June-July 2023

JAPANESE PERSPECTIVES ON OUR SHARED ENERGY FUTURE

REBECCA RICE

ELI LILLY TEACHER CREATIVITY FOUNDATION

TRI-NORTH MIDDLE SCHOOL

Bloomington, Indiana

COMPONENT 1: JAPANESE LANGUAGE STUDY

I spent two weeks in Kyoto's Japanese Language School (JaLS), where I tested into the advanced study course. My other four classmates were Chinese or Malaysian students. My instructor, Ryusei Sensei, and the five of us became very close over the two weeks of our conversation courses. We had 6 hours of daily conversation classes with textbook homework, and I had additional private conversation lessons. I was able to practice conversation about the environment and climate change with Ryusei Sensei in preparation for future conversation with locals about their perspectives on climate change.

MY INTERNATIONAL CLASSMATES, JAPANESE INSTRUCTORS, AND ROCK CLIMBING FRIENDS I MADE IN KYOTO.

Oka Bike Tours

2 weeks in Hokkaido

THESE PICTURES FEATURE AKIRA AND TOKU, TWO OF THE JAPANESE GUIDES ALONG THE SHIRETOKO PENINSULA.

COMPONENT 2: CYCLING RURAL JAPAN

FOR ROUGHLY TWO WEEKS, I JOINED OKA BIKE TOURS ON A MODERATE (~300 MILE) BIKE TOUR AROUND THE NORTHERNMOST PART OF JAPAN.

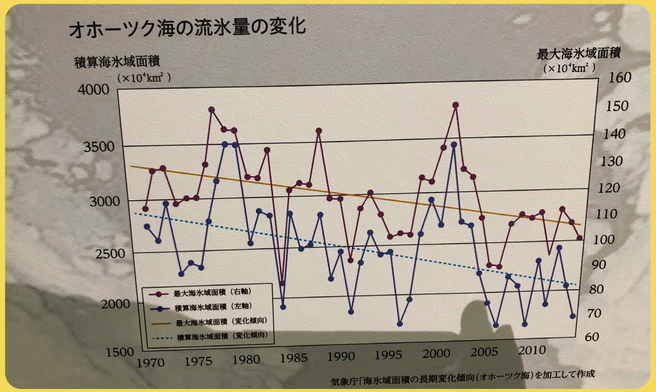
THIS REGION OF JAPAN IS SPARSELY POPULATED BUT IS THE SOURCE OF EXTENSIVE NUCLEAR POWER RESEARCH. I WAS WITH A GROUP OF SEVERAL OTHER RETIRED JAPANESE RIDERS, A SINGAPOREAN COUPLE, AND ANOTHER AMERICAN COUPLE.

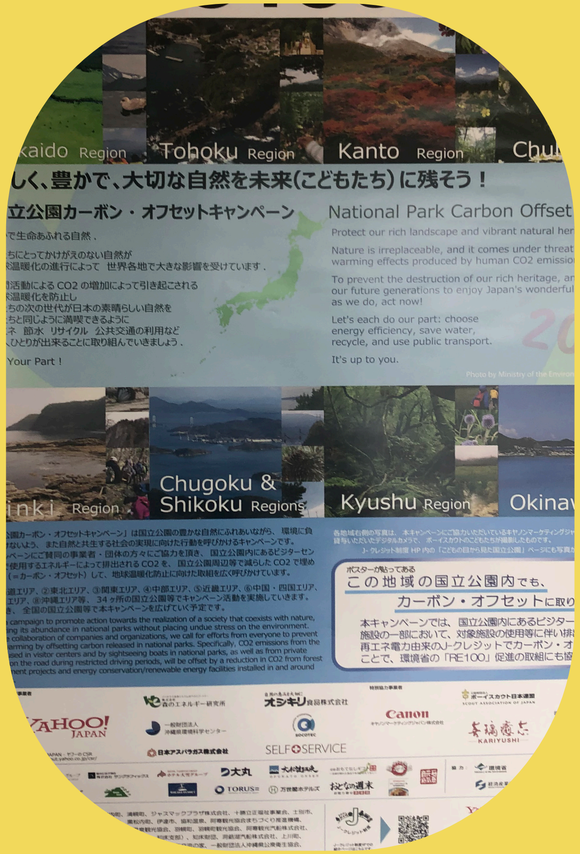
DURING DINNER TIME, WE CHATTED ABOUT CLIMATE CHANGE IN OUR OWN REGIONS OF THE WORLD, BUT ALSO IN THE SHOW-LADEN REGIONS WE WERE CYCLING IN JAPAN. AS AGRICULTURE IS THE MAIN EMPLOYMENT IN HOKKAIDO, CHANGING CLIMATES OF THIS NORTHERN REGION ARE A HUGE ECONOMIC CONCERN. SIGNS ABOUT LOWERING YOUR CARBON FOOTPRINT, CONSERVING ENERGY, AND PROTECTING WATERWAYS WERE ABUNDANT.

COMPONENT 3: JAPANESE PERSPECTIVES ON ENERGY & THE FUTURE

From media and passing conversations with friends I made in Kyoto and Hokkaido, I was struck by how different Japan's political debates are from America's. Concerns about rising sea-levels, acidification of the ocean, the dangers of nuclear power, and a rapidly greying population are at the forefront of many Japanese voter's minds. Severe work culture and gender norms has driven many Japanese adults aways from parenting, which has lead to massive rural depopulation.

Pictures from the Drift Ice Museum and Museum of Native Northern Peoples in Abashiri, Japan.





JAPAN'S CHALLENGES: OVERFISHING, CARBON LEVELS, RENEWABLE ENERGIES, NUCLEAR POWER, PLUMMETING BIRTHRATES

nuclear power

depopulation

sea-level rise

Geo-engineering	Carbon Footprint	United Nations

CLASSROOM OUTCOMES

OUTCOME 01

Cloud engineering

I designed an activity about cloud engineering (seeding), which is one method nations like Japan have considered for engineering the climate. Students measured albedo of a cloud they chemically produced with aerosols and pressure in a bottle using Lux meters.

OUTCOME 02

UN Summit

Student teams represented different countries in an activity I designed to model the ongoing international debates about geoengineering. Each group presented their nation's position on geoengineering, which culminated in a final resolution vote to ban or promote it.

OUTCOME 03

Carbon Footprints

Together, students and I measured our own carbon footprints using an online tool. We compared our individual use to others in the United States and in other countries.

OUTCOME 04

Wind Turbines

Students learned how to measure power wattage using multimeters, and then made their own wind turbine (blade) designs. After mutliple iterations of the design process, students competed to see which turbine produced the most power.

(SOME PHOTOS BLURRED FOR STUDENT PRIVACY)

THANK YOU!

REBECCA RICE

REJERICE@GMAIL.COM

BLOOMINGTON, IN

Tri-North Middle School