

Environmental Activity Report

FY 2011

(For the period from 1 April 2011 to 31 March 2012)

31 August 2012

Institute for Global Environmental Strategies

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1. Summary of the Organisation

(1) Name

Institute for Global Environmental Strategies

(2) Locations

- Headquarters:

2108-11 Kamiyamaguchi, Hayama, Miura-gun, Kanagawa 240-0115

- Tokyo Office:

Nippon Press Center Bldg., 6F, 2-2-1 Uchisaiwai-cho, Chiyoda-ku, Tokyo 100-0011

- Kansai Research Centre:

East Building, 5F, Disaster Reduction and Human Renovation Institution, 1-5-2 Kaigan-dori, Waki-no-hama, Chuo-ku, Kobe, Hyogo 651-0073

- Kitakyushu Urban Centre:

International Village Centre, 2F, 1-1-1 Hirano, Yahatahigashi-ku, Kitakyushu City, Fukuoka 805-0062

- IGES Regional Centre in Bangkok:

604 SG Tower 6F, 161/1 Soi Mahadlek Luang 3. Rajdamri Road, Patumwan, Bangkok, 10330, Thailand

- Beijing Office:

Sino-Japan Friendship Center for Environmental Protection, Room #508, No. 1 Yuhuanlu, Chao Yang District, Beijing, 100029, China

- Japanese Center for International Studies in Ecology (JISE):

Yokohama Nishi Godochosha, 3F, 2-12-20 Okano, Nishi-ku, Yokohama, Kanagawa 220-0073

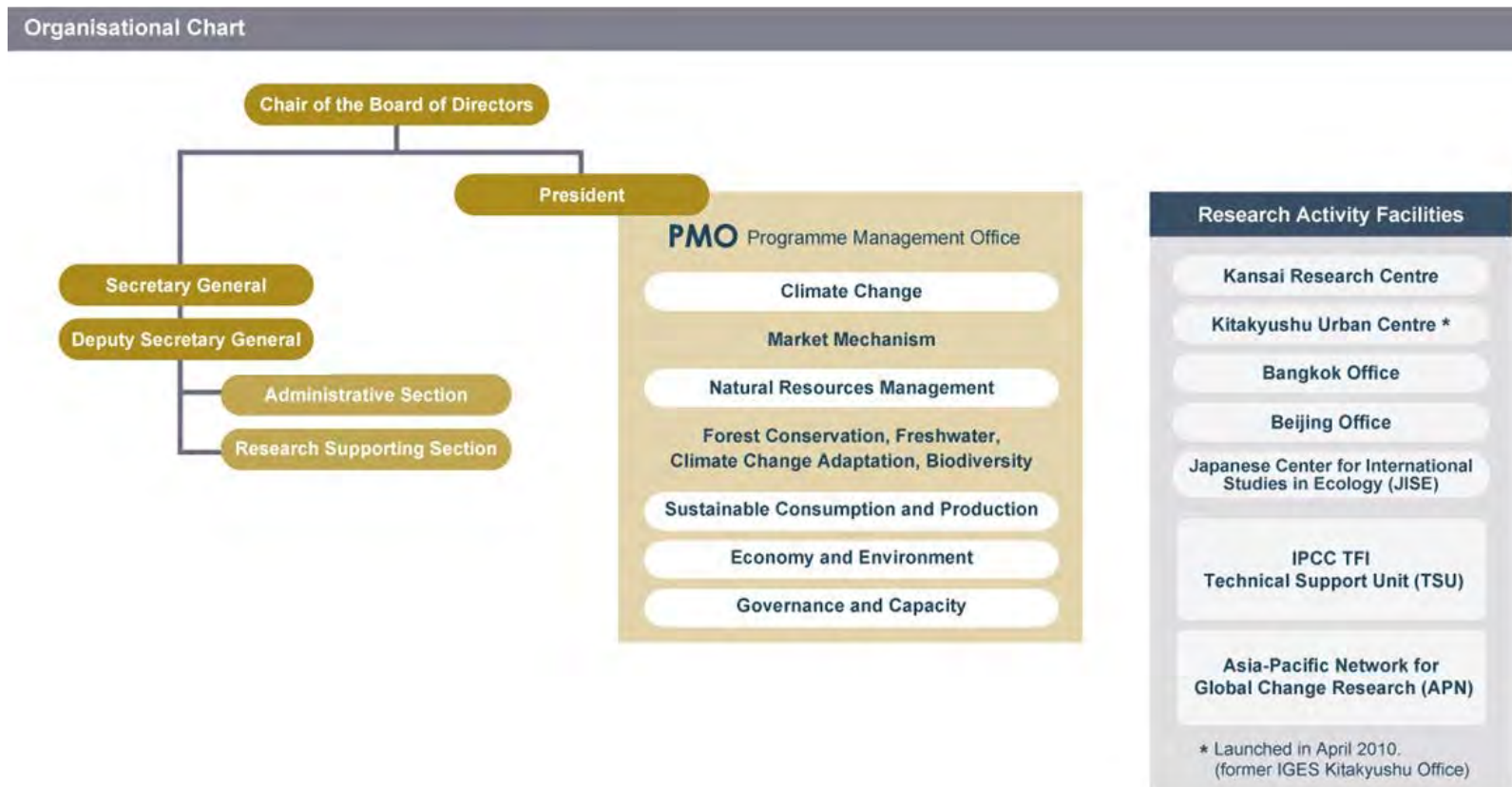
- APN Centre:

East Building, 4F, Disaster Reduction and Human Renovation Institution, 1-5-2 Waki-no-hama, Chuo-ku, Kobe, Hyogo 651-0073

(3) Staffing

Total number of staff: 166 (as of 1 April 2012)

(4) FY 2011 Organisational Chart



(5) Officer responsible for environmental management

Mr. Horotaka Tachikawa, Secretary General, Institute for Global Environmental Strategies

(6) Contact information

Mr. Isao Sato, Head of Administrative Section, Eco-Action 21 Office, Institute for Global Environmental Strategies

Tel: +81-46-855-3712

(7) Budget

JPY 3,078,793,000 (FY 2011 budget)

(8) Outline of IGES

The Institute for Global Environmental Strategies (IGES), established under an initiative of the Japanese government in 1998, is an international research institute conducting practical and innovative policy research for the realisation of sustainable development in the Asia-Pacific region. While population growth and urbanisation are advancing along with rapid economic development, poverty reduction remains an important issue for the Asia-Pacific region. Although efforts have been made to promote regional economic integration and provide new opportunities for further economic development and poverty reduction, there is a risk associated with these trends, including accelerating the growing burden on natural resources and the environment due to the loss of forests, pollution of air and rivers, and the growing volume of waste. As well, amid the pressing international problem of global warming, the Asia-Pacific region is a major emitter of greenhouse gases, and it is feared that the greatest impact will be on the region's economy, society, and people's lives. The mission of IGES is to establish strategies and recommend effective policies for the realisation of sustainable development in the Asia-Pacific region while confronting these varied challenges, looking 50 or 100 years ahead into the future. There are rising expectations and demands concerning the role that the Asia-Pacific region should play in the future in international efforts toward the resolution of global warming and other environmental problems. The Asia-Pacific region is rich in diversity in terms of economics, politics, culture and natural environments, and it is of the utmost importance that appropriate policy recommendations are made available in light of local situations. Through further expansion of cooperative relationships with various entities including national governments, regional governmental organisations, NGOs, businesses, local groups, and experts, the Institute for Global Environmental Strategies conducts strategic policy research from an Asia-Pacific perspective and extensively disseminates the results of such research to the world in order to contribute to the realisation of a sustainable society.

2. Scope of Report

EA21 certification and registration for FY 2011 was completed for Hayama Headquarters in March 2012.

- FY 2012 Scope

Environmental action plans and targets were set for all IGES offices in accordance with their particular situations/characteristics (excluding the IGES Regional Centre in Bangkok and Beijing Office. This applies throughout the report.)

An EA21 mid-term review for scope of activities is planned for each office in March 2013.

- Environmental Activity Report

The environmental action plans and targets for each office are included in this report.

The outcomes of activities for each office will be reflected in the FY 2012 Environmental Activity Report.

Offices	Total office area	Number of Staff	Location
Hayama Headquarters	7,408m ²	123	Hayama-machi, Kanagawa Prefecture
Tokyo Office	108m ²	2	Uchisaiwa-cho, Chiyoda-ku, Tokyo
Kansai Research Centre	246m ²	12	Chuo-ku, Kobe, Hyogo Prefecture
Kitakyushu Urban Centre	125m ²	12	Yahatahigashi-ku, Kitakyushu City, Fukuoka Prefecture
JISE	383m ²	10	Nishi-ku, Yokohama, Kanagawa Prefecture
APN Centre	196m ²	7	Chuo-ku, Kobe, Hyogo Prefecture

(Staff numbers are as of 1 April 2012)

3. Environmental Policy

We, as members of the research institute “IGES” that conducts pragmatic and innovative strategic policy research on sustainable development, commit to this Environmental Policy in our daily operations, obeying the relevant environmental laws and agreements, as we achieve our research objectives.

1. Sustainability

Recognising that the happiness and well-being of future generations rests on our actions today, we will contribute to the aim of realising sustainable development by changing our resource-intensive lifestyles and value systems.

2. Our actions

We will demonstrate the principles of sustainable development and our research outcomes by promoting environmentally sustainable, socially acceptable, and economically feasible practices. We will further endeavour to reduce the environmental footprint incurred in carrying out our mission.

3. Culture

We aim to advocate the principles of sustainable development by utilising local wisdom and tradition, and respecting gender balance and cultural diversity.

4. Local engagement

We promote and participate in local actions with communities and youth, encouraging sustainability and a learning society.

5. International collaboration

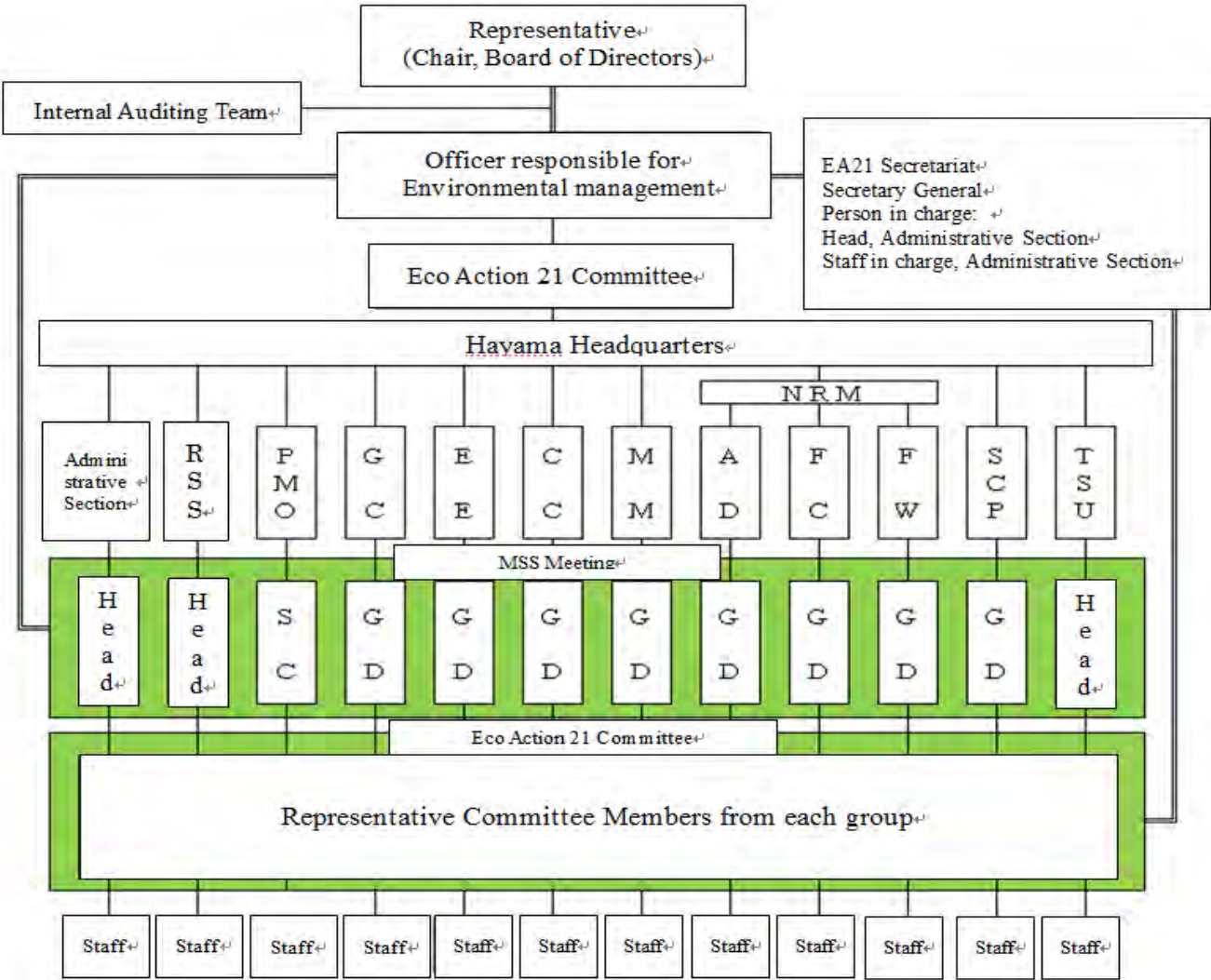
Through transboundary collaboration, we work to create international communities of practice by sharing ideas and expertise towards sustainable development.

Prof. Hironori Hamanaka, Chair of the Board of Directors

Institute for Global Environmental Strategies

1 October 2008

4. FY 2011 Organisational Chart for Eco-Action 21



※Administrative Section includes Accounting Section.

5. FY 2011 Environmental Action Plan (10 Actions)

Ten environmental actions are set as basic environmental activities to build an energy-saving, resource recycling society. IGES aims to achieve its environmental targets by carrying out the following ten environmental actions.

1. In our business operations, each and every staff member will maintain an eco-conscious attitude.
2. We will abide by optimised temperature settings for air conditioning (28°C) and heating (20°C).
3. We will use air conditioning and heating only when and where it is needed.
4. We will regularly educate our staff as necessary in order to implement EA21 actions.
5. We will turn off the lights in workspaces when no staff are present, such as lunchtime.
6. We will put personal computers in sleep mode or shut them down when they will not be used for a long period of time.
7. We will purchase environmentally-friendly goods and services (Green Purchasing Law, items with eco-marks, etc.)
8. We will promote a “paperless” office and use paper effectively by making double-sided copies and reusing scrap paper.
9. We will properly separate waste and promote recycling.
10. We will minimise water use and use caution to conserve water.

