidizing agents, then measuring the amount of oxidizing agents used in the process. A high COD level means that the water contains a large amount of organic chemical substances that consume oxygen. With lower oxygen content, the water cannot sustain biological life, which stops the natural purification process, leading to a muddied and odorous water environment.
- *5 3 Ms: muri (unreasonableness), muda (waste), and mura (inconsistency)

Corporate Governance

The Nippon Kayaku Group Corporate Governance and Internal Control System

■ Fundamental Approach to Corporate Governance

To gain the trust of society, the Nippon Kayaku Group recognizes the vital importance of preserving business transparency through greater checks and balances and of timely, impartial information disclosure to investors and shareholders. To that end, we have put in place an autonomous corporate governance system.

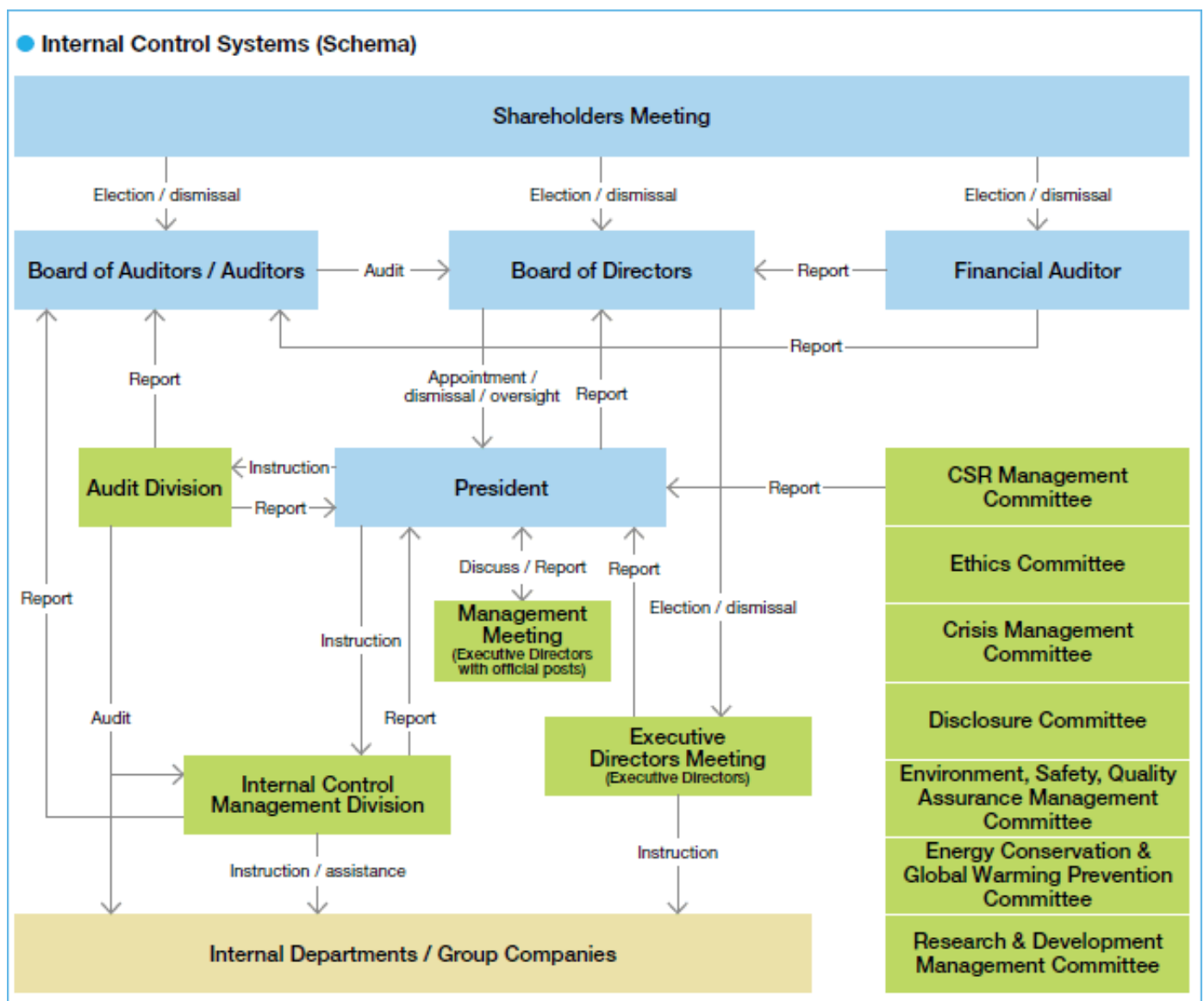
■ Corporate Governance System

Through decision-making by the council system of our Board of Directors and the corporate auditor system, the Nippon Kayaku Group believes that its system of corporate governance effectively supports management functions.

Starting in August 2005, Nippon Kayaku adopted the Executive Officer System in order to promptly respond to changing business climate and ensure agile execution of business operations. This system clearly distinguishes management decision making and auditing from business execution, enabling each of these functions to be reinforced, whereby ensuring that appropriate decision making and punctual business execution take place. To further clarify management accountability and responsibility for business execution, the term of board of directors and executive officers has been set at one year. In addition, an outside director has been appointed since June 2013. This heightens management transparency and helps to further strengthen the company's corporate governance system.

Nippon Kayaku has a board of corporate auditors that comprises five individuals, including three outside corporate auditors. Corporate auditors attend board of director meetings and other important company deliberations and through information sharing with the Internal Audit Department they are able to oversee and monitor directors' execution of duties from a neutral and independent stance.

- [Summary of Internal Control Systems](#) [PDF](#)



Internal Control System and Corporate Auditor Audits

The Internal Audit Department has been established separate from the board of corporate auditors and directly managed by the president in order to perform internal audits that help prevent improprieties and errors before they happen, improve business operations, and protect company assets. This department performs business audits on all Nippon Kayaku Group companies in accordance with the fiscal year plan.

Audits performed by each corporate auditor attends board of director meetings and other important company deliberations and performs business execution audits to oversee and monitor directors' execution of duties from an independent perspective in accordance with the audit policy, audit plan, and assignment of duties decided by the board of corporate auditors.

Risk Management System

The Nippon Kayaku Group performs comprehensive risk management activities in order to prevent the occurrence of risk and minimize losses if risk does occur.

We have built up our risk management system around the Risk Management Manual compiled in the year 2000 and the Crisis Management Committee Rules and Regulations formulated in 2004.

In addition to our system that notifies senior management promptly about the occurrence of risks, we have also designated a department to be in charge of each factor requiring risk management as part of our efforts to avoid and prevent individual risk factors as well as take remedial measures.

Individual risk factors being addressed on the department-level include natural disaster risk such as earthquakes, environmental destruction risk, environmental pollution risk, accident (production / logistics)-related risk, product-related risk, loss of credibility risk, risk of crimes against the company, risk of crimes against senior management, employees and their families, risk related to expatriate workers and foreign business travel, litigation risk, personnel and labor-related risk, patent litigation risk, and infectious disease risk, among others.

Activities Promoting Risk Management

The Nippon Kayaku Group has a designated department in charge of risk management that each year develops a Risk Management Action Plan, which in turn is approved by the Crisis Management Committee, as part of the company's efforts to raise risk awareness, promptly report risk to senior management and engage in risk reduction activities.

The Nippon Kayaku Group's Business Continuity Plan Initiatives

In fiscal 2012, we conducted business continuity plan (BCP) training at the head office, utilizing the lessons learned from the Great East Japan Earthquake and tsunami that struck Japan on March 11, 2011. This section takes a closer look at our BCP initiatives.

- [Fiscal 2012 Disaster Preparedness Training Survey](#) PDF

BCP Training

In fiscal 2011, we drafted a BCP manual and launched a company-wide BCP project led by the Internal Control Promotion Department and involving all other company divisions. The BCP manual calls for each business division to set up its own response headquarters and for the establishment of a system to focus resources for the restoration of important business operations defined in advance in order to quickly restore operations within the targeted timeframe. Each workplace has also been allocated a satellite phone, design modifications made to information systems, and strategic inventory set up and managed from the perspective of business continuity planning. At the same time, we recognize that employee training is a key to quickly implementing the BCP.

As a result, the corporate head office and Functional Chemicals Business initiated BCP training under the guidance of an external consultant in fiscal 2012. The scenario for the training included an earthquake that struck in Tokyo Bay with a seismic intensity of 6, causing damage to the Tokyo Plant that required repair and restoration work. The company president and all employees took part in this training, which ended as planned after the Central Disaster Response Headquarters ordered the Functional Chemicals Business Disaster Response Headquarters to compile and report the recovery plan. In addition, the head office was damaged as part of the scenario, which required the Head Office Disaster Response Headquarters to be set up to help restore the functions of the head office. This aspect of the training was also completely successfully.

We will continue to conduct BCP training at all of our business divisions going forward to ensure that the BCP manual is actually used and practiced.



Summary of each Meeting

Board of Directors Meeting (Held Monthly)

To ensure prompt decision-making, the Board is limited to 10 members. Decisions related to important business matters are made through the stipulations of the Board of Directors in conformity with relevant laws and our articles of incorporation. Operational oversight functions also are being strengthened.

Management Meeting (Held Weekly)

The Management Meeting deliberates important matters related to management and business affairs and receives reports from business divisions. The President, as the chairman, makes decisions after thorough deliberation among the Management Meeting members.

Executive Directors Meeting (Held Quarterly)

The Executive Directors Meeting is chaired by the President, and attended by all Executive Directors (up to 25) appointed by the Board of Directors. Executive Directors report on the status of the businesses they have been entrusted with from the Board of Directors and the President as well as other necessary matters.

Management Strategy Meeting (Held Semi-Annually)

Important management matters at the Board Meeting such as basic policy of our group and management strategy are distributed to management personnel through the Management Strategy Meeting to ensure thorough understanding and awareness.

Board of Auditors Meeting (Held Monthly)

The Board of Auditors consists of five auditors (three external). The members monitor and oversee the duties of Directors from an independent position based on the stipulations of the Board of Auditors..

In addition, the Company clarifies authority and responsibility by management position, segregation of duties and company organization structure, setting rules that stipulate duties and powers. This promotes organized and efficient operations and establishes a framework of accountability.

Establishment of Various Committees

CSR Management Committee

Decides CSR action policy and mid-term action plan as well as confirms the validity of the measures based on KAYAKU spirit and CSR philosophy to undertake corporate social responsibility sustainably.

Ethics Committee

Works to formulate policies and measures for compliance and implementation of the Charter of Business Conduct and Code of Business Conduct and to evaluate companywide compliance.

Risk Management Committee

Develops and maintains a risk management structure for risk preventive measure, damage control and damage remediation over the full range of management issues.

Disclosure Committee

Scrutinizing important managerial information of the company and maintains and improves the structure for timely and proper external disclosure.

Environment, Safety, and Quality Assurance Management Committee

Presents its fiscal year policies on environment, safety, and quality assurance matters. Assesses results, and devises plans for improvement.

Energy Conservation and Global Warming Prevention Committee

Makes mid- and long-term plans, confirms each activity and discusses measures to problems based on the policy about energy conservation and global warming prevention.

These results are disclosed to inside and outside the company.

Research & Development Management Committee

Develops company-wide research and development policies and strategies. A forum to report, discuss and make decisions on important research and development matters.

FY 2012 Disaster Prevention Training Survey

* 1 Notification, evacuation, fire fighting, and other training in cooperation with the Fire Departments overseeing Comprehensive Disaster Prevention Exercises

* 2 Training in placing the monthly satellite phone calls, starting June 2012, required by the Satellite Phone Training section of the BCP

Business site/ Company name	Comprehensive disaster prevention training	Notification training	Early stage fire-fighting training; fire extinguishers and fire hydrant	Earthquake simulation training	Evacuation training	Leakage training	Patient transportation and first aid training	AED training	Sandbag training; simulated smoke inhalation training	Lectures, presentations, study sessions	Satellite phone training	Remarks
Head Office, NIPPON KAYAKU CO., LTD.		●		●		—	●	●	—	●	●	Carried out BCP training for a hypothetical earthquake
Fukuyama Plant/ NIPPONKAYAKU FUKUYAMA CO., LTD.	●	●	●	●	●	●	●		●	●	●	Joint training with public fire fighting units; Fukuyama Harbor marine disaster prevention training; Notification training with JFE Steel Corporation (events with the Ad Hoc Regional Disaster Prevention Association)
Asa Plant	●	●	●	●		●	●	●	●	●	●	Water damage prevention training
Tokyo Plant/ NIPPON KAYAKU TOKYO CO., LTD.	●	●	●	●	●	●	●	●	●		●	
Takasaki Plant	●	●	●	●	●	●	●	●	●	●	●	
Himeji Plant	●	●	●	●	●	●	●		●	●	●	
Kashima Plant		●	●	●	●	●	●	●		●	●	Tsunami evacuation training
Tokyo business CENTER/ Tokyo business district	●	●	●	●	●	—	●	●	●	●	●	Joint training with the Tokyo Fire Department and the disaster prevention association (member organization)
POLATECHNO CO., LTD.	●	●		●		●					—	
Moxtek, Inc.					●	—		●		●	—	
Wuxi Polatechno Optics Co., Ltd.	●	●	●		●	—				●	—	
Dejima Tech B.V.	●					—			—	●	—	
NIKKA FINE TECHNO CO., LTD.			●	●		—			—	●	—	
NIPPON KAYAKU AMERICA, INC.					●	—			—		—	Annual evacuation drill organized by the building management firm
Euro Nippon Kayaku GmbH		●							—		—	Created an emergency contact network
KAYAKU CHEMICAL (WUXI) CO., LTD.		●	●		●		●			●	—	
MicroChem Corp.			●		●	—		●	—	●	—	
Wuxi Advanced Kayaku Chemical Co., Ltd.	●		●		●	●	●			●	—	
Zhaoyuan Advanced Chemical Co., Ltd.			●							●	—	
Shanghai KAYAKU International Trading Co., Ltd.						—			—		—	Installed flashlights Permanently stocked special PM 2.5 face masks (freely distributed to visitors)
NIPPON KAYAKU FOOD TECHNO CO., LTD.	●	●	●	●	●		●	●			—	Carried out jointly with the Takasaki Plant: comprehensive disaster prevention training, earthquake simulation training, fire prevention training, first aid training, AED training
Tumor Diagnosis Support Co., Ltd.					●	—			—		—	Disaster prevention training to be carried out with all of the building tenants (currently scheduled)
Nippon Kayaku Medical Care Co., Ltd.	●	●	●	●	●	—	●		—	●	—	Fire fighting training (required by the patient care insurance regulator)
NAC Co., Ltd.	●	●	●	●	●	—	●		●	●	—	Joint training with the Tokyo business office
Taiwan NJC Corp.					●	—			—		—	
INDET SAFETY SYSTEMS a.s.		●	●		●	—	●	●	—	●	—	
Kayaku Safety Systems (Huzhou) Co., Ltd.			●		●	—			—		—	
Kayaku Safety Systems de Mexico, S.A. de C.V.			●		●	—	●		—	●	—	
Nishiminato Driving School Corporation	●	●	●			—			—		—	
Wako Toshi Kaihatsu Co., Ltd.		●		●		—	●	●	—	●	—	Joint training with NK HQ
NIKOS CO., LTD.		●		●		—	●	●	—		—	Joint training with NK HQ
JHMS Co., Ltd.					●	—			—		—	Participated in evacuation training carried out by the building management firm
Okiura Golf Center Co., Ltd.		●		●		—			—	●	—	Used a manual based on the Earthquake Preparation Plan for the Nankai & Tonakai Areas (a report by the Fukuyama Higashi Fire Department)
Kouwa Sangyo Co., Ltd.	●	●	●	●		—	●	●	●	●	—	Water damage prevention training: Joint training with the NK Asa Plant
Gunnan Sangyo Co., Ltd.	●	●	●	●	●	—	●	●	●	●	—	Joint Training with the Takasaki Plant
Head Office, KAYAKU AKZO CORPORATION	●	●	●	●		—			—		—	
Asa Plant, KAYAKU AKZO CORPORATION	●	●	●	●		●	●		—		—	Joint training with the NK Asa Plant
Head Office, Kayaku Japan Co., Ltd.	●	●	●			—			●	●	—	
Asa Plant, Kayaku Japan Co., Ltd	●	●	●	●		●	●	●	●	●	—	Joint training with the NK Asa Plant
Sanko Kagaku Kogyo Co., Ltd.		●	●	●		—			—		—	Joint training at the Sanko Chemical Industry Co. HQ and plants

Compliance

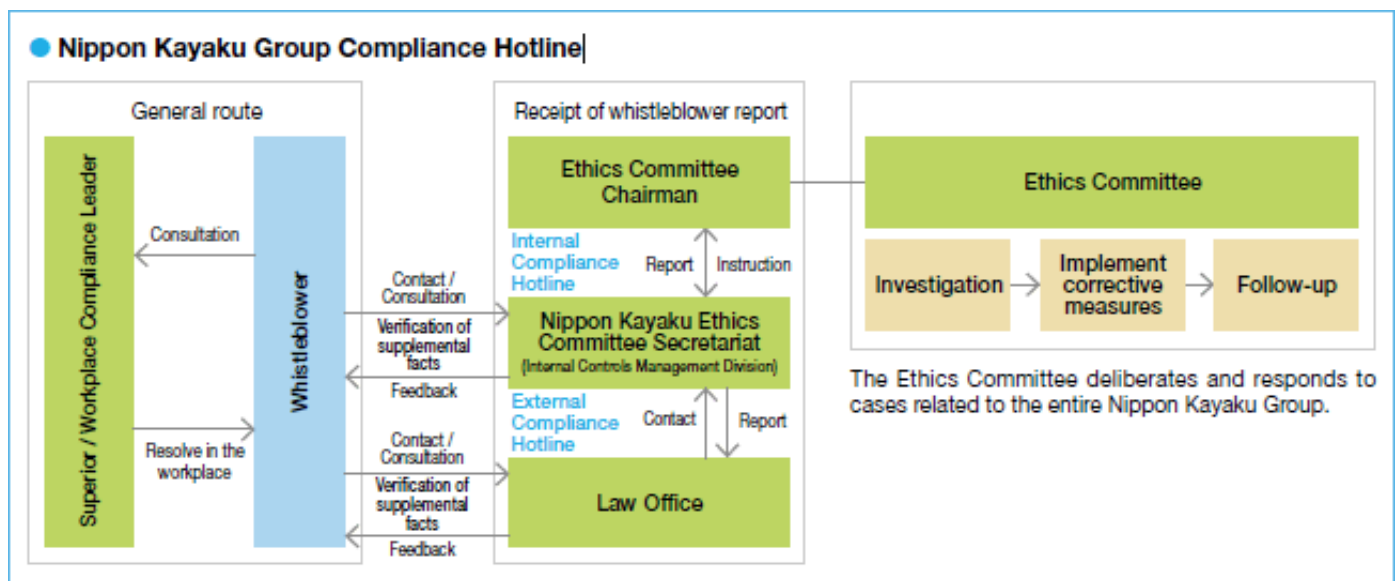
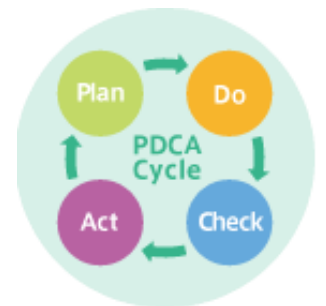
Raising Awareness about Compliance

The Nippon Kayaku Group believes that compliance holds a position of the utmost importance in its business activities. In June 2011, the Nippon Kayaku Group Charter of Conduct and the Nippon Kayaku Group Code of Conduct were drawn up. In order to foster a corporate culture that respects compliance, personnel responsible for and in charge of ethics matters are appointed at each business location of domestic Group companies. These personnel work to promote compliance in close cooperation with the Ethics Committee.

