Material Issue: Environment
Initiatives to Conserve the Global Environment

KDDI's approach

●Recognition of social issue

In these times when global warming is evident, along with measures to mitigate global warming by reducing greenhouse gas emissions, people are asking about adaptations to global warming where nature and society are changing in response to the effect on the global environment. For companies, making simultaneous efforts to mitigate and adapt to this issue is important.

●KDDI's risk and opportunity

KDDI is aware of the risk of global warming and other climate changes and is taking the opportunity to mitigate and adapt to those risks. Global warming increases the risk of natural disasters, which greatly increases the chance of damage to communications equipment and interruption of communications hindering the provision of stable information communication services. Meanwhile, we are taking the opportunity to provide ICT services by using equipment that has a lesser environmental load and developing and proposing

services and solutions that reduce the physical movement of customers. Furthermore, ICT services have become a valuable means of communications during times of disaster functioning as a lifeline that society cannot do without. As such, we are constantly working to provide high quality information communications services.

●KDDI's management

KDDI has in place the KDDI GREEN PLAN 2012-2016 medium-term environmental conservation plan based on the KDDI Environmental Charter, and the KDDI Action Guidelines on the Preservation of Biodiversity based on this medium-term environmental conservation plan. As of March 31, 2015, we are progressing in line with achieving the KDDI GREEN PLAN 2012-2016, barring one of the items.

＞Policies

・KDDI Environmental Charter

・KDDI Action Guidelines on the Preservation of Biodiversity

Highlights of FY2014 Activities

We have calculated and released FY2012, FY2013, and FY2014[*] emissions for Scope 3, which indicate the greenhouse gas emissions in the supply chain.
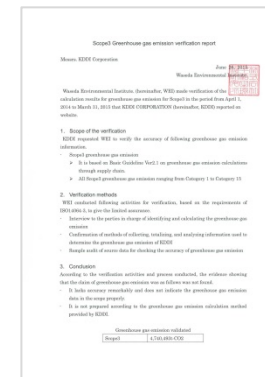
❏ Scope 3 FY2014 Greenhouse Gas Emission Verification Report

* The data of FY2014 was released in this report.

●Future issues

・Efforts to reduce environmental load for the supply chain
・Transferring environmental technology that considers the environment overseas

●Key Performance Indicators (KPI)

	FY2016 Goal	FY2014 Result
Amount of power consumption (compared to when energy conservation measures are not taken)	**30% constraint**	**Progressing at pace to achieve this goal**
Amount of power consumption per subscriber (compared to FY2011)	**15% reduction**	**31.9% reduction**
Number of Tribrid Base Stations established	**100 stations (FY2012 Goal)**	**Achieved at the end of March 2013**
Achieve zero emissions for retired telecommunications facilities (* Zero emissions is defined as having a final disposal rate of 1% or less.)	**Final disposal rate of 1% or less**	**FY2014 result: Final disposal rate of 0.4%**
Recycling rate of used mobile phone material	**Over 99.8%**	**99.8%**
Recycling rate of general waste material for KDDI buildings and headquarters	**Over 90%**	**87.5%**

Environmental Management

Environmental Policies

| Policy | KDDI Environmental Charter

KDDI Environmental Charter is composed of the Manifesto (Approach to Global Environmental Problems) which is the highest concept, and the Action Guideline for defining the direction of concrete initiatives.

Manifesto

KDDI Group recognizes the importance of fulfilling its duty as a responsible global corporate citizen to conserve and protect the Earth's irreplaceable environment so that it can be inherited by future generations. We are committed to pursuing our business in eco-conscious ways, through programs of activities that span the entire company.

Action Guideline

1. We will strive to evaluate the quantitative impact of our activities as a company on the global environment, implement effective environmental protection programs and continuously improve these programs. Specifically, we will:
   (1) Develop and operate environmental management systems necessary to make continuous improvements in such environmental fields as energy conservation, resource conservation and waste reduction.
   (2) Comply with environmental laws, ordinances and other regulations and requirements. In particular, we will promote measures to reduce our electricity consumption from the perspective of preventing global warming.
   (3) Promote communication through the appropriate disclosure of information.
2. We will strive to develop and offer services that reduce environmental impact through the use of next-generation information technologies.
3. We will contribute to the development of a recycling-oriented society by promoting measures to mitigate and reduce the environmental impact of activities that necessarily entail mass consumption, such as the supply of mobile handsets.
4. We will promote corporate purchasing policies that favor eco-friendly products and equipment.
5. As a responsible corporate citizen, we will contribute to society and local communities through activities that promote an affluent society that is in harmony with the environment.

| Policy |
KDDI Action Guidelines on the Preservation of Biodiversity

KDDI has established the KDDI Action Guidelines on the Preservation of Biodiversity based on the Third Medium-term Environmental Conservation Plan, which began in FY2012, to multilaterally capture the contributions towards the preservation of biodiversity. Using this policy, we are pinpointing various opportunities to engage in promoting activities.

Preserving Diversity in Business Activities

When formulating business plans, we take into consideration the impact on the related ecosystems and local community.

Collaboration and Cooperation with Related Organizations

We strengthen collaboration and cooperation with administrative authorities, NPOs and other organizations, and undertake CSR activities using ICT.

Promoting Recycling of Resources

To prevent the depletion of bioresources and minimize degradation of the natural environment, we continuously and proactively engage in recycling of resources.

Environmental Management

Message from executive in charge of CSR & Environmental issues

In the course of performing business activities, KDDI consumes electricity and other forms of energy and emits greenhouse gas. To respond to global warming progressing at a global scale, we are moving forward with making base station equipment and other communications equipment energy efficient and working on reducing the amount of power that we consume. At the same time, by providing ICT services, we are contributing to the reduction of energy consumption by customers and society and to the reduction of greenhouse gas emissions. Furthermore, we will begin encouraging business partners to reduce environmental load in the supply chain in the future. Through the promotion of various conservation activities with the efforts from customers, business partners, and employees, KDDI will fulfill our social responsibility.

Akira Dobashi
Executive Officer, CSR
Environmental Sustainability
Deputy General Manager
General Administration &
Human Resources Division
Corporate Sector

Environmental Management

Environmental Management Regime

| System |

KDDI Group's Environmental Management Regime

KDDI Group has formed the KDDI Environment Committee, comprising members from each division, branch, Group company, and related organization. This committee serves as the center for formulating KDDI's environmental management system and promoting efficient environmental preservation activities throughout the Group. KDDI has acquired ISO14001 certification for this management system.

As of the end of March 2015, of the 33 companies that make up KDDI and its domestic consolidated subsidiaries, 20 companies (61%) have acquired this certification, along with 1 overseas company and 4 associations.

