

7th International Symposium on Environmental Sociology in East Asia (ISESEA)

Social Actions to Climate Change and Energy Transition in East Asia:
Toward a Sustainable Planet

Date	October 26 (Sat) ~ 28 (Mon), 2019
Venue	Graduate School of Environmental Studies, Seoul National University, Seoul, Korea
Organized by	Korean Association for Environmental Sociology
Co-hosted by	Korea Environment Institute, Seoul Institute, Goyang City, Seoul National University GSES BK21 Plus, Hanshin University Center for Regional Development
Supported by	National Research Foundation of Korea, International Sociological Association RC24 Environment and Society

**이 발표논문집은 2019년도 정부재원(교육부)으로
한국연구재단의 지원을 받아 발간되었음.**

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ISESEA-7 Local Planning Committee

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Co-hosted by

Korea Environment Institute (KEI)

Seoul Institute (SI)

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Seoul National University GSES BK21 Plus

Hanshin University Center for Regional Development

Supported by

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International Sociological Association (ISA) RC24 Environment and Society

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I CONFERENCE INTRODUCTION

In 2007, environmental sociologists in East Asia organized the first International Symposium on Environmental Sociology in East Asia (ISESEA). Since this inaugural meeting, ISESEA has been held biennially to provide a platform for environmental sociologists and other social scientists to debate complex socio-ecological issues and sustainability transition, particularly from an East Asian perspective. Co-hosting with RC 24 of International Sociological Association, the Korean Association for Environmental Sociology (KAES) will host the 7th ISESEA with the theme of “Social Actions to Climate Change and Energy Transition in East Asia: Toward a Sustainable Planet” at Seoul National University during October 26th~28th, 2019.

In the late 20th century, East Asian countries experienced unprecedented social and ecological changes with rapid economic growth. In this process, many citizens have become victims of environmental pollution, but economic growth remains a top priority in East Asia. As a result, given the share of East Asia in the global economy, East Asian countries have been increasingly responsible for global environmental problems. The transition to a sustainable society has become a significant challenge that East Asian countries can no longer ignore.

Fortunately, there is an increasing number of social actions in East Asia that seek sustainability transition. For example, not only renewable energy is spreading rapidly in East Asia, but also in Korea, Taiwan, and Japan, long-term policies are in place to shut down nuclear power plants. However, contentious politics for sustainable societies in East Asia is still in its infancy. Growth coalition, which claims the inevitability of nuclear power, still has a strong influence, and developmental policies to destroy the natural environment are also continuing. Furthermore, the historical experience shared by East Asian countries, including export-led economic growth, the legacy of authoritarian politics, and strong aspirations for economic growth, further complicates the politics of transition between state, market and civil society. From a comparative historical point of view, the experience of East Asian countries will provide various implications for developing emerging debates, such as climate justice, energy democracy, and degrowth, as well as major topics of environmental sociology, and seeking “just transition”. We hope the 7th ISESEA vitalizes discussion on social actions to climate change and energy transition, rethinking its challenges and implications toward a sustainable planet.

I ISESEA-7 GUIDANCE

Guidelines for Regular Session Presentation

Please check the online conference program to re-confirm the time and room of your session. Below are some tips to assist you, most importantly please ensure you start and finish your presentation on time.

Duration

- Each session length is 90 or 120 minutes including question time and each session presentation should involve 3-4 speakers.

- Each presenter has 15~20 minutes for his/her presentation. After all the presentations, there will be about 20-30 minutes to open the floor for Q & A for all presenters.

For session moderators

- Session moderators are invited to come to the room 10 minutes prior to the start time of the session. Their responsibilities include shortly introducing the session and the speakers, ensuring that the time is equally divided across all presentations, and guiding the general discussion.

For session speakers

- Presenters are invited to come to the room 10 minutes prior to the start time of the session to upload their presentation and check the functionality. If you need technical assistance and cannot spot an assistant, kindly approach us at the Registration Desk.

- Computer and projector will be available in each room for presentations. Please use either PowerPoint (.ppt) or Portable Document Format (.pdf) as presentation formats. Presenters can bring their presentations on a USB stick or can download it on the Internet. Connecting personal laptops is discouraged to avoid excessive loss of time. If you need any help with your file, please feel free to approach us at the Registration Desk.

- The presentation computers use PowerPoint with Windows operating system.

- Staff will ring a bell to let you know the remaining time.

- * The 1st bell: 3 minutes remaining for the presentation

- * The 2nd bell: The end of the presentation

PROGRAM AT A GLANCE

Saturday 26th October, 2019				
8:45 AM ~ 5:30 PM	Registration <i>Room 303</i>			
9:15 AM ~ 9:30 AM	Opening Ceremony <i>Room 306 Glocal Hall</i>			
9:30 AM ~ 10:30 AM	Keynote Speech <i>Room 306 Glocal Hall</i>			
10:30 AM ~ 10:50 AM	Break			
10:50 AM ~ 12:20 PM	Regular Sessions (1)			
	1-1 <i>Room 306</i>	1-2 <i>Room 305</i>	1-3 <i>Room 205</i>	1-4 <i>Room 308</i>
12:20 PM ~ 1:30 PM	Lunch Break			
	ISESEA-7 Business Meeting <i>2F Open platform Seminar A</i>			
1:30 PM ~ 3:30 PM	Plenary Sessions (1) <i>Room 306 Glocal Hall</i>			
3:30 PM ~ 3:50 PM	Break			
3:50 PM ~ 5:50 PM	Regular Sessions (2)			
	2-1 <i>Room 305</i>	2-2 <i>Room 304</i>	2-3 <i>Room 205</i>	2-4 <i>Room 308</i>
6:00 PM ~	Dinner <i>Room 306 Glocal Hall & Graduate School of Environmental Studies</i>			
Sunday 27th October, 2019				
8:45 AM ~ 5:30 PM	Registration <i>Room 303</i>			
9:00 AM ~ 10:30 AM	Regular Sessions (3)			
	3-1 <i>Room 306</i>	3-2 <i>Room 304</i>	3-3 <i>Room 305</i>	3-4 <i>Room 308</i>
10:30 AM ~ 10:50 AM	Break			
10:50 AM ~ 12:20 PM	Regular Sessions (4)			
	4-1 <i>Room 306</i>	4-2 <i>Room 304</i>	4-3 <i>Room 305</i>	4-4 <i>Room 308</i>
12:20 PM ~ 1:30 PM	Lunch Break			
	한국환경사회학회 총회(The Korean Association for Environmental Sociology Business Meeting) <i>2F Open platform Seminar B</i>			
1:30 PM ~ 3:30 PM	Plenary Sessions (2) <i>Room 306 Glocal Hall</i>			
3:30 PM ~ 3:50 PM	Break			
3:50 PM ~ 5:50 PM	Regular Sessions (5)			
	5-1 <i>Room 306</i>	5-2 <i>Room 308</i>	5-3 <i>Room 305</i>	
6:10 PM ~	Farewell Dinner <i>Hoam Faculty House</i>			

I KEYNOTE SPEECH

Adapt, Transition, Transform: The Multiple Temporalities of Social Action on Climate Change

Stewart Lockie
Distinguished Professor of Sociology, Director
The Cairns Institute
James Cook University

Action on social and environmental change reflects our expectations, hopes and fears about how that change might unfold through time. Implicit in international agreements on climate change, more specifically, is a process of steady and linear transition to new climate states. The Paris Agreement aims to limit global warming through progressively more ambitious greenhouse gas mitigation targets, while increasing the adaptive capacity of communities and ecosystems, but provides no explicit mechanism to deal with unexpected change in the rate, magnitude or consequences of global warming. This paper will consequently explore the implications for climate action of different temporal dynamics including linear increases in global mean temperatures, accelerating or exponential warming, abrupt transition to novel climate states, and heightened volatility at finer spatial and temporal scales. Different temporal dynamics, it will be argued, call for radically different responses, ranging from incremental adaptation and transition to more far-reaching processes of transformation. Drawing on examples of greenhouse gas mitigation, biodiversity management and poverty alleviation, the paper will explore mismatches between the temporalities of environmental change and the temporalities of policy and other responses. It will highlight, moreover, the potential for projects of ambitious social, economic and environmental reform to generate not only political but also scientific and epistemological conflict.

Climate Justice and Environmental Movements in East Asia

Seejae Lee
Professor-Emeritus, Sociology
The Catholic University of Korea

Climate change becomes our everyday experience now. Extreme weather events such as high heat, flooding, and draught directly give severe impacts on our lives. It is now evident to us what causes such climate changes. Accumulation and increase of greenhouse gases, carbon dioxides in particular causes climate change. World population have produced such greenhouse gases in the historical and present processes of industrialization and consumption.

What is problem here is that those who are least responsible for climate change suffer its gravest consequences. Climate change effects differently on people, communities, and countries. It is fundamentally related to justice, human rights, collective rights and responsibilities.

A case study on the Hurricane Katrina which hit southern parts of United States in 2005 showed the differential effects of climate change on different groups of people. Those people such as poor, black, elderly, sick and homeless people could not afford enough resource to cope with the disaster, and had limited mobility to evacuate before the storm.

East Asian countries are gravely responsible for global accumulation of carbon emission. Particularly China became a world top emission country, followed by the United States. Historically it is certain that the United States and European Union are more heavily responsible for the climate change. Moreover, per capita emission of carbon dioxide in China is still very low, compared with the developed countries. But currently East Asian countries China, Japan, Korea are heavy polluters of the atmosphere(China 27%, Japan 3.3%, South Korea 1.7% respectively in 2017). Their speed of increase in carbon emission are very rapid. In addition, East Asian countries are also big consumer countries which also contribute to accumulation of carbon emission. In this sense, East Asian countries are in a position to review consumption as well as production in terms of carbon emission.

China, though high emission country, is also one of the gravest victim of the climate change. Draught in North and West China has been so severe that great number of lakes and rivers in the area already dried up, and the Yellow River, the Mother River of Chinese civi-

lization frequently dried up so that it could not reach the Yellow Sea, before Chinese government strictly controlled the allocation of water supply of the River since the year 2000. The peasants and nomad people could not cultivate or raise livestock, and had to leave their homes---became ecological refugees. On the other hand, in the South and East China, periodically heavy rain and flood destroy people's living, and also people had to leave their hometown. The pollution of micro particles in the air is one of the gravest environmental problems in China and Korea. This is also the result of carbon emission from power plants, factories and transportation means. Micro particles directly attack the physically weak children, old people, poor people that have limited means to mitigate the effects,

It is eventually governments and enterprises that can effectively solve the problem of climate change. However, government and enterprises are more concerned with the economic growth than fundamental issues of climate change. It is evident that the national interests and business chances are sought in the negotiation tables of the COPs which were supposed to counter the climate change. However, it is the citizens of respective countries that can change government policies and control business activities. Some European countries achieved impressive results in climate change, because they form a functioning governance where citizens, business and governments are invited to produce effective policies pertaining to the climate change. Therefore, the climate justice is closely related to democratic participation, not to mention the human rights, justice, and equality. Therefore, citizens' action and participation are most essential starting point for all changes.

In East Asian countries, there is a new political trend: that is, the rise of neo-authoritarianism. Political power vis-a-vis civil society and business world became more and more overwhelming, which is a counter-trend in the age of globalization and post-modernity. Empowerment of civil society is one of most important factors to successfully collaborate with government and business in solving the climate change problems.

Decarbonization of energy system is our most important targets; decommission of coal-fired power plants, change of transportation means. There are some state-led decarbonization in the process in China, because leaders think they are faced with the environmental tipping point or the ecological limits.

East Asian countries are world largest consuming countries. Without massive consumption, massive production will not be followed. To counter the climate change it is essential to radically review our consumption which may not be sustainable. It is the citizens'

role to deal with the consumption side of climate change, without which our production system will not be changed.

In view of climate justice, we have to safeguard the lives of the socially and ecological weak beings, to stimulate the social and economic redistribution, and global and international compensation system, and try to make a transition toward more sustainable society.

I PLENARY SESSIONS

Plenary Sessions (1)

Climate Actions and Climate Governance after Paris Agreement

1:30 PM ~ 3:30 PM | Room 306 Global Hall

Moderator: Dowan Ku (Environment and Society Research Institute)

Discussants: Ajiang Chen (Hohai University), Shu-Fen Kao (Fo Guang University)

Climate Change Governance in Japan: Critical review on Japan's INDC and its energy policy

Koichi Hasegawa (Tohoku University)

Although the 1997 Kyoto Conference was hosted by Japanese government, after then the government and Japan's industrial sector have been reluctant to tackle climate change protection. Especially since the Fukushima nuclear accident in 2011, public concern has gone to electricity issues concerning how to supply electricity and reopening of nuclear plants rather than climate change issues. Even after the historical Paris Agreement was adopted, almost the same policy position is maintained. Why are Japanese government and industrial sector so reluctant to improve the protection? This paper discusses major characteristics of Japan's climate change governance and political, economic, and social backgrounds of this reluctance. This article explores this question by analyzing documents, news articles, and interview data with key players of this issue. The decision making process of the Intended Nationally Determined Contribution (INDC), the 2030 GHG reduction target published in Summer, 2015 was a typical example of the political product of the relatively closed political opportunity structure with small influences of NGOs. This article analyzes the assumption and the real intention of Japan's INDC to be dependent on as many of the nuclear power plants and coal-fired plants as possible.

On GHG emissions, Japan is the fifth largest emitter with 3.5% share following China with 28% share, the US with 15%, India with 6.5%, and Russia with 4.5% in 2016. Germany with 2.3% and South Korea with 1.8% are following. Per capita, Japan is the fourth largest emitter with 9.0 ton following the US with 14.9 ton, South Korea with 11.5 ton, and Russia with 10.0 ton in 2016. Japan's responsibility to reduce GHG emissions looks not so small. On Japan's climate change policy, it has been criticized as very passive attitude to take active

measures like introducing an aggressive carbon tax and carbon pricing system. Central government are reluctant to promote renewable energy resources, whereas it has been stressing the role of coal-fired plants and nuclear plants. Although scholars and environmental NGOs have been seeking "energy transition" prior to the 2011 Fukushima nuclear accident, government and a mainstream economic sector like Keidanren have been negative to such transition to keep their existing interests.

What are political barriers to refrain from energy transition in Japan? The political opportunity structure on climate change policy and energy policy has been very closed. We do not have the real meaning of the system of climate change governance. Though the word of governance is a little bit ambiguous and has a lot of connotations, in the context of environmental governance such as climate change governance, participatory governance has been focused. It stresses democratic engagement through the participation of multiple of stakeholders including NGOs, citizens in the processes of decision-making. Additionally, in Japan, political leadership for tackling climate change issues has been unclear. Most Minister of Environment go in and out for an almost only one year. Prior to taking this role, they were not so familiar with any environmental issues including climate change issues. Simply speaking, they were non-professional, an amateur minister. Remember, current German Chancellor Merkel used to be Minister of Environment from 1994 to 1998 under the Kohl administration. She has been taking an outstanding political leadership in Climate Change politics under her administration since 2005.

Climate Change Governance in Taiwan

- The Transitional Gridlock by a High Carbon Regime

Kuei Tien Chou (National Taiwan University)

Hwa Meei Liou (National Taiwan University of Science and Technology)

The examination of climate governance in Taiwan requires a long term perspective of social transformation - of the triple helix interaction of energy and carbon emissions, industry, and air pollution control, to dissect them. From the challenges faced during the structural transformation of these three facets, we can see the long term efforts and predicaments that the government has faced towards climate policy, and the corresponding criticisms from civil society and their power to reverse decisions.

It is worth analyzing how the policy decision-making of high carbon regimes has continued to revolve around and be stuck in the ideology of the brown economy that had been the dominant drive of the developmental state in the past, and even with the dual vertical

and horizontal pressures of international climate agreements and internal domestic criticisms and demands, this has not directly resulted in structural shake-ups or reversals. What we have to ask is, what the structural impediments are, that have prevented the transformation of governance, that is, from the Asian perspective of cosmopolitan climate governance, it is necessary to analyze which path dependency has resulted in the quandary of national governance and even of social transformation, including that of the developmental state, the politics of authoritarian regimes, the economy's high carbon makeup, the brown energy framework, and the ideology of carbon capitalism behind these. This paper will point out that from the Taiwanese government's earliest response to the 1997 Kyoto Protocol and the first national energy conference that was immediately held in the following year, to the global INDCs made previously under the COP21 declarations in September 2015, and even to the conservative nature of the energy policy reform under the Democratic Progressive Party (DPP), all these demonstrated the long term reliance of the various aforementioned pathways, and the power of this systematic locking-in effect. Other than the predicaments faced by high carbon regimes over the transformation of climate governance, on the societal front, we have instead seen a paradigm shift in the public's perception towards a low carbon society and the various active environmental movements. However, living under a deeply-embedded high carbon economy and brown energy structure has meant that social transformation has been slow-moving and constrained.

Climate Change Governance in Korea: Focusing on the Process of the Establishment of its NDC

Sun-Jin Yun (Seoul National University)

Climate change is a domestic problem as well as a global one which gives impact on the life of all people, consequently requiring participation of all relevant stakeholders in decision-making process. Establishment of Intended Nationally Determined Contribution (INDC) in each country also requires proper process to reflect concerns of all stakeholders in that society. South Korea cannot be an exceptional case. Even though the industrial sector, the biggest energy and electricity consumer, is the major source of greenhouse gas emissions in South Korea and has the most critical interest in the establishment of INDC, representative members of all other sectors have to participate in the process. For they are also sources of GHG emissions and climate policies, in addition to climate change itself, influence their lives. This aspect clearly shows governance approach is required to respond to climate change, in-

cluding INDC establishment. Thus, this study explores how appropriate the process of INDC establishment was in South Korea, what was the criteria to determine the GHG reduction target, and who was allowed to participate in the process. Other than literature review, this study has taken participatory observation and in-depth interviews as main methodologies. As a result, this study figured out there were several problems in the climate governance in establishing INDC in South Korea, in terms of appropriate process, participants and principles for decision-making.

Plenary Sessions (2)

Environmental Sociology in East Asia

1:30 PM ~ 3:30 PM | Room 306 Glocal Hall

Moderator: Seejae Lee (The Catholic University of Korea)

Discussants: Stewart Lockie (James Cook University), Ryoichi Terada (Meiji University),
Juju Wang (National Tsing Hua University)

Recent Methodological Innovations in Environmental Sociology in Japan

A Case of Nuclear Power Plant Disaster and the Evacuation: A Chronology [2018]

Saburo Horikawa (Hosei University)

Japan and other Asian countries/regions seem to have a tradition of making chronologies, while they have a very small place in the Western intellectual tradition. Is chronology a uniquely East Asian style of scholarship? If so, how has that tradition of chronology evolved over time? What are the recent methodological innovations, and how has it contributed to environmental sociology? This paper tries to answer those questions, by examining a recently published chronology on the Fukushima nuclear accident and its aftermath.

Nobuko Iijima, who played a major role during the formative period of Japan's environmental sociology, produced a monumental work titled *Pollution Japan: Historical Chronology* (1977). Its most important feature is the multiple-column chronologies in 5 different areas/subjects: pollution cases, victims' movements, corporate-business circles, local/state governments, and labor movements. With these multiple columns, it is possible to understand the dynamics of a case (or phenomenon or subject), as in the mutual relationships among subjects or the process by which problems and conflicts evolve. One can get a cross-

over view of different fields and can understand reciprocity with these multiple columns. Introduction of multiple columns into chronology is the first methodological innovation.

Chronology helps determine the complete picture of a certain problem or controversy, or its characteristics at certain periods of time. However, as the chronology becomes more detailed as it did in Iijima's *Pollution Japan*, it loses its qualities as a complete picture and its quick-reference value. For example, there are a great many entries pertaining to Minamata disease, but it is extremely difficult, if not impossible, to see the complete picture of this whole saga of mercury contamination. An *Environmental Chronology* (2010) and *A Comprehensive History of Atomic Power* (2014) broke the methodological impasse through introducing "integrated chronologies" and "topic-based chronologies." The former provides a concise overview of Japanese pollution history, whereas the latter offers detailed accounts of, for example, Minamata disease cases to readers who wish to delve deeper into the issue. This is the second innovation.

The Fukushima nuclear accidents of March 11, 2011 ("3.11") have encouraged methodological innovation. The most recent chronology, *Nuclear Power Plant Disaster and the Evacuation: A Chronology* (2018), is a good example of this third innovation in chronology. While *A Comprehensive History of Atomic Power* was designed to scrupulously record the lead-up to the events of "3.11," this volume seeks to detail the trajectory of events following the Fukushima earthquake and nuclear power plant disaster. Among the many findings of *Nuclear Power Plant Disaster and the Evacuation*, one of the most important is the way in which evacuation has separated families, demonstrated by an "evacuation chronology" and "individual evacuation chronologies." The book avoids abstract descriptions of evacuation. Instead, it paints a distinct picture of the challenges of evacuation through the words of the evacuees themselves, who were interviewed by members of the editorial board during fieldwork. These experiences are literally illustrated using original "evacuation diagrams." Integrating geographical and biographical information into chronologies, I argue, is the third (and most recent) methodological innovation.

