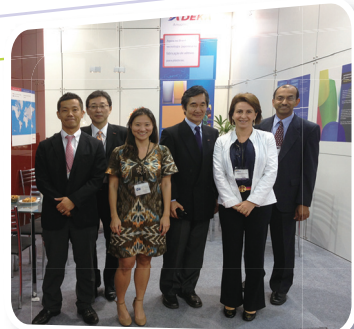




# CSR REPORT 2013

CORPORATE SOCIAL RESPONSIBILITY



# CSR REPORT 2013

CORPORATE SOCIAL RESPONSIBILITY

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## Editorial Policy

The ADEKA Group aims to contribute to the health and enrichment of society through a commitment to “harmony with society” and “gentle harmony between people and technology” across all our corporate activities, and based on our management policies. This forms the basis for our CSR policy.

In the ADEKA Group CSR Report 2013, we have placed the focus on initiatives that are unique to ADEKA, and which are based on the abovementioned philosophy and policy. In addition to providing an overview of our Mid-Term Management Plan “STEP 3000,” we have also covered the progress status of activities that are in line with our five basic policies: Global operations, Technology, Creation of Value, Investment, and Human Resource.

The ADEKA Group CSR Report 2013 takes reference from the following guidelines. To ensure that the report is easy to read and understand, we have focused on communicating to readers the initiatives that we feel are of the greatest importance to us.

Detailed environmental data is also available on our website.

In striving to improve future CSR reports, the ADEKA Group welcomes any candid feedback concerning the Group. Please use the questionnaire form enclosed at the end of this report to provide any feedback or thoughts you may have.

## Scope Covered by This Report

This Report covers the whole ADEKA Group. Where necessary, “ADEKA Group” and “the Group” refer to the entire ADEKA Group, while “ADEKA” and “the Company” refer to ADEKA Corporation. The report pertaining to the environmental material flow data covers ADEKA and the 10 major group companies in Japan.

## Period Covered by This Report

2012 Fiscal Year ended March 31, 2013

\*Some parts of this report refer to recent activities taking place in fiscal 2013.

## Reference Guidelines

*Environmental Reporting Guidelines (Fiscal Year 2012 Version)* of the Japan Ministry of the Environment

*Sustainability Reporting Guidelines 2006* of the Global Reporting Initiative (GRI)

*Japanese Standards Association ISO 26000:2010 Guidance on social responsibility*

Published: September 2013

Next publication date: September 2014

\*ADEKA Group CSR site: <http://www.adeka.co.jp/csr/en/index.html>

\*Financial and economic data can be viewed at the ADEKA Group Investor Relations site:  
<http://www.adeka.co.jp/en/ir/index.html>



Head Office of ADEKA CORPORATION

## Corporate Data

Name: ADEKA CORPORATION

Established: January 27, 1917

Representative Director: Akio Kohri

Head Office: 7-2-35 Higashi-ogu, Arakawa-ku, Tokyo

Capital Stock: ¥22.899 billion (as of March 31, 2013)

Shares Issued: 103,651,442 (as of March 31, 2013)

Employees (consolidated): 3,027 (as of March 31, 2013)

## Commitment of Our Top Management

We aim to become a “good company” that creates sustainable social values by paying close attention to the opinions and feedback from an increasingly diverse group of stakeholders as we extend our global reach, and through corporate activities that are unique to ADEKA.

Akio Kohri, Representative Director and President



## Looking Back on Fiscal 2012

The ADEKA Group has established a medium- to long-term vision of becoming a Good Company that generates net sales of 300 billion yen. This is our aspiration for fiscal 2016, when we mark our 100th anniversary. In fiscal 2012, we drew up our Mid-Term Management Plan, “STEP 3000,” and injected further effort into realizing this vision. As part of these efforts, we laid out the “ideal situation” that we wanted to arrive at by fiscal 2014, and implemented policy measures in line with five basic policies: Global Operations, Technology, Creation of Value, Investment, and Human Resources. (Please refer to pages 10-13 for details.)

Of the five basic policies, with regard to accelerating overseas expansion in order to achieve sustainable growth going forward, we have undertaken strategic investments aimed at future growth. This includes the procurement of businesses and the establishment of new companies or joint ventures in countries around the world, such as the United States, Brazil, and Malaysia. We have also taken initiatives to enhance our product development system in order to respond swiftly to advanced customer needs. To that end, we have completed a new research center at the Urawa R&D Laboratory, which will serve as a global technical center for our polymer additives business, as well as enhanced our R&D facilities in Korea.

## Our Challenges In Becoming a “Good Company”

Toward becoming a good company with net sales of 300 billion yen, it is important to enhance our corporate value through bold measures such as further strengthening our technological capabilities and physical capacity, and expanding our businesses overseas and into new areas. In other words, it is vital for us to become a Good Company that has a corporate culture and management practices that are up to the job of generating value worth 300 billion yen.

The goal of generating net sales worth 300 billion yen ultimately does not represent a single-minded push toward achieving this number. As we head toward the realization of this goal and consider the concrete efforts that are necessary in order to generate the next 100 billion yen, we have to act boldly and proactively without being limited by existing ideas and old practices. This vision is a driver for organizational innovation for the entire ADEKA Group and, at the same time, is one that poses a challenge to each individual employee.

## Aiming to Establish a Value Chain that Maximizes Social Value

Our top management priorities are to provide products, technologies, and services that can satisfy our customers, and to continue acquiring a reasonable level of profit for the sustainability of the company. To improve customer satisfaction, we first have to gain a good understanding of our customers from their perspective before proposing solutions to their problems.

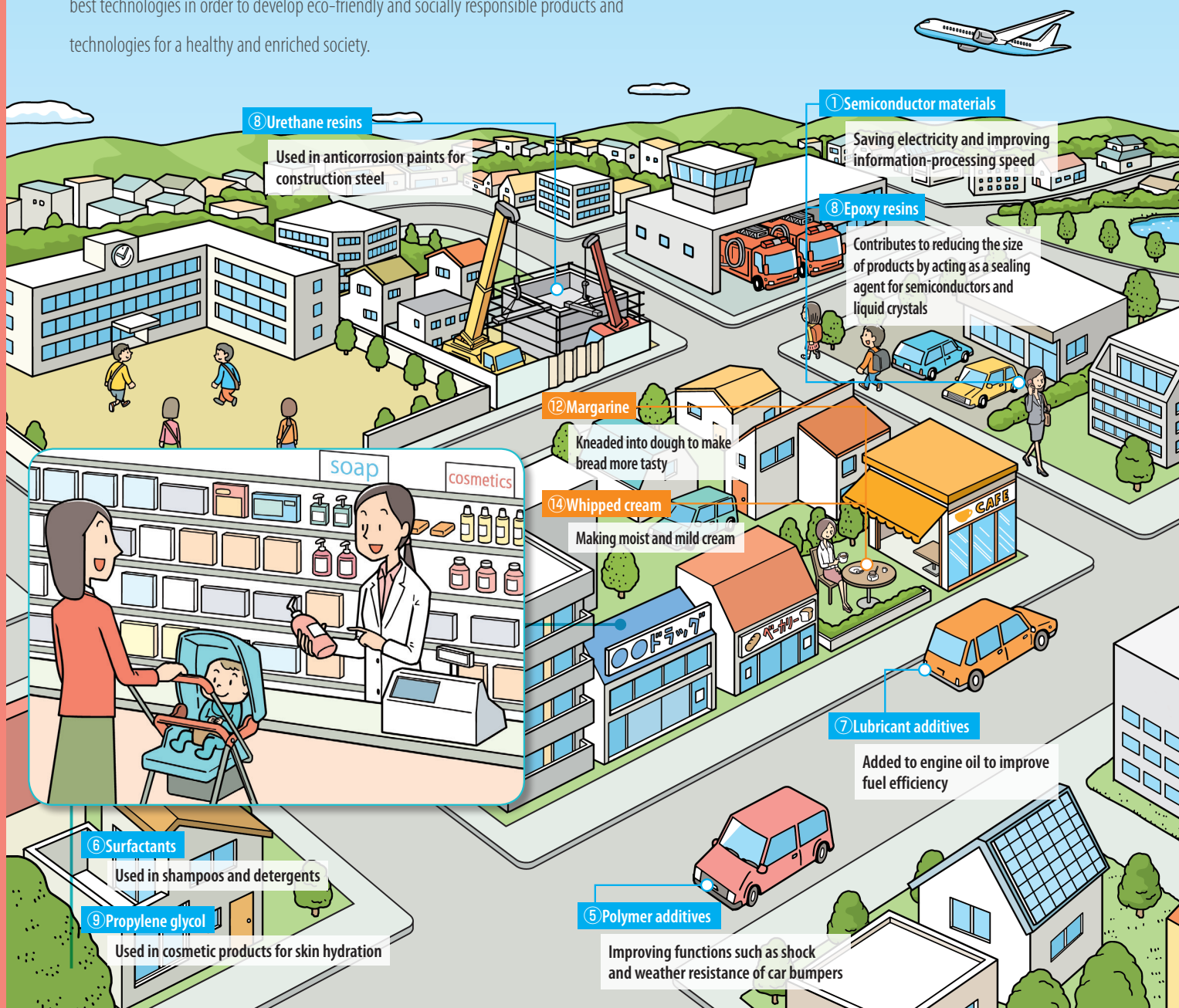
We can say the same for all our CSR activities. By creating value in partnership with society (=stakeholders) through our corporate activities, we aim to gradually enhance our corporate value, and thereby realize our management philosophies and bring about a sustainable society. This is our concept of CSR. An important premise behind this concept is to capture issues—in the form of the positive and negative impacts of our corporate activities—from the perspective of our stakeholders, and to keep up efforts to find solutions for these issues.

Through the expansion of the supply chain in tandem with the expansion of corporate activities, such as the overseas expansion that was mentioned earlier, the scope of impact on stakeholders will also inevitably grow wider. In view of this, it is important for us to give consideration to human rights across all our activities, pay close attention to feedback and opinions from an increasingly diverse group of stakeholders, put ceaseless effort into verification and improvement activities through the PDCA cycle, and build a “value chain” that can maximize the social value generated through our corporate activities.

We view these as further challenges in our goal to become a Good Company, and will work together as one to overcome them.

# ADEKA in Our Lifestyles

Throughout its history, Adeka has been developing proven technologies, which are at work in diverse aspects of our everyday lives. The Adeka Group is committed to assembling the best technologies in order to develop eco-friendly and socially responsible products and technologies for a healthy and enriched society.



① Semiconductor materials

Saving electricity and improving information-processing speed

② Epoxy resins

Contributes to reducing the size of products by acting as a sealing agent for semiconductors and liquid crystals

③ Urethane resins

Used in anticorrosion paints for construction steel

⑫ Margarine

Kneaded into dough to make bread more tasty

⑭ Whipped cream

Making moist and mild cream

⑦ Lubricant additives

Added to engine oil to improve fuel efficiency

⑥ Surfactants

Used in shampoos and detergents

⑨ Propylene glycol

Used in cosmetic products for skin hydration

⑤ Polymer additives

Improving functions such as shock and weather resistance of car bumpers

## Chemicals Business

### IT and electronic chemicals

The Adeka Group provides products for various electronic devices such as LCD TVs, PCs, and smart phones, using cutting-edge technologies. Especially, quality of semiconductor materials manufactured at Kashima Plant is at the highest level in the world.

- ① Semiconductor materials
- ② Light curing resins
- ③ Flat panel display materials
- ④ Circuit materials

### Functional chemicals

Polymer additives are essential for highly-functional plastic. As an all-round manufacturer for polymer additives, the Adeka Group manufactures various kinds. The Group also provides additives for automobile engine oils, which were developed with Adeka's unique technology, as well as highly-functional cosmetic materials developed taking into account safeness.

- ⑤ Polymer additives
- ⑥ Surfactants
- ⑦ Lubricant additives
- ⑧ Epoxy resins, Urethane resins

### Commodity chemicals

From daily necessities such as soaps and detergents to IT electronics, the Adeka Group provides products to a wide range of fields and contributes to the development of industries. We produced propylene glycols which are used for cosmetics for the first time in Japan.

- ⑨ Propylene glycol
- ⑩ Hydrogen peroxide
- ⑪ Water swelling sealing materials



①④ Semiconductor materials, Circuit materials

Saving electricity and improving information-processing speed

⑤ Polymer additives

Improving flame retardance of covering materials such as cables and cords

① Water swelling sealing materials

Sealing materials infilling gaps to prevent water leakage in civil engineering and construction works

⑮ Plant design / Construction management

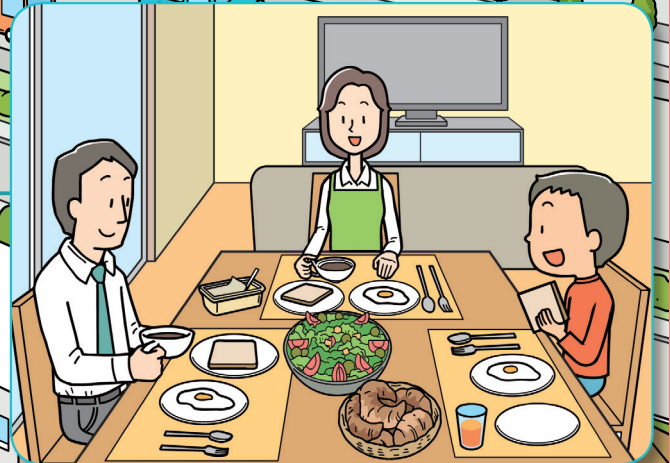
Designing and building plants for manufacturing chemicals and food products

⑯ Logistics

Transporting various products safely, such as chemicals, food, and frozen food products

⑩ Hydrogen peroxide

Used to bleach paper and pulp



②③④ Light curing resins, Flat panel display materials, Circuit materials

Contributing to thinner television sets and higher image quality

⑫ Shortening

Making puffy, fluffy bread, and crispy donuts

⑬ Frying oils and fats

Frying noodles and snacks

### Foods Business

#### Food

Guided by the slogan, "The Delicious Taste You Can Rely On," the Adeka Group develops food materials, leading the industry.

By supplying food processing oils and fats to bread and confection makers, the Group contributes to achievement safe and secure foods.

⑫ Margarine, Shortening

⑬ Frying oils and fats

⑭ Whipped cream

### Other Business

#### Other

Other Business mainly includes maintenance of the Adeka Group's plants and facilities, design of various kinds of plants, logistics, and insurance agent business. The Group provides services to customers in various fields, on the basis of expertise related to those operations.

⑮ Plant design / Construction management

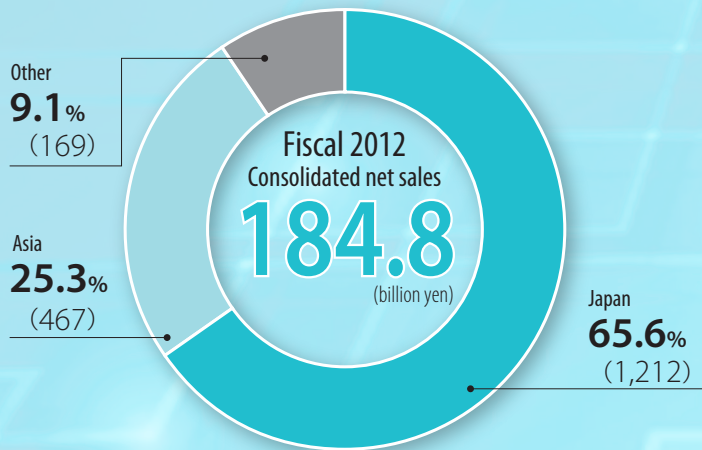
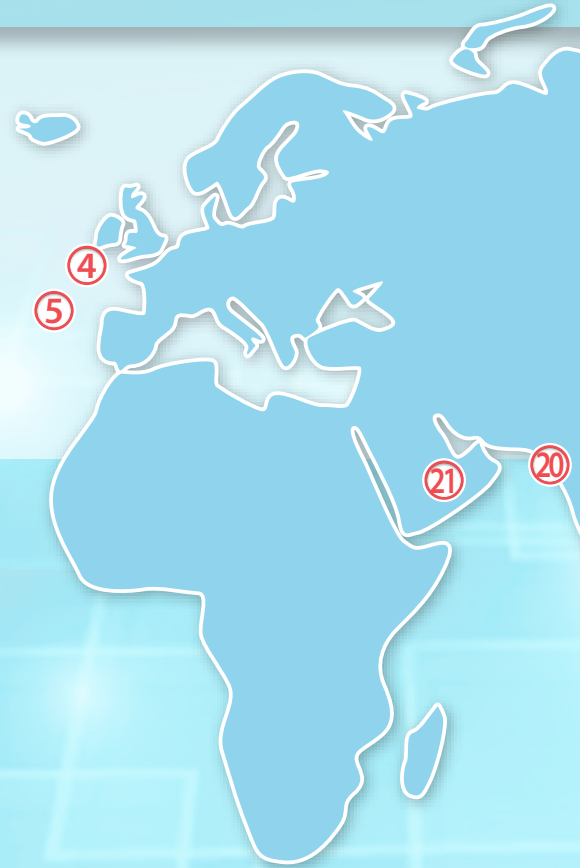
⑯ Logistics

Real estate

Insurance agent

# ADEKA Overseas Network

"Being a respected member of the world community," we are expanding our business domains and proactively developing our overseas operations in alliance with a network of 22 overseas bases in 12 countries.



## USA

**① ADEKA USA CORP.**  
Established January 2004 Business Sales of chemical products

**② AMFINE CHEMICAL CORP.**  
Established March 1994 Business Manufacturing and sales of polymer additives



**③ AM STABILIZERS CORP.**  
Established May 2012 Business Manufacturing and sales of polymer additives

## Germany

**④ ADEKA EUROPE GmbH**  
Established April 1999 Business Sales of chemical products

## France

**⑤ ADEKA PALMAROLE SAS**  
Established September 2000 Business Manufacturing and sales of polymer additives



## South Korea

**⑥ ADEKA KOREA CORP.**  
Established November 1991 Business Manufacturing and sales of chemical products



## China

**⑦ ADEKA (SHANGHAI) CO., LTD.**  
Established December 2001 Business Sales of chemical products

## ⑧ ADEKA FINE CHEMICAL (SHANGHAI) CO., LTD.

Established August 2002 Business Manufacturing and sales of chemical products



## ⑨ ADEKA FINE CHEMICAL (CHANGSHU) CO., LTD.

Established May 2003 Business Manufacturing and sales of polymer additives



## ⑩ ADEKA FOODS (CHANGSHU) CO., LTD.

Established May 2004 Business Manufacturing and sales of food processing oils and fats



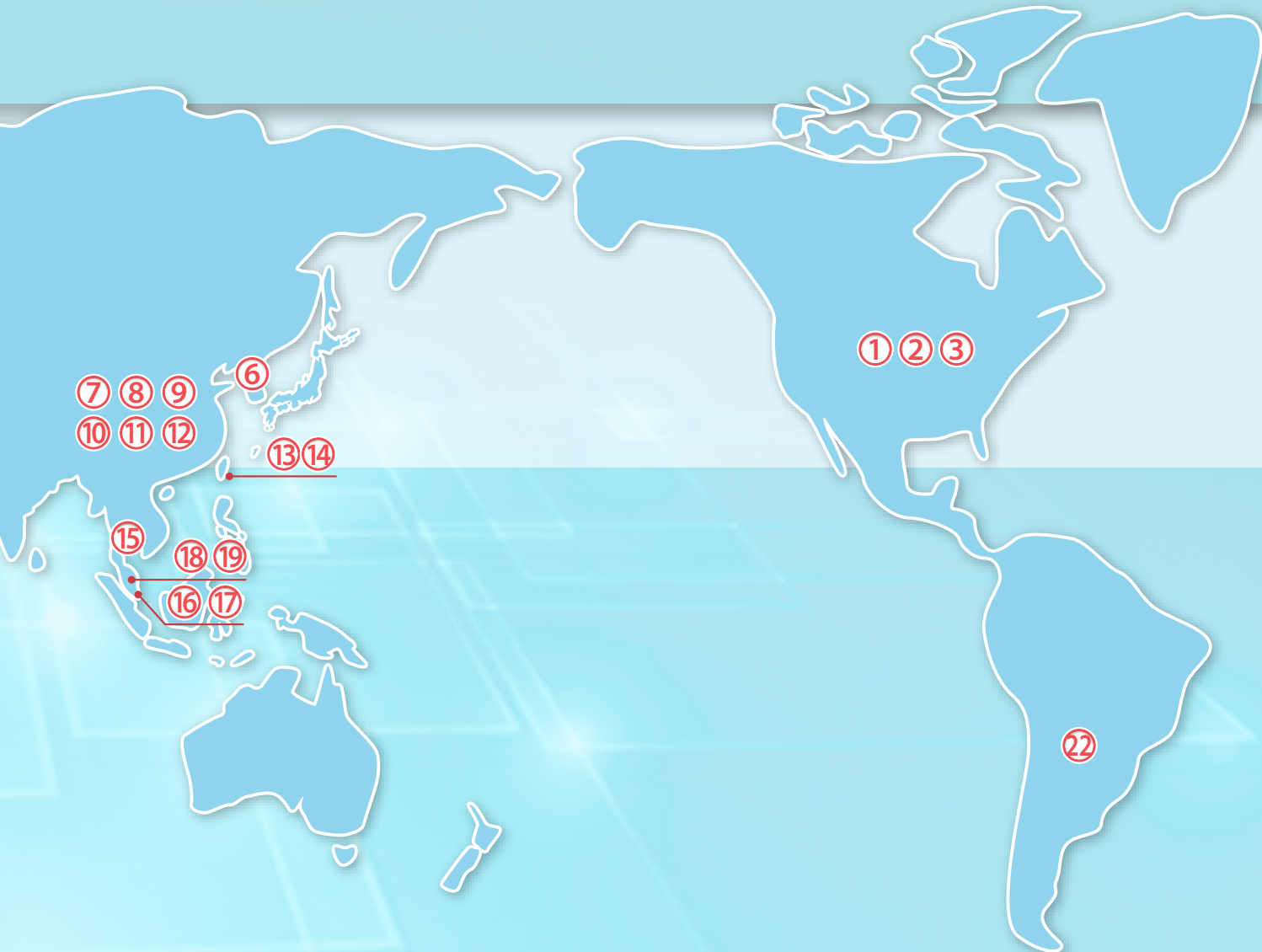
## ⑪ CHANG CHIANG CHEMICAL (SHANGHAI) CO., LTD.