KDDI Group's Environmental Management Regime
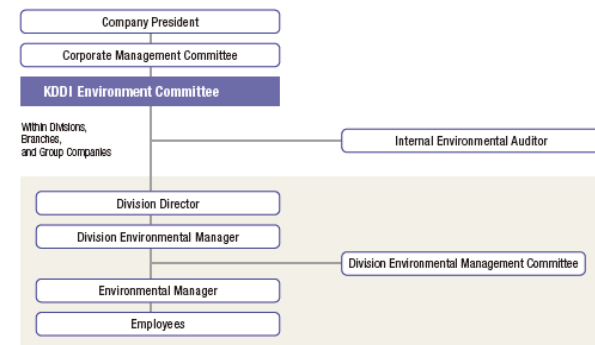
| Initiative |

Internal Environmental Audits

KDDI conducts internal environmental audits once each year. In FY2014, 57 departments and 66 offices were provided with a checklist and asked to evaluate themselves followed by internal environmental auditors performing a second check on the state of conformity with environmental legislation. The audit also verifies the functioning of the system for systematic and ongoing improvement of environmental activities.
In FY2014, we had no violations of environmental legislation.

| Initiative |

Appropriate Processing of PCB

In FY2014 KDDI disposed of approximately 9.3 tons of transistors, capacitors, and other components that previously included high-concentration PCB that disposal processors can accept. We will continue the disposal of remaining high-concentration PCB devices as soon as disposal processors that can accept them are in place. We are also scheduling the disposal of low-concentration PCB devices.

| Initiative |

Compliance with the Green Purchasing Law

Read about KDDI's compliance with the standards required by the Law Concerning the Promotion of Procurement of Eco-friendly Goods and Services by the State and Other Entities (enacted in 2000; subsequently referred to as "Green Purchasing Law") and the Basic Policy for the Promotion of Procurement of Eco-friendly Goods and Services.

❏ State of Compliance with Green Purchasing Law (Japanese)
❏ List of Compatible Models (Japanese)
❏ Product Line-Up

| Initiative | Acquiring the Eco ICT Mark

KDDI acquired the Eco ICT Mark established by the ICT Ecology Guidelines Council[*] as part of our endeavor to further environmental conservation and the reduction of environment load.

* Council founded for the purpose of establishing energy-saving indices to be referenced when procuring ICT devices and data centers. The constituting members are: Telecommunications Carriers Association (TCA), Telecom Services Association (TELESA), Japan Internet Providers Association (JAIPA), Communications and Information Network Association of Japan (CIAJ), and ASP-SAAS Industry Consortium (ASPIC).

KDDI Group ISO14001 Certification Acquisition
As of March 31, 2015: KDDI CORPORATION, OKINAWA CELLULAR TELEPHONE COMPANY, KDDI Evolva Inc., KDDI Evolva Okinawa Corporation, KDDI R&D Laboratories Inc., KDDI RESEARCH INSTITUTE INC., KDDI Technology Corporation, KDDI Engineering Corporation, Kokusai Cable Ship Co., Ltd., mediba inc., Japan Telecommunication Engineering Service Co., Ltd., KDDI Group Foundation, KDDI Health Insurance Union, KDDI Pension Fund, KDDI Web Communications Inc., KDDI Challenged Corporation, KDDI Foundation, TELEHOUSE International Corporation of Europe Ltd., Chubu Telecommunications Co.,Inc., WebMoney Corporation, KDDI MATOMETE OFFICE CORPORATION, KDDI MATOMETE OFFICE HIGASHINIHON CORPORATION, KDDI MATOMETE OFFICE CHUBU CORPORATION, KDDI MATOMETE OFFICE KANSAI CORPORATION, KDDI MATOMETE OFFICE NISHINIHON CORPORATION

Environmental Management

Self-evaluation Check List for CO_2 Emission Reduction Efforts by Telecommunication Operators

		Evaluation item	If implemented, description of actions taken
Formulation of voluntary environmental action plan, etc.	1	Has the organization formulated a voluntary environmental action plan that describes actions for reducing CO_2 emissions? Has the plan been implemented?	KDDI has formulated a medium-term environmental conservation plan based on the KDDI Environmental Charter, and the plan is being implemented. KDDI Action Guidelines
	2	Does the voluntary environmental action plan include specific actions for which quantitative goals for CO_2 emission reduction are stated?	The Third Medium-Term Environmental Conservation Plan (KDDI Green Plan 2012-2016) sets the following targets. 30% reduction in energy use estimated for FY2016 compared with not taking any energy-saving measures 15% reduction in energy use per subscriber estimated for FY2016 compared with FY2011 Expansion of Tribrid Base Stations to 100 by March 31, 2012 (Target achieved) Achieve zero emissions for retired telecommunications facilities (*Zero emissions is defined as having a final disposal rate of 1% or less) Recycling rate of used mobile phone material Over 99.8% Recycling rate of general waste material for KDDI buildings and headquartaers Over 90% Third Medium-Term Environmental Conservation Plan – KDDI Green Plan 2012-2016
	3	Does the organization put efforts into informing and enlightening employees about environmental conservation actions to improve their environmental awareness, as well as publishing the organization's voluntary environmental action plan internally and externally?	The Medium-Term Environmental Conservation Plan is published inside and outside the company by means of the Sustainability Report (formerly CSR & Annual Report) and the corporate website. KDDI also provides e-learning programs and internal seminars for employees whenever necessary. Integrated Report (Detailed ESG Version) Environmental Education
	4	Are the implementation statuses of and the targeted achievements for actions given in the voluntary environmental action plan disclosed to the public?	The attainment statuses of trend targets toward the achievement of the Medium-term Environmental Conservation Plan are published in the Sustainability Report (formerly CSR & Annual Report) and the corporate website. Material Issue: Environment
Eco-efforts in procurement	5	Has the organization formulated, with a view to energy-saving, procurement standards for ICT devices and data centers? Does procurement conform to the established standards?	KDDI conducts its procurement activities in accordance with the KDDI Green Procurement Guidelines. Formulation of KDDI Green Procurement Guidelines (Japanese)
	6	Does the organization procure office supplies and other goods as well as logistics service in an energy-saving manner (Green purchasing, etc.)?	KDDI promotes green purchasing under the KDDI CSR Procurement Policy. Working with Business Partners, Shareholders

Environmental Management

		Evaluation item	If implemented, description of actions taken
Promotional system for eco-efforts	7	Is there an assigned group or personnel in charge of CO_2 emission reduction actions?	The CSR & Environment Management Department is established as the internal organization responsible for CO_2 emission reduction efforts.
	8	Does the organization have a system for appropriately monitoring and checking the status of implementation and the achievement level of targets given in the voluntary environmental action plan as well as for conducting internal audits?	KDDI monitors the status of implementation and the achievement level and conducts inspections and improvements through internal audits, both of which are realized through the ISO environmental management system.
Other eco-efforts	9	Does the organization undertake eco-friendly actions beside energy-saving efforts?	The promotion of 3R (Reduce, Reuse, Recycle) is also a core KDDI challenge, and the following goals are pursued: Promotion of recycling communications equipment; Improvements in recovering resources Promotion of recycling used mobile phones; Improvements in recovering resources Reduction in paper resource use via "Green by ICT" (Bill on WEB, KDDI paperless fax service, slimmed-down au mobile phone manual, compact individual packaging, etc.) Reduction in office waste and improvements in recovering resources KDDI is also engaged in support for biodiversity. Recycling-Oriented Society Low-Carbon Society Biodiversity
	10	Does the organization perform activities for environmental conservation in collaboration with the community?	KDDI implements forest conservation activities in which employees and customers work together across the country. Environmental Conservation Activities

77

Environmental Management

| Initiative |
Environmental Awareness for Employees

In order to deepen understanding with regard to KDDI's environmental initiatives, each year the company periodically institutes e-learning programs targeting all employees. In FY2014, during June, which is Environment Month, KDDI held e-learning sessions about the Energy Conservation Act in which 10,691 participants attended (participant rate of 91.2%).

Environmental e-learning in FY2014

Medium-term Environmental Conservation Plan

| Policy | **Third Medium-term Environmental Conservation Plan KDDI GREEN PLAN 2012-2016**

As a 5-year environmental conservation plan beginning from FY2012, KDDI established the KDDI GREEN PLAN 2012-2016 Third Medium-term Environmental Conservation Plan. This plan takes three material issues – low-carbon society, recycling-oriented society, and biodiversity – and establishes concrete targets for each. By promoting the 3 Gs – Green of ICT, Green by ICT, and Green Road Project – we will continue further contributing to the conservation of the global environment.

