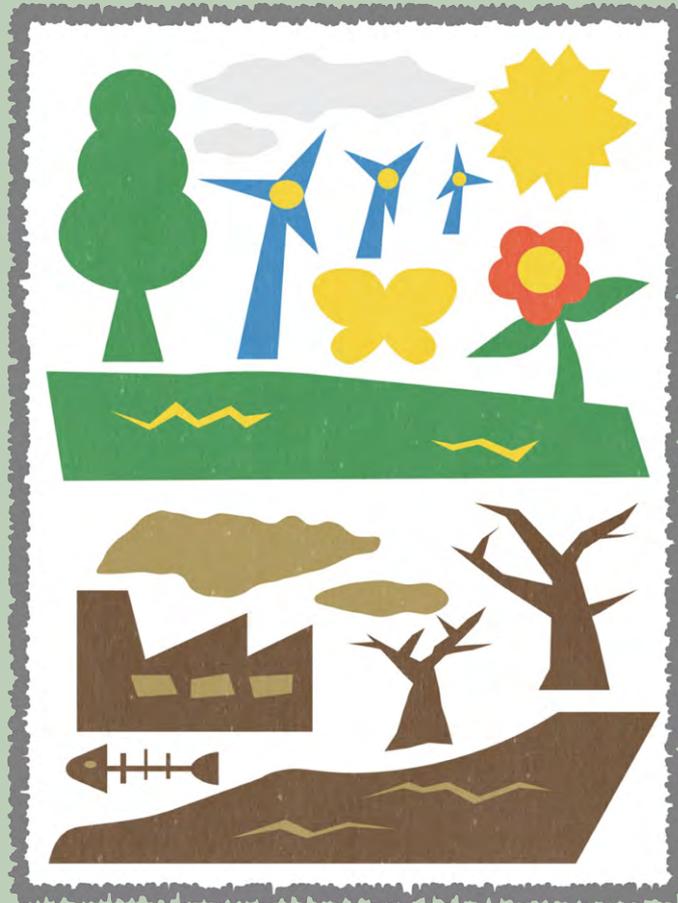


# Environmental Report 2025



# Digest Edition

## Environmental Report 2025



## 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 this environmental policy, and work diligently on initiatives such as saving energy and resources, reducing waste, recycling, and green purchasing. We aim to achieve carbon neutrality by reducing our CO<sub>2</sub> emissions by 50% by AY2030 compared to AY2013 levels.
6. Make this environmental policy 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 27, 2025

Dr. OGAWA, Satoshi, President of Iwate University

# Environmental Activities of Young Children and Students

## Affiliated Kindergarten



Each child with their own pot

## Affiliated Primary School



Observed how leaf colors vary based on sunlight exposure

## Affiliated Junior High School



Field study: Hands-on forest conservation learning activities

## Affiliated Special Needs School



Soap-making team

## University Student Circles



Iwate University Asiatic Black Bear Research Group  
Public awareness & outreach activities

## Student-led business initiatives on campus



The Iwate University Craft Beer Club

## About the cover

The cover art, created by Ai Suzuki from Nagaoka Institute of Design, conveys the message: 'Today's environmental issues represent a vital crossroads for our future. Which path will we choose?'

# Iwate University Environmental Activities

## Environmental Management Student Committee



Environmental education at a local kindergarten



Environmental study tour in Kuzumaki Town



Participation in a Youth Working Group (WG) meeting of the Iwate Prefecture Citizens' Council for Global Warming Prevention

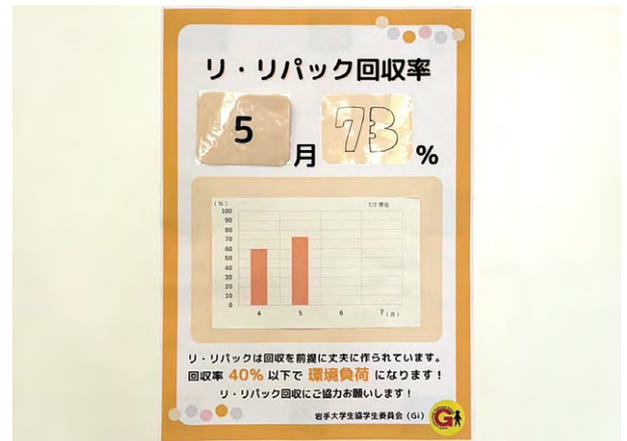


EcoPro 2024 EMSC Booth Activities

## Iwate University Co-op Environmental Initiatives



Collecting containers for "Bento". cafeteria lunchboxes



Poster displaying container collection rates



# Topics for the 2024 academic year

## AY2024 Iwate University Environmental Leadership Development Program Ceremony held for the university-certified "Iwate University Environmental Management Specialist"



