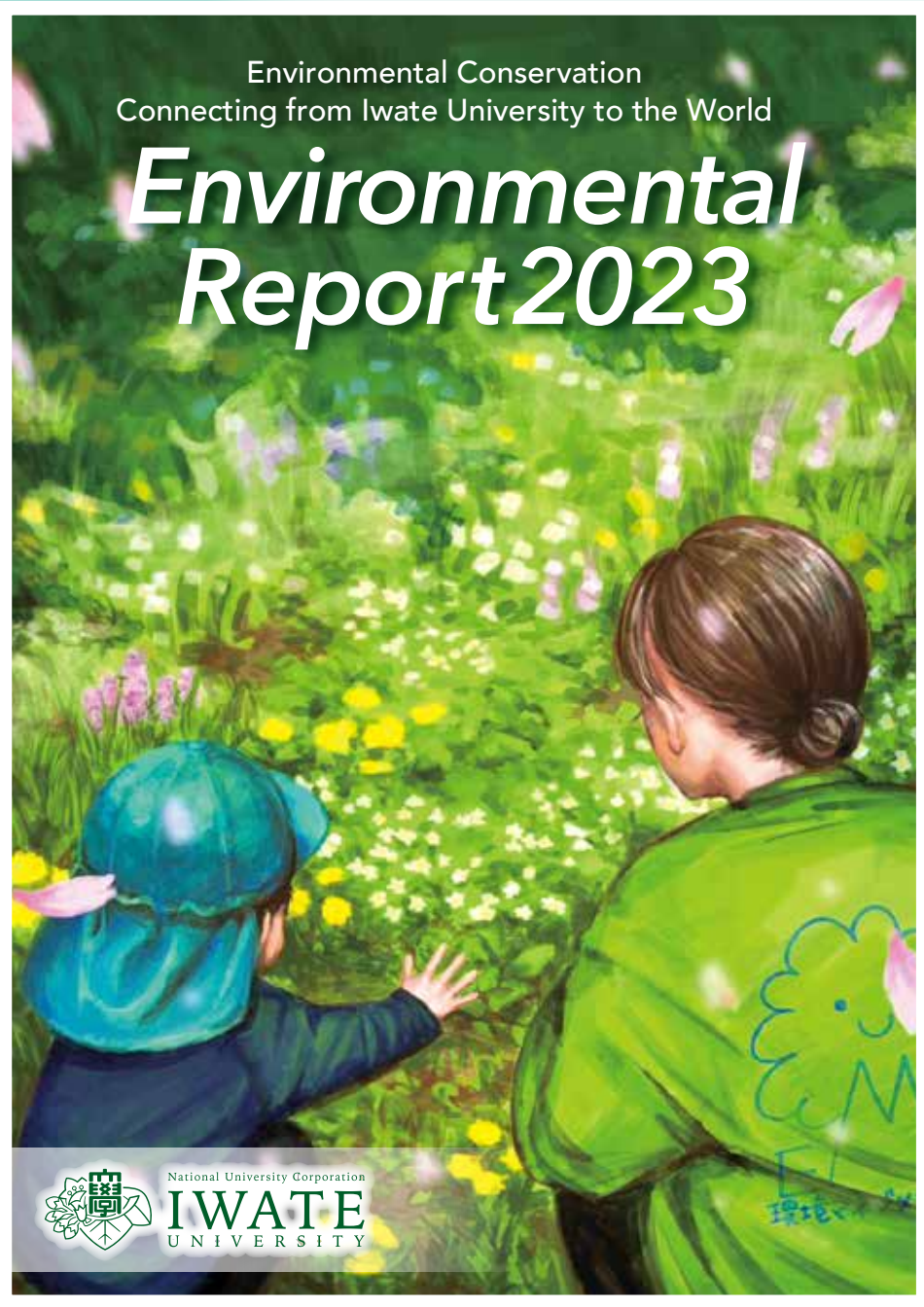


Digest Edition

Environmental Report 2023



Iwate University Environmental Policy

<Basic Principles>

Iwate University considers environmental conservation and revitalization to be one of the most important challenges of the 21st century. Our university is working proactively on environmental conservation and revitalization education and research, and making contributions toward the achievement of a sustainable society in light of the Sustainable Development Goals (SDGs). As part of these efforts, members of our university and its affiliated schools as well as resident university-related parties are working together to be environmentally friendly in all activities taking place at the university, making efforts to reduce our environmental footprint, prevent pollution, and improve our campus environment as the social responsibility of the university.

