EAEH2023

CONFERENCE ABSTRACTS

THE 7TH BIENNIAL CONFERENCE OF EAST ASIAN ENVIRONMENTAL HISTORY

DAEJEON, KOREA
JUN28 - JUL2, 2023

Multiple Crises and the Asian Anthropocene:

Climatic, Ecological, and (Post)Colonial Perspectives

Association for
East Asian Environmental History

The Seventh Biennial Conference of East Asian Environmental History

EAEH 2023

Association for East Asian Environmental History

Center for Anthropocene Studies

KAIST

NRF National Research Foundation of Korea

ibs Institute for Basic Science

Rachel Carson Center

대전광역시 DAEJEON METROPOLITAN CITY

DAEJEON Tourism Organization

DMA DAEJEON MUSEUM OF ART

The Korean History of Science Society 한국과학사학회

충남대학교 Chungnam National University

LIVING WITH SLOW DISASTER
PNU SSK 느린 재난

EIH 이화여자대학교 이화인문과학원 EWHA INSTITUTE FOR THE HUMANITIES

STP Graduate School of Science and Technology Policy

The Local Preparatory Committee

Chair (President of AEAEH)

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

Co-chair (Vice President of AEAEH)

Manyong Moon 文晩龍 (Korean Research Institute of Science, Technology and Civilization, Jeonbuk National University)

Committee Members (alphabetical order by last name)

Myung-Ae Choi 崔明愛 (Department of Cultural Anthropology, Yonsei University)
Deokhwa Hong 洪德和 (Department of Sociology, Chungbuk National University)
Jaehwan Hyun 玄在煥 (Institute of Liberal Education, Pusan National Unversity)
June Jeon 全準 (Department of Sociology, Chungnam National University)
Sekwon Jeong 鄭世權 (The HK+ Institute for Integrated Medical Humanities, Kyung Hee University)
Yeonsil Kang 姜妍實 (National Science Museum of Korea)
Dokyun Kim 金鍍均 (Korea Environment Institute)
Soo Hyun Kim 金秀賢 (Center for Anthropocene Studies, KAIST)
Tae-Ho Kim 金兌豪 (Korean Research Institute of Science, Technology and Civilization, Jeonbuk National University)
Yongjin Kim 金容振 (Center for Anthropocene Studies, KAIST)
Hyunsook Lee 李賢淑 (Institute for Ecological and Environmental History)
Jongmin Lee 李鍾珉 (Science and Technology Management Policy, University of Science and Technology)
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Jongtae Lim 林宗台 (Department of Science Studies, Seoul National University)
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Chuyoung Won 元柱榮 (Catholic University of Korea)
Doogab Yi 李斗甲 (Department of Science Studies, Seoul National University)

DAY 1

Wednesday, June 28

Chung Kunmo Conference Hall, E9, KAIST

[Welcome address] Buhm Soon Park

President. Association for East Asian Environmental History, *KAIST*

[Congratulatory remarks] Myung Ja Kim

Chairperson, Board of Trustees, *KAIST*

Place: Chung Kunmo Conference Hall

Time: 15:00-15:20

ED1-S1	**[Opening session]** **Keynote speech 1: Julia Adeney Thomas** *University of Notre Dame* "Framing the Future: The Environment, Climate Change, and the Anthropocene in Asia"

Place: Chung Kunmo Conference Hall

Time: 15:20-15:50

Moderator: June Jeon, *Chungnam National University*

ED1-S2	**[Opening session]** **Keynote speech 2: Simon Turner** *University College London* "A Golden Spike for the Stratigraphic Anthropocene"

Place: Chung Kunmo Conference Hall

Time: 15:50-16:20

Moderator: June Jeon, *Chungnam National University*

ED1-S3	**Roundtable**

Place: Chung Kunmo Conference Hall

Time: 16:20-17:50

Chair: Buhm Soon Park, *KAIST*

Fa-ti Fan, *SUNY Binghamton*

Jürgen Renn, *Max Planck Institute of Geoanthropology* (*participating online)

Scott Gabriel Knowles, *KAIST*

DAY 2

Thursday, June 29

Science Culture Center, IBS

ED2-S1	**[Special lecture] Scott Gabriel Knowles** *KAIST* **"Death, Life, and Longing in the Pandemicene"**
Place: Auditorium Time: 11:15-12:00	
Moderator: Jaehwan Hyun *Pusan National University*	

ED2-02	Disaster Track (1): Nuclear Memory in the Body and the Environment
Place: S221-A Time: 9:00-11:00	
Chair: Jaehwan Hyun *Pusan National University*	Commentator: Ryuma Shineha *Osaka University*
Robert Jacobs *Hiroshima Peace Institute*	The Global Hibakusha during the Cold War
Yuko Takahashi *Hiroshima Jogakuin University*	Layered Hardships for Korean Atomic-Bomb Victims
Yunjeong Joo *Pusan National University*	Living with Slow Disaster: Memories of Haeneyo, Sea Weeds and Nuclear Plants in Gori, Pusan
WooChang Kim *Seoul National University*	Living in the Nuclear Village: An Exception Space Created by the Clash of Developmental Desires

ED2-04	Development and Environment (1)
Place: S305 Time: 9:00-11:00	
Chair: Yeonsil Kang *National Science Museum of Korea*	
Young Rae Choi *Florida International University*	The colonizers, the developmental state, and uneven geography of development: Reclamation of tidal flats in South Korea, 1900s-1980s
Soonbae Kwon *Pusan National University*	The Oncheon Stream Restoration Project and the Politics of Natural Restoration in Busan during the 1990s and 2000s
MinHwa Yun *Ewha Womans University*	A Study on the Application of Citizen Science to the Urban Ecological Corridors Monitoring Project in Korea
Jane Sung Hae Kim *Jeonbuk National University*	Life after the 'Living Laboratory.' – A Study of Slow Disaster in Jangjeom Village

ED2-05	Environment and Art (1)
Place: S304 Time: 9:00-11:00	
Chair: Jongmin Lee *University of Science and Technology*	
Masatake Shinohara *Kyoto University*	The possible making of a realm of coexistence beyond humans in the Anthropocene
Jongmin Lee *University of Science and Technology*	Remembering Coal and Understanding Korean Hinterlands: Undercover Senses of History and Environment
Soyo Lee *Korea National University of Arts*	Getting in touch with the heterogeneity of landfilled municipal solid waste in South Korea

ED2-06	**Human and Nature in Premodern East Asia**
Place: S303 Time: 9:00-11:00	
Chair: Jung Lee *Ewha Womans University*	
Brian Lander *Brown University*	The Historical Ecology of the Yangzi Delta Region: On the Economy of the Wu and Yue Kingdoms
Luo Qilong *Guizhou University*	Vegetation in early Chinese ancient gardens and its cultural implications
Kiebok Yi *Seoul National University*	Revisiting the Gendered Medical Body in Joseon Korea: An Examination of Medical Narratives and Cognitive Practices
Jong-wook Jeon *Jeonbuk National University*	Perspectives of Korean traditional knowledge on humans, animals, and nature

ED2-07	**Barriers of energy transition in East Asia**
Place: S302 Time: 9:00-11:00	
Organizer & Chair: Seona Park *KAIST*	
Seona Park *KAIST*	Scaling-up renewable conflicts: From site to history
Jong-min Choi *SNU Environmental Planning Institute*	A Study on the Changes in the Actor Composition and Policy of the Japanese Nuclear Power Promotion Bureaucrats' Group after the Fukushima Nuclear Disaster
Hye-Jung Shin *Seoul National University*	'Survival' before Climate and Environment - A qualitative research on Perceptions and Beliefs on Climate and Environment of Participants in the Taegeukgi Rally -
Dasom Lee *KAIST* Sikke R. Jansma and Le Anh Nguyen Long *University of Twente*	Understanding energy citizenship: how cultural capital shapes the energy transition.

ED2-08	**An Environmental History of the Asian Monsoon: Linking Climate Change Science and Climate Adaptation Science (1)**
Place: S221 Time: 13:30-15:30	
Chair: Toru Terao *Kagawa University*	
Satoshi Murayama *Kagawa Univesity*	Pre-modern flood and drought in Kasa County, Kyoto, Japan: Shaking steady state in the Asian monsoon
Masahide Ishizuka & *Kagawa Univesity* Gantsetseg Batdelger *Information and Research Institute of Meteorology Hydrology and Environment*	Asian dust characteristics influenced by surface conditions in the northern Gobi Desert, Mongolia: natural environmental changes or anthropogenic influences?
Michihiro Ogawa *Institute for Advanced Studies on Asia, University of Toyo*	Impact of Monsoon Drought on Agrarian Society on the Deccan Plateau in Western India during the Great Famine (1876-1878)

ED2-09	Disaster Track (2): Disaster Science, Investigation, and Memory
Place: S221-A Time: 13:30-15:30	
Chair: Joelle Champalet *KAIST*	Discussant: Sarah Senk *California State University Maritime Academy*
Youngkwan Ban *Jeju 4.3 Peace Foundation*	Breaking the Long Silence: The Jeju 4.3 Exhumations
Seulgi Lee *KAIST*	Fragments of a Disaster: The Sewol Ferry Special Investigative Commission
Jinyoung Park *Pusan National University*	The Korean Humidifier Disinfectant Disaster and the Science: Investigation, Responsibility, and Memory

ED2-10	Trans-Asian Sciences, Environmental Interventions, and the Diplomatic Roles in Postwar Japan and Korea
Place: S306 Time: 13:30-15:30	
Organizer: Jaehwan Hyun *Pusan National University*	Chair & Discussant: Jongmin Lee *University of Science and Technology*
Kaori Iida *Grad. Univ. for Advanced Studies (SOKENDAI)*	A Japanese agricultural vision in the 1930s to 1960s, as an alternative to a Eurocentric historical narrative
Hidekazu Sensui *Kanagawa University*	Postwar American Attempts to Foster a Vernacular Model of Land Use in East Asia
Jaehwan Hyun *Pusan National University*	North Korea's bird diplomacy and (Korean) Japanese ornithologists, 1963-1996
John P. DiMoia *Seoul National University*	Rho Chae-Sik, Environmental Science, and Identifying Air Pollution, 1959-early 1970s

ED2-11	Development and Environment (2)
Place: S305 Time: 13:30-15:30	
Chair: Jane Sung Hae Kim *Jeonbuk National University*	
Chun-Yi Ho *National Taiwan University*	International aid, developmentalist state, and local technology imitation: The subterranean Anthropocene in Cold War Taiwan (1950-1975)
Juyoung Lee *Johns Hopkins University*	Agriculture, Fertilizer, and the Industrial Landscapes of Taiwan and South Korea during the 1950-60s
Yeonsil Kang *National Science Museum of Korea*	From Thermal Pollution to Future Energy: Local Environment and Reimagining Cold Byproduct of Soyang Multipurpose Dam in South Korea
Jungha Hwang *Seoul National University*	Dam as a Relational Artifact: A Case of Environmental Impact Assessment of the Peace Dam

ED2-12	Environment and Art (2)
Place: S304 Time: 13:30-15:30	
Chair: Manyong Moon *Jeonbuk National University*	
Chihchung Chang *Indepdndent Researcher / Artist*	The Catastrophic Coastlines Shaped by Others - Relocation, War and Shipwreck
Young June Lee *Kaywon University of Arts and Design*	Taxonomy of Vessels: its Fluctuation in Relation to the Change in Maritime Industry and Environment
Takashi Arai *Artist, Researcher at Tono Culture Research Center*	Two Shores - Seawall Construction after the Great East Japan Earthquake and Japan's Border Restrictions during the Pandemic: Some Thoughts from Artist's and International Family's Perspective
Manyong Moon *Jeonbuk National University*	National Science Museum and Natural History Studies of Seok Ju-myeong

ED2-13	Anthropocene Estuaries and Deltas (1)
Place: S303 Time: 13:30-15:30	
Organizers: Guan-hong Lee *(Inha University)* and Yoshiki Saito (*Shimane University)*	
Guan-hong Lee *Inha University*	"Global distribution of altered estuaries"
Yoshiki Saito *Shimane University*	Asian deltas/estuaries and the Anthropocene
Timothy Dellapenna *Texas A&M University*	Habitat alterations and geomorphic response to estuarine dams and land reclamation on the Korean Peninsula
Steven M. Figueroa *Inha University*	How do estuarine dams alter tide, river, and sedimentary processes? Lessons learned from field observations and numerical modeling

ED2-14	Rethinking Human and Nature
Place: S302 Time: 13:30-15:30	
Chair: Tae-Ho Kim *Jeonbuk National University*	
Alexander Damianos *University of Kent*	Formalising the Anthropocene: science, law and geo-forensicality
Cheong-Ho Yi *Korea University*	Culture is emphasized in the pursuit of sustainability
Taewoo Kim *Kyung Hee University*	The Matter and Meaning of Natures in East Asia
Tatsushi Fujihara *Kyoto University*	Philosophy of Decomposition: Waste, Art and Ecology

ED2-15	An Environmental History of the Asian Monsoon: Linking Climate Change Science and Climate Adaptation Science (2)
Video Session Place: S221 Time: 15:50-17:50	
Chair: Toru Terao *Kagawa University*	
Haruhisa Asada *Nara Women's University*	Post flood management and the history of the rice-based agriculture development in Bangladesh
Hideyuki Kamimera *National Research Institute for Earth Science and Disaster Resilience*	A relation between a river and local residents: A study from the viewpoint of environmental history
Masahide Ishizuka *Kagawa University* Gantsetseg Batdelger *Information and Research Institute of Meteorology Hydrology and Environment*	Asian dust characteristics influenced by surface conditions in the northern Gobi Desert, Mongolia: natural environmental changes or anthropogenic influences?
A. T. M .Shakhawat Hossain & *Jahangirnagar University* Toru Terao *Kagawa University*	The Recent Change of Monsoonal Climate And It's Impact on Environment, Society & Sustainability of Ukhiya, Cox's Bazar, Bangladesh-A case Study

ED2-16	Disaster Track (3): Disastrous Futures in Uncertain Environments
Place: S221-A Time: 15:50-17:50	
Chair: Hyunah Keum *KAIST*	Discussant: Scott Gabriel Knowles *KAIST*
Vivian Choi *St. Olaf College*	Indian Ocean Science: From a “Vast Unknown” to Slow Disaster
Hyeonbin Park *KAIST*	The Forest-Thinning Policy Caused Wildfire Disasters?: Forestry in South Korea 1998-2022
Eun Kyung Choi *Kyungpook National University*	Health-Related Harm and Vulnerability in Slow Disasters (Climate Crises): A Conceptual Exploration

ED2-17	National Development, Transnational Environment: Environmental History of the Cold War in the Two Koreas

Place: S306 Time: 15:50-17:50

Organizer and Chair: Robert Winstanley-Chesters *University of Edinburgh / University of Leeds*	Discussant: Lisa Brady *Boise State University*
Robert Winstanley-Chesters *University of Edinburgh / University of Leeds*	Securitising Fisheries in Cold War Environmental Histories of the Sea of Okhotsk
Max Altenhofen *University of Tübingen*	From Model to Norm? – The Forest Management Cooperatives in Ulju-gun, 1970-80s
Jaeyoung Ha *UC San Diego*	Preservation as a Force of Development: Local, National, and Cold War Dynamics in the Making of South Korea's First National Park
Sulim Kim *University of Hawai'i at Mānoa*	Green Utopia House: The Transnational Entanglements of Housing Development and Eco-Socialism in Postwar North Korea

ED2-18	Development and Environment (3)

Place: S305 Time: 15:50-17:50

Chair: Juyoung Lee *Johns Hopkins University*	
Rui Liu, Chih-hung Wang *National Taiwan University*	The Transformation of Large Socio-Technological System with Chinese Features: A Case Study of T Power Plant
Yeseul Park *Seoul National University*	'Localizing' Energy for Nation?: the Nuclear Fuel Development Project in South Korea, 1976-1989
Ilana Herold *KAIST*	Grassroots activism meets the sustainability fix: Urban agriculture policymaking and contested governance in South Korea
Michael Wollrath *Martin-Luther-University Halle-Wittenber*	Sacredness Through Commodification: Attempts to Normalize Invasive Species in The Indonesian Ornamental Fish Trade

ED2-19	Pollution and Rehabilitation

Place: S304 Time: 15:50-17:50

Chair: Junho Jung *Jeonbuk National University*	
Kat Austen *UCL and Studio Austen*	Artistic perspectives on transitions in post/extractive landscapes at the rubicon of the post-anthropocene: the case of Lusatia's landscapes
Seulgi Lee *KAIST*	Anthropocene Literacy: From a National Industrial Complex in South Korea
Jingyuan Wu *University of Tokyo*	Tracing the Local Government's Idea of Pollution Problem in Xiangjiang River Basin, China
Conrad Hirano *Northwestern University*	The Mantetsu-led Anti-Smoke Campaign in 1930s Dalian

ED2-20	Anthropocene Estuaries and Deltas (2)

Place: S303 Time: 15:50-17:50

Roundtable Chair: Guan-hong Lee *Inha University*	
Participants:	Wook-Hyun Nahm *(KIGAM)* Simon Turner *(University College London)* Yoshiki Saito *(Shimane University)* Timothy Dellapenna *(Texas A&M University)* Sreenivasulu Ganugapenta *(Inha University)*

ED2-21	**Environment and Disease**
Place: S302 Time: 15:50-17:50	
Organizer & Chair: Hyunsook Lee *Korean Institue for Ecological & Environmental History*	
Hyunsook Lee *Korean Institue for Ecological & Environmental History*	The Climate change and Epidemic in the 8th Century of Silla
Miyoung Shin *Jeonbuk National University*	The introduction and transfer of specialized knowledge in the prevention of Japanese encephalitis in Korea in the 1950-60s
Min-Suh Kim *Yonsei University*	The Cold War and Influenza pandemic in 1960's Hongkong
Hyun-Sun Kim *Myonji University*	The Little Ice Age and the Epidemics of Hubei Province in late Ming and Early Qing

DAY 3
Friday, June 30 Science
Culture Center, IBS

ED3-S1	**[Special lecture] Jürgen Renn** *Max Planck Institute of Geoanthropology* **"Geoanthropology: Science for the Anthropocene"**
Place: Auditorium Time: 11:15-12:00	
Moderator: Hanah Sung *KAIST*	

ED3-01	**Anthropocene Commons**
Place: S221 Time: 9:00-11:00	
Organizers: Katrin Klingan, Carlina Rossée *Angewandte Wien* *Bauhaus Univ. Weimar / HKW*	
Megan Black *AC Delegate*	Networks as aggregators of shared spaces
John Kim *Macalester College*	Conceptual identification of the AC themes: Shared Spaces, Pedagogies of Action, and Resourceful Research
Sarah Lewison *Southern Illinois University Carbondale*	Harm reduction for the soft Anthropocene
Fernando Silva e Silva *APPH*	Challenges of a Brazilian Anthropocene: education, research, and citizenship

ED3-02	**Environment and industrialization in Asia (1): Japan**
Place: S221-A Time: 9:00-11:00	
Chair: Tatsushi Fujihara *Kyoto University*	
Akihisa Setoguchi *Kyoto University*	Modeling Human and Insect Populations: COVID-19, Malaria, and the Ecological Approach to Infectious Diseases
Aaron Skabelund *Brigham Young University*	“To Bag Wild Ducks with a Net”: Japanese Royal Hunting and the (Re)invention of Tradition
M. William Steele *International Christian University*	Japan’s Paper Industry in the 1930s: Where Did All the Wood Come From?
Patricia Sippel *Toyo Eiwa University*	How Japan Became a Have-Not Nation: Copper Resources in the Modern Era

ED3-03	**Korean Modern Environmental History, 1960s-1990s**
Place: S306 Time: 9:00-11:00	
Organizer: June Jeon *Chungnam National University*	Chair & Commentator: Yeonsil Kang *National Science Museum of Korea*
Daehoon Jeong *National Institute of Korean History*	The construction of Uiam Hydroelectric Power Plant and the problem of land compensation for submerged area
Chuyoung Won *Catholic University of Korea*	Development for the Environment: Environmental Crisis and Urban Planning in South Korea during the 1970s
June Jeon *Chungnam National University*	Scientization of Nature and the Construction of Environmental Subjects: A Creation of the National Environmental Research Institute of South Korea, 1978-1981
Sanghee Bae *Seoul National University*	Whose Garbage? Whose Environment?: Building a National System of Municipal Waste Management in South Korea, 1990s.