Every year Nippon Kayaku conducts compliance training in order to raise awareness about compliance, and in fiscal 2012, these training sessions were held at 40 of our domestic business sites, including those sessions for new hires and for newly appointed managers.

October has been designated Compliance Promotion Month, during which time training sessions are held for each workplace and all Nippon Kayaku Group employees in Japan are asked to complete a compliance survey. In fiscal 2012, a total of 3,648 responses were received from Nippon Kayaku Group company executives and employees. Survey results are used to monitor compliance and identify challenges pertaining to implementation efforts, based on which the next fiscal year's Compliance Action Plan is drafted. In turn, the PDCA cycle is employed to improve compliance awareness.

An Internal Compliance Hotline and External Compliance Hotline have been set up for employees in order to prevent violations of laws, company rules, or the Charter of Conduct before they happen and to ensure problems are corrected early.

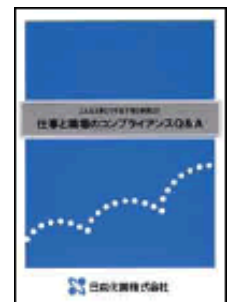


Compliance Promotion Activities

The Nippon Kayaku Group implements compliance promotion activities based on the annual Compliance Action Plan drafted by the Ethics Committee Secretariat and approved by the Ethics Committee.

1. Compliance Promotion Month

October has been designated Compliance Promotion Month to raise awareness of compliance issues among all executives and employees. In conjunction with Compliance Promotion Month, all Nippon Kayaku Group employees in Japan are asked to complete a compliance survey that also covers CSR, with company-wide results released in the company newsletter. Results are arranged in graph format to enable better visualization of trends that have taken place. Strengths and weaknesses of these results are also analyzed and provided as feedback. Based on this, the Compliance Action Plan for the following fiscal year is prepared and the PDCA cycle is implemented in order to raise awareness of compliance matters.



Compliance Q&A on Work and the Workplace

2. Compliance Activities during Fiscal 2012

- Each division drafts a Compliance Activity Action Plan and conducts compliance promotion activities independently according to this plan

- Compliance managers conduct continuous education and training for all Nippon Kayaku Group employees in Japan
- “Compliance News” is published periodically to draw attention to corporate wrongdoings and to be used for training sessions held at the department level.
- Job and Workplace Compliance Q&A is a booklet highlighting specific case studies both internally and externally that is utilized in department-level training sessions in order to raise awareness of compliance matters.

The Nippon Kayaku Group has defined the KAYAKU spirit (“continuously providing society with the best products through ceaseless progress and the combined forces of our consciences”) as an unwavering vision defining the company’s approach to business.

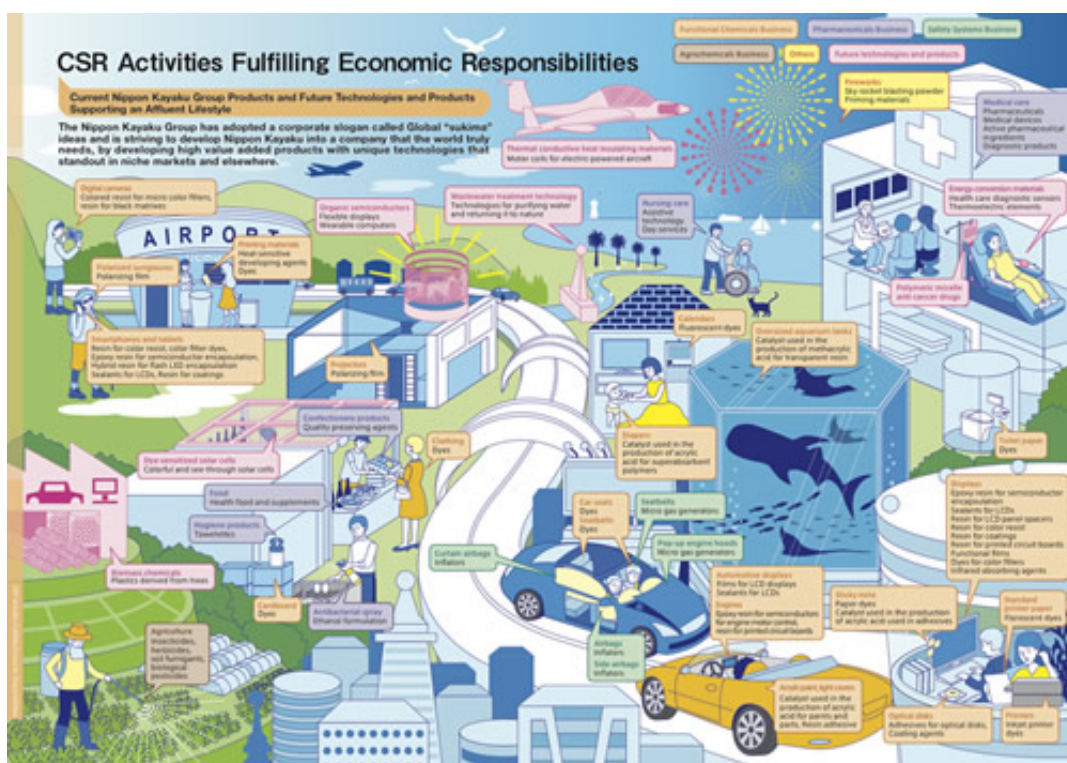
Moving forward, we will engage in compliance promotion activities so that all executives and employees of the Nippon Kayaku Group (including temporary and part-time workers) share an awareness of compliance and help to achieve our goal of earning the trust of all of our stakeholders.

CSR Activities Fulfilling Economic Responsibilities

The Nippon Kayaku Group adopted a corporate slogan called Global "sukima" ideas. We are striving to develop Nippon Kayaku into a company that the world truly needs, by accumulating unique technologies that stand out in niche markets and elsewhere. Here, we introduce four of our core businesses to show readers some of the ways in which our products are used on a daily basis.

Current Nippon Kayaku Group Products and Future Technologies and Products Supporting an Affluent Lifestyle

The Nippon Kayaku Group has adopted a corporate slogan called Global "sukima" ideas and is striving to develop Nippon Kayaku into a company that the world truly needs, by developing high value added products with unique technologies that stand out in niche markets and elsewhere.



• [View larger image](#) 

The Nippon Kayaku Group's Businesses

This section will take a closer look at the 4 core businesses of the Nippon Kayaku Group as well as products that it developed with unique technologies that contribute to the betterment of society.

Functional Chemicals Business

Development of motor coils for electric-powered aircraft using heat insulating material with thermal conductivity

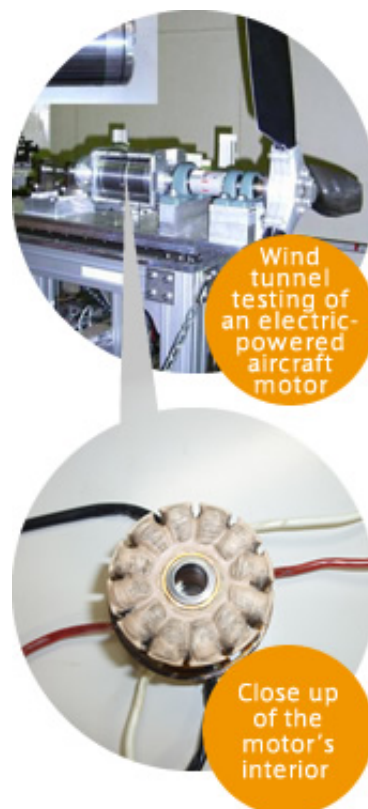
The Japan Aerospace Exploration Agency (JAXA) has researched and developed electric-powered aircraft as one prominent aerospace technology that can change the future of flight. The key to this technology is a compact, high efficiency motor. However, with conventional electric motors it was difficult to prevent the coil from burning due the high temperature needed to achieve maximum power for takeoff. A host of solutions were devised, which included increasing the size of the motor the motor system to limit the maximum power needed and using a water-cooled system, but these methods resulted in the exact opposite of downsizing. Instead, a coating material that does not cause heat damage on the motor coil was required to achieve both the compact design and high-efficiency needed.

Nippon Kayaku has used special reactive polyamide resins to develop highly thermal conductive heat insulating material with advanced heat conductivity and adhesive properties that can be used up to 250 degrees Celsius.

Nippon Kayaku and JAXA began joint research in fiscal 2012. Recently this research yielded the successful development of a motor coil that can operate at maximum power for twice the amount of time of conventional coils and achieves a 1% improvement in maximum efficiency.

This technology will help us realize a lighter and more compact motor system with greater maximum power than conventional systems. These advancements will allow for the system to be used not only in aircraft, but also in other applications as well, such as large vehicle and electronic industrial equipment that will require greater power than now.

Functional Chemicals Business



Pharmaceuticals Business

Specialty, Biosimilar & Generic Plus IVR Pharma

Nippon Kayaku was among the first to commercialize biosimilars that play an important role in the treatment of cancer and rheumatoid arthritis after focusing all of its efforts on the field. These biosimilars are helping patients and their families as well as healthcare practitioners.

By providing an extensive lineup of biosimilars, Nippon Kayaku is helping to ensure that all of society can have equal access to sound, high quality medical treatment options anytime and anywhere.

In 2010, Nippon Kayaku entered the Interventional Radiology (IVR)* field as the third pillar of its Pharmaceuticals Business. Moving forward, we are focusing on further expanding our lineup of embolic materials tailored to the needs of target organs as well as the condition of diseases and patients. In this manner, Nippon Kayaku is making contributions to society as a whole by delivering embolic products that reduce the physical burden of patients and particularly those battling cancer.

Pharmaceuticals Business

- * IVR: Also known as intravascular surgery or endovascular surgery, IVR is a method of treating illness with a narrow catheter or needle inserted inside the body that is manipulated while monitoring X-ray, ultrasound, or CT images.



Nippon Kayaku's informative website for healthcare practitioners called MINK Web

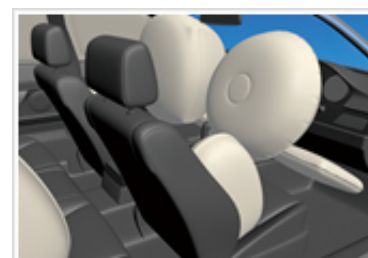
Safety Systems Business

Recognized as Safety Components Manufacturer by NCAP

Public automobile crash tests are being conducted around the world to respond to consumer demands for automobiles that are safer for occupants in the event of a collision. These crash tests are known as the New Car Assessment Program (NCAP) or the Japan New Car Assessment Program (JNCAP) in Japan. These crash tests now include pedestrian protection performance, in addition to occupant safety and braking performance. NCAP performs safety performance testing for mass produced vehicles and publishes the results to enable consumers to select safe automobiles in an effort to popularize safe vehicles. This testing has been performed in the United States since 1979 as UNCAP and recently was launched in December 2011 as ASEAN NCAP in ASEAN countries. In addition, similar testing is also being conducted in Europe, Australia, China and South Korea. A variety of elements are needed to ensure occupant safety in the event of an automobile collision, and airbags and seat belts play a particularly important role.

Given this environment, Nippon Kayaku harnesses its long-standing explosives technologies to develop, manufacture and market inflators for airbags, micro gas generators for seat-belt pretensioners, and pop up engine hood devices to protect pedestrians from head injuries, helping to ensure the safety of automobile occupants around the world.

Safety Systems Business



Air bags inflated using explosives technology

Agrochemicals Business

Protecting Rice with Unique Pesticide Sukumi Hunter

Apple snails from South America have spread across Japan, especially Western Japan, where they have caused extensive damage to wetland rice seedlings.

The Agrochemicals Business used its formulation technologies to successfully transform Thiocyclam, an agrochemical intermediate used to exterminate other insects, into gradual release granules that have residual efficacy. This new formulation does not completely exterminate apple snails, but rather stably prevents damage to rice paddies by reducing apple snail activity during the period of efficacy and reducing their ability to masticate.

Apple snails eat wetland rice plants when the seedlings are soft, but once they grow larger and harden, the apple snails go after other vegetation like grasses. This means that the sustained efficacy of the pesticide during the period until the seedlings harden will prevent damage to seedlings while also help cut back on invasive weeds that occur later in the growing cycle.

In this manner, Nippon Kayaku Group technologies are alive and well in the materials that help produce food and in pesticides that reduce producer work load and protect agricultural produce from pesticides and weeds.

[Agrochemicals Business](#)



Apple snail

Research and Development

Researching the Needs of Tomorrow: R&D for Organic Semiconductor Materials

Electronics have drastically improved living standards since the 20th century. Today, electronics occupy an indispensable presence in many of the products we use every day, including computers, smartphones and medical equipment. One of the core components of these electronics are inorganic semiconductors.

Nippon Kayaku is researching and developing organic semiconductors as an alternative to inorganic semiconductors. Organic semiconductors can be used in a host of different products (products that bring our live new and greater convenience) because they make it possible to make electronics softer. In addition, organic semiconductors can be printed, making the semiconductor manufacturing process more environmentally friendly and use less energy. Organic semiconductor materials are garnering much attention from academia and industry alike as a material that represents the key to the future of electronics.

Nippon Kayaku's organic semiconductor materials boast among the best performance in the world. We are also working closely with other leading research institutions in Japan and abroad to accelerate the commercialization of these technologies through our involvement in NEDO's consigned research project, the Japan Advanced Printed Electronics Technology Research Association (JAPER).

Going forward, Nippon Kayaku will seek to research new themes that capture the needs of tomorrow and to systematically develop businesses in the segment in order to make sustainable contributions to society.