Environmental Sociology in Taiwan

Shu-Fen Kao (Fo Guang University)

Rapid industrialization and economic development supported by limited environmental controls in Taiwan during the latter half of the 20th century generated what has been famously called the "Taiwan miracle". Yet, while Taiwan has gained great benefits from this industrialization and increased prosperity, this has come at the cost of natural resource deple-

tion and environmental degradation in many aspects since the late 1960s. In response, empirical research on these issues has grown in Taiwan over the last few decades. But a more theoretical reflection has been lacking, thus limiting the ability of existing research to make broader connections among natural and societal processes, conflicting and emergent epistemologies and appropriate policy responses. This paper, therefore, starts by asking what are the most significant environmental problems in Taiwan? And how have sociologists (and other scholars from social sciences) in Taiwan responded to challenges emerging from these environmental issues through their scholarship? In doing so, this paper reviews the environmental-sociological scholarship in Taiwan over the past five decades with a focus on six key areas of environmental-sociological scholarship in Taiwan: (1) environmental consciousness, attitudes, values, behaviors and risk perceptions (2) environmental justice (3) collective actions and environmental movement (4) technological risk, risk communication and risk governance (5) environmental impact assessment, social impact assessment and strategic environmental assessment (6) energy transition. In providing a critical review of environmental scholarship in Taiwan, this paper then discusses how environmental sociologists in Taiwan have incorporated the normative concern of "environmental justice" in teaching, research and public participation and reflect on public sociological implication of "doing environmental justice." (Kao, 2014; Tu et al., 2007).

Environmental Sociology in South Korea

Dowan Ku (Environment and Society Research Institute)

This article aims to review the currents of the environmental sociology and find out the characteristics of environmental problems and social response in South Korea. Eco-Marxist theory, social movement researches on environmental movements, ecological modernization theory and so on were discussed in South Korea. Furthermore, developmentalism and authoritarianism of developmental state were analyzed and green state and ecological democracy were suggested as an alternative to authoritarian developmental state. Nowadays, researches on commons in terms of ecological commons are being developed and the researches on sustainability or energy transition are emerging.

One of important structural cause of environmental problems of Korea is developmentalism which was mobilized by authoritarian state and capital and supported by technocrats. Environmental movements contributed to solve environmental problems and change the authoritarian developmental state to democratic state. However, developmentalism is still strong and economic growth is state imperative in Korea. However,

some progress of energy transition or sustainability transition implemented by the central and local government and civil society can be found. Environmental politics in Korea was sub politics which could protest against and modify the dominant developmental system but could not transform it to ecologically democratic associations.

In conclusion, Korean environmental politics have been dominated by developmentalism, environmentalists could change the political opportunity structure to passively inclusive to environmentalists. Mobilizing the environmental consciousness and risk perception of people and political chances, Korean environmentalists could make safety and environmental sustainability one of state imperatives.

Korean environmental sociologists analyzed environmental problems and social responses as one of social problems in the late 1980s and the early 1990s. They analyzed environmental movements with diverse viewpoints: democratization, anti-capitalist, life-oriented, and new social movement. The structural causes of environmental problems such as capitalism, industrialism, developmental state was discussed in the 1990s and 2000s. Ecological modernization, social economy and so on were suggested as theoretical and practical response to the environmental problems. On the other hand environmental sociologists researched the transforming authoritarian developmental state to green or ecological democratic state

Environmental Sociology Research in China

- Comparing with environmental sociology in Japan and Korea

Ajiang Chen (Hohai University)

China's environment has changed dramatically in the past 70 years. It is believed that Fei Xiaotong's "Chifeng" published in 1984 is the opening work of Chinese environmental sociology. Although Fei does not use the terminology of environmental sociology, he analyzes the grassland desertification from the social structure relationship between agriculture and animal husbandry, farming and nomadic relationship. The social impact of environmental pollution has received extensive attention from Chinese scholars, but there are not many theoretical explorations. Chen Ajiang has an ideal type of "human water disharmony" and discovers the social impact chain of environmental pollution (DDPMC...): environmental degradation-disease-poverty-migration-social conflict. It is possible that Japan's environmental pollution has certain peculiarities. Japan has developed a middle-level theories of detailed and profound analysis of victim structure theory, beneficiary circle and victim circle. Different from the international environmental movements, Chinese scholars choose envi-

ronmental protest as the key terminology and conduct a lot of research on the reactions of people affected by environmental pollution. After the environmental problems eased, they are also keen on environmental governance research. Korean scholars regard environmental movement as the main core research topic of Korean environmental sociology, and the most important environmental sociologists in Korea have set up ENGO to participate in the environmental movement. Similar to the United States, the social cause of environmental problems is one of the core issues of concern to Chinese sociologists. Hong Da's "transformation theory" attempts to analyze the emergence of environmental problems with the transformation of Chinese society. Zhang Yulin's "political and economic integration" attempts to analyze how the relationship between local officials and entrepreneurs affects the environment under China's special assessment system at the time. Chen Ajiang tried to conduct micro-analysis from the perspective of stakeholders and explore the macroscopic historical roots with "secondary anxiety". Finally, the author think that China's sociologist should pay attention to the study based on China's position and Chinese methods.

SESSIONS

Saturday 26th October, 2019

Opening Ceremony

9:15 AM ~ 9:30 AM | Room 306 Glocal Hall

Chair: Sun-Jin Yun (President of Korean Association for Environmental Sociology & Professor, Seoul National University)

Jae-Mook Park

| Chief Director of Daejeon Sejong Institute

Keynote Speech

9:30 AM ~ 10:30 AM | Room 306 Glocal Hall

Moderator: Sun-Jin Yun (Seoul National University)

Adapt, Transition, Transform: The Multiple Temporalities of Social Action on Climate Change

| Stewart Lockie (James Cook University)

Climate Justice and Environmental Movements in East Asia

| Seejae Lee (The Catholic University of Korea)

1-1. Energy Transition and Democracy

10:50 AM ~ 12:20 PM | Room 306 Glocal Hall

Moderator: Iida Tetsunari (Institute for Sustainable Energy Policies)

This session is organized by Seoul National University GSES BK21 Plus.

Energy Transition and Democracy in Japan

| Iida Tetsunari (Institute for Sustainable Energy Policies)

Energy Transition and Democracy in Taiwan

| Tze-Luen Lin (National Taiwan University)

The current status of and challenges to energy transition: from a perspective of energy democracy

| Sun-Jin Yun (Seoul National University)

1-2. Anti-Nuclear Movements in East Asia

10:50 AM ~ 12:20 PM | Room 305

Moderator: Shin-Ock Chang (Jeju National University)

Changes in Perception of Disaster Risks and Attitudes Toward Nuclear Energy Policy: Trends in Public Opinion Surveys and Analysis Using JGSS Data

| Noriko Iwai; Kuniaki Shishido (Osaka University of Commerce)

Post-Fukushima Anti-Nuclear Civil Advocacy: Exploring Sociopolitical challenges in South Korea

| Pinar Temocin (Hiroshima University / Seoul National University)

Public Attitudes towards the Restart of Nuclear Power Plant in Japan: A Postal Survey in Shizuoka Prefecture over Hamaoka NPP

| Takashi Nakazawa; Tomoyuki Tatsumi (Shizuoka University)

1-3. Community, Resilience and Disaster Management

10:50 AM ~ 12:20 PM | Room 205

Moderator: Koichi Hasegawa (Tohoku University)

Evacuation for the Livestock Farmers in Fukushima Nuclear Disaster

| Kyoko Ueda (Sophia University)

Community Governance in Decontamination Programs after the Fukushima Nuclear Accident: Two Case Studies from the Naka-dori Region, Fukushima, Japan

| Takashi Tsuji; Shogo Nakamura; Ryo Tajima; Makoto Ooba (National Institute for Environmental Studies)

Double Failures of Management of Radiation Exposure after Fukushima Nuclear Disaster

| Yayoi Haraguchi (Ibaraki University)

Shifting Connotation of 'Gender Needs' and 'Leading Women's Roles' in Community-based Disaster Risk Management in Japan

| Keiko Ikeda (Shizuoka University)

1-4. Environmental Movements and Risk Politics

10:50 AM ~ 12:20 PM | Room 308

Moderator: Hyun Choe (Jeju National University)

The Status of Japanese Anti-pollution Movements During the Period of High Economic Growth: A Focus on the Role of Jun Ui (1932-2006)

| Yuuki Tomozawa (Nagasaki University)

International Environmental Problems and Asian Perspective for Support and Justice: From the Cases of Toroku, Japan and Bhopal, India

| Ken Fujikawa (Meiji Gakuin University)

The Role of Knowledges Obtained through Hands-on Activities for Resilience of Social and Ecological Systems: A Critical Thinking of Governance from the Fields of Environmental Health Hazard

| Kenji Otsuka (Institute of Developing Economies)

Plenary Sessions (1) Climate Actions and Climate Governance after Paris Agreement

1:30 PM ~ 3:30 PM | Room 306 Glocal Hall

Moderator: Dowan Ku (Environment and Society Research Institute)

Discussants: Ajiang Chen (Hohai University), Shu-Fen Kao (Fo Guang University)

Climate Change Governance in Japan: Critical review on Japan's INDC and its energy policy

| Koichi Hasegawa (Tohoku University)

Climate Change Governance in Taiwan: The Transitional Gridlock by a High Carbon Regime

| Kuei Tien Chou (National Taiwan University); Hwa Meei Liou (National Taiwan University of Science and Technology)

Climate Change Governance in Korea: Focusing on the Process of the Establishment of its NDC

| Sun-Jin Yun (Seoul National University)

2-1. Environmental Politics and Risk Governance

3:50 PM ~ 5:50 PM | Room 305

Moderator: Stewart Lockie (James Cook University)

Path Dependency of Climate Change Induced Disaster Risk Governance Regime in Taiwan: A Case Study of the 823 Flood in The South of Taiwan

| Chiao-Chi Chen; Kuei-Tien Chou (National Taiwan University)

The Evolution of Chinese Environmental Policy and Its Governance Logic under the Perspective of Social Governance

| Chun-tian Lu (Xi'an Jiaotong University)

International Policy Framework for Toxic Chemical Risks and Domestic Anti-toxics Movements in Japan

| Ryoichi Terada (Meiji University)

2-2. Environmental Sociology of Transboundary Environmental Problems

3:50 PM ~ 5:50 PM | Room 304

Moderator: Sanghun Lee (Hanshin University)

Environmental Sociology of Air Pollution: How Particulate Matter Become a Politicized Issue?

| Minjae Kim; Dowan Ku (Environment and Society Research Institute)

Political Ecology of Fine Dust: Focusing on the Debates of Fine Dust in South Korea

| Sanghun Lee (Hanshin University)

A study on the classification of PM 10 vulnerability in South Korea

| Hye-young Shim (Seoul National University)

2-3. Nature in the Anthropocene

3:50 PM ~ 5:50 PM | Room 205

Moderator: Buhm Soon Park (Korea Advanced Institute of Science and Technology (KAIST))

Ethical Study on Digital Humanitarianism in Case of Disaster

| Jiwon Shim (Chung-Ang University)

Conservation in the Anthropocene: Re-envisioning Environmental Studies on the DMZ

| Myung-Ae Choi (Center for Anthropocene Studies, KAIST); Buhm Soon Park (Korea Advanced Institute of Science and Technology (KAIST))

The Changing Role of the Judiciary in the Anthropocene Era: Observations from the 10-Year Case of Siaolin Village

| Nee Mau-Ting; Kuei-Tien Chou (National Taiwan University); Hwa-Meei Liou (National Taiwan University of Science and Technology)

Visual Arts and Environment: Conceptualizing and Visualizing Nature and Environment in Japan

| Mika Merviö (Kibi International University)

2-4. Community and Environmental Movements

3:50 PM ~ 5:50 PM | Room 308

Moderator: Shu-Fen Kao (Fo Guang University)

Consideration on the Possibility of Social Inclusion through Community Collaborative Education in the Informal Sector: Through the Practical Case of Waste Pickers in Khulna City, Bangladesh

| Hideki Sato (Edogawa University)

The Problem of Aging Environmental Volunteers: A Case Study on the Environmental Preservation Groups Associated with Lake Kasumigaura, Japan

| Nana Ono (Wako University)

The Waning of Fishing Community and the Touristic Transformations of Coastal Lines of Jeju Island – An Environmental Sociological Insight

| Shin-Ock Chang (Jeju National University)

Sunday 27th October, 2019

3-1. Politics of Energy Transition in East Asia (1)

9:00 AM ~ 10:30 AM | Room 306 Global Hall

Moderator: Ryan Gunderson (Miami University)

Political Barriers to Energy Transition in Japan

| Koichi Hasegawa (Tohoku University)

The Challenges of Energy Transition in Taiwan: Regulatory and Social Perspectives

| Shu-Fen Kao (Fo Guang University)

Energy Democracy and Social Communication: Referendum on Pro and Anti Nuke in Taiwan

| Juju Wang (National Tsing Hua University)

3-2. Water Policy and National Archive in East Asia (1)

9:00 AM ~ 10:30 AM | Room 304

Moderator: Sanghun Lee (Hanshin University)

This session is organized by SNU Center for Asian Urban Societies.

Image Transition of the Displaced: Analysis of NHK TV Documentary

| Hamamoto Atsushi (Toyo University)

Documentary <Big Three Gorges> and the High Modernism in Contemporary China

| Chul-Hyun Park (Kookmin University)

Discourses on a Dam Issue: Based on NHK Documentary from the 1980s to 2000s

| Sayaka Mori (Kochi University)

3-3. Commons and Sustainability Transition (1)

9:00 AM ~ 10:30 AM | Room 305

Moderator: Jiwon Shim (Chung-Ang University)

Exploring an Innovative Mechanism for Ecological Conservation with Perspective of Community Participation : Based on Case Study of Mangrove Conservation in Zhanjiang

| Qian Wang (Global Environmental Institute)

Community Perceptions Towards Risks and Benefits of a Saltmarsh Restoration Project: Learning from a Case Study in the UK

| Hiromi Yamashita (Ritsumeikan Asia Pacific University); Naoyuki Mikami (Hokkaido University)

The Utilization of Marine Resources and the Changes of the Relationship Between Man and Sea

| Hu Liang; Chen Jiaying (Hohai university)

The Functional Decline of Karez: Evolution of Human-Water Relationship in Arid Areas

| Feng Yan (Shaanxi Normal University)

3-4. Just Transition and Energy Democracy (1)

9:00 AM ~ 10:30 AM | Room 308

Moderator: Chun-tian Lu (Xi'an Jiaotong University)

Governing Coal Transition in Japan, China and India: Solutions for Just Transition

| So-Young Lee; Kentaro Tamura; Xianbing Liu; Zhen Jin; Nandakumar Janardhanan; Akihisa Kuriyama (Institute for Global Environmental Strategies); Diego Silva Herran (National Institute for Environmental Studies)

Crisis Perception on the Economic and Social Impact of Nuclear Power Plant Decommissioning: The Case of the First Nuclear Power Plant Decommissioning in Taiwan

| Daixi Wang (Nagoya University)

How can we Mitigate Impacts of Nuclear Phase-out to Nuclear Host Municipalities?

| Yoichi Yuasa (Kanto-Gakuin University)

3-5. Environmental Consciousness and Ecological Citizenship

9:00 AM ~ 10:30 AM | Room 205

Moderator: Soonyawl Park (Urban Regeneration Institute)

Sustainable Living in Chinese Mainland: Rationale, Vision, and Implication

| Felix Sai Kit Ng (Humboldt University of Berlin)

Public Deliberation on ‘Decarbonization Transition and the Quality of Life’: Insights from a Mini-public Experiment in Japan

| Naoyuki Mikami (Hokkaido University); Ekou Yagi (Osaka University); Seita Emori (National Institute for Environmental Studies); Tetsuki Tamura (Nagoya University); Masahiro Matsuura (Meiji University); Yasushi Ikebe (National Museum of Emerging Science and Innovation); Mitsuru Kudo (Osaka University); Akane Iwasaki (National Institute for Environmental Studies)

Making Social Influence: Message Effects of PM Reducing Behavior with Normative Appeals

| Seona Park; Hyun Suk Kim; Sun-Jin Yun (Seoul National University)

4-1. Politics of Energy Transition in East Asia (2)

10:50 AM ~ 12:20 PM | Room 306 Glocal Hall

Moderator: Kuei-Tien Chou (National Taiwan University)

Transformative Policy Mixes for Long-Term Decarbonization in Taiwan

| Chia-Wei Chao; Kuei-Tien Chou (National Taiwan University)

Pursuing Energy Democracy: The Role of Taiwan’s Anti-Nuclear Groups in Energy Transition

| Hua-Mei Chiu (National Sun Yat-sen University)

The Forming of Counter-Discourse Through Citizen-Expert Cooperation: The Case of Zero-Energy Buildings

| Miseong Cho; Sun-Jin Yun (Seoul National University)

4-2. Water Policy and National Archive in East Asia (2)

10:50 AM ~ 12:20 PM | Room 304

Moderator: Jin-Tae Hwang (Seoul National University Asia Center)

This session is organized by SNU Center for Asian Urban Societies.

The Representation of Soyang Dam as State-nature in National Films during the Park Chung-Hee Regime

| Jin-Tae Hwang (Seoul National University Asia Center)

The Developmentalism and National Films in Dam Construction in Korea

| Eun-hye Kim (Pusan National University)

Production and Consumption of Green-growth Landscape: Analysis on the 4 Major Rivers Project Promotion Videos

| Sanghun Lee (Hanshin University)

Quantifying River Water, Rationalizing Dam Constructions: How South Korea Has Become a Dammed Nation

| Seohyun Park (Virginia Tech)

4-3. Commons and Sustainability Transition (2)

10:50 AM ~ 12:20 PM | Room 305

Moderator: Carl Middleton (Chulalongkorn University)

The Conservation of SATOYAMA and Reforming of Commons: the Actors and Activities of Producing Firewood

| Takahashi Satoka (Tohoku University)

Sustainable Development through the Lens of Historical Environmental Conservation: From the Case of Urban Regeneration in Daegu, Korea

| Rie Matsui (Atomi University)

How East Asian Regionalism Connects Ecologies and Societies through Global Commodity-commons Chains

| Carl Middleton (Chulalongkorn University); Takeshi Ito (Sophia University)

4-4. Just Transition and Energy Democracy (2)

10:50 AM ~ 12:20 PM | Room 308

Moderator: Tze-Luen Lin (National Taiwan University)

Driving Motivations for Energy Transition: Case Study of Community Power and Green Electricity in Japan

| Yasushi Maruyama (Nagoya University); Makoto Nishikido (Hosei University)

Public Pathway to Energy Transition in Korea

| Deokhwa Hong (Chungbuk National University)

Building New Energy Culture: How Community Colleges Overturned the Citizen's Energy Behaviors in Taiwan

| Ying-Feng Chen (Chinese Culture University); Shixi Jiang (Shantou University)

4-5. Climate Change and Social Actions

10:50 AM ~ 12:20 PM | Room 205

Moderator: Ajiang Chen (Hohai University)

Livelihood Impact and Community Response of Lake Level Rise with the Climate Change: Taking the Villages around the Selin Lake as an Example

| Ajiang Chen; Zhao Wang; Wei Zhou (Hohai University); Xiaobing Yan (Changzhou University)

The Developmental State's Legacy and Corporation Carbon Emission Performance: The Evidence from Taiwanese Firms from 2014-2017

| Chung-Pei Pien; Chia-Wei Chao; Kuei-Tien Chou (National Taiwan University)

Who Wins?: Climate Adaptation Conflict in Central Stockholm

| Atsushi Nozawa (The University of Tokyo)

Climate Change Awareness and Energy Use in the Southeast Asian Countries

| Midori Aoyagi (National Institute for Environmental Studies)

Plenary Sessions (2) Environmental Sociology in East Asia

1:30 PM ~ 3:30 PM | Room 306 Glocal Hall

Moderator: Seejae Lee (The Catholic University of Korea)

Discussants: Stewart Lockie (James Cook University), Ryoichi Terada (Meiji University),

Juju Wang (National Tsing Hua University)

Recent Methodological Innovations in Environmental Sociology in Japan

| Saburo Horikawa (Hosei University)

Environmental Sociology in Taiwan

| Shu-Fen Kao (Fo Guang University)

Environmental Sociology in South Korea

| Dowan Ku (Environment and Society Research Institute)

Environmental Sociology Research in China: Comparing with environmental sociology in Japan and Korea

| Ajiang Chen (Hohai University)

5-1. Energy Technology from the Perspective of Environmental Sociology

3:50 PM ~ 5:50 PM | Room 306

Moderator: Sun-Jin Yun (Seoul National University)

Seoul's Energy Innovation and Challenges

| Jungmin Yu (Seoul Institute)

Can Carbon Capture and Storage Contribute to East Asia's Energy Transition?
Socio-ecological Considerations

| Ryan Gunderson (Miami University)

Lessons and Implications of Off-shore Windmill Development in UK

| Sangyun Lee (Korea Environment Institute)

5-2. Disaster and Environmental Victimization

3:50 PM ~ 5:50 PM | Room 308

Moderator: Juju Wang (National Tsing Hua University)

Becoming Victim of Residents around the Nuclear Power Plant: A Study on the Lawsuit of Kyundo's Family

| Woo-Chang Kim (Seoul National University)

How Was the Law Mobilized after the Injury? A Social-Legal Study of "Oil Disease" (1979-2016)

| Shan Ya Su (National Taiwan University)

Rethinking Expert's Role as Advocate after the Humidifier Disinfectant Disaster in Korea

| Jinyoung Park (Seoul National University); Dowan Ku (Environment and Society Research Institute)

The Long-term Social Impact of Environmental Disaster: The Scenes of Fishing Village after 11 Years from the Hebei Sprit Oil Spill Accident

| Do Kyun Kim; Eun-Ju Seo (Korea Environment Institute); Jeong-rim Lee (Daejeon Institute for Civil Society Research)

5-3. re-Framing Food

3:50 PM ~ 5:50 PM | Room 305

Moderator: So-Young Lee (Institute for Global Environmental Strategies)

Discussant: Seejae Lee (The Catholic University of Korea)

The session is supported by the Environment Research and Technology Development Fund S-16 "Policy Design and Evaluation to Ensure Sustainable Consumption and Production Patterns in Asian Region".