ED3-05	**Tension and crisis in East Asian environment**
Video Session Place: S305 Time: 15:50-17:50	
Chair: Teamin Woo *KAIST*	
Tae-woo Ko *Seoul National University*	The Darkness of the Great Acceleration: Did the History of Korea Advance in the 20th Century?
Bulkhia U. Panalondong *Central Mindanao University*	A Survey of Environmental Social Movements in Democratic East Asia: An Historical Perspective

ED3-06	**New approaches to environmental history**
Place: S303 Time: 9:00-11:00	
Chair: Federico Paolini *Università di Macerata*	
Hrvoje Petric *University of Zagreb*	Changes in Natural System of the Brijuni/Brioni Islands (Adriatic Sea, Northern Mediterranean)
Ishizuka Masahide *Kagawa University*	Characteristics of Precipitation Distribution and River Flood Using Historical Precipitation Datasets: A Study for the Northern Kyoto Region, Japan
Thomas Hahn *UC Berkeley*	Mother Russia's forests and China's recent anti-desertification campaigns

ED3-07	**Rethinking Hydraulic Societies**
Place: S302 Time: 9:00-11:00	
Chair: Shinobu Iguro *Otani University*	Discussant: Ya-wen Ku *Institute of Taiwan History*
Wakako Kumakura *Tokyo University of Foreign Studies*	Oriental Despotism or Bottom-up Approach? A Discussion on the Irrigation Maintenance System of the Nile in Ottoman Egypt
Michihiro Ogawa *University of Tokyo*	A Study of the Local Governance of Water Transportation on the Deccan Plateau in Western India from the Late Eighteenth to the Early Nineteenth Century
Shinobu Iguro *Otani University*	Boundary Perceptions of Wells and Ponds as Sources of Water for Domestic Use in Rural Communities in Northern China from the eighteenth to the twentieth Centuries

ED3-08	**Global Perspectives to the Anthropocene**
Place: S221 Time: 13:30-15:30	
Chair: Myung-Ae Choi *Yonsei University*	
Joseph Underhill *Augsburg University*	Planetary Explorations of Anthropocene River Futurities: Fluvial Networks of Creative Resistance
Jamie Allen *Critical Media Lab* Jeremy Bolen *Georgia State University*	The impossibility of a planet
Lucio De Capitani *Ca' Foscari University of Venice*	Snapshots of a global/Italian Anthropocene: strategies of representation in Amitav Ghosh and Wu Ming 1
Hugo Ricardo Noronha de Almeida *NOVA University of Lisbon*	Comic book "persons of mass destruction" and the reimagining of humankind in the Anthropocene
Ana Matilde Sousa *CIEBA – Artistic Studies Research Center & University of Lisbon*	The Floating Dakimakura: notes on a found photography

ED3-09	Environment and Industrialization in Asia (2): Southeast Asia
Place: S221-A Time: 13:30-15:30	
Chair: Juyoung Lee *Johns Hopkins University*	
Maya Dania *Chiang Mai University*	Damming of Mekong Rivers in the Age of the Anthropocene: Feral Frontier in Northern Thailand from an Ecofeminism Perspective
Endira F. Julianda (et al.) *Floating Tech-Lab*	Mangrove Aesthetics from the Inside: Time Traveling in and against the Landscape Change
Novita Anggraini *Floating Tech-Lab*	Spectral Storytelling
Kamil Muhammad *Floating Tech-Lab*	Passages that Tell the Time: Mapping the Anthropogenic Markers of Muaragembong Estuary

ED3-10	Human-Nature Interactions in Public Policy: Korean and Japanese Experiences in the Anthropocene
Place: S306 Time: 13:30-15:30	
Organizer & Chair & Discussant: Jongmin Lee *(University of Science and Technology)*, Hiroki Oikawa *(Yokohama National University)*	
Yongjoo Han *Seoul National University*	The Landscape Entanglement of Development and Preservation: The Case of Nodeul Island in the Han River
Tatsuya Miyazoe, Kiyoka Kondo, Hiroki Oikawa *Yokohama National University*	Community Cat Activities in Japan: A Cognitive Reform Leading to Change in Human-Nature Relationship
Hanah Sung *KAIST*	Politics of Rice Paddy Knowledge: Survey Sciences and Human-Land Relations in Cheonsu Bay
Daichi Kato, Kiyoka Kondo, Hiroki Oikawa *Yokohama National University*	Ecosystem Services in the Anthropocene: What Should We Add to the MA (Millennium Ecosystem Assessment) Diagram?

ED3-11	Imperial Forestry in the Territorial Expansion of Japan: Foresters, Science, and Management
Place: S305 Time: 13:30-15:30	
Chair: Koji Nakashima *Kanazawa University*	Discussant: Shoko Mizuno *Komazawa University*
Taro Takemoto *Tokyo University of Agriculture and Technology*	Quantitative aspects of forest management and timber trade in the Japanese Empire
Taisaku Komeie *Kyoto University*	Between the exclusion and promotion of swidden agriculture in imperial Japan: How did scientific foresters rediscover indigenous agroforestry?
Taisho Nakayama *Kushiro Public University of Economics*	Settler Colonialism of Foresters in Karafuto, a Subarctic Territory of the Japanese Empire
Koji Nakashima *Kanazawa University*	Formation and development of tropical forestry in modern Japan

ED3-12	Variegated State-Nature Relationships in East-Asia

Place: S304 Time: 13:30-15:30

Organizer: Junsoo Kim *KAIST*	Chair: Sanghun Lee *Hanshin University*	Discussant: Chulhyun Park, Junsoo Kim, Seulgi Lee *Kookmin University* *KAIST*

Jihye Yang *Northeast Asian History Foundation*	The Intertwined Politics of 'Development' and the 'Environment' in Korea during the 1970s
Jihoon Park *Chung-Ang University* Jin-Tae Hwang *Korea Institute for National Unification*	Putting the more-than-human state in its place
Sungeun Kim *KAIST*	Bridging Over the Troubled Waters: Geopolitics of Transnational Cooperation in East Asian Oceanography, 1985-2005

ED3-13	Human and Nonhuman Animals

Place: S303 Time: 13:30-15:30

Chair: Tae-Ho Kim *Jeonbuk National University*	
Hao Zheng *Minzu University / UC Berkeley*	The Big Cat in the Western Regions: A Restudy of the Species and Extinction Causes of Xinjiang Tiger in Historical Era
Jeong Eun Lim *National Institute of Ecology*	Big Cats in Korea: A journey through time and culture
Pei Xiaoshan *Nankai University*	Elegy for Elephants: The end of the imperial elephant performances and the change of the human-elephant relationship in the late Qing Dynasty
Misung Kim *Yonsei University*	Increase in Exports of Otter Skin and Its Ecological Environmental Consequences in the Joseon Dynasty

ED3-14	Water Control in Anthropocene East Asia: (Post)Colonial River Engineering and its Multiple Impacts

Place: S302 Time: 13:30-15:30

Chair & Discussant: Eric Dinmore *Hampden-Sydney College*	
Lisa Yoshikawa *Hobart and William Smith Colleges*	Witnessing an Ecological Debacle: Sun Moon Lake Hydroelectric Plant and Colonial Environmental Management
Miwa Shimada *Keio University*	The Yongding River Water Conservancy Projects in the Republic of China
Ya-wen Ku *Academia Sinica*	Reshaping the Landscape: The Construction and Impact of the Shihmen Reservoir
Seohyun Park *National University of Singapore*	The Inundated City: Dam-Fetishism and the Failure of Flood Control in Seoul during the 1960s and Thereafter

ED3-15	Roundtable: Anthropocene Commons Pedagogies
Place: S221 Time: 15:50-17:50	
Chair & Introductory Presentations: Carlina Rossée, Fernando Silva è Silva	
Participants:	Lucio De Capitani *(Ca' Foscari University of Venice)* Ana Matilde Sousa *(CIEBA – Artistic Studies Research Center & University of Lisbon)* Hugo Almeida *(NOVA University of Lisbon)* Sarah Lewison *(Southern Illinois University Carbondale)* Joseph Underhill *(Augsburg University)* Jeremy Bolen *(Georgia State University)* Jamie Allen *(Critical Media Lab)* John Kim *(Macalester College)* Megan Black *(AC / HKW)* Georg Schäfer *(Max Planck Institute for the History of Science)* Simon Turner *(University College London)*

ED3-16	Environment and Industrialization in Asia (3): South Asia
Place: S221-A Time: 15:50-17:50	
Chair: Chuyoung Won *Catholic University of Korea*	
Ru-Yu Lin *University of Sussex*	The Shaping of Crisis for Developing Home in the Eastern Himalayas
Jahnavi Phalkey *Science Gallery Bengaluru*	Anthropocene's Carbon
Sanjeeb Kumar Das *Regional Institute of Education (NCERT)*	Floristic dynamics and Vegetational analysis of plant community in temple city Bhubaneswar
Juanjuan Peng *Georgia Southern University*	State, business, and the local environment: the history of a post-1949 paper mill in China

ED3-18	Human and Forest
Video Session Place: S305 Time: 15:50-17:50	
Chair: Koji Nakashima *Kanazawa University*	Venue Chair: Teamin Woo *KAIST*
Wu Qifang *Northeast Normal University*	Forests and Frontiers: A Study of Forestry Rights in the Yalu River Basin on the Eve of the Russo-Japanese War.
Baisakhi Bandyopadhyay *The Asiatic Society Kolkata India*	Sustainable forest management: Biodiversity conservation by sacred groves, sacred landscape & sacred plant species & Traditional Ecological knowledge in India

ED3-19	Relationship between Scientific and Public Awareness of Environment
Place: S304 Time: 15:50-17:50	
Organizer: Michael Shiyung Liu *(University of Pittsburgh)* Chair and Discussant: Federico Paolini (*Università di Macerata*) & Michael Shiyung Liu *(University of Pittsburgh)*	
Federico Paolini *Università di Macerata*	Science, technology and politics: the birth of an ecological awareness in Italy
ChiaHsing Ho (James Hou) *National Chung Hsing University*	Technology, Territoriality and environment development of mountain agriculture in Taiwan, 1960's-1980's
Wan-Chun Cheng *Max-Planck-Gesellschaft (MPG)*	The Invisible Crisis: Electromagnetic Hypersensitivity (EHS) of public health perspective
Michael Shiyung Liu *University of Pittsburgh*	Knowing "nature" in late 19th century East Asia

ED3-20	Human and Wildlife
Place: S303 Time: 15:50-17:50	
Chair: Soo Hyun Kim *KAIST*	
Tae-Ho Kim *Jeonbuk National University*	“Little Cattle with Wings”: Industrialization of Farming and Cooking of Ducks in Modern South Korea
Hsin-Hua Chiang *University of Tokyo*	Struggles in a shell: socio-ecological transformation of freshwater pearl cultivation in Lake Biwa, Japan
Muzayin Nazaruddin *Universitas Islam Indonesia* Riin Magnus *University of Tartu*	The post-disaster transformation of interspecies dependencies: From talkative buffalo to desemiotised cows on the slope of Mt. Merapi, Indonesia
Sang-ho Ro *Ewha Womans University*	Born-in-America in the Kingdom of Plants: Tobacco and the Psychoactive Revolution in Early Modern Korea

ED3-21	The Water in Northwest China
Place: S302 Time: 15:50-17:50	
Chair: Jung Lee *Ewha Womans University*	
Pan Wei *Yunnan University*	The "Marginal Population" in the absence of the State: A study on the problem of "moving-hills households" in Minqin, Gansu Province from 1900 to 1950
Wu Yi-qun *Xinjiang University*	Case study on water conservancy dispute and administrative district adjustment of Tianshan South Road in late Qing Dynasty
Chen Zhiwei, Zhang Jingping *Lanzhou University*	The Wrtting of Landscape in Hexi Corridor from the Perspective of the Aggregation Reclamation: Mainly Based on the Period of Qing Dynasty
Wang Ruixue *Yunnan University*	Water landscape construction of Jiuquan Oasis from Qing Dynasty to Republic of China period

DAY 4
Saturday, July 1
Science Culture Center, IBS

ED4-S1	**[Special lecture] Axel Timmermann** *IBS / Pusan National University* **"Modelling Climate Change Effects on Human Evolution"**
Place: Auditorium Time: 11:15-12:00	
Moderator: Soo Hyun Kim *KAIST*	

ED4-S2	**[Keynote speech 3] Satoshi Murayama** *Kagawa University* **"Asian Diversity, Asian Boundaries: Living Spaces within Asian Monsoon"**
Place: Auditorium Time: 15:30-16:00	
Moderator: Jongmin Lee *University of Science and Technology*	

ED4-S3	**[Special Roundtable]** **A roundtable for the "Asian" Association for Environmental History: A new mission for the field of environmental history around the world**
Place: Auditorium Time: 16:00-17:20	
Chair: Michael Shiyung Liu *(University of Pittsburgh)* Shen Hou *(Peking University)* (*participating online) Jenia Mukherjee *(Indian Institute of Technology Kharagpur)* Julia Adeney Thomas *(University of Notre Dame)* Buhm Soon Park *(KAIST)* Donald Worster *(Honorary Director of the Center for Ecological History at Renmin University of China, Kansas University)* (*participating online)	

ED4-01	Theoretical Discussion and Empirical Study on Environmental History of the Northeast China (1)
Place: S221 Time: 9:00-11:00	
Chair: Teng Haijian *Liaoning University*	Discussant: Fan Lijun *Jilin Normal University*
Teng Haijian *Liaoning University*	Nature and Frontier -- The Dimension and Paradigm of the Study of Environmental History in Northeast China
Fan Lijun *Jilin Normal University*	Environment, Immigration and Diet: The changes of Dietetic Culture in Northeast China in Modern Times
Li Yujun & Guo Xin *Liaoning Normal University*	A Discussion on the Influence of Climate, Landform and Other Environmental Factors in the War of the Jin Dynasty

ED4-02	Environmental Challenges in China and Korea, Past and Present
Place: S221-A Time: 9:00-11:00	
Chair: Jaehwan Hyun *Pusan National University*	
Aaron Molnar *University of British Columbia*	A Climate of Crisis: The Confluence of Mongol Imperialism and Climate Transition in Late Goryeo (1258-1392)
Yu-Chien Jen *University of Carlos III*	The Eruption of Mount Tambora and The Agricultural Production in Taiwan and China from 1815 to 1815: Perspectives from Adaptation Measures
Yu-Cheng Shih *Brown University*	Reeds, Snails, and Parasites: Bilharzia Disease and Riverine Ecology in China's Lower Yangzi Delta during the Nineteenth and Twentieth Centuries
Limin Wang *ShaanXi Normal University*	Sanitation, Disease and Drinking Water in Kashgar City from the Late Qing Dynasty to the Early Republic of China Period

ED4-03	The Human-Environment-Climate Nexus: Exploring Disaster Responses and Water Related Hazards in East and Southeast Asia
Place: S306 Time: 9:00-11:00	
Organizer & Chair: Fiona Williamson *Singapore Management University*	
Fiona Williamson *Singapore Management University*	Sanitation, Disease and Drinking Water in Kashgar City from the Late Qing Dynasty to the Early Republic of China Period
Atsushi Ota *Keio University*	Rainfall and agriculture in Java in the 1900s
James F. Warren *Murdoch University*	A tale of three storm surges, and, three towns, under three flags

ED4-04	Environment in the Making
Place: S305 Time: 9:00-11:00	
Chair: Setoguchi Akihisa *Kyoto University*	
Duskin Drum *New York University*	Dialectics of Future Forest Cities in East Asia
Halla Jeeae Ko *Ewha Womans University*	Multispecies Storytelling in Restoration and Consevation of Jeju Hanon Crater
Bingru Yue *Queen's University*	"Overcome the Wetlands and Educate the Youth": State Farm Construction and the Sent Down Youth Movement from the 1960s to the 1970s

