

Regional environmental planning methods and implementation based on daily life



The infrastructure for daily life, such as electricity, water supply, sewage, and gas, that we use every day without even thinking about it, has impacts on the environment both before and after we use it. We cannot live without using such infrastructure.

Focusing on the infrastructure for daily life, we conduct study aimed at achieving carbon neutrality through 1) visualization of process by which the environment is affected, 2) optimization of environmental impact taking into account daily life, and 3) environmental impact assessment at the planning stage.

Through these research, we will clarify reasonable ways to reduce the environmental impacts of daily life. We will incorporate them into regional plans and implement them on our university campus.

1) visualization of process by which the environment is affected

- Infrastructure is made up of many facilities
- Focus on the operation data of each facility, and collect data
- Construct a visible model using facility and operation data
- The model also makes greenhouse gas emissions visible

2) optimization of environmental impact taking into account daily life

- Consider multiple scenarios for reducing environmental impacts using the visible model
- Indicate the impact on daily life for each scenario against the current
- In region, discuss the feasibility of scenarios, draw up a plan, and put it into regional decarbonization practice on our university campus (social implementation)

3) environmental impact assessment at the planning stage

- Constructing large-scale infrastructure, various environmental risks exist
- Some issues are appeared in the environmental impact assessment system at the planning stage.
- Study for ways for improve-system-operation and systems for next-generation