Thoughts of Food: Listening to (In)consistent Narratives on (Un)sustainable Practices

| Atsushi Watabe (Institute for Global Environmental Strategies)

Reclaiming Food as Commons: Sociological Lessons from Japan

| Masashi Tachikawa (Nagoya University)

Motivations of Followers for Sustainable Agriculture Based on a Local Farmers Group

| Satsuki Tanikawa (Tokyo University)

Seeking Sustainable Food in the City

| Chul-Kyoo Kim (Korea University)

| ABSTRACTS

1-1. Energy Transition and Democracy

10:50 AM ~ 12:20 PM | Room 306 Glocal Hall

Moderator: Iida Tetsunari (Institute for Sustainable Energy Policies)

This session is organized by Seoul National University GSES BK21 Plus.

Energy Transition and Democracy in Japan

Iida Tetsunari (Institute for Sustainable Energy Policies)

Energy Transition and Democracy in Taiwan

Tze-Luen Lin (National Taiwan University)

The current status of and challenges to energy transition: from a perspective of energy democracy

Sun-Jin Yun (Seoul National University)

The current Moon Jae-in government became the first government in Korean history which adopted "energy transition" as a national policy agenda. The commitment to "clean and safe energy," composed of "phasing-out aged coal-fired power plants, phasing-out aged nuclear reactors and no more construction of new nuclear reactors, and expansion of 20 percent renewable energy electricity by 2030," of the presidential candidate Moon Jae-in in the 19th presidential election took top first public support at the first policy shopping mall, so-called 'Moon Jae-in's First Street of Policy Promises.' The commitment was renamed as energy transition and became one of 100 national political agendas in the Moon government. Nevertheless, energy transition policy is still controversial in Korea. After public engagement process of Shingori 5 and 6 reactors, construction of those two reactors was resumed but construction of planned all other new nuclear reactors was canceled out. Instead, the government announced the road map of "Renewable Energy 3020," which means expansion of renewable energy electricity 20% by 2030. Pro-nuclear camp has strongly resisted against the government's decision for the reasons of loss of nuclear export markets, collapse of nuclear industrial ecology and loss of relevant jobs, and local economy retreat. Oppositional parties, except for justice party, have criticized the Moon government's energy

transition, especially nuclear phase-out policy. On the other hand, however, supporters for energy transition in civil society have been growing. Energy Transition Forum Korea was established, in which actors from diverse sectors, including energy experts, civil actors, business people, lawyers, politicians, participate. For energy transition at the local level, nation-wide network for local energy transition and a local governments' council for energy policy transition were initiated. The ruling party established a special committee responding to climate change and developing energy transition industry. Most public opinion surveys have shown support for energy transition. Since energy transition is one of changes in socio-technical system, it requires changes in laws, institutions, policies, and even social values as well as technics. Therefore, there are still lots of challenges ahead of energy transition. Pro-nuclear camps, mostly composed of nuclear engineers, nuclear industries, and conservative and economic newspapers, has strongly resisted against energy transition policy of the government. There are lots of fake news that interferes with energy transition. In addition, nation-wide conflicts around installation of PVs and wind farms have occurred. There are green to green conflicts, which means some conventional environmental groups resist against construction of PVs and wind farms on the reason that such works destroy the natural environment and living space of local residents. Conventional institutions, organizations, laws and policies are still behind in pushing urgent energy transition. Korea is in a very difficult situation now. The conventional socio-technical system and alternative one are in bitter conflicts and struggling.

1-2. Anti-Nuclear Movements in East Asia

10:50 AM ~ 12:20 PM | Room 305

Moderator: Shin-Ock Chang (Jeju National University)

Changes in Perception of Disaster Risks and Attitudes Toward Nuclear Energy Policy: Trends in Public Opinion Surveys and Analysis Using JGSS Data

Noriko Iwai (Osaka University of Commerce)
Kuniaki Shishido (Osaka University of Commerce)

This paper examines the trends in people's perception of disaster risk, fear of nuclear accidents, recognition of pollution issues, and their attitudes toward nuclear policies based on nationwide public opinion surveys which have been carried out by the government (cabinet office), major media (national newspapers and NHK), Japanese General Social Surveys, and the Atomic Energy Society of Japan. The Great East Japan Earthquake and the

Fukushima nuclear accident has heightened people's perception of disaster risks, fear of nuclear accidents, and increased recognition of pollution issues, and has changed public opinion on nuclear energy policy.

- Seventy-eight percent of people felt some fear that a major earthquake would occur a half year after the disaster and three years later.

- More than two-thirds of people believed the number of nuclear power plants should be reduced or abolished one year after the Fukushima nuclear accident and four years later.

- The opinion gap on nuclear energy policy between specialists and lay people has widened by the accident and has not been reduced after 3 years.

- A majority of people opposed the re-opening of the nuclear power plants in which their safety has been confirmed four years after the accidents.

- Eighty-one percent of people think it possible that a nuclear accident requiring an evacuation of the residents would happen even with the nuclear power plants that meet the new regulation in Oct.2014.

- The proportion of people who refrain from buying produce grown in Fukushima is 23% while 72% of people do not care four year later.

- The demand for electrical power was 906.4 billion kWh in 2010 but it decreased 5.1% in 2011, another 1.0% in 2012, 0.4% in 2013 and 3.0% in 2014 to bring it to 823.0 billion kWh. Both household use and commercial use has decreased. The level of commitment to energy saving is found to relate to opinions on nuclear issues (JGSS-2012) .

The paper will also discuss the factors related to people's attitudes toward nuclear policies based on JGSS-2012 and JGSS-2018 data.

Post-Fukushima Anti-Nuclear Civil Advocacy: Exploring Sociopolitical challenges in South Korea

Pinar Temocin (Hiroshima University / Seoul National University)

The Fukushima nuclear accident (3/11) has reinvigorated public engagement in anti-nuclear mobilization in East Asia and played a role as a "catalyzer" of nuclear-related debate. For the case of South Korea public attention and skepticism have become visible with the aim of reduction of nuclear dependency in the post-Fukushima era. However, anti-nuclear civil society faced some challenges and limitations due to the nature of indigenous politics and society. To fully understand those societal issues embedded in the society, there is a need to look at the blockages of social characteristics and institutional constraints on the continuation of nuclear energy production supported by the Korean government.

This research is theoretically framed under the political opportunity structure and resource mobilization approach. It analyzes why anti-nuclear advocacy with the underlying socio-political factors (including the shortcomings in pressure strategies and the top-down nature of nuclear energy policymaking) has failed to curb nuclear energy production in South Korea. To address this question, political tradition that hinders the counter-mobilization process, the public perception on nuclear energy after 3/11, `outcomes` of collective actions and mobilization strategies based on action repertoires, and the degree of `impacts` of public engagement in policy-making are considered.

Although research on anti-nuclear mobilization after Fukushima in South Korea is limited, this research sheds light on a better understanding of 'politics of radiation`, which could be viewed as one of the most promising avenues in anti-nuclear pacifist literature.

Public Attitudes towards the Restart of Nuclear Power Plant in Japan: A Postal Survey in Shizuoka Prefecture over Hamaoka NPP

Takashi Nakazawa (Shizuoka University)

Tomoyuki Tatsumi (Shizuoka University)

The purpose of the research is to explore public attitudes towards the restart of Hamaoka nuclear power plant (NPP). The resumption of NPPs has been a crucial issue in the environmental and energy politics in Japan since Fukushima Daiichi Nuclear Disaster. After the Fukushima disaster in 2011, all of the nuclear reactors in Japan stopped operation. Recently, some of the NPPs has resumed operation and more are in the process.

Hamaoka NPP is located in Omaezaki city, Shizuoka prefecture. Chubu Electric Power constructed the first reactor in 1976. Today, Hamaoka NPP has five reactors, while the first and second reactors are under the decommission process. After the Fukushima nuclear disaster, Prime minister Naoto Kan requested Chubu Electric Power to halt the fourth and fifth reactors, and not to restart the third one which was under regular inspection. As of April 2019, the third and fourth reactors are under examination by the New Regulatory Requirements.

Public attitudes are a significant factor for the resumption of NPPs as local agreement is a critical part of the resumption process. Although the central government is the one which regulates and supervises nuclear power, the resumption process conventionally requires local agreement, at least from the prefectural and municipal governments. In addition, as for Hamaoka NPP, conducting a prefectural referendum over the resumption has been discussed. Therefore, elucidating how people in Shizuoka prefecture think of the re-oper-

ation and exploring factors affecting their attitudes contributes to better understanding of the environmental and energy politics over nuclear power in Japan.

For this purpose, we conducted a postal survey of 5,000 citizens in Shizuoka prefecture in March 2019. The survey asked whether they agree or disagree with the resumption of Hamaoka NPP as well as their attitudes towards energy policy and decision making. Survey participants were randomly chosen from the electoral rolls of all towns and cities in the prefecture. Finally, we received 2,109 replies by 12th April 2019.

The result shows about 21.4% agree and 48.7% disagree with the re-operation while the other 29.9% cannot tell. The research analyses how the result is related to their positions to energy and nuclear power as well as their social attributes including ages, genders, occupations, and education levels. It also investigates geographical difference over the attitudes to the re-operation of Hamaoka NPP.

1-3. Community, Resilience and Disaster Management

10:50 AM ~ 12:20 PM | Room 308

Moderator: Koichi Hasegawa (Tohoku University)

Evacuation for the Livestock Farmers in Fukushima Nuclear Disaster

Kyoko Ueda (Sophia University)

The paper discusses how the nuclear power plant accident occurred on 11 March in Fukushima, Japan, affected the livestock farmers. After 8 years since the Fukushima-daiichi nuclear disaster, the number of livestock farmers are diminishing. Those who lived within a radius of 20km from the power plant were forced to immediately evacuate and euthanize all the livestock. Whereas, away from the site nearly 30km, there were livestock farmers who were forced to evacuate but could lawfully move their livestock out of 30km radius and continue breeding and raising them as long as they pass the screening test.

Despite this seemingly hopeful option, most of them discontinued their livestock farming. With relatively preferable conditions than in the municipalities which host the power plant, why did they need to stop their farmers' life just like those who were within a radius of 20km from the site? This paper investigate the obstacle that the livestock farmers in two municipalities (more precisely, inhabitants of two villages within the evacuation zone, Iitate and Katsurao) needed to overcome if they choose to continue their livestock farming away from their original villages.

Moreover, after the evacuation order is lifted nearly 6 years after the accident, more than 90% percent of livestock farmers and more than 70% of villagers did not return to the original place (as of November 2018).

By closely looking at the farmers who could possibly move their livestock out of the affected area but eventually didn't, the paper attempts to clarify what did the evacuation mean for the livestock farmers who had suddenly become evacuees on 11 March 2011 in Fukushima. The study eventually seeks for a power relationship lying between two industries, primary industry and the nuclear power generation.

Community Governance in Decontamination Programs after the Fukushima Nuclear Accident: Two Case Studies from the Naka-dori Region, Fukushima, Japan

Takashi Tsuji (National Institute for Environmental Studies)

Shogo Nakamura (National Institute for Environmental Studies)

Ryo Tajima (National Institute for Environmental Studies)

Makoto Ooba (National Institute for Environmental Studies)

Decontamination is one of the main methods that eliminates radioactive material and reduces radiation exposure in living areas. Since the Fukushima Nuclear Accident, evacuation zones have been set up in high radiation areas. The Japanese government has directly conducted decontamination programs in evacuation zones. In many areas outside the evacuation zone, decontamination was left to stakeholders in local communities such as municipal administrations, neighborhood associations, and citizens' groups. These stakeholders determine the procedure and contents of decontamination programs with coordination and cooperation from each local community. Therefore, it is important to focus on community governance in the decontamination policy process.

Previous research suggests that consensus building in decontamination programs is difficult. No absolute "safe level" of radiation exposure exists. Furthermore, there were no legislative systems to promote decontamination programs in local communities before the accident. Therefore, conflicts among stakeholders—about the decontamination method, decontamination waste management etc.—are common in local communities affected by radioactive contamination following the Fukushima Nuclear Accident. Conversely, some studies have highlighted that municipal administrations and residents should communicate from the occurrence of the accident until the formulation of the decontamination implementation plan, which will ensure that the decontamination programs proceed smoothly. However, little research has been conducted to explore the kind of institutions and methods used for

communication among municipal administrations and residents in the decontamination programs.

The aim of this study is to explore the influence of community governance on the determination of decontamination programs in local communities, focusing on Miharu-town and Koriyama-city in Naka-dori region, Fukushima prefecture. Little difference on the extent of radioactive contamination between these two municipalities after the accident was observed; however, there was a difference between the procedure and contents of decontamination programs. This study is based on fieldwork undertaken in Miharu-town and Koriyama-city. Data were gathered from local documents and interviews. Interviews were conducted with municipal administrations and neighborhood associations in charge of decontamination programs post the accident.

Results showed that the procedure and contents of decontamination programs were formulated based on organizational cooperation among municipal administrations and neighborhood associations in both municipalities. Immediately post the accident, neighborhood associations participated in the process of decontamination programs in these two municipalities. Networks comprised several neighborhood associations; these networks tackled decontamination in educational facilities and school routes. In some districts, neighborhood associations participated in the decision and management of temporary storage yards for waste generated by decontamination programs. However, in addition to these institutional factors, factors related to land use in living space influenced the procedure and contents of decontamination programs. This defined the difference between installation method of temporary storage yards in Miharu town and Koriyama City. Findings suggest that the relationship between community governance and land use deserves more attention, as do other environment problems.

Double Failures of Management of Radiation Exposure after Fukushima Nuclear Disaster

Yayoi Haraguchi (Ibaraki University)

After a series of explosions of Fukushima Nuclear Power Plants, we face complex and serious issues at both levels of individuals and communities. One of the complex and serious issues is a health issue relating to radiation exposure. At this presentation, we would like to discuss how the health issue have been recognized and responded in the discourse of the risk itself and risk management, relating to individual radiation exposure.

According to the official reports, more than 200 children were diagnosed as Thyroid

cancer through the medical survey operated by Fukushima Prefecture. It is not easy to conclude that there is a causal relationship between the rapidly increasing number of onset and the radiation exposure after Fukushima nuclear disaster. To reach a conclusion, we need to carefully discuss many possibilities with good data. However, the Japan government and Fukushima Prefecture have taken a stance that there seems no increase of thyroid cancer due to Fukushima nuclear accident, since they recognize that the individual's dose of radiation exposure after nuclear power plant explosion was relatively low compared to that of Chernobyl.

On the other hand, there is a question whether radiation exposure management and measurement was performed appropriately after the accident. With terrible confusion, measurement of individual dose of radiation exposure was not performed by local government and nuclear technocrats in the way that Plan for Nuclear Emergency Preparedness described. However, it is very seldom that the failure of radiation exposure management was mentioned in the reports published by the governmental body.

Now the government has been revised Plan for Nuclear Emergency Preparedness since 3.11. However, the proposed plan of radiation exposure management seems to be more lax, compared to pre-3.11 management plan. The idea that the individual dose of radiation exposure should be measured, collected and reported has not been clearly suggested in the Revised Plan for Nuclear Emergency Preparedness. We would like to point out that double failure of the actual management and its recognition may cause the next problem. The failure of radiation exposure management will be officially allowed under Plan for Nuclear Emergency Preparedness in the future, since the revised plan would omit the idea of the strict management of individual radiation exposure.

We would like to see how the discourse above has impacts on the discussion about re-operation of nuclear power plants in Japan.

Shifting Connotation of 'Gender Needs' and 'Leading Women's Roles' in Community-based Disaster Risk Management in Japan

Keiko Ikeda (Shizuoka University)

This paper seeks to illustrate notable features of female leaders, their activities and positions in community-based disaster risk management organizations in Japan. It intends to offer the key to an understanding of enabling environment that women are accepted as disaster managers by the community, and gender-and-diversity-responsive disaster management policies fully function.

Based on hard-won lessons from the Great East Japan Disaster (2011), the government of Japan amended its Basic Disaster Management Plan and the Basic Plan for Gender Equality so as to accommodate different needs of women and men, at the same time to promote women's participation at all stages of the disaster cycle. This policy was embodied in operational guidelines issued by the national government, such as the guideline for management of evacuation centers, emergency stockpiles supplies, training of local disaster managers and others.

However, there are considerable gap between policies and practices. According to a recent survey research with all local governments in Japan on progress of gender mainstreaming in local disaster risk management policies in which the author is a member of the survey team (Osawa eds., 2019), there is remarkable difference of progress between national and local governments. Among local governments, progress of municipal governments was slower than prefectural governments. When it comes to community-based disaster organizations, the progress is even slower.

Community organizations for disaster management (*jishubousaikai*) in Japan are conventionally established under each residents' association (*jichikai*) or neighbourhood association (*chounaikai*). Men in their 60's and 70's, retired but active, are the main members of *jishubousaikai*. Women of the same generation also participate in activities of *jishubousaikai*, but they are seldom engaged in decision-making because of strict gender divisions of labour that characterize this generation. Younger generations with more egalitarian gender attitudes are generally not very interested in disaster management activities. Although community organizations for disaster management in Japan has been an object of study for a long time, little is known about women's participation and their activities, especially after major policy amendments following the Great East Japan Disaster.

Through case studies of three *jishubousaikai* where active and voluntary female leadership are observed, this paper investigates how some basic ideas on 'gender needs' (Moser 1993) and 'female leadership' differs among key actor in different layers of disaster risk management governance to shape gap between policies and practices. In the policy documents, 'strategic gender need' are emphasized to promote decision-making power of women, but in the grassroots level, 'practical gender needs' which are in line with conventional gender norms and division of labour are given more importance. The female leaders utilize the community discourse to legitimize their new leadership role as disaster managers, which gives clue to bridge the gap of policies and practices. The data were obtained from key informant interviews in three communities in in Shizuoka Prefecture, where another gigantic Tokai Earthquake is predicted to occur.

1-4. Environmental Movements and Risk Politics

10:50 AM ~ 12:20 PM | Room 308

Moderator: Hyun Choe (Jeju National University)

The Status of Japanese Anti-pollution Movements During the Period of High Economic Growth: A Focus on the Role of Jun Ui (1932-2006)

Yuuki Tomozawa (Nagasaki University)

Japan's experiences with industrial pollution during the period of high economic growth (from roughly 1955 to 1973) stimulated public awareness of the issue. In a short span of time, numerous local groups were born and influenced public anti-pollution opinions. There have been many investigations into people's actions in four major pollution incidents (which caused such ailments as Minamata disease, Niigata Minamata disease, Yokkaichi asthma, and Itai-itai disease). In comparison, assessment of situations encountered by smaller, local movements lags behind.

This paper analyzes a survey of annual reports on pollution (kogai nen-kan 公害年鑑) published between 1971 and 1981. I extracted lists of local movements from these ten years of annual reports, combining them to make a provisional list. This study had five main purposes: (1) to calculate the number of anti-pollution movements existing in the ten years between 1971 and 1981; (2) to classify those movements by their goals; (3) to discover the organizational bases of the groups; (4) to identify interactions between groups from various areas; and (5) to examine the role of intellectuals in the social networks of local movements.

By 1972, local residents had launched at least 481 groups to either protest against pollution or to protect nature and human life. Several of these organizations played important roles in the formation of inter-regional networks. They were responsible for spreading environmental strategies, such as how to stop the building of thermal power plants. Several groups issued self-published magazines to present their claims and current situations to outsiders.

I would like to focus on the role of one intellectual, Ui Jun (1932-2006) in these movements. Ui Jun gave up his career in the academic world because of the environmental injustices he witnessed in Minamata and Niigata between 1959 and 1965. He and his supporters organized independent lectures (named KOGAI GENRON) on pollution from the 1970s to the 1980s, providing information to local movements throughout the country. He devoted his life to assisting grassroots movements and giving them ample advice. He was

proud of the fact that he had never received national research funding. He also served as an informal adviser to Nobuko Iijima, a leading Japanese environmental sociologist. This seems to suggest the importance of clarifying the process of network formation between intellectuals.

Based on the facts which have been presented herein, I am considering ways to proceed synthetically with my research.