3 Gs	Issue addressed	Example of initiatives
Green of ICT	Low-carbon society	Reduction of power consumption in base stations and disaster preparedness initiatives
	Recycling-oriented society	Reuse and recycling of communications equipment
Green by ICT	Low-carbon society	Support of workstyle reform through ICT
	Biodiversity	Dolphin observation using acoustic technology that maintains submarine cables
Green Road Project	Recycling-oriented society	Promotion of mobile phone recycling
	Biodiversity	Environmental conservation activities by employees

Material issues and specific targets

Material Issues	Targets
Low-Carbon Society	(1) By FY2016, reduce electric power consumption by 30%, compared with the level if energy-saving measures had not been implemented. (2) By FY2016, lower electric power consumption per subscriber by 15%, compared with FY2011. (3) By the end of FY2012, increase the number of Tribrid Base Stations to 100.
Recycling-Oriented Society	(1) Achieve zero emissions for retired telecommunications facilities.[*] (2) Achieve material recycling ratio of 99.8% or more for used mobile phone handsets. (3) Achieve a material recycling ratio for general waste of 90% or more at KDDI-owned buildings and in the headquarters building.
Biodiversity	(1) Pursue activities based on our action guidelines for preservation of biodiversity.

* Zero emissions is defined as having a final disposal rate of 1% or less.

Environmental Management

| Initiative |

Progress of the Third Medium-term Environmental Conservation Plan

Looking toward the target FY2016, we are promoting concrete targets for the Third Medium-term Environmental Conservation Plan established in FY2012. At the end of March 2015, barring the target of the over 90% recycling rate of general waste material for KDDI buildings and headquarters, we are progressing at a pace to achieve our goals including already having achieved the goal of expanding to 100 Tribrid Base Stations. The recycling of general waste material is dependent on equipment specifications of processors and other conditions of the processing area, which is making it difficult to achieve our target.

# Environmental Data

| Initiative |

Environmental Impact of Business Activities

Most input energy is electric power for telecommunications facilities. Heavy oil, light oil, heating oil and other fuels are input when test running emergency power generation facilities. Most water usage is generated by everyday business activities in the offices. Greenhouse gas emissions were calculated in three areas, Scope 1, Scope 2 and Scope 3 (all items).

Environmental Impact of FY2014 Business Activities

Coverage: KDDI (KDDI non consolidated)
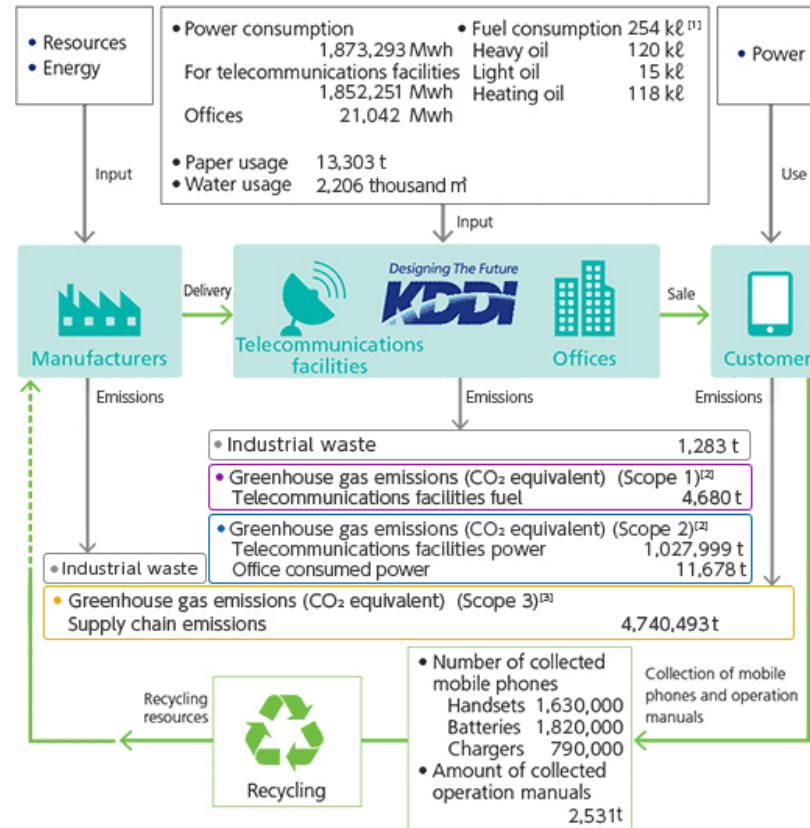
[1] Crude oil equivalent. Used for air conditioning of telecommunications facilities and for emergency generators.

[2] CO_2 emissions are calculated using a conversion coefficient of 0.555kg-CO_2/kWh for the power consumption and the emission coefficients for fuel consumption applied to the calculation, reporting, and disclosure systems based on the "Act on Promotion of Global Warming Countermeasures."

[3] CO_2 emissions are calculated using emission factors indicated in the Ministry of the Environment's "Overview of Basic Conversion Guidelines Related to the Calculation of the Greenhouse Effect through the Supply Chain."

Environmental Management

| Initiative | **Environmental Accounting**

Noteworthy changes in parameters of environmental accounting during FY2014 were twofold: (1) the expansion of the scope of calculation and the addition of 4 domestic consolidated subsidiaries (KDDI MATOMETE OFFICE HIGASHINIHON CORPORATION, KDDI MATOMETE OFFICE CHUBU CORPORATION, KDDI MATOMETE OFFICE KANSAI CORPORATION, and KDDI MATOMETE OFFICE NISHINIHON CORPORATION) and 5 overseas consolidated subsidiaries (Telehouse International Corp. of Europe Ltd. (France), TELEHOUSE International Corp. of America (US), TELEHOUSE Deutschland GmbH. (Frankfurt), TELEHOUSE HONGKONG CCC (Hong Kong), and TELEHOUSE BEIJING BDA Co., Ltd. (Beijing)), and (2) the increase in electric power consumption (Mwh) and greenhouse gasses (t-CO_2) compared with the preceding fiscal year.

Coverage: KDDI and 24 major consolidated subsidiaries [*]

Period: April 1, 2014 to March 31, 2015

Environmental Protection Costs		Transaction Examples	FY2013 (Millions of Yen)		FY2014 (Millions of Yen)		Change from Previous Year (Millions of Yen)	
			Investment	Cost	Investment	Cost	Investment	Cost
Business area costs	Pollution prevention costs	Pollution prevention costs stipulated by law, costs for proper disposal of PCBs, etc.	0	151	0	10	0	△141
	Global environmental protection costs	Power-saving wireless equipment for mobile base stations (Investment amount is calculated proportionally based on the power-saving effect.)	96,858	13,767	6,602	22,176	△90,256	8,409
	Resource recycling costs	Reduction of paper resources, processing and disposal of waste products	0	252	0	282	0	31
Upstream/downstream costs		Collection, recycling, and reuse of merchandise and products	0	935	0	1,186	0	251
Administrative costs		Operation and updating of environmental ISO standards, disclosure of environmental information	0	78	0	78	0	0
R&D costs		R&D of technology, equipment, handsets, products, services, and other items conducive to reducing the environmental burden	0	121	0	143	0	22
Social activity costs		Donations and support for forest conservation activities and to environmental protection groups	0	31	0	44	0	12
Environmental damage restoration costs		Measures for prevention of asbestos spraying, restoration of polluted soil	0	0	0	0	0	△0
Total			96,858	15,335	6,602	23,919	△90,256	8,584

