The Fourth Kitakyushu SDGs Training

March 2023

REFLECTION NOTE

by the Participants

KITAKYUSHU CITY
GOTO CITY
JAPAN

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This Reflection Note is voluntary made by the participants of the 4th Kitakyushu SDGs Training, co-organized by the Kitakyusyhu Urban Centre of Institute for Global Environmental Strategies (IGES) and NPO Satoyama in March 2023 in Kitakyushu City and Goto City.
(About this training in Japanese) https://www.iges.or.jp/jp/events/20230306-10
(About this training in English) https://www.iges.or.jp/en/events/20230306-10

Report

The Fourth Kitakyushu SDGs Training

The Participants listed below of the 4th Kitakyushu SDGs Training cooperated and worked closely on this report, which includes main highlights, insights and take-aways from the programme.

Photos used in this report and design by Mariam Kvaratskhelia

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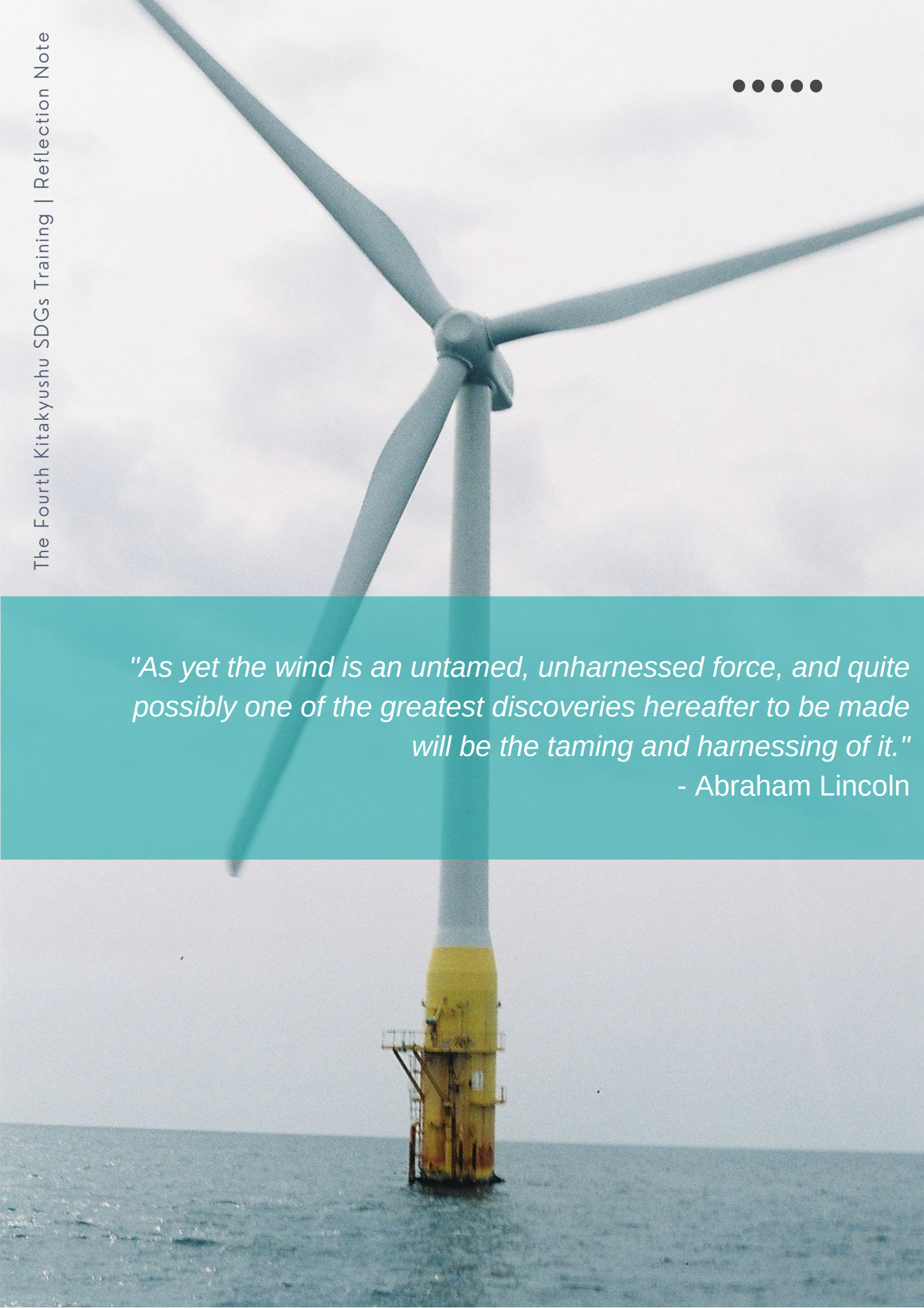
The above affiliations are as of March 2023



"As yet the wind is an untamed, unharnessed force, and quite possibly one of the greatest discoveries hereafter to be made will be the taming and harnessing of it."