International Environmental Problems and Asian Perspective for Support and Justice: From the Cases of Toroku, Japan and Bhopal, India

Ken Fujikawa (Meiji Gakuin University)

Justice is an important matter for solution process of environmental problems as well as for the occurrence of pollution and health damage. Many victims are suffering from discriminations after the causation of the pollution become clear. The survivors have been forced to long-term struggles, and, it is not easy for the damaged people to keep their action, particularly in Asia. This report shows two cases of international support for suffering people in polluted and poverty communities.

Asia Arsenic Network (AAN) is a non-profit organization based in Miyazaki, Japan, helping the people of arsenic contaminated area in Asian countries. AAN was born from a support group for the victims of Toroku arsenic poisoning in Miyazaki. Toroku is a remote mountain hamlet in Miyazaki and the poisoning patients had been neglected for about five decades till 1970s. The original members of AAN had supported the aged victims who made a judicial trial in 1975. After the settlement of the suit in 1990 they began to support the Asian peoples, because they had learned that there are many arsenic pollutions particularly in south Asia, and that many poisoned people are suffering without any medical care, notice, knowledge about the disease nor preventive measures. AAN supports the locals to keep clean water and to improve living conditions.

Bhopal gas tragedy is the worst industrial accident in the world that occurred in 1984. Many victims have been neglected for more than 30 years. International Appeal for Bhopal was published in newspapers in the UK about ten years after the accident and world-wide support networks were organized since then. Bhopal Medical Appeal (BMA), based in the UK, have supported free medical care clinic and rehabilitation center administrated by the trust of gas victims and have condemned the irresponsibility of the company with the victims' movement. International Campaign for Justice in Bhopal (ICJB), is a coalition that is comprised of survivors of the disaster, international volunteers, and environmental, social

justice and human rights groups, such as BMA, Pesticide Action Network, Amnesty International, Greenpeace International and so on.

Both BMA and AAN have concerned with the theme of global justice, disparity and poverty while working in particular communities with the sufferers. I will consider how they can widen the scope of environmental justice and environmental movements.

The Role of Knowledges Obtained through Hands-on Activities for Resilience of Social and Ecological Systems: A Critical Thinking of Governance from the Fields of Environmental Health Hazard

Kenji Otsuka (Institute of Developing Economies)

Understanding the social and ecological systems is critical to seek resilience from its deterioration and destruction. Especially, human health hazard caused by environmental pollution poses difficult questions for our society from the past to present due to the complexity of cause-effect relations, interactions between institutions as well as stakeholders. This paper focuses on governance and knowledges in the complexity of social and ecological systems where environmental health hazard occurs. One of the cases in this paper is the Minamata Disease in Japan. As known widely at now, the Minamata Disease has been caused by methyl mercury poisoning accumulated in fishes through the ecological chain after persistent disposal of untreated wastes with mercury from the factory. In both Minamata Diseases occurred in Kumamoto and Niigata, it wasted time to settle the cause-effect relation of the disease through law courts although hands-on activities by some clinicians and scholars were aware of the relation. It should also be noted that such cause-effect relation was coincident with the observations by residents. Another case in this paper is a “cancer village” in the Huai River Basin, China. The China Center for Disease Control and the Institute of Geographic Sciences and Natural Resources Research of the China Academy of Science jointly published their academic research results, including digital map data, and revealed a clear association between the heavy water pollution in the area and the digestive cancer death rate in the basin. From an epidemiological perspective, a cause-effect relationship between the increasing water pollution and the digestive cancers in the basin has been suggested, although there are still many “missing links” to provide further scientific evidence. In this case, it should be noted that practices of local environmental NGO based on social and ecological knowledge have also played an important role in this national survey, however, it took over a decade to reveal the fact since the founder of the ENGO has appealed it to the media. Taken as these cases, this paper discusses why the social and ecological knowledges through

obtained hands-on activities are easily disregarded and how such knowledges could be integrated in the environmental governance.

2-1. Environmental Politics and Risk Governance

3:50 PM ~ 5:50 PM | Room 305

Moderator: Stewart Lockie (James Cook University)

Path Dependency of Climate Change Induced Disaster Risk Governance Regime in Taiwan: A Case Study of the 823 Flood in The South of Taiwan

Chiao-Chi Chen (National Taiwan University)

Kuei-Tien Chou (National Taiwan University)

In recent years, climate change has caused large-scale, transboundary and cross-sector impacts in Taiwan. Although there are already many completed climate change risk studies in Taiwan, the scientific knowledge and results of these studies still haven't been successfully applied to the social issues that are affected by climate change. In addition, the fact that there are still many engineering approaches being undertaken that do not take climate change impact management into account shows how necessary it is for more dialogue and cross-domain communication amongst risk management stakeholders and decision makers. The top-down and expert-oriented risk communication methods common in our society are not responsive and flexible enough to reduce the impacts of climate change. Our society is therefore facing a vulnerable institution and governance situation which urges a transition from the established structural path dependence in disaster and risk management. This paper re-examines the problems embedded in the existing disaster management regime, technologies, and social structures to establish a new paradigm for climate change adaptation policy and decision-making mechanisms.

The findings of this paper demonstrate that the disaster management regime and institutions in Taiwan were established through different disaster events, methods and legal sources over time. Due to the fact that our current disaster management approaches are determined by different disaster causes, management responsibility is dispersed to different sectors. Departmental egoism and a lack of power to direct resources make it difficult to integrate disaster risk communication. As a result, Taiwan's disaster management regime has become locked-in, with only the response and recovery planning stages determined, which makes it difficult to address climate change and social changes. This paper uses the major

flooding event of August 23, 2018 in the south of Taiwan as a case study to examine the path dependence of disaster management transition, and to analyze the factors which set the barriers and obstacles for regime transition, including cognitive, institutional, dominant technologies, routines, cultures and economic patterns (Voß & Kemp, 2006; Rip, 2006, Loorbach et al., 2010). This paper also seeks to clarify the problems associated with cross-boundary governance, climate adaptation policies and public participation (when used to establish mechanisms and innovative governance), and to study methods of societal regime transition as a method of breaking from path dependence so as to construct a multi-voice, cross-boundary disaster risk management system.

The Evolution of Chinese Environmental Policy and Its Governance Logic under the Perspective of Social Governance

Chun-tian Lu (Xi'an Jiaotong University)

At present, environmental problems are becoming more and more prominent. They have had a serious negative impact on China's economic, political, cultural, social and ecological development. Based on the analysis of the development history and characteristics of China's environmental policy, this paper explores the relevant contents of the effective interface between environmental policy and governance process. Under the perspective of social governance, this paper deeply analyzes the root causes and internal logic of social environmental governance in China, and puts forward the key points and directions for the construction of social environmental governance system in China. The details include: comprehensively promoting information disclosure and rationally guiding public expectations; strictly implementing corporate responsibility and strengthening social supervision in accordance with the law; Actively advocating green production and practicing a green lifestyle; and Optimizing the way of social governance and improving the efficiency of social governance.

International Policy Framework for Toxic Chemical Risks and Domestic Anti-toxics Movements in Japan

Ryoichi Terada (Meiji University)

The U.N. Summit held at Rio de Janeiro in 1992 adopted Rio Declaration which included proposals for risk reduction from toxic chemicals. It led to series of U.N. programs for toxic chemical risk reduction such as the Stockholm (POPs) Convention (2001) and Strategic

Approach to International Chemicals Management (SAICM, 2006). SAICM is a voluntary action program for U.N. member countries to minimize the risks by 2020 by implementing effective measures such as PRTR (Pollutant Release and Transfer Registers), GHS toxicity labeling, and ICCM (International Conference for Chemicals Management). It also disseminate some key policy principles such as "precautionary principles", "substitution principles", "participatory principles", and information disclosure.

Some of these policy tools achieved considerable advancement in chemical risk reduction. The PRTR program, for example, enabled industry to reduce one third of their pollutant release since its implementation in 2003 in Japan. However, the SAICM programs as a whole have not had attracted much attention of the public, partly because environmentalists as well as citizens have had to tackle with radioactive issues since the 2011 Fukushima nuclear disaster. It seems to be difficult to achieve the goal to minimize toxic chemical risks by the year 2020.

Nevertheless, toxic chemicals issues are recently becoming topics among environmentalists and consumers. More and more consumers complain about scented fabric softeners, causing frequently multiple chemical sensitivity symptoms. Citizens perceived the world-wide problematization of micro plastics pollution of the ocean, not only because they hurt marine animals but also contaminate fishing resources we love on through the food chain to concentrate toxic chemicals. Also, toxic chemicals like organophosphate and neonicotinoid pesticides and other endocrine disrupting chemicals are suspected of causing developmental disabilities.

This resurgence of anti-toxic chemical movements, unfortunately, does not seem to match up with the SAICM international policy framework. The SAICM action programs have been introduced by the Government bureaucracy in the top-down style, watering key principles like information disclosure, without attracting enough attention from citizens. The environmentalists and consumer activists have tried to apply precautionary principles to regulatory policies on toxic chemicals with partial success. Under the recession era in general, environmental movements had difficulty to pressure the Government to take stronger measures on this issue. Also, since the SAICM and the ICCM had to prioritize more serious trans-national environmental issues such as the Minamata Convention to regulate international trade of redundant mercury, their objectives seemed less relevant to the citizens of advanced industrial countries. Last but not least, changing characteristics of chemical issues from acute toxicity like mercury and SO_x to long-term and chronic threat like endocrine disruptors has not been enough perceived among citizens. And the comprehensive risk reduction policy framework has not been appreciated among citizens either.

2-2. Environmental Sociology of Transboundary Environmental Problems

3:50 PM ~ 5:50 PM | Room 304

Moderator: Sanghun Lee (Hanshin University)

Environmental Sociology of Air Pollution: How Particulate Matter Become a Politicized Issue?

Minjae Kim (Environment and Society Research Institute)

Dowan Ku (Environment and Society Research Institute)

Air pollution, especially Particulate Matter (PM), rapidly become the most urgent environmental and political issue in Korea for a couple of years. This paper explores the social process of politicizing PM issue. Complex and heterogenous nature of PM raises serious questions to existing political and policy institutions. Through thick description to explore the trajectory and conjunctures of PM issue, the paper shows that how PM become the one of the most political issue. Public discontent has increased; however, no responses of government at the very first conjuncture, the systemic incompetence of bureaucracy and contradiction of state imperatives, and weak environmental sub-politics make PM unresolvable issue. Prevailing populist responses, like China is main source of PM in Korea, shows the fail of environmental politics.

Political Ecology of Fine Dust: Focusing on the Debates of Fine Dust in South Korea

Sanghun Lee (Hanshin University)

The purpose of this paper is to trace the multi-scalar changes developed from 'abstraction' of fine dust (PM10, PM2.5) into 'state-nature' from the standpoint of political ecology. Recently, the fine dust declared as a social disaster has become an important policy task and a political issue. Since fine dust is a carcinogen, it is a health hazard and it is caused by the industrial structure based on fossil fuel. Therefore, although the solution to this problem should be dealt with in terms of fundamental transformation (transformation of energy and industrial structure), the related policies are concentrated on prescription or short-term response. In addition, there are many debates including; whether the fine dust is more serious than the past; whether the foreign factors including China are bigger; whether the policies of the Ministry of the Environment are effective policies; whether the personal use of the air purifier and wearing mask are necessary or it has a negative impact on the public. Finally, this paper will analyze these debates through political ecological theory. In other

words, it tries to show how the boundaryless atmosphere is territorialized(i.e. nationalized), how it is made into 'state-nature', what disputes are created in this process.

A study on the classification of PM 10 vulnerability in South Korea

Hye-young Shim (Seoul National University)

The frequency and intensity of particulate matter (PM) are increasing in the whole area of South Korea. Since major cities such as Seoul Metropolitan Area or Busan are highly urbanized area with multiple sources of PM emission in and around the city, consideration on possible urban interaction seems to be demanded in terms of sustainable society. Also, effectiveness of PM policy seems to be limited because PM crosses over regional administrative boundaries. Segmented urban governance of PM has caused incompetent PM policy impact due to transboundary air pollution. Understanding of PM distribution and its impact regardless of administrative districts is highly required to promote collaborative cooperation among local governments. In this study, identifying PM 10 vulnerability in South Korea aims to suggest possible cooperation between local governments. According to previous publications, socioeconomic status, life stage and obesity ratio are composed of independent variables. Three socioeconomic status are the number of living in poverty, the number of low income and the number of occupations from Yearbook of Employment and Labor Statistics (Ministry of employment and labor). Two life stage variables are the number of below 18 years of age, and the number of above 65 years of age from Household Register Demographics (Ministry of the Interior and Safety). Obesity ratio from Community Health Survey (Korea Centers for Disease Control & Prevention). Dependent variable is yearly average PM concentration in 2015 from 331 PM monitoring centers of Airkorea (Korea Environment Corporation). Since PM monitoring centers are mostly located in Gu level (or sometimes in Dong level due to administrative area), data unit is Gu level. Factor analysis is conducted on the 6 variables collected at the Gu/Dong level (administrative) to identify possible correlated variables. This result could support policy makers and officials in the mitigation of PM fluctuation atmosphere and indicate requirement of collaborative cooperation among local governments.

2-3. Nature in the Anthropocene

3:50 PM ~ 5:50 PM | Room 205

Moderator: Buhm Soon Park (Korea Advanced Institute of Science and Technology (KAIST))

Ethical Study on Digital Humanitarianism in Case of Disaster

Jiwon Shim (Chung-Ang University)

Since the evolution of digital devices such as smart phones and social network services, the leading force in politics and economics are shifting from government or large media industries to individuals. Such flow is also happening in the situation of natural disasters such as earthquakes, typhoons, and floods. With using smart devices, social networks, and ad-hoc networks which can be utilized even in the places where mobile networks do not function, individuals in these situations share information and gather helping hands without and before the lead of government. In this research, the contribution of digital humanitarianism in the situation of disasters and socio-ethical problems arising from such changes will be considered.

Conservation in the Anthropocene: Re-envisioning Environmental Studies on the DMZ

Myung-Ae Choi (Center for Anthropocene Studies, KAIST)

Buhm Soon Park (Korea Advanced Institute of Science and Technology (KAIST))

The rapidly changing political atmosphere between the North and South Korea has attracted regained attention to the Korean Demilitarized Zone (DMZ) as the space for innovative and sustainable use of nature. However, existing scholarly work on the DMZ appears to reproduce environmental discourses and practices based on artificial separation of nature from society, failing to address the political, economic, and cultural conflicts involved in the use of the DMZ. Drawing on the recent debates on the Anthropocene, this study explores new ways of thinking about, and relating to, nature through the case of the DMZ. The recent diagnosis of the Anthropocene confirms sustained human interference with nonhumans, challenging public understanding of nature as a pure entity removed from society. Instead, it seeks out a different mode of nature-society relations, where non-experts, nonhuman animals, and technologies are taken seriously in the making of the (more-than-human) world. This study develops a theorisation of DMZ as an 'Anthropocenic Nature', which emerges as an 'accidental ecology' from the political, economic, and cultural ruins of the Cold War. By putting empirical stories of the DMZ in conversation with the discussions of the

Anthropocene, it explores alternative modes of conservation of the DMZ towards inclusive, experimental, and future-oriented ones. For this, it takes an interdisciplinary method that combines ethnographic fieldwork with Information and Communication Technology (ICT) for data collection and analysis. In doing so, this study aims to develop multifaceted and nuanced understandings, and practices, of the DMZ beyond the prevalent ideas of ‘the treasury of ecology’ and the protected area model. This paper is a preliminary study for a larger research project on the DMZ and the Anthropocene. It first critically reviews existing scholarly work on the DMZ. It then identifies key concepts and themes developed in the Anthropocene studies to situate and make sense of the DMZ in the broader context of the Anthropocene. Finally, it considers the implications of this study on policy discussions of the DMZ, as well as the Anthropocene studies.

The Changing Role of the Judiciary in the Anthropocene Era: Observations from the 10-Year Case of Siaolin Village

Nee Mau-Ting (National Taiwan University)

Kuei-Tien Chou (National Taiwan University)

Hwa-Meei Liou (National Taiwan University of Science and Technology)

The image of humans as geological agents has been clearer in the Anthropocene epoch. We are all facing the common threats like the changing climate, the great loss of biodiversity, ocean acidification and so on. Governments have been trying to deal with the human-induced problems through international environmental law over the past two decades. However, in terms of the nine planetary boundaries which we now have breached four of them, it is hard to say the international environmental law has made a successful results. (Kotze and Kim, 2019)

We can also find the same governance failure in the context of climate change. Humans are still under the threats of climate change after the adoption of United Nations Framework Convention on Climate Change in 1992 and Kyoto Protocol in 2005. Even in the phase of post-Kyoto, the global efforts remain insufficient to comply with the Paris Agreement which is to hold the global average temperature to well below 2°C above pre-industrial levels. (IPCC, 2018)

From the perspective of powers separation, courts can make meaningful contributions by many ways. It can provide equal access to climate justice and be an undeniable legitimate force against the non-implementations done by the executive, legislature and even private sector. (Preston, 2016) Given that, we have seen a new global wave of climate litigation.

There is an urgent need for the court to adjust its role to address the uncertainty, complexity and ambiguity accordingly under the Anthropocene era. How should courts interact with the climate science? How does courts made climate justice done by adaptive legal interpretation within the existing legal system? (Yeh, 2017) However, it is only the last decade that climate change has been used as part of the argument or as a motivation for cases. (Nachmany and Setzer, 2018)

Typhoon is a common events in Taiwan. Changes in extreme weather and climate events have made Taiwan become more vulnerable. In 2009, Siaolin Village in Kaohsiung, Taiwan, was destroyed by Typhoon Morakot. It brought extremely torrential rain and caused landslide which had made over 500 villagers been buried alive. The survived villagers brought suit against Taiwanese government for their negligence. In March 2019, the appealing court has finally made the decision in favor of the remaining villagers.

Despite the court doesn't mention climate change during the litigation and in the final decision, it is still a good starting point worthy for the judicial system in Taiwan to rethink how to fit climate change in the litigation properly. This article will analyze the decision and litigation process to see whether and how the court interact with climate change.

Visual Arts and Environment: Conceptualizing and Visualizing Nature and Environment in Japan

Mika Merviö (Kibi International University)

While the political elite invented traditions of modern Japan during the Meiji Period it also created narratives of Japanese history and culture to suit the uses of new state and nationalism that supported it. At the same time with new ideas about aesthetics the ideas about nature and environment went through fundamental transformation.

The old cultural traditions of high culture enjoyed the patronage of the upper classes and, therefore, social status and arts were (/are) closely connected. The artists and artisans knew better than openly raising their voices against the system. What sets visual art apart from other forms of political participation is that freedom and expression of ideas in art is part of the work itself. The possibility of great diversity of interpretations with visual art helps to maintain freedom as well as honesty, subtlety and detachment from ideological dogma.

For the artists there was a clear incentive to turn to the eternal beauty of the nature and avoid directly addressing social and political issues. By doing so, for instance, the achievements of the Rimpa school set new standard to depicting natural beauty and splendor.

Furthermore, the folk art, for instance, often reflected images and ideas that were developed by the high-end art, and often does it with different touch.

The ideas of nature in Japan have a long tradition of being based on the syncretism between Shintô and Buddhism. Legends, myths and folklore created a myriad of narratives about such gods, spirits and guardians. However, the (rice) farming changed fundamentally the animistic nature of Shintô and the life styles of people. The actual life styles and attitudes to nature/ environment of the Japanese continued to be diverse.

In modern Japan the traditional ideas of nature as a venerated object of awe have been replaced by turning environment into a reserve of resources for the nation, nation state and corporations. Meanwhile, contemporary Japanese art has grown to touch more frequently and directly environmental issues. Such art festivals as the Echigo-Tsumari Art Triennale and Setouchi Triennale are based on the idea of local environment and community becoming an integral part of the art festival itself and that many of the art works are directly contemplating the environment and environmental issues.

The contemporary visual art tends to be quite international and is in close communication with artistic discourses elsewhere. However, the Japanese authorities continue to view art as a socially less significant phenomenon and public support to alternative ways of constructing environment, by artistic or other means, could still be much stronger. Meanwhile, the local authorities often view art projects primarily as sources of tourism and revitalization of local communities rather than original forms of artistic and political expression. While Japanese political developments have been dominated quite strongly by political elite with rather conservative and selfish political mindset, the alternative and challenging ideas about both art and environment most likely will come from people with alternative world-views and ideas about the realities of this world.

2-4. Community and Environmental Movements

3:50 PM ~ 5:50 PM | Room 308

Moderator: Shu-Fen Kao (Fo Guang University)

Consideration on the Possibility of Social Inclusion through Community Collaborative Education in the Informal Sector: Through the Practical Case of Waste Pickers in Khulna City, Bangladesh

Hideki Sato (Edogawa University)

While the employment and social security systems are not always sufficient in the urban areas of many developing countries, the economic activities by various informal sectors (low salary workers) such as street vendors, rickshaw-van, ship dismantling, brick factory workers and waste pickers are being conducted. Generally speaking, many people in the informal sectors are not well educated, and their social position is low. In them, the waste pickers collect the valuable wastes such as bin, plastic, can, metal and contribute to the community resource recycling, and it is necessary to consider the recognition of the important role and involvement in the community society.