On March 13, 2025, a certification ceremony for the "Iwate University Environmental Management Specialist" was held in the President's Office. This internal qualification is an initiative to develop "π-shaped" environmental leadership by combining environmental education, Education for Sustainable Development(ESD), and Environmental Management Systems (EMS) based on the university's Environmental Leadership Development program. The program was originally developed as a Ministry of the Environment project from AY2009–2011 and has been operated by the Iwate University

Office of Environmental Management since AY2012 to 2024. Undergraduates who meet specific requirements are awarded certification by the President. In this most recent ceremony, Yuki Goto (Junior, Faculty of Humanities and Social Sciences) was certified, bringing the cumulative total of qualification holders to 24. Starting in AY2025, the program has been renewed in name and content as the "Ihatov Co-creation Course" Registration Model 5: "Environmental Human Resource Development," continuing under the direction of the Regional Co-Creation Education Center.



## Environmental Initiatives through Collaboration between Oshu City and Iwate University



Iwate University and Oshu City established mutual friendship and cooperation agreements with the former Mizusawa City in 2002 and the former Esashi City in 2004; these were re-signed with Oshu City following the municipal merger in 2006. Simultaneously, the Iwate University Casting Technology Research Center (Mizusawa Satellite) was opened within the Oshu City Casting Technology Research Center, contributing to technological development in the casting industry, industry-academia collaboration, and human resource development. The dispatch of Oshu City staff to the university also continues. Oshu City established a GX (Green Transformation) Promotion Office and, in August 2024,

declared a goal of "Net Zero CO<sub>2</sub> Emissions by 2050." Since AY2020, the "Local Enterprise × Iwate University × Oshu City Collaboration Forum" has been co-hosted with the university to share research seeds and corporate case studies. In AY2021 and AY2024, the forum focused on "Environment," "Decarbonization," and "Carbon Neutrality," promoting the importance of decarbonization through expert lectures and business examples. Participants shared positive feedback, noting that "learning how energy conservation leads to decarbonization lowered the hurdle." Moving forward, the city will continue to advance environmental initiatives in cooperation with Iwate University.

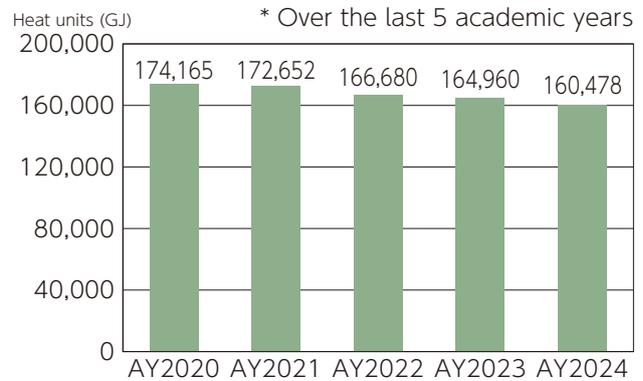


## Total Energy Inputs ● Efforts to reduce heat and energy use

### 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 meeting of the Office of Environmental Management. The electricity consumption was also calculated for each departmental unit.
- ② Cleaned the air conditioner and regulated the room temperature during heating and cooling periods.
- ③ Lighting equipment was properly maintained by cleaning and making replacements when necessary.
- ④ Implement a policy to turn off lights in classrooms, offices, and other areas during lunch breaks, overtime, and when unnecessary (except for over-the-counter services).

### ● Total Energy Inputs(converted to heat units)



### Outcome

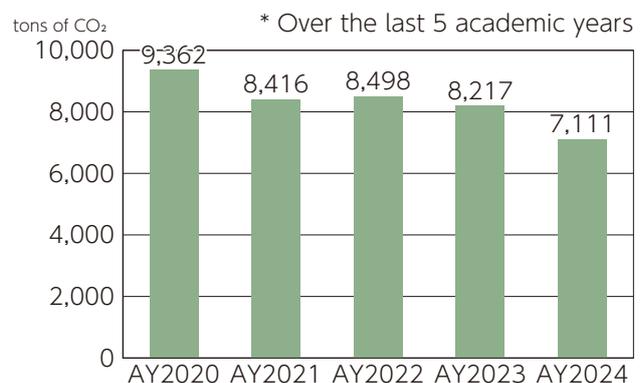
In AY2024, energy consumption from heavy fuel oil A, kerosene, and LPG (Liquefied Petroleum Gas) increased. However, the use of electricity, kerosene, and city gas consumption decreased compared to the previous year. As a result, the total energy output fell to 160,478 GJ (gigajoule), a 2.7% reduction from the previous year.

## Emissions of Greenhouse Gases, etc ● Efforts to reduce CO<sub>2</sub> emissions

### Initiatives

- ① Calculated the CO<sub>2</sub> 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 meeting of the Office of Environmental Management.
- ② Calculated the CO<sub>2</sub> 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 preceding month.