ED4-05	Politics, Cold War and environment in East Asia
Place: S304 Time: 9:00-11:00	
Chair: Donghyun Woo *KAIST*	
Kaihei Koshio *Tokyo University of Agriculture*	Soilless agriculture and War, focusing on the role of hydroponic farms in Japan as supply bases for Korean War
Junho Jung *Jeonbuk National University*	Making of "Pristine Vegetables" : Construction and Shifting Concepts of Environmental Contaminants in Korea, 1960~1990s
Kyoung Shin *National Tsing Hua University*	Environmental Civil Society Organizations and the State in China: Institutional Analysis of the Dynamics, 1980s-2010s
Joseph Seeley *University of Virginia*	Remaking North Korea Nature at the West Sea Barrage

EF4-06	Theoretical Discussion and Empirical Study on Environmental History of the Northeast China (2)
Place: S221 Time: 13:30-15:10	
Chair: Teng Haijian	Discussant: Fan Lijun *Jilin Normal University*
Tan Yuxiu *Northeast Normal University*	Flood in Northeast China in Modern Times and its Countermeasures under the Evolution of Regional Environment
Wan wenjie *Liaoning University*	The Statute and Ordinance and Environment: The interaction between Qing Dynasty rulers and environment before the Qing entered the pass in 1644 from “The Statute and Ordinance in Manchu Archives of Shengjing
Lei Zhang *Lingnan University*	Feeding Revolution: The Enterprise of Corn in North China, 1938-1950

ED4-07	Kichi (機智), Resourceful Eco-Techne with Material
Place: S221-A Time: 13:30-15:10	
Organizer: Jung Lee *Ewha Womans University*	Chair: Hanah Sung *KAIST*
Yeon-Kyoung Lim *Ewha Womans University*	Disconnected Network: A Human-Nature Assemblage Reformatted through the Techno-natural Disaster Narratives of Undersea Cable in South Korea from the 1990s to the 2000s
Ae-Ryung Kim *Ewha Womans University*	“Was that Mountain Really There?” Posthuman Ecological Approach to History of Nanjido Landfill
Jung Lee *Ewha Womans University*	Crossing Boundaries with Tak trees: Transmission of eco-techne by moving with material

ED4-08	Towards a Planetary History and Planetary Humanities
Video Session Place: S221-A Time: 13:30-15:10	
Chair: Ranjan Chakrabarti *Netaji Subhas Open University*	
Mili Ghose *Independent Researcher*	Martin Heidegger and the Creation of ‘Earth’ as a philosophic category
Aryama Ghosh *Jadavpur University*	Expanding the Frontier of Temporality: A Conversation between Historical and Planetary Times
Sekhar Mahapatra *Jadavpur University*	From Environmental Humanities to Planetary Humanities

ED4-09	Conflicts, epidemics, and climate crisis: an environmental history in comparative perspectives
Place: S305 Time: 13:30-15:10	
Organizer: Satoshi Murayama *Kagawa University* Chair & Discussant: Michael Shiyung Liu *University of Pittsburgh*	
Satoshi Murayama *Kagawa University*	The Earth System as an agent of humanity: perspectives derived from a comparative study on environmentally local economies
Masahide Ishizuka, Toru Terao, and Satoshi Murayama *Kagawa University*	Characteristics of Precipitation Distribution and River Flood Using Historical Precipitation Datasets: A Study for the Northern Kyoto Region, Japan
Josef Grulich and Václav Černý *University of South Bohemia*	Soldiers, Epidemics and bohemian rural enviroment in the 18th and 19th century

ED04-10	The Politics of Sustainability: Elemental Media and Contemporary Art in East Asia and Beyond
Place: S304 Time: 13:30-15:10	
Chair: Bookyoung Son *Binghamton University*	Discussant: Juhyun Cho *Yonsei University*
Eunha Chang *Independent Curator*	Invasive Species, Colonialism, and Artistic Practice
Pei-chun Viola Hsieh *Binghamton University*	The Aesthetics of Air and Tactile Politics in Wang Te-yu's Inflatable Art, circa 1996
Bookyung Son *Binghamton University*	A Restoration of the Oldest Media in the Works of Lee Seung-taek, Kim Ku-lim, Park Hyun-ki

Disaster Track (1):
Nuclear Memory in the Body and the Environment

ED2-02

The Global Hibakusha during the Cold War

Robert Jacobs

Hiroshima Peace Institute

Since the two nuclear attacks on Hiroshima and Nagasaki in 1945, there have been over 2,000 nuclear weapon detonations in the world. The US began testing nuclear weapons in the Marshall Islands less than a year after attacking Hiroshima. We think of the Cold War as a period of time in which nuclear weapons were not used, but in reality, a nuclear explosion happened every 8.6 days from 1950-1990. Many of these detonations spread radioactive fallout into lands where millions of people lived. Many were exposed to radiation and had their health and lives upended. This lecture will explore the history of the global nuclear weapon testing, its harms and legacies.

Disaster Track (1):
Nuclear Memory in the Body and the Environment

ED2-02

Layered Hardships for Korean Atomic-Bomb Victims

Yuko Takahashi

Hiroshima Jogakuin University

This presentation examines various hardships experienced by Korean victims of the atomic bombings in Hiroshima and Nagasaki in 1945. During the 1910-1945 colonial period, over 2 million Koreans migrated to the Japanese mainland, and approximately 100,000 were said to have been victimized by the nuclear attacks. Following Korea's liberation from Japanese colonial rule, among these victims, those who managed to survive were dispersed mainly across East Asia—namely, South Korea, North Korea, and Japan. Since then, they not only suffered from radiation-induced illnesses, but also left without appropriate support that multiplied their hardships, or causing "secondary" damages. The presentation examines Korean hibakusha's hardships and discusses causal factors that concern colonialism, ethnocentrism, nationalism, and the Cold War regime in the East Asian geopolitical context.

Disaster Track (1):
Nuclear Memory in the Body and the Environment

ED2-02

Living with Slow Disaster: Memories of Haeneyo, Sea Weeds and Nuclear Plants in Gori, Pusan

Yunjeong Joo

Pusan National University

Since the two nuclear attacks on Hiroshima and Nagasaki in 1945, there have been over 2,000 nuclear weapon detonations in the world. The US began testing nuclear weapons in the Marshall Islands less than a year after attacking Hiroshima. We think of the Cold War as a period of time in which nuclear weapons were not used, but in reality, a nuclear explosion happened every 8.6 days from 1950-1990. Many of these detonations spread radioactive fallout into lands where millions of people lived. Many were exposed to radiation and had their health and lives upended. This lecture will explore the history of the global nuclear weapon testing, its harms and legacies.

Disaster Track (1):
Nuclear Memory in the Body and the Environment

ED2-02

Living in the Nuclear Village: An Exception Space Created by the Clash of Developmental Desires

WooChang Kim

Seoul National University

Korea has 24 nuclear power plants in 4 regions. Each region has more than 6 nuclear plants in one city. I have lived Wolsung(one of them, has 6 nuclear plants and a radioactive waste repository) for 8 months to research and try to understand how and why this exceptional space was created. Kepco(Korea Electric Power Corporation) has been wanting to make Enertopia which is filled with nuclear plants. And some residents who live near plants have been satisfied with living in Utopia and haven't tried to ask them for better safety or criticize. In addition, Kepco has forced local communities, including residents, social groups, the press, and politicians, to support nuclear power plants with various means of governance. Such as, making white or black-list and sharing some owners of restaurants in the demonstration against nuclear plants on their intranet (for employees in Kepco). And by supporting or giving funding, social groups and the press in the community have not been criticized freely. After 30-40years, this region has become very exceptional place, while delayed democratic space like Plutopia by Kate brown (2021)

Although this exceptional place but quite peaceful one made by the clash of developmental desires, some people tried to criticize, dissolve this exchange between danger and material abundance. Some residents have made a task force to relocate and have been demonstrating every Monday with death carriage. This research has some differences, especially it refrains from the perspective the dichotomy between agreement and opposition about nuclear plants. And try to understand nuclear village with many stakeholders, not only Kepco, one of the strongest. Even try to understand this exception space through local’s perspective, context, and history.

Postcolonial Science in the Philippines: Investigations and Institutions towards a National Science

ED2-03

PWB and COMVOL to PAGASA and PHILVOLCS: Postcolonial Meteorological, Seismological, and Volcanological Institutions in the Philippines

Kerby C. Alvarez

University of the Philippines Diliman

National and Filipinized scientific institutions in the postwar Philippines are vital in the postcolonial period nation-building efforts. These agencies are mandated to deliver plans and programs, which are aimed at advancing economic development and social progress through the benefits of modern science and technology. In a speech by Juan Salcedo, chairman of the National Science Development Board during the centennial anniversary celebration of the Manila Observatory on September 1965, he called the era "Age of Science" and called on the people to support Filipino scientists in their quest for knowledge and solutions to the country's problems.1 One of those problems is the country's constant encounters with environmental hazards – typhoons, earthquakes, and volcanic eruptions. These natural hazards caused persistent havoc to communities and cities, from human lives to built structures and landscapes. Therefore, studying these phenomena did not only entail strengthening the scientific infrastructure of the country but also mobilizing the local governments and uniformed personnel to respond to the challenges posed by these natural hazards. Disaster response and reconstruction evolved from mere laboratory concerns to civil defense issues. And the scientific institutions were at the forefront of nationalized meteorological, seismological, and vulcanological sciences that pioneered the decades-long program and efforts of crafting a responsive Philippine disaster response and management.

This paper examines the institutional developments of the Philippine Weather Bureau (PWB) and the Commission on Volcanology (COMVOL) and their reorganized counterparts, the Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA) and the Philippine Institute of Volcanology and Seismology (PAGASA) from the postwar years (the 1950s) to the 1990s. This paper examines the activities, programs, and policies of these institutions and attempts to illustrate the multi-layered functions of these agencies, both as centers of knowledge production and organizations that contributed to the crafting of disaster response mechanisms grounded on civil defense. For almost five decades, these institutions entered the national arena as premier state-initiated and state-governed agencies tasked with advancing knowledge on disasters and educating the people. Their institutional developments are emblematic illustrations of the Philippine progress in science and the enduring vision of national science for national-building.

1 Juan Salcedo, Jr., "The Manila Observatory and Philippine Science, World Science, and Nationalism," Science Bulletin of the Science
Foundation of the Philippines, Volume 16(1) (Science Foundation of the Philippines, 1965), pp. 10-11.

Keywords: Philippine Weather Bureau, Commission on Vulcanology, PAGASA, PHIVOLCS, Philippine Science

Postcolonial Science in the Philippines: Investigations and Institutions towards a National Science

ED2-03

Laguna de Bay in Serials: Biology, Conservation, and History in Philippine Scientific

Ruel V. Pagunsan

University of the Philippines Diliman

Laguna de Bay (LDB) to examine its ecological state. In 1928, the University of the Philippines Limnological Station was established to evaluate the production of local fishes in the largest freshwater lake in the Philippines. The station and other research infrastructures facilitated the production of literatures that examined the species composition and resource management of the
lake. As one of the most productive resource frontiers in the country, scientists similarly investigated the lake's capacity for introduced species. In the period after 1946, as the nation faced food security issues, scientists were drawing lessons from LDB about the possibilities and perils of creating a fisheries capital.

This paper examines the epistemological history of LDB as narrated in Philippine scientific publications. It particularly follows the works of two of the leading Filipino biologists in the postwar era, Leopoldo Uichanco and Deogracias Villadolid, who played pivotal roles in the foundational years of the station. Reading LDB in serials also revealed stories about the lake's cultural and historical importance and how the scientists remembered its past and reimagined the futures of its ecology and resources. I argue that the scientific narratives created notions of authority that shaped the conservation discourses and nationalized the policies on the how the lake should be developed, regulated and protected.

Keywords: Mindanao, science, development, extinction, biodiversity, ecology, and freshwaters, Mindanao State University

Postcolonial Science in the Philippines: Investigations and Institutions towards a National Science

ED2-03

Indigenous but introduced: science, development, and the (un)making of Lake Lanao

Anthony D. Medrano

Yale-NUS College

The world's organisms are often classified as native and non-native, indigenous and alien. These simple binaries mark biological life and, in doing so, define what belongs where and why. But when species travel, they change, transforming cultures and ecologies along the way. While some species introductions can cultivate new livelihoods, new food webs, and new types of ecological services, other kinds of biological flows can foster explosive reproduction rates that rupture and ravage nature's ecosystems—resulting in cultural, economic, and biodiversity losses.

In the case of Philippine freshwaters, it was the pairing of science and development that championed an age of species movements in the wake of 1946. Inspired by the possibilities of the postwar moment, this new biological age made sense politically. It was reasoned within the urgencies of economic progress and food security. In practice, it meant that indigenous fishes were introduced to alien habitats while non-native types were stocked within native freshwaters. From Luzon to Mindanao, and vice-versa, indigenous fishes from one island were planted in another to feed and bolster the country's protein supply. This paper explores how science and development coalesced to boost the production of Lake Lanao and, in the process, unmake Mindanao's rare ichthyofauna. In particular, it charts the losses that followed the release of two indigenous but introduced gobies locally known as kadurog (Glossogobius giurus) and katolong (Hypseleotris agilis) and the ways in which these native species contributed to the extinction of Lake Lanao's endemic cyprinids and the Maranao worlds they embodied.

Keywords: Laguna de Bay, limnology, postwar science, Filipiniana

Postcolonial Science in the Philippines: Investigations and Institutions towards a National Science

ED2-03

The Philippine Rodent Research Center and the Control of Rodent Outbreaks

Ma. Florina Y. Orillos-Juan

De la Salle University Manila

Many species of rodents are agricultural pests – be it on a global or continental scale. Rodent outbreaks that occurred in the past proved to be a scourge to human beings – not just because they were instrumental in the spread of diseases but more so because they destroy major crops like rice which eventually led to famine and shortage. The Philippines has a long history of rodent outbreak that caused so much misery to the lives of the Filipinos. These sufferings are etched in their memory through oral and written history, folklore, and even language.

In 1955, Philippine President Ramon Magsaysay issued Proclamation No. 179 which stipulated that the period of September 1 to 30 of that year and thereafter will be declared as Anti-Rat Campaign Month. This was a landmark proclamation because it clearly identified rats as one of the country's major agricultural pests and the citizens of the republic, as well as the government had the responsibility to bring rat infestation under control. Thirteen years later, in 1968, the Rodent Research Center (RRC) was established as a result of the joint undertaking of the government of the Republic of the Philippines and the United States Agency for International Development (USAID). Its headquarters were in the University of the Philippines Los Baños campus. The objective of the RRC was to reduce the economic impact of agricultural losses caused by rodent damage of crops. This paper will delve on the nature of research undertakings and types of training carried out by the RRC. It will examine the research thrusts of RRC vis-à-vis the common practice of applying rodenticides and other chemicals to control rodent population. It shall also explore how the health concerns of humans prompted experts to re- assess existing harmful pest management methods and come up with solutions that are more ecologically sound.

Keywords: rats, rodents, agricultural pests, Philippine Rodent Research Center

Development and Environment (1)

ED2-04

The colonizers, the developmental state, and uneven geography of development: Reclamation of tidal flats in South Korea, 1900s-1980s

Young Rae Choi

Florida International University

South Korea's tidal flats, called getbol, are muddy and grayish coastal wetlands under the tidal influence that constitute the predominant land form of South Korea's west and southwest coasts. Today, getbol is appreciated for its biological and geological diversity for which it recently earned UNESCO's World Heritage status. Yet, throughout the 20th century, more than 50% of getbol areas were lost due to coastal reclamation, a civil engineering practice of enclosing and filling in getbol. This paper closely examines this history of getbol from the 1900s to the 1980s. While being messy and complex, the history shows the tendency that reclamation evolved from small to large in terms of scale, and from private-led to state-led. In popular imaginations, the reclamation of getbol is thought to have been driven top-down by governing authorities, in particular, by the "developmental state" that roughly ran from the 1960s through the 1980s. While this explanation fits the general trend, this paper highlights that the state did not act solely upon its own will but responded to the desires of those that the state had to satisfy to gain political legitimacy. Ultimately, in the context of South Korea's uneven geography of development, this paper argues that the reclamation of getbol transitioned from a project for the entire nation to a project for the rural populations and the agricultural sector lagging behind the country's tantalizing economic growth.

Development and Environment (1)

ED2-04

A Study on the Application of Citizen Science to the Urban Ecological Corridors Monitoring Project in Korea

Yun MinHwa

Ewha Womans University

This study proposes a 'Citizen Science Model for Urban Ecological Corridors' as a way for the general public to participate in urban ecological corridor research. The establishment and use of new city plans in Korea have resulted in the fragmentation of habitats and loss of biodiversity due to roadkill and other negative impacts of human activities. To control these impacts and promote natural ecological flows, the concept of urban ecological corridors has been introduced into urban ecosystems. Originally intended to assist the movement of wildlife, ecological corridors have also been utilized as spaces providing ecological services to citizens, as most urban species have less fear of humans. However, there is currently a lack of monitoring facilities and records regarding the presence of such facilities, which has prevented the evaluation of the ecological value of urban ecological corridors and the establishment of differentiated installation standards for existing ecological corridors. In this paper, we explore the potential of citizen science in monitoring urban ecological corridors, proposing a citizen science model for urban ecological corridors based on the results of studies online platforms such as 'Ecobank' and 'Wildlife Crossing Network', as well as the National Institute of Ecology's 'A study on enhancing habitat connectivity in fragmented landscapes.' This model collects and analyzes data generated by the current monitoring devices, and provides ways for citizens to more efficiently count the number of organisms using ecological corridors. Participants in the model can experience the process of co-producing knowledge about urban ecological corridors with scientists, and by disclosing the results of monitoring, can enhance the social and academic value of urban ecosystems.

Development and Environment (1)

ED2-04

The Oncheon Stream Restoration Project and the Politics of Natural Restoration in Busan during the 1990s and 2000s

Soonbae Kwon

Pusan National University

This paper examines the social debate that occurred surrounding the Oncheon Stream restoration project in Busan, South Korea, during the 1990s and 2000s. The stream's restoration project was initiated by regional environmental movements around the mid-1990s, and now the Oncheon Stream is considered a representative restored stream of the downtown area in Busan. This paper focuses on the clashes between local governments, experts, environmental activists, and citizens in the course of restoration. Those actors envisioned the meaning of ‘restoration’ and the restored stream’s ‘function’ differently. The issue of providing maintenance water to keep the Oncheon Stream flowing showcases the conflict over the direction and meaning of the restoration. At the project's outset, the local governments in Busan were mainly concerned about restoring the stream's landscape aspects and calculating the cost-benefit with a technical approach using artificial water supply. On the other hand, environmental activists and civic organizations argued that the stream should be restored as a sustainable natural stream without using artificial supply methods. The conflicts also occurred in relation to the function of the restored stream. The local governments, experts, and environmental activists agreed on the idea of making the stream a “water-friendly space” for the citizens. The point of conflict was its meaning. Landscape architects employed by the local governments urged a need for creating an artificial forest near the stream, while environmental activists claimed to create it as an ‘ecological park’ that would minimalize human access. Meanwhile, in the local election context, the local governments planned to establish a ‘civic park’ that is occupied by artificial facilities for citizens’ leisure activities. Engaging with the previous literature exploring the interpretive flexibility of ‘restoration’, I will show that the actors in the Oncheon Stream case strategically used the ambiguity of the term 'restoring'.