Previous studies have reported the importance of the role played by the informal sectors from the economic point of view. However, by improving their labor, life and urban environment from the perspective of education, we aim to reduce the social vulnerability of workers in the informal sectors and create a community society for social inclusion.

In this presentation, we introduce the current situation and problems of the informal sectors through the practical activities for supporting the waste pickers in Khulna city, Bangladesh, for three years during October 2015 to September 2018, and consider the ideal way of community collaborative education as one of the important approaches toward their social inclusion in the future in the developing countries. It aims to help the direction of social inclusion in the informal sector.

The Problem of Aging Environmental Volunteers: A Case Study on the Environmental Preservation Groups Associated with Lake Kasumigaura, Japan

Nana Ono (Wako University)

Japan's population is aging, and environmental volunteers are no exception. Japan's declining birth rate has simultaneously caused increased labor shortage, and more people now

continue to work after retirement. This report addresses the problems that have emerged in Japan's environmental activities because of the aging of volunteers. Since retirees are major functionaries of volunteer activities in Japan, it is believed that this trend will change in the future. How will the activities of an older volunteer workforce be transformed? Will it be possible to sustain domestic volunteer activities as before, given the aging population and the labor shortage?

In 1995, Japan's "volunteerism" began as a lot of unpaid social activities were undertaken as a response to the Great Hanshin-Awaji Earthquake. Ever since, Japan has seen the birth of many volunteer groups, and the welfare field tops the list. As of April 2017, 193,608 domestic volunteer groups exist, and the volunteers total 7,068,403 in number (Chîki Fukushi Borantia Joho Nettowâku [National Social Welfare Council Community Welfare Promotion Committee / National Volunteer and Citizen Activity Promotion Center], 2018). The environmental domain is no exception to this growth. Many environmental preservation groups have been instituted, and they have contributed to the conservation of natural ecosystems across Japan through their activities in support of environmental awareness and their monitoring of the condition of the natural environment of Japan. However, more than two decades have now passed since Japan's "volunteerism" began, and the nation's voluntary workers are also aging. What kind of changes are the groups facing now? How will they be transformed in the future?

This study surveyed eight volunteer groups that have been working for a decade on activities to preserve the local natural environment of Lake Kasumigaura in Itakoshi, Ibaraki Prefecture. The impact created on the local ecology by the suspension of volunteer activities due to the aging of the voluntary personnel is discussed on the basis of the results obtained from the survey.

The Waning of Fishing Community and the Touristic Transformations of Coastal Lines of Jeju Island – An Environmental Sociological Insight

Shin-Ock Chang (Jeju National University)

It can be said that the coastal lines and seaspaces of Jeju Island are contested areas involving diverse uses for humans. The seaspaces support human activities for tourism and fishery industries, windmills construction, and leisurely pastime. This paper aims to address the touristic transformations of coastal lines of Jeju Island on an environmental sociological perspective. Particularly it aims to examine the touristic transformation in relation to the waning of fishing community whose social organizations are found along the coastal lines of

the island.

The founding fathers of environmental sociology have paid attentions mainly to modern, industrial, urban society in order to criticize industrial modernization that is considered to cause environmental problems. However, researchers have recently addressed marine issues on an environmental sociological perspective (see Longo & Clark 2016). Also, scholarly attentions in a social science perspective to marine issues in Jeju Island have not been impressive even if the very basis of Jeju Island society draws upon marine spaces. In this paper, I aim to document shifting patterns in seascapes use from fishing to tourism activities with two case study examples by highlighting interlinked nature between marine environment, human social organizations and social changes.

3-1. Politics of Energy Transition in East Asia (1)

9:00 AM ~ 10:30 AM | Room 306 Glocal Hall

Moderator: Ryan Gunderson (Miami University)

Political Barriers to Energy Transition in Japan

Koichi Hasegawa (Tohoku University)

This presentation examines political barriers to energy transition in Japan. Japan's policy position on climate change at and after the 2015 Paris conference was not so ambitious. In case of Germany, the policy goal of post nuclear and post coal-fired plant has a reality to meet by the strong leadership of Chancellor Merkel. Although Japanese government calls "the best mix scenario" of energy supply plan in FY2030, it was trying to maintain the status quo, highly dependent on nuclear and coal-fired plants based on the overestimation of the 2030 electricity demand and supply. Although the recommended policy goal of denuclearization, promoting renewables and energy efficiency from the viewpoints of environmental NGOs is clear, the government and major power companies like TEPCO are reluctant to promote renewables and energy efficiency. The conservative government and Ministry of Economy, Trade and Industry (METI) are lack of social learning from the Fukushima accident. There are several problems. Stressing "voluntary action plan" by each industry sector, there is no carbon pricing system and no nationwide cap-and-trade program. Weak carbon tax with 289 Yen/CO₂ ton which means an extra payment of 100 Yen/per month for household. No effective framing of the target goals of climate change protection in FY2030 and FY2050. Weak political leadership on climate issues. Climate issues for the mitigation policies does

not improve popularity, votes and money for any politician. Few diet members who back climate issues and can receive benefits from their efforts. Why does Japan's energy policy remain even after the tragic Fukushima nuclear plant accident? What are national and local political barriers to moving to low carbon and sustainable society? Why does Japan's civil society fail to find the effective political route to change the whole energy policy? Analyzing news clippings, documents, participant observations, and case studies, this paper will reply to these questions.

The Challenges of Energy Transition in Taiwan: Regulatory and Social Perspectives

Shu-Fen Kao (Fo Guang University)

Energy transitions are an evident part of public discourse nowadays. Whether shaped by electricity price, fuel price fluctuation, environmental and security concerns, aspects of technology change, or goals to improve energy access, attention regularly turns to ways in which to improve energy pathways. Yet what is understood about energy system change is still emerging. Efforts to transform energy systems involve changes, not only to energy technologies but also to the broader social and economic dimensions that are built around energy production and consumption. Unfortunately, energy planning and policy rarely account for these broader dimensions of energy change.

On June 12, 2009, Taiwan government approved a bill of "Statute for Renewable Energy Development", which aimed at promoting the use of renewable energy, boosting energy diversification, and helping reduce greenhouse gases. The new act caps the subsidies for renewable energy up to 10 GW within 20 years. Yet, the development of renewable energy has been slow and energy transition has faced various challenges. In this paper, the author employed a qualitative approach to investigate challenges of energy transition in Taiwan, particularly in the regulatory and social dimensions. These social-technological and regulatory barriers are: Low energy literacy and lack of information among ordinary people; lack of funding and man power, particularly in the local government level; complex building regulations and administrative procedures for rooftop solar system establishment; fragile regulatory link, particularly for geothermal power development; limited smart meter usage and lack of smart grid infrastructure; and the problem of Electricity Act (電業法) and the reluctant role of Taipower. It's critical to have extended citizens' participation to strengthen social learning in energy transition. Such civil participation requires involving local social groups, create a department related to green energy development, invest more renewable energy research and development units within governments both in central and local level;

and upstream civil involvement through workshops and learning circles.

Energy Democracy and Social Communication: Referendum on Pro and Anti Nuke in Taiwan

Juju Wang (National Tsing Hua University)

Referendum, as a means of direct democracy, have been conducted from nation to nation for a long time since 1793 in France. From then on, a variety of issues covering constitution, independence, Brexit (British Exit from EU) among others are undertaking. In this context, Taiwan passed her Referendum Act (TRA) in 2004 but failed to present any successful cases whatsoever due to its high threshold such as 1/2 and 1/2 rules. Confronting such dilemma, known as Cage Referendum, The Congress amended the TRA so that lower threshold is reached to 1/5 by which direct democracy is possible. Then, ten cases, endorsed successfully, were presented and linked with an island-wide local election composed of nine categories on 24th of November, 2018. Those ten cases range from gender (5), sport (1) to energy (4) issues.

As a result, seven out of ten cases, including four energy-related ones, were passed. For those four cases, their legal requirements are as follows: total power generated by fir-power decrease by 1% annually, no any new fire- power plant be constructed, no food import from Nuke-impacting area disregard of whatsoever scientific examinations and abandon Article 1 of power Generating Act: 2025 No- Nuke Taiwan.

This paper applies the theory of Risky society: $RS=f(O+W+P) *SM$ to address social communication linked with NIMBY, PM2.5 Red and Purple zones, power addicted, little sense on inter-generational justice, Nuke-reopen in Japan. SDGs will be linked to strengthen social communication in this regard.

3-2. Water Policy and National Archive in East Asia (1)

9:00 AM ~ 10:30 AM | Room 304

Moderator: Sanghun Lee (Hanshin University)

This session is organized by SNU Center for Asian Urban Societies.

Image Transition of the Displaced: Analysis of NHK TV Documentary

Hamamoto Atsushi (Toyo University)

Since the mid-1990s, with the rise of environmental awareness and criticism of government corruption, dam construction has recognized today as a representative issue of public works in Japan. The confrontational axis here is basically project authority versus civil society group, but it is not a simple. This is because the displaced (supposed to be displaced) are often in a position to desire to continue the construction after several decades of project history. Thus, when considering dam construction and environmental issues, it is extremely important how to recognize the position of the displaced.

Taking this into consideration, the purpose of this study is to trace how the television program has captured the displaced and its historical changes. I demonstrate the overall picture of the 326 NHK dam programs broadcasted from the 1950s to the 2000s. Furthermore, focusing on the Tokuyama Dam program, which has been the most covered in NHK, I examine how to take up theme "Losing hometowns" has a large impact, and the environmental issues and public works issues themselves have been dropped to the background.

Documentary <Big Three Gorges> and the High Modernism in Contemporary China

Chul-Hyun Park (Kookmin University)

This research began with the thought that not only political-economic approach, but also ideological approach is needed to have a deep understanding about the development model of contemporary China. High Modernism has distinctive features like 'state-driven social engineering project, belief in scientific-technological knowledge of experts, all-out mobilization, mixture of passion and coercion'. The construction of Sanxia Dam was firstly conceived by Sun Wen in the early 20th century, but the actual construction was conducted with the start of the reform era. Documentary Big Three Gorges was broadcast in 2010, when Hu Jintao government had to come up with new development model and its ideology to cope with the challenges to threaten the stability of the regime, because the existing development model already revealed its limitations. 'Harmonious Society' and 'Scientific

Outlook on Development' which is the ideology of Hu Jintao era, is reflected in the documentary Big Three Gorges, and has the feature of High Modernism. The notice should be taken care of the possibility of the emergence of new type High Modernism in social management of China due to the rapid development of information-communication technology.

Discourses on a Dam Issue: Based on NHK Documentary from the 1980s to 2000s

Sayaka Mori (Kochi University)

This paper studies the following problems; how television had drawn the dam issue in Japan using Japan Broadcasting Corporation (=NHK) documentary from the 80's to the 2000's as the subject.

The dam issue in Japan has been discussed as a review of public works whose need itself is questioned since the 1980s. Controversy had been actively developed since the middle of the 1990s, triggered by the opposition movement of the Nagara River weir in the late 80's . And the process leading to the Democratic Party government which was born in 2009 with the manifest of "human rather than concrete" is a series of event to do with the controversy. These historical backgrounds are also reflected in dam images.

What can not be overlooked over the NHK dam documentary of this era is the fact that a series of discussion over reviewing public works and the "Project X" as developmentalism program existed at almost the same time. How had NHK drawn each of a series of works with different directions, such as a series of criticism on public works, and the stories of engineers who are concerned with land development and infrastructure maintenance? The key to considering these points is the 1980s' dam image. Criticism of dam technology, contradiction of central industrial policy and environmental destruction have been the points of contention before public works review was actively discussed, and NHK produced dam images including the points of contention. What will we see if we reconsider them as "preludes" to the public works review debate? In the NHK documentary, what issue was the dam shown, or was it not? I would like to demonstrate using the program data of NHK Archives at the "Development and Image" research group, which surveyed programs in the 80's to 2000's.

From the viewpoint of environmental restoration, nowadays in the world, dams that have finished their roles have been removed. However in Japan, instead of removing dams, dam redevelopment is currently being promoted by the government. Some of them are bad for the environment, even though they have not been able to cope with unexpected floods. This study, which tracks how the dam problem has been built, will be a rethinking of how we

face dams in Japan today.

3-3. Commons and Sustainability Transition (1)

9:00 AM ~ 10:30 AM | Room 305

Moderator: Jiwon Shim (Chung-Ang University)

Exploring an Innovative Mechanism for Ecological Conversation with Perspective of Community Participation: Based on Case Study of Mangrove Conservation in Zhanjiang

Qian Wang (Global Environmental Institute)

Mangrove forests as a part of ocean ecological system in addition to provide flood control and storm protection as well as is habitat for wildlife, fisheries and forests. Besides, they also donate for resource supplements to local communities, such as fruits and vegetables, timbers, firewood and roofing materials. However, due to expanding agricultural land, fast growth of population and excessive cutting for fuelwood, the mangroves forests faced with serious challenges. The author takes mangrove communities as well as fishing villages located in Zhanjiang, Guangdong Province as research objectives, to explore the sustainable development model pursuing to solving contradiction between community development and mangrove conservation. With methods of questionnaire survey and depth interview, results show that waste issue and restrictive development for ecological tourism issue were two elements which limited the local community development and participation in conservation behavior. The finding reveals that community conservation concession agreement (CCCA) model was an effective way to integrate mangrove conservation with local communities' sustainable development dilemma. The author indicates that through strength capacity building training can improve community participation. And multi-stakeholder cooperation network or platform, including local management bureau, communities and local government, NGOs and research institutes, work together for optimizing the functional zoning of protected areas scientifically and exploit ecological products to improve ecological supplement capacity of local community will promote sustainable development of entrance communities which nearby protective areas.

Community Perceptions Towards Risks and Benefits of a Saltmarsh Restoration Project: Learning from a Case Study in the UK

Hiromi Yamashita (Ritsumeikan Asia Pacific University)

Naoyuki Mikami (Hokkaido University)

Various coastal wetland restoration projects have been conducted in recent years in an attempt to revitalize fish stocks, prepare for sea level rise or for mitigation purposes. Due to the need for long-term social support and investment in such schemes, as well as to avoid potential conflict, it is becoming increasingly important to take into account the various perceptions within the community. The existing study results, although clearly listing the range of opinions expressed by citizens, lack investigation into aspects of environmental justice and risk communication. Citizens are sometimes branded as self-interested, hoping to receive short-term and tangible benefits with little care for coastal wetland environments or future generations.

This representation reflects the findings from an in-depth study in the UK, which investigated various stakeholders' perceptions of the benefits or 'success', and risks or 'negative' impacts of a salt marsh restoration project in Somerset. The questionnaires sent to all the households in the four stakeholder communities just by the project revealed that there has been a very positive perception towards the project in general. However, the reasons why the project was supported and how people saw its benefits were very different from the reasons of the project explained by the project contractor and the environmental conservation organization.

This study provides insights into the types and levels of people's perceptions towards restoration projects, and some thoughts for effective environmental communication and decision making for the future.

The Utilization of Marine Resources and the Changes of the Relationship Between Man and Sea: A case study of oyster culture in a village, east Guangdong province, China

Hu Liang (Hohai university)

Chen Jiaying (Hohai university)

Overfishing has led to serious marine environmental problems, and many traditional fishery resources have fallen into serious decline. Taking the development of oyster culture in a fishing village in Guangdong province as an example, and from the two angles of the utilization of marine resources and the change of the relationship between man and sea, this

paper analyzes how the oyster culture industry from the traditional agricultural throwing rock style to Industrialization and large-scale style. In the stage of oyster culture by throwing rocks (from Ming and Qing Dynasties to the 1980s), the oyster farms are similar to the common pool mentioned by Elinor Ostrom. Oyster culture has a clear division of rights. The oyster culture mainly adopts the method of throwing rocks or placing piles, so that the oyster fry naturally attach to the stone or piles. At this stage, the relationship between people and sea is basically harmonious.; With the development of technology, the local oyster culture has entered the stage of oyster row method(from 1990s-2013). At this stage, the breeding boundary has broken through the original common pool and entered the outer sea. The market-oriented, industrialized and large-scale farming methods have made the breeders continuously increase the density of the culture, causing serious environmental problems, triggering the government to carry out clean sea regulation of the environment, and making the oyster culture enter the third stage(from 2013-), The stage of evacuation of oyster culture from the coast, At this stage, because the operation focused more on the construction of coastal landscape, forcing oyster farming away from the coast, concentrating on the increasingly compressed suitable sea surface, and some oyster farmers chose to enter the disorderly management of offshore oyster farming, thus aggravating the tragedy of the Commons type of environmental predicament.

The Functional Decline of Karez: Evolution of Human-Water Relationship in Arid Areas

Feng Yan (Shaanxi Normal University)

Karez was the most economical and effective water conservancy project in arid area of Xinjiang, which played an important role in the development of oasis agriculture. As the only water source, the local villagers established the culture, institution, norm and organization to maintain the normal operation and water order of Karez, so the relationship between human and water was in balance. After the entry of modern water conservancy technology, due to the lack of comprehensive planning and allocation, unreasonable distribution, and over-exploitation of groundwater, the amount of water in karez had been reduced or even dried up. The villagers' water cost increased, the social communication space changed, and even the whole family moved to the place with water. Tap water replaced the advanced function of drinking water source of karez, which completely disrupted the intimate relationship between karez and villagers, so people turned to its low function of holding waste, and the balance between human and water was broken. The norm and values of karez had changed, people slacked the maintenance work, the relationship between human and water

into a vicious circle. Oasis agriculture in Xinjiang was faced with the dual risks of "resource" and "functional" water shortage. It was a theoretical and practical problem to be solved urgently to rebuild the harmonious human-water relationship and to find the way of sustainable development.

3-4. Just Transition and Energy Democracy (1)

9:00 AM ~ 10:30 AM | Room 308

Moderator: Chun-tian Lu (Xi'an Jiaotong University)

Governing Coal Transition in Japan, China and India: Solutions for Just Transition

So-Young Lee (Institute for Global Environmental Strategies)

Kentaro Tamura (Institute for Global Environmental Strategies)

Xianbing Liu (Institute for Global Environmental Strategies)

Zhen Jin (Institute for Global Environmental Strategies)

Nandakumar Janardhanan (Institute for Global Environmental Strategies)

Akihisa Kuriyama (Institute for Global Environmental Strategies)

Diego Silva Herran (National Institute for Environmental Studies)

The Communique of the G7 Summit in 2018 reaffirmed their strong commitment to implement the Paris Agreement through reducing emissions while strengthening resilience and reducing vulnerability as well as ensuring a just transition. Discussions of climate and energy justice, the key basis of the aforementioned consideration, focus on who produced no contributions to the increase of the climate change become subject to its concentrated adverse effects especially marginalised and displaced communities from climate change. Yet, unfortunately, the impacts of the power sector decarbonisation in fossil fuel communities have been less considered in this discussion, especially the coal phase-out in China, the world largest coal producer and India, the second largest. It is indisputable that the reduction of fossil fuel use is necessary step and right direction to mitigate climate change and decrease air pollution so that we could be benefited from better environment. However, the transition impacts to workers and communities those have sacrificed their life and environment for the world economic growth and now affected from economics and social depression should be considered as one of components of the climate justice discussion. This presentation will cover aspects and considerations that influenced the degree and scale of change in fossil fuel industries in Japan, China and India; encourage in depth recognition of the local situation; and suggest inter/national climate policies must provide a fair and just transition toward sustainable future.

Crisis Perception on the Economic and Social Impact of Nuclear Power Plant Decommissioning: The Case of the First Nuclear Power Plant Decommissioning in Taiwan

Daixi Wang (Nagoya University)

Due to the decommissioning of the First Nuclear Power Plant (NPP) in Taiwan, the potential crises of the decommissioning such as nuclear waste problems come into discussion. In addition to the safety crisis, the decommissioning of NPP may also lead to local economic decline and unemployment. Despite being faced with the possible economic and social impact, however, not all local people perceive this crisis. During my fieldwork research, I found many local people think of the matter in an optimistic way. Three questions form my research: 1) What do they perceive as crisis? 2) Why don't they perceive economic and social impact as crisis? 3) Do they really have the capacity to face the economic and social impact as they believe they do? To answer these questions, I did fieldwork, interviews, and life history research. This research aims to investigate the perception of crisis on the economic and social impact brought by NPP decommissioning and to focus on those who lack crisis perception on the economic and social impact. The conclusion is that the deviation of legal decommissioning and formal decommissioning increase the uncertainty of decommissioning while the local people develop self-protection mechanisms to optimistically face the depressing uncertainty.

How can we Mitigate Impacts of Nuclear Phase-out to Nuclear Host Municipalities?

Yoichi Yuasa (Kanto-Gakuin University)

What will happen to nuclear host municipalities in the nuclear phase-out? In this presentation, taking some Japanese cases, we will examine impacts to nuclear host municipalities caused by nuclear phase-out. After Fukushima disaster, nuclear phase-out has become a focal point. In Japan, opinion polls have shown that opposition to restart of suspended nuclear reactors is over 50%. Some electric power companies decided to close a part of reactors. Most of officials and residents in host nuclear municipalities, however, would like to restart these reactors.