<Basic Policies>

Iwate University actively engages in the following activities based on a medium-term plan under Iwate University Vision 2030 in order to achieve its basic principles.

1. Enthusiastically expand on education and research related to environmental conservation and revitalization, and develop the environmentally-conscious human resources that society requires.

2. Engage in education, awareness, and outreach, and other such activities geared toward all types of people, including those in local communities, based on the findings of education and research related to the environment.
3. Collaborate with community NPOs, government, and other such entities, to be proactively involved in initiatives for environmental conservation and revitalization, and the preservation of biodiversity in the community.
4. Seek continuous improvements to the on-campus environment through environmental management systems, while complying with environmental laws and environmental requirements which Iwate University agrees to.
5. Set annual targets based on the goals of these policies, and work diligently on initiatives such as saving energy and resources, reducing waste, recycling, and green purchasing.
6. Make environmental policies known to all members of the university, and while carrying out these policies also widely publish their results to the general public in writing and on the internet.

Enacted January 26, 2006

Last Revised : March 25, 2022

Dr. OGAWA, Satoshi, President of Iwate University

Iwate University's Environmental Activities



Promote purchasing in accordance with "Act on Promoting Green Procurement"



Research on the potential for reducing food waste in Morioka city



Iwate Univ Coop : Collecting containers for "Bento", cafeteria lunchboxes



Iwate Univ Coop : sales on used appliances for newcomers



Important Issues in Environmental Management (AY 2022)



The Office of Environmental Management is working to establish, implement, and maintain environmental management system as part of the environment-conscious activities of Iwate University.

The Office of Environmental Management conducts activities with five working groups that help execute specialized operations. Among the working groups, members of the Environmental Management Student Committee actively participate in Environmental Impact Assessment, Environmental Education, Energy and Resource Conservation, and Trash and Waste Reduction working groups.

1. Environmental Impact Assessment WG

- Assessing the results of monitoring and measuring environmental objectives, targets, and activities plans
- Operational management of environmental objectives, targets, and activities plans
- Base energy studies through separate calculations of energy and water usage, and CO₂ emissions, in each department.

2. Environmental Education WG

- Editing environmental report
- Formulating environmental education training plans and checking the results
- Studies to facilitate effective environmental education and training (including ensuring that students/trainees watch the environmental education video) etc.

3. Energy and Resource Conservation WG

- Monitoring and measurements for initiatives to conserve energy and resources
- Working on implementation plans, and monitoring and measuring energy and resources usage amounts etc.

4. Trash and Waste Reduction WG

- Following up to ensure separation and collection of trash, Standardizing garbage separation posters throughout the university
- Investigations on the processing and management of waste (Collaborative efforts with the Environmental Management Student Committee and sharing information about efforts within each unit)
- Working on reducing trash etc.

5. Laws and Regulations Assessment WG

- Review evaluation methods for environment-related rules and regulations at Iwate University etc.



A congress at the Office of Environmental Management

Initiatives to Reduce Environmental Footprint



Total Energy Inputs / Efforts to reduce heat energy use



Purposes/Objective

purposes: Achieve over 1% reduction in energy use and CO₂ emissions compared to the previous year

Objective: Reduce energy use and review the baseline of annual usage by energy source.

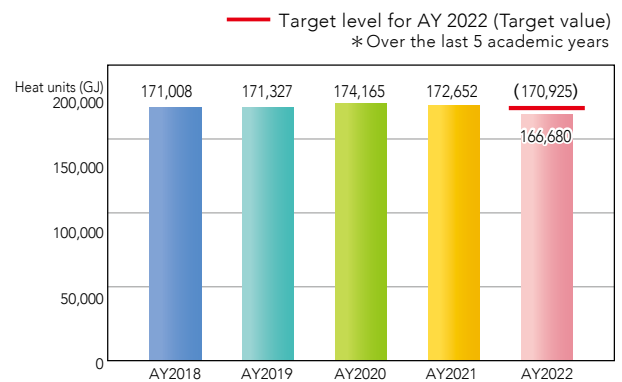
Initiatives

- 1 Recorded monthly usage of seven energy sources (electricity, fuel oil A, kerosene, gasoline, diesel, city gas, and LPG), compared the results with the previous month or the same quarter in the previous year and reported at the congress of the Office of Environmental Management. The electricity consumption was also calculated for each departmental unit.
- 2 Examined the change in monthly usage over the past 10 years by energy source.
- 3 Cleaned the air conditioner and regulated the room temperature during heating and cooling periods.
- 4 Lighting equipment was properly maintained by cleaning and making replacements when necessary.