- Abraham Lincoln

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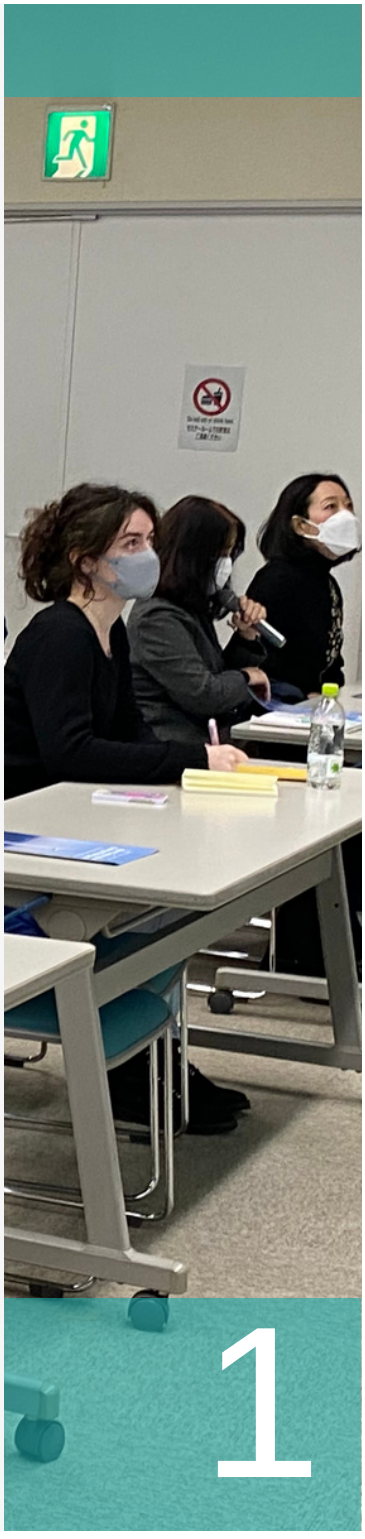
Introduction

Josephine Wouda Kuipers

The 4th Kitakyushu SDGs Training Programme organized by the Institute for Global Environmental Strategies (IGES) and NPO SATOYAMA, allowed ten university students from across Japan to visit Kitakyushu City of Fukuoka Prefecture and Goto City of Nagasaki Prefecture to understand their frontrunner practices that make them two decarbonisation leading cities in Kyushu, southwestern region of Japan.

The programme took place from 6 to 10 March 2023, of which the first half was spent exploring Kitakyushu City and the second half exploring Goto City, as seen in Figure 1.

Kitakyushu City and Goto City are both leading the decarbonisation initiatives in Japan, but have different reasons for doing so, making the visit to both very multifaceted. The industrial city, Kitakyushu, demonstrates how a previously polluted city can transform and lead the transition to carbon neutrality by utilizing hydrogen from the local steel industry and generating renewable energy from its solar panels and wind farms in the Next-Generation Energy Park within the Kitakyushu Eco Town.



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Goto City, on the other hand, wants to reverse the ageing and shrinking population dynamics of the island by pursuing these frontrunner renewable energy practices.

The first floating offshore wind power pilot in Japan that was placed off the coast of Goto proved to be a success, as they found a way to coexist with the local fishery industry and were able to boost employment on the island. The wind park is currently being expanded and has stepped forward to commercial operation. The programme gave us the opportunity to visit actual sites of renewable energy and decarbonisation projects, as well as to discuss with a range of stakeholders from each city about the various efforts.

Figure 1. Schedule of the 4th Kitakyushu SDGs Training

Additionally, the programme inspired us, students from nine different universities, to collaborate and explore how decarbonisation projects and initiatives towards the Sustainable Development Goals (SDGs) can be further pursued. Brainstorming with the innovative 2030 SDGs Game and LEGO® SERIOUS PLAY® we were able to share and develop ideas in an effective and enthusiastic way.