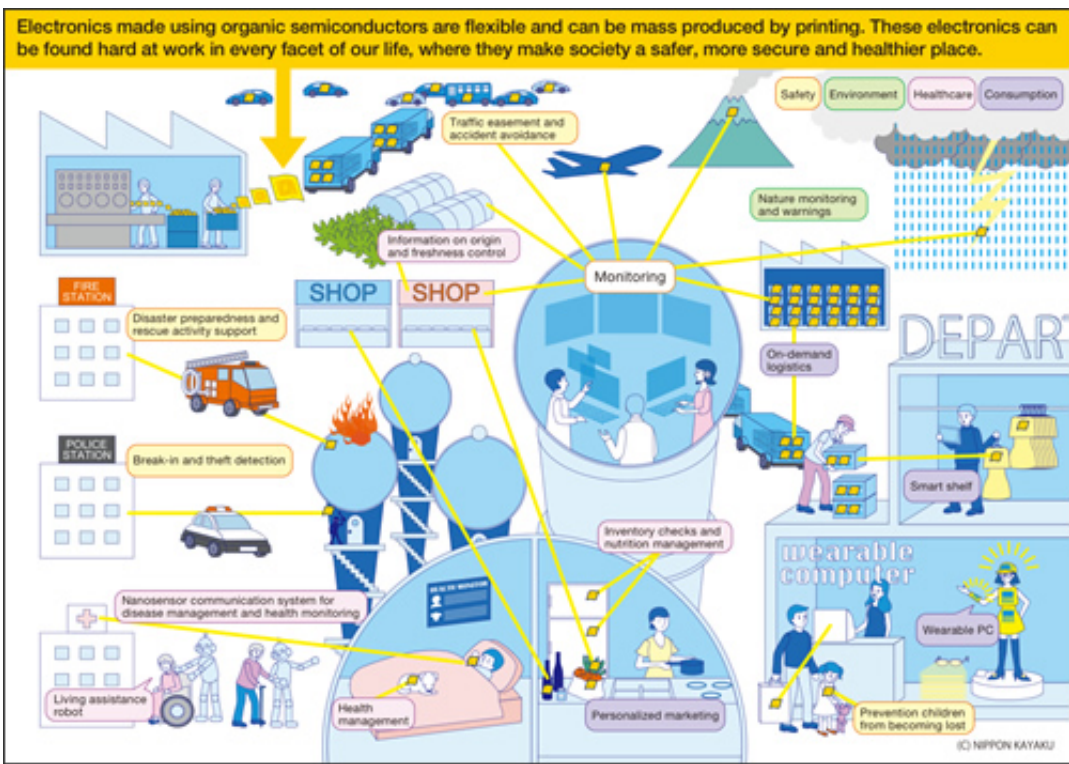
[Learn more about our research laboratories](#)



The world which uses an inorganic semiconductor



The world which uses an organic semiconductor



- [View larger image](#) [PDF](#)

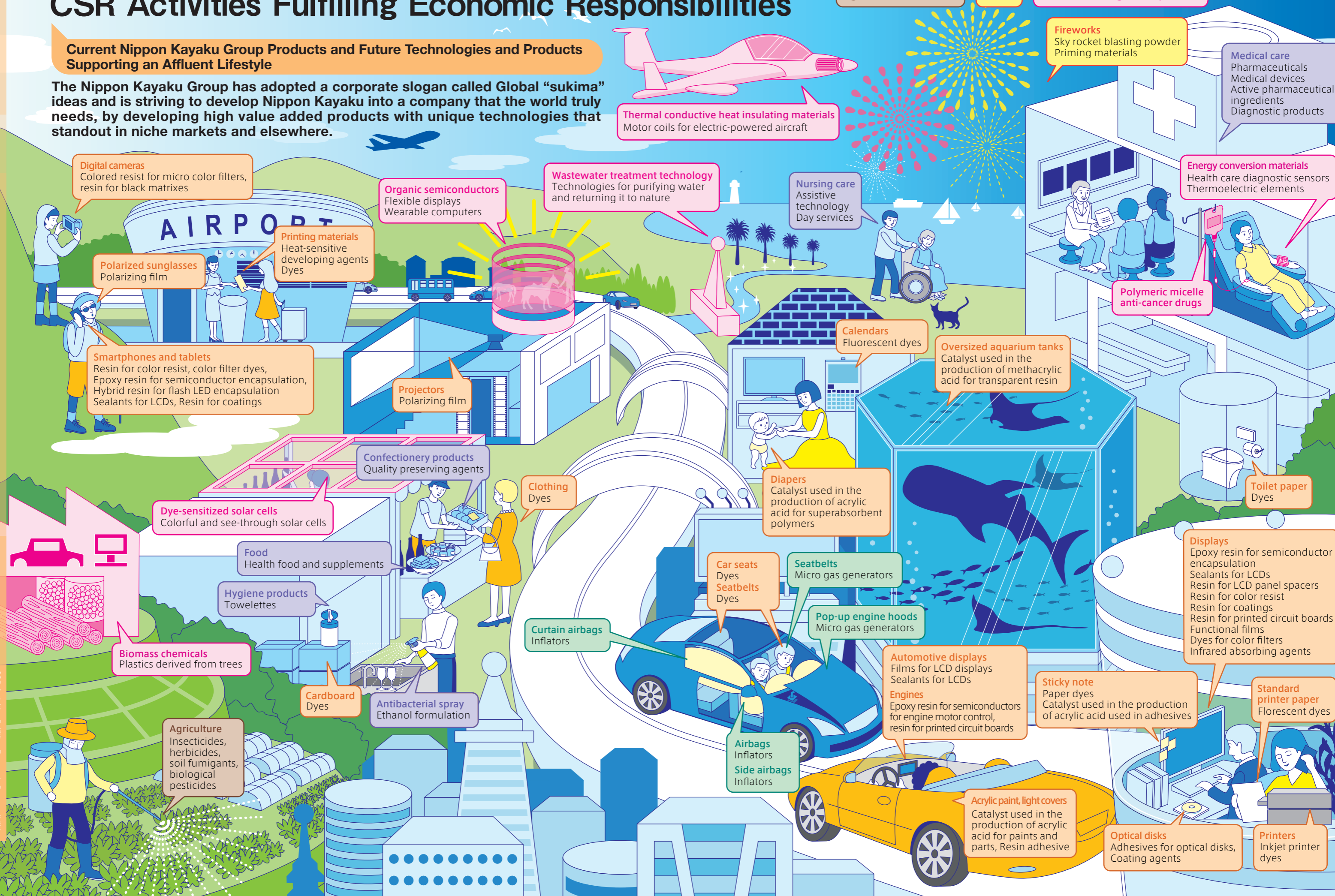
CSR Activities Fulfilling Economic Responsibilities

Current Nippon Kayaku Group Products and Future Technologies and Products Supporting an Affluent Lifestyle

The Nippon Kayaku Group has adopted a corporate slogan called Global "sukima" ideas and is striving to develop Nippon Kayaku into a company that the world truly needs, by developing high value added products with unique technologies that stand out in niche markets and elsewhere.

Functional Chemicals Business Pharmaceuticals Business Safety Systems Business

Agrochemicals Business Others Future technologies and products



Digital cameras
Colored resist for micro color filters, resin for black matrixes

Polarized sunglasses
Polarizing film

Smartphones and tablets
Resin for color resist, color filter dyes, Epoxy resin for semiconductor encapsulation, Hybrid resin for flash LED encapsulation, Sealants for LCDs, Resin for coatings

Printing materials
Heat-sensitive developing agents, Dyes

Organic semiconductors
Flexible displays, Wearable computers

Wastewater treatment technology
Technologies for purifying water and returning it to nature

Thermal conductive heat insulating materials
Motor coils for electric-powered aircraft

Nursing care
Assistive technology, Day services

Fireworks
Sky rocket blasting powder, Priming materials

Medical care
Pharmaceuticals, Medical devices, Active pharmaceutical ingredients, Diagnostic products

Energy conversion materials
Health care diagnostic sensors, Thermoelectric elements

Polymeric micelle anti-cancer drugs

Calendars
Fluorescent dyes

Oversized aquarium tanks
Catalyst used in the production of methacrylic acid for transparent resin

Projectors
Polarizing film

Confectionery products
Quality preserving agents

Clothing
Dyes

Dye-sensitized solar cells
Colorful and see-through solar cells

Food
Health food and supplements

Hygiene products
Towelettes

Biomass chemicals
Plastics derived from trees

Cardboard
Dyes

Antibacterial spray
Ethanol formulation

Agriculture
Insecticides, herbicides, soil fumigants, biological pesticides

Curtain airbags
Inflators

Car seats
Dyes, Seatbelts, Dyes

Seatbelts
Micro gas generators

Pop-up engine hoods
Micro gas generators

Automotive displays
Films for LCD displays, Sealants for LCDs
Engines
Epoxy resin for semiconductors for engine motor control, resin for printed circuit boards

Airbags
Inflators, Side airbags, Inflators

Displays
Epoxy resin for semiconductor encapsulation, Sealants for LCDs, Resin for LCD panel spacers, Resin for color resist, Resin for coatings, Resin for printed circuit boards, Functional films, Dyes for color filters, Infrared absorbing agents

Standard printer paper
Fluorescent dyes

Sticky note
Paper dyes, Catalyst used in the production of acrylic acid used in adhesives

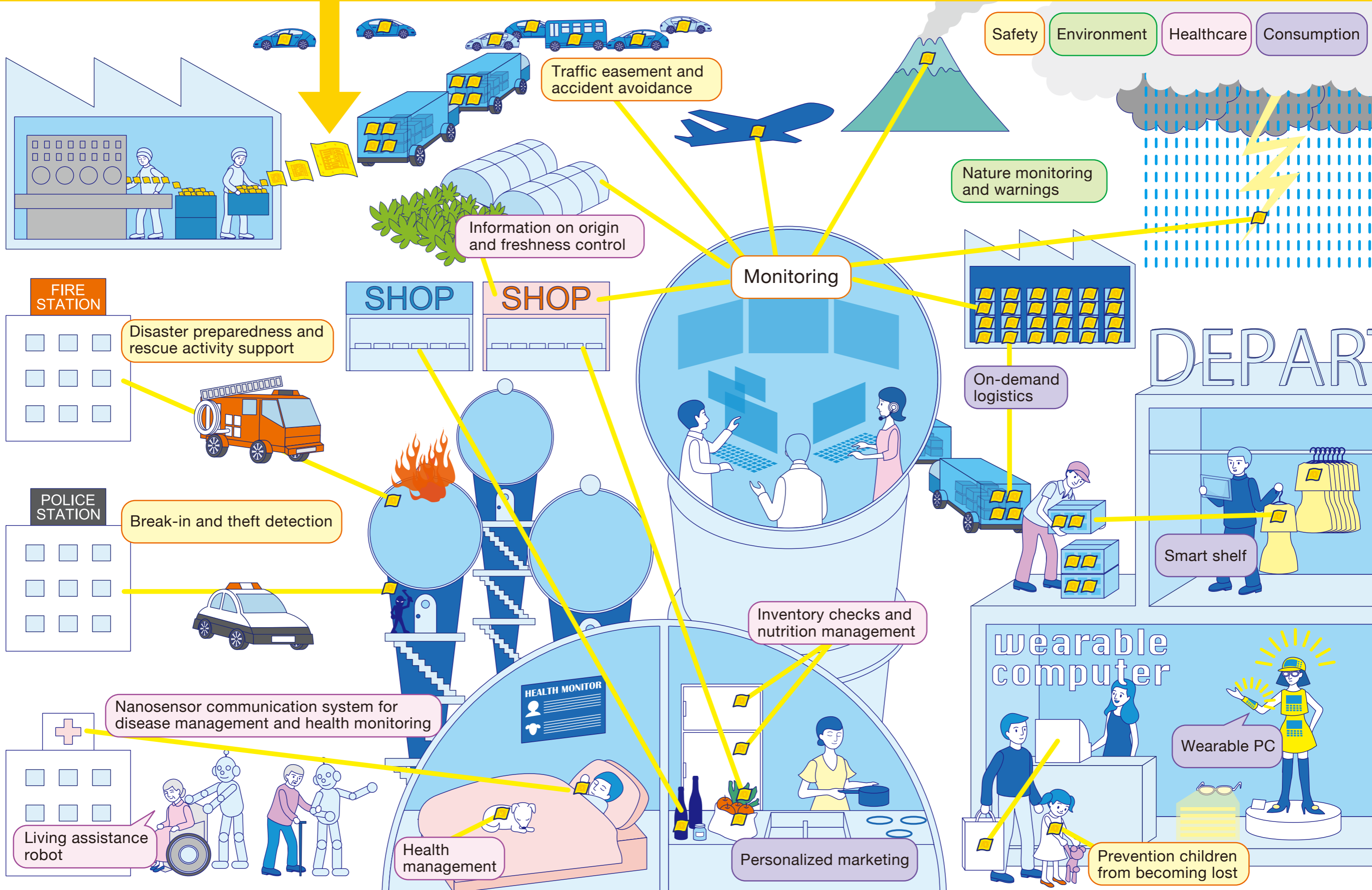
Acrylic paint, light covers
Catalyst used in the production of acrylic acid for paints and parts, Resin adhesive

Optical disks
Adhesives for optical disks, Coating agents

Printers
Inkjet printer dyes

Toilet paper
Dyes

Electronics made using organic semiconductors are flexible and can be mass produced by printing. These electronics can be found hard at work in every facet of our life, where they make society a safer, more secure and healthier place.



Safety Environment Healthcare Consumption

DEPART

wearable computer

Wearable PC

Prevention children from becoming lost

Initiatives with Our Customers

The Nippon Kayaku Group continually strives to develop sound products and services that are both safe and reliable in order to provide the best possible solutions to its customers around the world.

Pharmaceutical Information Center and Securing Customer Trust

The Medical Information Service Center handles a variety of different inquiries on our pharmaceutical products and medical devices from physicians, pharmacists, distributors, patients and the general public.

To ensure that pharmaceuticals and medical devices supplied by Nippon Kayaku are of the highest possible quality, the Medical Information Service Center carefully and accurately responds to each and every inquiry under the motto of conveying the right information on proper usage. Surveys are given to healthcare practitioners to check whether our response meets customer expectations and the results of these surveys are used to make modifications and improvements. The Medical Information Service Center works closely with medical representatives (MRs) that visit healthcare facilities to deliver information that benefits patients. It also reports feedback and requests from customers to individual departments in charge internally.

The Medical Information Service Center is committed to improving medical care under the slogan "provide proper usage information and improve customer satisfaction in all situations."



Pharmaceutical Information Center

Providing Instructions on the Correct Use of Pesticides

The Agrochemicals Business sells Kayaku Chloropicrin, Dojo Picrin, and Chlopic Flow made from chloropicrin.

These products play an integral role in modern Japanese agriculture as soil fumigants for exterminating pathogens and pests found in soil that are harmful to agricultural crops. Today, nearly half a century has passed since these products were released, these products remain popular because they are highly effective and do not leave residue on crops.

However, gases from chloropicrin products have a high inhalation toxicity and are an eye and skin irritant. If used improperly, this chemical can result in not only eye or throat pain, but even death. Therefore, it must be used and handled with the utmost care.

As a result, we have organized seminars on chloropicrin agents to educate our customers to ensure they use our products not only effectively, but also safely and properly. For example, every year we hold local seminars on Chlopic Flow in the geographic areas where it is being used.



Local seminars for Chlopic Flow

Initiatives with Our Business Partners and Investors

The Nippon Kayaku Group continually strives to develop sound products and services that are both safe and reliable in order to provide the best possible solutions to its customers around the world.

From Green Procurement to CSR Procurement

We encourage the sourcing of items that have reduced environmental impacts as part of our raw materials procurement efforts and we have developed a system that compiles information on quantities purchased and amounts spent. Our electronic purchasing system for indirect materials enables us to display green labeled products as well as products compliant with Japan's Law on Promoting Green Purchasing in our electronic catalogue. We are committed to promoting the purchase and use of eco-friendly indirect materials going forward.

Nippon Kayaku is currently examining the development of a CSR procurement system together with its suppliers by setting specific external-oriented guidelines for raw materials purchases from the perspective of CSR.

We have diverse operations that include a number of manufacturing sites both in Japan and abroad. Given this, we recognize that our social and environmental responsibilities are growing globally. We believe that companies maintain not only economic responsibilities, but also social and environmental responsibilities as a member of society. Given these three perspectives, we are working with our suppliers, and by extension our customers, to ensure that goods manufactured using our products are safe and secure for consumers.



Communicating with Investors

■ Earnings Presentations

We host earnings presentations for institutional investors and securities analysts in Japan following the announcements of our interim and fiscal year-end results. Nippon Kayaku's entire executive team, including the president, attends these presentations where we provide more information on our financial results, earnings forecast and future management strategy and actions.



Earnings Presentations

■ One-on-one Meetings

We also organize one-on-one meetings in Japan with institutional investors and securities analysts.

■ Open House Tours at Plants

Nippon Kayaku organizes open house tours of its plants and R&D briefings for institutional investors and securities analysts every year to broaden understanding about its business activities.



Initiatives for Society



With operations located around the world, the Nippon Kayaku Group stands committed to actively communicating with the local communities in which it operates because they represent one of its most important stakeholders.

The Pink Ribbon Campaign

Pink Ribbon activities were launched by Nippon Kayaku in 2004 to convey the importance of early detection, early diagnosis and early treatment of breast cancer. Fiscal 2012 marked the ninth year of these activities.

Activities include running a breast cancer awareness website, employees wearing Pink Ribbon Badges and handing out items that help raise awareness such as bumper stickers. Normally these items were handed out at the railway station nearest to our corporate head office, but in fiscal 2012 we handed items out at the railway stations closest to all of our business sites in Japan (Nippon Kayaku Fukuyama, Asa Plant, Takasaki Plant, Himeji Plant, and the Tokyo), where we also lobbied passersby about the importance of breast cancer screenings.



- [Pink Ribbon activities website](#) 
- [Nyugan Info Navi](#) 

Kayami – the Nippon Kayaku
Pink Ribbon activities character

My Involvement with the Pink Ribbon Campaign

Ayaka Kassai

Pharmaceuticals Development Division

At first I was a bit nervous, but I soon found that the time spent through the Pink Ribbon activities with members of the local community and their warm smiles was very inspiring and meaningful. I heard a lot of questions during my time on the street. "What are the Pink Ribbon activities?" "Is it really that important to be screened for breast cancer?" The fact that I was able to speak directly with members of the local community about the importance of early screening was really important to me because of the potential to save lives.



Asunaro House – Supporting Families of Children with Intractable Diseases

The Nippon Kayaku Group, as part of the commemorative projects marking its 80th anniversary and under the motto of "Let's assist children with intractable diseases and their families," owns and operates Asunaro House, an extended-stay facility for caregivers in Saitama City, Saitama Prefecture. This facility safeguards users' privacy and provides parents with a child fighting an illness an opportunity to meet others like themselves, which helps to alleviate the mental burden placed on parents.





Cafeteria

Asunaro House Today

Hideo Yasui

House Manager

Asunaro House is now in its 14th year and I am the third House Manager. We have totally 10 private rooms, and in some months, more than 80% of those private rooms are occupied and when we are in busyness, we tend to get things overlooked; Nevertheless, we always try to get feedback and requests from users through questionnaires and daily conversations with users to continually make improvements to ensure their stay as comfortable as possible. For example, we came up with the idea of using magnets with each room number to place on each washing machine and drier so that users can find immediately who is using which machine. Although it may be difficult for us to respond to all requests, we will continue to do everything we can for users.



Providing Support for LRI Activities

The Long-range Research Initiative (LRI) is a joint initiative of the chemical industries of Japan, the United States and Europe. Part of the voluntary activities of International Council of Chemical Associations (ICCA), LRI supports long-term research into the effects of chemicals on human health and the environment, with focus on endocrine disrupting effects, neurotoxicity, chemical carcinogenesis, immunotoxicity and elaborating risk factors.