6. Environmental Targets and Level of Achievement

- Environmental targets and achievements for reduction target items, such as CO₂ emissions

Item	Unit	Reference year (FY)	FY 2012				FY 2011				FY 2012	
		FY 2007	Target		Actual Results		Target		Actual Results		Target	
			Reduction rate	Target value	Reduction rate ※1	Actual value	Reduction rate	Target value	Reduction rate ※1	Actual value	Reduction rate ※1	Target value
CO₂ Emissions	t-CO ₂	531.5	24.0%	403.9	<u>21.6%</u>	<u>416.8</u>	24.9%	399.1	32.7%	357.7	29.7%	373.6
	Electricity※2	kWh	15.0%	770,478	15.8%	763,468	16.6%	755,834	30.2%	632,935	16.6%	755,834
	City gas	m ³	48.0%	36,085	<u>37.1%</u>	<u>43,670</u>	46.9%	36,826	<u>17.8%</u>	<u>57,040</u>	38.0%	43,000
Water service usage	m ³	7,920	48.0%	4,119	<u>36.5%</u>	<u>5,026</u>	46.0%	4,277	<u>42.3%</u>	<u>4,570</u>	46.0%	4,277
Waste	Burnable waste	kg	31.5%	3,272	<u>28.7%</u>	<u>3,407</u>	31.5%	3,272	46.7%	2,547	47.6%	2,504
	Non-bur nable waste	kg	▲31.3%	676	新基準 年度	1,339	2.0%	1,312	25.7%	995	50.7%	660 ※3
Copy paper purchasing	Sheet s	919,500	11.0%	818,355	27.7%	665,000	30.0%	643,650	29.7%	646,500	30.6%	638,100

Items that are underlined and in bold indicate items and fiscal years in which targets have not been achieved.

※1 . . . Actual reduction rates are based on comparison with FY 2007 as the standard fiscal year.

※2 . . . Energy-saving targets of 15% were set for the summer of FY 2011 due to lower power supply from TEPCO as a result of the Fukushima nuclear power plant disaster. In FY 2012, IGES plans to continue with FY 2011 targets, with energy conservation being carried out through EA21 activities.

※3 . . . With the start of separate measurements for non-burnable waste and plastic, IGES has set this value from which values for waste plastic have been removed.

● Reference targets and achievements (excluding reduction target items)

Item		Unit	Reference year (FY)	FY 2010				FY 2011				FY 2012	
			FY 2007	Target		Actual Results		Target		Actual Results		Target	
				Reduction rate	Target value	Reduction rate ※1	Actual value	Reduction rate	Target value	Reduction rate ※1	Actual value	Reduction rate	Target value
Recyclables	Bottles	kg	194	2.0%	190.1	4.6%	185	5.6%	183.1kg	▲28.2%	IGES : 230.7 Kitchen : 18	New reference year (FY)	249
	PET bottles	kg	126	▲15.0%	144.9	▲7.1%	135	▲6.0%	133.6kg	▲23.0%	IGES : 152.2 Kitchen : 2.8	New reference year (FY)	155
	Cans	kg	184	▲15.0%	211.6	▲97.3%	363	▲77.6%	326.7kg	▲26.2%	IGES : 201.6 Kitchen : 30.6	New reference year (FY)	232
	Plastic	kg	—	—	—	—	—	—	—	—	—	New reference year (FY)	336 ※
Green purchasing	Eco-products purchasing rate	%	54.09%	—	88.0%	—	90.0%	—	90.0%	—	94.2%	—	94.2%

▲ indicates an increase in reduction rates.

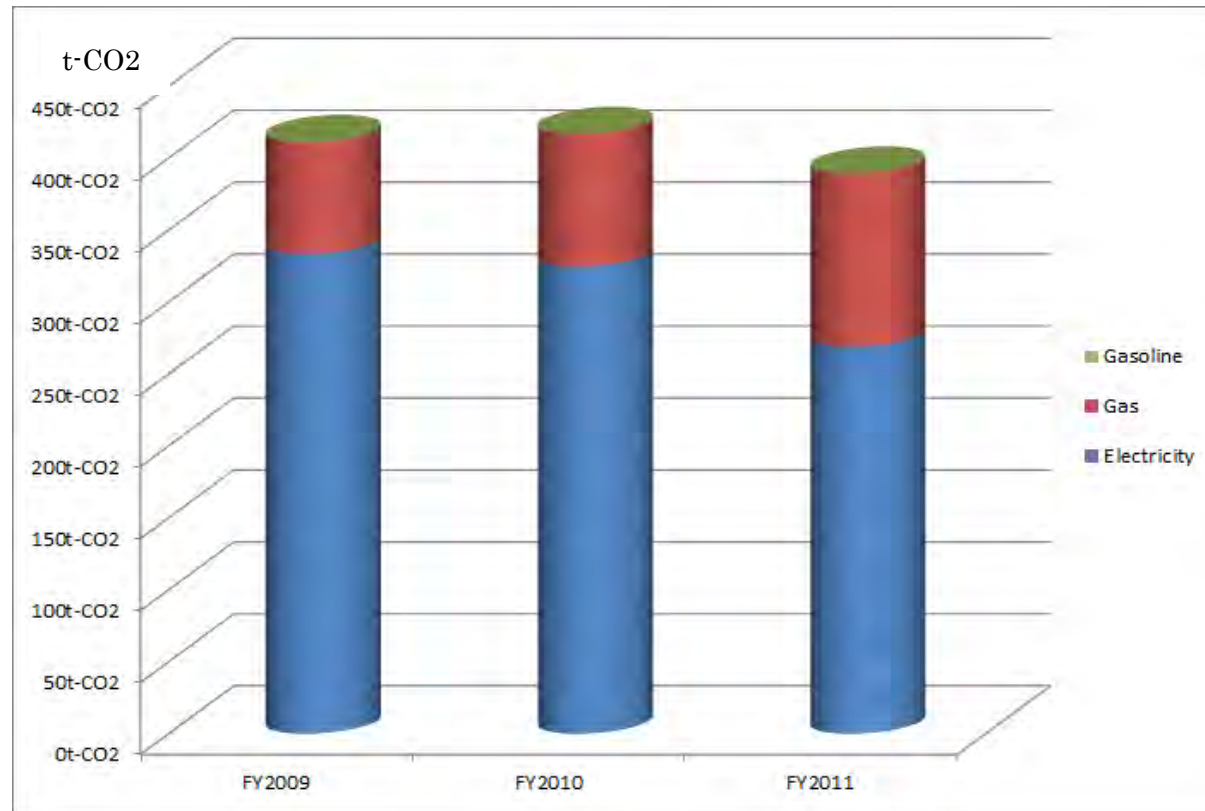
※ Plastic, which had been measured together with non-burnable waste, will be measured separately from FY 2012.

FY 2012 will be set as the new reference year (FY) for actual waste values from IGES in FY 2011. The rationale for setting values (trial calculation) is as follows.

【Setting target values for FY 2012】 Since measurements started in June 2012, generated plastic will be calculated in FY 2012 from the average of measurements of plastics in June and the measurements in July.

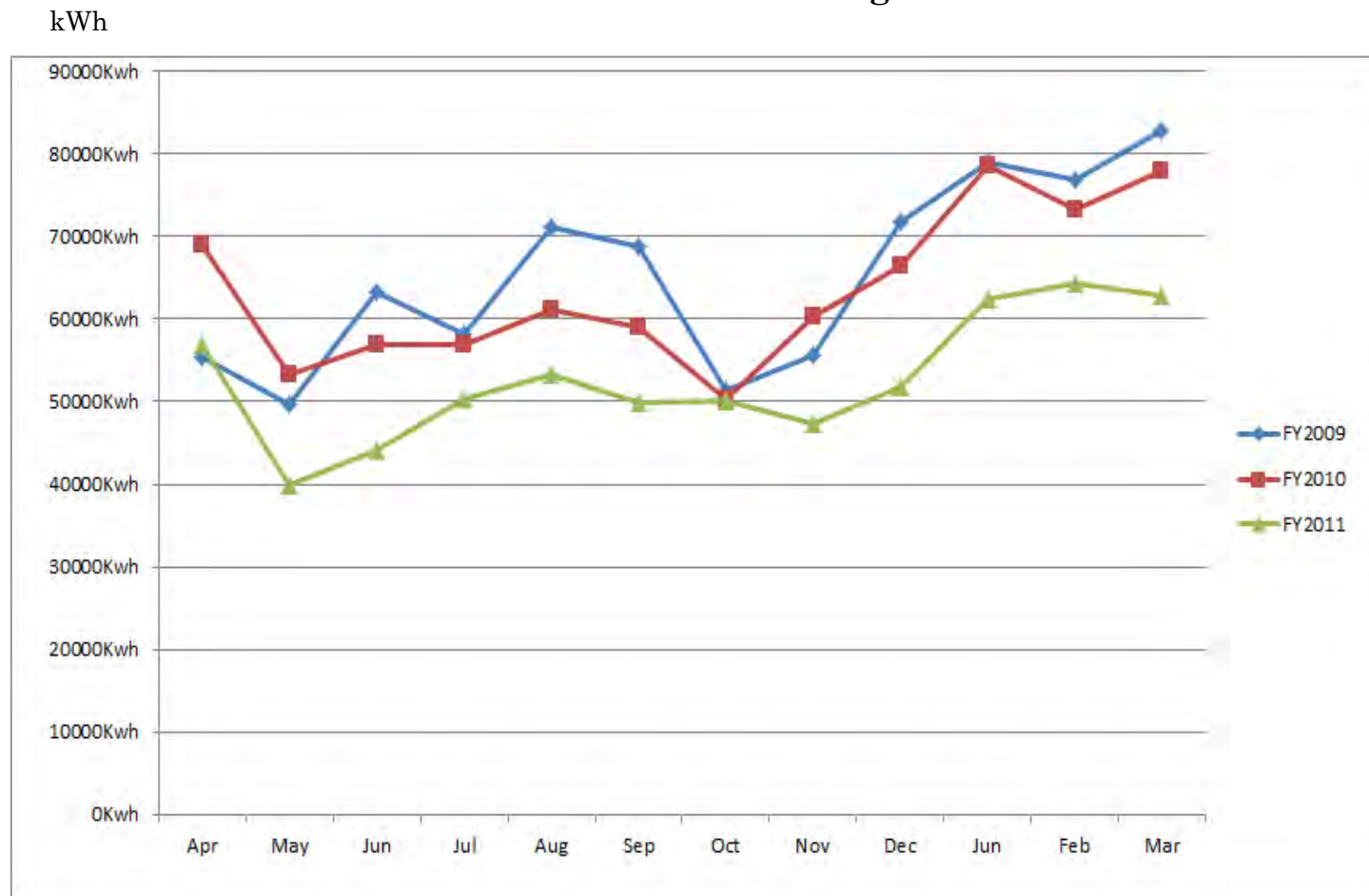
(June: 24kg + July: 32kg) /2=28kg The amount of waste for one month is assumed to be 28kg, from which an annual amount is calculated. 28kg X 12 months = 336kg/year.)

CO2 Emissions



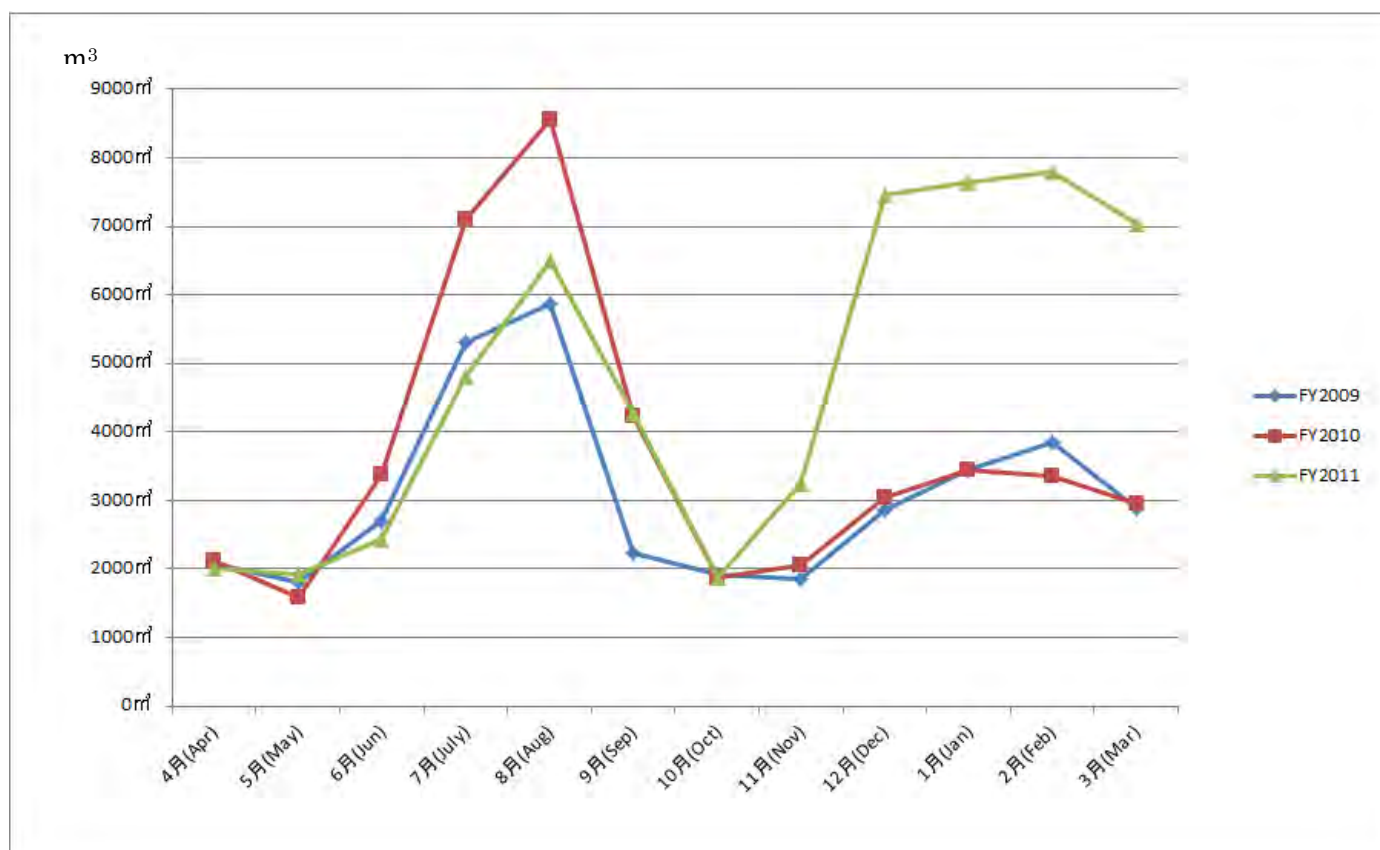
	Electricity	Gas	Gasoline	Total	Reduction rate (compared to reference year FY 2007)
FY2007	385.2	146.3		531.5	100.0%
FY2009	333.2	77.6	0.4	411.2	22.6%
FY2010	324.4	92.2	0.2	416.8	21.6%
FY2011	237.3	120.2	0.1	357.6	32.7%