Environmental Management

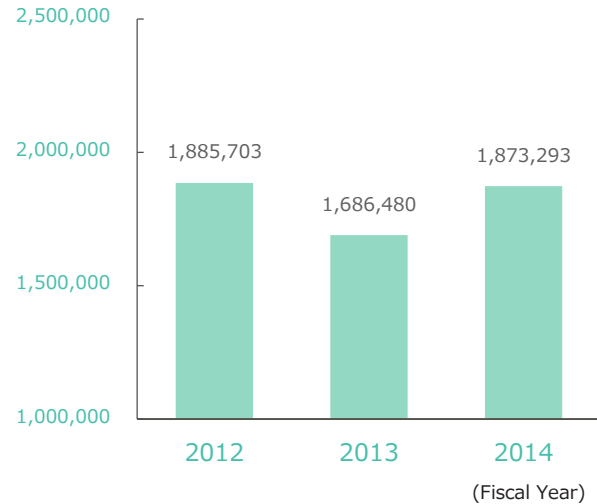| 1. Environmental Protection Benefits (Physical)		Indicator Category (Unit)	FY2013	FY2014	Change from Previous Year
(1) Benefits derived from business area	1) Benefits related to resources invested in business activities	Power consumption (MWh)	1,889,604	2,296,470	406,866
		Paper usage (t)	43,691	13,469	△30,221
		Paper reduced by Bill on WEB (t)	3,481	3,665	184
	2) Benefits related to environmental burden and waste products discharged from business activities	Greenhouse gas emissions (t-CO$_2$) (Emission coefficient used per telecommunications operator)	1,070,006	1,298,422	228,416
		Industrial waste emissions related to telecommunications facilities and buildings (t)	3,388	7,556	4,168
(2) Benefits derived from upstream/downstream costs	Benefits related to goods and services produced by business activities	Number of used mobile phones and other devices collected (10,000 units)	387	424	37

2. Economic Benefits of Environmental Protection Measures (Yen)	Substantive Benefits (Major Effects)	FY2013 (Millions of yen)	FY2014 (Millions of yen)	Change from Previous Year
Revenues	Revenues from sales through disposal of telecommunications facilities and buildings	631	566	△66
Costs reductions	Reduction in energy costs by adopting the use of low-pollution vehicles	13	10	△3
	Reduction in costs of new purchases by reusing disposed of telecommunications facilities	3,200	2,361	△840
Total		3,845	2,936	△908

* KDDI Web Communications Inc., mediba Inc., KDDI R&D Laboratories Inc., KDDI Research Institute, Inc., KDDI Engineering Corporation, KDDI Evolva Okinawa Corporation, KDDI Challenged Corporation, KDDI Technology Corporation, WebMoney Corporation, KDDI MATOMETE OFFICE CORPORATION, KDDI MATOMETE OFFICE KANSAI CORPORATION, KDDI MATOMETE OFFICE CHUBU CORPORATION, KDDI MATOMETE OFFICE HIGASHINIHON CORPORATION, KDDI MATOMETE OFFICE NISHINIHON CORPORATION, Chubu Telecommunications Co., Inc., OKINAWA CELLULAR TELEPHONE COMPANY, KDDI Evolva Inc., Japan Telecommunication Engineering Service Co., Ltd., Telehouse International Corp. of Europe Ltd. (UK), Telehouse International Corp. of Europe Ltd. (France), TELEHOUSE International Corp. of America (US), TELEHOUSE Deutschland GmbH (Frankfurt), TELEHOUSE HONG KONG CCC (Hong Kong), TELEHOUSE BEIJING BDA Co., Ltd (Beijing)
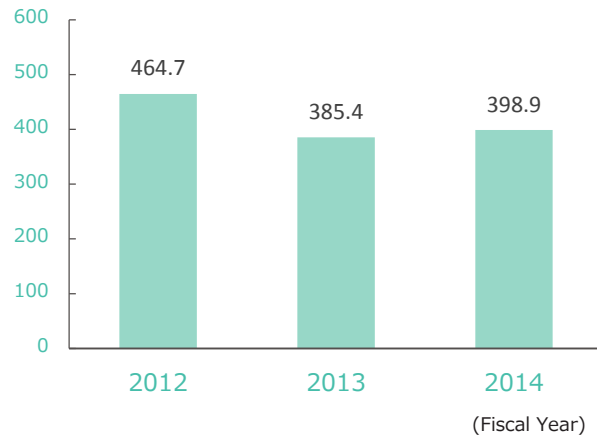
Environmental Management

| Initiative | Data (KDDI)

Electricity consumption   (Unit: MWh)

	FY2012	FY2013	FY2014
Greenhouse gas emissions (CO_2 equivalent; unit: t) [*]	5,210,981	5,820,666	5,784,851
Electric power consumption (unit: MWh)	1,885,703	1,686,480	1,873,293
Electric power consumption per subscriber (unit: MWh)	464.7	385.4	398.9
Fuel consumption (unit: kℓ)	308	260	254
Paper usage (unit: t)	17,924.0	43,429.2	13,303
Water usage (unit: 1,000 m^3)	1,638	1,864	2,206
Industrial waste emissions (unit: t)	1,401.1	1,445.7	1,283
Number of mobile phones and other devices collected by KDDI (unit: 10,000 devices)	Mobile phones	181	154	163
	Batteries	182	161	182
	Chargers	83	72	79
Amount collected through au Operation Manual Recycling (unit: t)	2,394	2,235	2,531

* CO_2 emissions are calculated using a conversion coefficient of 0.555 kg-CO_2/kWh for the power consumption and the emission coefficients for fuel consumption applied to the calculation, reporting, and disclosure systems based on the "Act on Promotion of Global Warming Countermeasures."

Electricity consumption per subscriber   (Unit: MWh)

Number of mobilephones collected by KDDI (Unit: 10,000)