Established April 2004 Business Sales of chemical products

## ⑫ KUKDO CHEMICAL (KUNSHAN) CO., LTD.

Established April 2002 Business Manufacturing and sales of functional polymers





**Taiwan**

**13** CHANG CHIANG CHEMICAL CO., LTD.

Established October 1989 Business Sales of polymer additives

**14** ADEKA FINE CHEMICAL TAIWAN CORP.

Established November 2004 Business Manufacturing and sales of chemical products



**Thailand**

**15** ADEKA FINE CHEMICAL (THAILAND) CO., LTD.

Established June 2004 Business Manufacturing and sales of polymer additives, etc.



**Singapore**

**16** ADEKA (ASIA) PTE.LTD.

Established September 2003 Business Sales of chemical products

**17** ADEKA (SINGAPORE) PTE.LTD.

Established July 1988 Business Manufacturing and sales of food processing oils and fats, and frozen piecrust, etc.



**Malaysia**

**18** ADEKA FOODS (ASIA) SDN.BHD.

Established November 2012 Business Manufacturing and sales of food processing oils and fats

**19** FELDA IFFCO OIL PRODUCTS SDN.BHD.

Established October 1975 Business Refining palm oil



**India**

**20** ADEKA INDIA PVT.LTD.

Established September 2007 Business Sales of chemical products

**UAE**

**21** ADEKA AL GHURAIR ADDITIVES LLC

Established April 2011 Business Manufacturing and sales of polymer additives



**Brazil**

**22** ADEKA BRASIL LTDA.

Established July 2012 Business Sales support and market development of ADEKA Group products

# CSR and Medium- and Long-term Visions of the ADEKA Group

The purpose of the Adeka Group's CSR initiatives is to realize its management policies in a sincere manner. The management vision was formulated from a mid- and long-term viewpoint, in order to reach a corporate ideal image which was stated in the management policies. Specific strategies and policies indicated in the management vision accord with the Adeka Group's CSR initiatives.

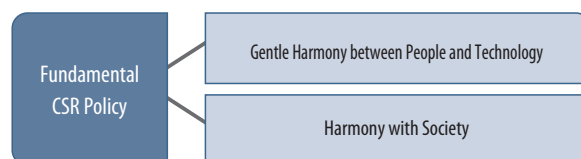
## Management Policies and Fundamental CSR Policy

The Adeka Group affirms its management policies of "working hard to be a forward-looking organization by staying on the cutting edge" and "being a respected member of the world community." The Group is pursuing corporate activities worldwide centering on products which are competitive and technologically advantageous in the global market.

Perceiving changes in trends sharply and constantly, the Adeka Group aims to create new products and technologies, taking into account their impacts on the environment and society.

While required to provide socially demanded and valuable things, the Group believe that it should put priority on "gentle harmony between people and technology" as a company aiming to develop a better community.

Furthermore, the Group considers it necessary to continue corporate efforts to create common values in partnership with stakeholders, striving to harmonize with society in terms of various environmental and social issues, in addition to social contribution through provision of products and technologies, as a respected member of the world community.



## ADEKA Group's CSR is the "Creation of Common Values", in common with those of Society

ADEKA Group's CSR encompasses initiatives aimed at enhancing our corporate value through the creation of values that we can share with society, in order to solve social problems through ADEKA's technologies, products and services, and human resources, based on our management philosophies, toward the realization of a sustainable society.

The common values that we aim to create are not limited to economic values, such as profits, but also include "human values" such as the respect of human rights and the creation of pleasant working environments in which employees are motivated to work. Furthermore, it also encompasses "society-side values" such as fair and open management practices as well as environmental conservation and protection. Through the creation of these values, it is our goal to become a company that is needed by society.

To create common values, ADEKA, which provides raw materials for chemical and food products, places its focus not only on direct users and suppliers, but on the entire value chain that includes upstream and downstream stakeholders such as end-users and local communities. Our concept of CSR recognizes the need to accurately capture the impact of our corporate activities while paying close attention to feedback and opinions from our stakeholders.

## Formulation of Medium- to Long-Term Vision

In order for us to move steadily toward our ideal corporate image based on our concept of CSR, we have formulated a medium- to long-term vision, which represents our aspiration for fiscal 2016.

### Medium- and Long-term Vision

As **“a Good Company”**, to reach 300 billion yen in sales by FY2016

As **“a Good Company”**, to be the No.1 company in strategic field and to create value by developing products and services for the quality of life.

Setting the goal of “being a company generating net sales of ¥300 billion by January 2017 marking the 100th anniversary of its foundation” in fiscal 2006, the Adeka Group has taken various measures for growth.

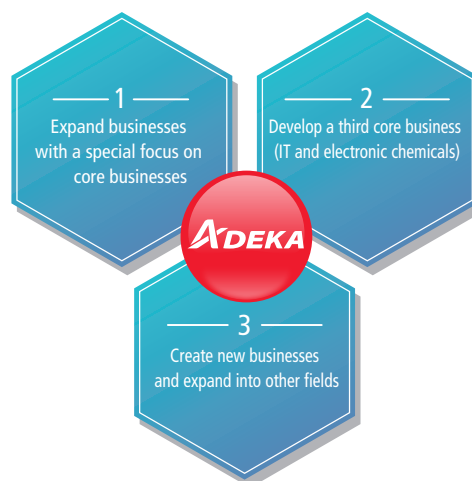
“A Good Company” we aim to be means becoming a corporate group which creates various values with “Competent,” “Vigor,” and “stability” appropriate for a company earning net sales of ¥300 billion.

Redefining strategic fields by segment, in which the Adeka Group can utilize its strength, the Group creates new values for customers and other stakeholders through continuing to take on challenges to be No.1 in those fields.

In accordance with the above-mentioned management policies and CSR fundamental policy, the Adeka Group contributes to society as increasing its existence value in the world by creating values which only the Adeka Group can create through business operations in partnership with stakeholders.

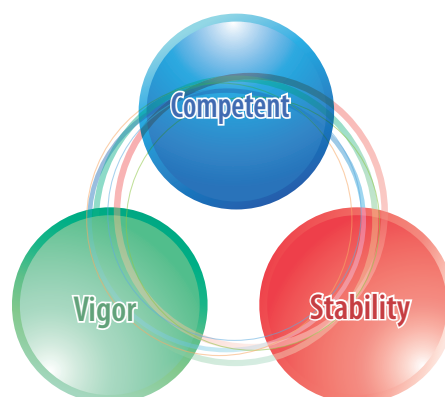
### Three Fundamental Strategies toward Achievement of the Medium- and Long-term Visions

- 1** Aiming to double net sales by fiscal 2016, by expanding the business scale, especially in the polymer additives and food businesses which have been regarded as core business segments.
- 2** Making the IT and electronic chemicals business grow to be a core business by early expanding its sales threefold.
- 3** Proactively implementing M&A and forming alliances as important management means from viewpoints of effective use of external resources, and expansion and growth of business.



### A Good Company

“A Good Company” means a company which has a global presence, contributes to society, and continues to grow with the following three elements: 1) “capability” to expand its business size with R&D and capital investment; 2) “vitality” to keep employees highly motivated; and 3) “stability” to continue to earn sales and profits in a stable manner, flexibly responding to changes in the external environment.

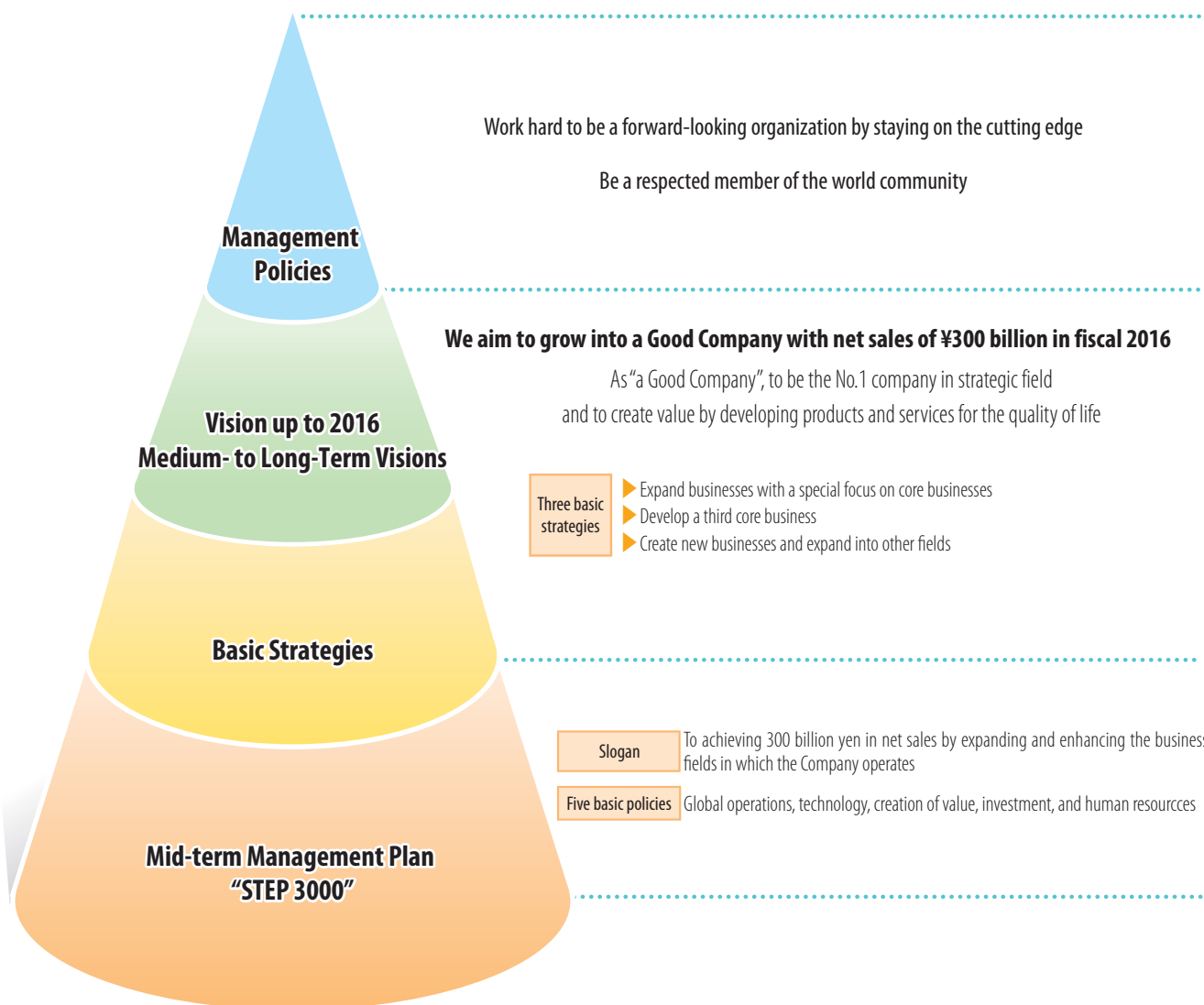


## Started Mid-term Management Plan

# Toward Becoming a Good Company with Net Sales of 300 Billion Yen by Fiscal 2016

In fiscal 2016, ADEKA will mark the 100th anniversary of the foundation (in January 27, 1917). In order to realize the “medium- and long-term visions” formulated as an “Vision up to 2016,” the Mid-term Management Plan “STEP 3000” (FY2012–FY2014) was established.

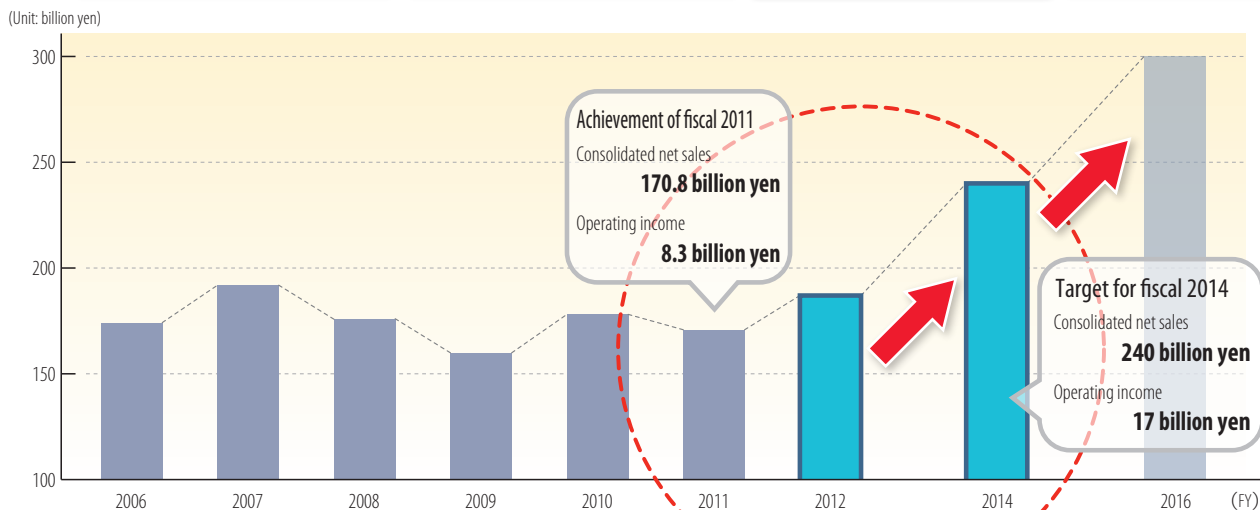
Regarding a period of this mid-term management plan as “a time to take steadfast measures,” we will promote expand and enhance business domains toward a significant leap forward of the Adeka Group



## Targets of STEP 3000

STEP 3000 powerfully pursues “creation of new products” and “expansion of overseas operations,” which are the Group’s growth strategies, aiming to achieve net sales of ¥240 billion and operating income of ¥17 billion in fiscal 2014, according to the five basic policies of overseas operations, technology, creation of value, investment, and human resources.

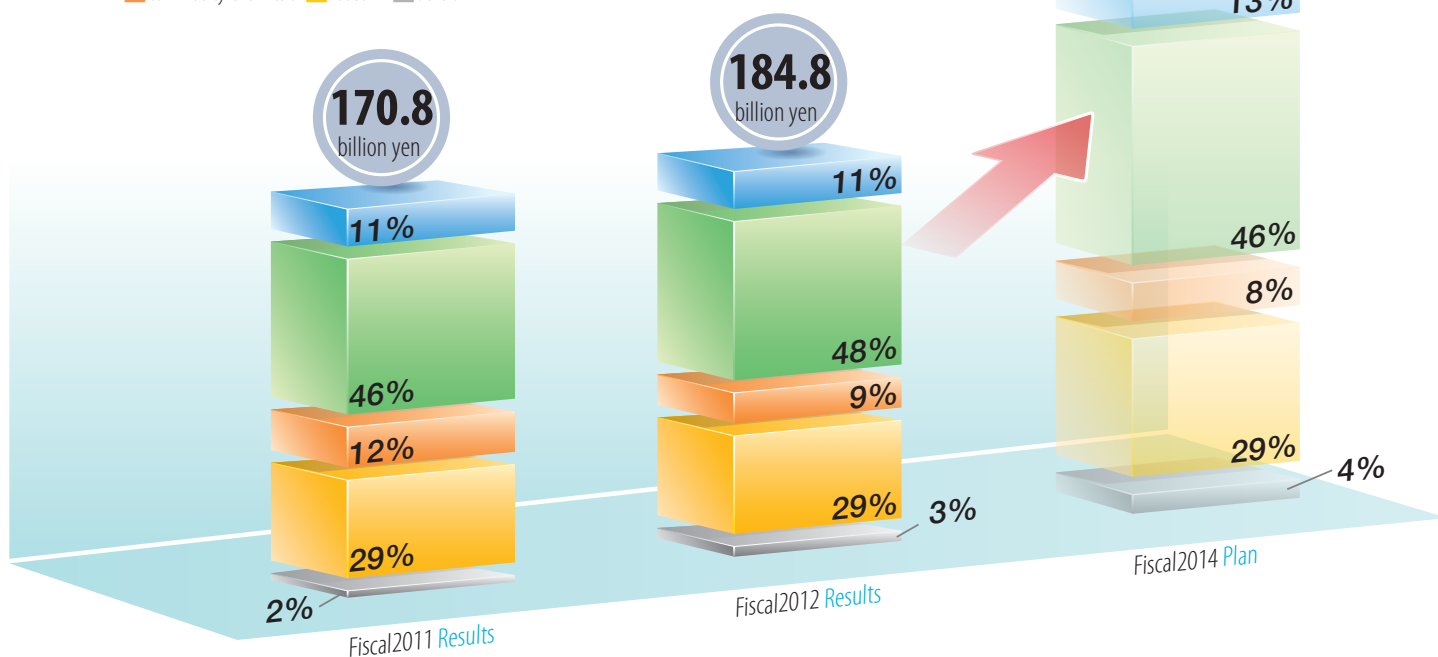
### Net sales in fiscal year (Achievement and Target)



(Unit: billion yen)

	Fiscal 2011 (Results)	Fiscal 2012 (Results)	Fiscal 2014 (Plan)	Fiscal 2016 (Reference)
Net sales	170.8	184.8	240	300
Operating income	8.3	9.8	17	24
Operating income ratio	4.9%	5.3%	7%	8%

■ IT and Electronics    ■ Functional Chemicals  
■ Commodity Chemicals    ■ Foods    ■ Others



## Mid-Term Management Plan

# Initiatives Toward the Realization of Our Mid-Term Business Plan "STEP 3000"



In fiscal 2012, we implemented initiatives toward the realization of "STEP 3000," in line with the five basic policies that we have established

	Global Operations	Technology
Items		
Goals	<ul style="list-style-type: none"> <li>● In our current 22 overseas operating bases in 12 countries, we will enhance and expand business while taking into account CSR.</li> <li>● Strengthening our marketing function and developing products that meet local needs in the ever-growing Asian markets</li> <li>● Entering into new markets and making capital investment                             <ul style="list-style-type: none"> <li>▶ We will enter into markets expected to grow in demand, and form strategic alliances</li> </ul> </li> <li>● Establishing overseas research and development centers (in South Korea and China)</li> <li>● Considering establishment of regional headquarters                             <ul style="list-style-type: none"> <li>▶ We will speed up our decision-making, reinforce marketing functions, and standardize administrative operations</li> </ul> </li> <li>● Establishing a global production system                             <ul style="list-style-type: none"> <li>▶ Establishing a global purchase system</li> <li>▶ Establishing production systems in optimal locations for maximum efficiency</li> <li>▶ Securing global production capacity</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Creating new businesses                             <ul style="list-style-type: none"> <li>▶ Regarding "life science" and "environment/energy" as our priority fields for new businesses, we will establish materials laboratories specialized in each field to develop products with better research manpower</li> </ul> </li> <li>● Developing new products                             <ul style="list-style-type: none"> <li>▶ We will develop competitive products with combination of our unique fundamental and core technologies, so that sales of new products will account for 30% of total non-consolidated sales</li> </ul> </li> </ul>
Results	<ul style="list-style-type: none"> <li>● United States: Established AM STABILIZERS CORP., which manufactures and sells polymer additives. Acquired vinyl chloride stabilizer business from Hammond Group, Inc.</li> <li>● Brazil: Established local subsidiary ADEKA BRASIL LTDA., which commenced operations in April 2013</li> <li>● Malaysia: Established ADEKA FOODS (ASIA) SDN. BHD., a joint venture company in the food business, and began construction work on the plant</li> </ul>	<p><b>Japan</b></p> <ul style="list-style-type: none"> <li>● Completed new research center at the Urawa R&amp;D Laboratory</li> <li>● Was highly appraised by the Japan Health and Nutrition Food Association as part of its functional assessment project, for our barley beta-glucan products, which contribute to normalizing blood cholesterol and suppressing the rise of postprandial blood glucose level</li> </ul> <p><b>Overseas</b></p> <ul style="list-style-type: none"> <li>● Korea: Expanded the R&amp;D center of ADEKA KOREA CORP., a company that engages in the manufacturing and sale of chemical products</li> <li>● China: Reviewed the establishment of an R&amp;D center</li> </ul>

## Highlights of Fiscal 2012

Fiscal 2012 was the first year in the launch of our "STEP 3000" Mid-Term Management Plan. Despite the difficult business environment arising as a result of the impact of the European debt crisis and the slowdown in the growth of emerging economies including China, we were able to make strategic investments toward the future growth of the company. These included the acquisition of a vinyl chloride stabilizer business in the United States and the establishment of a sales company in Brazil, as well as establishment of a joint venture food company in Malaysia.