Electric Power Usage



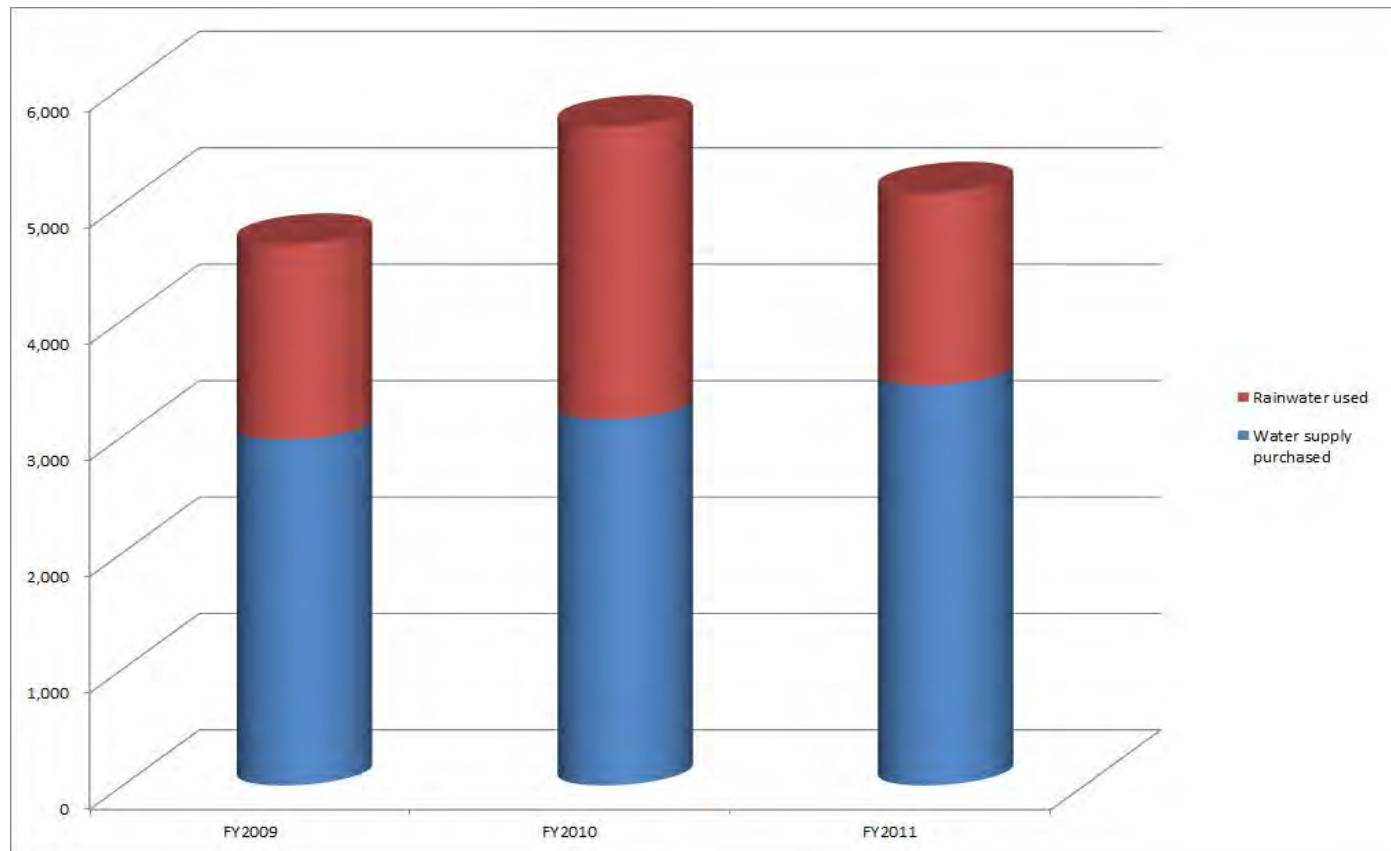
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total	Reduction rate
FY2007	74,381	64,595	71,581	70,088	89,884	78,776	65,623	68,938	76,495	84,604	84,875	76,605	906,445	100%
FY2009	55,357	49,614	63,202	58,109	71,223	68,895	51,460	55,666	71,739	79,127	76,925	82,865	784,182	13.5%
FY2010	68,982	53,258	56,841	56,886	61,267	59,140	50,337	60,345	66,559	78,586	73,242	78,025	763,468	15.8%
FY2011	56,809	39,812	44,094	50,262	53,210	49,917	50,114	47,255	51,732	62,424	64,439	62,867	632,935	30.2%

Gas Usage



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total	Reduction rate
FY2007	4,205	3,840	4,322	5,720	10,140	5,892	4,323	5,106	6,727	6,891	8,207	4,021	69,394	100%
FY2009	2,078	1,807	2,705	5,313	5,860	2,237	1,914	1,852	2,855	3,449	3,846	2,883	36,799	47.0%
FY2010	2,122	1,573	3,377	7,094	8,551	4,228	1,883	2,043	3,044	3,440	3,366	2,949	43,670	37.1%
FY2011	2,018	1,928	2,434	4,820	6,506	4,276	1,872	3,249	7,468	7,644	7,790	7,035	57,040	17.8%

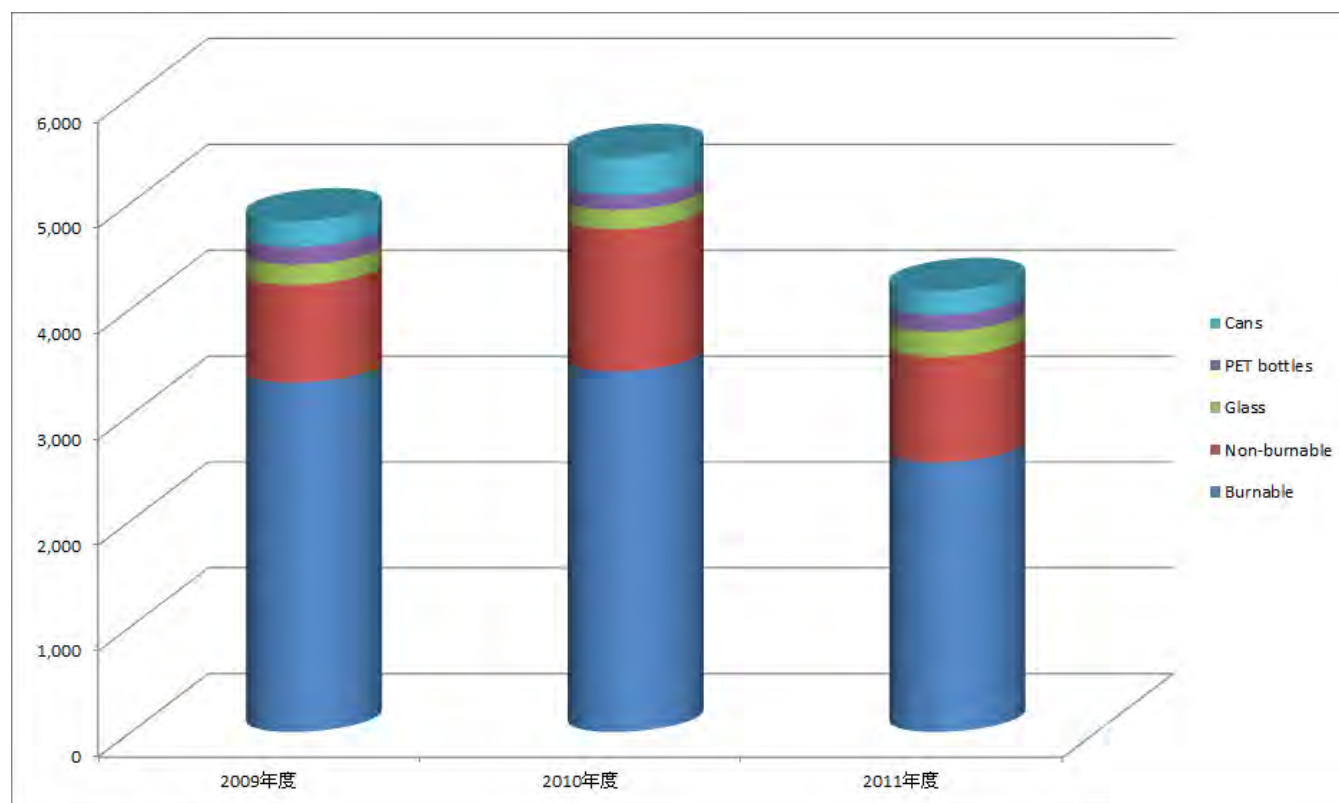
Water Usage



	Water supply purchased	Compared to reference year (FY 2007)	Rainwater used	Coolant for heating/cooling	Total amount of water used	Compared to reference year (FY 2007)
FY2007	5,863		2,497	440	7,920	
FY2009	2,972	52.09%	1,671	311	4,332	45.3%
FY2010	3,146	55.14%	2,514	634	5,026	36.5%
FY2011	3,439	58.65%	1,648	517	4,570	42.3%

Total amount of water used = water supply purchased + rainwater used - coolant for heating/cooling (due to evaporation)

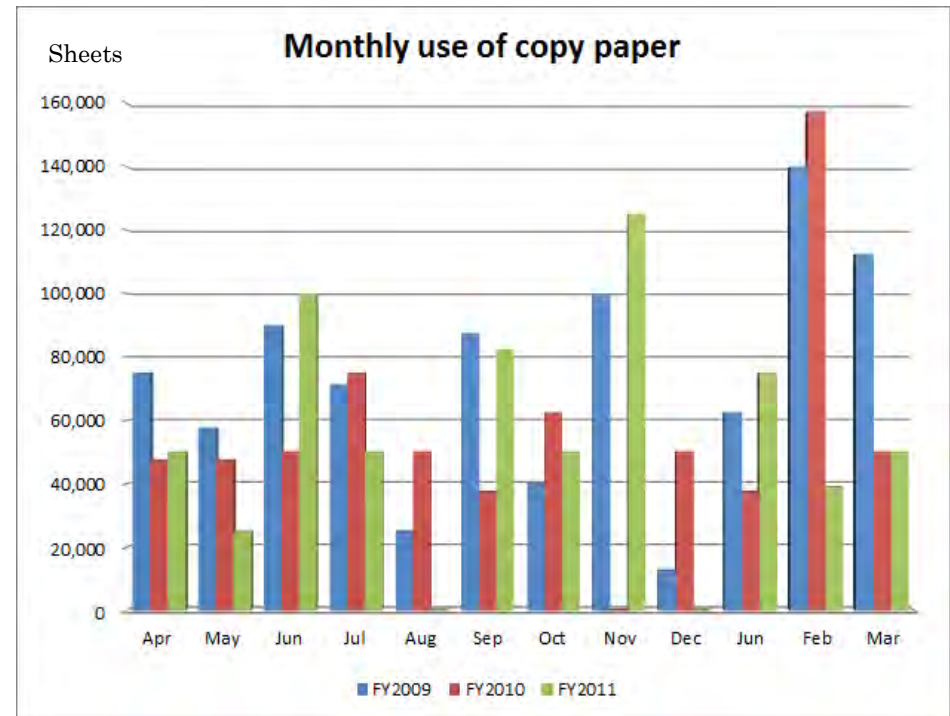
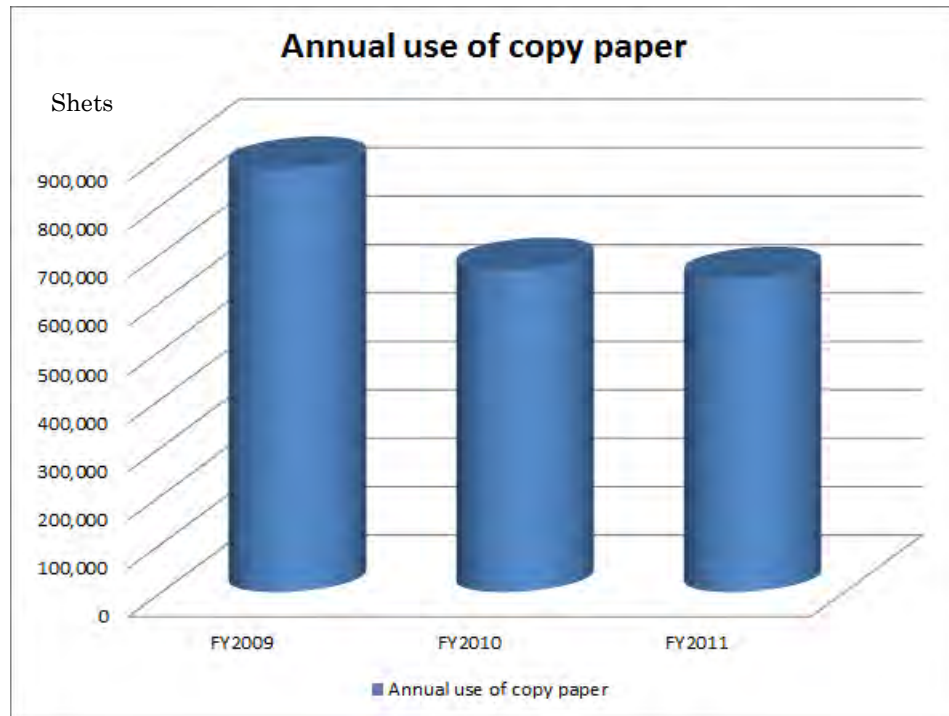
Waste Generated



	Burnable waste		Non-burnable waste		Glass		PET bottles		Cans	
	(kg)	Reduction rate (compared with FY 2007)	(kg)	Reduction rate (compared with FY 2007)	(kg)	Reduction rate (compared with FY 2007)	(kg)	Reduction rate (compared with FY 2007)	(kg)	Reduction rate (compared with FY 2007)
2007年度	4,777		515		194		126		184	
2009年度	3,300	30.9%	921	-78.8%	192	1.0%	165	-31.0%	246	-33.7%
2010年度	3,407	28.7%	1,339		185	4.6%	135	-7.1%	363	-97.3%
2011年度	2,547	46.7%	995	25.7%	240	-23.7%	155	-23.0%	228	-23.9%

(Note) Recycling is outsourced.

