

Debrief Report: 2018 Perspectives on Global Issues Workshop - Sustainability at the European Academy of Otzenhausen, Germany

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Synopsis. This is the debrief report on attending the Perspectives on Global Issues Workshop – Sustainability at European Academy of Otzenhausen (EAO) during May 10-18, 2018. To be honest, I was initially requested by my department chair to submit the application to attend this workshop rather than due to my personal desire. I believe he wanted me to have a break from my routine life and learn about the outside world. Personally, this was the first time for me to visit Germany (and any European country), mostly because I feel I was not so much attracted by the concept of visiting Europe. During the workshop, however, I have a number of opportunities to learn new knowledge and obtain unique experiences. After all, I can assure that the workshop has transformed me into another person who is completely different from who I was and now I would like others to join this amazing opportunity.

What I Learned and My Experience. During the workshop period, I have had several chances to learn about environmental issues confronted by European Union (EU) nations, the world, and the global efforts to address these issues. Previously, I have recognized that sustainability is becoming a crucial subject for the prosperity of the current and future generations and thus recently receiving much attention from academia, industry, and governments. I also knew that climate changes, over population, water pollution, pacific plastic garbage island, fossil fuel power generations are significant issues in sustainability. However, before the workshop, I did not know that on September of 2015, United Nations set a 17 sustainable development goals with specific targets to achieve over the next 15 years to end poverty, protect the planet and ensure prosperity for all. It was also quite impressive that the goals cover such a wide range of issues including gender equality and peace, justice, and strong institution. During the workshop, I have learned that the issues are not independent from each other. I also had an impression that most sustainability issues are due to the overpopulation and the limit of sustainable resources on the earth to support the population such as space and clean energy source.

Throughout my own multi-years long research activities, I have already built a strong background on renewable energy related technologies and the importance of environmental protection. However, this was my first time to see a solar energy farm, wind turbines, and a pump storage station, which were all impressive, and learn how they really like and how they are being operated in the real world. I personally have a number of solar panel powered lights in my backyard as I have been interested in solar power due to the financial and environment benefits all the time. The solar farm that I have observed has motivated me to further consider the adoption of solar panel in much larger scale for my personal living space. The wind turbines are really huge and surprisingly noisy. It was my conclusion that people in US may not like it as the sound could be daunting especially when the wind becomes strong. The use of food wastes at Energielandschaft Morbach to produce Methane and generate electricity and other useful materials such as fertilizer was very impressive too. The concept of the water pump storage station (Vianden Pumped Storage Plant at Luxembourg) is actually not new as there are several of those in South Korea and I have learnt from a textbook before, but I was very excited to see the actual facility along with the beautiful

natural environment surrounding the facility. Previously, I heard that Germany was trying to close all nuclear powerplants, but I did not know that so many wind turbines are being used all over the country. Overall, my conclusion is that people in Germany are paying lots of attention on renewable energy unlike United States (at least the State of Georgia). This made me to think how to educate the people in the state about the importance of sustainability issues when I go back.

I was also surprised that I barely had an understanding about the structure of EU and its operation as well as the people living in there. I have learned about several EU politic entities such as European Council, Council of the European Union, European Parliament, European Commission, Court of Justice of the European Union, European Central Bank, European Court of Auditors, and their roles. It seems like that making a significant effort to make the EU more sustainable is a very daunting task due to the complicated political structure of EU. I believe this is the reason only a few leading countries such as Germany are only those making a significant effort toward sustainability issues. This might be true for the whole globe, which consists of more than one hundred countries. I have realized that the promotion of sustainability is a very urgent issue but also requires much patience which takes time to persuade people to learn about the importance of sustainability issues and make actions to change the political climate in their own countries, and consequently the whole world.

I used to think that I am not very much interested in visiting EU counties. However, after the workshop, I have realized that I have been enjoying the new and unfamiliar environment and atmosphere, which makes me to be invigorated. I have learned about Cologne Cathedral in the textbook when I was attending a middle school, but I did not expect that I was not able to see the real one until I actually saw it. The atmosphere of Cologne was so much different from Otzenhausen, and feel vibrant as much as my home town, Seoul, South Korea. Finally, this workshop has provided several precious opportunities to make good friends within KSU as well as from EAO.

What's Next. After I came back from the trip, I have been thinking about how to use the knowledge and experience from the workshop toward my personal and professional lives as an educator and researcher in my different aspects. One of my effort includes the invitation of people who have an expertise in sustainability to the campus for a guest lecture to provide an opportunity to learn about the sustainability issues to others. Currently, I am trying to invite Alexander Metternich from EAO for a department seminar on November 2018. I am also writing an education proposal on sustainability issue with colleagues to apply external funds. The main theme of this proposal will be about how to provide sustainability related education to K-12 students, especially those within under-represented groups. In addition to my effort toward educations, I am conducting two researches related to sustainability with my graduate students. The first one is how to resolve severe traffic jam issues in the metropolitan area using computing and communication technologies. I believe my research would contribute to save fossil gas fuels spent by the stalled vehicles on the highway during rush hours. The other one is the wider adoption of electric vehicles (EVs) by introducing a new infrastructure which allows the battery of the EVs to be charged while they are moving on the highway.