Nuclear host municipalities are peripheralised and become to be dependent on many benefits from the location of nuclear facilities. In fact, compared to others, nuclear host municipalities are rich in Japan. These municipalities have a concern of losing their benefits by nuclear phase-out. It is very difficult to make clear nuclear energy's future though the

Japanese government keeps its policy of promoting nuclear power. In this context, it is important to ask what will happen to nuclear host municipalities in nuclear phase-out.

We will analyze impacts to host nuclear municipalities by nuclear phase-out from 3 perspectives. The first one is to make clear the way of dependence on nuclear facilities in nuclear host municipalities. We insist that local governance and local public finance system deeply influence to the way of dependence. In Japanese cases, benefits to local public finance are essential. As a characteristic of local public finance system in Japan, municipalities may go into bankruptcy. This possibility is relatively high to geographically remote, politically powerless and economically weak municipalities. This is why some rural municipalities have accepted nuclear facilities.

The second one is to analyze the process of location of nuclear facilities by the theory of peripheralisation and the strategic analysis. The way of dependence in a municipality seems to stem from the historical process of nuclear facility's location. This process can be considered as the social peripheralisation. We should examine the dynamics of this process by the strategic analysis that considers municipalities active not passive.

The third one is that we are taking some problems that can occur in nuclear phase-out such as disposal of nuclear waste from decommissioning. Decommissioning of nuclear reactors is a huge and long work and can cause some serious problems. Some nuclear reactors are under decommissioning but no disposal site for nuclear wastes from decommissioning process has been decided. Current host municipalities refuse to accept those wastes.

The tendency of nuclear phase-out looks to be stronger from now on. Mitigation of damage to nuclear host municipalities is an important key for promotion of this tendency.

3-5. Environmental Consciousness and Ecological Citizenship

9:00 AM ~ 10:30 AM | Room 205

Moderator: Soonyawl Park (Urban Regeneration Institute)

Sustainable Living in Chinese Mainland: Rationale, Vision, and Implication

Felix Sai Kit Ng (Humboldt University of Berlin)

In the past one to two decades, the pursuit of a sustainable lifestyle has become increasingly visible in East Asia and across the globe. Its practitioners value the reduction of their carbon footprint, such as decreasing their reliance on fossil fuels, rejecting all toxic pesticides, stopping buying plastic, recycling as much as possible and buying products made by

sustainable resources. Their green values reveal in their environmental awareness, persistence and consistency, everyday life, and involvement in environmental groups in promoting environmentalism. Triggered by ecological risks such as thick smog in Beijing, this transnational phenomenon as one form of social activism has also been more visible among local green groups in mainland China. Instead of solely joining the environmental movement by protests, rallies, demonstrations or other forms of confrontational social actions, some environmentalists adopt another approach to social change, i.e., a soft approach to environmentalism. More specifically, they prefer changing their lifestyles to be eco-friendly in a bid to be responsible for the global village. Some environmentalists established civic, environmental organizations to promote and learn green design or DIY, voluntary simplicity, recycling, ethical consumption, vegetarianism and the like green practices in a persistent manner. Others formed green-living communities, i.e., eco-village to live together with Nature and promote eco-tourism. Still, others enjoy living in rural life and farming as an alternative way of life, by running organic and community farms as an implicit or explicit gesture for sustainable development. The Chinese characteristics of environmentalism are somewhat influenced by economic growth, cultural traditions, and political opportunities and constraints in China. Though this convivial lifestyle with Nature has become increasingly significant engendered by environmental risks, little attention has been paid to this lifestyle-based form of social movement. This paper adopts a research framework investigating its rationale, development, vision, limitation, and implication. By interviewing 15 environmentalists affiliated with a local ENGO actively promoting green living in Beijing and nationwide, this study will explore the transnational, economic, cultural and political dimensions of the green-living movement in this Sinosphere.

Public Deliberation on ‘Decarbonization Transition and the Quality of Life’: Insights from a Mini-public Experiment in Japan

Naoyuki Mikami (Hokkaido University)

Ekou Yagi (Osaka University)

Seita Emori (National Institute for Environmental Studies)

Tetsuki Tamura (Nagoya University)

Masahiro Matsuura (Meiji University)

Yasushi Ikebe (National Museum of Emerging Science and Innovation)

Mitsuru Kudo (Osaka University)

Akane Iwasaki (National Institute for Environmental Studies)

With regard to policy dialogue on climate change and energy transition, the last decade has witnessed a global trend of experimental applications of participatory and deliberative techniques involving randomly selected members of the general public, in other words mini-publics. The World Wide Views (WWViews) project represents one of the most influential models, with the result of its 2015 meetings on climate and energy being communicated to the COP21 in Paris. Although internationally standardized methodologies like WWViews provide a powerful tool for aggregating a ‘citizens’ voice’ on predetermined questions, findings from previous research have also suggested they tend to overlook locally specific logics and contexts behind globally uniformed results of public deliberation. One remarkable aspect of such global-local gap in the past WWViews meetings was the impact of decarbonization transition on the quality of life (QOL). The voting outcome showed the majority of Japanese participants believed that transition would threaten their QOL whereas, in the rest of the world, it was regarded more positively as opportunities for improving the QOL. However, the backgrounds to this global-local contrast have not fully been investigated, and the potential of constructing more nuanced public opinions on the same issue has never been explored. Here we demonstrate the Japanese citizens can also appreciate the positive aspects of decarbonization transition, using an experimental citizens’ jury panel that was held for two days in March 2019 in Hokkaido, Japan. In order to elicit more informed and contextualized public opinions, we elaborated a set of questions regarding the impact of transition on everyone's QOL and invited expert witnesses specializing not only in climate change risks and energy issues but also the local impacts of climate change as well as consumers’ energy conservation to extensively inform the participants. After a dialogue with the witnesses and deliberation among the panel members, the participants reached an agreement that transition does not necessarily pose a threat to their QOL and can provide opportunities for promoting well-being. Their conclusion emphasized the zero emission goal of the Paris Agreement is difficult but achievable, based on the recognition that climate change is a

serious problem that would destroy ecosystems on a global scale as well as the right of survive of future generations. The jury conclusion also mentioned the diversity in the kind of QOL that people wish to pursue, and it highlighted the importance of tolerating different attitudes toward decarbonization transition. In fact, our individual questionnaire survey after the entire meeting revealed the degree of support for decarbonization still varied among the participants. Our observation and the conclusion indicate that a mini-public process like citizens' jury, when equipped with relevant questions as well as well-balanced information, can provide a bridge between global agendas and local contexts regarding the issues like climate change and energy transition. We expect mini-public methods discussed here will be applied to climate and energy policy dialogue in parallel with other participatory mechanisms including stakeholder engagement methodologies.

Making Social Influence: Message Effects of PM Reducing Behavior with Normative Appeals

Seona Park (Seoul National University)
Hyun Suk Kim (Seoul National University)
Sun-Jin Yun (Seoul National University)

Environmental communication deals with social influence that urge citizens to act now. Under this concern, this empirical research examined the message effect of pro-environmental behavior. Based on a review of persuasive communication, this research adopted and tested the focus theory of normative appeals. The theory assays norms into Injunctive Norms (IN, "What you should do") and Descriptive Norms (DN, "What others do").

The study was designed as a message effect experiment, held at an extension of one qualitative elicit survey research. The previous research developed a possible campaign strategy to make citizens participate in reducing Particular Matters (PM), especially among the young. This research investigates whether normative appeals can be persuasive that suggest people ride a public bike, with a primary motivation to reduce PM.

As message effects could be strictly confirmed in a specific context rather than a general design, riding a public bike in Seoul metropolitan city was suggested as a recommended behavior to the study participants. Three message treatments were presented for each group in the form of news articles and operated into combinations of IN and DN. So there were four groups, including one control group. Messages were assigned randomly to the participants, consisted of students in one university located in Seoul.

The one-way ANOVA analysis and nonparametric tests showed no significant differ-

ences among treatment. A few other variables driven from theoretical review had significance explaining behavioral intention. It was assumed that the effect of the message was too small to make differences among them. The SEM(structural equation modeling) analysis showed the collected data fitted to a theoretical model with behavioral intention as an independent variable and DN, attitude, and efficacy. There could be other factors promoting the willingness to ride a public bike, and those are also confirmed in the result analysis. Even though the message treatment hardly affected the degree of DN and behavioral intention, we still could infer the importance of DN. Based on the results, the research aiming at enhancing civic participation discussed a practical meaning in pro-environmental messages using normative appeals. It concluded with a further suggestion for future research and the experimental design suggestion to raise the validity of an experiment.

4-1. Politics of Energy Transition in East Asia (2)

10:50 AM ~ 12:20 PM | Room 306 Glocal Hall

Moderator: Kuei-Tien Chou (National Taiwan University)

Transformative Policy Mixes for Long-Term Decarbonization in Taiwan

Chia-Wei Chao (National Taiwan University)

Kuei-Tien Chou (National Taiwan University)

The Paris Agreement ask all the parties should strive to formulate long-term low greenhouse gas emission development strategies, and while the IPCC highlights the importance of system transition to strengthen the global response of limiting warming to 1.5 °C and maximize the co-benefits with SDGs. Although Taiwan has placed itself on an accelerated energy transition pathway towards a “nuclear free homeland” and low-carbon economy, through the expansion of the investment on the renewable energy and gradual reform of electricity market, but the existing official GHG Reduction Action Plan fail to provide a clear path to fulfill the long-term legally binding GHG reduction target (no more than 50% of 2005 GHG emission by 2050), and the insufficient to launch the widespread adoption of new and possibly disruptive technologies and practices and enhanced climate-driven innovation. Based on the socio-technical transition theory, the long-term strategy should address multiple market and system failures by the combination of different types of instruments, that need to be orchestrated in synergetic instrument mixes consistent with long-term targets and well aligned across different policy fields and governance levels.

In this study, we develop the transformative policy mixes to facilitate the transition pathway to deep decarbonization in Taiwan. Based on the public poll, stakeholder questionnaire survey and expert interview, the governance gaps are identified from Multi-Level Perspective which includes the resistance of energy-intensive industries, low public confidence, depoliticized advocacy coalition and knowledge monopoly from state-owned utility. Furthermore, six key policy bundles have been formulated to bridge the above gaps which are: inclusive participation, local energy governance, electricity market reform, industrial energy efficiency first, greening financial flows and internalization of externality. In order to fulfill the mandatory long-term climate pledge, it requires reshape the socio-technical imaginary toward energy, which can initiate through inclusive social learning on external cost of fossil fuel and nuclear energy. The grassroots niche innovations such as participatory budgeting on energy saving and renewable energy cooperative can be upscaled through local energy governance program and well-designed electricity market, which provide full access for citizen energy communities. However, the energy-intensive industries are the incumbent actors that hold the physical and political power to consolidate the existing regime. Therefore, the fossil fuel subsidies reform and the divestment from the pension fund can send a new signal to business leader to accelerate the diffusion of best available energy efficiency technology. This study not only drafts the policy recommendations to guide the decarbonization in Taiwan, but also provide an analytical framework that can incorporate the system transition perspective into the formulation of long-term strategies.

Pursuing Energy Democracy: The Role of Taiwan's Anti-Nuclear Groups in Energy Transition

Hua-Mei Chiu (National Sun Yat-sen University)

The revitalized anti-nuclear movement in Taiwan has gained its unprecedented momentum after the 2011 Fukushima Nuclear Disaster. Through massive social mobilization, the movement have resulted in the termination of the construction of the Fourth Nuclear Power Plant in April 2014. In 2016, the new elected President from the DPP has promised to carry out the “nuclear go zero” policy appealed by the environmental groups and to increase the proportion of renewable energy to 20% by 2025. Against this background, one can observe that the focus of the anti-nuclear movement has significantly shifted from “against-” nuclear power to “pro-” energy transition. As political opportunities appeared and some institutional channels opened, the leading anti-nuclear groups do not only have their members participating in various governmental commissions but also seek to collaborate with the gov-

ernment and the economic actors in order to influence the country's energy policy and to advocate the citizens' version of energy transition. The research explores the efforts the anti-nuclear groups and activists have made since 2014. It finds that some groups and activists have participated in the formulation of new energy policy and promoted of the democratic form of energy governance. Some activists have converted themselves to be energy prosumers, such as collectively establishing citizen power Co-op. Overall, the leading anti-nuclear groups and activists have made great efforts in pursuing a more democratic, decentralized and justice form of energy transition. How to form a democratic governance framework is an issue. In November 2008, the pro-nuclear referendum initiated by the pro-nuclear camp has forced the anti-nuclear organizations to switch their focus from the energy transition back to the battle field of anti-nuclear power. The progress of energy transition has been delayed by the result of the referendum. The challenges of pursuing energy democracy in energy transition is still tremendous.

The Forming of Counter-Discourse Through Citizen-Expert Cooperation: The Case of ZeroEnergy Buildings

Miseong Cho (Seoul National University)

Sun-Jin Yun (Seoul National University)

In the era of climate crisis, social interest in zero-energy buildings (ZEB) to reduce greenhouse gas emissions is increasing. The purpose of this paper is to explore a movement for sustainable energy transition in the residential sector. Especially it gives deep attention to the formation of counter-discourse through citizen-expert cooperation concerning ZEB technology. Most studies in the field of ZEB have focused on technology itself, while there has been little discussion on the interaction between citizens-residents and technology for energy transition. This study focuses on civic engagement around ZEB technology, through a case of an architectural Institute named Passive House Institute Korea (PHIKO). The research questions are as follows. First, what discourses are formed at the point where citizens meet with ZEB technology? Second, how do citizens participate in technological development in this process? In short, this paper is concerned about the contents and method of citizen-technical interaction.

For this study, we adopted a qualitative case study approach and collected various data through interviews, participation observations, and documents. In particular, posts and comments on the PHIKO homepage were analyzed as the main data sources. This is because PHIKO uses the homepage as an important tool for archiving, civil communication and edu-

cating citizens.

As a result, we found that PHIKO homepage serves as a kind of school, a living lab, a knowledge commons, and a forum for discourse. Based on contents analysis of dialogues through the website, the forming process and contents of the counter discourse against mainstream building industry were grasped. The content of counter discourse can be classified into three categories. First, they raise questions about the irrationality of the building industry with regard to the concept of the house, and try to restore its essence. Second, they emphasize the original goals of energy efficiency and saving pursued by ZEB technology. Third, they try to improve ZEB technology in order to match the Korean context.

Next, we paid attention to the process of forming such counter discourse through the homepage that pursues copyleft. It turned out that the process of formation of counter discourse had three characteristics: knowledge commoning through social media, production of lay knowledge and role mashup of lay people and lastly, knowledge co-production through collaboration between experts and citizens.

These findings suggest several policy implications. It is necessary to modify the system to achieve the original purpose of saving energy and reducing emissions in ZEB construction and renewable energy use. Also, the scope and perspective on ZEB technology should be extended from the original state of the technology's birth to social application and public reaction to it in different social context. Finally, lay people can contribute to the technological development by intervening in its whole life cycle. Ensuring citizen participation in ZEB technological development will contribute to the spread of zero energy housing and a more sustainable residential energy transition.

4-2. Water Policy and National Archive in East Asia (2)

10:50 AM ~ 12:20 PM | Room 304

Moderator: Jin-Tae Hwang (Seoul National University Asia Center)

This session is organized by SNU Center for Asian Urban Societies.

The Representation of Soyang Dam as State-nature in National Films during the Park ChungHee Regime

Jin-Tae Hwang (Seoul National University Asia Center)

This paper aims to explore the ways in which the Korean developmental state had transformed diverse local natures into a single 'state-nature' by focusing on national films during the Park Chung-Hee regime. The Korean state had produced state-natures as a hegemony project to support a certain accumulation strategy and to erase potential social and political resistance at the local level in the name of national economic development. In a case study, I pay attention to national films having functioned as a hegemonic practice of the state. More specifically, several key narratives extracted from *Daehan News*' news images on Soyang Dam are as follows: 1) exposing local space to state spatial strategy; 2) making national actors appear on local space; 3) incorporating local nature to the formation of a state-nature; 4) seeing local nature like a national actor. In conclusion, I argue that the hegemony project of the developmental state and the relationship between the state and nature needs to be explored more deeply and broadly.

The Developmentalism and National Films in Dam Construction in Korea

Eun-hye Kim (Pusan National University)

The purpose of this study was to review the historical trajectories of dam construction on developmentalism and national films in Korea. The developmentalism in 20th centuries has been represented as development film between developmental regime and subject. This study has reviewed the national archives of the dam construction's images: modern developmentalism (colonialism- the late 1970s) - the criticism of development(1980-90s) - post developmentalism(after the 2000s). The images of dam were the products that the conflicts and strains of interests on the development brought in colonialism and Cold War in world-historical Perspective. In particular, the multipurpose dam developments in Korean modernization of the Fatherland are the representative of public works which covered the

electric-power production, water supply, the related business (tourism) etc. But Part of the films on dam construction have been described as the nostalgia, sadness, and magnificent landscapes in submerged districts, promoted to the reflexivity of development. Recently, there has been some revival of dam development between sharp environment issues, the dominant images in national films should be reviewed in cultural-political sphere.

Production and Consumption of Green-growth Landscape: Analysis on the 4 Major Rivers Project Promotion Videos

Sanghun Lee (Hanshin University)

This paper tries to examine how the 4 major rivers are produced and consumed as 'green-growth landscape' through analyzing the publicity videos produced by the government and the criticism. By focusing on the ideological characteristics of landscape, and the function of 'government', this paper paid attention to how the landscape of the river made as a 'state-nature' imbues the green growth strategy to the public. As a result of analyzing the videos made by the government and the videos criticizing and refuting them, it was estimated that the influence of the government promotional videos did not appear much in terms of water quality improvement. But, in terms of water quality, dimension and leisure, there has been considerable influence. However, the conflict over the 4 major rivers has not yet been completed, so it is likely to continue.

Quantifying River Water, Rationalizing Dam Constructions: How South Korea Has Become a Dammed Nation

Seohyun Park (Virginia Tech)

To explore how South Korea has become one of the countries with the greatest number of dams per unit area, this paper studies the history of river basin surveys conducted during the 1960s and 1970s. Korean environmental sociologists and political geographers have employed the "construction state" thesis, presented by Gavan McCormack to explain the surge of dam construction in the second half of the twentieth century in Korea. McCormack referred to late 20th century Japan as a construction state to reveal the collusion between politics and, the construction business, which posed an immense threat to the ecological system. Drawing on this framework, Korean scholars argue that the construction complex, which consists of bureaucrats, construction industries, and landed proprietors, legitimized

environmental exploitation out of self-interest under the name of technological, economic, and industrial progress.

While the construction state thesis characterizes the political economy of the advocates of national construction projects, it has insufficiently explained how so many dams, of all structures, came into being over the late twentieth century. By investigating hydrological knowledge and practices implemented in Korea during the 1960s and the early 1970s, I argue that quantification of different dimensions of river water was key to framing river water as an economic good; thus, it rationalized national dam building projects. After the Korean War (1950-53), the Korean authority aspired to build the postwar nation by capitalizing on the natural environment. Around the early 1960s, the Korean government began to standardize water measurements and produce hydrological data from major rivers with technical aid from the United States Geological Survey (USGS) and the United States Bureau of Reclamation (USBR). These hydrological surveys allowed the authority to turn rivers into numbers and thus quantifies river water as a national resource. Thereby, the construction of dams for the storage of more water and generation of more hydraulic power became a virtue of advanced society, while letting water flow without any human intervention was considered a waste of resources.

This research provides a different perspective on the contemporary discussion concerning dam construction and deconstruction. Granted, interests of the construction complex have factored into a dam construction boom; however, its more fundamental reason is the way water has been managed by the authority. The central government quantified river water by collecting hydrological data in order to manage rivers in the territory from a distance. My research reveals that these water measurement practices were a means of implementing a specific political vision which served particular social groups. I raise the questions of how hydrological knowledge is produced and how hydrological data is collected in a particular social context. This problematization leads us to investigate how techniques of quantifying river water can drive technological decisions of dam building and how social, political, and ethical choices can be embedded in those decisions.

4-3. Commons and Sustainability Transition (2)

10:50 AM ~ 12:20 PM | Room 305

Moderator: Carl Middleton (Chulalongkorn University)

The Conservation of SATOYAMA and Reforming of Commons: the Actors and Activities of Producing Firewood

Takahashi Satoka (Tohoku University)

Who could involve in conserving SATOYAMA? How they could do that? SATOYAMA is defined as the secondary woodlands such as oak coppices, pinewoods and bamboo groves, as well as grasslands managed for thatch, fodder and compost. These secondary environments have been maintained for long-term sustainable use of vital natural resources they provided. SATOYAMA is a typical commons and an important resource base for biodiversity.

However recently, SATOYAMA has not been positively used because of the energy revolution and urbanism, dependence on foreign resources and so on. Now it is difficult to maintain SATOYAMA by local residents who live in the surrounding area due to under-population and aging. So, citizens in urban areas are identified as new actors to manage SATOYAMA.

Studies on Commons by Inoue(2001), Suga(2001), Miyauchi(2001) and others, have been focusing on the role of local residents and prevention of over-use. However, a new study is required to show how citizens in urban areas could reform commons in order to prevent under-use and involve in conserving SATOYAMA.

There are mainly two difficulties for urban citizens to want to conserve SATOYAMA, building a partnership with local residents and getting a permission to use SATOYAMA from its owners.