Copy Paper Purchasing



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total	Reduction rate
FY2007	50,000	56,000	87,500	50,000	87,500	62,500	78,500	75,000	75,000	82,500	100,000	115,000	919,500	
FY2009	75,000	57,500	90,000	71,500	25,000	87,500	40,000	100,000	12,500	62,500	140,000	112,500	874,000	4.9%
FY2010	47,500	47,500	50,000	75,000	50,000	37,500	62,500	0	50,000	37,500	157,500	50,000	665,000	27.7%
FY2011	50,000	25,000	100,000	50,000	0	82,500	50,000	125,000	0	75,000	39,000	50,000	646,500	29.7%

7. Results and Evaluation of Actions under FY 2011 Environmental Action Plan

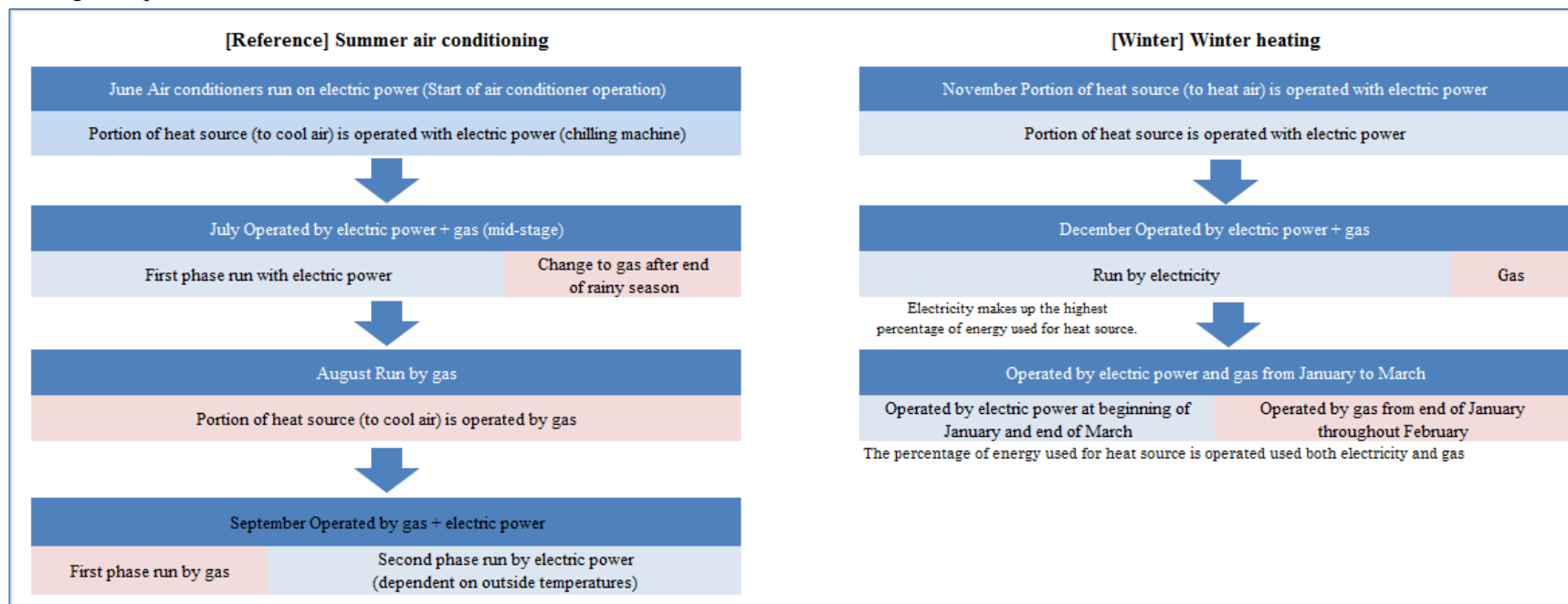
● Results and evaluation of actions for target items.

Items	Evaluation	Status of Achievement	Results/Reasons for Achievement, other
CO2 emissions	○	Compared to reference year (FY 2007): 32.7% reduction Compared to previous year (FY 2010): 14.2% reduction Compared to FY 2011 target: 89.6%	【Result】 Refer to electricity and gas below 【Calculation for CO2 emissions】 • Electricity usage • Gas usage • Gasoline for public vehicles
Electricity	○	Compared to reference year (FY 2007): 30.2% reduction Compared to previous year (FY 2010): 17.1% reduction Compared to FY 2011 target: 83.7% reduction	【Result】 Implementation of 15% reduction in power usage in summer as a result of the nuclear accident after the Great East Japan Earthquake. Achieved reduction exceeding targeted 16.6%. Despite the severity of the measures introduced, staff cooperation resulted in power savings. • Reducing air-conditioning running time • Rotating suspension of air-conditioning running times
Gas	×	Compared to reference year (FY 2007): 17.8% reduction Compared to previous year (FY 2010): 30.6% reduction Compared to FY 2011 target: 154.9% (exceeded target)	【Result】 Amount used (54.8%) exceeds target for FY 2011. Objective could not be achieved. 【Reasons】 • Insufficient contact with building management company resulted in the use of more than three times the amount of gas as usual in winter, as the operation method* for winter was the same as the summer, i.e. keeping electricity use to a minimum. • Estimates for the use of gas and reduction ranges were insufficient. • In order to conserve power in the summer, electricity was not used for air-conditioning mid-summer (June-July). As a result, the period in which gas was used was extended.

* **【Reference】** Refer to heating/cooling operation methods on the following pages.

【Reference】 Heating and cooling operation methods

- Regular operation methods



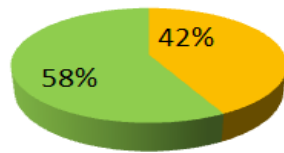
IGES uses gas for regular heating and cooling operations (air conditioning, heating) only in the summer when electricity demand is high.

- Operation methods in FY 2011

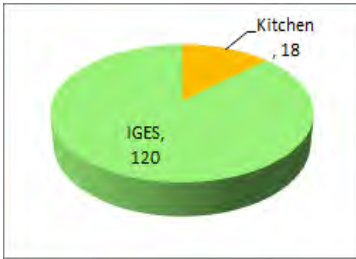
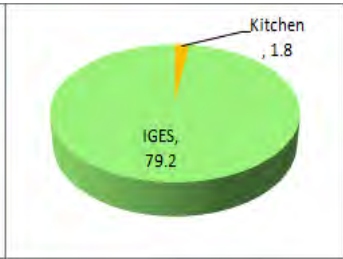
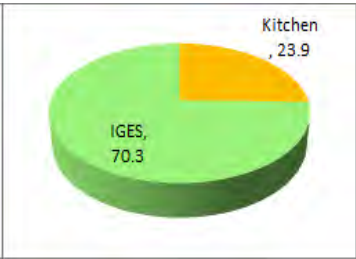


IGES achieved a 15% reduction in power usage in the summer as a result of the nuclear accident following the Great East Japan Earthquake. Although there was no power reduction target for the winter months, from the perspective of energy conservation, IGES succeeded by operating with gas only (due to insufficient contact with the building management company). As a result, the amount of gas used in the winter was three times higher than usual.

In addition, from the perspective of both CO2 emissions and energy costs, it is not beneficial to operate gas-dependent heating during the winter months.

Water supply	×	Compared to reference year (FY 2007): 42.3% reduction Compared to previous year (FY 2010): 9.1% reduction Compared to FY 2011 target: 106.9% (exceeded target)	【Result】 In a comparison between the reference year and previous fiscal year, although there was a reduction in the amount of water used, the target for FY 2011 was not achieved. 【Reasons】 Every three years in June, the water storage tank is cleaned, which resulted in the use of an additional 200m ³ of water. Since targets were not achieved in both FY 2010 and FY 2011, targets will be reexamined and the conditions for water use will be evaluated in order to set an appropriate target for FY 2012.						
Burnable waste	○	Compared to reference year (FY 2007): 46.7% reduction Compared to previous year (FY 2010): 25.2% reduction Compared to FY 2011 target: 77.8%	【Result】 As a result of conserving paper and the use of recycling boxes (set up in each group room), the amount of copy paper and mixed paper disposed has been reduced. As a result, reduction targets for burnable waste have been achieved.						
Non-burnable waste	○	Compared to reference year (FY 2010): 25.7% reduction Compared to FY 2011 target: 75.8% ※ Since collection of recyclable plastic waste from the cafeteria as non-burnable waste started in FY 2010, figures for non-burnable waste after this fiscal year will use FY 2011 as the reference year.	【Result】 As a result of separating and measuring the amount of business waste (cafeteria) and office waste (IGES), the amount of waste disposed since August 2011 follows below. Areas for improvement, such as separation of non-burnable trash and recyclable plastic, were also found. The separation of non-burnable waste and resources is being promoted looking towards FY 2012, and will be linked to reductions in non-burnable waste (refer to “Activities for reducing non-burnable waste” below.) Amount of non-burnable waste  58% 42% ■ Kitchen ■ IGES <table><tr><td></td><td>Amount of non-burnable waste</td></tr><tr><td>Kitchen</td><td>241.3 kg</td></tr><tr><td>IGES</td><td>327.7 kg</td></tr></table>		Amount of non-burnable waste	Kitchen	241.3 kg	IGES	327.7 kg
	Amount of non-burnable waste								
Kitchen	241.3 kg								
IGES	327.7 kg								

Copy paper purchasing	○	Compared to reference year (FY 2007): 29.6% reduction Compared to previous year (FY 2010): 2.8% reduction Compared to FY 2011 target: 100.4%	【Results】 With the majority of staff at Hayama Headquarters using scrap paper and taking part in “paper-less” activities, the amount of paper disposed is the same as the previous fiscal year and therefore, the target has been achieved. The number of times copy paper was purchased decreases year by year, and can be classified as an “intentional reduction” (please refer to graph).
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Items	Status of Achievement	Results/Reasons for Achievement, other
Recyclable waste (Glass, bottles, cans, PET bottles)	① Glass, bottles Compared to reference year (FY 2007): 28.2% increase Compared to previous year (FY 2010): 34.4% increase Compared to FY 2011 target: 135.8%	【Results】 Although there was a reduction in the number of cans, the amount of bottles/glass and PET bottles increased. Although the increase in recyclable waste is considered within the normal range, it is necessary to examine the cause behind the high increase in glass bottles. Glass bottles, cans and PET bottles from both the cafeteria and within IGES are separated and weighed. The results are below. (Data is from September to March because of the start of separate collection and weighing from September 2011.) Glass  PET bottles  Cans 
	② PET bottles Compared to reference year (FY 2007): 23.0% increase Compared to previous year (FY 2010): 14.8% increase Compared to FY 2011 target: 116.0%	
	③ Cans Compared to reference year (FY 2007): 26.2% increase Compared to previous year (FY 2009): 36.0% reduction Compared to FY 2011 target: 71.1%	

Green purchasing	Reference year (FY 2007): 54.1% Previous year (FY 2010): 90.0% FY 2011 achievement rate: 94.2%	【Result】 The increase in green purchasing rates can be attributed to the following actions: • Making green purchasing a habit • Increase of eco-products
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8. Results of Overall Assessment and Review by Representative (President)

The representative (Chair of the Board of Directors) has made the following comments concerning efforts in FY 2012 based on the results of external and internal audits in FY 2011.

Comments by the Administrator of Environmental Management (Chair of the Board of Directors) on EA21 Actions in FY 2011

With your cooperation, IGES was able to acquire certification and registration in FY 2011.

The external audit confirmed an advanced level of awareness of EA21 activities and highlighted IGES's enthusiastic actions, and we were able to obtain an assessment that showed the expectations of our institute, including through the visualisation of our own leadership activities as a research institute for the global environment and climate change, and through external publications.

On the other hand, the necessity for improvement was indicated for procedures to update regulations and systems, set environmental targets, and carry out environmental-related education and record-keeping.

The internal audit also saw differences in the activities and understanding of individuals and groups and indicated the necessity of radically strengthening education and training, as sufficient common knowledge of items related to EA21 (environmental policies, environmental targets, environmental action plans, activities, PDCA rules, etc.) was not visible.

The Eco-Action Secretariat and Eco-Action Committee will consider the following points for the future to tie into more effective actions.

(1) Process for updating responses to revisions to laws and systems

In this case, although the Eco-Action Secretariat, in principle, carries out periodic follow-up activities, IGES staff are quite knowledgeable about the details of such laws and systems. As such, we expect your positive participation in information sharing and recommendations to the Eco-Action Secretariat.

(2) Setting environmental targets

With regard to setting environmental targets and action plans, means to establish services we provide ourselves (surveys, research, policy recommendations, etc.), and ways to connect milestone management and EA21 management was suggested. For this purpose, you are requested to examine what kinds of targets and activity plans should be formulated around the Eco-Action Secretariat and PMO.

In addition, this fiscal year we will set IGES's mid-term targets and FY 2012 targets for CO2 emissions for which the achievement of mid-term targets for non-burnable trash is considered to be poor and in which the scope of unstinting will be newly expanded. Your cooperation is especially requested as it is necessary to carry out IGES's own original activities.

(3) Implementation of environmental-related education and record-keeping

Please consider methods of disseminating EA21-related matters, including training in which all staff would participate.

9. Environmental Targets and Action Plan (Hayama Headquarters)

9-1. FY 2012 environmental targets

Environmental targets for FY 2012 are set based on the outcomes of activities from FY 2007.

◆ Reduction targets for CO2 emissions from facilities

CO2 scope of calculation: Electricity and gas used at facilities

Item	Compared to reference year (FY 2007)	Target	Basis for target setting
CO2 emissions	29.7% reduction	373.6 t-CO2	Calculated from amount of electricity and gas used at facilities

(CO2 emission coefficient used for electric power is 0.375 kg-CO2/kWh.) (TEPCO Heisei 22 edition=2010 edition)

※From October 2011, office vehicles were changed over to electric vehicles (Nissan Leaf), and therefore, gasoline costs are excluded from calculations.

※In FY 2012, the CO2 emission coefficients for electric power for 2010 were used and evaluated, and future targets will be reconsidered.