Fiscal 2013, which is the second year in the implementation of our Mid-Term Management Plan, will be an important year for ADEKA. During this year, our growth strategies must bear fruit in order for us to achieve the goals that we have laid out for the final fiscal year in our Management Plan. Each department will take up the challenge boldly under the slogan, "Focusing on our goals, and taking action while maintaining a constant awareness of fulfilling our roles."

## Creation of Value

- Providing as wide a range of solutions as possible to our customers
  - ▶ We will strengthen our marketing function and inter-divisional cooperation in order to provide maximum value to our customers
  - ▶ We will incorporate the BCP into our business strategy in order to establish a supply chain less susceptible to risks
- Expanding business operations
  - ▶ We will focus more on general-purpose" additives than on polymer additives
  - ▶ We will enter into new food-related fields to make a qualitative shift in our food business
- Promoting CSR activities
  - ▶ We will strengthen corporate governance as well as CSR management on the basis of social action programs through business operations, in order to realize people's enriched lives

### Japan

- Conducted a marketing training program for ADEKA Group management staff

### Overseas

- Strengthened ties with customers, and received various awards
  - ▶ China: ADEKA (SHANGHAI) CO., LTD., which engages in the sale of chemical products, received the "Excellent Supplier Award"
  - ▶ Taiwan: ADEKA FINE CHEMICAL TAIWAN CORP., which engages in the manufacturing and sale of chemical products, received the "Excellent Vendor Gold Award"
  - ▶ Korea: ADEKA KOREA CORP., which engages in the manufacturing and sale of chemical products, received the "Best Partner Award"

## Investment

- Planning to make capital investments worth about 40 billion yen over three years
  - ▶ Overseas capital investment will account for about 60% of total capital investment
- Planning to allocate about 20 billion yen for M&A in order to expand into other fields and create new businesses

### Japan

- Completed a new research center at the Urawa R&D Laboratory
- Constructed a manufacturing facility for ester-based additives at the Chiba Plant

### Overseas

- Established three overseas subsidiaries in United States, Brazil, and Malaysia
- Korea: Established additional production facilities for semiconductor materials at ADEKA KOREA CORP., which engages in the manufacturing and sale of chemical products
- China: Established additional production facilities for antioxidants at ADEKA FINE CHEMICAL (CHANGSHU) CO., LTD., which engages in the manufacturing and sale of polymer additives

## Human Resources

- Developing human resources as our most important corporate asset
  - ▶ Enhancing abilities of employees and develop globally competitive human resources
  - ▶ Developing highly professional human resources
  - ▶ Fostering female executive employees and enhancing their skills
  - ▶ Employing more foreign personnel

- Enhanced overseas training system
- Took proactive steps to recruit mid-career personnel
- Took proactive steps to carry out job rotation for employees: 27 employees were involved in the global job rotation program
- Improved childcare systems, and produced leaflets/pamphlets to disseminate information about these systems
- Expanded recruitment of foreign students and personnel with experience in working overseas



Five Basic Policies

Global  
Operations

## Extending Global Reach, and Accelerating Localization

Based on our management philosophies of “working hard to be a forward-looking organization by staying on the cutting edge” and “being a respected member of the world community,” we are accelerating our efforts to expand our businesses globally, with a focus on technologically superior product groups that are competitive in the global market.

### Basic Stance for Overseas Businesses

ADEKA Group aims to contribute to the world by injecting effort into growth sectors through unique superior technologies, and by providing cutting-edge products that meet the needs of our customers.

### History of Overseas Businesses - Objectives and Progress

The 1970s to the 1990s was the period of the dawn of the overseas expansion of the ADEKA Group. Initially, overseas expansion was achieved in the form of joint ventures with local partners in NIES\* and Southeast Asian countries with the objective of obtaining stable supplies of raw materials.

The period around the year 2000 was the period of development. During this time, we harnessed our own capital for our overseas expansion efforts. We established bases in Europe, America, and Asia across all of ADEKA'S businesses, and set up local manufacturing and sales systems. Of particular note is our success in breaking into the Chinese market at an early stage, establishing six companies within a four-year period from 2001 to 2004.

The period from 2005 to the present day represents a new growth period, and we have been aiming to diversify our overseas businesses during this period. In addition to expanding into countries such as India and Brazil, we have also been working to strengthen our production facilities and enhance efficiency in the operation of our overseas businesses through the elimination and consolidation of bases.

### Localization, Which is Vital to the Expansion of Our Overseas Businesses

We believe that it is important to further accelerate the localization of activities for our local companies even as we extend our global reach. By assigning local employees to key positions, we aim to improve the management capabilities of our local subsidiaries and bring about prosperous lives for the people through corporate activities that create value. We believe that this is the key to contributing to the development of the country.

Last year, the new company in the food business that we had set up in Malaysia established the following as its segment vision: “Developing processing technologies for oils and fats in order to contribute to the realization of a rich dietary culture in Asia.”

### Development of Human Resources Who Hold the Key to Overseas Expansion

To further speed up our overseas expansion efforts going forward, it is necessary to have human resources who can accept and respect differences in culture and customs in various countries, as well as help to expand our playing field to encompass the whole world. Human resources are the most important, as well as the best, assets that a company has, and we regard them as an important factor in further advancing our overseas expansion efforts in the future.

As the market seeks responses to an ever-changing business environment and diversifying customer needs, we aim to promote diversity, expand the areas of activity for our local employees, and contribute to the development of the local economy and culture.

\*NIES designates countries and regions that have experienced rapid economic growth in the latter half of the 20th century



Company name: ADEKA FINE CHEMICAL(THAILAND)CO., LTD.  
 Location: Bangkok (sales base); Rayong Province (manufacturing base)  
 Management system: Received ISO9001 accreditation  
 Capital: 350 million baht  
 Businesses: Non-heavy metal stabilizers for PVC, manufacturing and sale of special polyester plasticizer

## Taking Up the Localization Challenge for ADEKA FINE CHEMICAL (THAILAND) CO., LTD.



**Masaru Nagahama**  
 Leader, Urawa R&D Management Group  
 Planning Department

.....  
 First manager of the Development Office which was established in 2008, and remained in the position till 2012

Amongst ADEKA's businesses, the polymer additives business has achieved the greatest degree of global expansion. Bases have been established in Asia, Europe, and the Americas, and a wide range of market activities are carried out. The polymer additives business is also engaged in corporate activities that take into consideration the characteristics of each market and local region.

As part of these efforts, a development office was set up within the production plant of ADEKA FINE CHEMICAL (THAILAND) CO. LTD. (AFCT), which was established in 2005. Through an integrated development, manufacturing, and sale system, the company has been highly appraised by its customers for the provision of products and services that match local needs.

### Building Systems that Respond to Local Needs While Protecting the "ADEKA Character"

AFCT manufactures and sells additives for PVC that is used in component parts of automobiles and home appliances. These additive products are targeted at plastic manufacturers in Thailand, as well as in other Southeast Asian countries such as Indonesia and Malaysia. In Japan, most of the products are non-heavy metal stabilizers that do not contain cadmium and lead. However, in the above-mentioned countries, inexpensive and metal stabilizer products with high cost-performance are the mainstream in the market.

Against the background of this market situation, AFCT, which manufactures only non-heavy metal stabilizers, was originally focused on supplying products to user companies which produce products for Europe and America. However, with the aim of becoming more proactive in responding to local needs, a development office was established within the production plant. This office has built up a precise product development system that also provides technological services, and is contributing to improving business performance for the company.



## Taking Up the Localization Challenge for ADEKA FINE CHEMICAL (THAILAND) CO., LTD.

### Gaining the Trust of Customers Through Close Communication

Price competitiveness is the most important factor that facilitates the acceptance of a company in a local market. Consequently, the key lies in accurately capturing the needs of the market by possessing smooth communication channels with customers. To that end, AFCT established a development department in 2008 in order to build up a system for developing new products that come with local specifications. This, in turn, was achieved by having experienced ADEKA engineers pass on knowledge and knowhow about additives to local technical staff, in line with ADEKA's policy of producing high-quality heavy metal free products

The production of plastic products is accompanied by various types of problems. While knowledge about additives is, of course, required in order to resolve such issues, the knowhow that has been accumulated by engineers through their work experience is also important. AFCT technical staff has won the trust of customers by being business partners that customers can consult with on all issues. In addition, through close communication with customers, they have also succeeded in providing products that better match the needs of customers. AFCT products have been highly appraised by customers for being reasonably priced and environmentally friendly. Customers have also praised staff for the prompt and attentive service they have received.

### Achieving Steady Skill Improvements Through "Specially Tailored" Human Resource Development

There are currently about 60 employees (of these, four are Japanese employees) in AFCT.

The development department has kept up constant recruitment of several employees since its establishment in 2008. There are currently seven employees in the department, including four quality assurance representatives. The department is engaged in the work of product development and the provision of technical services. Although new employees possess a high level of knowledge in specific areas of specialization, they lack fundamental knowledge about chemical reactions and synthesis. As such, the department manager and senior employees provide these new employees with training and education on a one-to-one basis. Other efforts are also made to improve the skills of staff. These include the holding of regular study seminars based on case studies of past research for all employees, as well as training programs at the Global Technical Center's Urawa R&D Laboratory and at Mie Plant, which is ADEKA's main plant for the production of polymer additives.

In the area of providing technical support services through customer visits, employees are trained through OJT, which includes accompanying trained staff on such visits. Currently, local Thai technical staff is also actively engaged in the provision of such services in their respective areas. The results of our "specially tailored" human resource development efforts are also gradually emerging in the aspect of product development, where employees are creating new products that have never been seen before in ADEKA's product lineup.

In addition to improving quality and production efficiency, AFCT will continue in its drive to develop new employees by deploying them to the technical section of the production department, so that they may provide production technology-related services to user companies in the future.



Commemoration ceremony for the establishment of AFCT



Company trip – The welfare committee, comprising AFCT employees, plan events



Donations from AFCT to an orphanage



Sponsoring the "Japan Festival" held by Japanese corporations in the industrial park



# Expanding Business Through Investments Targeted at Sustainable Growth

The ADEKA Group has planned to put in investments totaling 60 billion yen in fiscal 2012 to 2014. Its proactive stance with regard to investments is aimed at expanding its scope of business, and creating new business domains through capital investment and M&A in Japan and abroad. In fiscal 2012, the focus was placed on expanding its markets, and efforts were injected into expanding and strengthening its global businesses.



## United States

### Generating Synergy Through Establishing Subsidiaries and Acquiring Businesses

AM STABILIZERS CORP, which produces and sells PVC stabilizers and other products, was established as a subsidiary of AMFINE CHEMICAL CORP, which produces and sells polymer additives. In tandem with this, the PVC stabilizer business acquired from Hammond Group, Inc. was transferred to the new subsidiary.

We aim to further expand our polymer additives business by combining the excellent technology, products, and sales networks of ADEKA Group and Hammond Group, Inc.



Company name: AM STABILIZERS CORP.  
 Location: State of Indiana  
 Established: May 2012  
 Businesses: Manufacturing and sale of polymer additive products, including PVC stabilizers



## Brazil

### Establishing a Local Subsidiary to Gain a Foothold in the South American Market

Local subsidiary ADEKA BRASIL LTDA. was set up with the aim of expanding the sale of ADEKA Group products, in particular polymer resin products, to automobile and electronics industries in Brazil and other parts of South America.

The Brazilian market is expected to expand and develop further going forward, as it plays host to the soccer World Cup in 2014, and the Rio de Janeiro Olympic Games in 2016. In view of that, we are putting effort into expanding sales in the Brazilian market and conducting market surveys of the South American region.



Company name: ADEKA BRASIL LTDA.  
 Location: Sao Paulo  
 Established: July 2012 (start of operation in April 2013)  
 Businesses: Sales support for ADEKA Group products and market development



## Malaysia

### Bringing "Good Taste" to Southeast Asia

In a joint venture with the IOI Group, which is one of the largest conglomerates in Malaysia, we established ADEKA FOODS (ASIA) SDN. BHD. to manufacture and sell processed fats, with a focus on the production of margarine.

We will further develop and expand our food business so as to fulfill our goal of delivering safety, assurance, and good taste to customers in Southeast Asia, where growth is anticipated.



Company name: ADEKA FOODS (ASIA) SDN. BHD.  
 Location: State of Johor  
 Established: November 2012 (expected to commence operations in June 2014)  
 Businesses: Manufacturing and sale of processed oil and fats, including margarine and shortening



# Creating Innovation Through Development of Fundamental and Core Technologies



**Kazuhiko Morio**  
Director and Managing Operating Officer,  
and General Manager of the Research and Development

Creating innovation through research and development, as well as contributing to the development of society, are important missions for the ADEKA Group. We are committed to creating products with value, which combine new technologies with the various technologies that we have built up over our years in the business, and to contributing to the development of a harmonious society that provides peace and safety.

In the area of information electronics, our products have been adopted for use as important parts in cutting-edge equipment such as smartphones, and highly appraised as materials that are indispensable to the world today. Energy and life innovation are global issues.

ADEKA is putting effort into the development of unique materials technology that can contribute to energy conservation and the area of electricity storage materials. These include materials for wind power generation and organic solar cells, such as dye-sensitized and organic thin-film that are required in the field of renewable energy.

In the area of life science, we have made use of natural materials such as beta-glucan, and conducted research into materials used in nutritional supplements, health foods, and cosmetic products, based on the keywords "healthcare" and "anti-aging." In the field of medical products, we are also dedicated to the development of diagnostic products and new products for medical treatment, such as contrast agents for the early detection of colon cancer.

In order to develop technologies that can play a useful role in the global community, we are actively engaged in tie-ups with other companies, universities, and public institutions. We have also placed our focus on strengthening our research and development bases overseas, and aim to create new values that bring together various cultures.

## Developing Health Materials to Solve Social Issues



**Kazufumi Tsubaki**  
Manager, Development Department,  
Life Science Materials Laboratory

The rapid emergence of an aging population is an issue for developed countries, and a problem faced not only by Japan, but also by other countries in Asia. The prevention of diseases and maintenance of healthy bodies throughout one's lifetime are desires that are common to all of humankind. ADEKA is moving forward on the development of superior health products that can contribute to the maintenance of immunity, and the prevention of lifestyle diseases. We have succeeded in commercializing high-functionality beta-glucan from black yeast and barley (barley beta-glucan, fermented beta-glucan), and are working toward acquiring the status of food for specified health uses for our barley beta-glucan products. Barley beta-glucan is very safe and provides health functions. Tests conducted on humans have also shown that it provides immunity against virus infections and cancer, and is effective in the prevention of diabetes and heart diseases. On the other hand, fermented beta-glucan has excellent hydrating function, and is therefore used in cosmetic products.

ADEKA is dedicated to research and development of intake formats and new functionalities that can maximize the functionality of beta-glucan, as well as to application of beta-glucan in the medical field, including ingredients for cosmetics and dressing for wounds.



## Development of Illuminated Contrast Agent, Nano-Beacon, That Can Detect Only Cancer Cells



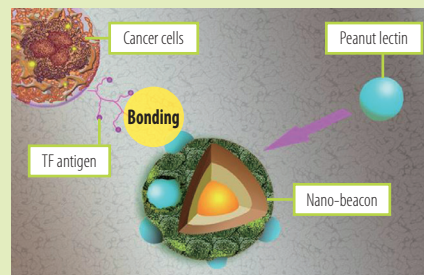
**Seiji Koike**  
 Manager, Research Department,  
 Life Science Materials Laboratory

The area of life sciences aims to create a society where people are healthy, energetic, and have long lives, and where they can enjoy lifestyles of high quality. One of the life sciences research and development themes that we are currently tackling, is the development of "nano-beacon," which is a contrast agent that can contribute to the early detection of colon cancer. Nano-beacon is a substance that is made up of highly sensitive fluorochrome contained in polymer (macromolecular organic compound). The surface of the polymer is processed using the polymer synthesis technology that ADEKA excels in, in order to create specific bonds\* only with cancer cells.

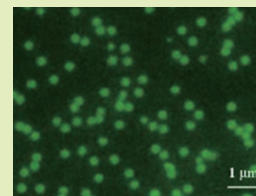
Early colon cancer detection is the key to recovery. When the nano-beacon comes into contact with cancer tissues on the colon mucosa (in the digestive tract), the cancer cells become brightly illuminated in significant contrast with normal cells. Thus, the adoption of nano-beacon technology is expected to increase diagnostic accuracy in endoscopy for the early detection of cancer.

The detection of cancer in its early stages contributes not only to improvements in the quality of life (QOL) for patients, but also to resolving the problem of rising medical costs. Going forward, we plan to evaluate the efficacy of the technology and conduct further tests so as to commercialize it as soon as possible.

\*In a joint research conducted with an American university, we have confirmed that nano-beacon bonds with colon cancer tissues from patients, and not with normal tissues.



The surface of cancer cells bonds with peanut lectin on the nano-beacon, and the dye molecules that are concentrated in the center part give off a strong fluorescent light.



Electron micrograph of nano-beacon, showing it being illuminated

## Development of Wavelength Conversion Materials to Improve Power Generation Efficiency of Solar Cells



**Hirokatsu Shinano**  
 Research Associate, Environmental & Energy  
 Materials Laboratory

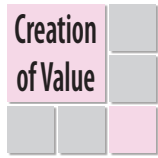
Solar power, which makes use of the inexhaustible supply of sunlight, is a power generation method that can generate sustainable clean energy. It would not be an exaggeration to say that the future of mankind depends on solar power. However, the reality is that a major technological barrier stands in the way of solar power adoption; these are the issues of improving power generation efficiency and reducing production costs.

In light of these circumstances, wavelength conversion formats have been drawing attention for their ability to enhance efficiency at low costs. This is achieved through the addition\*<sup>1</sup> of new materials (wavelength conversion materials) to sheets or film used to seal in the power generating elements (cells), and converting low-efficiency ultraviolet rays into visible rays. We are engaged in the development of this new material by applying ADEKA's optical functional material development technology. In fiscal 2012, we succeeded in developing organic fluorochrome that has approximately 80%\*<sup>2</sup> of wavelength conversion efficiency (ultraviolet rays ⇒ visible rays), and which can improve the conversion efficiency of crystal Si-based solar cells by approximately 0.4%\*<sup>2</sup>. In fiscal 2013, we began to send out samples of this product. There are still various problems that we have to tackle, such as the need for a durability that is equivalent to the lifespan of a solar cell. However, we aim to achieve further improvements in conversion efficiency, and will continue in our challenge to achieve the dreams of humankind.

\*<sup>1</sup> Adding additives that have a wavelength conversion effect, instead of using conventional ultraviolet absorbers    \*<sup>2</sup> Based on evaluation by ADEKA



During ultraviolet irradiation (left). Before ultraviolet irradiation (right).



# Toward Enhancing the Company's Presence by Strengthening Ties with Customers

ADEKA Group is united in our efforts to facilitate the provision of solutions to our customers. We will enhance our enterprise power in order to provide valuable products and services as well as create new values, and contribute to the realization of a better society.

## Efforts to Provide High-Quality Products and Create New Values

ADEKA Group puts effort into the development of new technologies and improving product quality every day, with the aim of ensuring a continuous supply of valuable products and services to our customers.

Since fiscal 2004, we have been holding presentation seminars that feature case studies of improvements achieved in the "four areas of safety\*," with the aim of raising awareness toward product and service quality. Group companies from within and outside Japan participate in these presentations, which are held in December every year. During these sessions, case studies that showcase quality improvements and improvements in production and work efficiency are introduced to participants. In addition, the participation of the distribution and administration departments contribute to the sharing of information about customers and market needs during these sessions. We will continue to put our best into providing products and services of high quality, through mutual efforts at improving ourselves.



Symbol of safety initiatives in the four areas



Presentation seminar that features case studies of improvements achieved in the "four areas of safety"

### Voice

#### Receiving the Award of Excellence in the Presentation Seminar for Case Studies of Improvements Achieved in the "Four Areas of Safety"

ADEKA Fine Foods Corp. is committed to daily efforts to reduce disasters and complaints to zero, including minor calamities, through our improvement activities. We have taken up "not allowing any foreign substances to escape our eyes" as our slogan for this initiative.

As part of our efforts to achieve equipment-related improvements on the production lines, we conduct repeated trial and error tests and come up with ideas as a united team, in order to improve existing lines that involve many detailed work processes.

As a result of our ceaseless efforts, we received the Award of Excellence in the presentation seminar. We are delighted and proud of the results we have achieved, and will continue to further improve ourselves going forward, so as to deliver even better products to our customers.



ADEKA Fine Foods Corp.

### Awards from External Parties



#### Receiving the Excellent Supplier Award from a Plastics Manufacturer (China)

In December 2012, ADEKA (Shanghai) Co., Ltd. (ADSH) received the Excellent Supplier Award from Kingfa.

Kingfa is the largest modified plastics manufacturer in China, which awards excellent suppliers every year. ADSH was highly appraised and awarded for its aggressive sales activities and technological services for the polyolefin additives, flame retardants, and PVC stabilizers that it supplies to Kingfa.



ADEKA (Shanghai) Co., Ltd.

#### Main Awards from External Parties for Fiscal 2012

Award recipient	Period	Award	Award given by
ADEKA Life-Create Corp. <b>Japan</b>	November 2012	Merit Award for Cooperation on Fire Management Business	Ogu Fire Station
ADEKA Fine Chemical Taiwan Corp. <b>Taiwan</b>	December 2012	Excellent Vendor Gold Award	TOPPAN CFI (TAIWAN) CO., LTD.
ADEKA Korea Corp. <b>Korea</b>	December 2012	Commendation from the Governor of North Jeolla Province	North Jeolla Province
ADEKA KOREA Corp. <b>Korea</b>	March 2013	Best Partner Award	Samsung Electronics

\*The important items that should be secured as the highest priority items for plant operation were established based on the four classifications of "occupation," "quality," "equipment," and "environment."