Development and Environment (1)

ED2-04

Life after the 'Living Laboratory.' – A Study of Slow Disaster in Jangjeom Village

Jane Sung Hae Kim

Jeonbuk National University

Jangjeom Village is a small farming village located on the outskirt of the City of Iksan, North Jeolla Province. It has a population of approximately 80 residents. The village received media attention in February of 2017 when it was first reported that fifteen village residents had been found with cancer. And out of the fifteen, ten had died. Later, the number of deaths increased to fourteen residents, and the total number of cases increased to twenty–two. The village residents pointed their fingers at the local chemical fertilizer plant, which had been in operation since 2001, as the possible cause of their illness. Taking over a local brick factory, the chemical fertilizer plant promised jobs for the sleepy little village when it opened. However, immediately after the plant began operation, the village was filled with an obnoxious stench akin to the smell of a rotting corpse and heavy smoke from the factory. Soon, the village residents began suffering from various illnesses, including headaches, nausea and insomnia. Their water was found to be contaminated and undrinkable when hundreds of fish died in local waters.

For years, the residents demanded action from the municipal government. Yet, the calls to the government went unheeded until the 2017 news reporting of the cancer cases. Public inquiries and environmental and epidemiological investigations followed afterwards. In 2019, the South Korean government acknowledged the role of the chemical fertilizer plant in having caused cancer among the residents of the Jangjeom Village. It was the first official recognition of health damage wrought by an environmental disaster in South Korea.

This paper seeks to explore the history of this environmental and health disaster in the Jangjeom Village as a case study of 'slow disaster.' And to do so, this study will trace the disaster of Jangjeom Village from the time of the Korean War (1950–1953), when the Food and Agricultural Organization of the United Nations (FAO) surveyed the North Jeolla Province, including this region, as part of plans to increase the agricultural productivity in war-torn Korea. In their recommendations, the FAO emphasized the role of fertilizers and pesticides in increasing food crop production. After the conclusion of the survey, the United Nations Korea Reconstruction Agency (UNKRA) funded the importation and establishment of fertilizer plants across Korea. The Geumgang Farming Co., the chemical fertilizer plant responsible for the health problems of the Jangjeom Village residents comes from this long history of an aggressive and relentless push for fertilizer manufacturing in postwar Korea. By taking a long historical approach toward understanding the disaster of Jangjeom Village as a slow disaster, the purpose of this paper is to pluralize the temporalities and narratives in the writing of disaster and question the current view of Jangjeom Village as a case study of success in resolving environmental and health disaster.

Environment and art (1)

ED2-05

The possible making of a realm of coexistence beyond humans in the Anthropocene

Masatake Shinohara

Kyoto University

In this presentation, I will show my thought that in order to address the question of a form of coexistence in difference among humans that is necessitated in the age of the Anthropocene we must try to attend to a certain realm of existence that may be given as an insubstantial and indeterminate spacious extension. To the extent that it is a realm in which humans in a heterogeneous way of living are allowed to dwell, it can be conceived as a certain place that subtends and conditions the existence of humans. Yet, it is different from a place as the solid ground on which the human artifice fit for the durable dwelling is firmly constructed. This is to say that the notion of the place that humans inhabit must be conceived as an amorphous and spacious realm in which the mode of human inhabitation bereft of a solid place is moving in space and time. Likewise, I contend that such an engagement with an exploration into such a dimension of amorphous and indeterminate reality requires that one abandons the familiar assumption that the human artifice embedded within the firm ground is secured from the perpetual threat of uncertainty. As the photographic art of Rinko Kawauchi discloses, within the realm at the threshold of the already given structure of modern human life, the irreducible aliveness of worldly things is revealed in a way that exceeds the dominant modes of representation that are blind to the planetary reality of the world. Drawing on works by Rinko Kawauchi, I adduce my attempt at such an engagement with a question of the condition of possibility for the construction of ideals for human life in relation to the amorphous and indeterminate realm of coexistence that is given for us yet is not derived from us.

Environment and art (1)

ED2-05

Getting in touch with the heterogeneity of landfilled municipal solid waste in South Korea

Soyo Lee

Korea National University of Arts

In May 2022, a team of interdisciplinary researchers from the Center for Anthropocene Studies at KAIST, Korea Institute of Geoscience and Mineral Resources, and Korea National University of Arts conducted a core boring excavation at a thirty-year-old unsanitary landfill site in Gyeonggi-do, South Korea to take an up-close look into the composition of this anthropogenic deposit. The samples were obtained as thirty-five cylinders, each of which is 1 meter in length and 5 centimeters in diameter, consisting of a wide variety of materials that are organic or inorganic, putrescible or imputrescible, and natural or artificial, as well as in different states of degradation and preservation.

While these samples are currently being investigated for microbiological and geological characteristics, they were also archived and fabricated into visual evidence by artists to be displayed in the context of fine arts and public science. This presentation shares the artist's hands-on experience with the waste samples, focusing on the heterogeneity and diversity within the constructed assemblages of anthropogenic materials. Municipal solid waste is direct consequence of contemporary lifestyle and active component of our changing environment; however, its materiality is mostly hidden from public via physical and psychological barriers. Although our samples are tiny fragments of a specific ecological condition, getting in touch with their details allows for new speculations upon long-term cycling of materials.

For archiving and visualization, general geological and biological specimen preparation techniques were applied to the samples, along with 16S rRNA gene sequencing, scanning electron microscopy & energy dispersive X-ray spectroscopy, and light microscopy for supplementary evidence.

Environment and art (1)

ED2-05

Remembering Coal and Understanding Korean Hinterlands: Undercover Senses of History and Environment

Jongmin Lee

University of Science and Technology

What was coal's place in Korean history of development? How do you understand and remember coal history through arts? This presentation aims to answer these questions using Gangwoo Lee's photos and writings during the past two decades and other material.

Locating and extracting coal became important industrial practices during industrialization and intensive labor and financial and health risks were interlinked with capital investment. Likewise coal mining towns and their people have drawn the attention of the writers and artists for a long time. Korean coal development began from the late nineteenth century with foreign explorers getting extraction rights from the government and continued under Japanese Resident-General and Governor-General. The Liberation, Korean War, and Division of Korea put more emphasis on coal mines in Taebaek and Sabuk regions of Gangwon Province in South Korea.

Photographer Gangwoo Lee began his regular visits to Taebaek and Sabuk in 2003/2004. The name of Sabuk became attached to the labor struggle that happened in 1980. Mining workers went on a strike in April 1980 which expanded to regional conflicts which lasted for four days. After consensus was reached, the police arrested the leaders who went to prison for 2-3 years under martial law. Limited media coverage afterward created an image of Sabuk as the hinterlands with high intensity low safety manual work and poor residents. Poems and paint works helped us document and remember lives at mining towns while affirming this image as well.

Between 2004 and 2023, Gangwoo Lee took landscape photos of Cheol-am of Taebaek and Sabuk of Jeonseon and recorded the images of mining works, housing, and landscape while coal mines of the area closed one by one. He wanted to capture the lives and images of disappearing towns and their workers and residents with landscape. He took a different approach from other poets and painters. He went up the mountains to grasp panoramic images of the mountains, buildings, and railroads. He also witnessed the redevelopment of towns along the streams near Cheol-am station. This presentation undercovers the images of coal mining town such as darkness, shortness of breath, cold surface, and heat of burning coal briquettes. While untangling the history of development of coal and casino industry in Taebaek and Sabuk through these images, I argue Gangwoo Lee and other artists and writers contributed to our enhanced understanding of the relations between coal and development in the hinterlands of Korea.

Human and nature in premodern East Asia

ED2-06

Vegetation in early Chinese ancient gardens and its cultural implications

Luo Qilong

Guizhou University

As everyone knows, Chinese gardens play an important role in Chinese culture. The styles of gardens vary greatly in different historical periods, and the one of the main factors forming this difference is the selection of vegetation. Until now, the research results of ancient garden art and culture are abundant, but due to the lack of data, the related results are mostly concentrated in the Wei and Jin Dynasties. As for the gardens of Qin and Han Dynasties and before, the discussion mainly focuses on architectural patterns and officials, and the study of vegetation is less. Therefore, based on the handed down literature and combined with archaeological data, this paper intends to explore the vegetation and its cultural connotation in the gardens of early ancient China – from Shang Zhou to Qin and Han Dynasties, clarify the origin and development of Chinese classical garden culture from different angles, and then provide a cultural theoretical evidence for today's garden construction.

Human and nature in premodern East Asia

ED2-06

Revisiting the Gendered Medical Body in Joseon Korea: An Examination of Medical Narratives and Cognitive Practices

Kiebok Yi

Seoul National University

This study aims to explore the diverse and ever-changing history of Korean and East Asian medicine by analyzing the evolution of medical narratives and cognitive practices surrounding the medical body during the Joseon 朝鮮 Dynasty (1392-1910), from a gender perspective. Instead of adopting a modernist or feminist approach that views medicine as independent from society or as subservient to social and political ideologies, this research methodology breaks free from these approaches by providing a re-interpretation of sex- or gender-related medical narratives. Using the medical body as a lens, the study examines the features of the narrative and its historical context to explore how medical principles and cognitive practices related to sex or gender differences have evolved over time. Interestingly, these medical discourses and issues were rooted in the question of what constitutes a medically healthy, ideal body. The medical bodies under scrutiny can be classified into five categories: the body of cosmology, the body of reproduction, the body of self-cultivation, the body of sentimentality, and the body of individual agency. The historical transformation of these medical bodies offers a fascinating glimpse into the diverse and dynamic terrain of the history of Korean and East Asian medicine.

Human and nature in premodern East Asia

ED2-06

Perspectives of Korean traditional knowledge on humans, animals, and nature

Jong-wook Jeon

Jeonbuk National University

From a comprehensive view of Eastern and Western religions and philosophies, there has been a perspective that sees nature as the mother earth that gave birth to all life forms. However, after the Industrial Revolution, the perspective that humans see nature as a resource, tool, or physical object to be utilized became dominant alongside human economic development. Humans began to perceive themselves as subjects who acquire resources, process them, and consume them. Nevertheless, it has become clear that this human-environment perception cannot be sustained in the current global environment. Even so, as modern individuals who have been empowered by the strong baptism of subjective abilities after modernity, we cannot avoid feeling doubtful about whether the traditional concept of nature as the mother earth can become a practical and workable model that can harmonize with the development of industrial and technological societies. In this context, let us revisit the discourse of Korean traditional scholars during the Goryeo Dynasty and Joseon Dynasty, such as Yi Gyu-bo(李奎報), Yi Cheom(李詹), and Seo Yu-gu(徐有榘), to explore their understanding of the hierarchy of living organisms, differences between them, and their relationship with humans, comparing them with the crowing of a rooster and the crying of a person or the death of a flea and a dog. Finally, let us examine the perception of whales and rice pests in late Joseon era Seo Yu-gu's work.

In general, we examine the perspective of nature(天) and humans(聖) focusing on the concept of "natural order". The key point is that nature and humans have a relationship where they take turns being superior to each other, and it is impossible to fix one-sided superiority. This perspective is fascinating. Through this perspective, we hope to gain insights into how humans, who were born in nature and are still living in it, can view themselves as beings of meaning and maintain sustainable positions through certain relationships among other creatures. However, even with a one-dimensional equality, it may be challenging for humans to continue their significance as valuable beings in the system of nature's harmony. It is not a form of blaming or belittling humans' sins. If we can excavate a story that goes beyond such negative possibilities and contribute to building a hopeful environmentalism that is inevitably coming in the future, it will be a valuable discussion through this academic conference, drawing upon the discourse of traditional Korean scholars from the past.

Human and nature in premodern East Asia

ED2-06

The Historical Ecology of the Yangzi Delta Region: On the Economy of the Wu and Yue Kingdoms

Brian Lander

Brown University

Historians often describe the Yangzi Delta as a sparsely populated swamp that remained a backwater until it was colonized by northerners during the first millennium CE. However, this idea is based only on the lack of earlier written sources and it ignores that the region had already been the core of two of the most powerful kingdoms of the Spring and Autumn period, namely Wu and Yue. This paper combines archaeological evidence from earlier periods with textual evidence from later periods to reconstruct the human ecology of this wetland region and to speculate on the economic basis of those two states. I will show that for millennia wet rice agriculture was combined in the region with the diverse products of the region's wetlands and forests, and will argue that although the Han colonization destroyed the region's languages and many aspects of its culture, the agriculture and cuisine of the region survived.

Barriers of energy transition in East Asia

ED2-07

A Study on the Changes in the Actor Composition and Policy of the Japanese Nuclear Power Promotion Bureaucrats' Group after the Fukushima Nuclear Disaster

Jong-min Choi

SNU Environmental Planning Institute

After the Fukushima nuclear accident on March 11, 2011, public criticism was formed in Japan against the group that had been promoting nuclear power development. Attention has been drawn to the group called the "nuclear village (gensiryokumura)", which is largely divided into the Japanese government, the power industry, and the nuclear industry and the academia. In particular, the Liberal Democratic Party, the Ministry of Economy, Trade and Industry (hereafter, METI), and the Ministry of Education, Culture, Sports, Science and Technology have been pointed out as key actors related. Especially, bureaucratic groups centered on the METI have planned and guided the nuclear industry based on embedded autonomy born in the developmental state system, and have designed nuclear policies in their desired directions through the closed decision-making process. Though Japan was democratized under the lead of the U.S. after the defeat in WWII, it's nuclear power policy has been virtually impossible for the citizens to participate and has been developed in a way that the government pushed ahead. However, after the catastrophic accident occurred, Japan's nuclear policy now strongly demanded the change. If so, has there been any change in the participation of bureaucratic groups in nuclear power policies and the direction of the policies they design after the Fukushima nuclear accident? This study aims to track the composition of bureaucratic actors related to Japan's nuclear power policy and the changes in the policies they design after the Fukushima nuclear accident, and to compare the overall features before the accident. This study will be able to present the indicator that explains the direction of Japan's nuclear power policy that promotes the restart of nuclear power plants, despite critical public opinion on nuclear power.

ED2-07

‘Survival' before Climate and Environment

Hye-Jung Shin

Seoul National University

Korean public opinions on climate change, which are highly aware of the seriousness but weak in response and practice could be seemed response skepticism, a sort of climate skepticism. A topical life history qualitative interview data from four participants in the Taegeukgi rally indicates how response skepticism is formed and maintained. This study looks at the participants of the Taegeukgi rally as a political generation unit that shares strong growth ideology, nationalism, and anti-communism.

This study finds that nationalism and growth ideology based on survivalism is embedded at the core of response skepticism. The world view of growth ideology, absolutised by the precarious division of Korean peninsula and survivalism that it must develop constantly to survive competition in the world, is based on a linear historical view of social evolution and state-centered, human-centered hierarchical ontology. Here, climate change is not a real problem, and the environmental issues are marginalized and otherized.

The participants of the study approach climate and environmental issues primarily through state-centered problem-solving discourses. However when this eventually faces limitations in climate change that the state cannot solve, the participants use the rhetorics("What can we do in this small country" and "Look at China") that justify it. They are pessimistic about the future of the planet. They recognize long-term global limitations but have no choice but to prioritize immediate economic survival. This study calls this survivalism of participants as ‘survavalism with resignation’.

It can be inferred that the survivalist values of the participants were formed from the life experience of chaos and poverty before and after Korean war, and embedding the survial oriented development ideology of the state and society. This study observes the survivalist value is being regenerated and reinforced through learning communities such as Taegeukgi rallies and conservative YouTube channels, which share similar values with the participants.

Barriers of energy transition in East Asia

ED2-07

Understanding energy citizenship: how cultural capital shapes the energy transition

Dasom Lee

KAIST

Sikke R. Jansma

Le Anh Nguyen Long

University of Twente

Community involvement and citizenship have been crucial drivers in energy transitions worldwide. To deepen our understanding of the energy transition and to further promote energy citizenship, we leverage Bourdieu’s concept of cultural capital to shed light on the inequities in community centered energy transition processes. More specifically, this study demonstrates that cultural capital is an important indicator of an individual’s willingness to participate in renewable energy related behavior and social movements. Using survey data in the Netherlands as a case study, it finds that depending on the type of energy citizenship, i.e., material participation (investments) or communicative participation (protest), different types of cultural capital are in play. The results of this study imply that a nuanced approach towards both concepts, namely energy citizenship and cultural capital, are needed. The scholarly and practical implications of this study are discussed, and the study concludes with pathways for more comprehensive community engagement.

Barriers of energy transition in East Asia

ED2-07

Scaling-up renewable conflicts: From site to history

Seona Park

KAIST

Existing renewable energy conflict studies have focused on a site. Scholars have found common grounds of renewable conflicts as crucial factors in explaining the acceptability of renewable energy. They focused on characteristics of the place/space where the facility is to be located and the perception of people living around.

On the contrary, this study argues that the renewable energy conflict needs to be scaled-up. The strategy of this study is in two directions: First, widen the time scale to examine the history of the energy laws. Second, broaden the spatial scale to investigate national level, rather than a site level. An analysis of history and laws is mainly dealing with offshore wind farm. This methodology will make a difference compared to existing literature on renewable energy conflicts.

These strategies try to answer this question - Why are similar renewable energy conflicts occurring across the country? This study focuses on the importance of historically formed institutions. What happened a half century ago when the state-centralized energy system was formed? This study explains how the government permits energy facilities by following these old laws.