Outcome

Reduced the consumption of all types of energy in the academic year (AY) 2022 compared to AY2021: fuel oil A by 16.9%, kerosene by 12.8%, diesel by 11.1%, city gas by 8.0%, gasoline by 3.2%, LPG by 2.9%, and electricity by 1.4%. This amounted to a 3.5% reduction on a calorie basis, as the total energy consumption decreased from 172,652 GJ in AY2021 to 166,680 GJ in AY2022.

Total Energy Inputs (converted to heat units)



Emissions of Greenhouse Gases, etc. / Efforts to reduce CO₂ emissions



Purposes/Objective

purposes: Achieve over 1% reduction in energy use and CO₂ emissions compared to the previous year

Objective: Reduce energy use and review the baseline of annual usage by energy source.

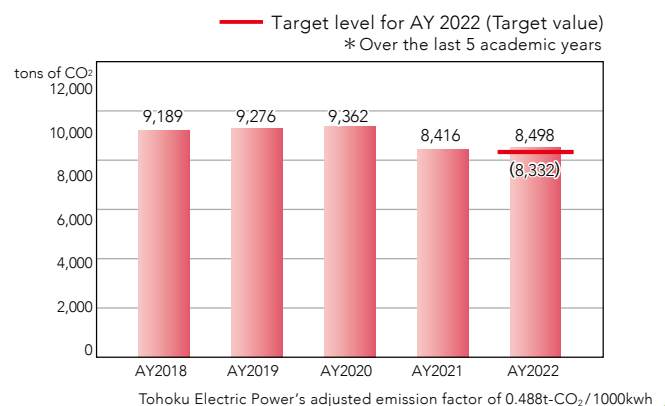
Initiatives

- 1 Calculated the CO₂ emissions based on the monthly usage of seven energy sources (electricity, fuel oil A, kerosene, city gas, gasoline, diesel, and LPG), compared the results with the previous month or the same quarter in the previous year and reported the results at the congress of the Office of Environmental Management.
- 2 Calculated the CO₂ emissions based on the electric power consumption for each unit every month. The results obtained were compared to the same time period of the previous year and the previous month.
- 3 Room temperature was kept around 28 degrees Celsius in the summer and 20 degrees Celsius in the winter when air conditioners were used. Rooms were ventilated at regular intervals as well.

Outcome

CO₂ emissions decreased by 231t-CO₂ in AY2022: fuel oil A by 16.9%, kerosene by 12.8%, diesel by 11.1%, city gas by 8.0%, gasoline by 3.2%, LPG by 2.9%, and electricity by 1.4%. While electricity consumption decreased by 1.4%, the emission factor for AY2022 was higher than that of AY2021, resulting in an increase of CO₂ emissions from electricity from 5,961 t-CO₂ to 6,274 t-CO₂, an increase of 313 t-CO₂. The overall CO₂ emissions increased from 8,416 t-CO₂ in AY2021 to 8,498 t-CO₂ in AY2022, an increase of 82 t-CO₂.

CO₂ Emission by Academic Year



Initiatives to Reduce Environmental Footprint



Input Usage and External Emissions /Material Balance



INPUT

Energy Usage

Power
12,856,000 kWh

Diesel
32 kl

City gas
732,000 m³

LPG
2,547 kg

Gasoline
30 kl

Heavy oil type-A
93 kl

Kerosene
68 kl

Paper
(Converted to A4 size)
8,230,000 sheets

Water
74,000 m³

Chemicals
10 tons

OUTPUT

Greenhouse gas emissions
8,498 tons of CO₂

General waste
160 tons

Industrial waste
227 tons

Sewage discharge
74,000 m³

Sulphur oxides
0.67 tons

Laboratory liquid waste
16 tons

BOD contaminant waste (estimated)
12 tons

External Emission

Tohoku Electric Power greenhouse gas emission factor (adjusted):
Tohoku Electric Power 0.000488t-CO₂/kWh



Topics for the 2022 academic year



Iwate University was awarded the "ECO Action Award" in the "Start with what you can do! ECO Action Award 2022."