Return to INDEX
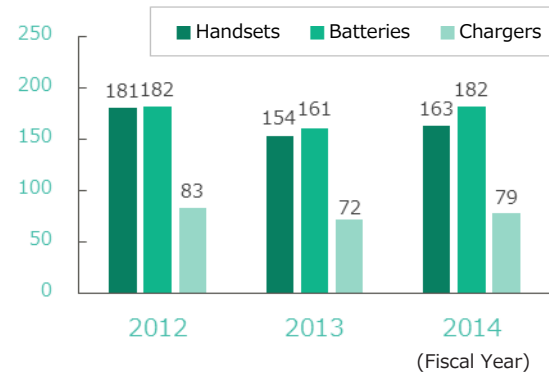
Supply Chain Approach

| Initiative | Scope 3 Response

KDDI conducts periodic life-cycle assessments (LCA), [1] which assess environmental load, by calculating CO_2 emissions in every step of its products and services from manufacturing to use, disposal, and recycling. KDDI uses these assessments to quantitatively determine and disclose its environmental load. In recent years, the movement for the visualization (determining and disclosing of management and information) of emissions from the supply chain of telecommunications carriers has intensified, and KDDI has established guidelines [1] to respond to this need. Using these guidelines, we have calculated greenhouse gas emissions of the supply chain since FY2012. For FY2014 business activities, Scope 3 accounted for 81.95% of total greenhouse gas emissions (Scope 1, 2 and 3), and when looking at individual categories, we saw that Category 1 and Category 2 continued to account for a large percentage of emissions. We will continue analyzing these key categories and promote initiatives to reducing their emissions.
To enhance the reliability of the Scope 3 calculations, the results were subjected to third party verification by Waseda Environmental Institute Co.,Ltd.. [2]
KDDI plans to continue its efforts to determine its Scope 1, 2, and 3 emissions and reduce its environmental load.
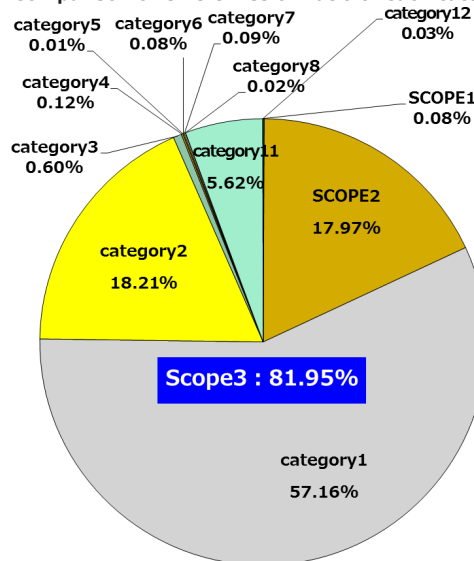
[1] Environmental load at the disposal and recycling stage includes environmental load at the manufacturing stage.
[2] Green Value Chain Platform
[3] Third party verification by Waseda Environmental Institute Co.,Ltd (FY2014)

❑ Scope 3 Greenhouse Gas Emission Verification Report

GHG emissions and the proportions of each categories

Category			FY2012		FY2013		FY2014	
			t-CO2	%	t-CO2	%	t-CO2	%
Scope1		All direct GHG emissions	2,857	0.05%	3,505	0.06%	4,680	0.08%
Scope2		Indirect GHG emissions from consumption of purchased electricity, heat or steam	1,046,565	20.08%	935,996	16.08%	1,039,677	17.97%
Scope3	category 1	Purchased goods and services	2,733,364	52.45%	3,343,506	57.44%	3,306,863	57.16%
	category 2	Capital goods	952,799	18.28%	1,093,184	18.78%	1,053,203	18.21%
	category 3	Fuel- and energy-related activities	34,439	0.66%	31,480	0.54%	34,967	0.60%
	category 4	Upstream transportation and distribution	8,261	0.16%	4,994	0.09%	7,003	0.12%
	category 5	Waste generated in operations	921	0.02%	588	0.01%	500	0.01%
	category 6	Business travel	5,154	0.10%	5,080	0.09%	4,590	0.08%
	category 7	Employee commuting	3,497	0.07%	2,671	0.05%	5,031	0.09%
	category 8	Upstream leased assets	1,751	0.03%	1,519	0.03%	1,367	0.02%
	category 9	Downstream transportation and distribution	0	0.00%	0	0.00%	0	0.00%
	category 10	Processing of sold products	0	0.00%	0	0.00%	0	0.00%
	category 11	Use of sold products	419,922	8.06%	397,324	6.83%	325,364	5.62%
	category 12	End-of-life treatment of sold products	1,451	0.03%	819	0.01%	1,606	0.03%
	category 13	Downstream leased assets	0	0.00%	0	0.00%	0	0.00%
	category 14	Franchises	0	0.00%	0	0.00%	0	0.00%
	category 15	Investments	0	0.00%	0	0.00%	0	0.00%
			4,161,559	79.86%	4,881,165	83.86%	4,740,493	81.95%
TOTAL			5,210,981	100.00%	5,820,666	100.00%	5,784,851	100.00%

Comparison of GHG emission ratio of each categories

category5 0.01%　category6 0.08%　category7 0.09%　category12 0.03%
category8 0.02%
category4 0.12%
SCOPE1 0.08%
category3 0.60%
category11 5.62%
SCOPE2 17.97%
category2 18.21%
Scope3 : 81.95%
category1 57.16%

Supply Chain Approach

| Initiative | **LCA Initiatives**

To quantify and disclose environmental impact, KDDI periodically conducts life-cycle assessments (LCA). In FY2008 and FY2012, we conducted LCAs on "au HIKARI" and "au." In FY2015, we plan to conduct an LCA on these same services to accompany changes in network construction such as the change of mobile communications networks to LTE.

| Initiative |
Promoting Green Procurement

KDDI formulated "KDDI Green Procurement Guidelines" to promote purchasing of more environment-friendly products, and since April 2010 we have procured business equipment (communications devices, air conditioning systems, power supply facilities, etc.) with high energy-saving performance. The Guidelines set standards for 29 kinds of equipment, of which the standards for 10 kinds of equipment are based on guidelines specified by the ICT Ecology Guideline Council, while those for the remaining 19 are based on KDDI's own standards set with reference to public standards in Japan and abroad (Top Runner Standards, ATIS [USA], CoC [Europe], etc.).

Furthermore, in FY2014, we implemented a CSR procurement survey for business partners, and obtained responses from 72% of our business partners.

❏ ICT Ecology Guideline Council
❏ KDDI Green Procurement Guidelines （Japanese)

| Initiative | **Cooperation with Suppliers**

KDDI aims to reduce its environmental load and is making efforts to make its base stations lighter and more energy efficient, among other efforts. In FY2014, KDDI worked with its base station equipment suppliers to develop equipment that is lighter and consumes less power. Together, we achieved an approximate 45% reduction in weight and an approximate 22% reduction in electric power consumption. By implementing this equipment, KDDI achieved a reduction in its environmental load.

KDDI will continue promoting approaches to suppliers and work with suppliers to reduce its environmental load.

Low-Carbon Society

Green of ICT

| Initiative | Reducing Power Consumption in Base Stations and Undertaking Disaster Measure Initiatives

The dense blanket of mobile phone base stations covering Japan accounts for 60% of the total energy consumed by KDDI, and reducing the power that base stations consume is a topmost priority. Furthermore, 77% of the base stations that ceased to operate in

Tribrid Base Stations

the aftermath of the Great East Japan Earthquake that struck in March 2011 (in six Tohoku prefectures, as of March 12, 2011) did so because of power outages. Clearly, disaster preparedness measures that address power outages are a pressing topic.

In regard to these issues, KDDI has promoted initiatives combining reduction of environmental impact and disaster preparedness measures by increasing the number of Tribrid Base Stations and extending the life of base station batteries to 24 hours. Tribrid Base Stations are base stations that employ tribrid power control technology to determine which of three types of power to use depending on the time of day and changes in the weather. Tribrid power control involves the use of technology to efficiently control the

source of electric power by the hour, combining typical commercial electric power with generation from solar panels and charging batteries with nighttime power. Compared with base stations that only use conventional electric power, Tribrid Base Stations have been proved to reduce CO_2 emissions by as much as 30% a year. As of March 31, 2015, 100 Tribrid Base Stations were installed throughout Japan. Furthermore, serving as backup in case power is interrupted, KDDI has installed batteries with life extended to 24 hours, focusing on prefectural and municipal government offices and train stations serving more than 100,000 passengers per day. As of March 31, 2015, extended life batteries have been installed at 2,200 base stations throughout Japan. We will continue installing extended life batteries while measuring the effect on the reduction of environmental load.

A video about the advancement of Tribrid Base Stations is available for viewing（Japanese）.