# Nurturing Next-Generation Leaders Who Can Lead the Global Business

As part of our initiatives to nurture global human resources, we introduced an overseas training system in fiscal 2007, which allows employees to undergo training for half a year at an overseas affiliate and language school. In the past few years, we have also enriched and expanded our work training program that dispatches employees to the head office, research departments, and production bases. Through active initiatives in personnel exchanges and mutual motivation and help, we aim to nurture next-generation leaders who can play a

## Experiencing the Business World Overseas, and Understanding the Importance of Communication



Training location

Taking advantage of the overseas training system, I took part in a language training and OJT program at a local subsidiary in Singapore for approximately half a year from May 2012.

During the program, I had the opportunity to visit the target markets of our food business in Southeast Asia, and gained experience in carrying out marketing activities. I had already formed a prior image of how business is conducted overseas, but this trip allowed me to gain a real sense of the situation outside of Japan.

I also felt strongly the importance of communication skills, including language skills, and how common Japanese practices and ideas were not applicable overseas. Going forward, I aim to keep a constant view toward global trends, put effort into marketing activities, and work hard to improve myself in order to become a global human resource.



**Takaaki Shimakawa**  
East Japan Foods Sales Department,  
Foods Division



**Yusuke Fujita**  
Commodity Materials Department,  
Chemicals DivisionFoods Division

## Significant Changes in Values Through Understanding Cultural Diversity



Training location

During my language training in Shanghai, China, in addition to acquiring a working knowledge of the Chinese language, I also became closely acquainted with Chinese culture and practices. It was a valuable experience for me. China is a vast country with diverse cultures (both in terms of languages and customs), and gaining an understanding of this cultural diversity brought about significant changes in the way I perceive China.

Understanding the local culture, and on top of that, building interpersonal relationships, are necessary elements for survival in the global community. Going forward, I will harness this experience and further improve myself, and strive to play a useful role in expanding ADEKA's global businesses.

## Learning Japanese Technology and Applying it to Local Projects



Training location

For a one-week period from June 3, 2012, I underwent training in production processes at the Mie Plant, along with eight members of the antioxidant manufacturing project team from ADEKA Fine Chemical (Changshu) Co., Ltd.

The training program was a fruitful one in which we learnt about many technologies under the earnest guidance of the engineering team at the Mie Plant. These included the handling of powder substances, assembly and disassembly of manufacturing equipment as well as a study of their structures, methods of verifying the oil-water separation interface, methods of controlling the quality of the solvent distillation process, and methods of regular management for various types of equipment.

This training program helped me to gain an understanding of the overall flow of the antioxidant manufacturing process, and I will continue to put effort into learning about the causes and solutions for different types of problems and trouble. I also aim to learn from the enthusiasm and passion of the employees that I witnessed at the Mie Plant, and to play a useful role in my workplace going forward.



**Zhenghua Liu**  
Manufacturing Department,  
ADEKA Fine Chemical (Changshu) Co., Ltd.  
Chemicals DivisionFoods Division

# Securing Product Safety and Improving Product Quality

ADEKA strives to secure product safety and improve product quality based on the concept of “quality safety,” which integrates quality assurance and product safety.

## Message from the Representative

The ADEKA Group considers quality assurance and product safety as an integrated concept that aims to provide safe and high-quality products and services to its customers. To that end, we have put in place initiatives based on our unique idea of “quality safety.”

In fiscal 2012, we conducted reviews of next-generation systems in order to ensure food safety in response to diversifying regulations for chemical substances, and in consideration of the strengthening of international management and increasingly diverse dietary habits.

Going forward, the ADEKA Group will continue to strengthen its quality safety system, which serves as a foundation for the realization of the medium- to long-term vision of becoming a Good Company that generates net sales of 300 billion yen.

**Junya Takeuchi**

General Manager, Environment Safety & Quality Assurance Department,  
Environmental Protection Division

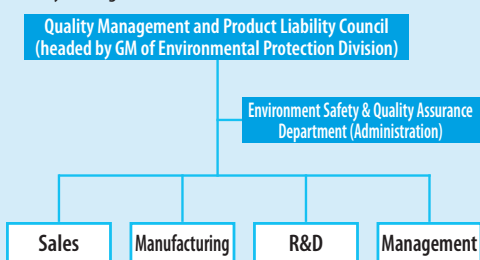


## Quality Control Policy

With the aim of providing safe and reliable products to customers, we assess effectiveness of systems related to quality control and continue to improve them.

1. We investigate a “true cause” of defects in process and complains, in order to take effective countermeasures and horizontally develop them.
2. We build a system for supply chain management, while promoting risk management of chemicals.
3. We secure management of original materials in relation to both foods and chemicals, as taking into account biodiversity.

### Quality Management



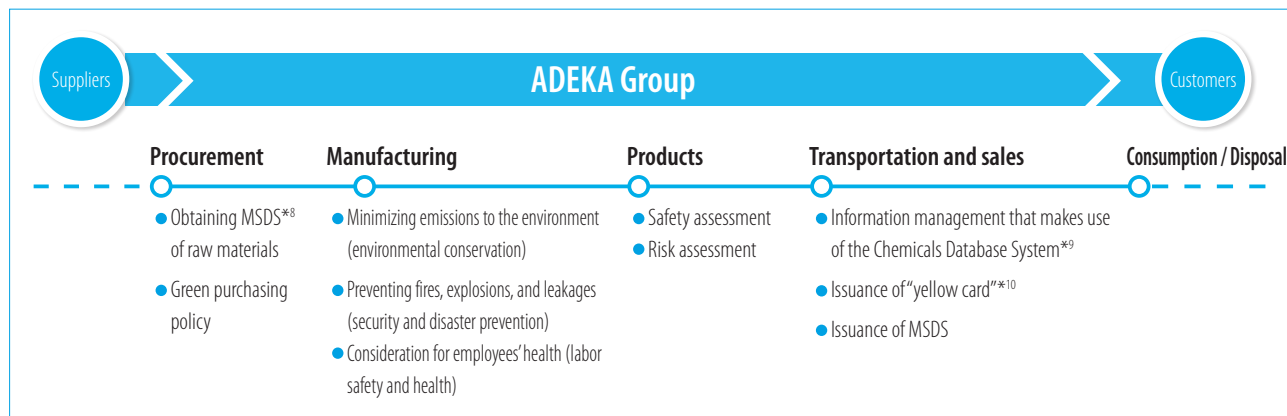
## Targets and actual results

Initiatives	Fiscal 2012 targets	Actual results for fiscal 2012
Compliance with PL*1	Compliance with GHS*2 for chemical products	◇ Adopted GHS in accordance with the legal stipulations for exports to Thailand and Singapore
	Utilization and improvement of the food traceability management system	◇ Registered information pertaining to newly adopted materials on the management system
Management of chemicals	Compliance with related laws and regulations in Japan and abroad	◇ Complied with revisions of Japanese laws (Chemical Substances Control Law*3, Industrial Safety and Health Act*4, Poisonous and Deleterious Substances Control Law*5) ◇ Complied with laws for chemical substances in Korea, China, United States, and other countries ◇ Complied with the passing of the bill on a law for the control of chemical substances in Taiwan
	Compliance with REACH*6 and CLP*7	◇ Continue to ensure compliance with REACH ◇ Continue to ensure compliance with the classification and labeling of chemical substances in line with CLS
Promoting safety and assurance for food products	Provision of information to customers throughout the product life cycle, from the procurement of raw materials to completion of final product	◇ Started providing information about cholesterol and trans fatty acid contents ◇ Collected information about Japanese laws that are scheduled to be enacted and/or revised in fiscal 2013

\*1 Abbreviation for “Product Liability” \*2 A system for unifying the global classification standards for chemical substances, and for raising awareness about the labeling of such substances \*3 Law that regulates the inspection and production of chemical substances \*4 Law that regulates labor safety and health \*5 Law that regulates poisonous and deleterious substances \*6 Refers to the integrated management system for chemical substances, implemented by the European Union \*7 European Parliament regulations pertaining to the classification, labeling, and packaging of chemical substances in line with GHS

## Appropriate Management of Chemical Substances

In order to secure the safety of products and production processes, the ADEKA Group strives to appropriately manage chemicals from the aspects of environmental conservation, security and disaster prevention, labor safety and health, and product safety.

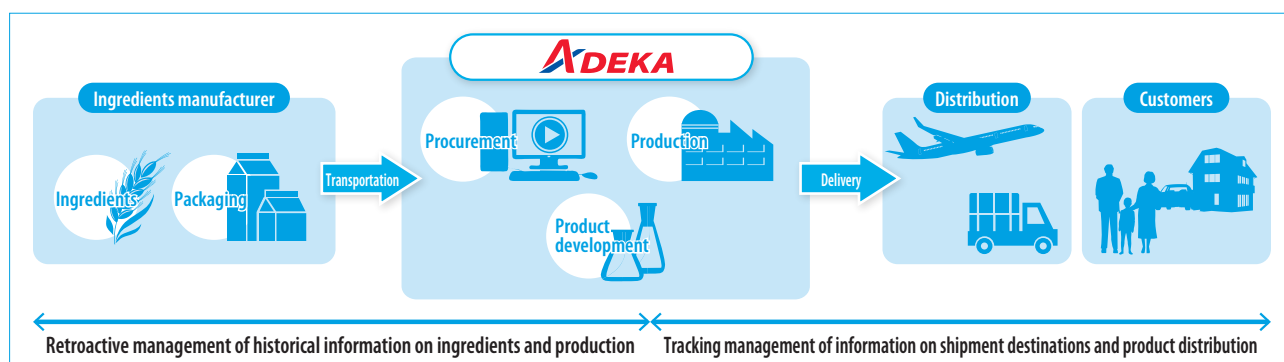


## Promoting Safety and Assurance for Food Products

The brand slogan for ADEKA Group's food business is "The Delicious Taste You Can Rely On". In addition to food hygiene, it also strives to provide safe and tasty food ingredients that are environmentally friendly.

### Management of Food Traceability

ADEKA employs an integrated management system for information pertaining to the types of ingredients, suppliers, production processes, and distribution processes. It is also able to track historical information about ingredients, production, and distribution through product lot numbers. In addition to product history, it is also linked to the production and inventory management systems as part of our thorough traceability management system.



### Inspection of residual pesticide on food ingredients

We have established our own management criteria for ingredients for food products, based on the Positive List System for Agricultural Chemical Residues in Foods\*<sup>11</sup>, which came into force in 2006. We also conduct periodic risk assessments. With regard to important ingredients based on our internal standards for the treatment of food ingredients, we have established a management system that includes inspections by external institutions.

### Targets for fiscal 2013

Initiatives	Targets for fiscal 2013
PL compliance	◇ Timely support for adoption of GHS in line with the laws and regulations for exported products for the respective countries
	◇ Promote improvements and greater efficiency for the food traceability management system
Management of chemicals	◇ Compliance with related laws and regulations in Japan and abroad
	◇ Continue to ensure compliance with REACH
Promoting safety and assurance for food products	◇ Keep up efforts to provide information to customers
	◇ Compliance with related laws and regulations in Japan and abroad

\*8 Material Safety Data Sheets \*9 An integrated management system for information pertaining to chemical substances and laws and regulations in Japan and abroad, aimed at ensuring compliance with GHS and the laws and regulations of the respective countries at all stages of the product life cycle – production, sale, and export \*10 An emergency contact card that describes the measures that should be taken by the person-in-charge in the delivery of dangerous substances \*11 A system that prevents, in principle, the distribution of food products that contain more than a specific volume of agricultural pesticides that are not covered by standards

# Environmental Conservation Initiatives

We have established a Basic Environmental Policy, and are actively engaged in environmental conservation activities.

## Message from the Representative

The ADEKA Group is engaged in environmental conservation activities with the aim of contributing to the enrichment and health of society. Through improvements in systems and management methods accompanying the revision of laws, as well as through inspection by the Environmental Protection Division and various environment committees, we assess and provide support for the activities of each of our workplaces.

Our society today propounds biodiversity, and there has been increasing activity among local communities, local governments, and corporations aimed at promoting this concept. ADEKA Group is implementing biodiversity initiatives, and aims to fulfill our role as a corporation in society.



**Yutaka Furukawa**  
Operating Officer and General Manager,  
Environmental Protection Division

## Basic Environmental Policy

### 1. Corporate-wide global environmental conservation and pollution prevention efforts

Each one of us must be highly conscious of environmental conservation, striving for harmony and integration with the environment in all aspects of our business activities. In order to carry out fair and sustainable activities, there must be cooperation, not only between departments within each company, but also in a broader sense with other companies in the group as Adeka adopts a comprehensive and organic approach to its efforts.

### 2. Corporate responsibility

Adeka endeavors to reduce the environment impact of its business activities throughout the life cycle—from research, development and procurement through to manufacturing, sales, logistics and disposal. These initiatives focus on conserving energy and resources, as well as reducing, reusing and recycling industrial waste, in order to reduce the impact on the environment. In addition, Adeka develops and supplies eco-friendly products and environmental technologies, and endeavors to use eco-friendly products in contributing to a sustainable society.

### 3. Contributing to society

We are keenly aware of the fact that a corporation is a member of society and we steadfastly comply and cooperate with environmental regulations and government policies. We also disclose environmental information and lend support and cooperation to environmental conservation activities, both in society at large and in the local community.

## Environmental Initiatives System

Under the policy set by Environmental Protection Division headed by an operating officer, each business office formulates an execution plan and makes efforts for continuous improvement of environmental management activities by implementing PDCA cycle.



## Targets and Actual Results

Internal grading: ◎ : Exceeded expectations ○ : Meet expectations △ : Below expectations

	Fiscal 2012 Goals
Promote energy conservation	Reduce energy intensity by 1.0% or more year on year
	Reduce CO <sub>2</sub> emissions by 1.0% or more year on year
Reduce industrial waste generated	Reduce industrial waste output by 1.0% or more year on year
	Increase recycling rate for externally processed waste to 80% by FY2020
	Continue to achieve zero emissions* <sup>1</sup> of landfill waste, and aim for complete elimination of landfill waste** <sup>2</sup>
Promote green purchasing	Achieve green purchasing for 80% or more of stationery items and designated non-stationery items by FY2020
Established a management system	Gain a good understanding of customers' needs, and keep up improvement initiatives for the management system Review the horizontal expansion of BCMS (Business Continuity Management System)

	Actual results for fiscal 2012	Self-evaluation
Promote energy conservation	Achieved energy intensity of 0.1856 kiloliters per tonne (4.5% reduction from previous year)	○
	Generated 150,607 tonnes of CO <sub>2</sub> emissions (4.2% increase from previous year)	△ <sup>**3</sup>
Reduce industrial waste generated	Generated 38,626 tonnes of industrial waste (7.7% increase from previous year)	△ <sup>**3</sup>
	Achieved a 48% recycling rate (Recycled 10,867 tonnes out of 5,211 tonnes of externally processed waste).	△
	Achieve zero emissions Landfill disposal volume of 25.8tonnes (0.07% of industrial waste generated)	◎
Promote green purchasing	Stationery items:69% (1,526 items out of 1,054 items), Designated non-stationery items: 54% (739 items out of 400 items)	△
Established a management system	Promote the continuous improvement of each management system As BCMS will move from BS25999-2:2007 to ISO22301:2012, review management systems	○

	Targets after the next
Promote energy conservation	Reduce energy intensity by 1% or more year-on-year in the production departments
	Reduce CO <sub>2</sub> emissions by 1% or more year-on-year in the production departments
Reduce industrial waste generated	Reduce industrial waste generated by 1% or more year-on-year
	Achieve 100% recycling rate for outsourced volumes by fiscal 2020
	Achieve landfill disposal volume of zero by fiscal 2020
Promote green purchasing	Improve green purchasing rate by 80% or more for stationery and non-stationery items by fiscal 2020
Established a management system	Gain a good understanding of customers' needs and promote continuous improvements in management systems Acquire ISO22301:2012 accreditation for the head office and Soma Plant Keep up continuous improvements in BCM and BCP in other plants

Detailed data that could not be included in this Report are available on our website (starting September 2013). <http://www.adeka.co.jp/csr/index.html>

\*1Adeka defines "zero emissions" as landfill waste that amounts to less than 0.5% of the total volume of industrial waste output.

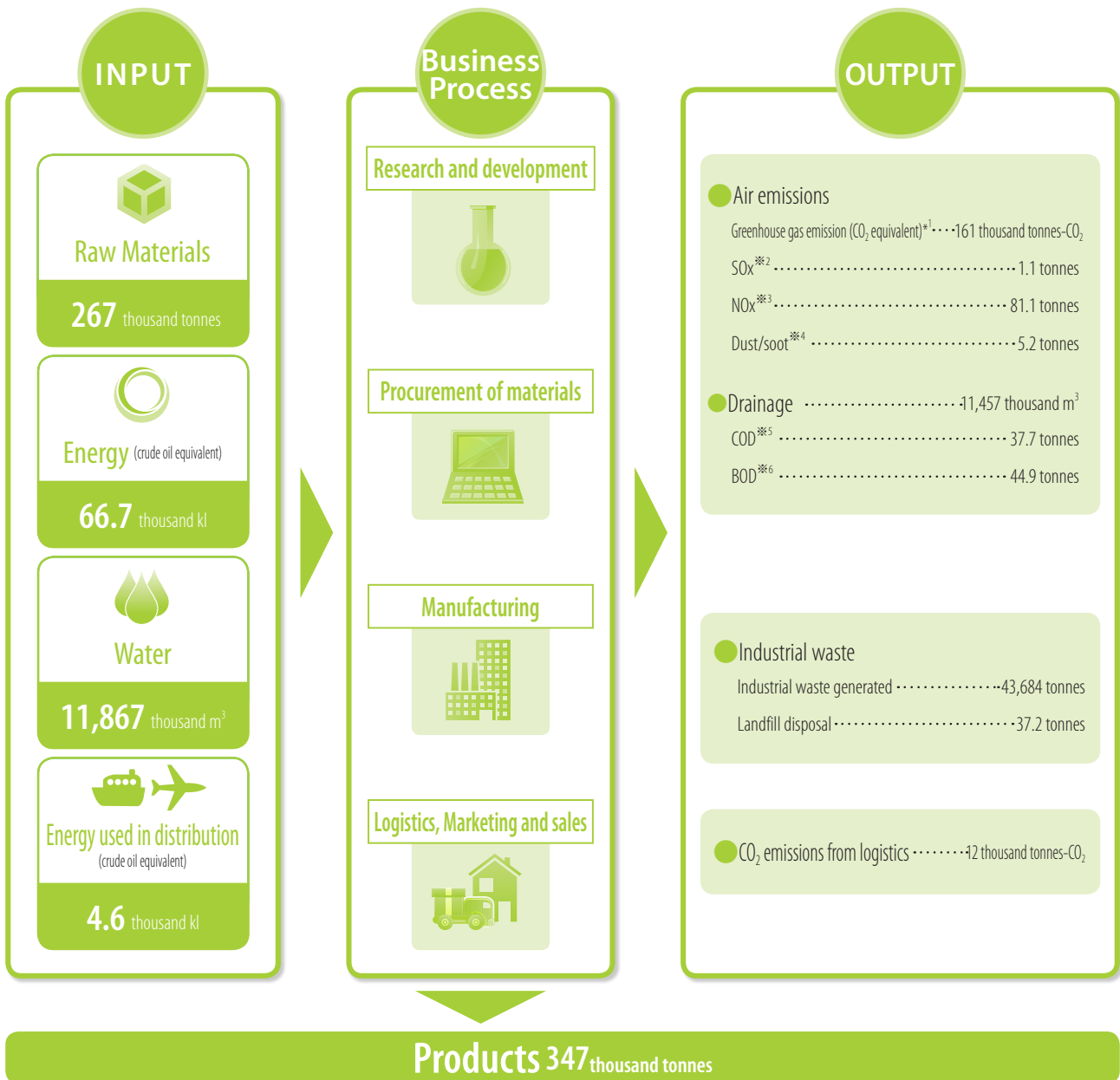
\*2Adeka defines "complete elimination" as landfill waste that amounts to less than 0.1% of the total volume of industrial waste output.

\*3 In fiscal 2011, as a result of the Great East Japan Earthquake, we had to suspend the operation of our production facilities. With the return to normal production in fiscal 2012, the volume of CO<sub>2</sub> emissions and industrial waste generated has increased.

# Environmental Conservation Initiatives

## Material Flow

The ADEKA Group has put in place initiatives to reduce and recycle the volume of waste material generated through our production processes.



## Green Purchasing

We have formulated green purchasing standards as part of our initiatives to be an environmentally friendly company. These initiatives include green procurement and green purchasing activities at our offices and domestic group companies based on ADEKA's basic policy.

To strike a balance between cost and environmental performance, we consider the necessity of the purchases, and take reference from the guidelines established by the Green Purchasing Network (GPN) in prioritizing the purchase of products that impose a minimum impact on the environment.