Iwate University was awarded the 2022 "ECO Action Award" for its participation in the "Start with what you can do! ECO Action Award" campaign, organized by the Business Subcommittee of the "Iwate Citizens' Conference for the Prevention of Global Warming."

The "Iwate Citizens' Conference for the Prevention of Global Warming" is a group that aims to "promote efforts to shift to lifestyles and business activities that emit as little carbon dioxide as possible through mutual cooperation and collaboration among its member organizations in order to protect the rich natural environment and prevent global warming, an extremely serious environmental problem that affects the infrastructure of the people of the prefecture."

The "ECO Action Award" is given to "businesses that lead the prefecture in taking measures to prevent global warming, and businesses that have implemented excellent overall initiatives." This is the second time in seven years that Iwate University has received the ECO Action Award.

The "2022 Winners for Start with what you can do! ECO Action Award" report introduces the activities of the award-winning businesses. Iwate University's main initiatives include (1) human resource development (training internal auditors for the operation of an environmental management system and conducting internal audits, etc.), (2) awareness-raising (calculating and publicizing monthly electricity and city gas consumption and CO₂ emissions, etc.), (3) introduction of LED lighting (as of December 2021, LED has been introduced to approximately 6.8% of the lighting), and (4) greening activities (the EMSC installed green curtains).

We have received renewed recognition for our ongoing efforts as environmentally conscious activities based on the Iwate University environmental management system operation.



EMSC participation in the 15th HESD Forum



On February 18, 2023, three students from the Environmental Management Student Committee (EMSC) and the Vice Director of the Office of Environmental Management joined the 15th HESD Forum held at the YS Arena Hachinohe satellite of Hachinohe Gakuin University.

The HESD Forum was first held at Iwate University and has been held across Japan with the goal of exchanging and sharing information among universi-

ties and other higher education institutions working toward ESD (Education for Sustainable Development).

The 15th HESD Forum featured presentations of research and practical case studies, where three EMSC students presented their activities, the HESD Forum General Assembly, and a networking session between the host university and participating students. The following is a report from the students who participated.

Environmental Management Student Committee: **Noa HANAKAGO Faculty of Humanities and Social Sciences, third year**

Our activities range from installing green curtains and providing environmental education to local children. We were very happy to receive the feedback that our activities were lively and active. We also learned a lot from interacting with students from other universities, as they had different ways of thinking and different perspectives. Especially, the opinions that were based on the activities and experiences of each group were very unique, and we felt that this was the most interesting and enjoyable part of the networking.

Finally, through this experience, we realized that our activities play an important role in the SDGs and in creating a better society. In particular, we understood that environmental education is closely related to the development of human resources for the future society.

We also learned that in order to expand our activities, we need to have a wider view, considering what benefits exist for both the people who run the activities and those who participate in them. Moreover, we believe that through networking, our motivation will be increased and our activities will become more ambitious. We would like to apply what I have learned to our future activities.



Iwate University Environmental Management Student Committee at the 15th HESD Forum



Environmental Activities of Young Children and Students



Affiliated Kindergarten



Kindergarten children picking the vegetables they have grown



Affiliated Primary School



Investigating the beauty of the Nakatsugawa River by collecting aquatic organisms



Affiliated Junior High School



Volunteers clearing snow



Affiliated Special Needs School



Tending the flowerbed



Environmental Activities of Student Circles



Iwate University Wild Birds Club
Working on the golden eagle forest maintenance project



Environmental Management Student Committee



JUMP2022: Picking up trash activities

About the cover

The image shows the activities that the Iwate University Environmental Management Student Committee (EMSC) does every year to inspire local children to care about the natural environment.

Last year, we held a nature-themed bingo game for local kindergarten children, and through the interaction, both the children and the university students gained many insights and discoveries.

The image expresses our hope to motivate children for the future to be curious and passionate about the natural environment through various experiences, as well as the significance and pleasure of environmental education that also contributes to our development as university students.

Natsumi TANICHI, Faculty of Humanities and Social Sciences, third year