Due to the valuable experiences from the 4th Kitakyushu SDGs Training Programme, the aim of this report is to recount the variety of activities, as well as reflect on key takeaways for our own journeys related to decarbonisation in Japan and beyond. The report is composed of a collection of short articles voluntarily written by some of the participants of this programme.

The SDGs and Renewable Energy Policy: Kitakyushu and Goto City

Novelia Triana

The city of Kitakyushu has successfully been chosen as one of Japan’s national model city programmes called the SDGs Future Cities, due to its efforts to develop a low-carbon energy production hub, improve the city's quality energy’s problem, and promote coexistence with all sectors of society and nature. This introduction provides an overview of Kitakyushu's current development in these areas.

In response to the Japanese Government's target of achieving zero carbon emissions by 2050, were plants, sufficient solar power generation facilities, and biomass thermal power plants. Kitakyushu City has also set its own target to achieve net-zero emissions by 2050 and has been collaborating with various sectors, including industry and businesses, to take action towards this goal. To achieve synergy from all sectors, the Kitakyushu government plays a crucial role in forming feasible subsidy to encourage commercial or voluntary involvement to be concrete.

Promoting the entire system of the Next-Generation Energy Park, Kitakyushu City set up an exhibition center in Eco Town.

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There are also increasing number of wind power plants, sufficient solar power generation facilities, and biomass thermal power plants.

Goto Island has become a pioneer of floating offshore wind energy generation. This project involved high levels of engagement multiple stakeholders, including the local government, corporations, and local people, including fishermen. Together, they built a self-sustaining energy generation system on the island.

From the experience of Kitakyushu City and Goto City, the lesson to learn is multisector work together. By fostering partnerships and cooperation among diverse stakeholders, the cities have been able to improve outcomes and better quality of life for their citizens.

I was amazed to see how the unpleasant history of pollution in Kitakyushu has pushed people to become aware and act for the citizen's movement, "We want our blue sky back". Also, the people in Goto, although in the past, were uneasy about the renewable energy project, eventually has harmony in living with the project.

All sectors in Kitakyushu and Goto have been taking respective actions to create solidarity and achieve the Sustainable Development Goals (SDGs) by exploring advanced knowledge and technology to address the current energy consumption of the people and to save resources for the next generation.

Wind Power Plants: Operation and Maintenance

Aoto Horiuchi

We visited a branch of Hokutaku Co. Ltd. in Kitakyushu and received a lecture from E-Wind Co. Ltd. in Goto. Both of them are maintenance companies for wind turbines.

Maintenance companies are divided into three types; manufacturers of wind turbines, business operators of wind farm, and third-party that specialise maintainance. Hokutaku and E-Wind are third party and have multiple branches in Japan.

Maintenance of wind turbine mainly includes services such as replacing blades, transmissions and other parts when broken. Especially offshore wind turbines require unique tasks such as painting the foundation to prevent the metal from rusting and removing seaweeds sticking to the foundation.

In Hokutaku, there are various parts of wind turbines from different manufacturers stored in a big warehouse. That makes it possible to replace the broken parts of wind turbines much earlier than other maintenance companies.

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E-Wind is leading an association called "Nagasaki Wind Service Group", where companies can share construction equipment, and get support in human resource development.

Local maintenance companies have a distinct advantage because they can reach and provide parts to the wind farm quickly in case of emergency. Associations of local companies like Nagasaki Wind Service Group can be more promoted to help them earn from wind power generation and stimulate local economy.

Wind Power Plants and Fishermen

Masahiro Seki

Mr. Chokichi Kumagawa, the chairman of the Goto Fukue fishery cooperative association, provided us with a story about a wind turbine project in Goto city.

He told us how the project was promoted, how he approached solving the problem among stakeholders and his own expectation of floating wind turbines. It is one of the best practices of installing floating wind turbines including the fishery resident as a stakeholder.

In 2010, following a proposal from Toda Corporation, a demonstration test of floating offshore wind power generation began on Kabashima, mediated by Mr. Kumagawa. It was not easy process in the beginning since it was a very first case of offshore wind power pilot in Japan, however, a series of tireless discussions took place to overcome the difficulties.

Mr. Kumagawa summarized the opinions of the fishery association side of Kabashima, reconciled them with Toda Corporation, and contributed to the coordination of the relationship among stakeholders, which led to the success of the 6-year demonstration experiment.