Nippon Kayaku has actively backed LRI from its start in 1999 by offering financial support for LRI activities.

- [LRI](#) 

Involvement in Summer Vacation Children's Chemistry Experiment Show 2012

The Nippon Kayaku Group took part in the Summer Vacation Children's Chemistry Experiment Show 2012* for elementary and junior high school students held at the Japan Science Museum (Kudanshita, Tokyo) on August 4 and 5, 2012. Experiments performed by the Nippon Kayaku Group during the show focused on the theme, "Play with light – Create your own rainbow kaleidoscope."

This year's experiments taught the children about light and how light is used to display images on the televisions and computers, and one of the experiments used polarizing film, which is one of the most important components of a television. Some 250 children took part in the event over the two days it was held, listening intently to the presentations by Nippon Kayaku Group employees and actively taking part in experiments.

This engagement forms part of our commitment to actively teach children about the interesting nature of chemistry and in the process develop the future leaders of the industry.

- * Summer Vacation Children's Chemistry Experiment Show: An event organized by the Dream Chemistry 21 Committee of the Japan Chemical Industry Association to educate children and the general public on the wonders of and contributions chemistry has made to society.



An experiment during the event

Donations of Respirators to the Jablunka Village Fire Department


INDET SAFETY SYSTEMS a.s.

INDET SAFETY SYSTEMS a.s. (ISS) donated four sets of respirators to the Jablunka Village fire department on March 26, 2013. ISS's No.2 and No. 3 plants are located in Jablunka Village where it manufactures automotive safety components.

The respirators used by the local fire department were very old and performed poorly, which restricted fire fighting activities. Respirators are used during emergency evacuations, fire fighting, rescue activities, and when in oxygen-deprived environments, such as inside tanks or sewers. These respirator masks can be fixed to fire fighters' helmets and supply air from a tank directly to the mask.

The fire department welcomed and was very thankful for the donation of the latest equipment because of the difficult economic conditions locally. Going forward, ISS will continue to find ways to make contributions to the local community as part of its effort to fulfill its broader responsibilities to society.



- [INDET SAFETY SYSTEMS a.s. \(ISS\)](#) 

Community Engagement

The Nippon Kayaku Group strives to foster understanding in its business activities among local residents through plant festivals, opening its sites to the public, cleanup activities and round-table talks.

Going forward, we will organize various platforms to proactively engage with the local residents as part of our goal of becoming a company that is closely rooted in the local community.

Nippon Kayaku's Agreements with Local Authorities

Business Site	Agreement	Other Parties
Fukuyama Plant	Agreement on environmental pollution control	Hiroshima Prefecture and Fukuyama City
Asa Plant	Agreement on water pollution control	Yamaguchi Prefectural Fisheries Cooperative
	Agreement on environmental protection	Sanyo-Onoda City
Tokyo Plant	Green agreement	Adachi City
	Agreement on establishing Colored Effluent Issue Council	Tokyo Metropolitan Bureau of Sewerage No. 2 Control Office
	Agreement on mutual disaster relief support in case of an earthquake	Shinden Neighborhood Association and Shinden 1-chome Residents' Association in Adachi City
	Agreement to provide the general public with access to a small water pump storage facility	Senju Fire Department
Tokyo Business Office	Provision of fire fighting facilities 1. Provision of water for firefighting 2. Deployment of a boat for rescues 3. Fire fighting group cooperation site 4. Use of rooftop as a lookout	Tokyo Fire Department Akabane Fire Station
Takasaki Plant	Agreement on assistance from voluntary fire fighting brigade	Regional fire departments including Takasaki City
Himeji Plant	Memorandum on effluent control	Himeji City
Kashima Plant	Agreement on environmental pollution control	Ibaraki Prefecture, Kashima City, Kamisu City

Community Engagement through Plant Festivals and Other Events

Business Site	Type	Details	When
Fukuyama Plant (Nippon Kayaku Fukuyama)	Festival	Shining Fukuyama Festival	Every other April
		Sponsor of Fukuyama Rose Festival and Fukuyama Summer Festival	May and August
	Event	Tennis Tournament	November

	Facilities opened	Soccer and baseball fields and tennis courts, etc.	Throughout the year
	Cleanup	Cleanup activities around the plant	Spring and autumn
Asa Plant	Festival	Wasshoi! Kayaku Festival (held jointly with Kowa Sangyo, Kayaku Akzo and Kayaku Japan)	November
	Event	Sponsor of municipal youth volleyball tournament	May
	Roundtable talk	Community roundtable talk (held jointly with Kayaku Akzo for residents' associations around the Asa Plant)	June
	Facilities opened	Gymnasium	As needed
	Cleanup	Roadside trash pickup along the Asakawa River (held jointly with the Asa Branch of the labor union)	October
Tokyo Plant (Nippon Kayaku Tokyo)	Festival	Satsuki Festival	May
		Rice-cake-making event	December
	Public lecture	Public lecture for elementary school students (dyes and dye coloring technologies)	As needed
	Plant tour	Plant tour	As needed
	Facilities opened	Parking lot opened for little league games during the season	April to October
	Cleanup	Cleanup activities at the factory and surrounding area	Every Wednesday
Tokyo Business Office	Festival	Spring festival	May
		Participation in the Kumano Shrine Festival	Every other September
		Rice-cake-making event	December
	Public lecture	Public lecture for elementary school students during summer vacation	August
	Roundtable talk	Briefing for leaders of the Shimo 3-chome and Shimo 4-chome residents' associations	May
	Facilities opened	Site provided for Akabane Fire Station training exercises	As needed
	Traffic safety	Traffic safety guidance provided on National Route 122 in conjunction with a nationwide traffic safety campaign (Tokyo Business District Traffic Safety Promotion Committee)	Spring and autumn
	Donation	Special donation menu added to normal lunch menu (part of proceeds donated)	Throughout the year
		Aid for the earthquake and tsunami reconstruction effort	May
		Providing vaccinations to children around the world through PET bottles	Throughout the year
	Cleanup	Cleanup activities held around the Tokyo Business Office	Daily
Cleanup Campaign (Akabane Station – Arakawa River)		October	
Takasaki Plant	Festival	Fureai Festival	2nd Sunday of May
		Participation in the Iwahana Kosodate Kanzeon Taisai Festival	August

		Summer Bon Dance Festival (jointly sponsored with Iwahanamachi)	August
	Plant tour	Plant tours and hands-on learning activities for local elementary school, junior high school, and high school students	As needed
	Roundtable talk	Plant tour and roundtable talk for local leaders	February
	Facilities opened	Parking lot rented out (for events at nearby park)	April
		Potato digging with local kindergarten students	October
		Facilities opened (baseball field, gymnasium and tennis court)	As needed
Himeji Plant	Festival	Summer fireworks display	August
	Facilities opened	Parking lot opened (for sports festivals held by local elementary school and junior high school)	September
	Cleanup	Cleanup activities around the plant	April and October
Kashima Plant	Roundtable talk	Roundtable talk with administrative representatives of Hasaki District	June
	Cleanup	Cleanup activities held with the Agrochemicals Laboratories	Every month
		Participation in cleanup activities inside the Hasaki District Industrial Park	February and September

Community Engagement through a Summer Fireworks Display

Himeji Plant

The Himeji Plant hosts a summer fireworks display on the last Sunday of every August as an opportunity to engage with the local community. In 2012, the event was held on Sunday, August 26, which marked the 19th time. Every year the number of visitors has increased, reaching more than 1,500 for the past several years, but this year there were more than 1,700 in attendance. The gates to the event opened at 6:00pm and there was a long line of people waiting to get in from before 5:30pm. This display has become popular through word of mouth and some of those in attendance traveled a long distance just to be there.

The opening act for this year's event was Sunday Sounds Jazz Orchestra, which got the venue excited from the very start with their live performance. This year's stalls included the always popular yakisoba, ice cream and juice vendors as well as a shooting gallery and fried potato vendor, which marked a bit of a change from prior years. The stall area was overflowing with people as the lines for each vendor were consistently long. The vendors were also really inspired by the sight of everyone and they did their best to meet demand. To cap things off a raffle was held, which had a lot of children screaming with joy.

The main event took place after speeches from the general manager of the plant, labor union representative and chair of the executive committee. The fireworks are launched in a close proximity to the viewers, making for an exhilarating display like few others in Japan. The crowd roared in approval from the sight of the fireworks, special effects fireworks like Hello Kitty, and a unique waterfall effect. The event is always a great way for local community members and employees alike to make memories as another summer season comes to an end. Next year employees will continue their efforts to make this event as fun-filled and exciting as possible for the local community.



Initiatives for Employees

A company is nothing without its people. The Nippon Kayaku Group is committed to creating safe and secure workplaces where its employees can thrive and feel a greater sense of motivation by helping benefit society through their jobs. Our goal is to provide a wide range of systems and programs for our employees that fully take into account the changes taking place today.

Training programs

Various training programs are provided to employees according to their jobs positions. These comprehensive training programs are conducted so as to develop the skilled workforce that will lead Nippon Kayaku in the next generation.

Mandatory programs

In order to systematically develop the skills of the employees, training is imparted to the employees start immediately upon their joining the company. This is followed by mandatory programs after durations of one year and three years. Mandatory programs are also conducted as key employees are promoted to certain jobs and positions because of their improved work performance.

Voluntary programs

A wide array of voluntary training programs is also available. These voluntary programs are tailored to specific employee characteristics and jobs. They facilitate self-improvement and boost the job-related problem-solving abilities of the employees.

Selective program

A program providing special leadership and management training is also available for promising candidates who are recommended by the superiors.



Training programs

Explosives Safety Maintenance Activities

The Safety Systems Group manufactures a host of automotive safety equipment that includes air bag inflators, micro gas generators and squibs that ignite this equipment. All of these products contain explosives that need to be handled in a cautious and careful manner.

The Safety Systems Group began offering the Explosives Safety Management Techniques lecture in 2009 for its employees. The key to ensuring the safety of explosives is taking measures to control sources of flames (explosions), to monitor for ignition (boosters) and minimize potential damages. Explosives safety management techniques need to be known by all Safety Systems Group employees and to that end regular lectures are held to raise awareness and increase knowledge of everyone.

The next step for employees of the Safety Systems Group that have demonstrated general knowledge of explosives safety management techniques is safety training on the handling of explosives provided by rank (manager, deputy manager, assistant manager, floor managers and employees) provided on the manufacturing floor where safety management is especially important. This is because we believe it is important for employees from each rank to use their own words to help educate and develop the next rank of employees. Improved safety awareness of employees in the Safety Systems Group forms an integral part of explosives safety management techniques.



Expanding Work-Life Balance Programs

We are making efforts to reduce overtime work, expand in-house programs, and encourage use of these programs in order to enhance our employees' work-life balance. As part of our Next Generation Childcare Support Program, we have introduced staggered work hour schedules and a program to support employees receiving fertility treatments. Through these programs, an employee caring for a child can shift their work start time, while an employee receiving fertility treatments can take a leave of absence or special paid holidays. A large percentage of our eligible employees take childcare leave, but going forward we intend to encourage more employees to take full advantage of our work-life balance programs.

Better Managing Employee Work Hours

The Nippon Kayaku Group strives to properly ascertain employee work hours and conditions, to take action where needed, and to foster an environment where employees and management work together, in order to follow compliance best practices and safeguard employees' mental health. We are also working to reduce employees' overtime hours from the standpoint of improving work-life balance. In fiscal 2011, we were able to reduce overtime hours by about four hours per employee compared to fiscal 2009. Going forward, we are committed to further enhancing the workplace environment for our employees by creating added value, improving operational productivity and changing the way employees work.

Special Paid Leave Program

We are actively supporting the work-life balance needs of our employees. Part of this support can be found in the Special Paid Leave Program where under certain circumstances employees can take paid leave that has been carried over from previous years. Typically this carried-over paid leave expires after two years.

Taking this special paid leave does not require any cumbersome application process; rather, employees simply have to provide either a medical certificate from their physician or some other document that verifies they require leave. In addition, even after taking part in the program once, employees can continue to accumulate paid leave to use in the future as part of this program.

● Special Paid Leave Program

Applicable Uses	No. of Days Allowed
To receive treatment of an injury or illness that requires at least 4 consecutive days of care To receive outpatient services for rehabilitation or aftercare (within the stated period on the physician-issued medical certificate)	Up to 60 days
To provide nursing care to an immediate family member, aunt or uncle	45 days
To participate in a training program or volunteer activities	30 days
Leave in conjunction with the use of active points from the Nippon Kayaku Cafeteria Plan	5 days
To take leave in order to receive a vaccination or medical exam for a child of preschool age	5 days
To receive fertility treatments	60 days
To allocate additional days to childcare leave	10 days
To allocate additional days to leave for providing care to a sick child	10 days

The Nippon Kayaku Senior Partner System

Starting in April 2006, we launched the Nippon Kayaku Senior Partner System to rehire employees that reached the mandatory retirement age to comply with changes made to the Act for Stabilization of Employment of Older Persons. This system is intended for retired employees that are both mentally and physically healthy, have a desire to work, and can assume the roles and responsibilities of their job tasks. The goal is rehire retired employees with the ability to share their career experience and expertise for the betterment of the company. In fiscal 2011, nearly all of the retired employees requesting rehiring were able to rejoin the company up to the age of 65 thanks to this system.

Mental Health Initiatives

Mental healthcare at Nippon Kayaku is important for the early detection and prevention of mental health issues because it empowers all employees with the correct awareness and knowledge. Mental healthcare initiatives are implemented continuously targeting all employees with a focus first and foremost on efforts that prevent mental health problems from arising.

In fiscal 2005, we organized our first training session for all employees led by a lecturer from an outside EAP*1. From fiscal 2006, we established one cour for every three-year period and began holding several dozen training sessions across our sites in Japan to ensure all employees could continuously receive this training at least once per cour. By fiscal 2011 two cours worth of training sessions had been completed, and the third cour was started from fiscal 2012. Training for managers focuses on the signs and specific actions that need to be taken for early detection, while training for general employees centers on improving the ability to cope with stress. Employees that have participated in the training have commented that they were able to obtain the correct knowledge and recognize that awareness is the key to prevention. Training sessions have also motivated employees to seek help from a counselor whenever necessary, which has increased the number of times employees have talked with a counselor. We believe these efforts are steadily helping to prevent mental health issues before they arise.

We have also created the Return to Work Program for employees that were forced to take a leave of absence due to a mental health issue. In this manner, workplace supervisors (the



Mental health training session



company), industrial physicians, and EAP form a trinity of measures for ensuring employees can return to work smoothly with a focus on preventing relapses.

*1 EAP: Employee Assistance Program

General Business Operator Action Program under the Act for Measures to Support the Development of the Next Generation

On March 30, 2012, we submitted our third action plan, prepared on March 22, 2012 for the period from April 1, 2012 to March 31, 2015, to the Tokyo Labor Bureau for approval.



Kurumin logo

30th Nippon Kayaku Research & Development Conference

The 30th Nippon Kayaku Research & Development Conference was held in July 2012. This is a major event for reporting Nippon Kayaku's R&D achievements and it has become a "Ba" (organic ground for knowledge creation) for technology fusion through presentations of cutting edge technologies. The Nippon Kayaku Research & Development Conference comprised three parts, a presentation session, a poster session and a commendation ceremony for patent applications. At the presentation session, researchers of each laboratory made presentations about R&D topics important to corporate strategy. Following the presentations there was active discussions on business strategy and technological development. The poster session was started in 2007 to develop mutual understanding among employees working in the Tokyo area and is co-sponsored by the labor union. Today, the event focuses on research and development, with all research laboratories now taking part. This year researchers were also able to network with one another in front of the posters, which featured easy-to-understand explanations and actual displays. Patent application commendations are given out to workplaces with the most applications, patent applications that quickly contributed to the company's business performance, and patent applications for excellent technologies. Commendations were given out to more than 40 workplaces and patents.



The communication that researchers take across department lines leads to a fusion of various core technologies and encourages new product development unique to Nippon Kayaku. We hope that the Nippon Kayaku Research & Development Conference will continue to serve as a "Ba."

Commendation Program for New Inventions

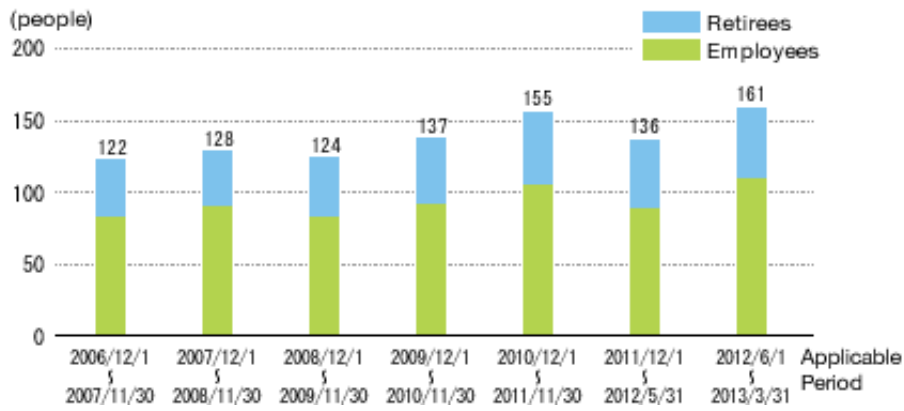
Nippon Kayaku has established several programs to commend and award employees for their inventions at work. These programs not only commend and award employees, but enable us to encourage our employees to come up with new and effective products that will benefit society as a whole. Our annual commendations are outlined below.

1. Performance Award Program

Our performance award program provides remuneration to employee patents that have contributed to sales. This program was initiated under the company's rule on the handling of employee inventions first prepared in 1963. This rule was created based on the provision of Japan's Patent Act and hence has been changed over the years with each modification to this law.