An Environmental History of the Asian Monsoon: Linking Climate Change Science and Climate Adaptation Science (1)

ED2-08

Pre-modern flood and drought in Kasa County, Kyoto, Japan: Shaking steady state in the Asian monsoon

Satoshi Murayama

Kagawa Univesity

The aim of this paper is to visualize descriptive data to make sense of the descriptions. Early modern Japan, on the way to a modernized national statistical management, has left unique and valuable historical sources that are rare in the world. These materials, which can be grouped together under the title of Gunsonshi (= County villages topography), describe the natural, environmental, and social-cultural characteristics of an entire region with a radius of about 20 km at the level of each village and town throughout Japan. It contains some quantitative data, but mostly descriptive information. The first task is therefore to digitize and map the descriptions so that they can be visualized and analyzed statistically and mathematically. The Yura River, located in northern part of Kyoto prefecture, is one of the Japan's first-class rivers, whose basin area is 1880 km2, length of main channel is 146 km, municipalities are 8 cities and 1 town, population is 0.33 million. Between the Japan Archipelago and the Eurasian Continent, there is a well-developed oceanic basin with relatively warm sea surface temperature. It interacts with strong cold surge from the continent to make cold and wet winter climate with low temperatures and heavy winter snow fall in this area. In summer also, due to abundant water vapor from the Pacific Ocean results in extreme rainfall. Such complicated hydro-climatological setting in an Asian monsoon area created areal specific water management and adaptation methods since ancient times. In the early modern period, a certain oscillating steady state between floods and droughts is considered to have been ensured over a long historical process. This may have been an empirical environmental measure to avoid tipping points that could cause a major environmental collapse.

An Environmental History of the Asian Monsoon: Linking Climate Change Science and Climate Adaptation Science (1)

ED2-08

Asian dust characteristics influenced by surface conditions in the northern Gobi Desert, Mongolia: natural environmental changes or anthropogenic influences?

Masahide Ishizuka

Kagawa Univesity

Gantsetseg Batdelger

Information and Research Institute of Meteorology Hydrology and Environment

Asian dust (KOSA) is a well-known natural phenomenon that occurs in East Asia. KOSA are soil particles those are a few micrometers in diameter and are generated by strong winds. The amount of KOSA varies greatly depending on differences in surface conditions such as vegetation, soil moisture, gravel, and soil crusts. Such ground surface conditions fluctuate from year to year under the influence of precipitation and air temperature, as they are affected by global environmental changes. On the other hand, the ground surface conditions are also affected by anthropogenic influences such as grazing by sheep, goat, cow and camels. In Mongolia, where rapid modernization is progressing, various changes in the living environment are occurring, and it is necessary to keep a close eye on how the impact of changes in the natural environment will affect the living environment in the future.

An Environmental History of the Asian Monsoon: Linking Climate Change Science and Climate Adaptation Science (1)

ED2-08

Impact of Monsoon Drought on Agrarian Society on the Deccan Plateau in Western India during the Great Famine (1876-1878)

Michihiro Ogawa

Institute for Advanced Studies on Asia, University of Toyo

According to the long-term observation of “All-India Summer Monsoon Rainfall (1871-2017)” by the Indian Institute of Tropical Meteorology, India saw the lowest amount of the monsoon rainfall in 1876, which caused the Great Famine hitting Western, Southern and Northern India during the period between 1876 and 1878. The famine commission under the British rule estimated about five million people died because of this famine. This famine, which the colonial famine policy was established based on its experience of, is one of the main topics of political, social and economic history of India under the British rule. The author considered how the rainfall patterns during the Great Famine gave an impact on the agrarian society on the Deccan plateau in Western India focusing on its demographic changes.

This paper attempts to reconsider the impact given by the pattern of monsoon rainfall during the Great Famine based on the above-mentioned research results by the author in wider contexts, The Maharashtra State Archives, Mumbai has the section called “famine branch” including documents on demography, rainfall and temperature, relief camps, crop yields, conveying of staple crops, and their prices. This paper discusses how the rainfall data in the previous work by the author can be connected to these documents, many of which the author newly found in the archives. This discussion leads to revisiting previous studies on the Great Famine from environmental perspectives.

Disaster Track (2):
Disaster Science, Investigation, and Memory

ED2-09

Breaking the Long Silence: The Jeju 4.3 Exhumations

Youngkwan Ban

Jeju 4.3 Peace Foundation

In 2007, after a period of 60 years of silence, the remains of 380 individuals were discovered on a tarmac near Jeju Airport in South Korea. This airport, known for its high volume of air traffic, experiences almost 500 heavy plane arrivals and departures daily. The discovery of these intertwined bodies has given rise to a disconnect between the tragedy and its commemoration.

To date, the Jeju 4.3 exhumation has unearthed a total of 411 remains, of which 141 have been identified. The South Korean government has provided annual support for this project. However, victims' families are legally barred from accessing the airstrip, and no small sign has received approval for display at Jeju airport, despite the presence of many trivial dolhareubang statues that welcome visitors with “Welcome to Jeju.” This presentation will explore the emergence and incompleteness of contemporary memories of the disaster and the intertwined temporality imagined around the Jeju 4.3 exhumations. The memory of disaster endures through its survivors. For others, memories are contemporary products that emerge from such events. This horrific past event, in which 10% of Jeju Island’s population was massacred, is seldom remembered in South Korean public discourse. For the families of the victims, the airport is a colossal grave, while for visitors, it is a gateway to an exotic travel experience. The government has controlled the interests of the victims and the tourism industry. Th exhumation disrupts this balance and opens up an unending question mark on the site of "non-space."

Disaster Track (2):
Disaster Science, Investigation, and Memory

ED2-09

Fragments of a Disaster: The Sewol Ferry Special Investigative Commission

Seulgi Lee

KAIST

A disaster investigation commission is a public institution that investigates, collects, processes, and analyzes materials at the after-disaster site to produce stories and knowledge. The investigation has been commonly understood to be an area exclusive to science and technology experts. However, various non-experts, including disaster victims and bereaved families are also involved in the disaster investigation process. Despite their significance, how disaster investigation commissions and non-experts meet in the investigation process lacks a description. This study takes the South Korean Sewol Investigation Commission (SIC), which operated from 2017 to 2018, as a case study to see the dynamics around digital devices found at the site of the disaster investigation. Interviews with bereaved families and relevant experts and also reviews of archival documents were conducted. This study suggests a new way to understand a disaster investigation as a process of preparing fragments of disaster that can be used for both forensic and memorialization purposes which can affect healing.

Disaster Track (2):
Disaster Science, Investigation, and Memory

ED2-09

The Korean Humidifier Disinfectant Disaster and the Science: Investigation, Responsibility, and Memory

Jinyoung Park

Pusan National University

The humidifier disinfectant disaster (HDD) is considered to have caused unprecedented biocide damage worldwide. There were an estimated 7,811 victims, 1,802 deaths, and hundreds of thousands of product users. Although the humidifier disinfectant had been sold since 1994, the damage was not discovered until 2011. Even today, in 2023, the disaster is said to be unresolved; as such, it is considered as a "slow disaster." It took longer than a decade for the disaster to be recognized, and the investigation is still ongoing more than a decade later. What is the role of science after a disaster has been identified? The task of recording and remembering disasters has always been considered only in the realms of social movements and politics. In the HDD case, science does not confine itself to laboratory science on the effects of humidifier disinfectants on the human body. In the intersection between science and social movements, scientists wanted the knowledge they produced to be helpful to victims. In particular, scientists produced knowledge and called for institutional improvements to enhance the systems that support victims. They gave expert testimony to aid victims in several lawsuits.

Furthermore, after the legal ruling in favor of the company, scientists held a press conference and argued the court needed to redefine its understanding of science. In this way, the process of producing scientific knowledge following a disaster is not just a process of acquiring more reliable and accurate knowledge but rather one of rethinking disasters, recording and remembering disasters, and constantly asking what the social role and responsibility of science in disasters are.

Trans-Asian Sciences, Environmental Interventions, and the Diplomatic Roles in Postwar Japan and Korea

ED2-10

A Japanese agricultural vision in the 1930s to 1960s, as an alternative to a Eurocentric historical narrative

Kaori Iida

Grad. Univ. for Advanced Studies (SOKENDAI)

Our perspectives of crops have been shaped by diverse elements such as biological and archeological knowledge, experiences from transnational fieldwork, cultural preferences, national interests, and identity. Some Japanese botanists who explored outside the Japanese archipelago between the 1930s and 1960s observed the people and plants in different places and tried to construct an alternative worldview to overcome the Eurocentric world history, through plants. I look at the plant geneticist Kihara Hitoshi and one of his disciples, Nakao Sasuke, who were both botanists and explorers. Kihara proposed an alternative historical view of the emergence and movement of bread wheat (a crop regarded as crucial for western civilization).

Nakao inherited Kihara's idea about agriculture/culture and proposed an expanded theory about agriculture in the world, which was also a counter-thesis to a Eurocentric historical narrative. His idea was highly influential among Japanese scholars as well as the general public. This paper examines how the Japanese views of agriculture/culture were formed and transformed during the expansion of the Japanese empire as well as in the period of the American agricultural intervention in Southeast Asia and what impacts they made in both agriculture and the practice of plant conservation in and outside Japan. I also discuss how diverse agricultural knowledge can be decentralized/centralized and consequently remembered or forgotten.

Trans-Asian Sciences, Environmental Interventions, and the Diplomatic Roles in Postwar Japan and Korea

ED2-10

Postwar American Attempts to Foster a Vernacular Model of Land Use in East Asia

Hidekazu Sensui

Kanagawa University

Michigan University Center for Japanese Studies (CJS) had a field station in the early 1950s. Its location, Okayama, was a rare choice as a research base. The CJS had a prospect that Okayama and surrounding Inland Sea area would offer a vernacular model of land use, which was to be applied to the rest of the country. The heart of that model lay in commercially viable winter cropping. Mechanized farming, which had already advanced in Okayama Plain due to its particular geographical environment, was expected to develop multi-cropping further.

This paper focuses on one of the CJS geographers, Forrest R. Pitts, to illustrate that CJS's attempts and beyond. While participating the CJS's joint study of a farming settlement, Niiike, in Okayama, Pitts conducted his dissertation fieldwork in Kagawa across the Inland Sea and observed there that intense multi-cropping brought relative prosperity. After that, he obtained a postdoctoral research assignment studying culture change of Okinawa under the control of the U. S. Army. Pitts chose a farming settlement whose socio-geological environment was similar to Niiike and explored the possibility of economic development following the Okayama-Kagawa model. Then Pitts took a teaching position at the University of Oregon. In 1960 the university sent a team of specialists, including Pitts, to the Republic of Korea to advice the Korean government to design an economic development plan. Pitts's recommendation was to introduce Okayama-style cultivators into Korean paddy fields to promote multi-cropping.

Pitts, as well as the CJS scholars in general, seem to have had a sense of cross cultural understanding. Pitts criticized the ethnocentrism of some American specialists who recommended American style agriculture to occupied Japan. He rightly saw the Okayama style land use and cultivator better applicable to East Asian fields.

Trans-Asian Sciences, Environmental Interventions, and the Diplomatic Roles in Postwar Japan and Korea

ED2-10

North Korea's bird diplomacy and (Korean) Japanese ornithologists, 1963-1996

Jaehwan Hyun

Pusan National University

This paper examines how trans-Asian ornithological research on migratory birds became a diplomatic tool for North Korea-Japan relations. In particular, it pays attention to the role of Zainichi Korean and Japanese scientists in this civilian-level diplomacy, with a focus on the Chōsen Sōren's (The General Association of Korean Residents in Japan) scientific arm and the Yamashina Institute for Ornithology. From the late 1950s on, one of Sōren's strategies to maintain a "normal" relationship between North Korea and Japanese civil society was to promote academic exchange between the Korea University (Chōsen Daigakkō) and Japanese universities and research institutions. At the same time, the Yamashina Institute for Ornithology revitalized its prewar research on migratory birds with new bird-banding techniques and began to extend its interest to other Asian countries, including the two Koreas, through the US military's trans-Asian bird-banding initiative, "Migratory Animal Pathological Survey." When the institute's founder Yamashina Yoshimaro refashioned himself as a builder of "Conservation in Asia" and the institute became a central node of networks of ornithologists across the Cold War borders, North Korea began using the institute's mediation between the father- and son ornithologists Won Hong-gu and Won Pyong-oh from the two Koreas for their propagandist works towards their civilians and the Zainichi people. By the mid-1980s, Zainichi ornithologist Jeong Jongryol at the Korea University initiated bird survey collaboration with the institute, and in doing so he aimed to tie between Japanese and Zainichi academic institutions. His collaborative activities led North Korea to use the Won family ornithologists' episode for cultural diplomacy, such as a Japanese-North Korean co-produced film. Throughout this case study, I will shed light on an overlooked history in the making of contemporary environmental diplomacy in East Asia: Zainichi Korean scientists' interactions with North Korea and Japanese scientific communities.

Trans-Asian Sciences, Environmental Interventions, and the Diplomatic Roles in Postwar Japan and Korea

ED2-10

Rho Chae-Sik, Environmental Science, and Identifying Air Pollution, 1959-early 1970s

John P. DiMoia

Seoul National University

In the early 1970s, South Korean physicist Rho Chae-shik published numerous works concerning environmental science (환경과학), focusing in particular on the growing problem deriving from factory emissions. At the same time, Rho also emphasized the need for preserving, and possibly enlarging, economic growth, meaning that he sought to accommodate this new air pollution, rather than to eliminate or reduce it.

This perspective, framing pollution as one with a rational solution, reflects Rho's previous training in atmospheric physics, where he first worked for the Korean atomic industry.

Receiving an international education as one of the Korean War-era generation of younger scientists, Rho started as a health physicist at AERI (Atomic Energy Research Institute), tracking solar radiation and other phenomena associated with the upper atmosphere.

In looking for the origins of a specifically South Korean environmental science, part of the answer lies not simply with the existing infrastructure and the political climate, but also with the types of training provided to the earliest generation of specialists, and the interaction between this new knowledge and Korean culture. Rho's training shaped him to look for particular types of pollutants, while not necessarily looking at infrastructure and colonial history.

Development and Environment (2)

ED2-11

International aid, developmentalist state, and local technology imitation: The subterranean Anthropocene in Cold War Taiwan (1950-1975)

Chun-Yi Ho

National Taiwan University

This article discusses how Taiwan's "underground water crisis" was influenced by geopolitical power at different scales, specifically in the context of the Cold War. The article examines how international aid agencies, which support the "free China" government to confront PRC, supported the Kuomintang (KMT) government in developing groundwater in Taiwan. In order to prevent over-exploitation, KMT technocrats designed a groundwater regulation regime with the assistance of international agency experts. The key to this regulatory regime is to control the number of wells and to encourage farmers to use public well dug and monitored by the government. However, due to economic development in rural Taiwan and the local ironsmith's ability to mimic and produce well-drilling machines, farmers are gradually willing to dig their own (illegal) wells to obtain underground water. The low usage rate of groundwater made the groundwater development agency (Groundwater Engineering Bureau) could not return the loan to international aid. The terrible cost-benefic statement made both international agencies and the central government of KMT gradually unwilling to support the groundwater development project in Taiwan. Consequently, Groundwater Engineering Bureau was abolished, and groundwater regulation work was ignored until severe land subsidence occurred in the 1970s. By examining how the actors at different scales impacted the politics of the underground world, this article tries to show how the Cold War and developmentalist state could be the key characters of the East Asia Anthropocene.

Development and Environment (2)

ED2-11

Agriculture, Fertilizer, and the Industrial Landscapes of Taiwan and South Korea during the 1950-60s

Juyoung Lee

Johns Hopkins University

Over the 1950s and 60s, numerous fertilizer plants were built across Taiwan and South Korea. Under the goal of nation-building, the plants in both countries aimed to substitute fertilizer imports and stabilize fertilizer supplies for agricultural productivity. Also, the fertilizer plants served as an early stage development of the heavy chemical industry, providing the two post-colonial countries with a basis for their rapid economic development after the 1960s. Thus, fertilizer plant constructions not only physically shaped the industrial landscape of Taiwan and South Korea by locating factories in different sites but also formed the economic infrastructure of the countries.

This presentation examines the controversies and tensions behind fertilizer plant site and type selections in Taiwan and South Korea during the 1950s. It is easy to assume that the two countries' industrial development processes were similar, having shared the experience of the Japanese colonial rule, the war against the communists, and the influence of the US superpower. However, comparing the fertilizer planning in each country tells us that the construction of industrial landscapes could not be reduced to the discussions on industrial development within the post-colonial Cold War context. This presentation explores fertilizer plant planning during the 1950s when agriculture was still the primary pillar of the national economy before the era of rapid economic development. By doing so, it rather argues that the industrial landscapes of Taiwan and South Korea resulted from the mixed influence of their environment, agricultural practice, and social structure that goes beyond the notion of economic development.

Development and Environment (2)

ED2-11

From Thermal Pollution to Future Energy: Local Environment and Reimagining Cold Byproduct of Soyang Multipurpose Dam in South Korea

Yeonsil Kang

National Science Museum of Korea

Soyang Multipurpose Dam (1967-1973) has been considered one of the most praised engineering achievements in modern Korean history. Constructed as a part of the national developmental plans for flood control, water supply, and electricity, the dam's technological, environmental, and historical meanings have been studied, focusing on its contribution to economic and urban growth. Moving away from the nation-centered view, this paper examines the local environmental changes and the local responses by paying attention to the unexpected by-product of the dam, cold water. Government documents, petitions, and local newspapers demonstrate how local officers, rice farmers, and fishers were challenged by, and negotiated with changing water temperature and microclimate. A recent effort to use cold water as hydro-thermal energy to attract computing industries will be examined, highlighting how cold water, once considered thermal pollution, was reimagined as an economic opportunity for the region. By paying attention to how the local continuously negotiates with its envirotechnical landscape, this paper sheds light on discrepancies between the national discourses and local experiences with the large-scale energy projects. This local environmental history of the dam complicates the technocratic history of energy development in East Asia.

Development and Environment (2)

ED2-11

Dam as a Relational Artifact: A Case of Environmental Impact Assessment of the Peace Dam

Jungha Hwang

Seoul National University

Dam engineering is a powerful technology that enables humans to utilize and transform the Earth's environment in the Anthropocene. In dam projects, environmental issues are considered important alongside technical ones. But what do we specifically mean by environmental issues and how are they addressed? The environmental impacts of dam construction are not limited to the direct destruction of the surrounding ecosystem. The environmental impact assessment for dam projects also considers the contextual issues of the entire water system – such as water resource management and flood risk – in which the dam is located. Therefore, this paper argues that when discussing the environmental impacts of dam construction, dams should be regarded as 'relational beings' that operate with multiple artifacts along the same waterway, rather than as stand-alone objects that only affect their nearby surroundings.

