

■ Completion of Research Institutes Building – Efforts for Commissioning

In March 2013, the Research Institutes Building was completed based on the design concepts of an environment furthering “research”, promoting “communication” and nurturing “nature”. The concepts “research” and “communication” make use of the building’s structure, focusing on the clear zoning by story and future developmental improvement, while the concept “nature” takes into account energy saving and environmental impact reduction. Under the supervision of the Building Services Commissioning Association, the Research Institutes Building addressed “commissioning” for the first time in Japan from the aspects of both the building and its equipment at different stages, including planning, design, construction and administration. “Commissioning” is a system in which the performances demanded of the building and its equipment by users are documented from the perspectives of the environment, energy and usability, the third party verifying whether the performances demanded are ensured at each stage. This system has the benefit of reduced life-cycle costs resulting from the improved design and construction quality and realization of performances demanded, and good results are expected from commissioning at future administrative stages.



■ Activities of Environmental Circle "Song Of Earth"

The Nagoya University Environmental Circle “Song Of Earth” was formed in 1994 by students who were interested in environmental activities. The Circle carries out investigations, proposals and plans in the hope that cooperation and effort from both the system and every university member will help Nagoya University become a University with a smaller environmental impact. It also engages in out different activities to increase students’ affection and consideration for nature by offering opportunities to experience nature and help solve environmental problems, and to increase the hope of making some kind of improvement by addressing environmental activities at the University, a familiar location.



■ Environmental Communication with External Stakeholders

We held environmental communications with Mie University on the details of the “Nagoya University Environmental Report 2013”, as well as an environmental activities as part of our activities that seek to improve the University’s environmental issues and the findings in the Environmental Report. Through a frank exchange of opinions with stakeholders, we successfully shared meaningful information such as views on the Environmental Report, measures for energy and waste disposal at the University, and students’ participation in environmental activities.



■ Action Plan for CO₂ Emissions Reduction

In the “Nagoya University Campus Master Plan 2010” Nagoya University announced the reduction of CO₂ emissions in 2014 from Higashiyama, Tsurumai and Daiko campuses by at least 20% compared to the FY2005 level, as well as the action plan to achieve the reduction target.

In FY2012, the third year of the action plan, CO₂ emissions were reduced by 19% compared to the FY2005 level.

■ Mutual Cooperation with the National University of Singapore in Safety and Health Management

In 2012, Nagoya University began mutual cooperation in safety and health management with the National University of Singapore, widely regarded as a university with a high level of safety and health management and safety education.

Talking advantage of this international cooperation, the level of health and safety management in Nagoya University is expected to be greatly improved.



Contact Information

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Recycled paper used.



NAGOYA UNIVERSITY

Nagoya University Environmental Report 2013 (Digest)



Michinari Hamaguchi
President of Nagoya University

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Message from the President

For three years through to FY2012, we have strived to achieve the Hamaguchi Plan, which was announced as a good when I had took. On the basis of our achievements and changing situations around the University, I have organized the issues and challenges for the second half of my term of office as the Hamaguchi Plan ver. 2013. The new version includes challenges regarding the enhancement of such management or governance as “business operations and financial conditions”, in addition to the enhancement of activities related to the University’s main activities like “education, research and social contribution”, and the “University Hospital and attached schools”. This report indicates that the greenhouse gas reduction plan I declared is taking steady steps towards its achievement. Notable results have also been accomplished in some long-standing environmental issues like energy saving and waste disposal. A number of different current issues associated with rapid globalization and the Great East Japan Earthquake have changed the challenges Nagoya University needs to address. Disaster prevention in preparation a massive earthquake from the Nankai Trough would be one of the particular cases in which we and other universities in Japan should lead the world. To further improve the students’ and teaching staff’s environment and security for their studies, research and work, and to establish a safer and more comfortable campus, we intend to enhance management and governance in order to support education, research and all other activities of our university. By becoming the world’s most advanced university in the fields of disaster prevention, campus safety and many other issues in addition to environmental issues, the university will attract young people wishing to learn together from around the world. Along with this aim, we will strive to produce human resources which will take a lead role in the future of humanity.