◆ Reduction targets for electricity and gas emissions

Item	Compared to reference year (FY 2007)	Target	CO2 emissions	Basis for target setting
Electricity	16.6% reduction	755,834 kWh	283.4 t-CO2	1% reduction from FY 2010 achievements
Gas	38.0% reduction	43,000 m ³	90.2 t-CO2	1% reduction from FY 2010 achievements

※Depending on the supply-and-demand environment for electric power, reduction targets for electricity use will be reinforced and easing the

dependence on gas will be examined.

◆ Other individual targets

Items		Compared to reference year (FY 2007)	Targets	Basis for target setting
Water supply		46.0% reduction	4,277 m ³	1% reduction from FY 2010 targets
Waste	Burnable	47.6% reduction	2,504 kg	1% reduction from FY 2011 achievements
	Non-burnable	50.7% reduction	660 kg	Value set which subtracts the estimated amount of plastic waste from FY 2011 achievements
Copy paper		30.6% reduction	638,100 枚	1% reduction from FY 2011 achievements

(Reference) Recyclable waste and green purchasing

Items	Reference targets	
Glass bottles	249kg	FY 2012 is reset as reference year
PET bottles	155kg	
Cans	232kg	
Plastic	336kg	
Green purchasing	94.2%	

9-2. FY 2012 Environmental Action Plan

① CO2 emissions

Please refer to Mid-Term Plan (Hayama Headquarters) for CO2 emissions reductions.

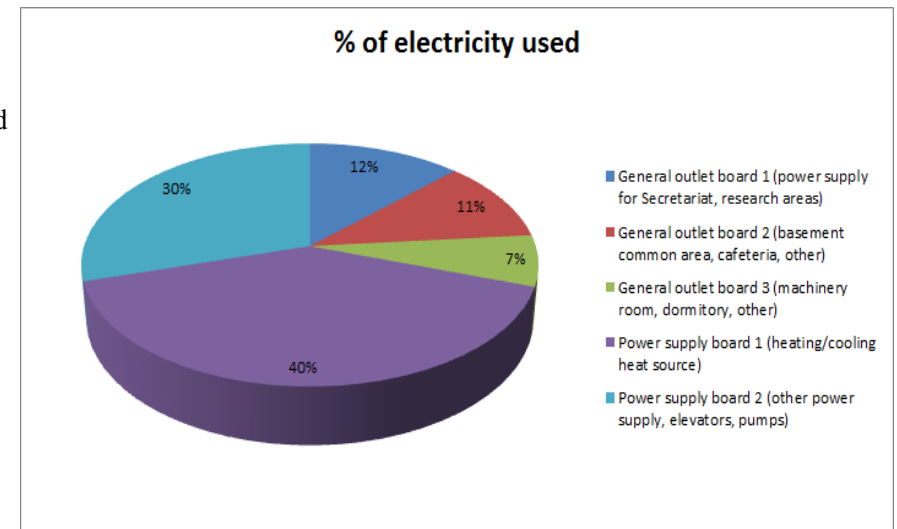
② Electricity

In order to reduce the amount of electricity used in 2010 (763,468kWh) by 1% annually, IGES set reduction targets at 31kWh/day.

IGES aims to achieve its environmental targets by reducing electric power used in facilities and for equipment to achieve a 31kWh/day reduction, as well as requesting each staff member to continue to adhere to the 10 environmental actions in their daily work.

◆ Electricity reduction targets

Reduction target (1%)	Daily reduction (247 days of operation)
7,635kWh/year	31kWh/day



◆ Measures to reduce electricity usage and reduction amounts

Subject of implementation	Measures	Reduction amount (daily)	Power source
Hayama Headquarters (all facilities)	Reducing the number of florescent lights (common spaces)	~12.6kWh	Outlet board 2
	Reducing cooling/heating times (1h)	~22kWh	Power source board 1
Staff	Setting computers to sleep mode when out to lunch or away from desks for long periods (item 6 in the 10 environmental		General outlet board 1

	actions); using Eco-Tap when leaving for home; carefully turning off unused lights (copy room, conference rooms, etc.); leaving the office early on days without overtime.		
Total		Over 34kWh (>reduction target)	

◆ Energy conservation effects from EA21 activities

Power consumption from July to September 2010		Amount reduced	Power conservation effects (compared to FY 2010)
Reducing heating/cooling operations by 1h (power board 1)	23,638kWh/month 1,125kWh/day	22kWh/day	~2%
Reducing the number of fluorescent lights/staff activities (general outlet board 1, 2)	Over 10,637kWh/month Over 506kWh/day	Over 12.6kWh/day	~ over 3%

【Reference】 Reduction amounts from shorter heating/cooling operation times and reducing the number of fluorescent lights

Time period	Operation times	Amount used (between 21:00-20:00)
• Summer: Jul-Sep • Winter: Dec-Mar (7 months: 147 days of operation)	Prior to change (7:00-21:00) ↓(1h reduction) After change (7:00-20:00)	Electric power used between 20:00 and 21:00: 22kWh Amount reduced over 7 month period during target time period: 3,234kWh/h

Area		Wh	Bulbs	Hours used	Amount (Wh)
1F	Corridors	25	10	4	1,000
	Secretariat and copy room	32	8	12	3,840
	Chairman's office	32	1	1	32
	North side restrooms	13	6	2	156
	In front of north side restrooms	18	11	2	396
	South side restrooms	18	6	2	216
Stairwells	North side landing	27	2	2	108
	South side landing	27	2	2	108
Basement	Dormitory corridor	27	9	12	2,916
	Corridor indirect lighting	32	30	4	3,840
Total daily usage					12.6kWh
Total annual usage					247 days of operation 3,112 kWh

(Second floor was excluded from light removal as desk lights are mostly used.)

【Reference】 Energy reduction values used for heating/cooling other than by electrical machinery

Time period	Operating times	Amount used
• Summer: Jul-Sep • Winter: Dec-Mar (7 months: 147 days of operation)	Prior to change: 7:00-21:00 After change: 7:00-20:00	【Gas】 1 hour average for gas used for heating/cooling: ~7 m ³ Amount reduced over 7 month period during target period: 1,029 m ³ 【Water】 1 hour average for water used for heating/cooling: ~0.5 m ³ Amount reduced over 7 month period during target period: 73.5 m ³

③ Gas and water supply

【Examination of potential range for reduction】

Gas used for hot water supply is maintained at a fixed temperature (60°C), and even if the temperature changes to some extent, an examination on reducing the amount of gas used by heating/cooling and hot water supply indicated that it would be difficult to expect major reductions in the amount of gas used. Therefore, heating/cooling in which hours of operation can be set was established as a potential area for reduction. Since there is a limit to the amount of time heating/cooling can be reduced, future measures include a plan to shift from reduction to maintenance. Water supply also serves as a mechanism in which fixed quantities can be collected in water tanks, etc.

Since both gas and water are mainly used in facilities, individual staff carry out the 10 environmental actions and activities in which they are conscious of water conservation, for example.

◆ Reduction targets for gas and water supply

Gas:

IGES set targets to reduce heating/cooling times by 1 hour to achieve a 1% reduction of the amount of gas used in FY 2010 (43,670 m³).

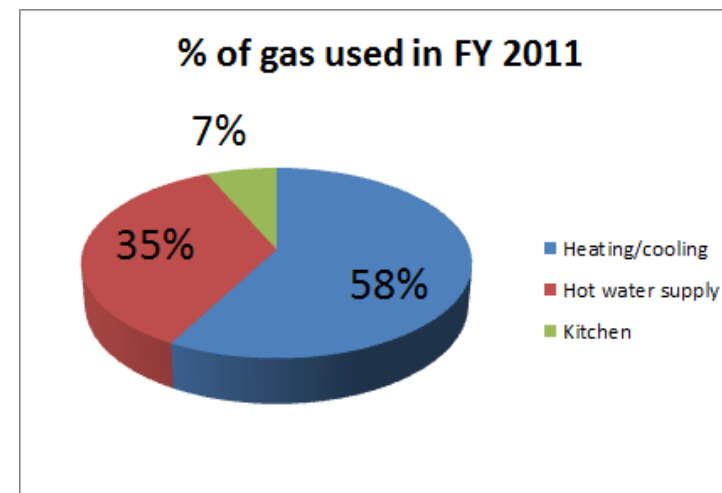
1 hour average for gas used in heating/cooling: ~7 m³ (July-September, December-March)

Water supply:

Because water supply usage is similar to that of gas, activities also share the same characteristics.

Cleaning water storage tanks (once every three years) requires about 200m³ of water. Cleaning was carried out in June 2011, which means that the reduction targets for heating/cooling were set for FY 2012 from FY 2011 figures, excluding the amount of water used for cleaning (next scheduled cleaning is in 2014).

1 hour average for water used in heating/cooling: ~ 0.5 m³ (July-September, December-March)



	Reduction target value (1%)	Daily reduction (147 days of operation)	Expected reduction amounts from activities
Gas	437 m ³ /year	3.0 m ³ /year	7 m ³ /day
Water supply	50 m ³ /year	0.34 m ³ /year	0.5 m ³ /day

Subject of implementation	Activity	Reduction amount (1 day)
Hayama Headquarters (all facilities)	Reducing heating/cooling time (1h)	~7 m ³
	Fixed heating/cooling temperature (summer: 28°C, winter: 20°C)	—
	Set regular meetings with building management company (Administrative Section)	—
Staff	Awareness of water conservation (item 10 in 10 environmental actions) Economising the use of hot water (item 10 in 10 environmental actions)	—

④ General waste (common)

Subject of implementation	Activities
Hayama Headquarters (all facilities)	• Ensuring the separation methods for waste are well-known and understood by staff to improve waste separation precision. • Amount of waste can be reduced by lowering the ratio of recyclable waste thrown away as non-burnable waste. • Promotion of 3R (Reduce, Reuse, Recycle) (item 9 in the 10 environmental actions)
Staff	• Correct use of separation box and garbage cans (item 9 of 10 environmental actions) • When purchasing supplies, the questions to determine if they are really necessary and if they are recyclable must be revisited.

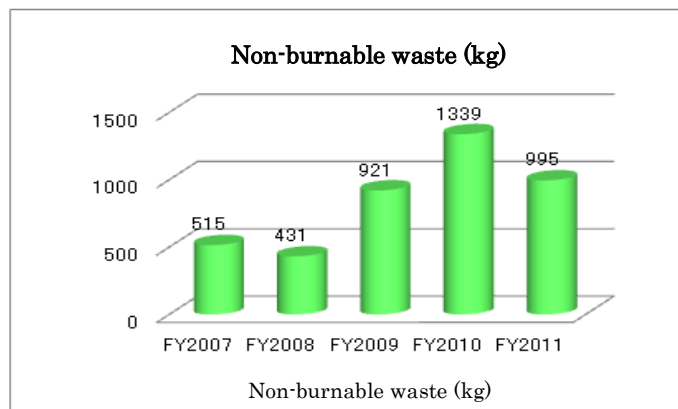
⑤ Recyclable waste (reference)

Subject of implementation	Activities
Hayama Headquarters (all facilities)	• Appeals for controlling the generation of waste is connected to reducing the amount of waste. • Understand the current state of waste through regular meetings with the building managing company and contacting staff where necessary (item 3 of 10 environmental actions).
Staff	• Confirm and be informed about waste disposal methods (Hayama Town rules) for plastic, such as not throwing out recyclable plastic as non-burnable trash.

- Glass bottles, PET bottles, cans: These are all recyclable and can result in reductions in the amount of waste generated by calling for people to control the amount of waste they are generating.

【Reference】 Outcomes of study on non-burnable waste and waste contents

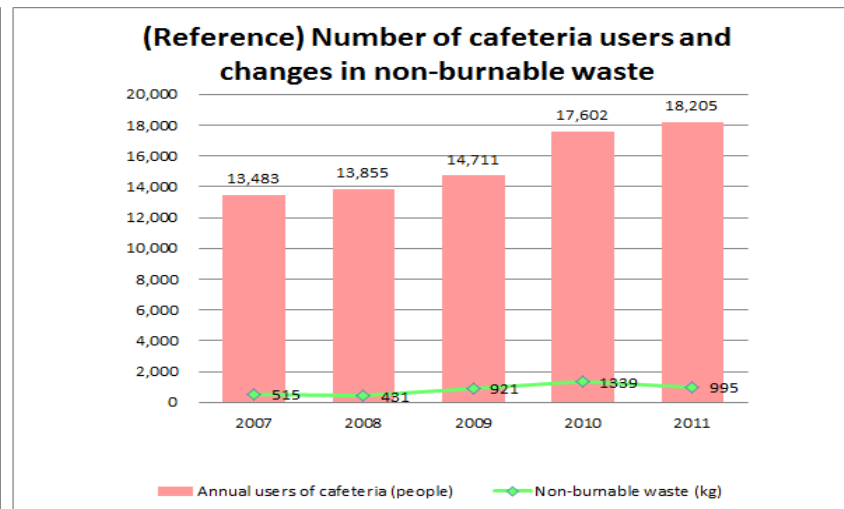
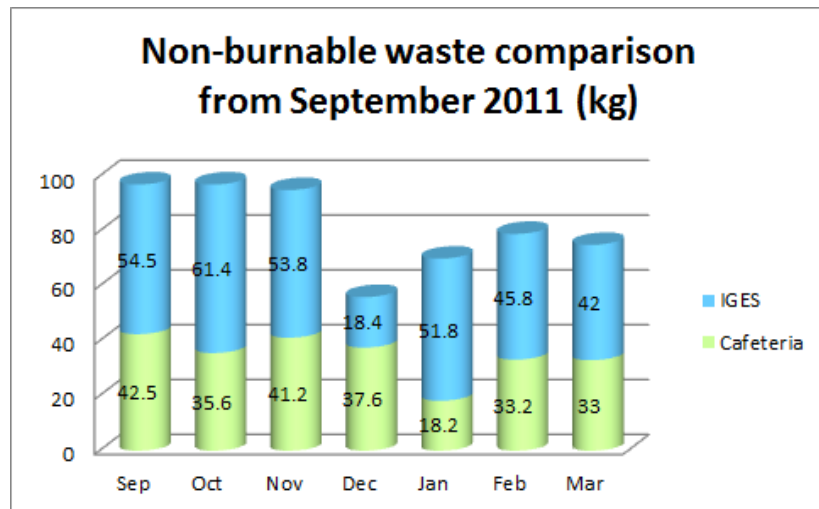
■ Trends in amounts of waste



Although measuring the amount of waste from staff and the cafeteria together since FY 2010 has been cited as a factor, the amount of non-burnable waste has increased considerably since FY 2008. In addition, since both quantities of non-burnable trash and recyclable plastics disposed of by staff was not clear up to this year, IGES requested Daiwa Life Next to start measurements of plastic waste from May 2012.