The figure below shows the number of employees that received a performance award over the past five years. Retirees are also eligible for a performance award, with between about 40 and 50 receiving recognition in any given year.

● Number of Employees Receiving a Performance Award for an Invention



2. Early Performance Contributions

Even for patents pending, if an invention has already made contributions to the performance of the Nippon Kayaku Group, the employee can receive remuneration known as an early performance contribution. This particular program was initiated in 2005 to properly recognize product inventions with a comparatively shorter lifecycle. This program, which is also intended to complement the performance award program from above, represents a truly progressive system in terms of providing remuneration for sales from a produce with a patent pending. 67 employees received the remuneration for fiscal 2010, 72 for fiscal 2011 and 58 for fiscal 2012.

3. In-house Commendation for Excellent Technologies

This program seeks to commend patent applications for products for which technical innovations are being made at a fast pace over a one-year period. One invention received this commendation in fiscal 2011 and another in fiscal 2012. Employees recognized with an award are asked to give a lecture at an award ceremony. Other annual commendations include best workplace and highest performance expectation, among others.

Environment, Health and Safety, and Quality Assurance Management System

We prioritize health, safety and environmental matters in our management of the company as well as strive to reduce our impact on the environment through the reduction of environmental emissions across the entire Nippon Kayaku Group.

Declaration on Environment, Health and Safety, and Quality

The Nippon Kayaku Group, under the spirit of its CSR philosophy and Responsible Care,*1 has formulated the Declaration on Health, Safety, Environmental Protection and Quality, in order to maintain and enhance its environmental protection, health and safety and quality assurance practices. We are also implementing this declaration using organized activities.

The Declaration on Health, Safety, Environmental Protection and Quality

Enacted November 7, 1995
Amended September 1, 2010

We will exert efforts as part of our unwavering commitment to contribute to humanity by creating products and technologies that protect and enhance people's health, life and comfort.

Our activities will not threaten the health and safety of people or property, nor be harmful to the environment.

Under our corporate motto of "KAYAKU spirit", which calls for providing society with the best possible products that meet customers' needs, by means of endless innovation and real cooperation, based on our high-esteemed ethics, we will conduct ourselves according to the following fundamental policies.

Fundamental Policies

1. We will be cognizant of the entire product lifecycle—from research and development, through production and sales to disposal—by evaluating effects on health, safety and the environment.
2. We will bear responsibility for the quality of our products, and will strive to develop and improve products that satisfy our customers.
3. We will increase our awareness toward the preservation of health, safety, environmental protection and quality of our products, and will endeavor to achieve the goals of no pollution, no accidents and no unsafe products.
4. We will provide necessary information about how to use and handle our products safely.
5. We will continue to promote the conservation of physical and energy resources as well as global warming countermeasures in order to contribute to the protection of the environment.
6. We will actively work to develop environmental protection technologies, as well as applications for such technologies.
7. We will make efforts to deepen communication about our operations and products among communities and government authorities to assure that proper understanding is achieved.



President & Representative Director
Nippon Kayaku Co.,Ltd.

*1 Responsible Care: A voluntary initiative under which companies that manufacture or handle chemical substances actively work on ensuring an operation that is aware of the environment, safety and health throughout its entire value-chain; from product development through production, sales, consumption, and disposal of chemical substances. The initiative began in Canada in 1985, and has now spread to encompass activities at companies in over 50 countries around the world.

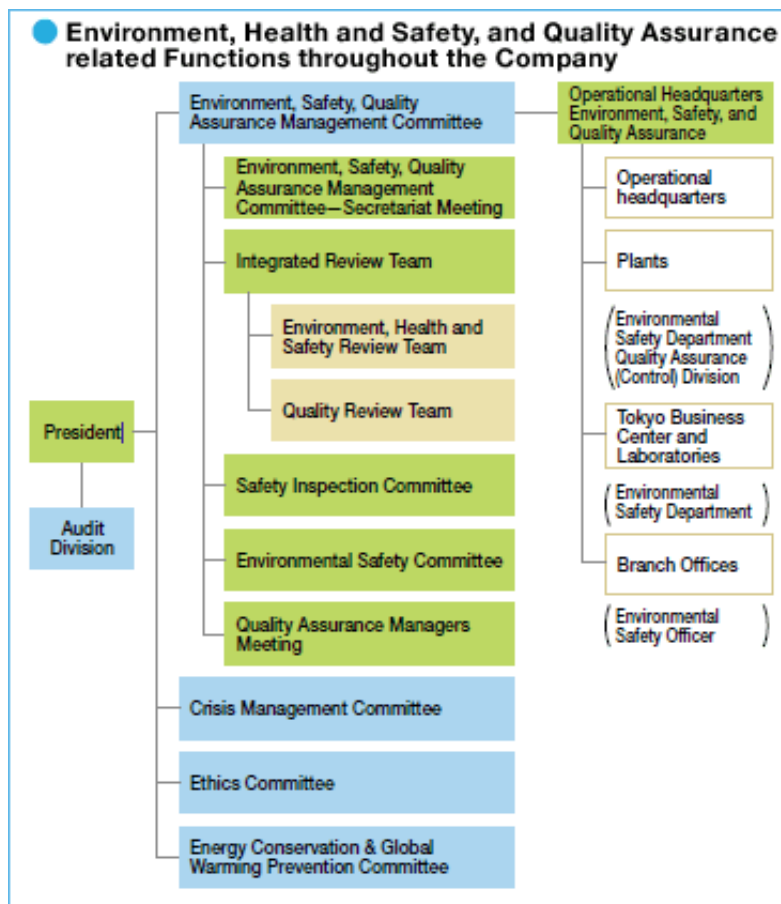
Company-wide System for Managing Environment, Health and Safety, and Quality Assurance

The Nippon Kayaku Group takes part in organized activities at all of its sites including four overseas plants

to ensure employees are aware of the environment, health and safety, and quality assurance as well as to maintain and improve quality assurance. These activities revolve around the Environment, Health and Safety, and Quality Assurance Management Committee, which is led by the President of Nippon Kayaku.



- [Structure of Environment, Health and Safety, and Quality Assurance related Functions throughout the Company](#) PDF



Management Structure at Our Business Sites

Each of our business sites has a committee on health and safety or the environment, health and safety headed by the head of that particular site. In addition, as a subordinate body, each business site also has a committee for promoting health and safety that consists of members representing each of the site's workplaces. Matters discussed by the Health and Safety Committee or the Environment, Health and Safety Committee are shared with all employees at roundtable meetings organized by the Health and Safety Promotion Committee. Conversely, matters discussed at roundtable meetings and by the Health and Safety Promotion Committee are communicated back to the Health and Safety Committee or the Environment, Health and Safety Committee as employee feedback.

Each business site's quality assurance (management) department leads Quality (Assurance) Committee meetings on a regular basis to check raw materials handled at each business site, examine customer complaints or quality issues concerning products made at that particular site, and deliberate on how to eliminate such complaints and quality issues. The committee also debates quality issues pertaining to new products, modified products and existing products to ensure that quality is constantly improved.



Certification of Quality Assurance System and Environmental Management System as well as GMP Authorization Status

The Nippon Kayaku Group has moved forward with acquiring ISO9001 and ISO14001 certification in order to provide and develop eco-friendly products and services of superior quality.

We started acquiring ISO14001 environmental management system certification in 1998. Since then all six of our plants have obtained certification, while other Group companies, including those outside of Japan, are in the process of obtaining this certification.

We began acquiring ISO9001 quality assurance system certification starting with our plants in 1995 and later expanded this scope to include business divisions, R&D departments, and Group companies outside of Japan.

● Quality Assurance Management / Environment Management System Certified Workplaces

Workplace	● ISO9001	ISO14001
	■ ISO / TS16949*2	
Fukuyama Plant	● June 1995	April 1999
Asa Plant	● Jan. 1995	Sept. 1998
Tokyo Plant	● June 1995	Dec. 1998
Takasaki Plant	● July 2003	Jan. 2000
Himeji Plant	● Sept. 2007	Jan. 2001
Kashima Plant	● Dec. 1995	March 1999
Functional Chemicals Group	● Jan. 2001	—
Pharmaceuticals Group	● Sept. 2003	—
Safety Systems Group	● Sept. 2007	—
Agrochemicals Division	● Sept. 2003	—
POLATECHNO CO., LTD.	● Jan. 1999	Aug. 2002
NIPPON KAYAKU FOOD TECHNO CO., LTD.	● Nov. 2003	—
KAYAKU CHEMICAL (WUXI) CO., LTD.	● March 2005	Aug. 2006
MicroChem Corp.	● April 2002	—
Wuxi Advanced Kayaku Chemical Co., Ltd.	● April 2007	July 2007
Zhaoyuan Advanced Chemical Co., Ltd.	● March 2005	—
INDET SAFETY SYSTEMS a.s.	■ March 2002	Dec. 2002
Kayaku Safety Systems (Huzhou) Co., Ltd.	● June 2010	—
Kayaku Safety Systems de Mexico, S.A. de C.V.	● Sept. 2010	—
MOXTEK, Inc.	● July, 2012	—

GMP*3 Approval Status	Workplace	Main governments
		Takasaki Plant

*2 ISO / TS16949: A world standard that was developed jointly by members of the IATF (International Automotive Task Force) to provide high quality products to automobile users around the world.

*3 GMP: A Japanese standard issued by the Ministry of Health and Welfare as a ministerial ordinance in 1980. Stipulates production control and compliance standards to ensure supply of high quality pharmaceutical and medical products.

Overview of Environment, Health and Safety and Quality Organizations

Environment, Safety, Quality Assurance Management Committee

The Environment, Safety, Quality Assurance Management Committee is a company-wide committee led by the President of Nippon Kayaku and comprised of executive officers responsible for business divisions, general managers of business divisions, and the General Manager of the Technical Operations Group. The committee formulates annual policy for the environment, health and safety and quality assurance, assesses the results and recommends improvements.

Environment, Safety, Quality Assurance Management Committee – Secretariat Meeting

The secretariat is comprised of general managers from the technical departments of each business division and from related departments of the head office. The secretariat deliberates fiscal year policy proposals and implementation status and reports back to the Environment, Safety, Quality Assurance Management Committee. It also reviews material matters related to the environment, health and safety, and quality assurance.

Central Integrated Reviews

An integrated review is a combination of the conventional environment and health and safety review and the quality review, which had been implemented independently targeting business sites and group companies. The Integrated Review Team is led by the General Manager of the Technical Operations Group, and is comprised of the Environment, Health and Safety Review Team, led by the General Manager of the Environmental Protection & Safety Division and the Quality Review Team, which is headed by General Manager of the Quality Assurance Division. The same review as before is being performed on the head office, business sites and group companies that received environment and health and safety reviews or quality reviews. The head office, divisions, business sites and group companies for which issues were identified during the review process are required to create and execute an improvement implementation plan. The results of central integrated reviews are reported to the Environment, Safety, Quality Assurance Management Committee.

Safety Screenings

Safety screenings are conducted when developing and manufacturing new products, designing new facilities and equipment, replacing facilities, changing raw materials, and outsourcing production. Risk and other assessments are also performed to prevent problems before they occur.

Environmental Safety Committee

The Environmental Safety Committee comprises environmental safety managers or representatives from the Environmental Safety Department of each business site and group company selected by the General Manager of the Environmental Protection & Safety Division. The committee debates material matters and problems associated with the implementation of environmental protection and safety activities.

Quality Assurance Managers Meeting

The Quality Assurance Managers Meeting comprises quality assurance managers from the head office, business sites and group companies selected by the General Manager of the Quality Assurance Division. The meeting deliberates the implementation status of quality assurance and quality control activities.

Health and Safety, and Quality (Assurance) Initiatives

The Nippon Kayaku Group engages in a wide range of health, safety, and quality assurance activities.

We conduct a safety screening whenever we institute new work flows or changing facilities and existing work flows, in order to prevent accidents, injuries or environmental accidents from happening. As part of our efforts, we also conduct risk assessments to ascertain inherent risk factors.

We have also created a database of troubles we have experienced in terms of our environmental, safety, and quality assurance initiatives that is used across all of our business sites. Central integrated reviews (environment, health and safety/quality reviews) are conducted on our business sites and certain Group companies.

Health and Safety Initiatives and Results

The Nippon Kayaku Group takes a systematic approach to eliminating accidents and injuries in the business sites. As a result of our efforts, in fiscal 2012 there were a total of only two no-lost worktime accidents and zero lost worktime accidents.

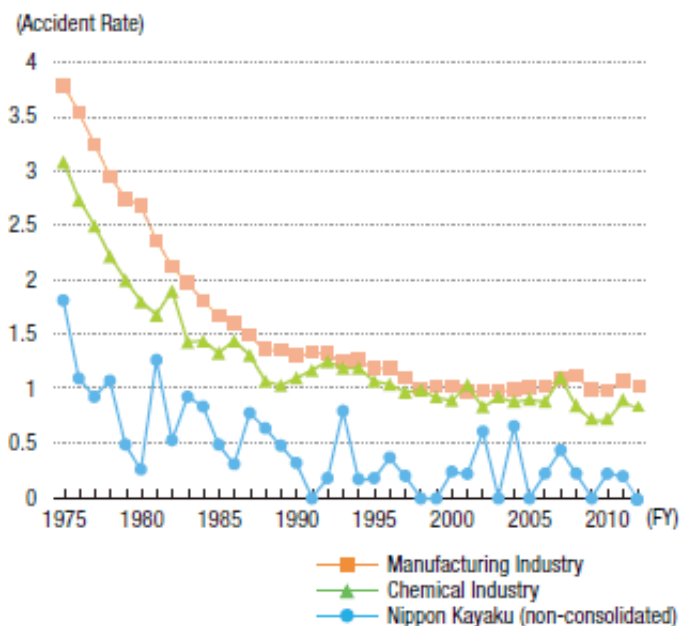
In terms of traffic safety, there were 40 traffic accidents involving company-owned vehicles or employees during the commute, representing an accident rate of 11.9% and a drop of 13 compared to last fiscal year when there were 53 accidents for an accident rate of 13.3%. However, the number of traffic accidents continues to remain above the level seen in fiscal 2010. As a result, we will continue with safe driving reviews as well as assure safer driving habits by combining these reviews with a driving aptitude test approved by the National Police Agency.

We are also working to share safety awareness across different workplaces by distributing work flow checklists to help eliminate shortcuts or omissions, having employees issue a safety declaration to prevent shortcuts and omissions, as well as displaying this safety declaration clearly in each workplace.

Fiscal 2011 Safety Targets and Performance

Items	Target	Actual
Major Injury / Accidents	0	0
Serious environmental accidents	0	0
Lost worktime accidents	0	0
Accidents not accompanied by lost worktime	Rate of lost worktime accidents*1 of under 1	0.42
	Less than 5 cases	2 cases
Work and commute-related automobile collisions	Less than 4%	11.9 %
	Less than 13 cases	40 cases
Non-injury workplace accidents	0	0

Rate of Lost Worktime Accidents



*1 Rate of lost worktime accidents: The number of lost worktime accidents that occur in every 1 million work hours.

Initiatives to Enhance Quality Assurance Functions

In order to promote training on and the percolation of quality management technologies, we send employees to participate in external lectures, hold group training sessions on statistical calculation methods, and conduct onsite presentations at our plants on the seven tools of quality control and other themes. Additionally, we publish a compilation of quality improvement case studies and seek to encourage greater use of statistics to improve quality, such as the experimental design method.

We also hold practical training programs that promote actual operational improvements or reform based on the challenges faced by individual business sites. In fiscal 2011, this training program was held at the Fukuyama Plant under the theme "Fukuyama Plant – Good Manufacturing Practices." A similar training program as from fiscal 2011 was held in fiscal 2012 at the Kashima Plant on the theme of "Quality Assurance Reinforcement Project."

Occupational Health and Safety as well as Quality Assurance Initiatives

1. Safety and Quality Assurance Activities at Work Sites

We are undertaking a wide range of safety and quality assurance activities. We are also compiling databases on environmental, safety, and quality issues to be used across our business sites.

Safety Activities	Quality Assurance Activities
◦ Risk Assessment	◦ Quality Risk Assessment
◦ 5S Activity*2	◦ Quality Patrol
◦ Hiyari Hatto Activity	◦ Trend Management (Visualization)
◦ KYT Activity	◦ Campaign to Prevent the Reoccurrence of Quality Problem
◦ TPM Activity*3	◦ Quality Technology Training

*2 5S Activity: An acronym of five Japanese words phonetically starting with the letter "S".

*3 Total Productive Maintenance (TPM): Activities that maintain equipment and facilities in good working order to ensure safety and maintain productivity.

2. Conducting Safety Assessments (Risk assessment, understanding potential risk factors)

Each of our business sites performs safety reviews for new processes and facilities and whenever changes are made to existing processes and facilities and implements risk assessments in order to prevent business sites accidents and injuries as well as environmental accidents. Risk factors in chemical reactions are analyzed primarily based on HAZOP.*4

*4 HAZOP: Hazard and Operability Study. A safety evaluation methodology used at chemical plants. Potential hazards associated with chemical reactions can be comprehensively extracted for evaluation.