■ Environmental Policy

The fundamental principles of scholarly activity for Nagoya University are set down in the Nagoya University Academic Charter. Within the Charter, it is written that “Based on the academic traditions of freedom and generosity, our mission is to contribute to the happiness and one word of human beings, through research and education related to humanity, society and nature”. The development of civilization and the current activities of human beings will have a great influence on future generations. Therefore, based on our Charter, and in order to fulfill our role in society and to contribute to the harmonious development of humanity and nature through research and education rich in imaginative power, we hereby establish the following fundamental principle and policies of Nagoya University regarding the environment.

1 Fundamental Principle

Recognizing that human beings have created a vast diversity of cultures and values, we will, for the benefit of future generations, consider which aspects should be truly respected, and contribute to the realization of a society that can maintain such traditions and values.

2 Basic Policies

Basic Position

(1) In order to investigate the causes of environmental problems, and find suitable means for dealing with them, all academic fields will develop educational and research programs that aim for sustainable development.

Environmental Management

(2) In order to plan further improvements in environmental management, we will (together with related parties) consider what attitudes and actions are necessary for universities, put them into practice, and further pursue them.

Environmental Performance

(3) Recognizing (together with related parties) that our own activities involve environmental effects and responsibilities, we will work to find comprehensive and systematic solutions that will reduce our environmental impact, and enable us to take preventive measures.

Social Responsibility and Environmental Communication

(4) With respect to laws and ethics, we will work to enhance trust from local and international communities by making information available publicly, and through communication and mutual understanding with related parties.

(Approved by the President on August 1, 2005)
(Revised on October 12, 2010)

The full version of the Environmental Report can be found at: <http://web-honbu.jimu.nagoya-u.ac.jp/fmd/rpt.html> (in Japanese)



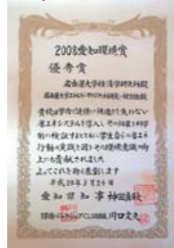
















Environmental Report Summary [Continuous Improvement in Environmental Activities]

Nagoya University has been continuing university-wide environment-related activities. These activities are summarized below.

Red text refers to awards received.

= Improved from previous year.
 = Further improvement needed.