### Basic Policy on Green Purchasing

**We take the following points into consideration across the life cycle of our products, from the procurement of resources to the disposal of the product.**

- To minimize the use and emissions of harmful substances that have an impact on the environment and the health of people**
- To minimize the amount of resources and energy consumed during the use of our products**
- To use sustainable natural resources or recycled materials for our raw materials**
- To enable long-term consumption, re-use, and recycling**
- To ensure ease of appropriate processing and disposal**

<sup>\*1</sup> Total emissions arising from energy sources, non-energy sources, and processes    <sup>\*2</sup> Sulfur oxides that are generated during the use of fuels that contain sulfur    <sup>\*3</sup> Nitrogen oxide that is generated during combustion in Plant boilers and incinerators    <sup>\*4</sup> Fine particles that are generated during the combustion of fuels and other materials    <sup>\*5</sup> Amount of oxygen that is consumed during the oxidation of organic substances    <sup>\*6</sup> Amount of oxygen required during the mineralization and gasification of contaminants in river water and industrial wastewater by microorganisms

## Main Environmental Conservation Activities in Fiscal 2012

### Formulation of Biodiversity Policy

ADEKA Group has formulated an ADEKA Group Biodiversity Policy with the aim of understanding the impact of our corporate activities on the Earth's environment and biodiversity, and to reduce this impact as far as possible.

In addition to the environmental conservation activities that we have undertaken previously, such as measures to prevent global warming and management of chemicals, we are also contributing to the protection of biodiversity by purifying industrial wastewater and carrying out greening activities in our business premises.

### Energy Conservation Initiatives at the Urawa R&D Laboratory

As part of our efforts to reduce the impact on the environment, we have installed a solar power generation system and introduced Low-e glass\* at the Urawa R&D Laboratory, which was completed in June 2012. The Laboratory was accorded the A Rank in the "CASBEE Saitama" system, which is an accreditation system for the environmental friendliness of buildings in Saitama City.

### Reducing CO<sub>2</sub> Emissions Through the Introduction of Natural Gas Fueled Boilers

At the Kashima Plant-West, we have removed our previous boilers that use heavy oil as fuel, and switched to the use of high-efficiency, energy-saving boilers that are fueled by natural gas. This contributed to a significant energy conservation effect arising from improvements in energy efficiency. On top of that, we were able to achieve major reductions in the amount of CO<sub>2</sub> emitted (28% reduction as compared to previous boilers).

### Recycling Food Waste

Food waste that is generated through our business activities is incinerated. A part of the waste is also recycled, such as by converting it into oils and fats.

In fiscal 2012, in order to further promote the recycling of food waste, we switched to methane fermentation processing for a part of the waste material generated by the Food Development Laboratory. The Akashi Plant, which is 100% compliant with the Food Recycling Law, has also established a recycling system for taking in and recycling food waste that is generated at related warehouses in the neighborhood. As a result of these initiatives, we have succeeded in recycling about 12t of waste.

#### ADEKA Group Biodiversity Policy

1. To give consideration to biodiversity in the procurement of raw materials that are sourced from nature
2. To promote activities for the protection of biodiversity within our business premises
3. To strive to develop biodiversity-friendly products
4. To undertake initiatives in cooperation with the local community



New Research Building at the Urawa R&D Laboratory

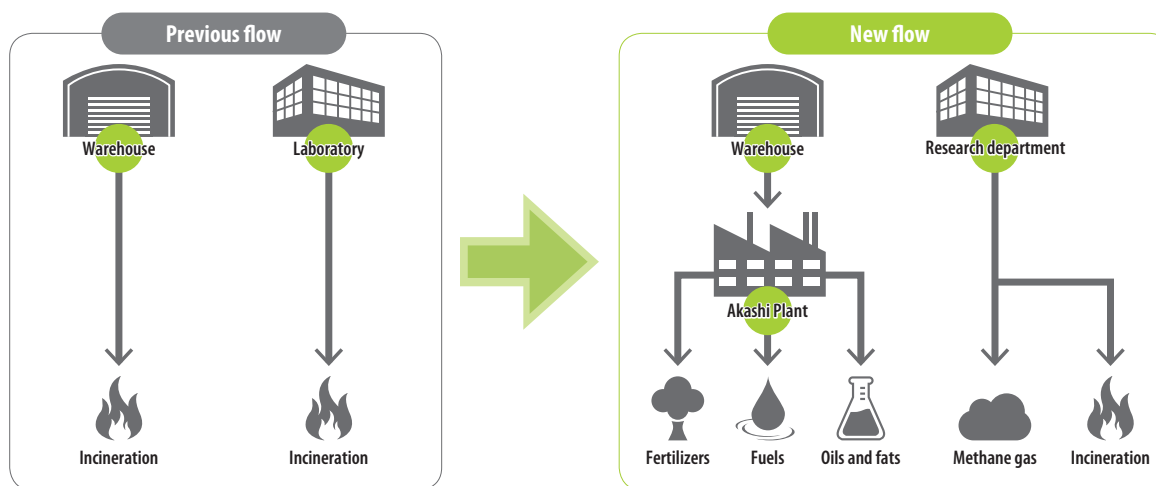


High-efficiency, energy-saving gas boiler facilities (Kashima Plant-West)



Recycling waste and reusing it as carbide products (Akashi Plant)

#### Flow of Recycling Activities for Food Waste



\*Energy-saving window glass with excellent heat insulation and heat shielding properties

# Creating a Pleasant Working Environment

We are committed to creating a pleasant working environment that is safe, and where employees are motivated to work and can continue to grow.

## Message from the Representative

ADEKA Group places a focus on developing and bringing out the capability of each employee based on our four human resource principles. We are also committed to treating employees fairly in accordance with the results achieved at each stage of the development of their capabilities, and strive to nurture a corporate culture that employees are comfortable in.

In fiscal 2012, under the human resource policy that forms one of the five basic policies in "STEP 3000," we promoted measures based on the key concept of the "Enrichment and growth of global human resources and human resources for strategy planning." We also continued in our efforts to promote work-life balance and diversity at the workplace.

Going forward, we will continue to respect diversity, personal character, and individuality in accordance with the characteristics of each region. We will also put effort into developing human resources as is appropriate for a Good Company with net sales of 300 billion yen, and into creating a secure work environment for our employees.

**Susumu Yasuda**

General Manager, Human Resources Department



## ADEKA Human Resources Principles

- ▶ Respect the human and personal qualities of employees
- ▶ Support self-realization by employee
- ▶ Develop human capital who have a positive social impact
- ▶ Develop employees with initiative

## Human Resource Development Philosophy

At ADEKA, we recognize employees as a valuable management resource for the company. We do not consider them to be merely employees but "human resources". We respect the motivation and ambitions of each individual, and are committed to developing human resources that can lead future generations.

Basic 1  
Philosophy

### Develop innovation leaders

Trust is an important value that the ADEKA Group has respected for a long time, and which we have continued to protect. We aim to develop each individual employee as "trusted personnel" that provide products and services, so as to raise the level of this "trust" and make it a part of our unique and immutable corporate culture.

Basic 2  
Philosophy

### Develop trustworthy people

Looking ahead of the times, we aim to develop human resources that are equipped with leadership qualities, and who are able to take the lead in delving deeply into our management plans in order to drive our businesses forward.

## Targets and Actual Results

Action plan based on the Act on Advancement of Measures to Support Raising Next-Generation Children(April 1, 2010 – March 31, 2013)

Targets	Actual Results
Improve rate of childcare leave taken (Men: 3 employees or more; Women: Take-up rate of 80% or more)	<ul style="list-style-type: none"> <li>◇Produced leaflets summarizing all the childcare systems and distributed the leaflets to all employees</li> <li>◇Strived to disseminate information about the systems, achieving the following results during the implementation period of the plan: Men: 4 employees; Women: Take-up rate of 100%</li> </ul>
Enrich various systems to promote work-life balance	<ul style="list-style-type: none"> <li>◇Increased the number of days of annual paid leave accorded to employees</li> <li>◇Strived to enrich systems, achieving 68.1% for use of annual paid leave (the rate was 61.8% for the past three years)</li> </ul>
Initiatives to reduce the number of overtime working hours	<ul style="list-style-type: none"> <li>◇Established a no-overtime day once a week, in line with the plan</li> <li>◇Promoted the no-overtime day through internal announcements and internal patrols conducted by employees and management</li> </ul>
Continue to carry out volunteer community cleanup activities around the company premises in order to nurture sound mental health	<ul style="list-style-type: none"> <li>◇Carried out volunteer community cleanup activities around the company premises once a month, in line with the plan</li> </ul>

## Promotion of Diversity

Adeka strives to create an organization in which diverse employees can vividly flourish using their characteristics by diversifying employees' attributes.

### Respect for Human Rights

The ADEKA Group Code of Conduct clearly stipulates the respect of basic human rights. It also stipulates the respect for diversity, personal character, and individuality for each employee in line with employment regulations, and prohibits acts that disregard personal character. These acts include discrimination due to gender, nationality, and/or age, acts of violence, and sexual harassment.

With the aim of preventing moral harassment at the workplace, and to ensure thorough compliance by employees, ADEKA has actively introduced an education program for the prevention of moral harassment. This takes the form of seminars grouped according to employee grades, and seminars for each business and company. In fiscal 2012, 22 employees participated in the program.



Seminars grouped by employee grades

### Recruitment and Appointment of Diverse Human Resources

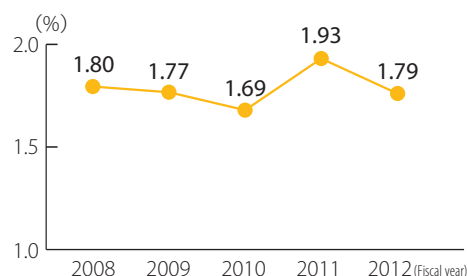
ADEKA Group takes a proactive stance toward employing persons with disability and re-employing seniors.

We have put effort into creating a pleasant work environment that is comfortable for all employees, by expanding workplaces and improving facilities to adapt to individual abilities. As of June 2012, the employment rate for persons with disability was 1.79%.

We have also introduced a continuous re-employment system so that the retirees can continue contributing their wealth of experience and knowledge. In fiscal 2012, we re-employed all applicants (14 people).

#### Employment Rate Transition of Disabled Persons

(Value of our company's achievements)



## Work-Life Balance

We place an emphasis on work-life balance, which aims to fully draw out the individual capability of each employee. To that end, we have put in place systems to allow for flexible and diverse working styles.

### Appropriate working hours

As part of our efforts to create a healthy and vibrant culture for employees, we have established a no-overtime day, set up an overtime work measures committee to ensure appropriate working hours, and reduced overtime work through cooperation between employees and management.

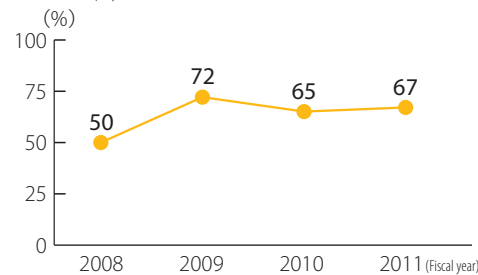
### Support for keeping a balance between work and childcare/nursing care

We have introduced childcare leave systems, as well as short-hour/time difference work systems, with the aim of providing support for employees striving to balance work life and family life. In order to increase the take-up rate for childcare and welfare systems, in fiscal 2012, we produced a leaflet that provides information about the various systems, and distributed it to all employees.

In fiscal 2012, 13 employees (of whom two were male employees) made use of the childcare leave system.

#### Changes in rate of annual leave used

(Value of our company's achievements)



Fiscal year in consideration: July 1 – 30 June the following year



Kurumin mark to be granted to companies which actively support employees' childcare

## Targets for fiscal 2013

Initiatives	Targets for fiscal 2013
Enriching Childcare/Welfare Systems	<ul style="list-style-type: none"> <li>◇Increasing the length of maternity leave</li> <li>◇Enriching short-time work system aimed at providing for childcare/welfare needs</li> </ul>

# Creating a Pleasant Working Environment

## Human Resources Development

We have established “trust” and “innovation” as keywords for our human resource development initiatives. Since 2007, we have established a new dedicated department to promote the development of human resources.

### Development of global human Resources

We have established “trust” and “innovation” as keywords for our human resource development initiatives. Since 2007, we have established a new dedicated department to promote the development of human resources.

We believe that the development of human resources that can lead the global business can contribute to the growth of the ADEKA Group. As such, we have put in place human resource development initiatives and established systems, such as providing support for language studies and dispatching employees overseas for training programs.

In Japan, we have hired foreign lecturers to conduct English and Chinese language classes at each office. We also provide support for employees to attend language schools outside of the workplace. A large number of employees have made use of these programs to improve themselves.

We have also established an overseas training system to allow employees to study languages and gain on-the-job experience abroad. Under this system, young employees are dispatched to countries such as the United States, China, and Singapore. Participants attend local language schools and undergo training at overseas affiliates, and through these activities, learn about the local business environment and customs, acquire language skills that they can apply their expertise to, and arm themselves with communication skills that allow them to blend into the local culture.

### Career Development for Employees

We provide support for independent skills and capability development, with the aim of developing human resources that can exercise their capabilities through work assignments and continue to provide high value-added products and services to society.

To that end, we provide seminars for different employee grades, training programs for selected employees, specialized training for the respective occupations, as well as support for various self-development initiatives such as e-learning programs, distance-learning programs, support for acquiring qualifications, and optional training programs (ADEKA Cafeteria Training).

We have also introduced a business school system for motivated mid-level employees. Under this system, employees undergo a training curriculum for working adults at external institutions, with a focus on marketing, management strategy, and logical thinking.

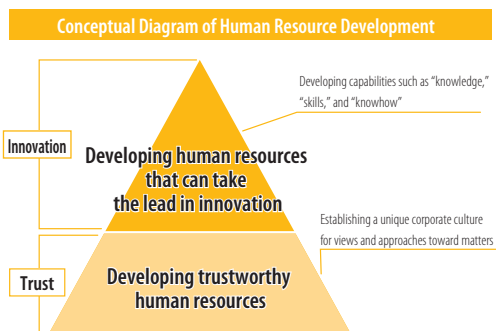
## Building good labor-management relationships

We are committed to building stable labor-management relationships with the aim of stabilizing and improving company growth and the lives of employees.

### Building relationships of mutual understanding and trust between labor and management

ADEKA has adopted a union shop system whereby all employees, excluding managerial staff, are members of the labor union. Efforts are made to build relationships that place a strong emphasis on dialogue between employees and the management.

The labor union and management executives actively exchange opinions at the labor-management council and various study committees in order to find solutions to various management issues, including issues pertaining to employment stability, safety and health, and production and sales activities, as well as working conditions. We strive to maintain, and further enhance, a sound and good labor-management relationship that is based on mutual understanding and trust.



In-house language classes

### TOPICS

#### Implementation of Safety Inspection Meeting by Employees and

We conduct safety inspection meetings between employees and management every year, at each of our offices, in order to create a pleasant working environment for all.

In fiscal 2012, these meetings were held at the head office, Ogu R&D Laboratory, and the Mie Plant. During these meetings, inspection activities such as equipment inspection, health and safety assessment, and countermeasures for potential risks,



Safety Inspection Meeting (Mie Plant)

## Labor Safety

We are committed to creating a safe working environment that takes the health of each individual employee into consideration, and where employees can work in safety and security.

### Targets and Actual Results

Items	Targets for fiscal 2012	Actual results for fiscal 2012
Eradicating accidents	Zero labor accidents	◇No. of incidents resulting in work absences: 0 No. of incidents not resulting in work absences: 9 No. of incidents occurring during commute: 5
	Zero accidents related to production facilities	◇No. of accidents related to production facilities: 2

### Labor Safety

As part of our efforts to prevent labor accidents, the ADEKA Group has put in place the "OHSAS 18001" management system for labor safety and health. All our production plants in Japan have acquired this accreditation.

In fiscal 2012, we continued to maintain the fiscal 2011 achievement of zero incidents resulting in work absences. However, there were nine cases of incidents that did not result in work absences. To reduce this number to zero, we are promoting measures to prevent labor accidents before they take place, including activities to prevent near misses, and risk assessment measures. At the same time, we are taking initiatives to improve quality safety, and working toward passing down skills between different generations of employees.

### Safety and Health Education

At our production plants, efforts are made to raise awareness of labor safety and health among newly appointed site supervisors and safety managers. These include training on how to supervise and guide employees based on the Industrial Safety and Health Act.

### Maintaining and Improving Employee Health

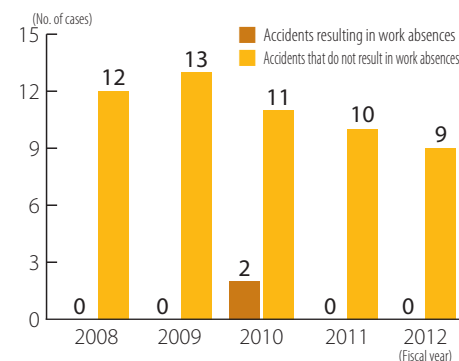
ADEKA Group conducts periodic health screening twice a year for all employees and executives. If there are findings or need for re-tests based on the results of the health screening, individual follow-ups are carried out by occupational physicians and nurses.

In cooperation with clinics, health insurance unions, and labor unions, we also provide specific health check-ups and specific healthcare guidance for employees aged 40 and above, and employees with dependents. We are achieving steady results through these efforts.

In addition, each office conducts mental health seminars and periodic workshops to maintain and improve the physical and mental health of each individual employee.

### Changes in the Number of Accidents

(Value of our company's achievements)



Educating newly appointed site supervisors

### Targets for fiscal 2013

Initiatives	Eradicating accidents
Eradicating accidents	◇Eradicating sources of danger through the implementation of risk assessment activities ◇Enriching education and training for young employees, who are the cause of many accidents

# ADEKA and Stakeholders

ADEKA Group is engaged in active dialogues with all its stakeholders with the aim of evolving into a company that is needed by society.

## Communication with shareholders and institutional investors

**We are committed to disclosing information at the appropriate time, and in an appropriate and fair manner, and to maximizing our corporate value.**

### Profit Allocation Policy

ADEKA Group has in place a basic policy that takes into account the business environment, operating results, and financial situation in deciding on an appropriate level of allocating profits and retaining earnings.

With regard to retained earnings, we take a stance that focuses on strengthening our business infrastructure in the medium- to long-term, and prioritize the utilization of retained earnings for investment in growth sectors that can contribute to new growth for the company. The annual dividend per share for fiscal 2012 was 22 yen.

### Holding IR Briefing Sessions and Individual Meetings for Institutional Investors and Analysts

We are engaged in a wide spectrum of activities, including briefings about our Mid-Term Management Plan, for institutional investors and analysts, tours of production bases and research departments, and individual meetings.

In fiscal 2012, in addition to half-yearly IR briefing sessions and a briefing about our Fiscal 2012-2014 Mid-Term Management Plan, we also held 118 individual meetings. We aim to enhance our corporate value by increasing opportunities for communication, and communicating the latest financial situation and management policies.



Investor briefing session for securities analysts and the press

## Communication with suppliers

**We build and maintain fair and just relationships with our business partners.**

### Procurement Activities Based on CSR Activities

ADEKA formulated Procurement Management Standards in 2002, and promotes procurement activities that place a strong emphasis on stability, safety, and compliance. In fiscal 2012, we conducted a questionnaire survey targeted at our main suppliers.

### Safety Activities with Affiliates and Partner Companies

As part of our activities to support initiatives for improving quality among our affiliates and partner companies, the ADEKA Group holds study sessions and self-audits at each office.

At the study sessions, participants introduce case studies of improvements made, exchange opinions with the persons-in-charge, and share knowledge and knowhow.

These activities are aimed at raising awareness toward safety and quality.



Education on safety during the distribution processes (Akashi Plant)

## Communication with Local Communities

We strive to contribute to the development of local communities while maintaining good relationships with local residents.

### Support for Next-Generation Education

We provide support for education aimed at ensuring the sound and healthy growth of children.



Holding judo and kendo competitions for elementary and junior high school students (head office)



Office tours for local junior high school students (Ogu R&D Laboratory)

### Dialogues with Local Residents

We put effort into conducting exchanges with local residents by opening up our facilities to the public, such as our grounds, and inviting local residents to summer festivals and other events.



Participating as an exhibitor at local industry and commercial fairs (Mie Plant)



Responsible Regional Dialogue Meeting in Chiba (Chiba Plant)

### Support for Social Welfare Activities and Disaster-Stricken Regions

We are actively engaged in social contribution activities, such as blood donation drives, fund raising, donating event proceeds, and providing support for the independence of persons with disability.



Donations to social welfare events (Kashima Plant)



Volunteer activities at children's orphanage (Fuji Plant)



Donations to disaster-stricken regions (Soma Plant)

### Contributing to the Local Community at Overseas Bases

We are engaged in activities that cater to the characteristics of the respective local community where ADEKA Group offices are based, in the United States, Europe, and Asia. These include beautification of the environment, support for welfare and education, and donations to local organizations and schools.