3. Elimination of Shortcuts and Omissions

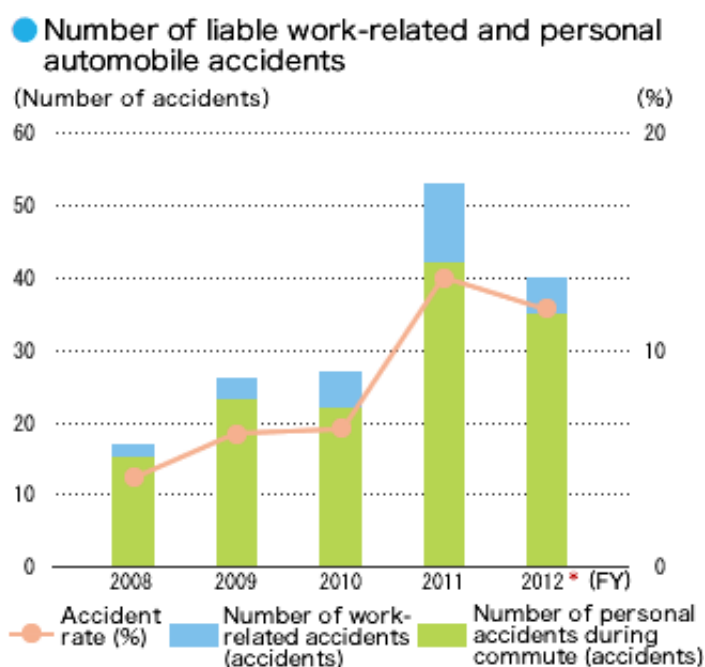
Accidents that have occurred within the Nippon Kayaku Group in recent years have tended to result from shortcuts or omissions. As a result, the Nippon Kayaku Group is working to share safety awareness across different workplaces by distributing work flow checklists to help eliminate shortcuts or omissions, having employees issue a safety declaration to prevent shortcuts and omissions, as well as displaying this safety declaration clearly in each workplace.

4. Traffic Safety Initiatives

Many Nippon Kayaku Group employees drive a car as part of their work duties or to commute to work. We perform safe driving reviews using a camera-equipped drive recorder*5 as well as assure safer driving habits by combining these reviews with a driving aptitude test approved by the National Police Agency*6. Our ratio of liable accidents is half of the average for the Japan Pharmaceutical Manufacturers Association. In fiscal 2012, it was 11.9%, which was slightly lower than fiscal 2011, but still relatively elevated compared to data from before fiscal 2010. We will continue to conduct driving safety reviews as part of our commitment to reduce the number of traffic accidents.

*5 Camera-equipped drive recorder: A recorder that can analyze bad driving habits, such as sudden acceleration, sudden braking, and sudden turns using sensors for front/back and right/left acceleration, gyrocompass and GPS system.

*6 Camera-equipped drive recorder: A recorder that can analyze bad driving habits, such as sudden acceleration, sudden braking, and sudden turns using sensors for front/back and right/left acceleration, gyrocompass and GPS system.



* Fiscal 2012: Number of accidents from June 1, 2012 to March 31, 2013

5. Promoting Health Management

Our employees undergo regular health checkups as well as special physical examinations because chemical substances are regularly handled on the job. Employees meet with an industrial physician following their regular health checkup to receive guidance and instructions on their health management and awareness. We also manage a database of information on the hazardous properties of chemical substances and utilize this information to prevent work related illnesses.

6. Deployment of AEDs

Driving aptitude test approved by the National Police Agency: A driving aptitude test that measures driving ability based on responses to seven questions covering 11 items including situational awareness, collision prevention ability, and mental stability, among others.

Responding to Accidents and Disasters

1. Fire response

Each business location is equipped with a fire truck, fire hydrant, and fire extinguisher for chemical substances in preparation for potential fire hazards. In addition to holding on-site training, employees also participate in local fire fighting competitions at which they have achieved strong results.

2. Natural disaster response

As a precaution for earthquakes and other natural disasters at each workplace, we have compiled and distribute the Employee's Handbook of Disaster (Earthquake) Prevention to each and every employee. This handbook contains instructions on emergency response when an earthquake occurs, how to make contact and confirm one's safety, and alternative methods to reach home when public transportation is unavailable.

Employee safety during a disaster is monitored by a safety reporting and communication system that uses email. As an earthquake strikes, the disaster response headquarters will send out an instruction by email to all employees. Employees can reply to the email by a simple touch of a button, which allows data to be collected. This system will be used to confirm employee safety during an earthquake of a seismic intensity of 6 or higher in Japan.

Management of Chemical Substances

With countries around the world moving to tighten the management of chemical substances, we have seen a growing importance in complying with chemical related laws both in Japan and abroad and being able to aptly respond to customer requirements for chemical substances contained in our products.

Given these trends, the Functional Chemicals Group established the Chemical Management Office in June 2012 to build up its in-house structure for the management of chemical substances.

The Chemical Management Office collects the latest information on laws and regulations around the world, instructs related departments with their response and provides training on general chemical substance related laws. Through these efforts, the Chemical Management Office is striving to maintain and improve compliance as it relates to chemical substances.

A representative of the Chemical Management Office has been assigned to the Functional Chemicals R&D Laboratories to closely monitor product safety and compliance with legal requirements from the development stage.

In fiscal 2013, we will make doubly sure of our compliance with Europe's REACH*7 and CLP*8 regulations as well as with legal revisions being made in China and South Korea.

*7 Registration, Evaluation, Authorization and Restriction of Chemicals (REACH): An EU regulation for registering, evaluating, approving and restricting chemical substances.

*8 Regulation on Classification, Labeling and Packaging of substances and mixtures (CLP): An EU regulation on the classification, labeling and packaging of chemical substances based on GHS.

GHS Compliance

With each country implementing GHS*9, companies are now required to provide SDS*10 compliant with local laws and regulations that are written in the local language. The Functional Chemicals Group has instituted an SDS compilation system (MSDgen) that contains a large database of bilingual documents as well as data on the laws of various countries and data on the properties and toxicity of chemicals. This system enables it to create SDS that are fully compliant with local laws and regulations. The 2013 system update complies with the US version of GHS, which complements its prior compliance with GHS in Japan, Europe and Asia.

The Functional Chemicals Group manages and uses a database of SDS and SDS history to ensure that it always provides the most up to date information on GHS compliance.

*9 GHS: Globally Harmonized System of Classification and Labeling of Chemicals

*10 SDS: Safety Data Sheet.



Sample GHS-compliant label

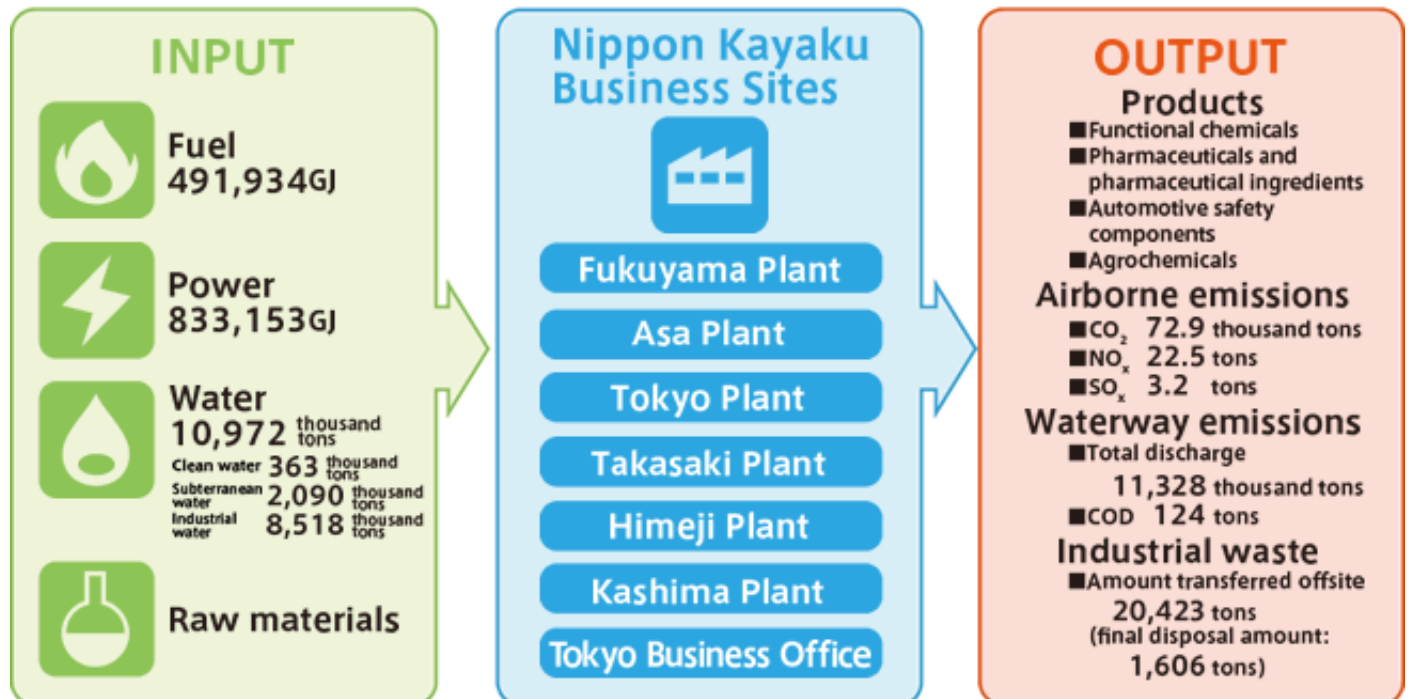
Reducing Our Environmental Impact

Energy and Material Balance

We are currently implementing initiatives that will help us achieve our mid-term environmental targets for fiscal 2020.

Fiscal 2012 is the period from April 1, 2012 to March 31, 2013.

Overview of business activities and environmental impacts



Results of the Mid-term Corporate Plan for the Environment

Nippon Kayaku has established a mid-term corporate plan for the environment for the period running from fiscal 2011 to fiscal 2020 that consists of six items covering three areas. Fiscal 2012 was the second year of this plan.

Mid-term Corporate Master Plan for the Environment (FY 2011 - FY 2020)

		Target value	FY 2012	
Reducing Our Chemical Substance Footprint	VOC*1 Emissions	Under 45 tons	81.4 tons	Reduced by 11.1% compared to fiscal 2011.
	COD*2 Emissions	Under 180 tons	124 tons	Unchanged from fiscal 2011.
Prevention of Global Warming	Energy Derived CO ₂ Emission*3 (Production Divisions+ Operation Divisions)	More than 15% reduction	72.9 tons	CO ₂ emissions were reduced by 3.8% compared to fiscal 2011. This represents a 24.2% reduction compared to fiscal 1990.
Reduction of Waste	Total Waste Produced	Under 30,000 tons	20,423 tons	Reduced by 8.4% compared to fiscal 2011.
	Recycling Rate	More than 70%	61.8%	Reduced by 1.7% compared to fiscal 2011. We have worked diligently to raise the recycling rate, but it dropped somewhat in fiscal 2012 after a reduction in the amount of organic solvents used.
	Zero Emission Rate*4	Under 3%	7.9%	We continue with our efforts to reduce landfill waste.

*1 VOC: Volatile Organic Compounds (VOCs). This tally includes all chemical substances emitted into the atmosphere, including those derived from reactions involving chemical substances not subject to reporting regulations.

*2 COD: Chemical Oxygen Demand. An indication of the amount of oxygen needed to oxidize a subject compound by oxidizing subject compounds under a predetermined condition using oxidizing agents, then measuring the amount of oxidizing agents used in the process. A high COD level means that the water contains a large amount of organic chemical substances that consume oxygen.

With lower oxygen content, the water cannot sustain biological life, which stops the natural purification process, leading to a muddied and odorous water environment.

*3 Energy-derived CO₂ emissions: Fiscal 1990 has been set as the benchmark (96,200 tons)

*4 Zero emission rate: The amount of internal and external landfill waste produced as a percentage of total waste produced.

Results of Our Efforts to Reduce Environmental Impacts

As part of its effort to reduce environmental impacts, Nippon Kayaku focuses on preventing air, water and noise pollution as well as stopping global warming and reducing waste.

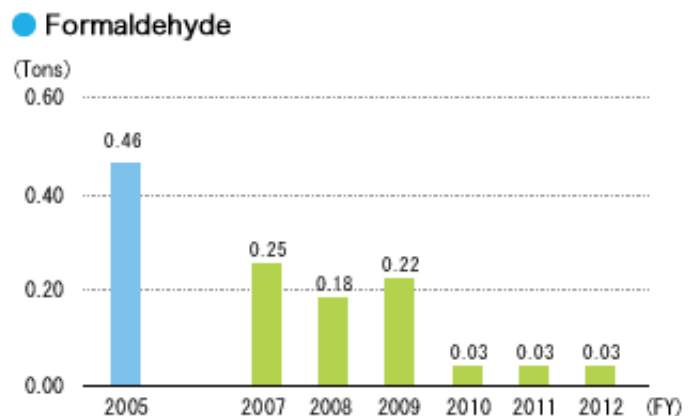
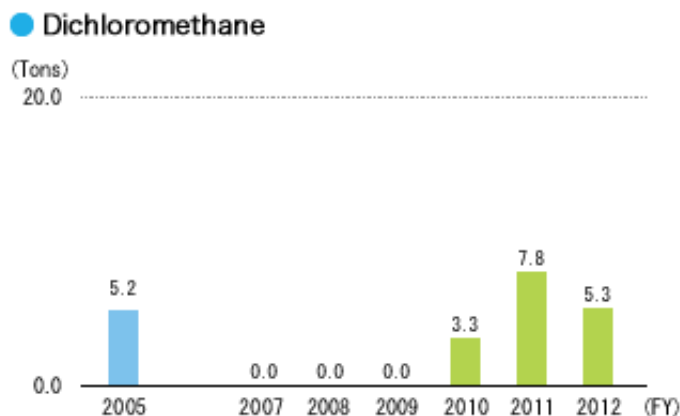
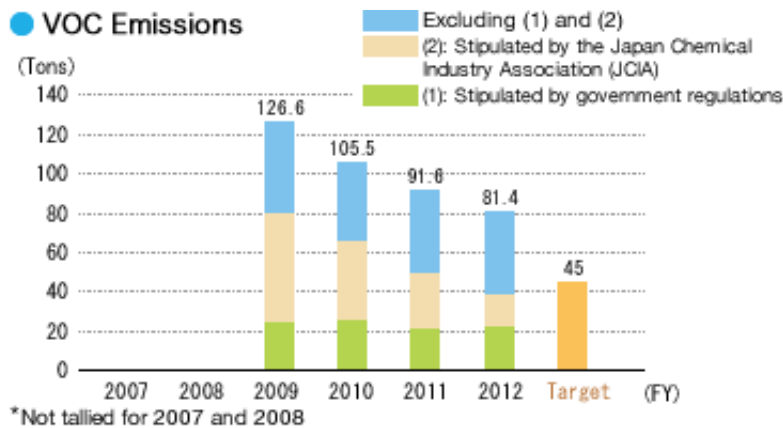
Preventing Air Pollution

To help prevent air pollution, we carefully manage substances subject to Japan's Air Pollution Control Act, hazardous substances released into the air and other air pollutants.

As for our VOC emissions reduction efforts, our new medium-term environmental targets established in fiscal 2011 expand the scope of data compilation to include all chemical substances discharged into the atmosphere. The new scope includes chemical substances that are produced through reactions as well as the chemical substances conventionally subject to government ordinances and the Japan Chemical Industry Association voluntary standards. The target for VOCs is to reduce emissions into the atmosphere to less than 45 tons by fiscal 2020. The Nippon Kayaku Group stands committed to making the self-initiated efforts needed to achieve this target.

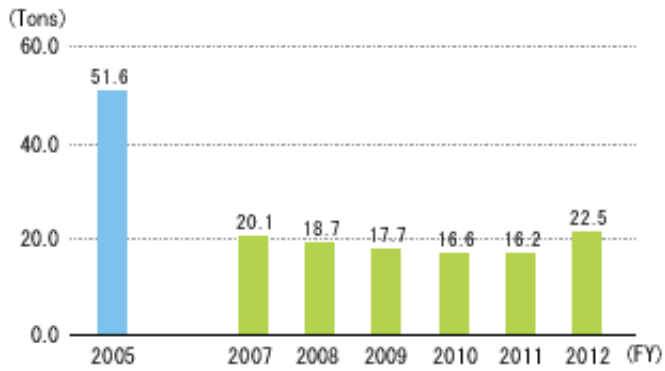
Under the initiative of the Japan Chemical Industry Association, the industry is taking action to voluntarily manage and reduce emissions of 12 control substances*⁵ that are deemed to be harmful air pollutants. Of these 12 control substances, we still use five, but stopped the use of benzene in 1995. Emissions of chloroform and ethylene oxide, on the other hand, have been cut to zero since fiscal 2007. Dichloromethane emissions had been zero since fiscal 2007, but rose to 3.3 tons in fiscal 2010 and 7.8 tons in fiscal 2011, and we were able to reduce these emissions to 5.3 tons in fiscal 2012. Formaldehyde emissions totaled 0.03 tons in fiscal 2010 and remained unchanged in fiscal 2011 and fiscal 2012. Going forward we will focus particularly on reducing the use and emissions of dichloromethane and formaldehyde.

Air pollutants sulfur oxide (SO_x)*⁶ and nitrogen oxide (NO_x)*⁷ are emitted during boiler operations. To date, the Nippon Kayaku Group has gradually shifted the fuel for its boilers from Bunker C heavy oil with high sulfur content to other lower sulfur content fuels such as Bunker A, in addition to LPG and natural gas, which are sulfur free. We continued this transition in fiscal 2012 as well. Since fiscal 2008, we have successfully made significant reductions in our SO_x emissions, and in fiscal 2012 we made further reductions. The Nippon Kayaku Group remains firmly committed to reducing its air pollutant emissions further through proper maintenance practices as well as regular inspections and upkeep.