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Toda Corporation participated in local events every year, helping out and engaging with local residents to build a relationship of trust.

In 2018, the project stepped up for commercial use on an expanded scale, but unlike the demonstration project, it was necessary to obtain consent from six villages on Fukue Island, Kuga Island, and Kabashima. In response to this challenge, Mr. Kumagawa accompanied the project team whenever the local government and Toda Corporation visited each fishing community to explain the details of the project, thereby building trust and achieving smooth consensus building.

“I wanted a precedent of a new fishery” - This is how Mr. Chokichi Kumagawa justified his efforts of making pilot projects possible.
Great knowledge and experience with fisheries helped him to identify the benefits of offshore wind turbines. By thinking of creating a precedent of artificial fishing ground, it would be possible to establish a new form of fishing, attract young people and eventually revitalize the fishing industry.

Mr. Kumagawa concluded that “floating wind turbines are means to revive the fishing industry”. In the huge scale of regional development, such as the floating wind turbine farm construction project, I think the probability of success will depend on the local community support. For example, in Goto’s case, Mr. Kumagawa was the nexus between local residents and the development entity and made it possible for the project.

Solar Panels: Energy Generation and Recycle

Sari Nomura

During the visit to a citizen-funded solar-power station in the Kitakyushu Next Generation Energy Park and Recycle Tech/Shinryo Corporation, a photovoltaic (PV) recycling company, we learned the great potential of cross-stakeholder partnership and cutting-edge technology for recycling PV panels.

The citizens' solar power station was a municipal project to celebrate Kitakyushu City's 50th anniversary. The construction cost was covered with public bonds issued by the Kitakyushu City at an interest rate of 0.5%, which were bought by around 6000 citizens as well as companies and organisations in Kitakyushu. The procurement of the materials, installation, and operation are handled locally and 30% of the revenues are given back to citizens by organising local events and funding the community activities such as planting trees in the city.

Despite the great benefits that PV panels could bring to society, they have a limited life span of about 30 years. This is where Shinryo's recycling technology is expected to play an important role.

Although they still need to conduct life cycle assessment (LCA) and minimise the cost, the technology will be in great demand considering that a lot of panels will fulfill their role in the coming years.

I was impressed with the fact that the spirit of partnership between citizens, companies, and the government that was nourished in the late 1960s has been reflected in the citizens’ solar-power station to this date. Also, I felt the strong motivation of the local municipality to utilise the local resources as much as possible, which was further enhanced by citizens' active involvement and the company’s technology.

Support by Local Community

Mariam Kvaratskhelia

“This city is what it is, because our citizens are what they are”
- Plato

When Japan’s first smog alert was issued in Kitakyushu in late 1960s, probably no one would estimate what the next 20 years would look like. Heavy industries almost destroyed the natural environment of the city, which resulted in drastic air pollution and contaminated Dokai Bay. However, soon after, a big miracle happened and within 20 years Kitakyushu’s water and sky were sparkling in blue again.

While it may seem like a fairy tale with mysteries and happily ever afters, Kitakyushu city’s miracle is rather simple and down-to-earth as it was initiated by the movement of local housewives, who were concerned about the health of their children. Their courageous action triggered the whole process of revitalisation by bringing local government, private sector and citizens together with a collective action that could transform the entire future of the city.

Similarly, but differently, Goto appeared to be another city with an inspiring story of the local fishermen, who greatly contributed to the establishment and continuation of Japan's first offshore wind turbine project. Speech of Mr. Tokichi Kumagawa, who is the Chairman of Fishermen's Association of Goto City was one of the inspiring parts of the programme as we understood how important it is to have a local support and if you don't have one, how a single person with the right communication and mediation skills can regain community trust and alter the whole situation.

I'm grateful that I had a chance to see a comprehensive elements of the renewable energy - from the heart of wind turbines to the local community's support. Importance of the local citizens in the success or failure of any renewable energy project, which has been embedded in the 5-day SDGs training programme, was a big highlight and lessons learned for me. Now I know that if I ever get myself across wind, solar or any other type of renewable energy projects, I will always start with the locals!

Learning with Games: 2030 SDGs Game and LEGO®SERIOUS PLAY®

Josephine Wouda Kuipers

In addition to the exciting visits to renewable energy projects in Kitakyushu City and Goto City, the programme introduced two facilitation tools to enhance people's engagement in discussion and brainstorm about a sustainable future and evaluate our experiences of the week.