Report Period	Environmental Management in General	Anti-Global Warming & Energy-Conservation Measures	Waste Management Measures	Chemical Substance Management	Community & Student Relations																
FY2008	<ul style="list-style-type: none"> Received Nagoya City Eco Business Establishment - Excellence Prize 2008 (Feb 2009)    <p>Prize of Minister of Economy, Trade and Industry Award for Successful Case of Energy Conservation in Factories & Buildings FY2007</p> <p>Excellence Prize, Aichi Environmental Award 2008</p>	<ul style="list-style-type: none"> NU Library and ESCO concluded comprehensive service agreement for energy conservation (Aug 2008) NU-ESCO energy-saving project started (From July 2008) <p>◎ Greenhouse Gas Emissions (CO₂ equivalent, compared to 2006)</p> <table border="1"> <thead> <tr> <th>FY2008 Results</th> <th>Evaluation</th> </tr> </thead> <tbody> <tr> <td>Higashiyama ⇒ 11.0% ↓</td> <td></td> </tr> <tr> <td>Tsurumai ⇒ 1.0% ↑</td> <td></td> </tr> <tr> <td>Daiko ⇒ 8.8% ↓</td> <td></td> </tr> </tbody> </table>	FY2008 Results	Evaluation	Higashiyama ⇒ 11.0% ↓		Tsurumai ⇒ 1.0% ↑		Daiko ⇒ 8.8% ↓		<ul style="list-style-type: none"> Waste Treatment Handler Training held (June 2008) Plastic bags became chargeable at NU Co-op (Oct 2008)  <p>◎ Combustible/Non-combustible Waste Amount (compared to previous year)</p> <table border="1"> <thead> <tr> <th>FY2008 Results</th> <th>Evaluation</th> </tr> </thead> <tbody> <tr> <td>Higashiyama ⇒ 6.1% ↑</td> <td></td> </tr> <tr> <td>Tsurumai ⇒ 1.0% ↑</td> <td></td> </tr> <tr> <td>Daiko ⇒ 26.1% ↓</td> <td></td> </tr> </tbody> </table>	FY2008 Results	Evaluation	Higashiyama ⇒ 6.1% ↑		Tsurumai ⇒ 1.0% ↑		Daiko ⇒ 26.1% ↓		<ul style="list-style-type: none"> MaCS-NU User Training held (June 2008) 330 laboratories registered approx. 120,000 chemicals  <p>FY 2008 Organic waste water collection (Higashiyama Campus)</p> <p>◎ MaCS-NU Registration ratio ⇒ 69%</p>	<ul style="list-style-type: none"> Nagoya University extension lectures held (Aug-Oct 2008) 4th Homecoming Day, attended by a total of 5,000 alumni, students' families, and local residents  <p>Experiments at science show for children</p>
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FY2009	<ul style="list-style-type: none"> Action Plan for CO₂ Emissions Reduction (20% reduction from 2005 level by 2014) "Excellent Engineer of Energy Conservation, Chubu Region Electricity Usage Rationalization Committee Chairperson's Award 2009" received "Prize for Public Entity, Green Reporting Award" received (Sponsored by Toyo Keizai Inc., Green Reporting Forum) 	<ul style="list-style-type: none"> ESCO projects conducted at Tsurumai Campus Energy-Saving patrol implemented <p>◎ Greenhouse Gas Emissions (CO₂ equivalent, compared to 2006)</p> <table border="1"> <thead> <tr> <th>FY2009 Results</th> <th>Evaluation</th> </tr> </thead> <tbody> <tr> <td>Higashiyama ⇒ 14.1% ↓</td> <td></td> </tr> <tr> <td>Tsurumai ⇒ 2.8% ↑</td> <td></td> </tr> <tr> <td>Daiko ⇒ 8.8% ↓</td> <td></td> </tr> </tbody> </table> 	FY2009 Results	Evaluation	Higashiyama ⇒ 14.1% ↓		Tsurumai ⇒ 2.8% ↑		Daiko ⇒ 8.8% ↓		<ul style="list-style-type: none"> Waste Treatment Handler Training held (June 2009) <p>◎ Combustible/Non-combustible Waste Amount (compared to previous year)</p> <table border="1"> <thead> <tr> <th>FY2009 Results</th> <th>Evaluation</th> </tr> </thead> <tbody> <tr> <td>Higashiyama ⇒ 19.8% ↓</td> <td></td> </tr> <tr> <td>Tsurumai ⇒ 2.0% ↑</td> <td></td> </tr> <tr> <td>Daiko ⇒ 14.0% ↑</td> <td></td> </tr> </tbody> </table>	FY2009 Results	Evaluation	Higashiyama ⇒ 19.8% ↓		Tsurumai ⇒ 2.0% ↑		Daiko ⇒ 14.0% ↑		<ul style="list-style-type: none"> Management System of Chemical Substances (MaCS-NU) strengthened Asbestos treatment for all relevant facilities at the University completed (Mar 2010) Implementation of measures to improve work environment at Tsurumai Campus launched <p>◎ MaCS-NU Registration ratio ⇒ 63%</p>	<ul style="list-style-type: none"> "ECO LABO" Project (Meichari Project 2009) Small home appliance collection program implemented Noise control measures (installation of sound-proof panels) implemented Non-smoking activities for Daiko Campus
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FY2010	<ul style="list-style-type: none"> Environmental policy revised. The new environmental policy comprises four basic components: Basic Position, Environmental Management, Environmental Performance, and Social Responsibility & Environmental Communication The University's environmental efforts are presented in separate sections according to each component of the Basic Policies A list of educational and research activities related to the environment created 	<ul style="list-style-type: none"> Results of the University Hospital ESCO projects conducted at Turumai Campus: 7,207 tons of CO₂ emissions reduced Energy-Saving patrol implemented <p>◎ Greenhouse Gas Emissions (CO₂ equivalent, compared to 2009)</p> <table border="1"> <thead> <tr> <th>FY2010 Results</th> <th>Evaluation</th> </tr> </thead> <tbody> <tr> <td>Higashiyama ⇒ 9.5% ↑</td> <td></td> </tr> <tr> <td>Tsurumai ⇒ 21.1% ↓</td> <td></td> </tr> <tr> <td>Daiko ⇒ 18.4% ↑</td> <td></td> </tr> </tbody> </table>	FY2010 Results	Evaluation	Higashiyama ⇒ 9.5% ↑		Tsurumai ⇒ 21.1% ↓		Daiko ⇒ 18.4% ↑		<ul style="list-style-type: none"> Waste Treatment Handler Training held (June 2010) <p>◎ Combustible/Non-combustible Waste Amount (compared to previous year)</p> <table border="1"> <thead> <tr> <th>FY2010 Results</th> <th>Evaluation</th> </tr> </thead> <tbody> <tr> <td>Higashiyama ⇒ 3.0% ↓</td> <td></td> </tr> <tr> <td>Tsurumai ⇒ 6.3% ↑</td> <td></td> </tr> <tr> <td>Daiko ⇒ 30.0% ↑</td> <td></td> </tr> </tbody> </table>	FY2010 Results	Evaluation	Higashiyama ⇒ 3.0% ↓		Tsurumai ⇒ 6.3% ↑		Daiko ⇒ 30.0% ↑		<ul style="list-style-type: none"> Management System of Chemical Substances (MaCS-NU) strengthened System for chemical substance registration at time of delivery introduced (May 2010) <p>◎ MaCS-NU Registration ratio ⇒ 100%</p>	<ul style="list-style-type: none"> Environmental circle "Song Of Earth" Cooperative activities for COP10  <p>Trash-collection activities</p>
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FY2011	<ul style="list-style-type: none"> Won 1st place in Eco-University Rankings Won the FY2011 Chairman Prize of the Energy Conservation Center, Japan (ECCJ)   <p>Won 1st place in Eco-University Rankings</p>	<ul style="list-style-type: none"> The "Emergency Statement on Energy Use" announced by the President to enhance further promotion of energy saving in response to the Great East Japan Earthquake was posted to call for cooperation in promotion of energy saving <p>◎ Greenhouse Gas Emissions (CO₂ equivalent, compared to 2009)</p> <table border="1"> <thead> <tr> <th>FY2011 Results</th> <th>Evaluation</th> </tr> </thead> <tbody> <tr> <td>Higashiyama ⇒ 5.0% ↑</td> <td></td> </tr> <tr> <td>Tsurumai ⇒ 24.5% ↓</td> <td></td> </tr> <tr> <td>Daiko ⇒ 22.4% ↑</td> <td></td> </tr> </tbody> </table>	FY2011 Results	Evaluation	Higashiyama ⇒ 5.0% ↑		Tsurumai ⇒ 24.5% ↓		Daiko ⇒ 22.4% ↑		<ul style="list-style-type: none"> Waste Treatment Handler Training held (June and December 2011) <p>◎ Combustible/Non-combustible Waste Amount (compared to previous year)</p> <table border="1"> <thead> <tr> <th>FY2011 Results</th> <th>Evaluation</th> </tr> </thead> <tbody> <tr> <td>Higashiyama ⇒ 2.0% ↓</td> <td></td> </tr> <tr> <td>Tsurumai ⇒ 1.2% ↑</td> <td></td> </tr> <tr> <td>Daiko ⇒ 37.7% ↓</td> <td></td> </tr> </tbody> </table>	FY2011 Results	Evaluation	Higashiyama ⇒ 2.0% ↓		Tsurumai ⇒ 1.2% ↑		Daiko ⇒ 37.7% ↓		<ul style="list-style-type: none"> Management System of Chemical Substances (MaCS-NU) strengthened System for high-pressure gas introduced (MaCS-G) <p>◎ MaCS-NU Registration ratio ⇒ 100%</p>	<ul style="list-style-type: none"> Environmental circle "Song Of Earth" Held COP10 Forum for Dialog on Society and Science  <p>Full of flowers campaign</p>
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FY2012	<ul style="list-style-type: none"> Completion of Research Institutes Building Environmental communication with external stakeholders Mutual communication with the National University of Singapore in safety and health management Seminar on environmental safety and health   	<ul style="list-style-type: none"> Approval of the environmental action plan at the meeting of the Nagoya University Promotion Headquarters of Environmental Safety and Health <p>◎ Greenhouse Gas Emissions (CO₂ equivalent, compared to 2009)</p> <table border="1"> <thead> <tr> <th>FY2012 Results</th> <th>Evaluation</th> </tr> </thead> <tbody> <tr> <td>Higashiyama ⇒ 1.3% ↓</td> <td></td> </tr> <tr> <td>Tsurumai ⇒ 25.2% ↓</td> <td></td> </tr> <tr> <td>Daiko ⇒ 33.9% ↑</td> <td></td> </tr> </tbody> </table>	FY2012 Results	Evaluation	Higashiyama ⇒ 1.3% ↓		Tsurumai ⇒ 25.2% ↓		Daiko ⇒ 33.9% ↑		<ul style="list-style-type: none"> Waste Treatment Handler Training held (June and November 2012) <p>◎ Combustible/Non-combustible Waste Amount (compared to previous year)</p> <table border="1"> <thead> <tr> <th>FY2012 Results</th> <th>Evaluation</th> </tr> </thead> <tbody> <tr> <td>Higashiyama ⇒ 12.6% ↓</td> <td></td> </tr> <tr> <td>Tsurumai ⇒ 2.7% ↑</td> <td></td> </tr> <tr> <td>Daiko ⇒ 15.6% ↑</td> <td></td> </tr> </tbody> </table>	FY2012 Results	Evaluation	Higashiyama ⇒ 12.6% ↓		Tsurumai ⇒ 2.7% ↑		Daiko ⇒ 15.6% ↑		<ul style="list-style-type: none"> Management System of Chemical Substances (MaCS-NU) strengthened Full-scale start of the high-pressure gas system (MaCS-G) Held MaCS-NU and MaCS-G workshops (May and June 2012) Investigation into return of cylinders remaining for a long period <p>◎ MaCS-NU Registration ratio ⇒ 100%</p>	<ul style="list-style-type: none"> Took noise prevention measures (replacement with inverter controls and installation of covers) Environmental circle "Song Of Earth"  <p>Eco-friendly trash collectors</p>
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Nagoya University's Energy-Saving Activities Main Activities After 2004

