

Non-Financial Information and Company Information

Third-Party Opinion



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Dr. Nakanishi completed a PhD in agriculture in the University of Tokyo's Graduate School of Agricultural and Life Sciences. After working as a post-doctoral fellow at the Hospital for Sick Children (Toronto) and a researcher in the Japan Science and Technology Agency's Department of Industry-Academia Alliance, she took a position as a Project Research Associate in the University of Tokyo's Graduate School of Agricultural and Life Sciences in 2016. She became a Project Lecturer in the same department in December 2017, and has been in her current role since April 2021. She has administered the University of Tokyo's One Earth Guardians Development Program since its founding.

The resources produced by the Earth are finite. The rate at which human activities are consuming these resources outstrips their rate of production, with Earth Overshoot Day*—the point at which human consumption will have used up all the resources that the Earth can regenerate in a calendar year—set to be August 2nd in 2023. If everyone in the world lived as we do in Japan, this date would be May 6th. In other words, life in Japan today takes an “advance” on the Earth's resources before we are even halfway through the year. Unless we work to establish a circular economy as soon as possible, a challenging future for continued human life on Earth is all too easy to imagine.

When it comes to recycling of resources, what kind of industrial waste treatment processes we can implement is a key question for present-day society. From the point of view of the resource balance described above, we no longer have the luxury of throwing away unnecessary “waste.” As a recycling company, Daiseki advocates a view of waste materials as resources and tackles this key challenge directly. I consider Daiseki to be standard bearers for a societal shift toward a circular economy.

The One Earth Guardians Development Program (OEGs) was started in 2017 within the University of Tokyo's Faculty of Agriculture in the Graduate School of Agricultural and Life Sciences. It aims to develop a group of scientists, the One Earth Guardians, who will take action to secure the future of the Earth so that humans and all other forms of life can be living here together in harmony 100 years from now. The OEGs is a framework for the University and a range of organizations and individuals to cooperate to develop human resources with the skills to do this, allowing industry and academia to work collaboratively to solve social and environmental issues.

Daiseki has been closely involved in the work of the OEGs since 2022. A core component of the OEGs curriculum comprises practical internships that foster the ability to identify and solve issues within their social context. During practical internships with Daiseki, students have gained insight into Daiseki's areas of activity and expertise and engaged in approximately six months of debate and research around the question of successfully balancing solutions to environmental issues in the aim of creating a circular economy and business feasibility, after which they put forward their own suggestions in this area. While the different format of the internship to their research at the University may sometimes be confusing, participating students have also learned about and gained direct

experience of perspectives that will be crucial to the business viability of their ideas. This approach to the issue is not one that students can easily discover and adopt purely within the educational and research setting of the University, yet it is a vital skill for taking action that brings in wider society. Discovering the possibilities for linking the research findings they have been learning about to on-the-ground problem-solving has not only opened up their future career options but also seems to have been an encouraging experience for them. This is a step on the path to developing human resources who, while drawing on their training and perspectives as scientists, will work in a variety of fields to contribute to creating a sustainable society, something that can give us hope for the future.

I would like to briefly touch on the concept of the “bioeconomy,” a sister concept of the circular economy that refers to economic activity that utilizes biotechnologies and biological resources without straining the biosphere. There is significant overlap between the two concepts, and the idea of the “circular bioeconomy,” which brings the two together, is gaining prominence in the US and Europe.

My field of study, agricultural science, is dedicated to making use of natural resources through learning from living things and capitalizing on their capacities. Yet this discipline, too, considers the circular use of resources to be a matter for urgent attention. In order to bring academic expertise to bear in solving real-world issues, cooperation with industry players is indispensable. I feel that our collaboration with Daiseki, leaders in creating recycled products from industrial waste, has enormous potential, and it also gives me a renewed determination to consider what we can achieve by working together.

The expression “venous industry” perfectly captures the character of the sector. Animals maintain their vital functions by circulating fluids through their bodies, and cannot sustain life if their blood flow stops or they lose a great deal of blood through external bleeding. While the arteries that deliver blood to all of our internal organs may be the better-known of the two blood vessels, the circulatory system could not exist without the veins that return blood flow to the heart. When we extend this metaphor to society and economic activity, it is clear that Daiseki has a significant role to play in its capacity as part of the venous industry. If we were to consider the Earth as a single huge and complex living entity, we would hesitate to declare that it is entirely healthy in its current state—but we can hope that the flow of the veins back to the heart of our planet will revive it.

*For more information on Earth Overshoot Day, please follow the link below.

Global Footprint Network <https://www.overshootday.org/newsroom/past-earth-overshoot-days/>