This study reveals the way of urban citizens involving in conserving SATOYAMA by focusing on how they are gathering, cooperating, and getting permission of using SATOYAMA from its owners. Two concepts of “commons” and “legitimacy” are used to analyze. As an case, this study deal with the activities of producing firewood in Kawasaki town, Miyagi prefecture, Japan. In this case, urban citizens in Sendai city who have wood-burning stoves participate in NPO’s activities and produce firewood for their fuels. The NPO aims to conserve SATOYAMA through the activities of cutting old secondary woods to prevent epidemic disease on them. This case show how conserving SATOYAMA could be done by focusing on the actors who participate in producing firewood.

Sustainable Development through the Lens of Historical Environmental Conservation: From the Case of Urban Regeneration in Daegu, Korea

Rie Matsui (Atomi University)

In the cities of Korea, rebuilding of local communities have become significant after the progress of rapid urbanization, which cause dilution of social ties among residents. Under such circumstances, the local residents of the cities were expected to rebuild a local community and be in a mutually supportive relationship. However, facing the limits of urban expansion and the scrap-and-build policy, a different way of community making has emerged. Instead of rebuilding a local community in a normative way, residents have turned to a strategy to rediscover and reuse historical and embedded social ties for sustainable development.

This paper will analyse this emerging strategy concerning community making from the perspective of Historical Environmental Preservation (*rekishiteki-kankyohozen* in Japanese), a hot topic in environmental sociology in Japan. The pivot of Japan's environmental sociology is the focus on the interrelationship between human and nonhuman environment. Most of the studies consider environmental issues in relation to social life. Therefore, Historical Environmental Preservation Studies also analyse cityscapes and architectures as social constructs. This paper will take up a case of Bukseongro district in Daegu, Korea. This district had been restructured during the colonial period by a Japanese imperial regime. Then, after the liberation and the Korean War, it turned into an area where small-sized factories are densely packed. Interestingly, the current residents in the neighbourhood who aim for alternative development have organized urban revival movement that reuse the architectures built from the colonial period to 1960s. In addition, urban regeneration movement by tool-maker and craftsman of the small-sized factories has also been flourished. This paper analyses these movements, which focus on not rebuilding a local community in a normative way but rediscovering and mobilizing historical and embedded social capital and networks, from the perspective of Historical Environmental Preservation, and then considers a new way of sustainable development in Korea.

How East Asian Regionalism Connects Ecologies and Societies through Global Commodity-commons Chains

Carl Middleton (Chulalongkorn University)

Takeshi Ito (Sophia University)

East Asia has a long history of regionalism, at least since the 16th Century. The age of economic modernization since the mid-19th Century profoundly transformed the region economically, socially, and ecologically. Japan rapidly industrialized since the Meiji Restoration in 1868, which was a precursor to Japan's imperial expansion, and latter reconstruction after World War II. Thailand, meanwhile, at first was a commodity exporter, but since the 1950s industrialized initially with a focus on domestic markets, and later for export. Over this period, Thailand and Japan deepened their political and economic relations, perhaps most profoundly since the 1980s when the Plaza Accord catalyzed large flows of investment from Japan into Thailand leading to rapid industrialization.

In this paper, with a focus on Japan and Thailand, we outline an environmental and economic history of East Asian regionalism to reveal how rapid economic modernization and social and ecological change are intimately connected and transform each other. We examine how the evolving political economy of East Asian regionalism, including flows of trade, investment, and aid, has reworked ecology-society relations in distant yet connected sites of investment and divestment, and the implications for community vulnerabilities. Our study is based on empirical fieldwork and archival research. In Thailand, our research focuses on industrial estates in Ayutthaya and Map Tha Phut, and peri-urban areas of Bangkok. In Japan, we focus on the watershed surrounding Tokyo, including former and current industrial zones and the Watarase conservation area, as well as Tokyo city itself.

We argue that the continual and connected reworking of ecologies and ecology-society relations in numerous localities in Thailand and Japan is an underappreciated foundation that has underpinned the expansion of capitalism in East Asia, including as it has responded to changing geopolitical, economic, and environmental contexts. We explore these connections through proposing the concept of 'global commodity-commons chains' to detail the dynamic ecology-society relations embedded in all global commodity chains. Through this concept we aim to understand the relational processes between Japan and Thailand that have led to the enclosure and recreation of commons, and changes to communities' economic, social and ecological vulnerabilities in both positive and negative ways.

4-4. Just Transition and Energy Democracy (2)

10:50 AM ~ 12:20 PM | Room 308

Moderator: Tze-Luen Lin (National Taiwan University)

Driving Motivations for Energy Transition: Case Study of Community Power and Green Electricity in Japan

Yasushi Maruyama (Nagoya University)

Makoto Nishikido (Hosei University)

This research aims to discuss the possible translation between energy transition and perceived benefit in living world. Through case studies of community renewable energy projects (supply side) and citizen's preference for green electricity (demand side), the authors will clarify the factors to promote energy transition.

We use two sets of data. The one is required from social survey of investors of community renewable energy form 1999 to 2016, so that we can see the structure of their motivations to support projects (RE survey). The other survey is focused on members of consumer cooperative as a case of "ethical consumer" so that we can clarify if and how they choose green electricity (GE survey). In both surveys, a conjoint survey is conducted to figure out the effective factors to push people to change their behavior.

The RE survey showed that there are many motivations for investment: e.g. environmental, economic, social, and ownership. In some cases, the attitude such as nuclear phase out shows contradict reactions within various projects. That is, a preference for renewable energy are somehow independent from the attitude toward nuclear power. A similar phenomenon are also observed in GE survey. Compared with governmental survey, members of consumer cooperative are more interested in and willing to change to GE (70%). However, this is not only because they want more RE .Conjoint analysis shows that the most preferred factor is the membership which suggest a symbol of transparency, accountability, and trust.

In conclusion, it is stated that diversity of values are more effective than one single strong value such as environmental, when we are to promote awareness and action for sustainable society. Climate change and sustainability has surely become a key political issue in this century. However, we cannot avoid uncertainty which brings many social actors lack of actuality. To overcome this dilemma, various bridgework and translation would be necessary

Public Pathway to Energy Transition in Korea

Deokhwa Hong (Chungbuk National University)

As the energy transition becomes visible, the strategies and pathways of energy transition are emerging as social issues. And new concepts are being proposed to explain the contention related to energy transition, including energy democracy, community energy, re-municipalization and energy citizenship. This presentation examines the diversification of energy transition strategies in Korea, focusing on the electric power industry. It also explores the possibility of public pathway to energy transition, taking into account the criticism that market mechanism is limited in mobilizing resources for rapid energy transition. As in many countries, marketization or liberalization, community energy or localized collective ownership, (re)socialization or nationalization are suggested as energy transition strategies in Korea. The conflict structure, however, differs from countries that have operated localized grids or where the electric power industry is privatized. In Korea, the privatization and marketization of the electric power industry has been promoted, but as the social preference for the developmental publicness is maintained, the state-owned enterprises still dominate the electric power industry. Many have doubted that the state-owned enterprises can lead the energy transition because public sectors have been used as a means of implementing supply-oriented energy policies in developmental state. However, the state-owned enterprises can also provide an efficient means of implementing government-led energy transition policies. Meanwhile, in Korea, the autonomy of local governments and local civil society is relatively weak due to the legacy of authoritarian political system. This results in political and social difficulties in activating community energy, local energy and energy devolution. This presentation will discuss the potential of transition pathway based on public-public(or commons) cooperation by examining the major issues in Korea.

Building New Energy Culture: How Community Colleges Overturned the Citizen's Energy Behaviors in Taiwan

Ying-Feng Chen (Chinese Culture University)

Shixi Jiang (Shantou University)

Energy transition is a mega project, which often encounters resistance from existing energy sectors and inertia of public behaviors. Particularly in East Asia, the path-dependence nature of developmental states, which heavily relied on energy subsidy and exportation in a state-centric and top-down manner, drastically slowed down the pace of energy transition,

partly because citizens and firms had been accustomed to cheap energy supply. In Taiwan, the long-term cheap energy supply and lacking of market incentives for new energy-efficient innovations had seriously prevented citizens from developing a new energy-efficient culture.

This paper adopted the “energy culture” framework from Stephenson and tried to explore the possibilities of collective behavioral changes in a grassroots way. By conducting participatory observation in Yongho community college in New Taipei City, the authors argued that the partnership between local government and community colleges has paid off in shaping new mentality of citizens. While participants in community college varied in age, class and genders, the empowerment through practices and collaboration among participants allowed them developing solutions and ideas in a real social contexts and thus made them more socially feasible and penetrative. This strengthened self-efficacy on energy issues thus further reinforced the passion in disperse sustainable lifestyle and deliver innovations among neighborhoods and triggered bottom-up changes.

4-5. Climate Change and Social Actions

10:50 AM ~ 12:20 PM | Room 205

Moderator: Ajiang Chen (Hohai University)

Livelihood Impact and Community Response of Lake Level Rise with the Climate Change: Taking the Villages around the Selin Lake as an Example

Ajiang Chen (Hohai University)

Zhao Wang (Hohai University)

Wei Zhou (Hohai University)

Xiaobing Yan (Changzhou University)

Under the influence of global climate change, the melting rate of glaciers is accelerating, and the lake level rises in lakes with glacial meltwater as the main source of recharge. Through the case study of the Selin Lake in the Qinghai-Tibet Plateau, it was found that the rise of the lake level inundated a large number of pastures in the surrounding areas. The decline of the livestock industry has seriously affected the livelihood of the local herdsman, and the degree of impoverishment has deepened. However, the current pasture contract responsibility system weakens the herdsman's coping ability. The herdsman spontaneously organize and cooperate to restore the traditional pasture collective organization, use the original local knowledge to adapt to climate change, and alleviate the livelihood to a certain extent.

The Developmental State's Legacy and Corporation Carbon Emission Performance: The Evidence from Taiwanese Firms from 2014-2017

Chung-Pei Pien (National Taiwan University)

Chia-Wei Chao (National Taiwan University)

Kuei-Tien Chou (National Taiwan University)

In the recent years, carbon emission disclosure has become a major way that the Taiwanese government and stakeholders encourage corporations to meet their climate change commitments. However, there is no clear evidence as to whether and to how corporations have a better or worse carbon emission performance. This produces an understanding gap between the disclosure policy's expectation and corporation practices. This study attempts to fill the gap by analyzing the relationships between corporations' carbon emission and characteristics. Using panel data of more than 300 Taiwanese corporations from 2014-2016, this study attempts to identify the primary factors, such as share structures, board constitution, finance and so on, to influence their carbon emission performance. The results of this study will provide abundant information to improve the weakness of carbon emission disclosure policy as well as offer future policy-making implication, such as cap and trade scheme.

Who Wins?: Climate Adaptation Conflict in Central Stockholm

Atsushi Nozawa (The University of Tokyo)

Adaptation agenda is not an urgent issue in developing countries. Toward a sustainable planet, not only mitigating CO2 emissions but also adapting the effects of climate change will be required even in developed countries. The Japanese Diet enacted the Climate Change Adaptation Act in June 2018. However, compared with the policy development, research trends have focused on mitigation agenda disproportionately, especially in the area of social science. This presentation will deal with a conflict over urban renewal project related to climate change in Sweden, one of the forerunners in terms of environmental policy, and discuss the difficulty of making a decision inherent in adaptation issue.

Stockholm has faced growing risk of water level rising in the lake Mälaren and sea level rising in Soltsjön (Baltic sea). This will bring about widespread floods in the surrounding of the lake Mälaren including Stockholm and harmful effect on drinking water supply in the

metropolitan area. To prevent these risks and adapt the effects of climate change over the next 100 years, and finally to make the city more attractive, the Stockholm city government has promoted a urban renewal project in Slussen (“sluice” in English) area that situated in strategically important location between the lake Mälaren and Sölsjön. The authorities are aiming for completing within 2025.

The research focuses on roles of local actors in Stockholm region that try to take initiative to this climate adaptation project and analyzes its policymaking and implementation processes through document analyses and qualitative interview surveys with citizen who engaged in this project with critical eyes. to this project, also interviews with city government Ministry of Environment, research institutions, individual researchers, companies, interest organizations media will be conducted.

As a conclusion, this presentation will refer to (dis) integration of local adaptation policy with the national climate agenda.

Climate Change Awareness and Energy Use in the Southeast Asian Countries

Midori Aoyagi (National Institute for Environmental Studies)

Recent extreme weather all over the world effect on people’s everyday lives and also on the perception of climate change. The current status of energy consumption and climate change awareness of people in the Southeast Asian countries are reported in this paper. We focused on the three development stages of countries: Thailand, Vietnam, and Myanmar. We fielded our survey in 2016 for Thailand, in 2017 for Vietnam and in 2018 for Myanmar. The combined method means that in each country. For the qualitative survey, both each country and Japanese team members visited 15(Thailand) to 30(Vietnam and Myanmar, respectively) households and interviewed, recorded and videotaped at each respondent’s home. For the quantitative survey, 1000 males and females from 18 and above were nationally drawn using probability proportion to size (PPS). The contents of the interview were: satisfaction of current life, relationship with other people, social networks, future aspirations, household appliances owned, energy consumption status, and demographics in both surveys.

Our results showed those observations as follows. For the quantitative parts, the most stories people told us in those three countries are about “adaptation” aspects of climate change, this means disaster and farming. People often connected natural disasters or other extreme weather events with climate change. As most of the people we interviewed in Myanmar, were farmers, the changes in weather patterns mean unstable work pattern and

production. People in Thailand had different responses, they told us that hot weather was the main reason of using air-conditioners. No interviewee had connected hot weather with natural disasters. When we asked people how they got to know about climate change, people often responded “I feel it,” “I watched it on the television,” in those three countries.

As for the quantitative parts, we picked up mainly the results in Myanmar here. The average scores of overall life satisfaction were 6.0 in urban areas, and 5.8 in rural areas. 88% in urban are connected with main-grid, while in the rural area, 32% for main-grid, 35% for the solar power panel (6% in urban). People were using car batteries for storing electricity to use electricity at night. The main purpose of the electricity is lighting, cooking (stove and refrigerator), entertainment (watching TV, smartphones, radio, etc.) and washing in the urban area, lighting and smartphones and watching DVD in the rural area. Very few households owned a refrigerator or washing machine in the rural area.

Supply of electricity is very limited in rural Myanmar. We watched people building power poles and power lines in rural Shan State. Once people know the effectiveness and benefits of electricity by using solar panels, people seem to be eager to be connected to the main grid.

People in those three countries are now facing or will be facing the social change due to the rapid economic growth in conjunction with the globalization. To achieve post-carbon society and raising quality of life, and enjoying decent lifestyles, people in those countries will continue struggling with the balance among better environment and economic growth.

5-1. Energy Technology from the Perspective of Environmental Sociology

3:50 PM ~ 5:50 PM | Room 306

Moderator: Sun-Jin Yun (Seoul National University)

Seoul's Energy Innovation and Challenges

Jungmin Yu (Seoul Institute)

Can Carbon Capture and Storage Contribute to East Asia's Energy Transition? Socio-ecological Considerations

Ryan Gunderson (Miami University)

Carbon capture and storage (CCS) is a climate change mitigation strategy based on the removal of carbon from the atmosphere and is increasingly considered an essential tool for limiting global temperature rise below 2 degrees Celsius above pre-industrial levels. CCS policy discussion has primarily focused on the potential economic and environmental costs and benefits. The clearest potential environmental benefit is reductions in total carbon emissions, especially from power plants, and reductions in atmospheric CO₂. Others have expressed concerns about the potential environmental, social, and political impacts of CCS.

CCS technologies are relevant to national energy transition plans. Focusing on South Korea's New Renewable 3020 Implementation Plan, the talk will consider the limitations and potentials of CCS technologies for decarbonizing East Asia's economy and energy supply by analyzing two lines of evidence: (1) CCS's capacity for negative emissions and (2) the social reasons for the fossil fuel industry's support for CCS.

The first line of evidence concerns the ability of different forms of CCS technologies to result in negative emissions. Most applications of CCS do not result in negative emissions. While select CCS technologies may have some potential to contribute to reducing atmospheric CO₂ in the future, the current social order constrains their use and effectiveness.

The second line of evidence concerns the fossil fuel industry's interest in using post-combustion CCS to sustain society's reliance on fossil fuels. "Post-combustion" CCS refers to capturing CO₂ at sources of fossil fuel combustion, such as coal or gas-fired power plants. The climate policy implications of the fossil fuel industry's framings of CCS are analyzed and assessed.

Lessons and Implications of Off-shore Windmill Development in UK

Sangyun Lee (Korea Environment Institute)

5-2. Disaster and Environmental Victimization

3:50 PM ~ 5:50 PM | Room 308

Moderator: Juju Wang (National Tsing Hua University)

Becoming Victim of Residents around the Nuclear Power Plant: A Study on the Lawsuit of Kyundo's Family

Woo-Chang Kim (Seoul National University)

These days 19 nuclear power plants are operating in South Korea. Gori #1 was the first nuclear power plant in Korea and it was started to operate since 19th June 1977. Finally, Moon Jae in government decided to stop permanently the oldest power plant 19th June 2017. It took almost 20 years from construction and operation to closure. However, still many power plants remain in Korea, and some accidents and unknown diseases occur to residents who reside around the nuclear power plant. Kyundo's family is typical in that case. They settled within 3km of the Gori nuclear power plant. Firstly, Kyundo's grandmother who lives within 15km of Gori nuclear power plant has stomach cancer. Kyundo's father also got colon cancer and the mother of Kyundo got breast cancer. Even Kyundo was born with a developmental disorder. Of course, there is still no proof or evidence of their disease and nuclear power plant relationship. But the misery and pain of Kyundo's family are just individual and personal problems? Or can we analyze social and structural problems especially caused nuclear power plants? These questions lead to the movement of Kyundo's family, named 'Walking the World with Kyundo and Kyundo's father'. Until now they did 4 times 'Walking the World', but there are some differences. 1st(2011.3~2011.4), 2nd(2011.9~2011.10) and 3rd(2014.4~2014.5) walked for raising questions about disability problems for instance, they criticized disability rating and caregiving obligation system. However, after the cancer of their families, the purpose of their movement totally changed. They insist de/anti-nuclearization and argued that the cause of their body pain was not just unlucky and personal.

This study will focus on how the family of Kyundo could raise their 'personal' problem to 'public and institutional' spheres. Also, trace the process in detail. Usually like the movement of the resident who is directly related to the problem tend to be isolated. Because some of them stick to 'Nothing about us without us' slogan, so they can't connect public. But Kyundo's family raise their question personal level as well as public level with the law and medical professionals.

How Was the Law Mobilized after the Injury? A Social-Legal Study of “Oil Disease” (1979-2016)

Shan Ya Su (National Taiwan University)

How might the law be mobilized in changing political process, by actors trained in legal profession or not? In this study, I discover this question by focusing on a specific yet remarkable case in Taiwan: “Yu Cheng,” a 40-year, multi-phases environmental movement blazed by a serious chronic polychlorinated biphenyls (PCBs) poisoning occurring in 1979 central Taiwan.

In the first part, I inquire the process in which the incident became a legally-framed dispute, and suggest it was the authoritarian state that the injury became a tort in Civil Law that only the oil company should take the responsibility for the poisoning. In the second part, I further analyze various legal actions based on “Yu Cheng” taken in the 1980s. It is found in this part that grassroots tended to mobilize the law outside the court. Though having written a petition to the state, threatening to “suit the government according to State Compensation Law,” grassroots’ goal was to negotiate for a decent medical allowance. On the contrary, actors with legal profession were more keen to create “Yu Cheng” a real tort case on court scene. It was not until activists from Consumer Foundation, most of whom lawyers, entered the movement did the war in the court appear. However, the outcome of “Yu Cheng” in the court was largely constrained by the strict principles adopted by judges in the 1980s. The predicament of “Yu Cheng” in the court, nevertheless, led to its opportunity in the parliament. Contrary to the limited outcome of court action, “Yu Cheng” became a perfect symbol exemplifying consumer rights in the lobbying of Consumer Protection Act (CPA). Ironically though, while key claims of the CPA were based on the frustration experienced in the “Yu Cheng” litigation, the legislation cured little pain or loss the “Yu Cheng” victims had been enduring for thirty years. The last part of this study explores the post-2000 “Yu Cheng” movement: one centered on victims in 2004, the other run by an NGO, “Taiwan Yu Cheng Victims’ Support Association,” from 2009 to 2016. This study indicates that both victims’ experience and the resources to exercise legal tactic and to negotiate with the government were key in “mobilizing law for the injury.” However, by looking at the legislation of “Yu Cheng Patients Health Care Services Act,” it is also found the constant limit of legal mobilization: though the victims’ interests were finally defined, little space were left for actors to negotiate for government’s duty to ascertain those interests.