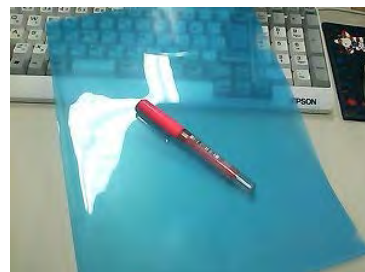
■ Current analysis (Verification of report items in the Environmental Activity Report)

Amount of waste generated for business waste (non-burnable waste from cafeteria) and office waste (non-burnable waste from IGES staff)



	Monthly average (kg)	Daily average kg (g)	Per capita (g)/day
Business waste (cafeteria)	34.4kg	1.7kg	—
Office waste (staff)	46.8kg	2.3kg	30g

※ Daily average is calculated at 20 days/month. Per capita is calculated as an average of 75 staff at headquarters.



==30g as office supplies==

Highlighters: 3

Clear file + highlighter

1 empty CD case equivalent to amount for 2 people (60g)

Cup ramen container, etc.

■ Separation of office waste (from discussions with Daiwa Life Next)

Office waste, burnable waste, non-burnable waste and recyclable plastic should be separated and placed in each container when collected in the morning.

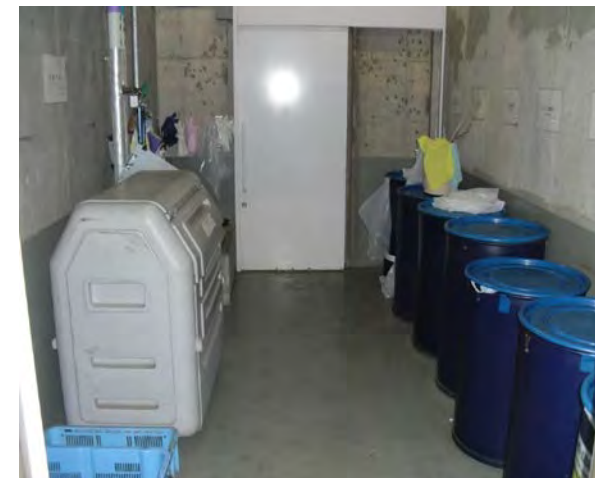
Non-burnable waste



Recyclable plastic



Basement garbage area



Issues: Problems that arose during discussions with Daiwa Life Next

- ✓ Recyclable plastics were mixed in with non-burnable trash.
- ✓ There were not many incidents of this, however, usable trash is still being thrown away.

Notes: In relation to staff regarding non-burnable waste

According to Daiwa Life Next, although the following did not happen on a regular basis, the following types of waste were prominent, in particular:

- ✧ Media-related trash, such as CD-R cases and floppy disks.
- ✧ Old, broken electric appliances and related items, such as coffee makers.
- ✧ Plastic goods and stationary from cleaning out storage areas and desks (ballpoint pens, files, etc.)

⑥ Purchase of copy paper

IGES takes the amount of print copies and replacement materials into consideration when purchasing copy paper, although this is dependent on the reasons for purchase, such as for board meetings, events, and workshops.

◆ Daily reduction targets

Reduction target	Daily reduction (247 days of operation)
8,400 sheets (A4, ~4 boxes)	~34 sheets

◆ Activities to reduce the amount of copy paper used

Subject of implementation	Activities
Hayama Headquarters (all facilities)	Calls for cooperation to reduce printing of meeting and presentation materials, and reducing replacement materials where possible (request from EA21 Secretariat)
Staff	• Consider necessity before printing 1-2 sheets daily. • Use scrap paper (back of paper already used) and work in a paperless office, such as during preparatory meetings (item 8 in 10 environmental actions)

⑦ Green purchasing (reference)

- IGES purchases green products in line with the Basic Policy on Green Purchasing at Hayama Headquarters.
- The amount of green products purchased by each group is periodically announced by the EA21 committee.

【Basic Policy on Green Purchasing at Hayama Headquarters】

“In general, the principles of green purchasing should be applied to all purchasing of goods and services, with consideration for the selection of green goods and services that meet all applicable quality and safety standards and are not too much higher in price than similar goods and services. However, this does not apply to goods and services where green purchasing is not considered feasible. For items such as consumables costing up to 20,000 yen, purchasing should be conducted with reference to Eco-Mark and Green Purchasing Network (GPN) products, labelling under the Green Purchasing Law, etc.”

◆ Details of activities for green purchasing

Subject of implementation	Activities
Hayama Headquarters (all facilities)	• The amount of green purchasing is recorded each month and is announced periodically. • To increase the amount of green purchasing, IGES confirms with companies Kaunet and Askul, etc.) once every three months about new items for staff. • Although the number of such goods and services is limited, IGES is considering the feasibility of using carbon footprint.
Staff	• Purchasing eco-friendly items (Green Purchasing Law, eco-mark, etc.) (item 7 in 10 environmental actions) • Periodic check of ratio of green purchasing by each group (use of monitoring sheets).

⑧ Home Diagnosis

In order to effectively reduce our environmental footprint, IGES uses the “Home Diagnosis” as a tool to increase awareness of individual actions. This is a tool developed at IGES, that starts with awareness of the tool to garner people’s interest, and leads to future activities. This results in each individual having a good opportunity to understand where and when CO2 is emitted.

◆ Details of activities for Home Diagnosis

Subject of implementation	Activities
Hayama Headquarters (EA21 Secretariat)	• Develop familiarity with the Home Diagnosis tool. • Have several staff take part in a diagnosis as monitors
Staff	• Develop familiarity with the Home Diagnosis tool.

⑨ Responses to revisions and enactment of laws

The state of compliance with, and confirmation of updates to, environmental related laws and regulations for FY 2012 will take place in September and March.

Subject of implementation	Activities
Hayama Headquarters (EA21 Secretariat)	• Information gathering at secretariat meetings (EA21 Secretariat Meeting) (item 3 in 10 environmental actions)
Staff	• Request for Eco-Committee to contact to Secretariat if there are any changes or information on proposed bills (item 3 of 10 environmental actions).

⑩ Implementation of education

The following staff training will take place in FY 2012 (item 4 of 10 environmental actions).

1 st staff training	2 nd staff training	Internal auditors training
30 August (Thursday)	24 September (Monday)	30 October (Tuesday)

Lecturer: Masahiro Ichikawa

⑪ Preparation and responses for emergencies

Rules have been made to confirm staff safety based on the experience of the Great East Japan Earthquake. IGES's disaster manual will be updated and all staff shall become familiar with its contents, with periodic checks being carried out.

10. Mid-Term Plan (CO2 emissions, non-burnable waste, energy)

In view of the achievements of the mid-term targets decided in FY 2007, mid-term reduction targets will be set for CO2 emissions, non-burnable waste and energy (electricity, gas, water). Plans will be tied to continuous actions from FY 2013, with a main emphasis on plans in FY 2012.

FY 2013 targets will be expressed numerically in the FY 2012 Environmental Activity Report.

(1) Mid-term plan for reduction of CO2 emissions

IGES is examining a three-year plan to determine what activities to carry out for CO2 emissions from project activities.

IGES will consider methods to gain the consent of staff through the EA21 committee.

Three-Year Plan of Action for CO2 Emissions		
1 st year: Examination of direction (FY 2012)	2 nd year: Examination of methods (FY 2013)	3 rd year: Formal practice (FY 2014~)
What should be done about CO2 emissions from IGES project activities? IGES will explore the scope of activities it can carry out from Eco-Action's perspective of "people, things and money."	IGES will consider what methods are best based on the direction derived from information exchange. → Can proposals for reduction targets be created?	Cost issues are also considered and a method that can be used each year will be established. Specific numerical targets are set.
Target: Opinions of experts in emissions reduction and committee opinions will be clarified with secretariat expectations, to explore the direction of reduction targets.	Target: Establishment of methods and numerical targets	Target: Creation of system which can be extended systematically
Continuous issues: Gaining an understanding of CO2 emissions. Continue with electricity and gas conservation, and green purchasing when buying consumables, as well as maintain efforts to keep CO2 emissions under control.		

- Since IGES staff are experts in environmental policy and are well-versed in the trends of the Ministry of the Environment and global standards, they are able to set up IGES original methods and targets.

- Direction and methods are examined by the EA21 committee meeting which is held about six times a year. After the two-year planning period, the third year and beyond will target an understanding of the amount of emissions and develop numerical reduction targets.
- The potential for use of carbon offset will be examined as one means of achieving targets, after CO2 emissions, including movement, are fully understood.

(2) Mid-term plan for reduction of non-burnable waste

The results of studies on non-burnable waste and other issues have determined that a major issue is insufficient separation. Reduction targets and activities are set out as follows. Numerical reduction targets for 2013-2015 will be set in FY 2012 by implementing the following plan.

■ Non-burnable waste reduction plan

Stage 1	FY 2012	Period to increase separation accuracy (Parallel appeals for reduction of waste)	The quantity of recyclable plastic and non-burnable waste are recorded each month and reported to the committee as a target for thorough separation (assessment is also carried out at this time, if possible). Three-year targets for 2013-2015 will be set based on the achievements in FY 2012.
Stage 2	2013-2015	Period to apply numerical targets	Implementation of activities to achieve targets set in FY 2012.

■ Details of activities

IGES improved the accuracy of separation in line with Hayama Town's separation methods for plastic in FY 2012, and will reduce the amount of waste disposed as non-burnable waste by increasing recycling rates.

Secretariat (Administration Section)	Regular meetings will be set once a month to ensure close contact with Daiwa Life Next.	Improve the relevance of projects and eco-action by building a system of communication, such as with facilities, equipment and others concerned with waste, and share the most recent information, such as changes related to facilities and equipment, etc.
	Redevelop familiarity about waste separation methods	Check already posted information and update where information is lacking; make information well-known when the latest information is available.

	Requests to control the generation of waste	(Ex) Call for people to limit the amount of plastic waste by purchasing drinks in PET bottles every other day and purchasing items in plastic containers, etc. in moderation.
EA21 Secretariat	Organisation of periodic EA21 committee meetings Precise recording of data on quantity of waste, etc.	Carry out regular information exchange and determine the point at which improvements should be made at an early stage.
Staff	Information sharing within separate disposal of non-burnable waste and plastic separation group (EA21 representative ↔ Director, member)	Improve awareness of waste by increasing separation accuracy.

(3) Mid-term plan for electricity, gas and water supply

Emphasis will be placed on the following points from 2012 and beyond, based on the results of actions implemented to form the reduction targets for electricity, gas and water supply from 2007.

- Continuation of energy saving
- Understanding of planned energy use
- Responses to unexpected events

Contents and targets to be continuously implemented in FY 2012-FY 2015		
Target *	Maintain FY 2012 targets	Electricity use: 755,834kWh Gas use: 36,826 m ³ Water supply: 4,277 m ³
Continuation of energy conservation	• Continuation of activities implemented until FY 2011 • Recording and check of data monthly. → Leads to early detection of problems. • Periodic contact on energy use with recorded data → Help others understand the energy use situation	Regular contact with the building management company and the Secretariat will help with an understanding of planned energy use for electricity, gas and water used in facilities, and will enable flexible responses when unexpected events occur.

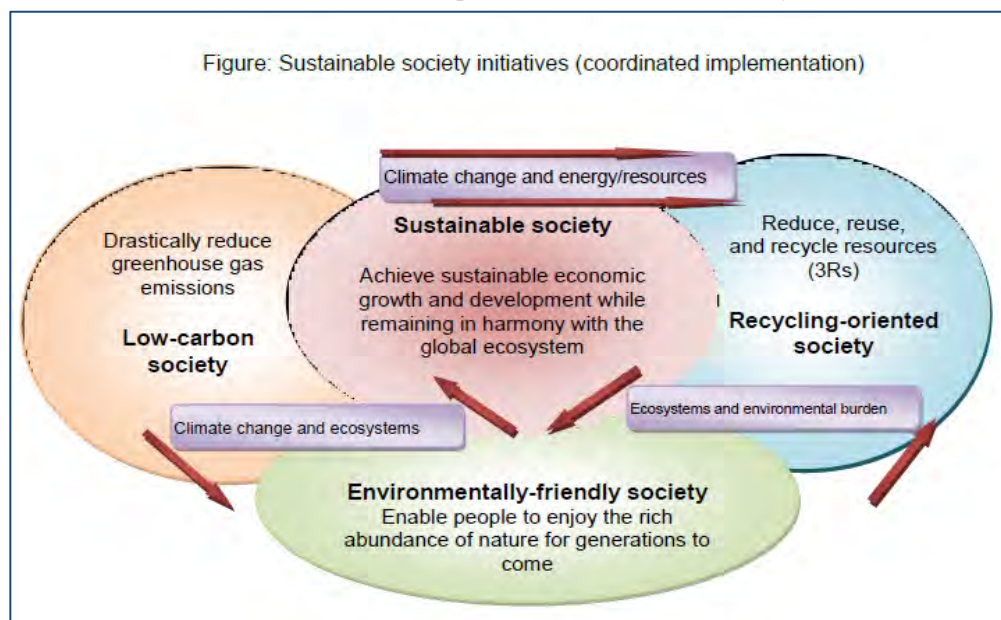
Understanding planned energy use	Understanding of energy consumption plans, such as regular cleaning, construction and equipment changes.	Cleaning of water storage tanks planned for May and June 2014.
Responses to unexpected events	Flexible responses for energy use in changes in temperature and weather in summer and winter, as well as natural disasters.	Targets and special activities should be recorded, so that it can be used at a later date.

* Targets considering the planned use of energy are set for targets from 2012. Refer to electricity, gas and water sections in the FY 2012 Environmental Action Plan.

(4) IGES projects and relevance to EA21

IGES is examining the connection between contributions by IGES projects to environmental conservation and the “visibility” of relevance with that requested by EA21 in relation to “establishing services provided (studies, research, policy research) in relation to formulating environmental targets and environmental action plans.”

EA21 model for the “development of a sustainable society”



IGES research groups



The PMO, each research group and the Secretariat will examine visibility using business plans and business reports. Details are recorded and will be included in the FY 2012 Environmental Activity Report. In this report, Chapter 12: FY 2011 IGES Activity Report only includes project activities.