Major energy-saving activities at Nagoya University (For building equipment-related energy-saving measures, see the list marked * on the right.)

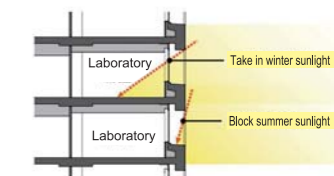
- Monthly energy consumption per campus and ongoing energy conservation measures published on website (2004-)
- Summer / Winter Energy-Saving Campaign and Lunchtime Lights Off Campaign (2004-)
- E-mail notice to reduce power consumption when usage is predicted to exceed the contracted capacity on Higashiyama Campus during summer time (2004-)
- Energy saving activity survey using energy saving check sheet (2005-)
- Energy saving practice ensured by appointing Energy Saving Promoters (2005-)
- Energy saving through university-wide summer break closure (2 weekdays in Aug) (2005-)
- Energy saving Patrol (2009-)

* Energy conservation measures in Research Institutes Buildings. (FY2012 results)

- Uses LED lights for entire building.
- Equipped with earth tube and eco-shaft.
- Ensures open ceiling space to promote natural ventilation.
- Effectively blocks solar radiation by means of windows located backward.
- Wall greening.
- Equipped with high efficiency water cooling heat pump chiller. Won the highest rank "S" of the Comprehensive Assessment System for Built Environment Efficiency. (CASBEE Nagoya)



Wall greening



Windows located backward