To illustrate this, my paper examines the debate between the South Korean government and environmental groups over the extension of the Peace Dam in the early 2000s. The dam was originally built in response to the inundation threat posed by North Korea's Imnam Dam in the 1980s and was extended in the early 2000s. At the time, environmental groups criticized the government for exaggerating the danger of Imnam Dam failure and downplaying the environmental damage caused by the dam extension. On the other hand, the government emphasized that the benefit of preventing flooding in downstream areas from the collapse of Imnam Dam outweighed the environmental losses. This paper analyzes how the debate was eventually concluded in favor of the extension of the Peace Dam in the environmental impact assessment. It will show that the difference between the two positions on the dam extension arose from the different interpretation of uncertain risks of Imnam Dam failure, revealing an intriguing aspect of the technopolitics of dam construction.

Environment and art (2)

ED2-12

The Catastrophic Coastlines Shaped by Others - Relocation, War and Shipwreck

Chang, Chihchung

Indepdndent Researcher / Artist

In this presentation, the author, a visual artist and cultural researcher, focuses on his research subjects and related art practices from recent years. He uses the waterfront environments around Taiwan Strait as a metaphor to explore the organic yet fluid processes of geopolitics, locality, and identity construction.

The presentation will showcase two recent project-based artworks, Marshal of the Sea (2020) and Darling (2022). These artworks respectively explore the "Hongmaogang (Ginger-haired) Harbor Relocation Program" and the "White History (local reference of White Horror)" of Matsu Archipelago, which was the frontiers of the civil war under the "Republic of China, Taiwan" framework.

Marshal of the Sea, the second chapter of the "Kaohsiung Harbor trilogy" Port of Fata Morgana, intertwines the themes of drifting corpse worship in Chinese-speaking society, Japanese colonial history, port expansion, and national planning in Taiwan. It exposes the hidden costs, absurdities, and dark sides of Port of Kaohsiung, which was once the third largest container port in the world.

Darling is inspired by the decipherment and reconstruction of past political propaganda during the cold war. It translates Matsu's consciousness of marginality between Taiwan and China, the drastic ecological and social changes during the martial law period, and the long-lasting tension between maritime networks and the concept of national sovereignty.

By interweaving the complex geopolitics, environmental textures, and societal patterns of the above-mentioned waterfronts, the author attempts to initiate a de-nationalistic and de-oriented imagination of subjectivity and identity amid "Monsoon Asia". He draws from his own context of Taiwanese culture, which is fluid, peripheral, decentralized, and diverse, which leads to his current research and art project, Between Submergence, which connects Taiwan, South Korea, and the Netherlands under the name of Hendrick Hamel, the "Dutch Marco Polo".

Environment and art (2)

ED2-12

National Science Museum and Natural History Studies of Seok Ju-myeong

Manyong Moon

Jeonbuk National University

Currently, South Korea is considered the only OECD country without a natural history museum. After the liberation in 1945, however, the National Science Museum, which succeeded the Science Memorial Museum of King’s Grace in Japanese colonial period, was strongly characterized as a natural history museum in terms of members and research, and Seok Joo-myung, the chief of the department of zoology, was at the center of such activities. So, why did the National Science Museum switch to a science center despite the possibility that it could be Korea's first natural history museum? The presentation aims to understand why the Science Museum chose the way of a science center, tracking its organization, personnel, and Seok’s activities. This is also one of the reasons why Korea has so far fialied to have the National Museum of Natural History.

Environment and art (2)

ED2-12

Two Shores - Seawall Construction after the Great East Japan Earthquake and Japan's Border Restrictions during the Pandemic: Some Thoughts from Artist's and International Family's Perspective

Takashi Arai

Artist, Researcher at Tono Culture Research Center

The term "mizugiwa" is unique to the island nation of Japan, as it means waterfront and implies a border, a defense line, and a quarantine line. During the pandemic, the Japanese government imposed strict border restrictions called "mizugiwa-taisaku/ waterfront measures," effectively banning the entry of tens of thousands of foreigners, including international families and couples, foreign students, workers, technical interns, and refugees.

The year 2021 was the 10th anniversary of the Great East Japan Earthquake; the 500-kilometer-long seawalls along the affected coastline became near completion.

In this presentation, my personal experiences as an artist and international family member in Japan during the pandemic, along with my art project regarding the seawalls and activism against border restrictions, will be introduced.

Environment and art (2)

ED2-12

Taxonomy of Vessels: its Fluctuation in Relation to the Change in Maritime Industry and Environment

Young June Lee

Kaywon University of Arts and Design

Just as various species live in various ecological environments, various ships are distributed in various marine environments. Ships show different distributions according to the natural environment, geographical environment, industrial environment, and cultural environment. I have investigated the distribution of such ships by exploring various ports and sea areas on various ships on various occasions. Just as there is a taxonomy for species, I have the idea that a taxonomy of vessels should be possible. Just as species in an ecosystem undergo fluctuation, the distribution of ships also changes according to changes in industry, geography, and historical environment.

In the case of Denmark's Port of Esbjer, it used to be a fishing port for catching shrimps in the past, but with the development of oil fields in the North Sea from the 1960s, the number of crude oil mining facilities has increased. Now along with the change from black energy (oil) to green energy (wind), Esbjer has turned to a home to wind turbine construction and installation. As China has become the world's factory, ports such as Ningbo and Yangsan have become ports where super-large container ships flock. On the other hand, in the case of Hong Kong Port, ultra-small container barges are to be seen, reflecting the subdivided cargo transportation pattern of Hong Kong.

The distribution of ships in ports around the world shows dynamic changes over time. The first factor is the increase in the volume of goods transported due to the expansion of global capitalism. In the world's oceans, you can see ships that are getting bigger day by day, and in particular, the development of the shipping industry in China and Korea has dramatically increased the size of container ships. The second factor in the change of the marine environment is environmental regulation according to climate change. This appears as a change that can be witnessed in Korean shipyards. In Korean shipyards, ships fueled by LNG, methanol, and ammonia, which claim to be environmentally friendly, are more often seen. And as the installation of wind power generation facilities increased, domestic shipyards were also able to see the construction of platforms for installing wind turbines.

However, it is impossible to survey and classify the distribution of ships as a whole in the world's oceans. Therefore, in 2022, the author conducted an investigation centering on the national trade ports in the southeast region of the Korean Peninsula. The several-day research study targeting Busan, Ulsan, and Geoje was very limited in terms of area and time, but it was sufficient to witness what changes were taking place in the current maritime industry and environment. This research study is expected to give birth to a new field of knowledge called ship taxonomy. The survey research so far is very limited, but it is expected that the transition pattern can be grasped in the mid- to long-term by expanding to 14 state-managed trade ports in South Korea and comparing the distribution of ships by accumulating research every year. After all, this research will lay one small brick to grasp changes in the marine environment as a whole.

Anthropocene Estuaries and Deltas (1)

ED2-13

Global distribution of altered estuaries

Guan-hong Lee

Inha University

Global-scale analyses of 2,396 estuaries found that estuarine area has changed in response to recent human impacts (e.g., land reclamation, estuarine dam construction) and economic development between 1984 and 2019, and that estuarine area shrank by 5372 km2 whereas upland submergence created 5,015 km2 of estuarine area elsewhere. Approximately 44% (n = 1,046) of today's estuaries have been directly altered through land reclamation, estuarine dam construction, or a combination of both, and ~250,000 acres (1,027 km2) of estuarine area have been directly converted to urban or agricultural fields. Nearly 90% (923 km2) of land reclamation occurred in Asia linked to recent advances in the economic development of the middle-income stage. Additional historical mapping and 5-year interval analyses revealed that human alteration was insignificant in the low-income stage, but estuaries were predominantely altered during their middle-income stages, where estuarine degradation is a common consequence of economic growth. This study suggests that large-scale estuarine loss can be avoided by preserving estuaries in low- and mid-income countries in the early stages of economic development.

Anthropocene Estuaries and Deltas (1)

ED2-13

How do estuarine dams alter tide, river, and sedimentary processes? Lessons learned from field observations and numerical modeling

Steven M. Figueroa

Inha University

Estuarine dams are dams constructed in estuaries to secure freshwater and stabilize water levels. While they can provide these benefits, they can also alter estuarine tide, river, and sedimentary processes. How this occurs is not well understood. To address this, we review here recent advances gained from modeling and field observations.

Both models and observations show that estuarine dams shorten estuaries and alter their processes. Tidal processes are strongly affected by estuarine dams. This is due to reflection of the tidal wave and resonant processes. When the estuarine dam is located at the resonance length, tides are increased, whereas when it is located at less than the resonance length, the tides are reduced. Reduction of tidal currents is important in tide-dominated estuaries and can result in landward transport of shelf sediment to the estuarine dam by the tides. River processes are also affected, as the previously continuous freshwater discharge is converted into episodic discharge released by sluice gates. As the interval between discharges increases, the estuary departs more from its pre-dam condition. Shift to episodic discharge is important in river-dominated estuaries and can result in seaward pulses of river sediment depositing in the estuary and near its mouth.

Altogether, estuarine models and field observations provide complimentary insights into how estuarine dams affect estuaries. These insights will be valuable to understand present and future processes and products especially in East Asia, such as China, Korea, and Japan, as these regions have a relatively high density of estuarine dam developments.

Anthropocene Estuaries and Deltas (1)

ED2-13

Asian deltas/estuaries and the Anthropocene

Yoshi Saito

Shimane University

The coastal areas of Asia are characterized by large deltas formed during the Holocene, which are densely populated and are areas of many important activities, including agriculture, industry, fisheries, and transportation. Nine of the world's 16 largest rivers in terms of sediment discharge are in Asia, and the region is characterized by large deltaic plains relative to their catchments, resulting from relatively stable sea levels over the past 6000 years, high sediment yield in their catchments, and high precipitation due to monsoon climate. Human activities such as deforestation in the drainage basins of these mega-deltas over the last 1000-2000 years have increased sediment delivery and accelerated the growth of the deltas. Since 1950, however, many deltas have been threatened by human activities such as dam construction, afforestation, and sediment extraction, (sand and gravel mining), resulting in a decrease in sediment discharge. Rising sea levels due to global warming and land subsidence due to excessive groundwater pumping have increased vulnerability. Deltas that developed in the Holocene are collapsing in the Anthropocene, and sustainable use and conservation of deltas are urgently needed.

Anthropocene Estuaries and Deltas (1)

ED2-13

Habitat alterations and geomorphic response to estuarine dams and land reclamation on the Korean Peninsula

Timothy Dellapenna

Texas A&M University

As countries deal with accelerated sea level rise, climate change and expanding coastal populations, a range of estuarine engineering solutions have been applied. However, these alterations have associated feedbacks and impacts to the natural system. On the Korean Peninsula, engineered solutions include extensive tidal flat land reclamation, installation of extensive seawalls and sea dikes and the building of estuarine dams and barrages. Over the past century these practices have considerably modified the shoreline and altered both net transport of sediment and freshwater from these systems and modulated the timing and intensity of the discharge. Of the South Korean estuaries with drainage basins >500 km2, 56% contain estuarine dams, and 71% with drainage basins larger than 1000 km2. These closures have resulted in conversion of significant portions of the estuaries into freshwater lakes and the significant loss of tidal flats. The micro-tidal Nakdong and macro-tidal Yeongsan, and Geum estuaries are prime examples. Detailed marine geological and geophysical investigations reveal that the impacts of the modifications include a substantial decrease in the tidal prism and tidal flushing; dramatic reduction of accommodation space for sediment within the intertidal zones; orders of magnitude increases in sediment accumulation rates within the estuaries; re-distribution of habitat by conversion of substrate type; formation of barrier islands; and trapping of sand atop former muddy substrates on the proximal shelf. In the Geum estuary, preservation of total organic carbon in post-dam estuarine sediment is half of what was found in pre-dam sediment, potentially suggesting an associated decrease in primary productivity. Conceptual estuarine facies models have been developed that can be used to predict changes in other estuaries where dams have been installed and for planning purposes to illustrate the range of potential impacts in estuaries where dams and other modifications are being considered.

Rethinking human and nature

ED2-14

Formalising the Anthropocene: science, law and geo-forensicality

Alexander Damianos

University of Kent

The Anthropocene presents a compelling paradox: it suggests that human activity is so intense as to have fundamentally changed the material constitution of the planet; a geological event on par with the extinction of dinosaurs, or the end of the last ice age. Yet it also confirms human finitude. It implies that humanity is simply a passing event, and that one day the planet will go on without us, albeit substantially altered by our lapsed presence. In this paper, I provide an outline of how such a premise is formalised as geo-scientific fact. I argue that the effort to formalise the Anthropocene as a geological unit unfolds as a juridical exercise. Geologists generate new categories of artefacts, such as the technofossil, in order to illicit accounts of human finitude and planetary dynamics from mundane artefacts of every-day life (plastic bottles, the bones of genetically engineered chickens, the concrete foundations of buildings and transportation networks). The Anthropocene Working Group draw on the formalisation of previous geological units as precedent, according to which they structure their account of the Anthropocene, so as to encourage consensus within the geo-scientific community. They engage a formal decision making procedure, submitting their proposal for an Anthropocene unit to the judgement of their peers. What can we learn, therefore, from an account of geo-science as a juridical affair? How does the narration of the Anthropocene as a geological Epoch/Series of the International Chronostratigraphic Chart unfold not simply as a geo-scientific fact but also as a technique of legal, political and sociological articulation as well? Although I may not fully answer these questions, my account of the Anthropocene Working Group's ongoing formalisation effort seeks to open a dialogue between disciplines in the face of earthly finitude.

Rethinking human and nature

ED2-14

Philosophy of Decomposition: Waste, Art and Ecology

Tatsushi Fujihara

Kyoto University

In this presentation, I would like to consider the natural philosophy of the coming society based on my book "Philosophy of Decomposition," published in Japanese in 2019 and translated into Korean in 2022, and subsequent conversations with readers. I would like to focus on three main points here. First, to clarify how "decomposers" have been discussed in the history of ecology and to consider their meaning in the ecosystem. We would like to examine how microorganisms have been regarded as a group of organisms. Second, to question the concept of "environment" that we take for granted by depicting the fertile world of decomposition within humans, especially in our internal organs. Third, to discuss the deep relationship between such a worldview of decomposition and art. For example, we would like to introduce some dialogues with artists who used this book for their works. From these three points, I would like to challenge the philosophy surrounding the deep dimension of nature that we have stopped thinking about by using the word "environment".

Rethinking human and nature

ED2-14

Culture is emphasized in the pursuit of sustainability

Cheong-Ho Yi

Korea University

If a new perspective on humans, who have been forming and conserving the environment and technology at all imaginable levels were to be accepted as the premise, the sustainable ecological and technological management of a coupled system of ecosystem and society (nature and humans) could be formulated and elucidated under the concept of cultural sustainability, one in which the forces of human culture exerted by new humans are emphasized in pursuing and achieving sustainability. The interaction between humans and environment, or technology, should be maintained at a long-term culturo-natural balance for at least many generations with a resilience against possible ecological or techno-social disturbances. And this imperative is to be attained by a sustainable increase in the literacies of ecosystem and technoscience on behalf of humanity, including East Asians and those living in the other parts of the world. Objectives for the eco-literacy include the care, not only for endangered bio-species under the threats of extinction, but also for cultural bio-species, which have played a significant role in the shaping of human culture and traditional knowledge. The technoscince literacy in the Anthropocene, especially in the civic epistemology, can be developed and appropriated in the technology politics which pursue cultural sustainability and the interaction between humans and newly emerging technologies be balanced in a culturally sustainable culture.

Rethinking human and nature

ED2-14

The Matter and Meaning of Natures in East Asia

Taewoo Kim

Kyung Hee University

Nature has never been singular. The heightened discussions on the turn to ontology and materiality have critiqued one Nature that is separate from, yet simultaneously deeply embedded in, the concept of culture. Viveiros de Castro's conceptualization of multinaturalism and Descola's elaboration of plural ontologies exemplify the potential of more than one nature. In East Asia, the plurality of "natures" has been exhibited spectacularly at the dawn of modernity when nature, referring to Tao Te Ching (道德經), was translated as shizen (自然) in Japanese, that is followed by the dissemination of the translated term throughout East Asia. This study points to this historical moment of translation—between an East-Asian-ontology laden concept [自然] and a modern dualistic notion [Nature]—as a crucial moment for the Asian Anthropocence. This study argues that the translation of nature was not just linguistic practice but a discursive-material imposition of territory on which discourses and practices of modern configuration have been enacted. Referring to Karen Barad's (2007) Meeting the Universe Halfway and citing the inseparability of matter and meaning, this study delves into natures enacted in East Asia since the translation of the word. This study's discussion of plural natures will not only provide a new materialist perspective for the history of nature, but also show the possibility of alternative trajectories in practicing nature and discussing the Anthropocence.

Barad, Karen (2007) Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning, Duke University Press.

An Environmental History of the Asian Monsoon: Linking Climate Change Science and Climate Adaptation Science (2)

ED2-15

Post flood management and the history of the rice-based agriculture development in Bangladesh

Haruhisa Asada

Nara Women's University

Bangladesh suffers from frequent floods due to the low-lying deltaic topography formed by the Ganges, Brahmaputra, and Meghna rivers, as well as the heavy monsoon rains. Partly due to this unfavorable natural environment, Bangladesh was one of the poorest countries in Asia until the 1990s, with a per capita GDP of less than USD 300. However, since the mid-2000s, the country has experienced rapid economic development and now has a per capita GDP of over USD 2,000. The economic growth can be attributed to a significant increase in the productivity of the staple food grain, rice cultivation, during the 1990s and 2000s. This increase in rice productivity may have contributed to the elimination of rural poverty and facilitated industrialization. Rice productivity increased drastically during years with severe floods. While the wet season Aman rice crop was directly affected by the floods, the subsequent dry season Boro rice cultivation greatly expanded the planted area, resulting in an overall increase in total rice production compared to pre-flood levels. This study analyzed newspaper articles during the post-flood seasons of four severe flood years (1988-89, 1998-99, 2004-05, 2007-08) to reveal the socio-economic background behind the changes in rice cropping systems. As a result, the followings were found. 1) To address food shortages during the Monga season, seedlings of short-duration varieties had to be replanted for Aman cultivation. The new rice varieties were still planted after the flood years. 2) For Boro cultivation, more seedlings were transplanted on silted riverbeds and char lands to compensate for the loss of Aman rice. The efforts of the government and farmers to address food shortages during the post-flood seasons likely influenced the cropping patterns and contributed to the increased rice production levels in the country.