11. Environmental Targets and Action Plans (Satellite Offices)

IGES's EA21 target scope was expanded to each office from FY 2012 (excluding the Bangkok Regional Centre and the Beijing Office).

The scope considers the low-carbon societies, recycling societies, and natural symbiotic societies pursued by EA21, develops plans for environmental activities and implements plans that are in line with the characteristics of each office.

Tele-conferences will be used for EA21 training in August and September (lecturer: Ms. Masaharu Ichikawa), and improvement of understanding of EA21 will take place with the participation of each office.

◆ EA21 components and activities of each office

EA21 components		Basic ideas on environmental activities in IGES offices
Low-carbon society	Energy conservation	While it may be difficult for tenants to demonstrate usage and reduction amounts for electricity and gas as numerical targets, offices carry out work activities with an awareness of energy saving.
Recycling society	Resource recycling through 3R	Implementation of waste separation and recycling in line with each office's location; efforts to conserve water, etc.
Symbiotic society	Consideration of the natural environment	Consideration of relevance of research contents with EA21

◆ Implementation of PDCA

PDCA in each office improves understanding through EA21 trainings, and paves the way for this fiscal year's assessments and target setting for the following year.

The activities of each office are assessed with internal audits and external evaluations.

◆ Details on activities

Please refer to the section on the activities of each office.

(1) Kansai Research Centre (KRC) activities

Environmental target	Environmental Action Plan	Activity details
Reduction of greenhouse gas emissions	Efforts to reduce usage of electricity and fuel used at facility	● Practice extinguishing lights in office during lunch hours and when staff is not around. ● Practice extinguishing lights (partial) during day and partial lighting for overtime hours. ● Put computers into sleep mode during lunch hours and when away from desks for a long period. ● Set air conditioning to appropriate temperatures (air-conditioners at above 28°C and heaters at below 20°C). ● Take the stairs, rather than elevators, to nearby floors. ● (In summer): Try to wear light clothes, i.e. no neckties or suit jackets during the “Eco-Style Campaign” period. (In winter): Layer clothing during “Winter Eco-Style” campaign.
Waste reduction (burnable, non-burnable)	Efforts to promote 3R	● Practice waste separation and recycling of resources. ● Reuse office items and equipment. ● Set up a recycling box for recycling copy paper.
Promotion of resource conservation	Efforts to reduce amount of copy paper and water used.	● Use double-sided and aggregated copies. ● Use one-sided printed copy paper. ● Limit printing of information from the internet. ● Efforts to conserve water
Promotion of green purchasing	Promotion of purchases of eco-products	● Purchase and use of products/items that are environmentally-friendly.

(2) Kitakyushu Urban Centre (KUC) activities

1 Environmental management system

- General manager: Toshizo Maeda, Acting Director
- Manager: Masahiro Nakamura, Section Director
- Staff responsible: Moe Ouchi

2 Understanding environmental impact from office activities

The Kitakyushu International Village Center in which the office is located is not only a business facility, it is also a compound complex that houses facilities for rent, such as a music hall and lifelong-learning facilities. As a result, it is not possible to structurally determine the amount of electricity and water used by each office and rented facility.

3 Understanding state of eco-actions

(1) Energy conservation

◎Change office lighting (24 bulbs) from halogen bulbs to LED lighting.
◎Electricity conservation by individual staff made possible with LED desk lights.
◎Travel within the city is done by bicycle, walking, or public transport.
◎Lighting in the locker room/office kitchenette and restrooms are usually turned off and only turned on when the room is in use.
◎Efforts made to refrain from using elevators and use stairs instead.
◎Appropriate temperature setting in summer (~28°C) and winter (~19°C).

(2) Resource conservation

◎Promoting PDF conversion of documents and use of email for correspondence.
◎Printing and copying using double-sided and aggregate options.
◎Using used-paper when possible.
◎Water conservation is strictly enforced daily.

(3) General control, recycling and appropriate disposal/treatment of waste.

◎Resource recovery routes for copy machines, printer toner cartridges are established and recycled.

(4) Green purchasing

◎Recycled paper is purchased for copy paper and paper for publications.

(5) Environmental communication and social contribution

◎Cooperation and linkages are sought with organisations that carry out research or activities on the environment.

◎Greening of premises and rooftops are carried out.

4 Environmental Action Plan

Environmental targets	Specific actions	Reference value (H23)	Target (H24)
1. Reduction of CO2 emissions	(1) Efforts to reduce amount of electric power used. ① Lobby lights, except when in use, are turned off. ② Computers are put into standby mode when not in use for long periods and desk lights are turned off. ③ Efforts to save standby power supply by turning off AC outlets prior to the weekend. 【Summer, winter】 ④ Efforts for effective energy management by shutting doors and using fans to circulate air (trial run). ⑤ Reduction in air conditioning running times (together with ④).	—	(Difficulties obtaining data on construction of building in which office is located)

2. Waste reduction	(1) Paper waste ① Reduce the amount of copy paper purchased. ② Complete separation and collection of paper waste.	① 26,500 sheets／9 people ② (Note 1)	2% reduction compared to previous year
	(2) Recyclable waste (cans, bottles, PET bottles) ① Control generation of waste by using own cups and thermoses. ② Set up separation/collection box in office.		
3. Promotion of green purchasing	(1) Promotion of the purchase of eco-friendly goods	Ratio of amount of green purchasing to the amount of supplies purchased: 45%	50%
4. Contributions to local beautification activities	(1) Participation in environmental/beautification activities carried out in the local area.	2 people/time	4 people/time

* Note 1: Since there is no data on the amount of waste emitted, standards will be set after data is acquired in FY 2012.

(3) JISE activities

Item	Unit	Reference year	FY 2012				FY 2013				FY 2014			
		FY 2011 ①	Target		Achievements		Target		Achievements		Target		Achievements	
			Reduction rate	Target value	Achievement value	Reduction rate	Reduction rate	Target value	Achievement value	Reduction rate	Reduction rate	Target value	Reduction rate	Target value
			②	①×②	value	③	③	①×③	value	④	④	①×④	④	①×④

CO2 emissions		t -co2	19.75	2.0%	19.35			3.0%	19.16			4.0%	18.96		
	Electricity use	kWh	41,906	2.0%	41,067			3.0%	40,648			4.0%	40,229		
	City gas	m ³	2,768	2.0%	2,712			3.0%	2,685			4.0%	2,657		
Water supply		m ³	249	2.0%	244			3.0%	241			4.0%	239		
Waste	Paper	kg	324	3.0%	314			6.0%	305			10.0%	292		
	Plastic	kg	81	3.0%	79			6.0%	76			10.0%	73		
Purchase of copy paper		Sheets	84,500	5.0%	80,275			8.0%	77,740			10.0%	76,050		
Green purchasing		%	75	-	85			-	90			-	92		

FY 2012 Environmental Action Plan

- 1 Each staff member will carry out activities with an awareness of the environment.
- 2 “Home Diagnosis” and other methods will be used to increase awareness at home.
- 3 In principle, elevators will not be used.
- 4 Lights will be turned off in the office during lunch hours and when staff are absent.
- 5 Aim at beautification of the place of work in order to increase heating/cooling efficiency.
- 6 Power for computers will be turned off during lunch hours and when staff is away from their desks for long periods of time.

- 7 Eco-friendly products and services will be purchased (items that have eco-marks, etc.)
- 8 Double-sided printing and use of scratch paper will be practiced to aim at the effective use of paper.
- 9 Separation of paper waste to promote reduction of miscellaneous recyclable paper.
- 10 Use water sparingly and endeavour to conserve water.

Japanese Center for International Studies in Ecology
Institute for Global Environmental Strategies

Environmental Targets and Activities for FY 2012 (Japan Center for International Studies in Ecology (JISE))

1 Understanding and reducing CO2 emissions

1-1 Electricity

◆FY 2012 reduction targets for electricity used

	Compared to FY 2011 base year
Electricity	2% reduction

※Reduction targets were set for our office's share of electricity, since the amount of electricity used for the entire building was divided proportionally and billed by area and number of people.

◆Details on activities and reduction amounts for electricity reductions (trial calculation)

Details of activities	Amount reduced
• Culling fluorescent lights • Putting computers into standby mode • Turn off copiers and lights in conference rooms • Promptly turning off lights when leaving office	839kWh

1-2 Gas and water supply

◆Reduction targets for gas and water supply in FY 2012

	Compared to FY 2011 base year
City gas	2% reduction
Water supply	

※Reduction targets were set for the office's share of gas and water supply, since the amount used for the entire building was divided proportionally and billed by area and number of people.

◆Details of activities and reduction amounts for reducing gas and water supply (trial calculation)

	Actions	Amount reduced
G a s	• Lowering set temperature of hot water for sinks • Set to OFF when not in use.	56 m ³
Water supply	• Endeavour to conserve water.	5 m ³

※Water is also used for heating/cooling facilities. Operating times and preset temperatures are all managed for the entire building.

2 Expansion of green purchasing

JISE promotes the purchase of eco-goods and services based on the “Basic Policy on Green Purchasing at Hayama Headquarters.”

◆Achievement rates for green purchasing in FY 2012

Green purchasing	85% achievement rate
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(Reference) Basic Policy on Green Purchasing at Hayama Headquarters

“In general, the principles of green purchasing should be applied to all purchasing of goods and services, with consideration for the selection of green goods and services that meet all applicable quality and safety standards and are not too much higher in price than similar goods and services. However, this does not apply to goods and services where green purchasing is not considered feasible. For items such as consumables costing up to 20,000 yen, purchasing should be conducted with reference to Eco-Mark and Green Purchasing Network (GPN) products, labelling under the Green Purchasing Law, etc.”

◆ Activity details on green purchasing

Activities
• Development and understanding of basic policy • Green purchasing of office supplies and services

3 Enhancing understanding of Eco-Action

In order to improve the understanding of staff members and conduct activities as JISE as a whole, staff members are sent messages on JISE's "environmental action plan," "environmental targets," and "details of activities." In addition, the "Environmental Action Plan" is posted at the copy machine and near the hot-water supply machine to ensure that staff are familiar with its contents.

4 Home Eco-Diagnosis

This tool is a good opportunity to understand the amount of CO2 emitted in each household, as both a tool to improve staff awareness and activity reduce environmental impacts.

5 Continuous environmental activities

5-1 Waste

Since waste is managed by a disposal contract for the entire government building, it is difficult to get a number on the exact quantity for the office itself. However, efforts are being made to reduce the amount of waste by gaining an understanding of the amount of waste brought from the office to the common garbage area.

◆ FY 2012 waste reduction targets

	Compared to FY 2011 base year
Waste	3% reduction

5-2 Reduction in amount of copy paper purchased

Although also dependent on the reasons for additional purchases of copy paper, such as steering committees and events, consideration of the amount of print copies and replacement materials will lead to a reduction in the amount of copy paper purchased.

◆FY 2012 waste reduction targets

	Compared to FY 2011 base year
Copy paper	5% reduction

◆FY 2012 copy paper reduction activities

Activities
• Consider the necessity of printing 1 to 2 sheets per day before printing. • Use scrap paper where possible for internal documents and make internal meetings and preparatory meetings paperless.

(4) Actions by the Asian-Pacific Network for Global Change Research (APN)

Environmental targets

Environmental impacts are lowered with a reduction in resource waste to contribute to the creation of a sustainable society through the promotion of resource conservation.

Environmental Action Plan and activities

【Reduction in use of electronics, other】

- Practice turning off lights when staff is not in office.
- Promptly turn off lights in rooms that are not in use.
- Turn off main power supply for computers and printers at night and on holidays to reduce standby power consumption.
- Set appropriate temperatures for heating/cooling (air conditioning: over 28°C, heating: below 20°C).
- Use stairs, not elevators, when going to nearby floors.
- Endeavour to practice “eco-styles” in summer and winter.

【Promotion of 3Rs】

- Practice the separation and recycling of waste.
- Establish recovery routes to recycle toner cartridges for copy machines and printers.
- Set up a collection box for unnecessary paper to promote recycling.
- Endeavour to reuse office supplies and equipment.

【Reduction in the amount of copy paper and water usage】

- Carry out double-sided printing and use of scrap paper to reduce unnecessary printing and ensure that paper is used effectively.
- Endeavour to conserve water when washing hands and other items.

【Promotion of purchasing eco-goods】

- Endeavour to carry out the preferential purchasing of goods and services that are environmentally-friendly.

Reduction targets for purchasing copy paper

2% reduction as compared to FY 2011 (Amount of copy paper purchased in FY 2011: 100,000 sheets)

12. FY 2011 IGES Activities

(1) Outline of research groups in FY 2011

① Programme Management Office (PMO)

The PMO conducts research activity planning and coordination from a panoramic, strategic perspective on IGES research activities, and at the same time, carries out research and studies on cross-cutting and emerging issues. With the Asia-Pacific positioned as a core target area, the PMO works to effectively promote activities to achieve sustainable development through close cooperation and linkages with other research institutes, governments, international organisations, NGOs, the business sector and major international networks. In addition, by participating in important international policy processes, the PMO gains an understanding of crucial policy trends and research needs, and disseminates IGES research output and policy recommendations in a timely manner, thereby giving international-level promotion and support to policy formation and implementation related to sustainable development.

② Climate Change Group (CC)

The Asia-Pacific is a major source of greenhouse gas. With worries about the influence of global warming, measures to address climate change issues are an extremely urgent issue. The Climate Change Project aims to make recommendations for climate change policies for sustainable development in the Asia-Pacific region under an international framework.

③ Market Mechanism Project (MM)

The Market Mechanism Project supports the effective introduction and implementation of market mechanisms by providing straightforward and useful information to the business community on market mechanism systems, and will contribute to practical policy design by conveying the viewpoints of affected businesses to policymakers.

④ Natural Resources Management Group/Climate Change Adaptation Team (AD)

The vulnerability of the Asia-Pacific region to climate change frequently originates with long-term strategies that are insufficient for reducing risks, and has become a road-block to sustainable development. Strong approaches to improve adaptation have become necessary for all sectors and the Asia-Pacific region as a whole, and support, financially and otherwise, has also increased for adaptation policies, becoming a major opportunity for developing countries. However, at the same time, the necessity of evaluating and reporting on the progress of adaption has risen. This group aims to facilitate mainstreaming adaptation at sectoral and national levels in the developing Asia-Pacific. Some strategies include assessments for measuring the effectiveness of adaptation actions and progress in mainstreaming adaptation, facilitating the formation of integrated adaptation decision frameworks that enable policymakers to effectively develop and implement national level adaptation plans and policies, and networking with various stakeholders to

bridge needs with opportunities for adaptation in the Asia-Pacific region.

