

Towards Designing a Better Future: Sustainable Cities and Communities

National Institute of Technology, Oyama College

A: Hello everyone, I'm Tatsuki Otsuka.

C: I'm Rio Iwabuchi.

B: And, I'm Otoha Takahashi. Recently, one of my dreams became true. I was able to go to Sweden for studying abroad.

C: Sweden... sounds nice.

A: What did you do there?

B: I'm interested in Swedish architecture and ways to protect the environment. Sweden is known for being environmentally conscious. So, I learned a lot by seeing architecture and just being there. I want to contribute to environmental protection in the future.

C: I see. I'm interested in architecture too. So, I'm studying it now too. Architecture is a major part of our lives, but it has also caused many problems to the environment.

B: I've heard of that before.

A: I didn't know that. For example, what are some of the negative effects on the environment?

C: The architecture industry generates a lot of CO₂.

A: How much has been discharged?

C: It accounts for 34 percent of Japan's discharge.

A: I can't imagine in what ways the architecture industry discharges that much.

C: It emits a lot of CO₂ by manufacturing materials and transporting them and additionally, also when buildings are demolished.

B: It threatens our lives too right?

A: Yea, there have been a lot of talk about air pollution. I heard that it's going to get even worse if we don't do anything.

C: For real?

A: Half of the world's population now lives in urban areas. So it's going to increase even more.

C: I can see why. Living in urban areas is just more convenient than in the countryside. There are a lot of jobs and stores.

B: That's true. Nothing beats the convenience of the city.

A: The population will continue to grow like this, and more people will be driving cars or using other vehicles which emit air pollution.

C: That's not gonna be good. I wonder if it's possible to help solve that problem using architecture urban planning.

B: Oh, I have an idea. Actually, there are ecofriendly architectures too. Have you ever heard of an ecovillage? I visited one in Sweden.

C: That's interesting. What's an ecovillage like?

- A: I've heard of it before. Ecovillages promote sustainable living, architecture, and supportive communities, don't they?
- B: Yes, this ecovillage was like a small town. There were 44 houses. Also, people of all ages lived there.
- C: It's great that the whole town is doing something like this.
- A: What does sustainable living look like, for example?
- B: Well, they carefully separated garbage for recycling. Also, they use ecofriendly materials to build their houses, for example, wood, eco-fiber installation and tempera made from eggs. Actually, wood structures help with environmental protection.
- C: I'm surprised to hear that wooden structures can do such things. And with wood, we can reuse it.
- B: Yea, Sweden is a forest rich country. So, there were many big wooden structures. Also, they continually renovate their houses. So, typically Swedish houses last over 100 years. It's awesome right?
- C: I've never heard of wooden structures that last more than 100 years.
- A: Japan has a lot of wooden structures too. But, I've never heard of that here.
- B: Exactly. Also, the ecovillage had special toilets. It separates human waste to be used as fertilizers.
- C: That's amazing. There really are no wastes. It's a special system, so it's gonna take a lot of work, maintenance, and all, but it's really ecofriendly.
- B: Yes, and look at these pictures. It looks like a forest right? But, actually this was in Stockholm city.
- A: You mean that's an urban area?
- B: Yes, outside of the village was a normal city. Just here, it looks like a forest.
- A: It's amazing that there is a forest within a city. But why?
- B: Because, they think of nature first when building their houses. Even though many big trees got in the way, they never cut the trees. Construction companies are required to write a written pledge. It's very serious.
- C: That's interesting. It seems tough to build there.
- B: Ecovillages are not only environmentally friendly, but also have a role in building a good community.
- A: Nice, what kind of community?
- B: Well, they share cars, a garden, a free event space, a DIY space, ingredients, and etc. I thought it was an especially nice idea to share things among residents. Common spaces like roads and parking areas in the village are cleaned by residents in charge of it. So, it's quite clean.
- C: That's a great idea. I'd love to adopt that into our communities.
- B: They were interacting with people beyond their age group and family. So, I think it's a very sustainable place for children and elderlies.
- A: This makes me want to live there too. Also, in Japan, people are less social. As a result, there is the problem of not having anyone to rely on in an emergency or when you are in trouble. But that way seems to be helpful to this problem. It is also very rewarding to live while interacting with many people.
- B: That's right. I want to share it more with other people.
- C: Sustainable life and communities sounds perfect for Japan in the future. I can see it

happening in Japan as well. But, I have a question. Do you think ecovillages actually help the environment?

B: I was curious too, so I asked someone there. He said that ecovillages do not directly help the environment. However, he also said that it's more important to do and think about environmental protection even if it's a little bit. Swedish people were interested in environmental problems. My host mother said that they talk and think about it in everyday conversations and life.

A: I can't imagine doing that everyday. It's totally different in Japan. Recently, we learned about SDGs in class more and more. But there aren't many opportunities to work on or think about them in real life.

C: That's right. We see and hear, more and more about SDGs in the news and in life, but we don't really feel environmental changes. So, we feel like we can't do anything about it.

B: Japan is one of the worst countries when it comes to discussions about environmental protection. I wonder why we are not interested.

C: It's not just environmental issues either. I have a friend who is an international student. She would ask me about social problems. But I have never thought deeply about social issues. So, I couldn't explain an opinion.

A: When we think about environmental issues, we tend to think negatively because we feel that our lives will be harder.

B: I really felt the difference. In Japan, some people feel that they need to give up their quality of life. Swedish people seem to value environmental protection.

C: I think we as Japanese people should be thinking more about these problems.

B: I think so too. We don't seem to care too much about environmental issues.

A: This problem directly affects us and our future children.

C: We as Japanese people need to independently act and think deeper in order to design a better future and not just wait to be told to do so.

A: First, we need to learn more about environmental and social issues.

B: Now is the time to change our mindset.

A,B,C: Thank you for listening.