On the first day we played the 2030 SDGs Game, where we engaged with the questions of why we need the SDGs and what kind of possibilities the SDGs create for the future. This was an effective way to see the 17 goals and 169 targets as a whole and as a tool to simulate the future world and human behavioral change. Every player was able to complete multiple actions that impacted the environmental, social, and/or economic indicators shown as the world condition meters on a white board.

By assessing the state of the world, halfway through the game and at the end of the game, it became clear that our individual actions had consequences for the whole world and that we all would need to work together to create a balanced environmental, social and economic outcome.

Furthermore, it highlighted that we were inclined to first pursue individual numerical goals, and only afterwards became able to broaden our mind to pursue qualitative goals that aided others.

Stepping back from acting and observing the state of the world was an effective way to mentally reset and understand what we needed to do to build a sustainable future together.

On the last day of the programme, we reflected ourselves in a LEGO® SERIOUS PLAY® workshop, where everybody was encouraged to express themselves by using lego blocks. Upon the guidance asking about your learning through the past week, and how you envision your sustainable future, everyone built their own response using lego, and explained the reasoning and emotions behind it briefly. Emphasis was placed on expressing your true mind regardless of the potential judgements from others. To do that, we were instructed to look at the LEGO® block while explaining, and not have eye contact with each other.

The Lego Serious Play was a very effective way to explore our perspectives on what a sustainable future looks like, and what role we, as individuals, would like to play. During the group sharing of everyone's sustainable future, it was impressive to see the different ideas that came up, which reflected the variety and breadth of experiences we all had during the week in Kitakyushu City and Goto City.

Conclusion

Throughout the programme, we were able to deepen our understanding of the SDGs and decarbonisation initiatives necessary for promoting the renewable energy sources.

By hearing from various stakeholders including municipal officials, fishery personnel, professionals in O&M industry and recycling, we could expand our knowledge and outlook regarding the operational, financial and social dimensions of the relevant renewable energy technologies. In addition, we understood that any big and positive change in the society stands upon versatility of perspectives, knowledge and resources.

The programme was a valuable opportunity for group discussions and negotiations. Not only did it contribute to capacity building for our future professional career, but it also enabled us to build strong friendships and bonds despite many of us meeting for the first time..

We hope that the training programme continues to provide great opportunities for the next generations and be a trigger for the future collaborations in creating a sustainable world.

Highlights of the Programme

SDGs Simulation Game
IGES Kitakyushu Urban Centre

Hydrogen Town
Kitakyushu City

Exploring Eco Town
Kitakyushu, Eco Town

Wind O&M
Kitakyushu, Eco Town

Solar Panels Recycling
Kitakyushu, Eco Town

Wind Turbines
Goto City

Exploring Goto City
Goto City

LEGO Serious Play
Goto City

Reflection
Goto City

Our Voices

"The training programme was not only about learning new things, but also building friendship with like-minded students. Can't wait to work with you in the future!"

Sari

"It was a journey full of inspiring stories, impressive sights and lots of Tsubaki flowers. Definitely, one of the memorable experiences in Japan both on professional and personal levels."

Mariam

"I could update my knowledge about sustainable energy by discussing with speakers in each session. It was so nice that we all are majoring in different fields and had various points of view.

Aoto

"Gained insightful and valuable experiences, and allowed us to see firsthand how the theory and concept of SDGs translates into practice"

Novelia

"It was powerful and inspirational to see firsthand how renewable energy projects can provide benefits for local communities, beyond their role in decarbonising energy systems."

Josephine

"The program helped understanding multi aspect of thinking about installing the new system of renewable energy, which various stakeholders have."

Masahiro

Acknowledgments

We would like to thank the organisers of the programme of IGES and of NPO SATOYAMA for giving us such a great opportunity to learn about renewable energy and decarbonisation initiatives in Kitakyushu and Goto cities.

Also, we are grateful to Kitakyushu City for funding the programme. Without the support, we would not be able to have such a great opportunity.

Thank you to all the speakers for sharing your stories and experiences with us, and thank you to the translators for making the programme accessible to all.

For more information on the Kitakyushu SDGs Training,
please visit the website of Kitakyushu SDGs Training or inquire via:

https://sdgs-kitakyushu.iges.jp/

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