An Environmental History of the Asian Monsoon: Linking Climate Change Science and Climate Adaptation Science (2)

ED2-15

A relation between a river and local residents: A study from the viewpoint of environmental history

Hideyuki Kamimera

National Research Institute for Earth Science and Disaster Resilience

In this talk, we attempt to discuss a relation between a river, as a part of nature, and local residents along the river, as a human society, with a case study in a local community in Niigata Prefecture in Japan from the viewpoint of environmental history.

In the community, local residents had a good relationship with the river with a good understanding of the river, as a part of nature, since ancient times.

Because the river sometimes provided too much water to the community and submerged the community, local residents had continued to build on their own local, traditional knowledge to harmonize their own rhythms in daily lives to the rhythm of nature.

However, with the development of the modern society and economy, splendid embankments were constructed along the river.

Because the river water rarely overflows after the construction of the embankments, local residents have lost an interest in flooding; and the local, traditional knowledge to live with the river floods is being lost in the community.

It may seem that disaster resilience in the community has been enhanced by the construction of the embankments, but in fact, it may be deteriorating due to the lack of preparedness for floods with the local, traditional knowledge.

We would like to deepen our discussion of such issues from the viewpoint of environmental history.

An Environmental History of the Asian Monsoon: Linking Climate Change Science and Climate Adaptation Science (2)

ED2-15

Asian dust characteristics influenced by surface conditions in the northern Gobi Desert, Mongolia: natural environmental changes or anthropogenic influences?

Masahide Ishizuka

Kagawa University

Gantsetseg Batdelger

Information and Research Institute of Meteorology Hydrology and Environment

Asian dust (KOSA) is a well-known natural phenomenon that occurs in East Asia. KOSA are soil particles those are a few micrometers in diameter and are generated by strong winds. The amount of KOSA varies greatly depending on differences in surface conditions such as vegetation, soil moisture, gravel, and soil crusts. Such ground surface conditions fluctuate from year to year under the influence of precipitation and air temperature, as they are affected by global environmental changes. On the other hand, the ground surface conditions are also affected by anthropogenic influences such as grazing by sheep, goat, cow and camels. In Mongolia, where rapid modernization is progressing, various changes in the living environment are occurring, and it is necessary to keep a close eye on how the impact of changes in the natural environment will affect the living environment in the future.

An Environmental History of the Asian Monsoon: Linking Climate Change Science and Climate Adaptation Science (2)

ED2-15

The Recent Change of Monsoonal Climate And It's Impact on Environment, Society & Sustainability of Ukhiya, Cox's Bazar, Bangladesh-A case Study

A. T. M .Shakhawat Hossain

Jahangirnagar University

Toru Terao

Kagawa University

Bangladesh is a Asian tropical monsoonal Country and the recent precipitation pattern in the south eastern folded part of Bangladesh including Ukhiya, Cox's Bazar area is changing due to recent change of climate and increasing the number of monsoonal slope failures and landslide hazards in the Kutubpalong & Balukhali Rohingya camp area and are threatening the livelihood, environment & society. More than one million Rohingya refugees migrated from Myanmar constructed temporary shelters on the loose unconsolidated sandy hills of Ukhia-Teknaf region, Cox's Bazar area, Bangladesh. After entering Bangladesh they destroyed the green eco forests of Ukhia Hills by cutting trees and hill slopes and destroying the eco system of Ukhia_ Teknaf region. These hills are mainly composed of loose to very loose unconsolidated sandy soils (SC, SM) with silty Clay (ML) or shales. Some sands are moderately dense clayey Sand (SP). Sands are mainly uniformly graded and composed of more than 72% to 98 % sand. This research has been carried out to assess the slope related risks during monsoon in the camp area using factor of safety values. This paper will present the influence of rain water, seasonal variation of ground water level (GWL) fluctuations on the stability of the eco hills and forests of Ukhiya Teknaf region. Ukhiya hills are at great danger because of anthropogenic activities, cutting trees from the hill slopes and it is well established that due to recent change of climate, short term rainfall for few consecutive days during monsoon might show an influence on the factor of safety (Fs) values of the camp hill slopes. A clear G.W.L. variation between dry and wet seasons has an influence on the stability (Fs)) values indicate that monsoonal rainfall has a strong influence on the stability. A stable or marginally stable slope might be unstable during raining and show a variation of ground water level (GWL). The generation of pore water pressure (P.W.P.) is also influenced by seasonal variation of ground water level. During wet season negative P.W.P called suction plays an important role to occur slope failures in the Ukhiya hills. Proper geo-engineering measures must be taken by the concerned authorizes to reduce P.W.P. during monsoon by installing rain water harvesting system, allowing sufficient drainage & other geotechnical measures to reduce the risk of slope failures in the Ukhia hills. Based on the stability factor (Fs) at different slope locations of the camp hills, a risk map of the Kutubpalong & Balukhali camp has been prepared for the local community for their safety and motivate them to evacuate the site during monsoon. Adaptation & motivation campaign, mitigation measures, training program have been introduced in the investigated area for community based societal & sustainable development to reduce the climate related risks.

Keywords: Rohingyas, Stability, Climate, Sustainable Development & Risk .

Disaster Track (3):
Disastrous Futures in Uncertain Environments

ED2-16

Indian Ocean Science: From a "Vast Unknown" to Slow Disaster

Vivian Choi

St. Olaf College

According to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), the earth is absorbing more heat than it is emitting back into space, 93% of which has been absorbed in the world's oceans over the last 40 years. While this warming trend encapsulates all oceans of the world, it has been observed that the Indian Ocean, already the world's warmest ocean basin, has been warming at a rate faster than all oceans. These changes in the Indian Ocean have potentially grave consequences on life in the air, land, and sea. In response to these concerns and the significant social impacts they will have, an internationally supported and coordinated group of scientists have been collaborating to examine these still- understudied changes and dynamics of the Indian Ocean. Prior to these contemporary collaborative efforts of scientific investigation was the first International Indian Ocean Expedition (IIOE) conducted between 1959-1965, and the first international effort of this kind. In scientific exploration, investigation, and discovery, the Indian Ocean has not been a uniform space, surface, or object. This paper traces some of these heterogeneous articulations. How has the Indian Ocean transformed from "a vast unknown," into the object of scientific knowledge, care, and concern it is today? Rather than take the Indian Ocean as a static object that connects territories, or is traversed by people and ships, I stress that its changing forms expressed in scientific investigations are worthy of examination and furthermore, provide another method of revealing social and political tensions, connections, and movements.

Disaster Track (3):
Disastrous Futures in Uncertain Environments

ED2-16

The Forest-Thinning Policy Caused Wildfire Disasters?: Forestry in South Korea 1998-2022

Hyeonbin Park

KAIST

Recently, South Korea, especially the northeastern part of the territory, Gangwon Province and Gyeongsang Province, has been undergoing large-scale wildfires. Whenever large-scale wildfires break out, innovations in technological means, such as larger fire helicopters, monitoring systems, and even firefighting drones, are recalled to cope with wildfires. Moreover, climate change, by increasing atmospheric temperature and exacerbating the drought, is considered a key factor in elevating wildfire risks; hence more integrated wildfire management strategies are required. However, in 2022, some scholars and wildfire policy experts in South Korea began to criticize the forest-thinning or forest-tending policy since 1998 as a root cause of the amplified wildfires. The forest thinning practices were originally initiated and operated to promote public employment in response to the 1997 Asian financial crisis. The forest-thinning policy was understood as a reasonable approach to managing dense forests after more than twenty years of national afforestation projects for the purpose of developing forest industry, forest ecology, water resource management, and also reduction of wildfires. Recent large-scale wildfires give an opportunity to reflect on the history of forestry science and policy in South Korea. Drawing the notion of "slow disaster" and perspectives from science and technology studies (STS), this work traces how the wildfire disasters are entangled with political economics throughout history and how the disasters opened the controversy of the forest-thinning science and policy.

Disaster Track (3):
Disastrous Futures in Uncertain Environments

ED2-16

Health-Related Harm and Vulnerability in Slow Disasters (Climate Crises): A Conceptual Exploration

Choi Eun Kyung

Kyungpook National University

Traditional health issues in disasters focus on the identification of medical needs, emergency response, and surveillance and follow-up of public health impacts following a sudden onset of an event. The health impact of an event can also be measured in terms of the cause, magnitude, and impact of harm over a short time frame. However, in a slow-onset disaster such as a climate crisis, the traditional concept of health-related harm in disasters can be challenged. For one thing, it is not always clear who is causing the harm, and if the effects are cumulative across subsequent generations, it can be difficult to prove that someone has been harmed. Furthermore, the scale of harm can be difficult to predict, making it difficult to apply the precautionary principle. Vulnerability is also an emerging concept in climate justice. However, it has only recently been reframed as a hazard-specific and socially contextualized concept, including the distribution of harm, sensitivity to harm, and adaptive capacity. To understand disasters as processes, it is necessary to understand vulnerability as a concept embedded in socio-natural harm. This study conceptually explores health-related harm and vulnerability within the frame of 'slow disasters', which focuses on disasters as processes, such as climate crises. By conceptualizing health-related harm and vulnerability in disasters, we explore how health and justice in disasters can be considered alongside compensatory and restorative justice. This is the first step in an attempt to situate communities and health in disasters within a long-term process of adverse affect and recovery by examining relevant concepts such as social determinants of health, historical justice, and health justice capabilities.

National Development, Transnational Environment: Environmental History of the Cold War in the Two Koreas

ED2-17

Securitising Fisheries in Cold War Environmental Histories of the Sea of Okhotsk

Robert Winstanley-Chesters

University of Edinburgh / University of Leeds

Environmental histories of North Korea are few, but those available have focused mainly on war and military matters, the chemicalization of its agriculture and accompanying reduction in soil health, the ecological aspects of the 38 th parallel and then environmental and institutional collapse that befell the nation in the 1990s. Such histories have rarely focused on the sea, yet maritime space has historically been vital to North Korean politico-developmental narratives.

This paper therefore considers North Korean maritime environmental history, interaction with international partners and competitors through the lens of what Jane Bennett has termed“vibrant” or lively matters. The paper also has in mind the work of Carmel Finley on the geo- politics of fishing in the Pacific and Ryan Tucker Jones on environmental histories around the nearby Commander Islands and other efforts of Imperial Russia to extract value from the sea.

Building on previous work by the author outlining the institutional and political fishing histories of Pyongyang, the paper traces developments in North Korean maritime environmental interactions with the Soviet Union in the 1960’s and 1970s. Drawing on archival material from the Russian State Archive of the Economy and the Soviet Union’s Ministry of Fisheries Archive the paper considers the historical reality of such encounters. In particular the paper analyses research exchanges focused on environmental matters between North Korea and the Soviet Union and the complexities and security paradoxes created by them, as well as North Korean and Soviet fishing encounters in the Sea of Okhotsk and around the Commander Islands. Fish, Fisheries Researchers and Fishing Technologies are certainly vibrant, active, lively matters in the environmental histories and landscapes of exchange between these two nations and their complex relationships of socialist fraternity and competition.

National Development, Transnational Environment: Environmental History of the Cold War in the Two Koreas

ED2-17

From Model to Norm? – The Forest Management Cooperatives in Ulju-gun, 1970-80s

Max Altenhofen

University of Tübingen

From 1974 to 1984 the West German and South Korean governments conducted a partner project on forest management in Ulju county, South Gyeongsan Province. The main objective was the support of Korean afforestation efforts in the light of the first 'Ten-Year Forest Rehabilitation Plan' (1973–1982). Due to the high parcellation rate of the forest land, the project aimed to promote the establishment of forest management cooperatives (FMC) modelled after the forest owner organizations (Waldbesitzervereinigung) in the West German province Hesse. Following statistical surveys on the forest owner's needs, the first FMCs were established in Ulju county in 1978. As the FMCs gained great popularity amongst the forest owners, the model was subsequently adopted by the Korean National Forestry Cooperative Federation (NFCF) and transferred to other regions all over the country throughout the 1980s. The cooperatives contributed to the economic livelihood of the rural population and enabled the transfer of forest management skills and practices to the forest owners. Besides, the forest owners could actively participate in decision-making processes on the local level, which constitutes a fundamental difference to the mandatory membership in sanlimkye. The project therefore provides an alternative to the Korean government's top-down approach. While current Korean Studies and historical research on rural development mostly focused on top-down movements like the Saemaul Undong, this case study highlights different, more inclusive and democratic approaches of rural development. 45 years after the start of the FMC project, in 2020, a new cooperative
under the name 'Centennial Forest Project' was established by forest owners and civic groups in Ulju county and Ulsan, which builds upon the achievements of the FMCs and is designed to deal with the current challenges of climate change. This shows the attractiveness of cooperative models in Korean forestry until today.

National Development, Transnational Environment: Environmental History of the Cold War in the Two Koreas

ED2-17

Preservation as a Force of Development: Local, National, and Cold War Dynamics in the Making of South Korea's First National Park

Jaeyoung Ha

UC San Diego

This paper investigates how South Korea's local elites, South Korea's developmental regime, and U.S. preservationists contested but also cooperated over South Korea's first national park project around Mt. Jiri during the Park regime. In so doing, this paper illuminates how Mt. Jiri's local communities capitalized on the U.S. and Park regime's what I call developmental preservationism as a chance to prompt the modernization of their hometown. The steep valleys around Mt. Jiri remained underdeveloped in the aftermath of bloody anti-communist partisan warfare that lasted for a decade until 1955. Even after the end of the partisan war, Mt. Jiri's forest suffered deforestation and overlogging by garrisoned soldiers and swidden cultivators. To stop the deforestation, local intellectuals sought assistance from the South Korean government
and International Commission on National Parks (ICNP), a worldwide organization that offered a national park planning service in affiliation with the U.S. government. First, this paper demonstrates how the South Korean government and ICNP aimed to establish the first national park around a well-preserved alpine forest in South Korean highlands. Next, this paper examines how this plan triggered Mt. Jiri's locals to organize a campaign to establish the first national park around their hometown. This paper also highlights the contestation among localists, government officials, and ICNP planners over how Mt. Jiri should be "developed" as an ideal natural park. By doing so, this paper illustrates how efforts to preserve the environment were interwoven and contested to Park regime's plan to develop the "nation's land (gukto)."

National Development, Transnational Environment: Environmental History of the Cold War in the Two Koreas

ED2-17

Green Utopia House: The Transnational Entanglements of Housing Development and Eco-Socialism in Postwar North Korea

Sulim Kim

University of Hawai'i at Mānoa

This article investigates how North Korea standardized its socialist housing while theoretically interpreting and practicing eco-socialism during the early national plans (1954-1967). To improve the housing shortage after the severe destruction in the Korean War, postwar North Korea conducted the socialist urban experiments alongside fraternal socialist countries. German Working Group reconstructed apartments in Hamhung and Hungnam, Polish architects supervised reconstruction in Ch'ongjin's residential districts, and North Korean housing engineers shared construction experience internationally through architecture magazines and international architecture congresses led by the Soviet Union. North Korea was involved in various transnational movements, including ecological socialism. North Korea emphasized parks and gardens near residential complexes, considered air pollution during housing planning, reconstructed houses in Botong slum to improve sanitation and prevent diseases near the Botong river, and debated deforestation related to domestic heating. However, such environmental consciousness often translated into industrialization, exploiting natural resources, demonstrating that North Korea was also troubled by the issues of all postwar socialist and capitalist countries simultaneously implementing environmental protection and industrialization. Addressing state- led housing construction and the promotion of juche ideology in North Korea, this article avoids perpetuating perceptions that urban planning was only a showcase dictated by the state. North Korean engineers, foreign engineers, and residents in North Korea exchanged their different opinions on urban experiments, and they also played a critical role in determining the style of modern socialist construction and ecological thinking in North Korea. This article mainly argues that North Korea's housing development should be viewed as beyond the simple Cold War dichotomy and as the complicated result of a transnational and multilateral history that cannot be reduced to a single image of Koreanized socialist urban planning. This research relies on a range of primary sources from North Korea, including architecture magazines and journals, official documents, newspapers, and literature, along with records from other socialist countries.

Keywords: North Korean modernization, eco-socialism, housing development

Development and Environment (3)

ED2-18

The Transformation of Large Socio-Technological System with Chinese Features: A Case Study of T Power Plant

Rui LIU

National Taiwan University

Chih-hung WANG

National Taiwan University

This article explored the transformation of the T power plant from the 1990s to today. The T power plant was in Shaanxi province and was built during the Third Front Movement in China. After the electricity power system reform during the 1990s, T Power Plant was 'kicked out' from the state grid and had to seek privatization. However, early in the 2000s, when China launched the west-east electricity transmission project, T Power Plant was again integrated into the state-owned enterprise, but with a mode of the energy industry and investment. Inspired by Thomas P. Hughes and Timothy Moss' ideas, this article developed the theoretical perspective of the large socio-technological system, which focused much on the party-state system and uneven urban-rural relationship that was absorbed and stretched through the birth and rebirth trajectory of the T power plant. We put forward the following arguments. (1) The coal power plant during the early days was a system that was not only a technological project but also a life-supporting network that integrated (re)production with living life. (2) Although the T was not in the city area, it was part of the urban welfare system that contrasted with the surrounding countryside. (3) The transformation of the T power plant also revealed the politics of scaling with the energy transit in China. In sum, the T power plant is large socio-technological system and impacts on the social and ecological environment in a way different from the western context.