⑤ Natural Resources Management Group / Forest Conservation (FC)

The Forest Conservation Group develops and promotes policy instruments for sustainable forest management and use of forest resources through strategic research, capacity building and outreach to enhance the wellbeing of present and future generations.

⑥ Natural Resources Management Group / Freshwater (FW)

The Freshwater Group aims at the creation, storage and use of the knowledge required to promote water governance strategies that are predictable in order to guarantee productive and sustainable use of water in the Asia-Pacific region.

⑦ Sustainable Consumption and Production (SCP)

The goal of the SCP Group is to contribute to the development of sustainable patterns of consumption and production in the Asia-Pacific region. Special attention is given to the use of raw materials, the flow of materials through society, and the environmental impacts associated with those flows.

⑧ Economy and Environment (EE)

Promotion of sustainable development requires poverty alleviation without destroying sound environmental and ecological systems that are the basis of human existence. The effectiveness and feasibility of proposed policies must also be ensured through quantitative assessment of the economic costs of implementing the policies. The Economy and Environment Group carries out policy analysis based on various economic analysis methods to reflect these aspects in the policy recommendations of IGES research groups. In addition, the theme of “trade and environment” is becoming even more important in the Asia-Pacific region where the process of regional economic integration is accelerating. The group conducts research on this theme using trade analysis techniques.

⑨ Governance and Capacity (GC)

The objective of this research is to analyse issues and make policy recommendations to improve governance and capacity to address sustainable development and environmental issues in the Asia-Pacific region at the global, regional, national and local level.

⑩ Kansai Research Centre (KRC)

The private sector, which has promoted environmental and energy saving actions, is the focus of research for the IGES Kansai Research Centre under the theme of “business and the environment.” In addition to promoting research on the environmental activities of companies in cooperation with national and local governments, impediments and promotional factors in sustainable business in Asia shall be specified and specific strategies formulated through the promotion of low-carbon technology to developing countries where the focus has been on environmental and energy saving within the private sector, as well as a co-benefit technology project.

⑪ Kitakyushu Urban Centre (KUC)

The Kitakyushu Urban Centre carries out cross-cutting research on sustainable urban development, and addresses important issues, such as waste management, public health, pollution control and transportation. The Centre has been involved in the management of the Kitakyushu Initiative Network and strives to expand and spread good practices on the urban environment to the Asian region, in cooperation with the City of Kitakyushu and the Kitakyushu International Techno-cooperative Association (KITA). Research capacity of the Centre has improved on urban development through strong linkages with local and national governments, and ASEAN.

⑫ Beijing Office

There has been an increase in the strategic importance of China in environmental policies in the Asia-Pacific region, such as those to prevent global warming. The Beijing office serves as an axis point to develop various surveys and research work in cooperation both bilaterally with China, and also multilaterally, based on close cooperation with the Sino-Japan Friendship Center for Environmental Protection.

⑬ IGES Regional Centre (IRC) in Bangkok

IRC in Bangkok was newly established in June 2011 to strengthen cooperation with various stakeholders and related organisations in the Asia-Pacific region. The Centre provides assistance for the effective operation of networks as well as coordinating collaborative research with international organisations.

⑭ IPCC Technical Support Unit (TSU)

TSU is a technical support unit which supports the activities of the Intergovernmental Panel on Climate Change (IPCC) Task Force on National Greenhouse Gas Inventories (TFI). Established within IGES in 1999, the unit provides substantial management for TFI and develops, publishes and promotes guidelines for the calculation and reporting of national greenhouse gas emissions and removals.

(2) Other activities

① Asia-Pacific Network for Global Change Research (APN)

The APN is an intergovernmental network of 21 member countries whose mission is to foster global change research in the Asia-Pacific region, increase developing country participation in that research and strengthen interactions between the science community and policymakers. The APN's policy and decision-making body is its Inter-Governmental Meeting. The APN Secretariat was transferred to IGES in April 2004.

② Japanese Center for International Studies in Ecology (JISE)

Towards a sustainable society from the plant ecology perspective, JISE carries out practical field surveys and research for the restoration and creation of ecosystems at the regional and global level. It also promotes trainings in environmental and ecological studies as well as the collection and dissemination of related information. JISE was integrated into IGES in April 2007.

13. Confirmation and Evaluation of Compliance with Related Legislation and Violations/Litigation (where noted)

Compliance with environmentally-related laws and regulations were checked in April 2012 with the following results.

There were no legal violations, lawsuits or other environment-related complaints.

Legal violations	None
Lawsuits	None
Environment-related complaints	None

Legislation	Requirements	Clause	Scope	Responsible department	Evaluation of compliance	
					Compliance status	Evaluation
Basic Environment Law	Regulates duties of various types of businesses. In particular, businesses are responsible for disposal of waste generated from their business activities.	Article 8	※Following requirements under the Waste Disposal Law	EA21 Secretariat	※Following requirements under the Waste Disposal Law	Compliant
Act on Promotion of Global Warming Countermeasures	Efforts to control greenhouse gas emissions	Article 20, Paragraph 5	Turning off indoor lights, adjusting air conditioning/heating temperature settings, turning off electrical appliances when not in use.		Use of various methods for reduction	Compliant
Waste Disposal and Public Cleansing Law	Aims at the preservation of the living environment and public health by controlling the emission of waste, and the proper separation, storage, collection, transport, reuse and management (such as disposal) of waste, as well as cleaning up the living environment.	Article 3	Proper treatment methods: Types of waste bins located at garbage/waste disposal locations in the organisation Waste reduction		Efforts to reduce and manage general waste	Compliant

Waste Disposal and Public Cleansing Law	Confirms state of disposal of industrial waste	Article 12, Paragraph 7	In cases where the transport or disposal of industrial waste is commissioned, the disposal of said industrial waste must be checked, and necessary measures must be taken to ensure that waste has been treated properly from generation to final disposal.		When treating industrial waste, a manifest must be checked until final disposal. The manifest is stored and maintained until the day of final disposal can be confirmed.	Compliant
Green Purchasing Law	Efforts to select eco-products when purchasing goods and services	Article 3	Purchasing of consumables/office supplies		Selection of eco-products from a catalogue; use of copy paper recommended by the Ministry of the Environment.	Compliant
	Better understanding concerning the procurement of eco-goods and services	Article 4				
Law on Recycling Food Wastes	Promotes the recycling of food waste	Article 4	Food waste from cafeteria	Management contractor	Processed with food waste processing machine	Compliant
Home Appliance Recycling Law	Long-term use of household appliances	Article 6	Use and disposal of electrical appliances at organisation and in company housing ※1	Facility manager	Checking for proper disposal of appliances in company housing, etc. upon discontinuation of long-term use.	Compliant
	Proper disposal upon discontinuation of use	Article 6		Facility manager	Proper disposal	Compliant
Fire Service Law	Conducting regular inspections, and preparing and maintaining records.	-	In-house fire hydrants, fire extinguishers, and fire service managers.	Secretariat	Annual reporting to Hayama Fire Station concerning light oil tanks of no more than the specified maximum quantity; fire prevention and evacuation training, etc.	Compliant
Fluorocarbons Recovery and Destruction Law	Recovery and destruction of CFCs from air conditioning, etc. at places of business.		Recovery and destruction of CFCs upon repair or disposal of air conditioning units.	Secretariat	Not applicable this year	—
Basic environmental ordinance of Hayama Town	Taking the necessary measures to reduce environmental impacts and protect the environment.	Article 5	Compliance with the Act on Promotion of Global Warming Countermeasures and Waste Disposal Law	All staff	Compliance with the Act on Promotion of Global Warming Countermeasures and Waste Disposal Law	Compliant

Beautification promotion ordinance of Hayama Town	Educating employees to prevent littering of cans, cigarette butts, etc., and holding clean-up activities	Article 4	Compliance with Waste Disposal Act	All staff	Compliance with Waste Disposal Act	Compliant
Kanagawa Prefecture Ordinance on Promotion of Global Warming Countermeasures	Active efforts to control greenhouse gas emissions.	Article 4	Compliance with the Act on Promotion of Global Warming Countermeasures	All staff	Compliance with the Act on Promotion of Global Warming Countermeasures	Compliant
Agreements with International Village	Compliance with emission standards related to joint purification of wastewater.		Wastewater from area of business	Administrative Section		Compliant
Building Standards Law	Compliance with regular survey reports on special buildings.	Article 12, Paragraph 1	Site, building and equipment	Administrative Section		Compliant
Electricity Business Act ※2	Maintenance of private electricity facilities/conformity to technical standards.	Article 39	Private power generator for emergencies	• Kanagawa Prefectural Housing Supply Corporation • Kanto Electrical Safety Inspection Association	Must be maintained to conform with technical standards established by METI ordinance	Compliant
	Establishment of security regulations, notifications, compliance	Article 42			Secure safety related to construction, maintenance and operation of business electricity facilities	Compliant
	Selection and notification of chief engineer (licensed engineer), notification	Article 43			Chief engineer must be assigned from among those that are licensed.	Compliant

※1 Company housing appliances: IGES company housing is a building that is leased by IGES for foreign researchers. A minimum number of household appliances have been arranged to allow foreign researchers to set up their households as soon as they arrive in Japan (refrigerators, air-conditioners, etc.). Since 2002, 13 rooms have been rented and currently a number of refrigerators and washing machines have broken down (unable to be repaired) as eight years have passed since purchase.

※2 Electricity Business Act: The Kanagawa Prefectural Housing Supply Corporation, which is the owner of the building that houses IGES, has installed a private power generator for emergencies, and has commissioned the Kanto Electrical Safety Inspection Association as the electric licensed engineer.

14. Outreach

There have been no environmental-related complaints, such as environmental pollution.

IGES is an organisation that carries out research on environmental issues. Its main activities include the conduct of research to contribute to policy formation in order to create a sustainable society.

The following is a partial description of events and seminars that have been organised as part of these research activities.

- 2011 International Forum for Sustainable Asia and the Pacific (ISAP 2011)

【Purpose】

The purpose of this forum is to provide a venue for experts and representatives of businesses, governments, international agencies and NGOs to meet together every year in the Asia-Pacific region, which plays an increasingly important role in promoting sustainable development, and engage in a wide-ranging debate on sustainable development.

【Themes for FY 2011】

New Asia-Pacific Perspectives towards Rio+20: Implications of the East Japan Disasters

Date: 26-27 July 2011

Venue: Pacifico Yokohama

Participants: 850 (total number)

【Outline of conference】

The first day featured discussions on the resilience of political and social systems and future prospects with a focus on the Great East Japan Earthquake from the perspective of climate change and natural disasters. Discussions were held on the second day on governance for sustainable development and green economies, both major topics at Rio+20, from the perspective of the Asia-Pacific region. As well, the summary of discussions from ISAP2011 was presented at a formal Rio+20 preparatory meeting.¹

¹ Regional Preparatory Meeting for Asia Pacific Region (United Nations Conference on Sustainable Development (UNCSD) (19-20 October 2011, Seoul, ROK)

【Outline of questionnaire results and responses】

Outline of questionnaire results: As a meeting after the Great East Japan Earthquake, the theme selected was appropriate. Contents were interesting and allowed the audience to hear discussions from various perspectives. It is regrettable that presenters were unable to fully discuss their topics as there were too many presenters. Better time management and more time for each session is necessary.

Response: To reflect the above comments, there were only three presenters at ISAP 2012. Guidelines were provided to the panel discussion participants regarding presentation time, to have them become familiar with the meeting.

● IGES Global Environment Seminar

【Purpose】

These seminars provide understandable explanations of global environmental issues and information on the latest trends in Japan and abroad for IGES supporting members and the general public.

【Outline of FY 2010 seminars】

	Dates	Theme	Location	Participants
1 st seminar	14 Dec 2011	Ministry of the Environment open seminar on sustainable resource management/1 st Global Environmental Seminar of FY 2011 “Sustainable Resource Management”: Report on the latest survey and research on the circulation of metal resources on the UNEP International Resource Panel	Tokyo	96
2 nd seminar	21 Dec 2011	Quick report on the outcomes of COP17 and future prospects	Yokohama	~270
3 rd seminar	23 Mar 2012	Building Sustainable and Resilient Local Communities: Actions in Asia and Support for Reconstruction of East Japan	Yokohama	81

- Local community activities

- (1) IGES tree planting ceremony: Looking forward to the future forest, three years after planting 3,000 trees (Shonan Village Festival 2011)

- 1) Activity summary

- Three years after IGES planted 3,000 trees (in 2008) to celebrate the 10th anniversary of its founding, an activity was held under the leadership of Akira Miyawaki, Director of the Japanese Center for International Studies in Ecology, who is involved in forest creation worldwide, to pull weeds around the saplings and apply compost prepared at IGES, as well as measure the growth of the trees after three years.

- 2) Date and location: 3 May 2011 (Tuesday) (IGES Headquarters)

- 3) Participants: approximately 100 persons

- (2) Global Environmental Event: Agenda Day 2011: Kanagawa Prefecture

- 1) Outline of activities

- IGES carried out PR activities with a booth exhibition as attendance was expected by the general public, businesses, and NPOs with a high level of concern for the environment, to increase understanding about IGES's research activities. IGES worked to carry out mutual information exchange with exhibitors, which included companies and NPOs committed to environmental issues.

- 2) Date and location: 4-5 June 2011 (Saturday-Sunday) Nihon Odori (Nihon Odori, Chuo-ku, Yokohama City)

- 3) Attendees: ~120,000

- (3) 11th Hayama Town Development Expo

- 1) Outline of activities

- Organisations that are carrying out development activities in Hayama Town gave presentations on their daily activities and showed the results with panel exhibitions and photos. IGES participated for the first time, and Satoshi Kojima, the Director of the Economy and Environment Group explained about the carbon tax and other issues in an easy-to-understand way to 90 first-year students from Nango Junior High School.

- 2) Date and venue: 8-10 July 2011 (Fri-Sun) (Hayama Welfare Culture Hall)

- 3) Attendees: Total ~ 850

(3) Shonan International Village Academia

1) Summary

A lecture called THE "Shonan International Village Academia" is held jointly with Kanagawa International Foundation every year for local residents, using the network of research institutions of Shonan International Village at IGES Headquarters.

2) FY 2011 lecturer and theme

「Refugees and the Environment: Experiences in Africa」

Hideyuki Mori (IGES President)

3) Date and venue: 28 January 2012 (Sat) (IGES Headquarters)

4) Participants: 61