❏ R&D related to adaptive utilization technology for limited network resources in the event of disaster
<R&D of Highly-Efficient Disaster-Adaptive Communication Facility Operation Technology>

Together with "Research and development related to variable-capacity optical network control systems" and "Research and development of obstruction estimation in times of disaster and restoration plan analysis and calculation technology," the "Study on advancement of Tribrid Base Stations" (KDDI project name) forms part of the "Research and development of management and control technology for disaster-proof networks

guaranteeing communications even during large-scale disasters," sponsored by the FY2011 supplementary budget of the Ministry of Internal Affairs and Communications.

| Initiative | Portable Batteries

In FY2013, KDDI introduced and utilizes portable batteries with reduced environmental impact at five maintenance bases throughout Japan as a substitute for the mobile power supply vehicles used in the past to power mobile phone base stations during electricity

Portable batteries

outages. In the portable battery trial conducted in FY2012, assuming a power outage of approximately 10 hours per base station and wireless device power consumption of 1kW, whereas a mobile power supply vehicle would consume 8.2 liters per time (equivalent to 21.5kg of CO_2 emissions), a portable battery required 10kWh per time (equivalent to 4.1kg of CO_2 emissions). Given this 17.4kg difference in CO_2 emissions, we expect an approximate 80% reduction in emissions compared with mobile power supply vehicles. KDDI plans to expand the number of portable batteries introduced in readiness for the future increase in base stations and to continue to work toward reduction in CO_2 emissions.

Low-Carbon Society

| Initiative |

Renewable Energy（Internal use）

In order to actualize even better energy conservation and CO_2 emissions cuts at KDDI, a portion of the electric power used at large scale communications stations like the

Large scale communications station using natural energy

Yamaguchi Technical Service Center, Oyama Network Center No. 2 and Tokyo Technical Center, and almost all electrical power at seven mobile telephone base stations including Hokkaido and Aomori come from natural energy sources such as solar power.

We have been making progress in introducing renewable energy, establishing 100 Tribrid Base Stations (base stations utilizing tribrid electric power control technology to efficiently supply three kinds of electric power – ordinary commercial power, power generated by solar panels, and midnight power saved in storage batteries – according to the time of day and changes in the weather) throughout Japan.

The amount of natural energy produced by each Tribrid Base Station is approximately 4.2 kWh/day,[*] accounting for 18% of the power used by every device. Furthermore, by utilizing midnight power, we are predicting that CO_2 emissions will reduce 20 to 30%.

* Includes values researched by KDDI where average energy production is predicted from 6 solar batteries installed in test stations during clear skies

| Initiative |

Renewable Energy（Solar power generation business）

KDDI launched its solar power generation business on November 18, 2013, with the aim of contributing to reduction of CO_2 emissions. We constructed solar power generation facilities on some idle land owned by KDDI in three locations around the country, and we sell the power generated to electric power companies based on the Feed-in Tariff Scheme for Renewable Energy. Total power generation (total power sales) amounted to 3,034MWh in FY2013 and 14,403MWh in FY2014.

Location of solar power generation facilities	Start of operation	Site area	Generating capacity	Estimated annual power output
KDDI Oyama Network Center (Oyama, Tochigi Prefecture)	February 26, 2014	Approx. 41,000m²	Approx. 3,500kW	Approx. 4,000MWh
Adjacent to KDDI Yamata Transmitting Station (Koga, Ibaraki Prefecture)	January 24, 2014	Approx. 57,000m²	Approx. 3,300kW	Approx. 4,500MWh
Former site of Kitaura Receiving Station (Namegata, Ibaraki Prefecture)	November 18, 2013	Approx. 78,000m²	Approx. 2,000kW	Approx. 2,600MWh

| Initiative |

Road Heating that Uses Waste Heat

The Sapporo Technical Center in the KDDI Hokkaido Building is contributing to the reduction of CO_2 through road heating that uses waste heat. Road heating is equipment that raises the heat of the ground to prevent the accumulation of snow and icing on roads and sidewalks. The road heating for the Hokkaido Building melts fallen snow by circulating

Road heating facilities

hot water through pipes laid under concrete. The Hokkaido Building system recycles heat generated in machinery areas to heat the cycling water, dramatically cutting CO_2 generation.

Low-Carbon Society

| Initiative |

Conference on Ecology Guidelines for the ICT Field

KDDI is participating in the ecology guideline proposal process as a member of the "Conference on Ecology Guidelines for the ICT Field",[*] which was launched in June 2009, and is striving towards the popularization and promotion of energy conservation devices in the communications field. Also, KDDI has acquired the Eco ICT Mark systemized by these guidelines and worked towards the enhancement of activities for environmental awareness and environmental burden reduction.

* A conference designed to establish an energy conservation index to be referred to when procuring ICT devices and data centers. Organized by the Telecommunications Carriers Association, Telecom Services Association, Japan Internet Providers Association, Communications and Information Network Association of Japan, and the ASP/SaaS Industry Consortium.

❏ The Eco ICT Mark

Green by ICT

| Initiative |

Support for Changing Working Styles Through ICT

KDDI provides various services that support changing working styles. The services we provide support computers, tablets, smartphones, and other multi-devices and include Google Apps for Work™, a cloud-based groupware service that enables web-based use of mail, calendars, and documents, and Office 365 with KDDI, a service that enables viewing and editing of Microsoft Office documents from outside the office in the same way as if you were using a computer. KDDI will continue to provide these kinds of services through which we will support the changing working styles of our corporate customers and contribute to their business efficiency. By providing business environments where work can be done from anywhere, cloud-based IT resources, energy conservation through shared use, contributions to the conservation of resources, and other ICT services, we will continue contributing to the resolution of issues and reduction of the environmental load to society of our customers.

Recycling-Oriented Society

Green of ICT

| Initiative |
Reuse and Recycling of Telecommunications Facilities

KDDI promotes reuse activities that regenerate and effectively employ retired telecommunication facilities. We also use material recycling to effectively employ equipment, components and materials that have become unnecessary.

Former 800MHz frequency base station storage battery

In FY2014, we almost completed the retirement of base stations using the former 800MHz band, and recycled the material of their equipment to effectively utilize their resources.

Former 800MHz frequency base station power source

KDDI will continue to promote the retiring of remaining base stations. We will also make proactive efforts to reuse and recycle the retired equipment generated during periodic upgrades of communications equipment for base stations and other facilities.

Green by ICT

| Initiative | **Reduction of Paper**

KDDI is making efforts to slim down the operation manuals of its au mobile phones through the introduction of operation manual apps in smartphones and through other means. We are also making

From left, successive operation manuals with the most recent on the far right. For details, visit the website below.

packaging on au mobile phones more compact. We will continue to further reduce the use of paper and expand operation manual apps to improve usability that is kind to the environment.

❏ Initiatives for environmental conservation activities (Japanese)

Green Road Project

| Initiative |
Promoting Recycling of Mobile Phones

Recycling rate in FY2014

99.8%

Used mobile phone handsets that have been collected from customers at au shops are manually disassembled, separating out substrates, displays, cameras, plastics, screws, iron, antennas, motors, speakers and other items. Gold, silver, copper, palladium and other resources are extracted from the substrates, while screws and antennas are recycled into steel products and plastics are recycled into plastic products.

When a machine is used to disassemble a mobile phone, plastics are burned up in the incineration process and so cannot be used as a recycled resource. KDDI performs all disassembly manually to prevent recyclable resources from being wasted.