Rethinking Expert's Role as Advocate after the Humidifier Disinfectant Disaster in Korea

Jinyoung Park (Seoul National University)
Dowan Ku (Environment and Society Research Institute)

The humidifier disinfectant disaster in Korea is, as is widely known, the world's largest biocide disaster. As of September 2019, 6,528 victims were reported, of which 1,435 died. Since the cause of unknown lung disease was identified as a humidifier disinfectant in 2011, there have been various public sector responses such as civil society, the media, and experts. In this presentation, I will focus on the role of experts in the response to the humidifier disinfectant disaster. After the humidifier disinfectant disaster, experts participated in the disaster response process in various forms and ways. For example, experts reported to the Centers for Disease Control & Prevention, conducted epidemiological investigations, surveyed the affected families, graded damage assessments, discussed remedy measures, and examined the health effects of substances used in the humidifier disinfectants. Expert involvement, assertion, and knowledge production gained power within the field of discussion and the process of investigating and judging damage and, as a result, influenced important decisions. However, not all experts participated in the disaster response process from the same point of view and position. Some experts stressed the accuracy of scientific evidence, while others stressed equity of interest. Some experts, on the other hand, actively stood on the victim's side and made their voices. This presentation will examine, in particular, the role of experts in practicing 'Seeing like the victim' and advocating victims. This will allow us to reconsider what role experts play in responding to disasters in environmental health sector.

The Long-term Social Impact of Environmental Disaster: The Scenes of Fishing Village after 11 Years from the Hebei Sprit Oil Spill Accident

Do Kyun Kim (Korea Environment Institute)
Eun-Ju Seo (Korea Environment Institute)
Jeong-rim Lee (Daejeon Institute for Civil Society Research)

5-3. re-Framing Food

3:50 PM ~ 5:50 PM | Room 305

Moderator: So-Young Lee (Institute for Global Environmental Strategies)

Discussant: Seejae Lee (The Catholic University of Korea)

The session is supported by the Environment Research and Technology Development Fund S-16 "Policy Design and Evaluation to Ensure Sustainable Consumption and Production Patterns in Asian Region".

Thoughts of Food: Listening to (In)consistent Narratives on (Un)sustainable Practices

Atsushi Watabe (Institute for Global Environmental Strategies)

Local level actions toward sustainable societies have gained momentum following recent global agreements on sustainable development. These include, but not limited to the reconfiguration of production, consumption, resource management, etc. by the residents' groups and civil society organisations. It is important to note that local initiatives do not usually go straight to the preset-goal of "the sustainable society" but often elaborate their objectives, actions, participants, etc. through the iterative process of learning through doing and sometimes through the conflicting relationships among the people engaged. Therefore, it is worth paying attention to the process in which people (re)contextualise their needs and opportunities to continuously shift their actions, in addition to the tangible impacts made.

The study pays attention to a few urban farmers and people supporting them in Yokohama city, Japan. Yokohama, being the forerunner of promoting urban farming in Japan, is a major producer of some of the vegetables. However, many people give up agriculture every year in the context of the ageing of people engaged in the agriculture sector and the declining trend of agricultural income. The city government has introduced various measures to keep the number of farmers through the training of potential new farmers and to enhance the opportunities where people can engage with and support the farmers, such as fostering of farm volunteers and certifying local food concierge.

The study analysed a series of interviews with farmers and supporters. These farmers have taken advantage of these policies and secured support from the volunteers. Additionally, they also cultivate their channels to collaborate with their neighbouring schools and companies. The analysis of their narratives reveals that they share a few key points for "contextualising" their efforts of urban farming. Firstly, farming in the city (and arguably in Japan as well) is not an economically viable activity. They understand the decisions of the other farmers who gave up and recommend the young generation not to decide to become

a farmer. Secondly, they emphasise they continue to meet their responsibility to the local society, through their contribution to preparedness to disasters (referring to the earthquake in 2011), environment protection, and education. Thirdly, they are critical against the overall direction of past development. However, they welcome some policies in Yokohama, in particular, which increased "supporters" of farmers. While talking about such ideas, farmers and their supporters use specific skills of contrasting: chronological scale (e.g. rapid economic growth, globalization, the earthquake in 2011); commonality and difference with the others (e.g. their friends who have gave up farming, neighbours who support them); and their active and passive roles to the situation changes. These contrasts help them create their unique contexts of urban farming which they continue with their supporters.

We should bear in mind here that such contexts are tentative ones subject to further changes. However, the analysis indicates that the farms in the mega-city serves as a hub of enabling the meeting of people with different backgrounds, and fostering (re-)contextualising the "(non-)sustainable" conditions of their neighbourhood and actions to address them.

Reclaiming Food as Commons: Sociological Lessons from Japan

Masashi Tachikawa (Nagoya University)

In Japan, we are facing various food related issues, such as abandoned farm land and aged farmers in rural area and food desert and decreasing local groceries in urban area. These issues might be two sides of one coin, that is broken ties between urban and rural areas under current socio-economic conditions which is highly globalized and financialized economy. We are now seeking niche activities which could guide us to make a transition to new society that is more sustainable from various viewpoints. In the meanwhile, the power of food to connect various actors in society is gradually recognized in neoliberal society. The key idea here is food as commons rather than commodity (Vivero-Pol 2019). Food has various dimensions for society, such as tradeable good, cultural determinants, essential for humans, human right, renewable resources, and so on. This multifunctional nature of food provides various opportunities for people in rural and urban residents to discuss the future of food in their local contexts. In this context, food is not just regarded as commodity but should be treated as commons which call for participation from citizens rather than consumers. When people find food as commons in the overall trend of commoditification? This would be an interesting issue worth to be pursued in sociology.

In this paper, I would like to explain the process how local people have recognized food

as commons by referring to a case study of Kashiwa City, Chiba Prefecture, Japan. Kashiwa City experienced the presence of radioactive material following the accident at the Fukushima Daiichi Nuclear Power Plant in 2011. Three organizations were established to discuss and implement countermeasures to the problem of food safety. Participants included farmers, business persons, researchers, public officers, and consumers. Through tackling issues related to radioactive materials, a range of diverse networks emerged. In the course of this process, Kashiwa citizens established various food-related activities, which still continue to evolve. This case study indicates the importance of food for community building, and how citizens are reclaiming food as commons through their tireless efforts to envision local food in the face of serious environmental difficulties.

Motivations of Followers for Sustainable Agriculture Based on a Local Farmers Group

Satsuki Tanikawa (Tokyo University)

This study examines motivations for sustainable agriculture, especially based on a survey on a local group of farmers. In Tome city, in the northeast area in Japan, many farmers adopt conservation agriculture of rice from 2003. Almost all Japanese farmers join the local branches of Japan Agricultural Cooperative (JA), and the Tome branch took the initiative in the diffusion process of eco-friendly farming in the area. This area is famous for the rice production, and many farmers have comparatively large-scale paddies.

Previous research shows the farmers decision-making whether converts to organic or stays conventional, focusing their rationale (Darnhofer et al. 2005). The study considered farmers as atomic individuals, and had a premise that they chose organic farming based on their own judgments only. However, in the case of Japanese rural area, the groupism values centered JA could affect farmers converting choice. Therefore, this study examined not only individual reasons, but also collective.

Survey questionnaires were distributed to all farmers who attend to an expert group in JA branch at Tome city. Of 312 questionnaires were passed out from JA staffs, 81 questionnaires were returned. In the sample, the average age was the late fifties, which was the same as the average of a population or slightly younger, and many of them were full-time farmers, managing large-scale paddies.

In the factor analysis of motivations for conservation agriculture practice, three factors were obtained. Reflected by their characteristics, each factor was named “organic movements factor”, “self-profit factor”, and “local connection factor”. The third factor was constituted by questions related to JA’s initiative and the existence of a number of local farmers

who engaged in conservation agriculture. In addition, these factor scores were used in cluster analysis, and indicated three clusters. The three clusters were analyzed by ANOVA. Finally, this study discussed on followers who participate in environmental activities.

Seeking Sustainable Food in the City - Food Citizens' Committees and Food Governance in Seoul

Chul-Kyoo Kim (Korea University)

In 2017, Seoul, the capitol of South Korea, announced Food Master Plan for 2020, which envisioned a "sustainable food city." The food plan included health, security, co-existence, and safety as the key values. This led to implementation of 26 food-related projects investing approximately 300 million US dollars to make a sustainable food city over the years. Seoul had been detached from food, agriculture, and nature in its process of economic development. The Food Plan has been trying to make some changes to this. It may be regarded as an effort to reclaim food and agriculture as important part of citizens' lives. Seoul is now in the process of preparing the Food Plan 2030, which strongly emphasizes citizens' participation and engagement. In preparing new food plan, Food Citizens Committees, a new form of governance, is playing a critical role. Ten committees and the Working Group for Food Plan have held 200 meetings in the process since 2018. This process has been slow, involving intense and time-consuming discussions among diverse actors. Yet, it provided the participants, both citizens and government officials, an important opportunity to work with each other to build a sustainable food city. This paper explains and analyzes how a new governance is being experimented in making the Food Plan in Seoul.

| MAP & FLOOR PLAN

Venue Information

Located around 30 minutes from the downtown Seoul, the venue for the ISESEA-7 is Building No.82 (GSES) at Seoul National University.



◇ Transportation By Subway or Bus

- 1) Seoul National University Station (Line 2) – Gate No.3 – Bus No.5511 (Green bus) – Graduate School of International Studies Station
- 2) Nakseongdae Station (Line 2) – Gate No.4 – Local Bus No.02 (Gwanak) – Dormitory Station

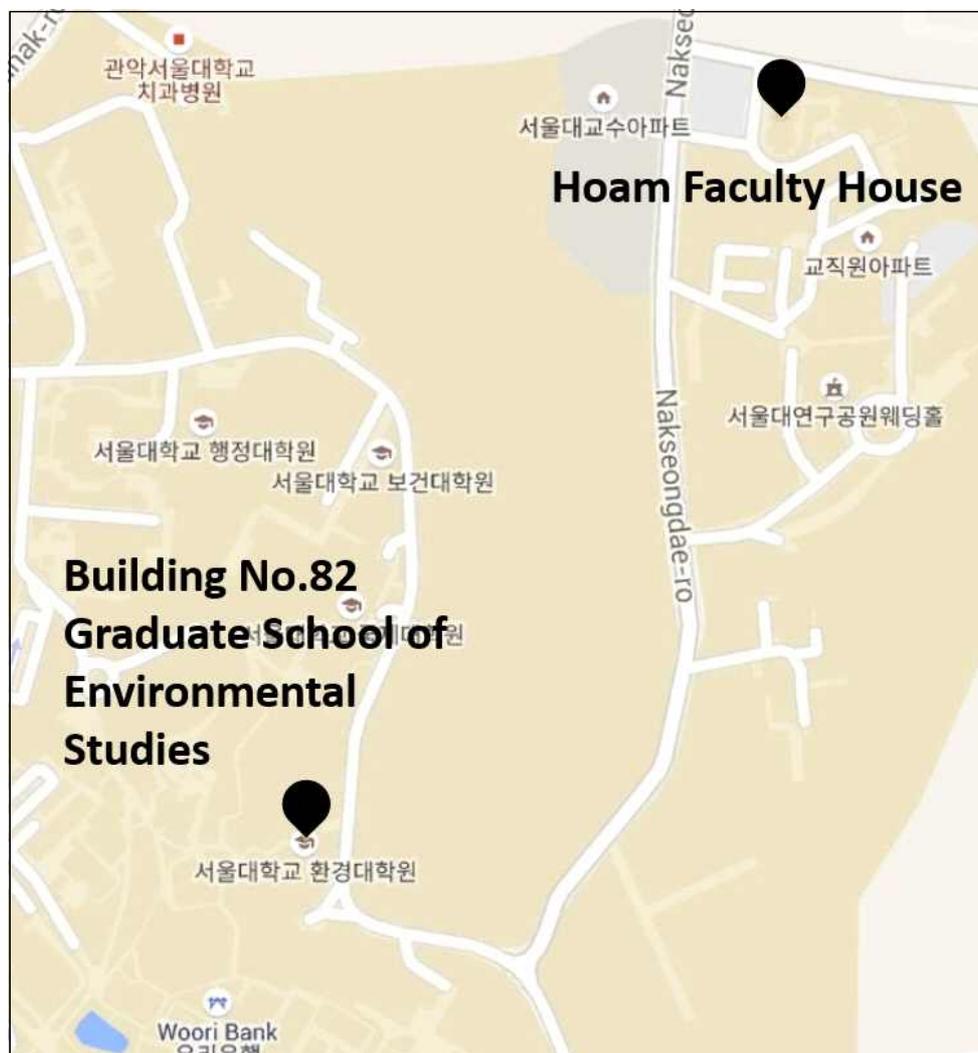
◇ By Car

- 1 Gwanak-ro, Gwanak-gu, Seoul, South Korea
(서울시 관악구 관악로 1 서울대학교 환경대학원 82동)

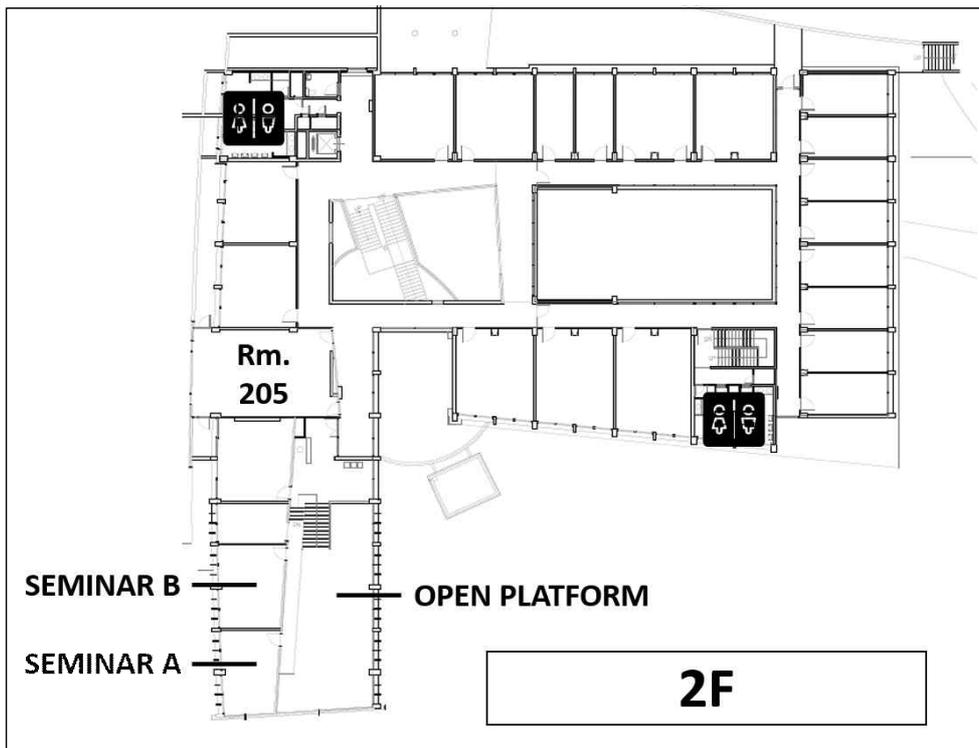
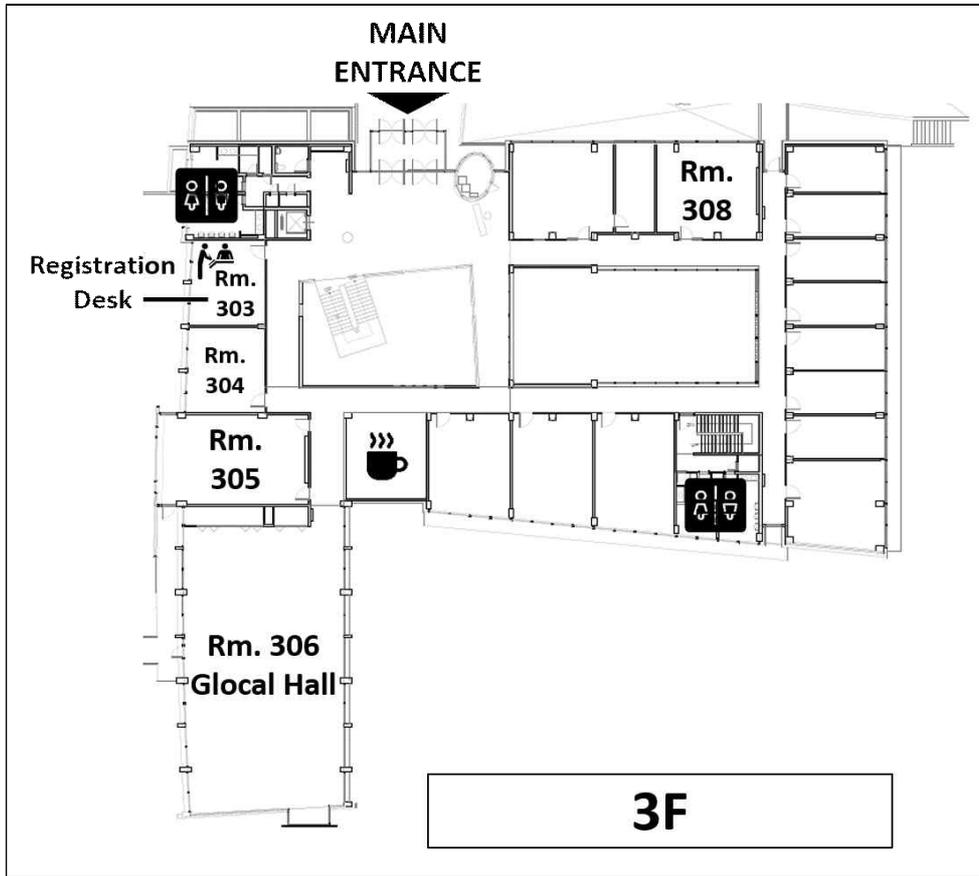
◇ **From the Airport**

The 'Limousine bus' is a convenient and inexpensive way to get to SNU Gwanak Campus from Incheon International Airport. Take airport limousine bus number 6017 or 6003. The bus 6017 comes directly from Incheon to SNU back gate (Hoam Faculty House) within 70 minutes. The bus 6003 comes to SNU main gate via Gimpo Airport, and it takes 110 minutes under normal traffic conditions. Service is available every day from early morning to night time at Incheon International Airport with no charge for the baggage

The taxi fare for coming to SNU Gwanak campus from Incheon International Airport is around 60,000 won depending on the traffic situation. By Deluxe Taxi (Mobeom Taxi), which offers kinder service, the approximate fare is 80,000 won



◇ Floor Plan



FIELD TRIPS

<Mouth of Hangang River Peace Story> Program

-Date: Monday, October 28.

-Time: 09:00~16:30

-Program Contents

Time	Duration(mins)	Place	프로그램
08:10	40	Hoam Faculty House	Pick-up
09:00~10:30	90	D a e d e o k Ecological Park	Ecological environment exploration
11:00-13:00	120	Haengju village	Talk about fish with fisherman from Haengju village
13:00~14:00	60	Haengju village	Lunch (Spicy King Crab Soup)
14:30~16:30	120	J a n g h a n g Wetland	Eco-environmental exploration and environmental cleanup program
16:30~17:10	40	Hoam Faculty House	Break-up

This field trip program is organized by ISESEA-7 Local Planning Committee with Goyang city and also supported by Goyang city.

REGISTRATION AND INFORMATION

Registration Desk

The Registration Desk will be open at Room 303, 3F, Graduate School of Environmental Studies, SNU.

Oct. 26th 08:45-17:30

Oct. 27th 08:45-17:30

Changes and updates to the program will be displayed at Registration Desk.

Badges

The name badge is given to you when you register and ensures your admission to the conference. Please make sure you wear it at all times!

WIFI Service

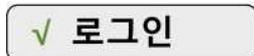
SSID List	Details
SNU-1st-time	Guest_ID is provided for temporary campus visitors.
eduroam	eduroam member
SNU_U+Zone	password: lguplus100

For SNU-1st-time:

1. Settings → Turn on WiFi → SNU-1st-time Open any web browser and click '방문객 (GUEST)'.

2. Temporary access ID(Guest_ID) is available for 4 hours.

If you have already Guest_ID, type it in Guest_ID and password in Password and click



※ If you forget your password, Click [비밀번호찾기\(Find P/W\) >](#)

enter your Guest_ID and name. And then, you can reset your password.

3. Temporary ID for guests.

After clicking 'GUEST (방문객 WiFi)' click

Guest_ID 신청

Select Location (Gwanak)

Type name and Guest_id.

- Your name : name

- Guest_ID : 11 Digits (Only number) (Ex.: 01056781234 / Mobile phone number is recommended.)

4. Click '신청(Apply) '.

Guest_ID and password are issued automatically and open a web site "www.snu.ac.kr".

Catering

Coffee breaks and the refreshments will be served in Room 321.

Lunch will served at Room 321.

Oct 26th Dinner are served at Room 306 Global Hall.

Farewell Dinner on Oct 27th will be held at Hoam Faculty House(15-20 minutes by walking).

Conference Website

<https://sites.google.com/view/isesea-7>

Conference Staff

Available throughout the conference @ Registration Desk (Room 303)

E-mail: isesea.7@gmail.com

Emergency Service

– Police: 112

– Fire & Ambulance: 119

Korea Tourism Information and Language Assistance Hotline

1330 Call Center (24/7 one-stop information service for all overseas visitors)

- Language available: Korean, English, Japanese

- Provides assistance for immigration, safety and medical needs (emergency rescue service), tourist complaints, etc.