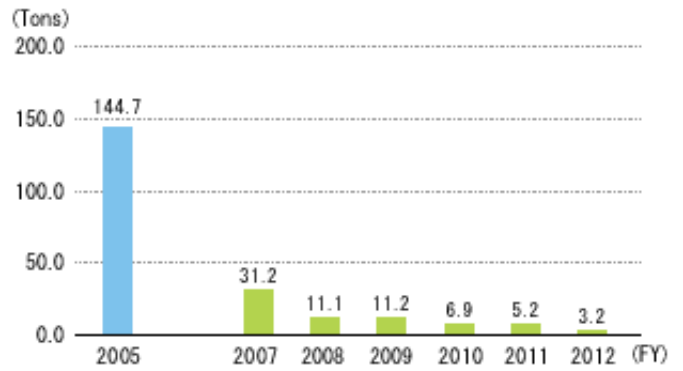


*⁵ 12 control substances subject to voluntary controls: acrylonitrile, acetaldehyde, vinyl chloride monomer, chloroform, 1,2-dichloroethane, dichloromethane, tetrachloroethylene, trichloroethylene, 1,3-butadiene, benzene, formaldehyde, and ethylene oxide.

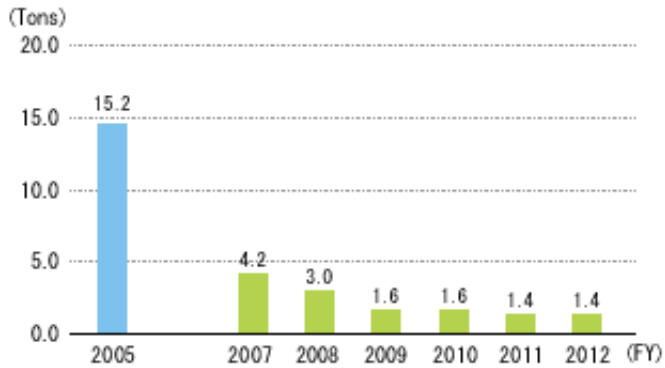
● NOx Emissions



● SOx Emissions



● Dust*8 Emissions



- *6 SOx (sulfur oxide): SOx is emitted when fossil fuels that contain sulfur are burned. SOx reacts with water in the atmosphere to form sulfuric acid and sulfurous acid, which are causes of air pollution and acid rain.
- *7 NOx (nitrogen oxide): NOx is produced when burned chemical substances react to nitrogen in the air and when fuels and chemical substances that contain nitrogen compounds such as coal are burned. Not only is it a major cause of air pollution including photochemical smog and acid rain, but NOx also has a harmful effect on the human respiratory system. In addition, NOx is also known to include the greenhouse gas dinitrogen monoxide.
- *8 Dust: Dust mainly refers to fine particulate soot found in dust smoke produced when burning fossil fuels. In addition to a major cause of air pollution, humans can contract pneumoconiosis or other harmful health conditions when breathing dust in high concentrations.

Preventing Water Pollution

The Nippon Kayaku Group has set voluntary wastewater discharge control standards that are tougher than requirements laid out in national laws and local ordinances.

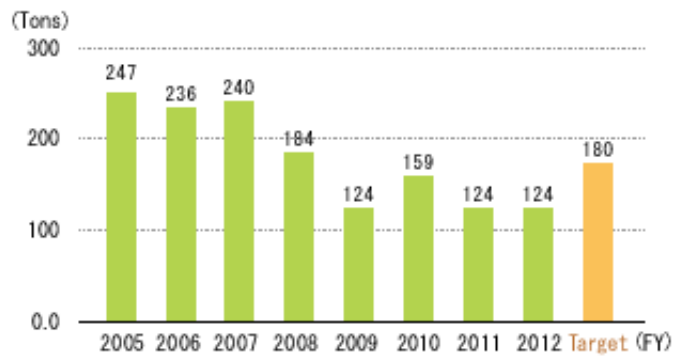
The Nippon Kayaku Group has made efforts to reduce its COD emissions by employing activated sludge treatment equipment at plants with high levels of COD emissions. During fiscal 2010 COD emissions increased to 159 tons due to the effects from changes in our production mix. In fiscal 2011 and fiscal 2012, however, COD emissions returned to fiscal 2009 levels at 124 tons. At the same time, nitrogen emissions also increased to 170 tons in fiscal 2010, but thanks to our reduction efforts nitrogen emissions were reduced down to 97 tons in fiscal 2012.

The Nippon Kayaku Group produces color material-related products including dyes and ink jet printer ink, among others. Our Tokyo and Fukuyama plants, where color material-related products are manufactured, fully decolorize colored wastewater before it is discharged.

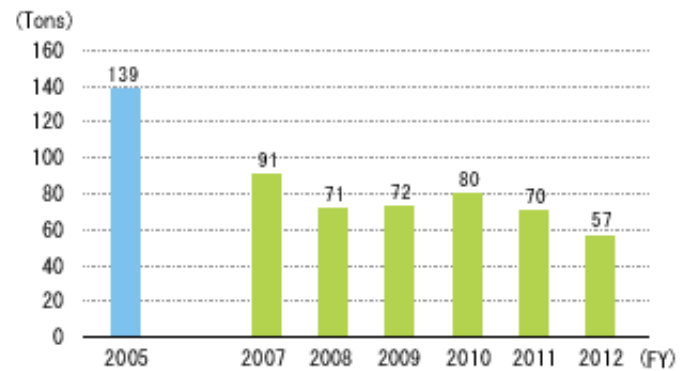
PRTR*9 Initiatives

Since 1995, the Nippon Kayaku Group has participated in the Japan Chemical Industry Association led initiative to reduce compounds identified in the PRTR regulation, working to reduce its emissions of PRTR controlled compounds into the environment. In fiscal 2012, our emissions of PRTR controlled substances totaled 35 tons, which marked a 6% increase from 33 tons in the previous year. Although toluene continues to represent the largest source of PRTR controlled emissions, toluene emissions decreased from 17.4 tons in fiscal 2010 to 9.4 tons in fiscal 2012. The rate of toluene emissions also decreased from 43% to 27% of the total.

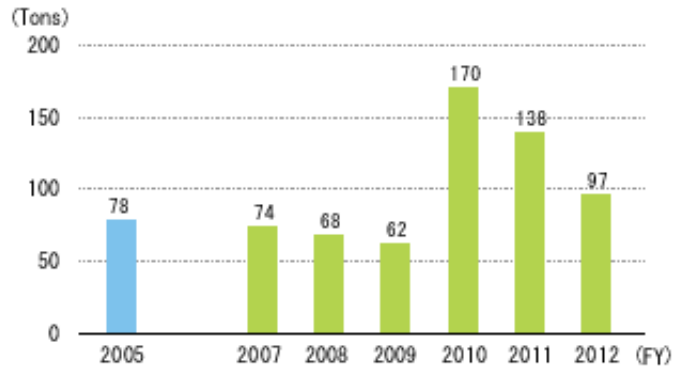
● COD Emissions



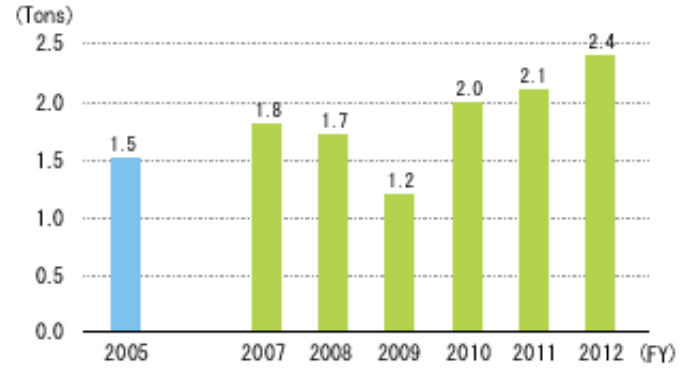
● SS *10 Emissions



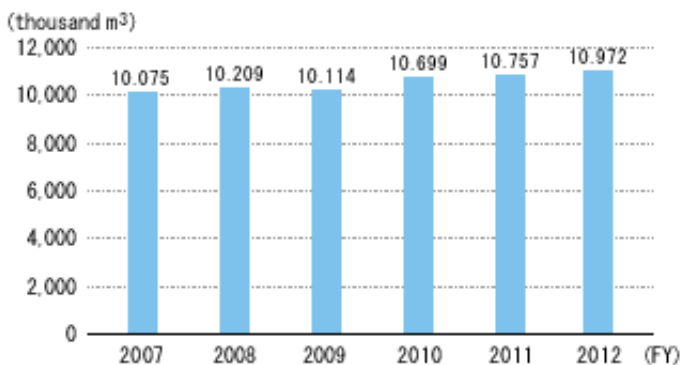
● Nitrogen Emissions



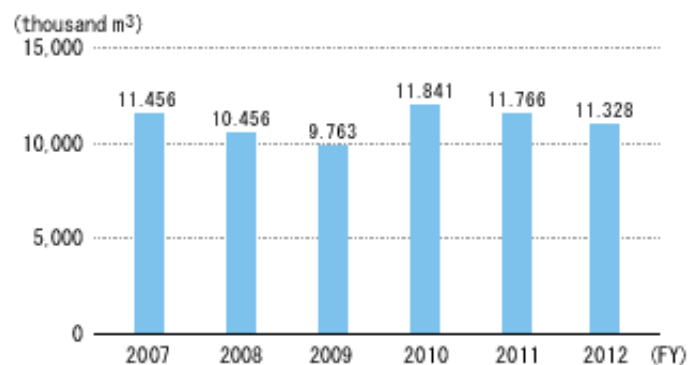
● Phosphorus Emissions



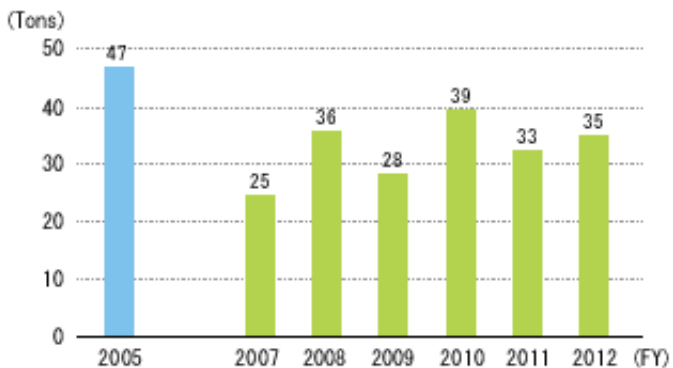
● Water Consumption



● Drainage



● Emissions of PRTR Controlled Substances



*9 PRTR: Pollutant Release and Transfer Register. The PRTR regulation is designed to prevent occurrences of environmental safety incidents by encouraging businesses to improve their own chemical substance management.

*10 SS: Suspended Solids. SS is a water-quality indicator generally referring to insoluble substances of 2 mm or less in diameter suspended in water. The organic matter and metal originating in particulate-like mineral, animals-and-plants plankton and its corpse, a sewer, factory effluent, etc. are contained. The increase in SS worsens transparency, and influences underwater photosynthesis by preventing light penetration.

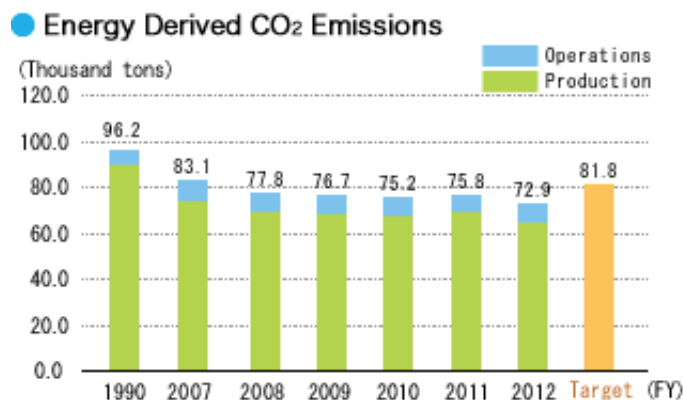
Preventing Global Warming

Each of our plants has implemented various energy conservation activities that have helped to reduce our total energy consumption annually. This, in turn, has reduced our energy derived CO₂ emissions as well, with such emissions totaling 72.9 thousand tons in fiscal 2012, which can be broken down into 66.0 thousand tons from production divisions and 6.9 thousand tons from operating divisions. Overall emissions decreased over fiscal 2011.

Nippon Kayaku has instituted a third-party logistics system (3PL) as part of its distribution reforms started in fiscal 2003. Today, we are working closely with our 3PL provider to change the modes in which our products are transported. We also began collecting data on CO₂ emissions emitted during product transport in April 2009. This modal shift will enable us to continue to reduce our energy consumption as well as CO₂ emissions.

As part of its efforts to help reduce CO₂ emissions from homes, the Nippon Kayaku Group has established two programs to encourage employees to conserve energy at home called My Family's Environmental Impact Budget and My Home is Currently Conserving Electricity.

which focuses exclusively on electricity usage.



● CO₂ Emissions during Product Transport and Distribution Volume

	CO ₂ Emissions (tons)	Distribution Volume (1,000 tkm)
Fiscal 2010	3,100	16,692
Fiscal 2011	3,090	16,809

- Ton-kilometer: weight (tons) x transport distance (kilometers)

Aiming to be a Company that uses Less Energy

Nippon Kayaku established the Energy Conservation & Global Warming Prevention Committee led by the president to roll out company-wide initiatives to help it achieve the provisional mid- to long-term environmental target of reducing greenhouse gas emissions 15% compared to 1990 by fiscal 2020. As part of this effort, we are working diligently to further reduce energy-derived greenhouse gas emissions.

Furthermore, the power supply problems caused by the Great East Japan Earthquake that struck on March 11, 2011 have inspired us to promote a company-wide project with the goal of becoming a company that uses less energy and can withstand power supply instability.

This project was recently concluded after a specific framework for initiative was developed. The next step of this process will be to promote activities as part of the efforts of the Energy Conservation & Global Warming Prevention Committee.

- [Study on Energy Conservation Activities from Fiscal 2012](#) PDF

Themes of Initiatives

1. Change power systems to build a stronger foundation for energy conservation

The Takasaki Plant installed and began operating a CGS* in June 2013 that can produce about one-third of its electricity needs from Tokyo Electric Power Company.

We completed the review process for emergency back-up generators at our other plants.

In addition, we changed electricity suppliers at certain business sites, excluding plants, to achieve a stable power supply unaffected by the operating situation of Japan's nuclear power plants.

* CGS: Co-generation system that produces electricity using gas as well as collects and reuses resulting heat emissions

2. Promote existing energy conservation and global warming prevention theme

In fiscal 2012 we improved our specific energy consumption by 1.5% compared to fiscal 2011 and total energy usage was down 4.9% year on year thanks to our promotion of these energy conservation themes.

3. Create energy conservation master plan to achieve ideal vision for plants

We are preparing mater plans to reduce energy usage with an eye on the future vision for our plants. Going forward, we will periodically revise these plans as part of our ongoing efforts to reduce our specific energy consumption and greenhouse gas emissions.

4. Formulate new energy conservation themes based on a statistical analysis of energy usage at our plants

We performed a statistical analysis on plants that have completed the collection of necessary data and verified the main factors behind their use of energy in order to begin a review into ways that we can reduce this energy usage. As for plants still collecting this data, we will perform a statistical analysis as soon as it becomes available and work to narrow the scope of this theme.

5. Devise evaluation method for energy usage at the time of research and development when developing new environmentally friendly products

We have created a system during the initial research and development stage where researchers perform energy usage evaluations on the manufacturing process under development. Although this system is still in its infancy, the fact that researchers are performing these evaluations has raised their awareness of energy conservation, which is expected to have positive effects on the development of energy efficient production processes.

2012 Award for Excellence in Energy Management from the Director-General of the Kanto Bureau of Economy, Trade and Industry Nippon Kayaku Tokyo Co., Ltd.

This award is presented to plants and business sites that rationalize energy usage and have achieved significant results from continuous efforts to promote energy management that can be used as a good practice by others.

On this occasion, representatives from the Kanto Bureau of Economy, Trade and Industry, Kanto Regional Electricity Usage Rationalization Committee, and Tokyo Regional Electricity Usage Rationalization Committee visited the plant to see our energy conservation initiatives at work.

We had previously been recognized with an award of excellence and grand prize from the Kanto Regional Electricity Usage Rationalization Committee, but it had never crossed our mind that we would receive such a great honor as this award. As it turns out we were both shocked and overjoyed. The plant's energy conservation initiatives are promoted using a top-down approach and represent many years of our employees' collective efforts to help streamline our energy usage. Winning such a grand distinction as the Award for Excellence in Energy Management from the Director-General of the Kanto Bureau of Economy, Trade and Industry both validates our initiatives and results, and will serve as motivation for our future efforts.

Energy Conservation Initiatives at the Plant

- Reduced electricity usage by changing volume of compressors for processors and instrumentation and through improvements in operational controls.
- Reduced electricity usage by improving operational control methods of industrial water pumps.
- Reduced energy usage by replacing mercury lamps with high efficiency lighting.
- Rolled out eco jacket solution for steam line valves.
- Our energy saving practices were highlighted on other company's websites.
- Made our efforts known through energy conservation broadcasts and email.

The plant is subject to the specific greenhouse gas emissions program of the Tokyo Metropolitan Ordinance on Environmental Preservation and as such we will focus even greater efforts on our energy conservation activities moving forward. Everyone at Nippon Kayaku Tokyo will continue to proactively work toward achieving energy conservation goals, knowing that these efforts also result in cost savings.



Awards ceremony (left)

President of Nippon Kayaku Tokyo Co., Ltd. and everyone from the Engineering Department (right)

Rolling Out Eco-friendly Sales Vehicles

Information on efficacy and safety is essential to ensuring that patients use our pharmaceutical products correctly. Nippon Kayaku stations medical representatives (MR) throughout Japan in order to gather and provide information on our proprietary pharmaceuticals by visiting medical institutions in person. All of the 327 company-owned sales vehicles used by these MR in their daily visits were recently switched over to eco-friendly hybrid vehicles, with the exception of colder weather areas requiring all-wheel drive.