❏ Mobile Phone Recycling Initiatives (Japanese)

Return to INDEX

Recycling-Oriented Society

| Initiative |

Recycling Operation Manuals and Pamphlets (Environment-Friendly Recycled Paper)

Throughout Japan, au shops recover for recycling the operation manuals, pamphlets and leaflets that are bundled together with mobile phones, as well as the individual boxes in which handsets are packaged.

This effort enables us to convert paper that was previously discarded as waste into 100% "environment-friendly recycled paper." We work to create an environment resource cycle for used paper under the keywords "recover, recycle and reuse."

In FY2014, we collected 2,531 t in au operation manuals and other paper material, and used them for in-house company envelopes, pamphlets, and other items.
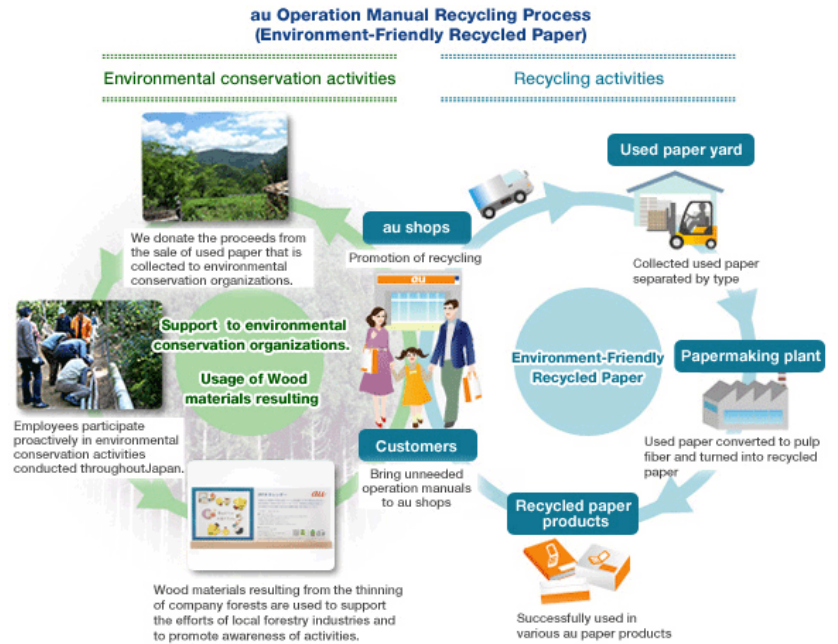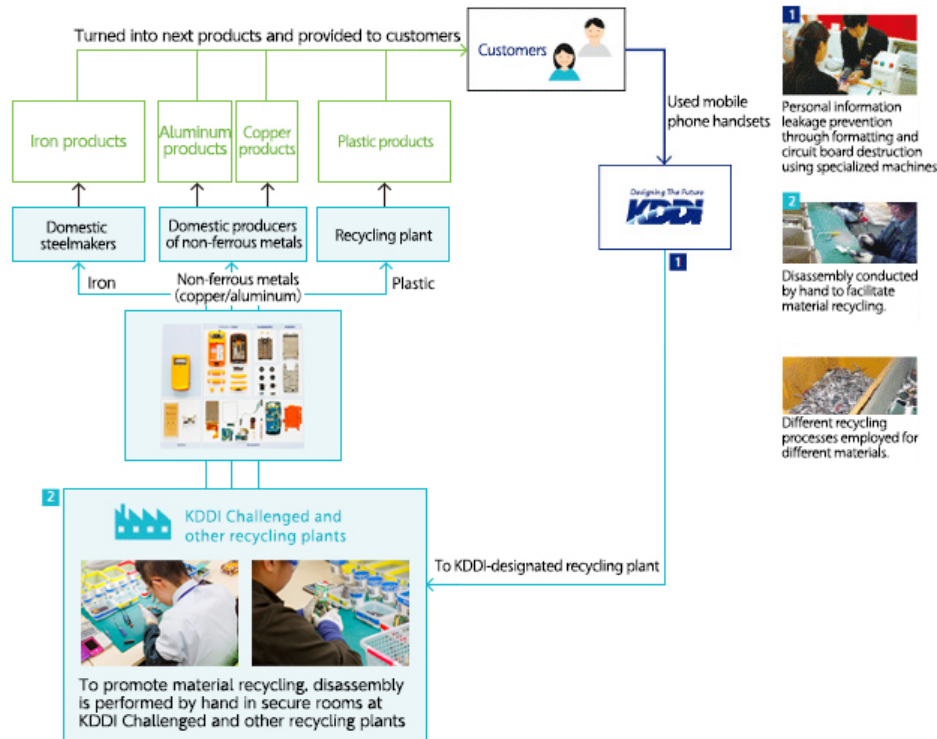

Logo for KDDI Environment-Friendly Recycled Paper

❏ Detailed Operation Manual Recycling Activities
　　(Japanese)

Recycling-Oriented Society

Basic flow for Recycling of Mobile Phones

Biodiversity

Green by ICT

| Initiative |
Biodiversity Consideration for Base Station Installation

Along with energy efficiency, KDDI is also taking biodiversity into concern for the construction of base stations. One example is cooperating with municipalities and environmental conservation associations to delay base station construction when it falls during the time that the northern goshawk and oriental stork build nests and lay eggs. Another example is the transplanting and afforestation of rare plants that exist on sites with guidance from the Ministry of the Environment. Furthermore, we select construction methods that do not produce pile driving noise so that the delivery, breeding, and milking of livestock is not effected by construction noise. Even though we have their understanding on the necessity for base station construction, we take great effort to build reliable relationships with municipalities and neighbors by minimizing the effect that base station construction has on the environment.

| Initiative | **Dolphin Observation Using Acoustic Technology That Maintains Submarine Cables**

KDDI R&D Laboratories is utilizing the acoustic technology cultivated by maintenance and inspection of submarine cables that connects continents and collaborating with the Institute of Industrial Science, the University of Tokyo, the Indian Institute of Technology Delhi, and WWF-India to observe the ecology of the Ganges River dolphin.

The Ganges River dolphin is a species of dolphin that live in the basin of the Ganges River. There are about 2,000 dolphins and are in danger of becoming extinct. To determine the surrounding environment of the murky waters where they live, these dolphins emit high frequency ultrasonic waves known as "clicks". By catching these ultrasonic clicks, we hope to survey the dolphins' behavior underwater. Using sound for ecological observation has the advantage being able to observe an unspecified large number of dolphins with little effect on the ecology since there is no need to physically contact dolphins.

We began making full use of acoustic observation from 2006 and this activity continues to this day. Dolphins that live in rivers in all areas of the world are on the brink of extinction and we plan continue these surveys.