Sponsoring awards for top high school students in chemistry (United States)



Environmental protection campaign held jointly with the government (Korea)



Accepting interns from local universities (Taiwan)



Participating in anniversary commemoration events at the industrial park (China)

# CSR Management

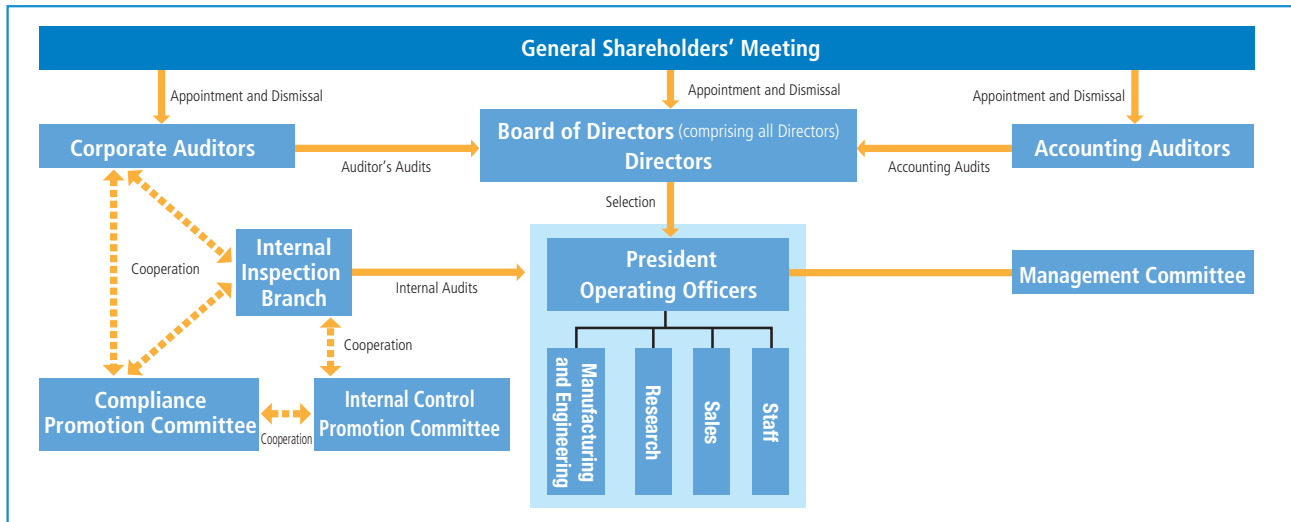
We have established a CSR management system to ensure that we can sustain our business operations and continue to be a company that is trusted by customers and society.

## Corporate Governance

ADEKA Group has positioned the strengthening of corporate governance as an important management issue, with the aim of enhancing our corporate value and achieving our management policies.

We have also introduced an executive officer system based on an auditing system and a framework for decision-making through consensus by the Board of Directors and external auditors. In addition, by setting up a work supervision office, we have developed a system that separates supervision and execution functions. These efforts are aimed at strengthening our management system.

A committee for internal control and independent committees are in place as part of our efforts to develop our corporate governance system.



### Acquisition of International Standard Certification for our Business Continuity Management System in Taiwan

ADEKA FINE CHEMICAL TAIWAN CORP. commenced operations in 2004 as a manufacturing and sales base for chemical products. The company putting active effort into establishing management systems for quality, environment, labor safety and health, and crisis management.

In March 2013, it preceded other ADEKA Group companies in acquiring the international standard ISO22301:2012\* for its Business Continuity Management System.



ADEKA FINE CHEMICAL TAIWAN CORP.

\*An international standard issued in May 2012, replacing the U.K. standard (BS25999-2:2007).

## Risk Management

ADEKA Group is committed to preventing risks before they arise. To that end, we have established a Crisis Management Committee, and are putting efforts into understanding risks that have an impact on our management activities, coming up with countermeasures, and strengthening our management system. This Committee has drawn up a Crisis Management Manual as part of a company-wide risk prevention system. This Manual lays out content pertaining to the prevention and suppression of risks during times of normalcy, emergency measures during serious crises, measures for preventing the spread of a crisis, and measures for early recovery.

### Disaster Countermeasures

In 2009, we formulated a Business Continuity Plan. The development of a business continuity system will ensure that business activities are not suspended even in the face of an emergency, such as an accident or disaster. It also serves as a guideline for prompt recovery even in the event that we are forced to suspend business activities.

As part of countermeasures against large-scale earthquakes, in fiscal 2012, we reviewed our basic policy for assisting local residents and those who are unable to return home, enriched our store of emergency supplies, and reviewed our regulations for the prevention of major disasters.

In addition, we have implemented evacuation drills at all our domestic bases, based on the assumption of earthquakes or tsunami. We have also conducted notification drills using our safety verification system. Going forward, we will continue to conduct drills periodically, and put effort into resolving problems that emerge.



Evacuation Drills Based on the Assumption of a Major Earthquake

### Strengthening BCMS

An inspection was carried out in November 2012 for the renewal of the BS25999-2 accreditation acquired by the head office and Soma Plant. Both facilities were found to be fully compliant, and accorded renewals for the accreditation.

Going forward, we aim to further strengthen our efforts in order to make the move toward ISO22301:2012.



BCMS audit (Soma Plant)

## Compliance

The ADEKA Group Code of Conduct was drawn up in fiscal 2002, outlining guidelines for all ADEKA Group employees to ensure that they act in an appropriate manner in accordance with the management philosophies, corporate ethics, and laws and regulations. The Code of Conduct has been translated into English and Chinese for use by our overseas affiliates. We are committed to strengthening and enhancing our compliance system based on our Code of Conduct.

In fiscal 2012, compliance training was held at our offices in Japan, and a total of 294 employees participated in the program.

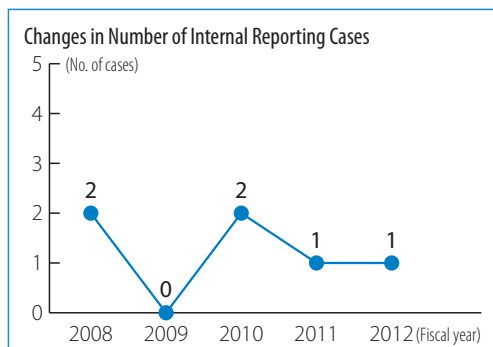
#### ADEKA Group Code of Conduct

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>1. Fair and transparent corporate activities in accordance with regulations and morals</li> <li>2. Provision of safe and quality goods and services</li> <li>3. Environmental protection</li> <li>4. Pro-active communication and social action activities</li> </ul> | <ul style="list-style-type: none"> <li>5. Fair and timely information disclosure</li> <li>6. Good work environment</li> <li>7. Elimination of antisocial forces and organizations</li> <li>8. Sound and sustainable development and giving back to society</li> </ul> |
|--|---|

### Internal Reporting System

An internal reporting system was introduced and implemented in April 2003 to quickly detect non-compliance behavior and resolve problems.

In fiscal 2012, we received one report for the entire Group. An investigation was conducted into the report while paying attention to the protection of privacy, and steps were taken to carry out improvements and prevent recurrence.



## Third Party Opinion Comments

### Reading the ADEKA Group CSR Report 2013

Professor, Graduate School of Business Administration, Kobe University **Katsuhiko Kokubu**

Professor Katsuhiko Kokubu received a PhD in business administration from Graduate School of Business, Osaka City University. He has been in his current position since 2001, after serving as associate professor of Osaka City University and associate professor of Kobe University. In 2003, he established the Institute for Environmental Management Accounting, a vehicle for utilizing research achievements. Professor Kokubu chaired ISO/TC207/WG8, and served as a chairperson and a member of various committees involved in the Ministry of Economy, Trade and Industry, and the Ministry of Environment. His published works include "Material Flow Cost Accounting" from Nikkei Publishing Inc. and "Accounting System to Support Decision-Making on Environmental Management" from Chuokeizai-Sha Inc.



#### CSR that is Built into the Mid-Term Management Plan

The ADEKA Group has declared a medium- to long-term vision of becoming a Good Company that generates net sales of 300 billion yen, as it moves toward its 100th anniversary in fiscal 2016. To achieve that, it launched its Mid-Term Management Plan "STEP 3000" in 2012, and this report summarizes the progress status of the plan for the first year of its implementation. While there have also been influences from the market situation, I accord a high evaluation to the Group's definition of its status as a Good Company, as befitting a company with sales of 300 billion yen, as well as its clear stance of enhancing the Group's corporate value. Specifically, it has established five basic policies: Global operations, Technology, Creation of Value, Investment, and Human Resource. It has also released information about the financial issues faced by the Group, as well as issues from the perspective of CSR. While it is natural for a company that advocates CSR management to build CSR into its management plan, ADEKA should be highly appraised for going further by specifically describing its CSR initiatives in its management plan. It is clear that the ADEKA Group takes a sincere and serious stance in confronting its CSR issues.

With regard to the five policies, from the perspective of materiality (importance), I feel that there is a need to decide on and disclose the KPI (Key Performance Indicators), and gain the understanding of stakeholders by providing them with progress updates based on concrete statistics. I recommend the following actions for improving communication with stakeholders.

#### Global Strategy Based on Human Resources

In the area of "Global" initiatives, listed as the first basic policy, the results of activities introduced in Thailand were introduced in this report. It is evident that the ADEKA Group places great importance on developing human resources in expanding its CSR management globally while keeping a focus on localization. Going forward, I hope that the company can further expand its management initiatives through overseas personnel exchanges. In the area of "Human Resources," the report described efforts in developing human resources in Japan. Similarly, I look forward to seeing more bilateral activities between ADEKA personnel based in Japan and abroad. Furthermore, from the perspective of human resources, I hope that women will be able to play an active role in the company through proposals for working styles that give consideration to work-life balance.

#### Environmental Conservation Activities

ADEKA Group has adopted a "year-on-year" system for measuring its target goals. For that reason, many goals were not achieved in fiscal 2012. This was the result of irregular operating results (low figures) due to the impact from the Great East Japan Earthquake in fiscal 2011. As total quantities increase in proportion to the increase in production volume, there may be a need to put greater effort into linking the setting of targets with motivation to carry out activities. Initiatives to recycle food waste at the Akashi Plant were introduced as a result of initiatives for 2012. Producing fuels and fertilizers from waste materials is an important social issue for the creation of a recycling society, so I anticipate significant future contributions through this initiative.

## Response to Third Party Opinion

Chairman of Compliance Promotion Committee **Akira Momose**

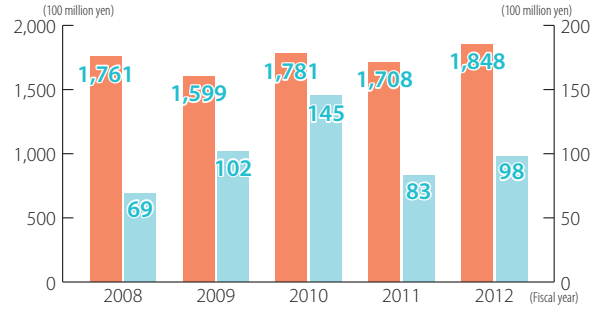
Thank you for your valuable appraisal and comments of the ADEKA Group CSR Report. In this Report, the ADEKA Group declared its vision of becoming a Good Company that generates net sales of 300 billion yen, as it moves toward its 100th anniversary in fiscal 2016, and introduced the Mid-Term Management Plan "STEP 3000" that it launched in fiscal 2012 to realize this vision. In addition to the progress status of the five basic policies outlined in "STEP 3000," this Report also picked up on the main CSR initiatives that are representative of our core business, and described our proactive stance toward creating

a sustainable society. Particular effort was made to communicate this information to all our stakeholders in an easy-to-understand manner.

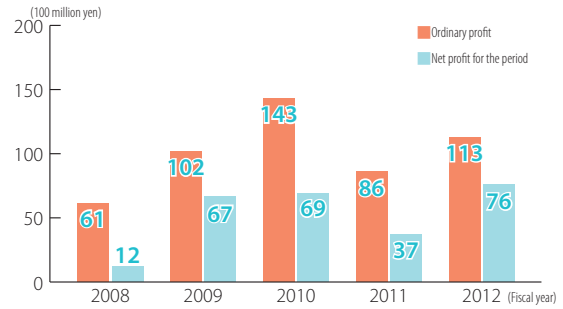
With regard to the points raised by Professor Kokubu in his evaluation, we will continue to put further effort into our initiatives going forward. While paying attention to the issues raised about establishing KPI from a materiality perspective, communicating with stakeholders, and establishing environmental conservation goals, we will further promote CSR activities in order to evolve into a global corporation that is trusted by all our stakeholders.

# Financial Statements

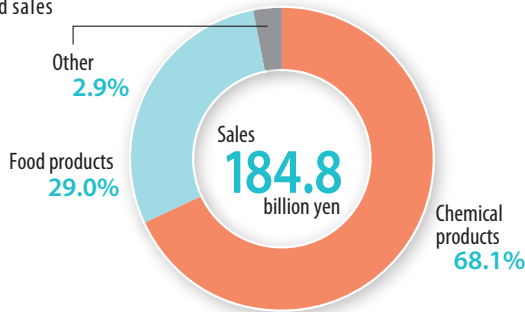
Changes in consolidated sales and operating profit



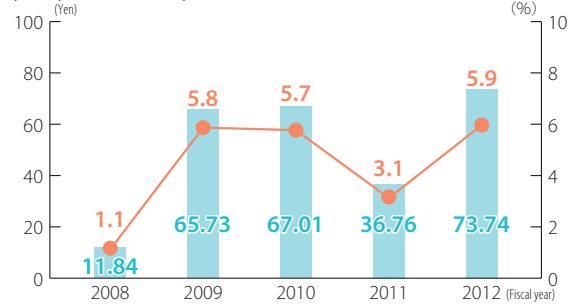
Changes in consolidated ordinary profit and net profit for the period



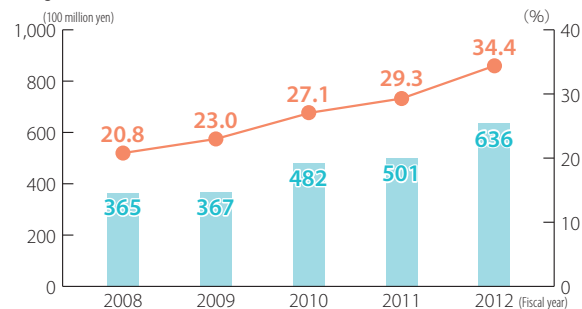
Consolidated sales by business



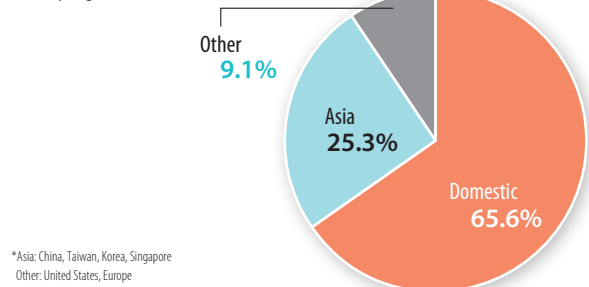
Net profit per share for the period, ROE



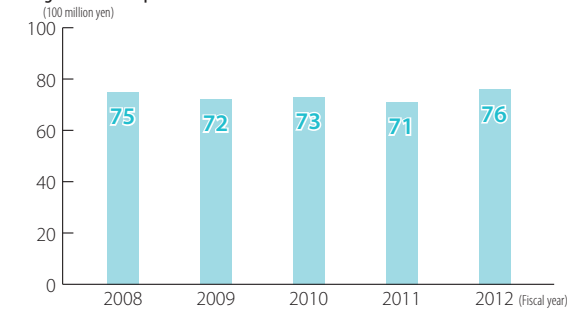
Changes in overseas sales and overseas sales ratio



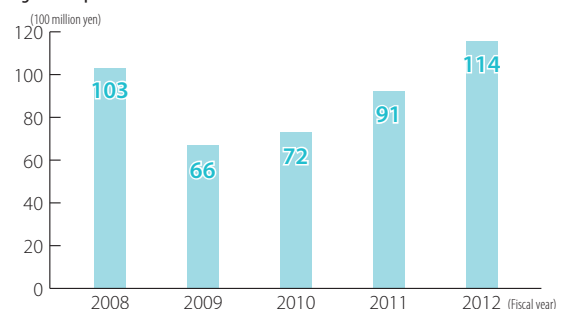
Sales by region



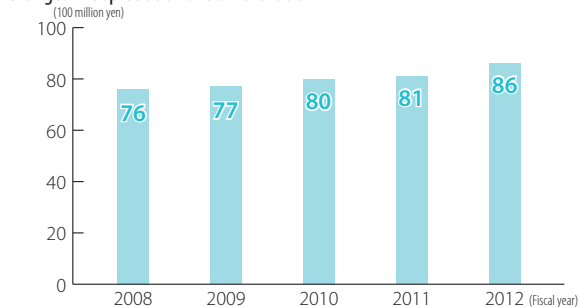
Changes in R&D expenditure



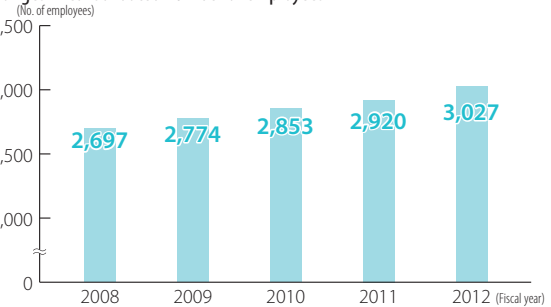
Changes in capital investment



Changes in depreciation and amortization



Changes in consolidated number of employees



## Group Network

### ADEKA CORPORATION

Head Office: 7-2-35 Higashi-ogu, Arakawa-ku, Tokyo  
HP Address <http://www.adeka.co.jp/en/index.html>

#### Main Branch / Branch / Regional Office

- Osaka Main Branch
- Sapporo Regional Office
- Nagoya Branch
- Sendai Regional Office
- Fukuoka Branch

#### R&D Laboratories

- Ogu R&D Laboratory
- Kuki R&D Laboratory
- Urawa R&D Laboratory
- Kansai Food Development Section

#### Plants

- Kashima Plant
- Fuji Plant
- Kashima Plant-West
- Akashi Plant
- Chiba Plant
- Soma Plant
- Mie Plant

#### Major domestic affiliated companies

- NIHON NOHYAKU CO., LTD.
- ADEKA CHEMICAL SUPPLY CORP.
- ADEKA LIFE-CREATE CORP.
- ASAHI ARCHITECTS OFFICE CO., LTD.
- OXIRANE CHEMICAL CORP.
- KANTO SODIUM SILICATE GLASS CO., LTD.
- ADEKA CLEAN AID CORP.
- TOKYO ENVIRONMENTAL MEASUREMENT CENTER CO., LTD.
- CO-OP CLEAN CO., LTD.
- MIZUSHIMA PLASTICIZER CO., LTD.
- ADEKA FINE FOODS CORP.
- ADEKA ENGINEERING & CONSTRUCTION CORP.
- ADEKA LOGISTICS CORP.
- ADEKA FOODS SALES CORP.
- YONGO CO., LTD.
- UEHARA FOODS INDUSTRY CO., LTD.

#### Major overseas affiliated companies

##### USA

- ADEKA USA CORP.
- AMFINE CHEMICAL CORP.
- AM STABILIZERS CORP.

##### Germany

- ADEKA EUROPE GmbH

##### France

- ADEKA PALMAROLE SAS

##### South Korea

- ADEKA KOREA CORP.

##### China

- ADEKA (SHANGHAI) CO., LTD.
- ADEKA FINE CHEMICAL (SHANGHAI) CO., LTD.
- ADEKA FINE CHEMICAL (CHANGSHU) CO., LTD.
- ADEKA FOODS (CHANGSHU) CO., LTD.
- CHANG CHIANG CHEMICAL (SHANGHAI) CO., LTD.
- KUKDO CHEMICAL (KUNSHAN) CO., LTD.

##### Taiwan

- CHANG CHIANG CHEMICAL CO., LTD.
- ADEKA FINE CHEMICAL TAIWAN CORP.

##### Thailand

- ADEKA FINE CHEMICAL (THAILAND) CO., LTD.

##### Singapore

- ADEKA (ASIA) PTE.LTD.
- ADEKA (SINGAPORE) PTE.LTD.

##### Malaysia

- ADEKA FOODS (ASIA) SDN.BHD.
- FELDA IFFCO OIL PRODUCTS SDN.BHD.

##### India

- ADEKA INDIA PVT.LTD.

##### The United Arab Emirates

- ADEKA AL GHURAIR ADDITIVES LLC

##### Brasil

- ADEKA BRASIL LTDA.



#### contact information

Legal Affairs & Publicity Dept TEL:+81-3-4455-2803 FAX:+81-3-3809-8210

CSR  
REPORT **2013**

CORPORATE SOCIAL RESPONSIBILITY

**Environmental Data**



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## Environmental Data

Period Covered by This Report

2012 Fiscal Year ended March 31, 2013

\* From January 1, 2012 to December 31, 2013 for overseas business locations

## Scope of This Report

Covers ADEKA and the major domestic and overseas companies in the ADEKA Group.

Domestic affiliated companies		Overseas affiliated companies	
● ADEKA Chemical Supply Corp.	● ADEKA Clean Aid Corp.	● Amfine Chemical Corp.	● ADEKA Foods (Changshu) Co., Ltd.
● ADEKA Fine Foods Corp.	● ADEKA Engineering & Construction Corp.	● ADEKA (Singapore) Pte.Ltd.	● ADEKA Fine Chemical Taiwan Corp.
● Oxirane Chemical Corp.	● ADEKA Foods Sales Corp.	● ADEKA Korea Corp.	● ADEKA Fine Chemical (Changshu) Co., Ltd.
● ADEKA Logistics Corp.	● ADEKA Life-Create Corp.	● ADEKA Fine Chemical (Thailand) Co.,Ltd.	● ADEKA Palmarole SAS
● Tokyo Environmental Measurement Center Co., Ltd.	● ADEKA Foods Industry Co., Ltd.	● ADEKA (Shanghai) Co., Ltd.	

In this Environmental Data, "ADEKA Group" and "the Group" refer to the entire ADEKA Group, while "ADEKA" and "the Company" refer to ADEKA Corporation. The report on environmental action goals covers ADEKA Corporation.