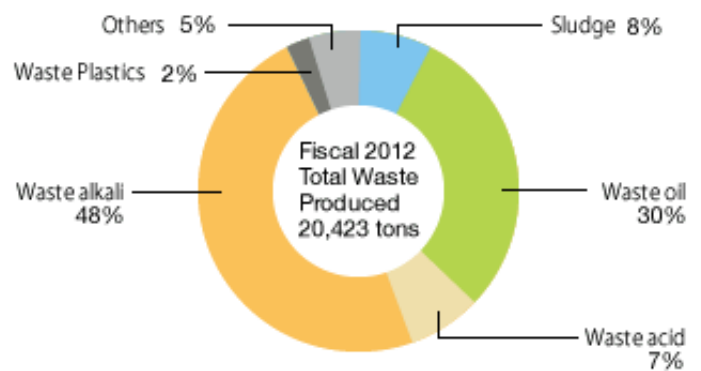
Waste Reduction

In fiscal 2012 the Nippon Kayaku Group produced 20,423 tons of waste, which represents an 8.4% decrease compared to fiscal 2011. Landfill waste in fiscal 2012 amounted to 1,606 tons, a 45% reduction from fiscal 2011. Going forward, we will continue with activities aimed at increasing our recycling rate and achieving zero emission.

● Total Waste Produced and Ratio of Landfill Waste



● Breakdown of Waste by Type



Noise Prevention

We conduct our business with a conscious effort toward minimizing noise pollution in the areas surrounding our factories. We regularly measure noise levels around our factories, making every effort to be a positive member of the local community. As such, any feedback or requests that we receive from local residents at company-sponsored events such as community round-tables are treated with the utmost priority. We also conduct regular work environment measurements in the factory to protect our employees from excessive noise.

Environmental Accounting

Nippon Kayaku has tracked and shared all cost data associated with its environmental protection initiatives since fiscal 2000. Also, from fiscal 2003, we began calculating the returns from our environmental protection initiatives. Calculation of environmental costs and returns are made according to Environmental Accounting Guidelines (2005 Version) published by the Ministry of the Environment of Japan, and Environmental Accounting Guidelines for Chemical Companies published by the Japan Chemical Industry Association.

● Environmental Protection Costs

(Millions of yen)

Category		Investment	Total	Main Activities
Cost Incurred in the Workplace	Air Pollution Prevention	129.7	118.1	Replaced waste fluid incinerator, reinforced VOC countermeasures, shifted heating medium furnace to gas-fired unit
	Water Pollution Prevention	33.5	211.3	Replaced bio-decolorization tower and waste water treatment facilities Replaced pumps, piping and flow meters
	Underground seepage prevention	11.4	23.0	Switched to aboveground waste liquid storage tank, lined pit underground water supply pit, made improvements to drainage channel
	Noise and Vibration Prevention	0.5	0.1	Installed silencer on isolation tower
	Other		9.9	Pollution load amount levy
	Global Environment Cost	Global Warming Prevention and Energy Conservation	574.3	1.9
Resource Recycling Cost	Waste treatment	0.8	465.5	In-house processing costs and processing outsourcing costs
Up- / Down-Stream Cost	Container Recycling Outsourcing	-	0.5	Outsourcing costs for repackaging products and cleaned and recycled product containers
	Sewage Processing Cost	-	102.8	Sewerage treatment costs
Management Activity Cost	System Maintenance and Operation	-	120.3	Internal auditor development cost and ISO14001 renewal costs
	Environmental Stress Monitoring	-	48.2	Analysis costs and outsourcing costs
	Information Disclosure	-	4.2	Outsourcing costs for preparing information disclosure documents on the environment
	Education, Training and Other	-	54.3	Workplace training, etc.
	Greening	13.4	115.7	Added plants and improved some greenery along the roadway
R&D Cost			287.3	Environmentally friendly R&D costs and wastewater treatment technology development costs
Social Activity Cost		-	9.1	Plant tours, community event sponsorship, responsible care, ICCA special committee, LRI research meeting costs
Environmental Damage Cost		-	0.0	
Total		763.6	1,572.2	

● Return from Environmental Protection Initiatives

(Millions of yen)

Sources of Return		Cost Reduction Return	Main Activities	
Workplace	Pollution Prevention Return	Air Pollution Prevention	0.1	Shifted boilers and deodorizing furnace fuel to LNG
		Water Pollution Prevention	0.0	Improved wastewater treatment capacity by installing ultrafine aeration tubes
		Pollution Load Levy Reduction	0.1	
		Noise and Vibration Prevention	0.0	
	Global Environment Return	Global Warming Prevention and Energy Conservation	146.4	Changed to high-efficiency HVAC system, reduced lost heat dissipation from steam, restricted the number of compressor units
	Resource recycling return	Reduction of Waste	12.1	Recycled waste oil as combustion improver
		Sale of Recycled Resources	14.5	Metal recovery, external sales of paper products, external sales of waste plastics
Other		1.6	Made changes to waste treatment providers	
Up- / Down-Stream	Container Recycling	9.5	Reused drums, etc.	
Others		4.7		
Total		189.0		

- Scope: Nippon Kayaku (non-consolidated)
- Capital expenditure: Compilation of capital appropriated for orders in fiscal 2012 (June 2012 to May 2013)
- Management cost: Any cost increase resulting from change in fuel type or change in waste processing method that are deemed appropriate from an environmental perspective are recorded under this category each year for a period of five years from the date the change is first administered.
- From a financial accounting standpoint, earnings realized from environmental protection initiatives are recorded in the fiscal year in which such earnings are realized.
- Earnings such as expense reduction and environmental impact reduction that are not considered from a financial accounting standpoint are reported for five years from the date it is first realized.

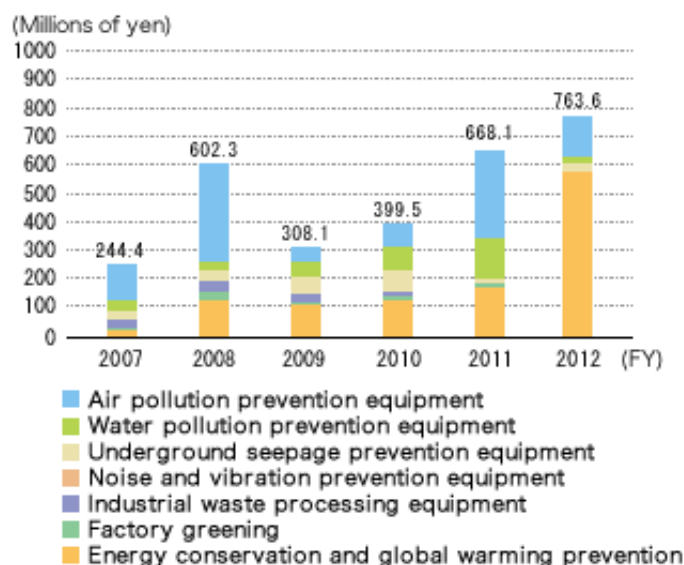
Investments Related to the Environment, Health and Safety

The Nippon Kayaku Group makes well planned and continual investments in environment, safety and health related projects. In fiscal 2012, investments related to the environment totaled 763.6 million yen, marking a 14% increase compared to fiscal 2011. Investments in energy conservation and global warming prevention accounted for 75% of the total, which was a major increase over the previous fiscal year.

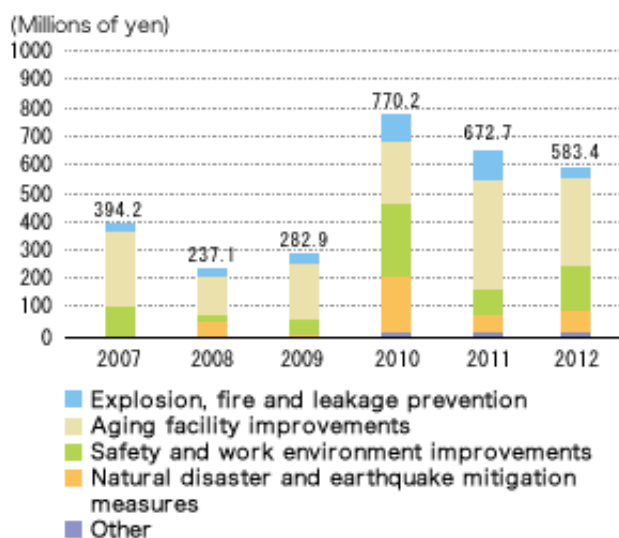
Investments related to health and safety totaled 583.4 million yen in fiscal 2012, which was down 13% compared to fiscal 2011.

Investments in measures to address aging facilities accounted for 52% of the total.

● Environment Related Capital Investments



● Safety and Health Related Investments



FY 2012 Energy Efficiency Survey

*High-load machinery: refrigerators/freezers, aeration tank ventilators, steam management, etc.

Business site/Company name	"Green curtains" (bitter gourd plants)	Adjustments to work styles	Management of thermostat settings	Electricity/water saving and conservation awareness	Reducing fluorescent lighting; LEDs, etc.	Adjusted operation of high-load machinery*	Limits on refrigerator use, etc.	Heat barrier film/paint, water dispersion	Surveys, etc. of efficiency measure efficacy	Remarks
Head Office, NIPPON KAYAKU CO., LTD.		—	●	●	●	—	●	—	●	Ceased air ventilation in the underground parking area Summer : ceased hot water usage for hand washing and switched off toilet seat heaters
Fukuyama Plant/ NIPPONKAYAKU FUKUYAMA CO., LTD.	●	●	●	●	●	●	●	●	●	Removed unnecessary steam pipes, upgraded outdoor steam traps, installed new ice maker/refrigerator/freezer, halted operation of unnecessary refrigeration equipment
Asa Plant	●	—	●	●	●	●	●	●	●	Implemented work days when employees were not allowed to drive to work
Tokyo Plant/ NIPPON KAYAKU TOKYO CO., LTD.	●	—	●	●	●	●	●	●	●	Received a commendation from the Commissioner of the Kanto Bureau of Economy, Trade and Industry as a FY 2012 Excellent Energy Management Company
Takasaki Plant	●	—	●	●	●	●		●		Adopted a gas co-generation system for operation in FY 2013
Himeji Plant	●	●	●	●	●	●		●	●	Reviewed possible adoption of a photovoltaic power generation system for operation in FY 2013
Kashima Plant	●	—	●	●	●	●			●	Optimized steam management Reviewed possible upgrades for refrigeration equipment
Tokyo business CENTER/ Tokyo business district	●	—	●	●	●	●		●	●	Optimized steam management, halted operation of clean room during long holidays, switched air-conditioning to ventilation only during intermediate periods, reduced air flow load of clean room during break times, etc.
POLATECHNO CO., LTD.		—	●	●	●	●			●	
Moxtek, Inc.		—			●	—				Turned off lights in empty rooms and during lunch break
Wuxi Polatechno Optics Co., Ltd.		—	●	●	●	—			●	Turned off lights in empty rooms and during lunch break
Dejima Tech B.V.		—		●		—				
POLATECHNO (HONG KONG) CO.,LTD.		—	●	●	●	—			●	
NIKKA FINE TECHNO CO., LTD.		—	●	●		—				Held discussions on energy and resource efficiency measures (in preparation for ISO14000 certification)
Nippon Kayaku Korea Co., Ltd.		—	●			—				
Euro Nippon Kayaku GmbH		—	●	●		—				
KAYAKU CHEMICAL (WUXI) CO., LTD.		—	●	●						Installed heaters but no air-conditioners
MicroChem Corp.		—	●	●		●				
Wuxi Advanced Kayaku Chemical Co., Ltd.		●		●	●	●		●		
Zhaoyuan Advanced Chemical Co., Ltd.		●	●	●	●	●		●	●	
NIPPON KAYAKU FOOD TECHNO CO., LTD.	●	—	●			—				Placed fans inside; circulated air and adjusted temperature settings of air-conditioners
Tumor Diagnosis Support Co., Ltd.	●	—		●	●	—		●		
Nippon Kayaku Medical Care Co., Ltd.	●	—	●	●	●	—				Temperature settings of air-conditioners carried out with a demand controller
NAC Co., Ltd.		—	●	●		—				
Taiwan NJC Corp.		—	●			—				
INDET SAFETY SYSTEMS a.s.		—	●	●		—				
Kayaku Safety Systems (Huzhou) Co., Ltd.		—	●	●		—			●	Carried out energy-saving awareness education; reviewed and implemented energy-saving measures
Nishiminato Driving School Corporation		—	●	●	●	—		●	●	
Kayaky (Shanghai) Co., Ltd.		—	●	●		—			●	Carried out energy/water saving measures and conservation awareness efforts Adjusted air-conditioning settings
Wako Toshi Kaihatsu Co., Ltd.		—	●	●	●	—		●	●	Thinned out the number of fluorescent lighting fixtures; continued to keep lights off during lunch break
NIKOS CO., LTD.		—	●	●	●	—				
JHMS Co., Ltd.		—			●	—				
Okiura Golf Center Co., Ltd.		—	●	●	●	—			●	Received requests for energy saving measures from the prefecture and city
Kouwa Sangyo Co., Ltd.	●	—	●	●	●	—	●	●	●	Implemented work days when employees were not allowed to drive to work
Gunnan Sangyo Co., Ltd.	●	—	●	●	●	—	—	●	—	
Head Office, KAYAKU AKZO CORPORATION		—	●	●		—				
Asa Plant, KAYAKU AKZO CORPORATION		—	●	●		—				
Head Office, Kayaku Japan Co., Ltd.		—	●	●	●	—				Lengthened the period for the "cool biz" dress code (short sleeves, no jackets, and no ties) Advertised our "cool biz" measures on the company website
Asa Plant, Kayaku Japan Co., Ltd	●	—	●	●	●	—	●	●	●	Implemented work days when employees were not allowed to drive to work
Sanko Kagaku Kogyo Co., Ltd.		—			●	—				Grew "green curtains" of bitter melon, akebi, and wisteria Upgraded production site lighting to energy efficient types

Third-Party Opinion

Masahiko Kawamura
Senior Researcher NLI Research Institute

Profile

After completing his master's degree from the Faculty of Engineering of Kyushu University in 1976, Mr. Kawamura joined Mitsui Ocean Development & Engineering Co., Ltd. (MODEC). In 1988, he joined NLI Research Institute, where today he belongs to the Insurance Research Department. Mr. Kawamura specializes in environmental management, CSR, and environmental business practices. He is a Vice Chairman of the Sustainable Management Forum of Japan (SMF). Mr. Kawamura has co-authored various books including *An Introduction to Environmental Management*, *SRI and New Companies/Financial Institutions*, and *Carbon Disclosure*, among others.



About the CSR Reporting: Strong Determination to Convey Key Info Felt

I found the overall composition and page layout of this year's abridged print version (digest) to be more concise and easier to read than last year's, which made me feel keenly aware of Nippon Kayaku's strong determination to convey key information to readers in the lead up to its 100th anniversary. The table of contents was structured with a focus on the company's four CSR activity domains (foundational, financial, social and environmental). Furthermore, the aims and fiscal year targets for each activity domain were organized thoughtfully at the top of the page, and major initiatives being implemented were presented in an easy-to-understand manner.

Another unique feature that stood out to me was the use of oversized font to emphasize quantitative data from the company's initiatives, such as holding 14 CSR training sessions or achieving zero major accidents. However, the meaning of this quantitative data was somewhat unclear. This is why I would like to suggest the company consider using key performance indicators (KPI), as I recommended last year. KPI relate closely to the company's new Mid-term CSR Action Plan, making it possible to implement the PDCA cycle in a qualitative manner. The current version is still focused predominantly on reporting CSR activities only.

I have also pointed out the need to expand the reporting boundary for some time and the fact that this year Nippon Kayaku changed the reporting of group company initiatives, including those overseas, from a separate column to a part of the main body of the report represents a step in the right direction. For that reason, I can also commend the fact that the CSR report has expanded its horizon to reflect the global nature of Nippon Kayaku's businesses.

I also applaud the company's use of a comparison table for ISO26000, the global standard for CSR, but I have to admit that it is still a bit superficial. This is because further exploration of the 37 issues of social responsibility is needed, in addition to the seven core subjects.

About the Content of the CSR Report: Making Progress in Global CSR Management

The second phase of the Nippon Kayaku Group's CSR management is about to start. This is because the company has drawn up the Mid-term CSR Action Plan, focusing on four domains and 24 items, that transcends single year outlooks and linked it with the three-year midterm business plan called "Challenge 100A!" I commend this approach, but there are still several issues I would like to point out.

First, the scope of this action plan is somewhat unclear. It appears from the content that the plan focuses on the company's businesses in Japan, which suggests the scope of the report covers Nippon Kayaku and its group companies in Japan. However, given the fact that the phrase "actively pursue CSR management around the world" was used in the Message from the President section in last year's report, the question of how Nippon Kayaku will roll out this plan at its overseas businesses is of greater concern.

Nippon Kayaku, which already has a multinational business footprint with a number of manufacturing sites outside Japan and employees working overseas, must recognize the significant differences between the social issues facing Japan and other countries and be aware that priorities of initiatives will differ in each country as a result. In recent years, there have been a growing number of cases where the overseas subsidiary of a Japanese company and/or its supplier/contractor was suddenly and severely criticized by NPOs and other groups for human rights violations, labor issues or pollution problems, etc..

In other words, CSR risks found in overseas supply chains have begun to emerge. The formulation of CSR procurement standards was only natural as part of the company's approach that involves transitioning from green procurement to CSR procurement, but Nippon Kayaku will need to also consider having its procurement departments conduct "CSR audits" on the ground at sites outside of Japan.

To that end, Nippon Kayaku will need to build up decision making processes and systems for its social responsibilities as part of its management strategy, instead of focusing on the narrow definition of governance as it relates to enhancing shareholder value. In this regard, I have high expectations for the entire Nippon Kayaku Group in the next stage and beyond.