Biodiversity

Green Road Project

| Initiative |

Environmental Conservation Volunteer Activities by Employees

Major Environmental Conservation Activities in FY2014

Hokkaido
Undergrowth Clearing Activities
at Volunteer Reforestation Forest at Foot of Mt. Tarumae
Undergrowth Clearing Activities
at Volunteer Reforestation Forest in Hills On Shore of Lake Shikotsu
Ishikarihama Coast Cleaning Voluntary Activities

Nagano
KDDI au Manual Recycling Forest
– Voluntary Forest Improvement Voluntary Activities

Ishikawa
Clean Beach Ishikawa Voluntary Activities
Asano River Cleaning Voluntary Activities

Miyagi
Kajikamura Forest Voluntary Presentation Activities
Kesennuma Fisheries
Cooperative Voluntary Activities

Kyoto
Tennozan Forest Voluntary Preservation Activities

Hiroshima
Hiroshima Afforestation Forum
Voluntary Activities

Tokyo
Mt. Takao Voluntary
Environmental Preservation Activities

Yamanashi
Began the Fuji Deer Grazing Damage
Countermeasure Voluntary Project

Aichi
Omotehama Coast Cleaning Voluntary Activities

Kagawa
Mt. Onose Environmental Voluntary Preservation Activities

Ehime
Uchiko Afforestation
Voluntary Activities

Fukuoka
Patchwork Afforestation Voluntary Activities

| Initiative |

Mt. Takao Environmental Preservation Activities

KDDI has continued its environmental preservation activities for the Kanto region in Mt. Takao (Hachioji-shi, Tokyo), which began in FY2013 and which KDDI has designated a long-

KDDI employees doing thinning work

term site for environmental preservation activities. In July, September, and November of FY2014, KDDI Group employees and their families took part as volunteers, cooperating with the Takao Green Club, an environmental protection group which mainly operates on Mt. Takao, working up a sweat in cutting and thinning of the cypress forest. As a new initiative, we also worked together with students from Tokyo Metropolitan KOGEI High School in an industry-academic partnership where we effectively utilized the wood cut from the cypress forest and constructed benches to donate to regional retirement homes and other locations.

| Initiative |

Contributing to the Use of Domestic Timber

In November 2014, KDDI was recognized for its contribution to the proliferation of the Kizukai Green Cycle, a program promoted by the Forestry Agency with the aim of reducing carbon dioxide emissions. KDDI became the first telecommunications operator to receive a certificate of appreciation from the Minister of Agriculture, Forestry and Fisheries. KDDI uses the proceeds from the selling of used paper of mobile phone operation manuals and instruction pamphlets collected for recycling at au shops nationwide to support regional forest preservation activities that our employees participate in. We also proactively use a portion of the domestic timber produced from forest preservation activities to produce catalog stands and novelty goods that have acquired the Kizukai Green Cycle Mark.

Development of Technology for Reducing Environmental Load

| Initiative |

Introduction of New Environmental Technology at London Data Center

TELEHOUSE Europe, a European subsidiary of KDDI, will introduce an indirect air conditioning system that utilizes air drawn in by exterior wall units for its TELEHOUSE LONDON Docklands North Two data center scheduled to begin operations in the first quarter of FY2016. This system also airflow control capabilities that physically separate the cool air used to cool racks and the heat exhaust paths of devices. By introducing these new kinds of environmental technology, the electric power consumption of air conditioning equipment is greatly reduced while its power efficiency is greatly increased.

| Initiative |

Introduction of Tribrid Base Stations in Indonesia

Since 2009, KDDI has installed and operated Tribrid Base Stations,[1] which are mobile phone base stations that effectively utilize normal commercial power, solar power, and rechargeable batteries. As part of its public Global Warming Countermeasure Proliferation Promotion Project to achieve Joint Crediting Mechanism (JCM),[2] the Ministry of Economy, Trade and Industry selected KDDI's research proposal for Indonesia, which proposes an aim for reducing greenhouse gas through the proliferation of Tribrid Base Stations.

In November 2014, KDDI invited Indonesian telecommunications and construction representatives to participate in seminars and visit Tribrid Base Stations to deepen their understanding of Tribrid technology.
KDDI will continue its efforts to consider the environment while utilizing the latest technology in order to contribute to the important responsibility entrusted to global companies of conserving the global environment.

[1] Tribrid Base Stations are mobile phone base stations that effectively use commercial power, power generated from solar panels, and power saved in rechargeable batteries in response to the time of day and the weather. Compared to base stations that only use commercial power, Tribrid Base Stations can be expected to reduce CO_2 emissions up to 30%. KDDI installed its first Tribrid Base Stations in December 2009, and as of March 31, 2014, has expanded to 100 base stations nationwide.

[2] A mechanism in which, through a bilateral agreement between two countries, the contributions to the reduction and absorption of greenhouse gas emissions by the spreading and transferring Japanese low-carbon technology, products, and infrastructure are recognized as Japanese contributions

Stakeholder Engagement: Highlight

Utilization Method of Scope 3 Calculation Results for KDDI

In October 2014, KDDI disclosed the Scope 3 results in all areas of its business activities. KDDI invited experts with detailed knowledge of Scope 3 to partake in this stakeholder dialogue, which resulted in a lively dialogue about how to utilize the results of the Scope 3 calculations and more.

Invited experts

Hiroshi Onoda (Associate Professor, Waseda University Graduate School of Environment and Energy Engineering; Director, Waseda Environmental Institute Co.,Ltd.)

Dr. Michiyo Morisawa (Director, CDP Japan)

Main opinions

Mr. Onoda

● In Japan, companies moving forward with Scope 3 initiatives are proactively attempting to assimilate them into their management strategy. Trial and error in this endeavor will continue, however, it is important to view the endeavor from the angle of how to turn these trends into something favorable.

● KDDI has made their calculations from the position of attempting to cover all categories, and I feel that this is amazing. Nevertheless, I feel that the fact that the advantages of environmental consideration have not been sufficiently discussed is an issue. The problem of disposing mobile phones has been pointed out since before the enactment of the Small Home Appliance Recycling Law. However, progress has been made through urban mining and by conveying the advantages of recycling. In the future,

in order to extract primary Scope 3 data from manufacturers and other suppliers, it will be important to discuss the advantages of considering the environment.

● It is important that efforts to address Scope 3 be made in every aspect of the supply chain, such as the Purchasing Department, and not just in the CSR & Environment Management Department. By creating a sense of ownership and devising specific schemes that are easy to enact, efforts become more of a reality. For example, associating internal company activities with each Scope 3 category, and then connecting them to stakeholders. It is my hope that KDDI will aim to step up their activities while keeping an eye on corporate strategy.

Dr. Morisawa

● Major overseas telecommunication companies are advancing their Scope 3 initiatives from the disclosure stage to the utilization stage by creating supplier scorecards based on the replies from CDP researchers and incorporating them in new contract processes with new suppliers.

● KDDI's large ratio for Category 2 (Capital goods [manufacturing base stations, etc.]) is distinguishing and there is room for reduction. I recommend KDDI grasps what their characteristics are and creates strategic initiatives.

● In order to differentiate suppliers, it is important for primary data to be obtained and calculated for Scope 3. By KDDI requesting that suppliers provide the information, they also declare their intent of wanting suppliers to make efforts for the environment as well.

● Even if emissions increase for Scope 1 and 2 during the product development stage, there are products that have low emissions when used by consumers. KDDI should provide a clear explanation of the reasons for the increased emissions in Scope 1 and 2, and provide the numerical value of the reduced emissions on the user side. It is my hope that KDDI draws attention to and utilizes these aspects of Scope 3.

Stakeholder Engagement: Highlight

In response to the dialogue

● In the facets of technology and development for Category 2, we are making efforts to reduce electric power consumption and materials. In the long run, compact base stations for mobile phones have their advantages in that their establishment and relocation has become easier and their labor costs can be reduced. However, in the short run, they will incur increased costs. We believe that the challenge will be how to balance the two.

● The first step was understanding greenhouse gas emissions and we have arrived at the next step, which is to think of how we utilize them. By creating goals that combat global warming and meet investor demands, we want to reduce greenhouse gas in the supply chain with the cooperation of each division and, at the same time, turn our efforts into an improvement of our corporate value. It is no mistake that Scope 3 is an effective tool in protecting the future of the planet. In reality however, customer brand awareness, price competition with competitors, the understanding of the management layer, and other various issues exist that must be resolved. In the face of this reality, we want to move forward one step at a time resolving what we can.