## Contact information

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TEL : +81-3-4455-2803 FAX : +81-3-3809-8210 Mail Address : somu@adeka.co.jp

## Basic Environmental Policy

### 1. Corporate-wide global environmental conservation and pollution prevention efforts

Each one of us must be highly conscious of environmental conservation, striving for harmony and integration with the environment in all aspects of our business activities. In order to carry out fair and sustainable activities, there must be cooperation, not only between departments within each company, but also in a broader sense with other companies in the group as ADEKA adopts a comprehensive and organic approach to its efforts.

### 2. Corporate responsibility

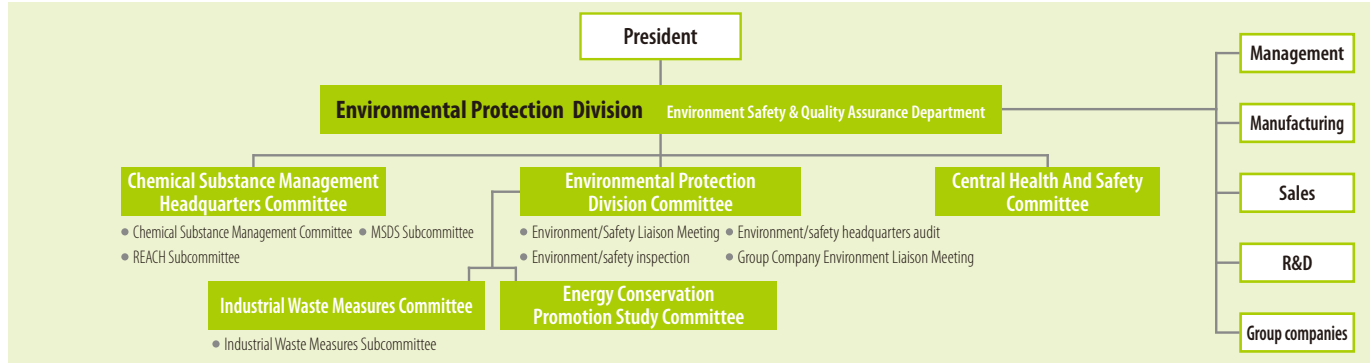
ADEKA endeavors to reduce the environment impact of its business activities throughout the life cycle—from research, development and procurement through to manufacturing, sales, logistics and disposal. These initiatives focus on conserving energy and resources, as well as reducing, reusing and recycling industrial waste, in order to reduce the impact on the environment. In addition, ADEKA develops and supplies eco-friendly products and environmental technologies, and endeavors to use eco-friendly products in contributing to a sustainable society.

### 3. Contributing to society

We are keenly aware of the fact that a corporation is a member of society and we steadfastly comply and cooperate with environmental regulations and government policies. We also disclose environmental information and lend support and cooperation to environmental conservation activities, both in society at large and in the local community.

## Environmental Initiatives System

Based on policies drawn up by the Environmental Protection Division headed by an operating officer, each business office formulates an execution plan and puts effort into the continuous improvement of environmental management activities by implementing the PDCA cycle.



Environmental Action Goals and Future Tasks

Category	Medium- and Long-term Goals	FY2012 Goals
<b>Promotion of energy conservation</b>	Reduce energy intensity* <sup>1</sup> by 20% by FY2010, compared with FY1990 levels	Reduce energy intensity by 1% per year
<b>Reduction of Greenhouse Gas Emissions</b>	Reduce CO <sub>2</sub> emissions by 25% by FY2010, compared with FY1990 levels	Reduce CO <sub>2</sub> emissions by 1% per year
<b>Reduction of Industrial Waste</b>	<ul style="list-style-type: none"> <li>• Completely eliminate landfill waste by FY2020</li> <li>• Increase recycling rate*<sup>2</sup> for externally processed waste to 80% by FY2020</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce waste generation by at least 1% per year</li> <li>• Continue to achieve zero emissions*<sup>3</sup> of landfill waste, and make efforts for complete elimination of landfill waste*<sup>4</sup></li> </ul>
<b>Reduction of Environmental Pollutant Emissions</b>	Reduce emission of PRTR* <sup>5</sup> substances by 20% compared with FY2010 level by FY2020	Strive to reduce emissions of PRTR substances, while managing them
<b>Promote green purchasing</b>	Achieve green purchasing rate of 80% or more for designated stationery items and non-stationery items by fiscal 2020.	
<b>Management systems</b>	Develop IMS* <sup>6</sup> and BCMS	<ul style="list-style-type: none"> <li>• Understand customer's needs and continuously improve management systems</li> <li>• Consider the horizontal development of BCMS (Business Continuity Management System)</li> </ul>

\*1: An objective indicator for production efficiency, and refers to the energy needed to produce a unit quantity of products (crude oil equivalent)

\*2: Defined as the percentage of industrial waste of all industrial waste that is treated by external contractors, which is effectively utilized through means such as recycling and reuse, resource recovery, and heat recovery

\*3: "Zero emissions" is defined as landfill waste that amounts to less than 0.5% of the volume of industrial waste output

The suspension of the operation of production facilities in fiscal 2011 as a result of the Great East Japan Earthquake had an impact on the environmental data. However, since our return to normal production levels in fiscal 2012, the amount of CO<sub>2</sub> emissions and industrial waste generated have increased.

Performance in FY2012	Future Tasks
<ul style="list-style-type: none"> <li>● <b>Achieved energy intensity of 0.1856 kiloliters per tonne</b> (Reduced energy intensity by 0.9% compared with FY1990 levels. 4.5% increase from previous year)</li> </ul>	<ul style="list-style-type: none"> <li>● Further reduce consumption of electric power and other fixed energy</li> <li>● Change fuels, for example, from heavy oil to city gas Discover new highly efficient equipment/energy-saving equipment, etc.</li> </ul>
<ul style="list-style-type: none"> <li>● <b>Generated 150,607 tonnes of CO<sub>2</sub> emissions</b> (Reduced CO<sub>2</sub> emissions by 18.1% compared with FY1990 levels. 4.2% reduction from previous year)</li> </ul>	
<ul style="list-style-type: none"> <li>● <b>Generated 38,626 tonnes of industrial waste</b> (7.7% reduction from previous year)</li> <li>● <b>Landfill waste generated: 25.8 tonnes</b> (44% reduction from previous year)</li> <li>● <b>Recycling rate: 48%</b> (5% fall compared to the previous fiscal year)</li> </ul>	<ul style="list-style-type: none"> <li>● Curb generation of waste through improvement in production technology</li> <li>● Curb generation of waste through improvement in well-planned production, and marketing</li> <li>● Reduce incineration disposal</li> <li>● Strive to convert things valuable resources, and recycle waste</li> </ul>
<ul style="list-style-type: none"> <li>● <b>Air emissions: 9.4 tonnes</b> (A 204% year-on-year increase)</li> <li>● <b>Emissions into public water: 18.2 tonnes</b> (A 42% year-on-year decrease)</li> <li>● <b>PRTR transferred amount: 170 tonnes</b> (A 27% year-on-year decrease)</li> </ul>	Enhance management for reducing emissions of PRTR substances
<ul style="list-style-type: none"> <li>● <b>Stationery items: 69%</b> (1,526 items out of 1,054 items) (6% fall from previous fiscal year)</li> <li>● <b>Non-stationery items: 54%</b> (739 items out of 400 items) (3% increase from previous fiscal year)</li> </ul>	Promote green purchasing while striking a balance with cost
<ul style="list-style-type: none"> <li>● <b>Promote the continuous improvement of each management system</b></li> <li>● <b>As BCMS will move from BS25999-2:2007 to ISO22301:2012, review management systems</b></li> </ul>	<ul style="list-style-type: none"> <li>● Understand customer's needs and continuously improve management systems</li> <li>● Acquire ISO22301:2012 for the Head Office and Soma Plant</li> <li>● Continuously improve on BCM/BCP in other plants</li> </ul>

\*4: "Complete elimination" is defined as landfill waste that amounts to less than 0.1% of the volume of industrial waste output

\*5: A system in which the Japanese government, together with business operators and other bodies, obtain, compute, and publish data on the sources and amounts of toxic chemical substances released in the environment, and amounts externally transferred in waste

\*6: Among all the management systems, the parts that are responsible for establishing, introducing, implementing, monitoring, reviewing, maintaining, and improving business continuity plans

## Environmental Accounting

ADEKA Group calculates and verifies costs required for environmental conservation and its effect in order to facilitate environmental management.

As tools to quantitatively assess the effects of environmental conservation activities, we have adopted “Environmental Accounting Guidelines 2005” and “Environmental Conservation Cost Category Handbook 2003” published by the Ministry of Environment, as well as “Environmental Accounting Guidelines for Chemical Companies” published by the Japan Chemical Industry Association. With these tools, we disclose environmental accounting information with a focus on reliability, comparability, and verifiability.

### Results of Environmental Accounting Calculations

· Covering the period from April 1, 2012 to March 31, 2013.

· Scope of quantitative assessment: ADEKA Corporation business offices, Oxirane Chemical Corp., ADEKA Fine Foods Corp., Uehara Foods Industry Co., Ltd.

### Environmental Conservation Costs

(millions of yen)

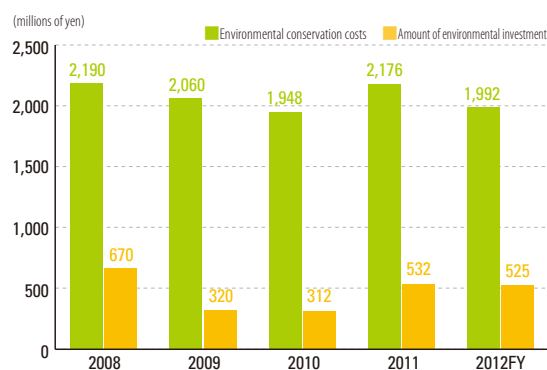
Category	Description of Main Initiatives	Cost of Environmental Initiatives	Amount of Investment
<b>1. Business area cost</b>	All environmental conservation activities aimed at limiting environmental impact	1,863	525
(1) Pollution prevention costs	Prevention of air, water, and soil pollution, and of noise, stench, and land subsidence	1,024	306
(2) Global environmental conservation costs	Minimizing greenhouse gas emissions, conserving energy, and preventing ozone layer depletion	367	145
(3) Resource recycling costs	Recycling and reuse of resources, and minimizing, treating, and disposing of waste material	472	74
<b>2. Upstream/downstream cost</b>	Collection and recycling costs for containers and packaging, green procurement	41	0
<b>3. Administration cost</b>	Implementation of management systems, monitoring and tracking of environmental effects, and greening	80	0
<b>4. R&amp;D cost</b>	R&D expenses for environmental conservation	5	1
<b>5. Social activity cost</b>	Greening and weed removal outside the business premises, provision of support for all environmental conservation activities in the community, and financial donations	1	0
<b>6. Environmental remediation cost</b>	Nature restoration expenses, payment of damages related to environmental conservation, and provision of allowance for damages related to the environment	3	0
<b>Total</b>		<b>1,992</b>	<b>525</b>

### Economic Effects with Environmental Conservation Measures

(millions of yen)

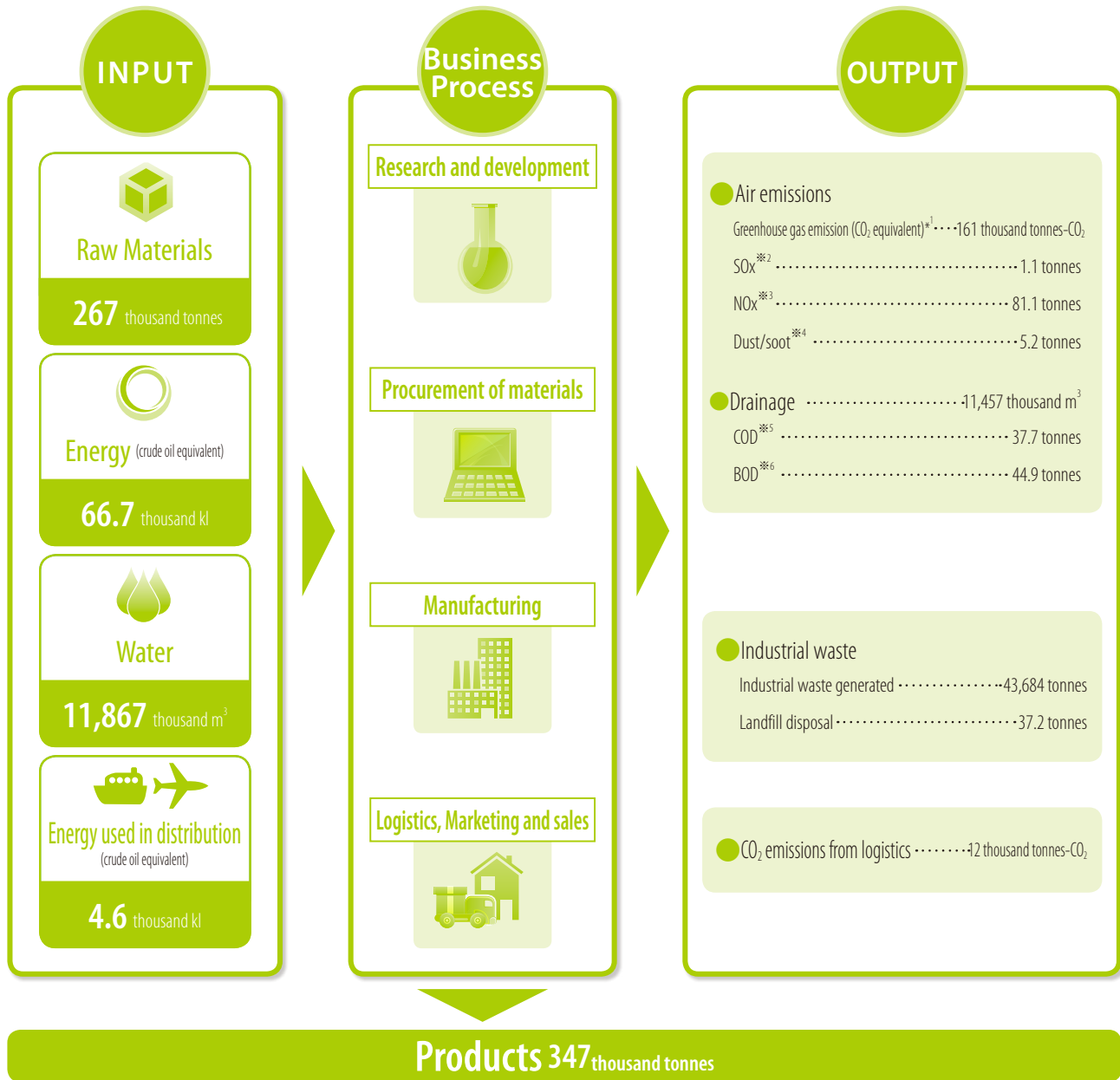
Details of effects	2011FY	2012FY
Income earned by recycling	18	100
Reduction in costs through energy saving	105	100
Reduction in waste disposal cost	81	50
Reduction in the amount of materials	189	358
Reduction in distribution cost with more efficient transportation	26	15
<b>Total</b>	<b>419</b>	<b>623</b>

### Cost of Environmental Initiatives and Amount Invested



**Material Flow**

The ADEKA Group has put in place initiatives to reduce and recycle the volume of waste material generated through our production processes.

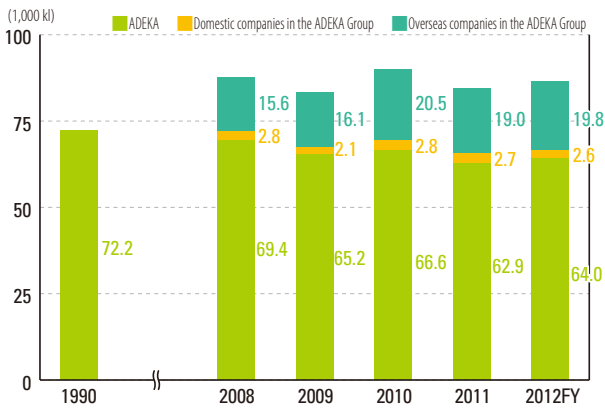


\*1 Total emissions arising from energy sources, non-energy sources, and processes    \*2 Sulfur oxides emitted during the use of sulfur-containing fuels    \*3 Nitrogen oxide emitted during combustion in boilers and incinerators at plants  
 \*4 Particulate matter emitted from combustion of fuels and other matter    \*5 The amount of oxygen that is consumed during the oxidization of organic compounds    \*6 The amount of oxygen that is needed by biological organisms to mineralize or gasify organic pollutants in a body of water or plant wastewater

## Prevention of Global Warming

Production recovered mainly for the food business, which had suffered from the significant impact of the Great East Japan Earthquake. As a result, production volume for the ADEKA Group for fiscal 2012 rose 6.1% year-on-year to 347 thousand tonnes. Consequently, energy consumption and greenhouse gas emissions also increased by 2.2% and 5.5% respectively as compared to the previous fiscal year. Energy intensity improved by 4.5%, but is yet to return to the level prior to the earthquake disaster.

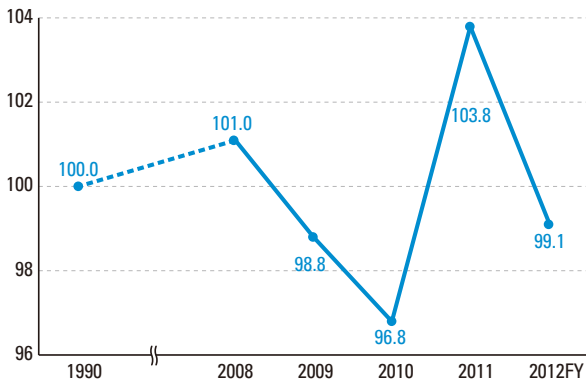
Energy Consumption by Crude Oil Equivalent



CO<sub>2</sub> Emissions

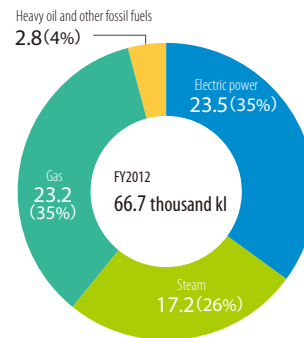


Energy Intensity Index from Manufacturing (ADEKA plant)



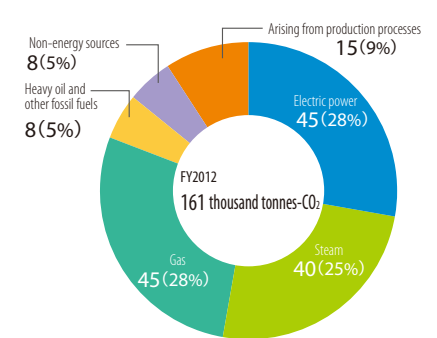
Breakdown of energy consumption

\*Excluding overseas group companies



Breakdown of greenhouse gas emissions

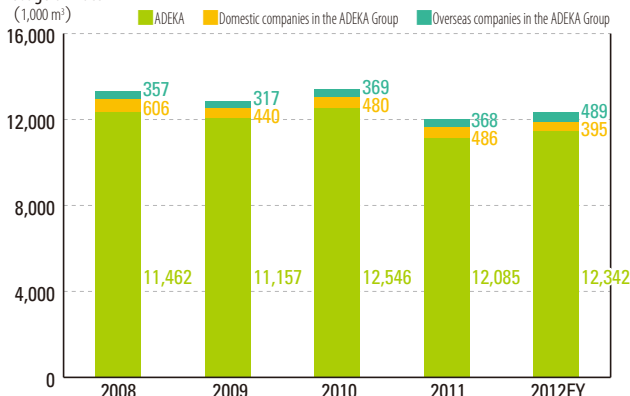
\*Excluding overseas group companies



## Prevention of Water Pollution

The ADEKA Group collects, recycles, and reuses wastewater from production processes, with the aims of preventing water pollution and the conservation of water resources, which are vital for a recycling-based society. The Group is also committed to reducing the environmental effects of wastewater, in accordance with various laws and regulations.