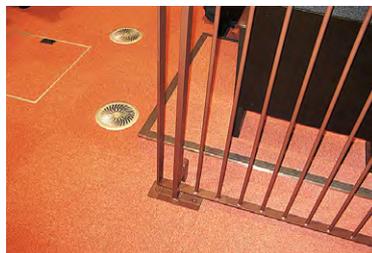
### ● CO<sub>2</sub> Emission by Academic Year



### Outcome

As a result of the decrease in total energy input, CO<sub>2</sub> emissions also declined. In AY2024, emissions fell to 7,111t-CO<sub>2</sub>, representing a 13.5% decrease compared to the previous year.

Used Tohoku Electric Power's adjusted emission factor of 0.402t-CO<sub>2</sub>/1000kwh



# Iwate University's Efforts to Reduce Environmental Impacts

## Material Balance



### Input



Power

12,469,000 kWh



Diesel

34 kℓ



City gas

655,000 m<sup>3</sup>



LPG

2,628 kg



Gasoline

30 kℓ



Heavy oil type-A

94 kℓ



Kerosene

54 kℓ



Paper

(Converted to A4 size)  
7,440,000 sheets



Water

78,000 m<sup>3</sup>



Chemicals

8.6 tons



### Output

Greenhouse gas emissions

7,111 tons of CO<sub>2</sub>

General waste

151 tons

Industrial waste

173 tons

Sewage discharge

78,000 m<sup>3</sup>

Sulphur oxides

0.38 tons

Laboratory liquid waste

14.5 tons

BOD contaminant waste (estimated)

15 tons

### External Emission

Tohoku Electric Power greenhouse gas emission factor (adjusted):  
Tohoku Electric Power 0.000402t-CO<sub>2</sub>/kWh



## Environmental Subjects: Faculty Interview



### Yoshiko Muto, Department of Rural Environmental Sciences, Faculty of Agriculture



#### Assigned Environmental Subject: Water and Environment

**Overview :** The primary focus of this lecture is for students to recognize the indispensable importance of water for human coexistence with nature. The course follows a systematic structure, beginning with an introduction to aquatic environments and moving through biological, chemical, and physical approaches to aquatic environment issues, and topics such as marine/river environments and "soft path" vs. "hard path" water resource management.

**Interviewers:** Environmental Management Student Committee members, Rinka Ohori (Junior Faculty of Agriculture) and Kyosuke Kumagai (Junior, Faculty of Agriculture)

#### Q1: What kind of research are you currently conducting?

My specialty is Soil Physics. I study the mechanisms by which water and nutrients in the soil are absorbed by plant roots, and how this affects crop growth. My goal is to produce high-quality crops efficiently and affordably while clarifying the relationship between production and environmental conservation/impact.

#### Q2: What do you think is important when considering environmental issues?

It is gaining a broad base of fundamental knowledge. The environment is a place where living organisms, chemical changes, and biological activity influence one another; therefore, you need the ability to make comprehensive judgments.

#### Q3: Please tell us about the challenges and future outlook of your research.

It is vital to select agricultural methods that adapt to changing conditions. Because soil properties, productivity, and environmental contributions vary by method, I emphasize focused research. I also use laboratory experiments to simplify complex phenomena and field monitoring to grasp what is actually happening on the ground.

#### Q4: How do you want students to approach and deal with environmental issues?

I want them to acquire broad knowledge and learn the process of identifying and solving problems in daily life. Gaining experience in looking at things from a wide perspective—including knowledge outside one's specialty—will be invaluable after graduation. I hope students consciously make time to use their imagination and think every day.

## Environmental Research - Introductory Interview



### Keiko Amaki, Home Making Economics, Faculty of Education



#### Research theme: Developing cleaning and dyeing methods aimed at reducing environmental impact

**Interviewers:** Environmental Management Student Committee members, Rinka Ohori (Junior, Faculty of Agriculture) and Yuika Yokoyama (Sophomore, Faculty of Education)

#### Q1: What kind of research are you currently conducting?

I research ways to reduce the environmental burden caused by laundry. Laundry has a high impact because it uses petroleum-based detergents and large amounts of water, yet it is essential to our lives. My goal is to reduce that burden, even slightly, through daily washing.

#### Q2: What do you think is important when considering environmental issues?

It is crucial to translate laboratory results and data into a form that society can use. Expensive detergents will not become widespread; therefore, we must find a balance between cleaning power and price. Since the final choice rests with the consumer, it is the researcher's responsibility to provide accurate information to society.

#### Q3: Please tell us about the challenges and future outlook of your research.

As society becomes more cleanliness-oriented, the frequency of laundry increases, as does the environmental impact. However, since it is difficult to simply "wash less," the focus must be on reducing the impact of a single load by even 1%. If many people take this on daily, it becomes a major contribution. Therefore, I believe it isn't necessary to eliminate detergents entirely.

#### Q4: How do you want students to approach and deal with environmental issues?

I want people to be conscious of what they can do for the environment, no matter how small. These small actions stack up to create great results, so I hope everyone develops the habit of thinking about the environment in their daily lives.