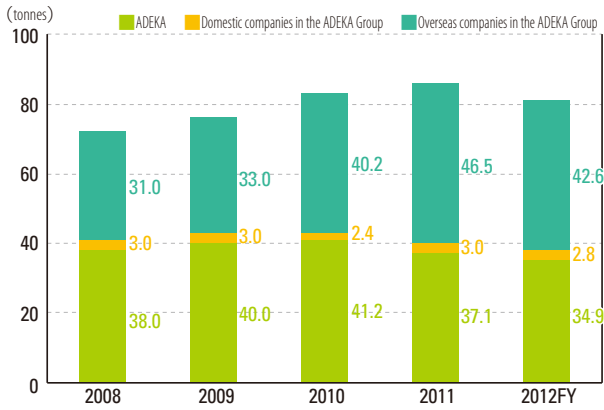
Usage of Water



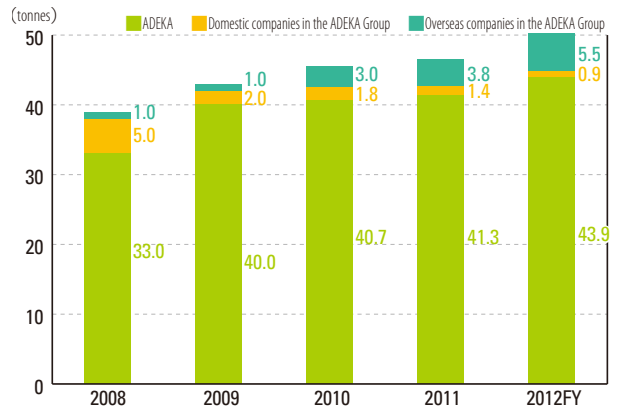
Waste Water Discharge



Chemical Oxygen Demand emissions



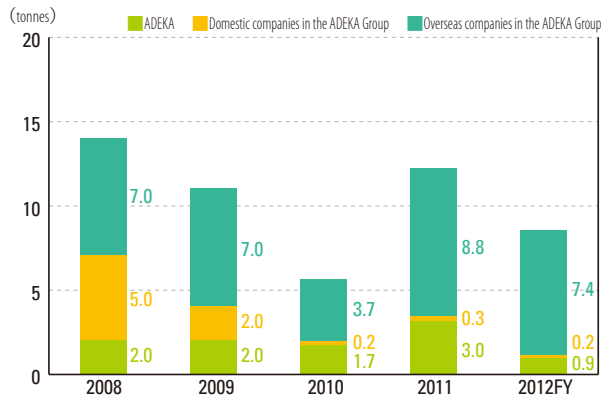
Biological Oxygen Demand emissions



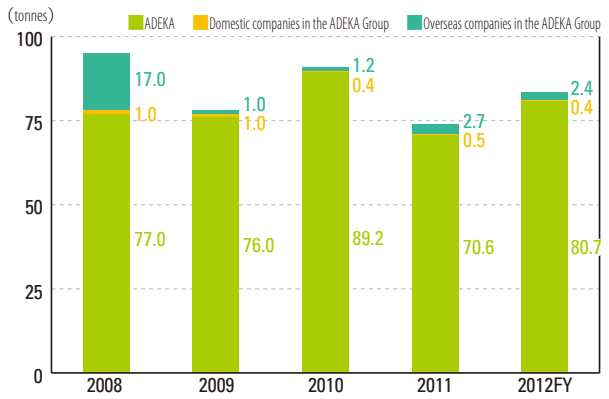
## Air Pollution Prevention

In fiscal 2012, we began using city gas instead of heavy oil as boiler fuel in Kashima Plant-West. As a result, we achieved significant reductions in SOx emissions. In addition to SOx, we are also putting effort into the appropriate management and operation of incinerators at the three ADEKA plants that use incinerators (Chiba, Mie, Soma) in order to reduce the amounts of NOx, Soot, and Dust generated.

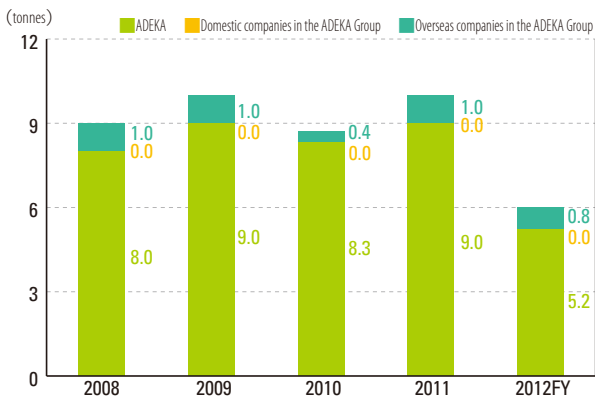
SOx emissions



NOx emissions



Soot/Dust emissions



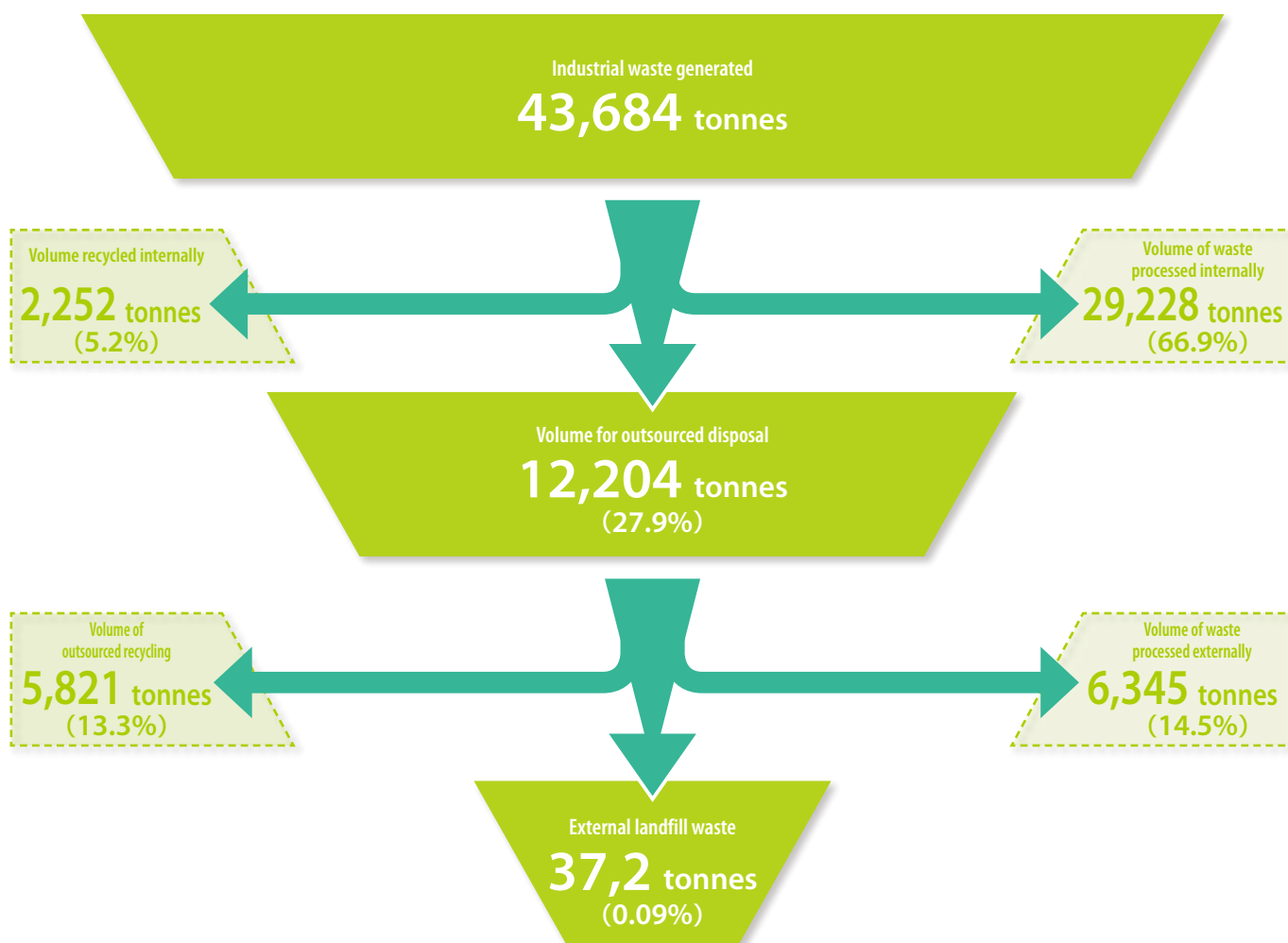
## Reducing Industrial Waste

The ADEKA Group has continued to achieve zero emissions since 2007, pursuing 3R initiatives to reduce, reuse, and recycle industrial waste. In fiscal 2012, we achieved complete elimination for the first time in two years.

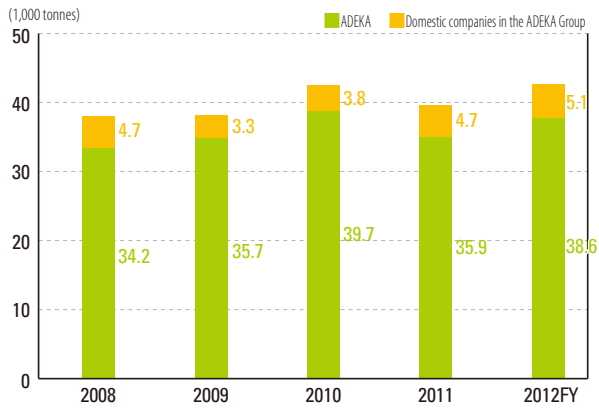
In fiscal 2012, the economy recovered from the recession that had resulted from the Great East Japan Earthquake and we resumed production activities. As a result, the volume of industrial waste generated by the ADEKA Group increased 3,141 tonnes (7.7%) year-on-year to 43,684 tonnes. We promoted the treatment of industrial waste in-house, reducing the amount treated by external contractors by 1.1% year-on-year to 27.9% of all industrial waste generated.

On the other hand, the recycling rate (the percentage of effectively recycled waste in the total volume of waste treated by external contractors) was 47.7%, which was 7.8% lower than in the previous fiscal year.

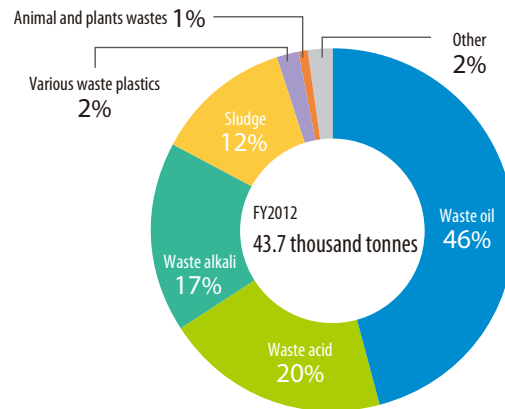
### The entire flow of recycling and disposal of waste



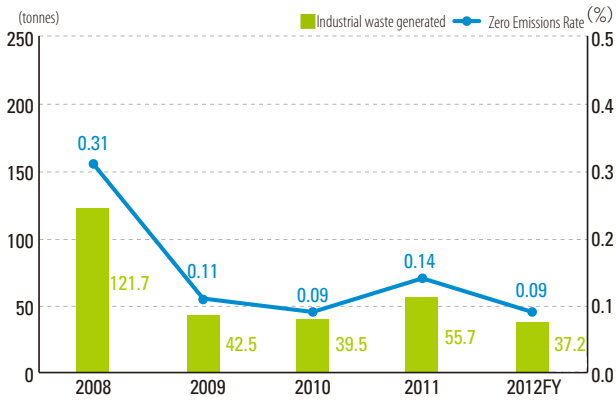
Industrial waste generated



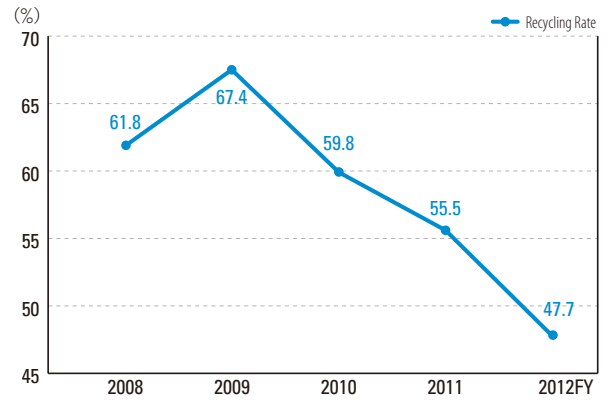
Breakdown of industrial waste



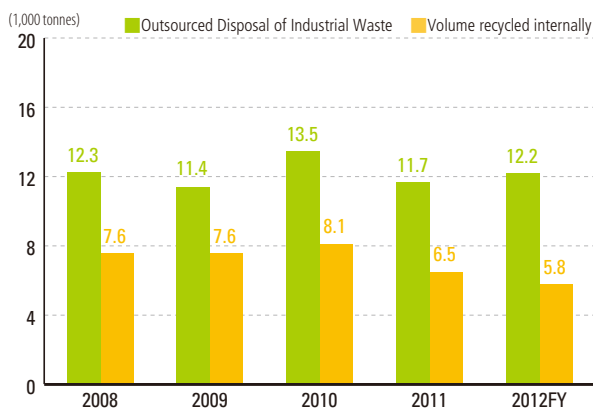
Zero Emissions Rate for Landfill Disposal of Industrial Waste



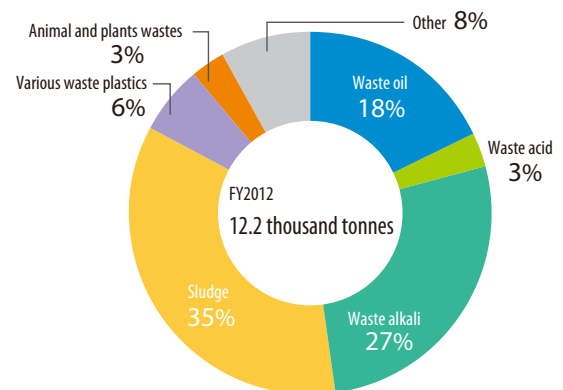
Recycling Rate



Outsourced Disposal of Industrial Waste



Breakdown of the total volume of waste treated by external contractors



### Reducing Emissions of Chemical Substances

The ADEKA Group has been tracking PRTR substances since fiscal 1997, and comprehends and properly manages the use and transfer of toxic substances while endeavoring to reduce their use.

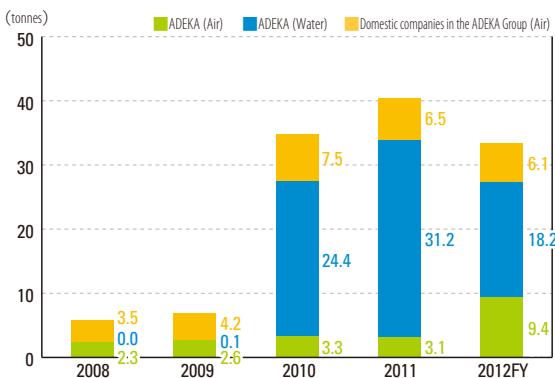
With the revision of legislation for PRTR substances, the number of Class 1 Specified Chemical Substances has increased from 354 to 462 since fiscal 2011. Among them, the ADEKA Group made a report of 75 substances in fiscal 2012.

Furthermore, the Group is appropriately handling other chemicals than PRTR substances, and will continue pursuing initiatives to reduce emission of chemicals.

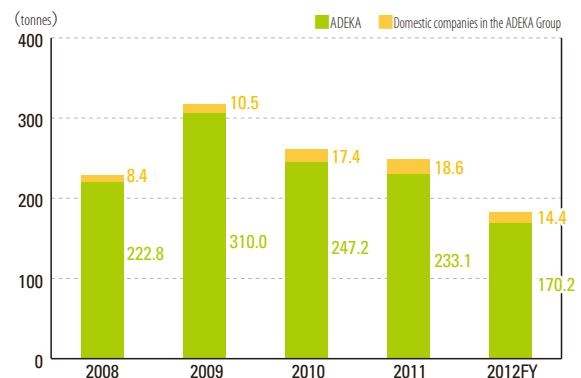
Substance	Discharge				Transfer		(tonnes)
	Air	Public Waters	Soil	Landfill Waste	Sewage	External Transfer	
1-Allyloxy-2,3-epoxypropane	0.0	0.0	0.0	0.0	0.0	0.2	
4,4'-Isopropylidenediphenol	0.0	0.0	0.0	0.0	0.0	0.5	
Ethylbenzene	0.0	0.0	0.0	0.0	0.0	15.1	
Ferric chloride	0.0	0.0	0.0	0.0	0.0	2.2	
Xylene	0.0	0.0	0.0	0.0	0.1	12.1	
Chlorobenzene	0.2	0.0	0.0	0.0	0.0	9.5	
Chloroform	0.0	0.0	0.0	0.0	0.0	1.1	
Chloromethane	0.2	0.0	0.0	0.0	0.0	0.0	
1,2-Dichloroethane	0.9	0.0	0.0	0.0	0.0	50.0	
Dichloromethane	0.2	0.0	0.0	0.0	0.0	11.0	
Butylated hydroxytoluene	0.0	0.0	0.0	0.0	0.0	0.8	
N,N-dimethylformamide	0.0	0.0	0.0	0.0	0.0	0.7	
Decyl alcohol	0.1	0.0	0.0	0.0	0.0	0.0	
Triethylamine	0.0	0.2	0.0	0.0	0.0	8.5	
Toluene	9.6	0.0	0.0	0.0	0.0	42.1	
Naphthalene	0.0	0.0	0.0	0.0	0.0	0.2	
Carbon disulfide	0.6	0.0	0.0	0.0	0.0	0.0	
Pyridine	0.0	0.0	0.0	0.0	0.0	0.5	
Bis(2-ethylhexyl)phthalate	0.0	0.0	0.0	0.0	0.0	0.2	
N-hexane	3.3	0.0	0.0	0.0	0.0	7.8	
Water-soluble salts of peroxodisulfuric acid	0.0	18.0	0.0	0.0	0.0	0.0	
Boron compounds	0.0	0.0	0.0	0.0	0.1	0.2	
Poly (oxyethylene) alkyl ether(Limited to substances with alkyl group carbon atoms from 12 up to 15 and their mixtures)	0.0	0.0	0.0	0.0	0.0	0.2	
Methylenebis (1,4-cyclohexylene) diisocyanate	0.0	0.0	0.0	0.0	0.0	0.1	
Molybdenum and its compounds	0.0	0.0	0.0	0.0	0.0	4.8	
TRIS(2-ETHYLHEXYL)	0.3	0.0	0.0	0.0	0.0	16.0	
50 substances other than those listed above	0.1	0.0	0.0	0.0	0.0	0.8	
<b>Total</b>	<b>15.5</b>	<b>18.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>184.5</b>	
<b>Dioxins *</b>	<b>0.18</b>	<b>7.5×10<sup>-5</sup></b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.10</b>	

\*Dioxins: Unit: mg-TEQ

Discharge of PRTR Substances



Transfer of PRTR Substances



## Acquisition of Management System Certification

### ► ISO 14001 Environmental Management Systems

- Mie Plant (December 1996)
- Kashima Plant (March 1998)
- Fuji Plant (April 2000)
- Chiba Plant (May 2000)
- Soma Plant (September 2000)
- Akashi Plant (March 2001)
- Oxirane Chemical Corp. (March 2001)
- Tokyo Environmental Measurement Center Co., Ltd. (February 2003)
- ADEKA Korea Corp. (January 2006)
- ADEKA Fine Chemical Taiwan Corp. (February 2007)
- ADEKA Fine Chemical (Changshu) Co., Ltd. (July 2007)
- Amfine Chemical Corp. (September 2007)
- ADEKA Foods (Changshu) Co., Ltd. (August 2009)

### ► OHSAS 18001 Occupational Health and Safety Management Systems

- Mie Plant (September 2001)
- Soma Plant (November 2002)
- Kashima Plant (November 2002)
- Akashi Plant (March 2003)
- Chiba Plant (October 2003)
- Fuji Plant (December 2003)
- ADEKA Fine Chemical Taiwan Corp. (June 2007)
- ADEKA Foods (Changshu) Co., Ltd. (August 2009)

### ► ISO 22000 certification for food safety

- ADEKA Foods (Changshu) Co., Ltd. (January 1998)
- Akashi Plant (April 2008)
- ADEKA Fine Foods Corp. (March 2010)

### ► FSSC 22000 certification for food safety

- Kashima Plant—West (November 2011)

### ► Hazard Analysis Critical Control Point (HACCP) implementation

- ADEKA Fine Foods Corp. (January 1998)
- Kashima Plant (March 2002)
- Akashi Plant (March 2004)

### ► ISO22301 Business Continuity Management System

- ADEKA FINE CHEMICAL TAIWAN CORP. (January 2013)

### ► BS 25999 certification for business continuity management systems (BCMS)

- Soma Plant and Head Office  
(March 2010, for manufacturing of lubricant additives and cold forging oil additives)

### ► ISO 19001 Quality Management Systems

- Mie Plant (June 1993)
- Kashima Plant (April 1996)
- Fuji Plant (January 1997)
- Chiba Plant (July 1997)
- Oxirane Chemical Corp. (October 1997)
- Soma Plant (August 1998)
- ADEKA Clean Aid Corp. (October 1999)
- ADEKA Engineering & Construction Corp. (March 2002)
- Kukdo Chemical (Kunshan) Co., Ltd. (March 2004)
- Amfine Chemical Corp. (October 2004)
- ADEKA Korea Corp. (October 2004)
- ADEKA Fine Chemical (Shanghai) Co., Ltd. (May 2005)
- Tokyo Environmental Measurement Center Co., Ltd. (August 2005)
- ADEKA Fine Chemical (Changshu) Co., Ltd. (October 2005)
- Uehara Foods Industry Co., Ltd. (November 2005)
- ADEKA (Singapore) Pte. Ltd. (April 2006)
- Felda Oil Products Sdn Bhd (June 2006)
- ADEKA Fine Chemical Taiwan Corp. (July 2006)
- ADEKA Fine Chemical (Thailand) Co., Ltd. (December 2006)

### ► Integrated management system (IMS)

- Soma Plant (August 2004)
- Kashima Plant (November 2008)
- Fuji Plant (December 2009)
- Chiba Plant (July 2011)

### ► Received Total Productive Maintenance (TPM) Awards

- Chiba Plant: 1994 Excellence Award
- Kashima Plant and Mie Plant: 1995 Excellence Award
- Oxirane Chemical Corp.: 1995 Excellence Award
- Akashi Plant: 2004 Excellence Award
- Kashima Plant: 2007 Excellence Award  
—Special Award for TPM Achievement
- Fuji Plant: Award for TPM Excellence, Category A (2010)

### ► ISO 14064-1

(Standard concerning calculation, reporting, and verification of emissions and reduced amount of greenhouse gases)

- ADEKA Fine Chemical Taiwan Corp. (March 6, 2011)