Development and Environment (3)

ED2-18

'Localizing' Energy for Nation?: the Nuclear Fuel Development Project in South Korea, 1976-1989

Yeseul Park

Seoul National University

This paper examines a representative South Korean case of technology transfer and its "localization (kuksanhwa)"—importing technology from foreign, developed countries, and then giving it a new cultural identity as "domestic (kuksan)" technology. The case in point is the Pressurized Heavy Water Reactor (PHWR) and Pressurized Water Reactor (PWR) fuel development project from 1976 to 1989, which aimed to secure core nuclear technology to establish the nation's nuclear power industry under U.S. pressure to block nuclear proliferation since the 1970s. Particular emphasis will be placed on showing how the path of nuclear technology transfer to South Korea was set and then shifted, depending significantly on ideological and political orientations of the two institutions that competed with each other for gaining the initiative in these projects: the Korea Atomic Energy Research Institute (KAERI) and the Korea Electric Power Company (KEPCO). This paper argues that these two institutions' political and technological strategies of technology transfer, or their "technopolitics" to use Gabrielle Hecht's term, were summed up by their diverging ideas of "localization," which led the engineers of the two institutes to produce different designs of PHWR and PWR. KAERI regarded "localization" as an independent technology development by South Korean scientists without any involvement of foreign companies. This reflects their experience of being devoted to developing nuclear weapons confidentially under U.S. surveillance during the 1970s. In contrast, KEPCO understood it as the production of fuel in South Korea, regardless of foreign companies' participation. This shows their situation, which should import guaranteed nuclear technology to supply electricity stably when a heavy and chemical industrialization policy was implemented in the 1970s. In short, although KAERI and KEPCO sought to "localize" nuclear fuel technology, the way to realize this was different based on their particular needs to consolidate their position.

Development and Environment (3)

ED2-18

Grassroots activism meets the sustainability fix: Urban agriculture policymaking and contested governance in South Korea

Ilana Herold

KAIST

Urban Agriculture (UA) is touted by governments and civil groups around the world as a way for urban citizens to connect with nature, battle food insecurity, and even lessen the anthropogenic burden on the climate system through shortening food supply chains. At the same time, agriculture and urbanization are both drivers and recipients of expansive changes in ecological and socioeconomic systems in the Anthropocene era. Despite Korea's extensive history as an agrarian society, formal UA civil movements emerged only recently, and the history of official UA policies is even shorter still. This paper traces the history of UA movements and policies in Korea, arguing that in several phases what began as a citizen movement was subsequently taken up by the government and re-shaped to meet rural-urban relations and sustainable development policy goals. This process has led to both a standardization of UA practices and an ongoing re-negotiation between "green" policy goals and everyday citizen visions for urban cultivation in the Korean context. What began as an exodus of urbanites seeking to escape the increasingly crowded and polluted capital area on the weekends in the 1960s was molded into a program for city-dwellers to understand the plight of farmers in the 1990s. Taking off with new vigor in the early 2000s, a more formalized civil movement striving for small-scale urban cultivation in tune to natural processes and minimal disturbance of the land was still in its infancy when a "low carbon, green growth" policy agenda swooped in, leading to the creation of a federal UA law in 2011. The ongoing evolution of UA in Korea, now contending with the application of "4th Industrial Revolution" technology to agriculture, offers a potent example of how top-down sustainability policies, bottom-up practices, and human-nature relations converge in a period of immense planetary change.

Development and Environment (3)

ED2-18

Sacredness Through Commodification: Attempts to Normalize Invasive Species in The Indonesian Ornamental Fish Trade

Michael Wollrath

Martin-Luther-University Halle-Wittenber

This presentation focuses on three invasive fish species, the arapaima (Arapaima gigas), alligator gar (Atractosteus spatula), and snakehead (Channa striata), and their respective histories in the Indonesian ornamental fish trade. The results presented show that their introduction is directly linked to the popularity of a native fish species of high economic value (Asian Arowana) and a perceived similarity to its morphological characteristics. Furthermore, the results show that normalizations are (temporarily) accomplished by achieving some degree of "sacredness" through commodification. The tension between sacredness and commodification is a common theme in geography as it relates to the impact of human activities on natural and cultural landscapes. Sacredness is traditionally associated with the cultural significance of a place, which often excludes these spaces from "secular" activities such as commercial use. Commercialization, on the other hand, refers to the transformation of objects, places, or cultural practices into marketable products or experiences. This tension is particularly important at the species level as well, as it often influences which species are accepted and which are excluded. The collected findings suggest that this tension is unraveling and reversing in an increasingly integrative capitalism that seeks ever new pathways to generate profits. Overall, this study highlights the importance of recognizing the ornamental fish trade as a major pathway for species introductionsespecially in relation to invasive species and their impacts on native ecosystems. Further, this research also sheds light on how seemingly unrelated species are linked through economic processes.

Pollution and rehabilitation

ED2-19

Artistic perspectives on transitions in post/extractive landscapes at the rubicon of the post-anthropocene: the case of Lusatia's landscapes

Kat Austen

UCL and Studio Austen

Lusatia is a place of liminality, a region that predates the German/Polish national borders that dissect it. Alongside being the home to Sorbs, a minority Western-Slavic community, the region is well known for its brown-coal mining industry. Indeed, the dominance of the large opencast mines on the landscape is paralleled in their dominance of the narrative of Lusatia's identity. The open cast lignite mining, which involves scraping away the earth's surface by driving a digger the size of a house, has given economic security with one hand while taking away homes and historic sites with the other. Hundreds of villages, mostly Sorbian, were destroyed in the process, adding to existing challenges for maintaining Sorbian culture and heritage.

The relationship of the region with extraction of long carbon reserves (or, as they are more commonly known, fossil fuels) is extremely complex and many entities hold a stake in the consequences and future of the activity, including humans, waterways, proand animals. However, this industry is set to end in just under 20 years, and while old mines are already filled with water across the region, questions remain about what will fill the holes left by the mines in the future economy and industry, and in society.

This paper reports on the outcomes of an artistic research project, This Land is Not Mine, focussed on human, non-human and more-than-human identity in the region of Lusatia. The research looked at and beyond the epic scale of open cast mining activity. Using methods including participatory sound studies and the use of adapted scientific instruments alongside video and sound research, the project affords the development of aesthetics of the region, both extractive and post-extractive, that elaborate on transitions at the verge of the post-anthropocene.

Pollution and rehabilitation

ED2-19

Anthropocene Literacy: From a National Industrial Complex in South Korea

Seulgi Lee

KAIST

This paper suggests the concept of "Anthropocene literacy" through a case study of a field site that is exemplary of Anthropocene literacy and learning in South Korea. Due to the Anthropocene's comprehensiveness through human and non-human history at the planetary level, it is hard to make a field and local case deal with this concept and make sense of this concept to public audiences. Adding on current quotidian Anthropocene and science-related disaster literacy discourse, this paper suggests Anthropocene literacy as a concept that can cover knowledge of Anthropocene and the social engagement in local history and nature.

The case examined in this paper based on the Anthropocene literacy is a non-ferrous and petrochemical industrial area named the Onsan National Industrial Complex which is located in the southeast part of the Korean peninsula. Similar to other industrial complexes in South Korea, this complex was built in the 1970s based on the economic development plan of the Korean government. In particular, this place was the center of the 1980s South Korea's environmental movement due to pollution disease, and there was also a mass migration of residents to build the complex. Alongside this history, this paper attempts to add non-human history focusing on an island, named Mok-do, which is located 200m from this complex and has been a designated natural heritage site since the Japanese colonial era. The ecological changes of this island ignite discussion on how to best protect this island. By exploring the industrial and ecological history of Mok-do and the industrial complex area, this paper suggests a way to read certain local situations through the lens of the Anthropocene.

Pollution and rehabilitation

ED2-19

Tracing the Local Government's Idea of Pollution Problem in Xiangjiang River Basin, China

Jingyuan Wu

University of Tokyo

The history of environmental policy has often been portrayed as a linear process, from prioritizing economic development to valuing the environment. However, focusing on the changing priority of economic development and the environment may overlook the dynamic history of defining pollution problems. To better understand the historical pollution problems and make a reflet to current environmental policy, examining the changing of the nuanced policy ideas regarding pollution problems at the local level is essential.

This study traces the local government's policy idea of pollution problems in the Xiangjiang River basin, Hunan province, China. I collected unpublished government archives from the Local Literature Office in the Hunan Library, including pollution reports, pollution prevention plans, and related meeting minutes by the Hunan government since the 1970s. For government plans after the 2010s, most of them are available online.

The study reveals how the Hunan government has constantly enriched the connotation of pollution problems, triggered by the central government's policy shift, international development cooperation, and local pollution events. The definition of pollution in the Xiangjiang River basin has expanded throughout history, from being perceived as a problem that occurred inside enterprises to a problem that affects the natural environment and society as a whole, from a technical problem to a problem concerning people's need for safety and development, historical responsibility, and political responsibility.

By narrating the expansion process of the definition of the pollution problem, the paper highlights that the problem perception led to the corresponding solution, while each period's problem perception and solutions had limitations and sometimes brought out unexpected new problems.

Pollution and rehabilitation

ED2-19

The Mantetsu-led Anti-Smoke Campaign in 1930s Dalian

Conrad Hirano

Northwestern University

Dalian, under Japanese rule from 1904 to 1945, developed as an industrial center in Northeast China and, as a result, suffered from intense coal smoke pollution. Yamamoto Jotaro, the tenth president of the South Manchuria Railway Company (Mantetsu), took the situation seriously and, in 1928, ordered his close associate Kaise Kingo to devise measures to combat the city's low air quality. The Mantetsu-led anti-smoke campaign lasted for a decade and hosted a variety of events from public lectures and exhibits to on-site training for industrial workers (both Japanese and Chinese). The Mantetsu Hygiene Institute also conducted scientific measurements and discovered that, by the mid-1930s, Dalian received more soot fallout per square meter than London, a city known for its lethal smog. Appalled by this result, in 1935, Kaise planned a visit by two leading anti-smoke activists from Osaka, Japan's industrial metropolis with the longer history of smoke control movement, and further invigorated Dalian's campaign. Their zeal drew visitors from Shinkyo, Fengtian, Fushun, and Jinzhou, and Dalian's activists toured these cities to help locals launch their own movements. Facing more severe weathers and depending more on coal-powered heating devices, however, other Manchurian cities did not support Dalian's call for abatement through the reduction of coal consumption.

Dalian's history of anti-smoke campaign demonstrates how colonialism framed people's responses to environmental problems such as air pollution. Because Japan maintained dense intra-empire networks that Louise Young and others have described, Dalian's activists could build their movement through collaboration with people from other parts of the empire. Meanwhile, the colonial condition inhibited Dalian's campaigners from seeking advice from their counterparts in London where, like Dalian, a vast amount of airborne pollutants also stemmed from houses. Colonialism restrained human responses to air pollution and other types of environmental disasters and thus accelerated the advent of Anthropocene.

Environment and Disease

ED2-21

The Clmate change and Epidemic in the 8th Century of Silla

Hyunsook Lee

Korean Institue for Ecological & Environmental History

Smallpox became very popular in the 8-9th century in East Asia. It seemed like to bring the collapses of Tang China, Silla Korea, Ritsryo state Japan. This article will examin the beginning of smallpox in Silla. It seemded that smallpox broke out seriously in the era of King Sungduck(rg:702-737) and King Kyungduck(rg:742-765). The smallpox virus was introduced while various East Asian tribes were at unification war of Silla(600-676) on the Korean Peninsula. However, there was no clear explanation why epidemic became so popular in the 8th and 9th centuries. However, recently, natural scientific research on the ancient climate has been accumulated, revealing that the proxy data for the climate of the 8th and 9th centuries was cold and dry. Given the nature of the virus' preference for cold and dry environments, it becomes clearer why East Asian countries suffered from various epidemics, including smallpox. In other words, the cold and dry climate that the virus liked was in the background of epidemic era. In 735, smallpox epidemic broke out in Japan via Korea from China and its population was plunged by half. The sharp decline in the population led to a recession, and the vicious cycle of poverty was repeated. This seemed to have happened first in Silla. In the 8th and 9th centuries, as the cold and dry climate continued, crop production was not smooth, and famine frequently occurred, resulting in a mass production of an immune-free population. At this time, the influence of the epidemic was greater. Silla fell into a vicious cycle of poverty, cold and dry climate.

Environment and Disease

ED2-21

The introduction and transfer of specialized knowledge in the prevention of Japanese encephalitis in Korea in the 1950-60s

Miyoung Shin

Jeonbuk National University

Japanese encephalitis is one of the infectious diseases that still occur today. In Korea, Japanese encephalitis received attention in 1949 when a major damage occurred nationwide, but the proper method for prevention was not known. However, by understanding the ecology of mosquitoes that cause encephalitis, Japanese encephalitis was prevented. Until the 1950s, it was a priority to prevent mosquito habitats by removing puddles of water or spraying DDT. In the 1960s, in addition to the existing method, it was emphasized that a certain distance should be placed between the human space and livestock such as pigs. It can be seen that the introduction of knowledge related to the prevention of encephalitis affected these changes. I'll review the process of Japanese encephalitis prevention, focusing on Chun Chong-hwee's activities, which played an important role in the introduction and delivery of specialized knowledge to the public.

Environment and Disease

ED2-21

The Cold War and Influenza pandemic in 1960's Hongkong

Min-Suh Kim

Yonsei University

Asian flu of 1957 and Hong Kong flu of 1968 are also known as pandemics which, ten-year apart, swept the whole globe due to the antigenic shift of Influenza A viruses. The first outbreak of both flu cases is considered to be started in mainland China, however, unfortunately this information did not reach the rest of the world until the epidemic had spread over several countries; and Hong Kong has been the first place where the outbreak was detected. Because of Hong Kong's special position to the PRC and the UK, it played a crucial role in not only spreading these new viruses to the free world but also making Influenza surveillance more systemic at both global and regional levels. I will discusse political and economic functions of colonial Hong Kong in the Cold War, which played a role in exporting not only the flu virus but also the epidemic intelligence from HK to the world. I will examine how flu surveillance system developed and operated in 'Far East' during the Cold War, focusing on Asian flu and Hong Kong Flu, in 1957 and 1968 respectively. The networks of WHO in East Asia provided a central role in adopting and implementing the global surveillance system. The relationship between two flu epidemics reinforced colonial Hong kong as a sentinel post for Influenza.

Environment and Disease

ED2-21

The Little Ice Age and the Epidemics of Hubei Province in late Ming and Eraly Qing

Hyun-Sun Kim

Myonji University

Hubei Province is located in the middle YangziRiver area where the epidemics and endemics were very frequentlyoccurred in Ming-Qing period. I will discuss the epidemics and endemics in relation with social,geo-environmental, demographic context and climatic changes of HubeiProvince in late Ming and Early Qing period. As for the eastern Hubei region, an unprecedented explosion of seriousepidemics was rife across the boundary especially in 1641 and in 1832. Since the climate of the year of 1641, belonged to the Little Ice Age, wasvery cold and dry, there were frequent natural disasters. Then occurred inShanxi(山西) and Henan(河南), an epidemic spread to the south, whichtouched the Hubei Province. Researchers at that time called the ragingepidemic the Black Death. Considering factors such as peasant uprisings, the flow of migrants in the end of the Ming and mass death of rats, where theepidemic had started, cold and dry climates, it is supposed that the ragingepidemic of the Hubei Province in 1641 was the black death. Comparingepidemics occurred in the eastern region of Ming Period with that of Qingperiod, the epidemic in 1641 was due to the influence of the cold, dryclimate in Ming period which had brought drought. In contrast, there werefrequent deluges in Qing period because of the development of polders(垸田)in Jianghan Plain(江漢平原), the soil erosion caused by the exploitation ofmountainous areas. After the flood, the epidemics frequently occurred in Qing times.

Anthropocene Commons

ED3-01

Networks as aggregators of shared spaces

Megan Black

AC Delegate

The paper proposes an examination of networks as facilitators and aggregators, which function as an overarching shared space that constellates multiple interlinked shared spaces of individual projects and initiatives: a network of networks. The proposed paper aims to contribute to the ongoing discourse around the role of networks in shaping our social, intellectual and physical landscapes, and to highlight the importance of relationships and collaborations as key drivers of knowledge creation and dissemination. Using the AC network as a case study, the paper will explore how relationships are placed at the fore to emphasise the potential for collaborations and sharing, rather than creating or storing knowledge. The proposed paper will conclude with a reflection on how we can harness the power of networks to generate transformative change and foster sustainable and just futures, emphasising the need for collective action and collaboration to address complex challenges in a rapidly changing world. Ultimately, the proposal seeks to explore the transformative potential of networks, highlighting the importance of relationships, collaborations, and shared spaces in shaping collective futures.

Anthropocene Commons

ED3-01

Conceptual identification of the AC themes: Shared Spaces, Pedagogies of Action, and Resourceful Research

John Kim

Macalester College

As part of the panel on the Anthropocene Commons (AC), I propose speaking to the conceptual identification of three distinctive themes defined in its statement of purpose: Shared Spaces, Pedagogies of Action, and Resourceful Research. I will focus my comments on the ways in which these themes cross paths with an AC partner project on which I am a principal investigator, the Mississippi River Open School (2022-2024). This presentation will illustrate the ways in which the AC themes resonate with partner activities and have been put into practice in local contexts.

The Open School project itself emerged in part from the Anthropocene Curriculum-initiated Mississippi. An Anthropocene River project (2018-2019), Whereas the Anthropocene River project researched the river as a site for the investigation of the local conditions of the Anthropocene, the Open School seeks a more focused approach: the intersection of race, resource extraction, and environmental change as they relate to the conditions that have produced the Anthropocene in this particular riverine context. This is consistent with cultural critiques that have argued that the Anthropocene does not properly account for specific contexts in which the Anthropocene emerged (I.e. Colonial Anthropocene, Black Anthropocene, Plantationocene, etc.). In our preparatory work on the Open School we identified four working themes: Welcoming, Crossing, Repairing and the Open School, which share conceptual framing with the Anthropocene Commons. My comments will address how we have defined these themes in the Open School project and sought to implement them in our ongoing work. I will also discuss how the Open School's themes cross paths with the Anthropocene Commons', and the challenges of pedagogy and research in a time of crisis.

Links
Anthropocene Commons "Statement of Purpose": www.anthropocene-commons.org
Mississippi River Open School: www.mississippi.school

Anthropocene Commons

ED3-01

Harm reduction for the soft Anthropocene

Sarah Lewison

Southern Illinois University Carbondale

Although some believe global warming can be mitigated through technocratic solutions, there's a growing acknowledgement that climate engineering poses terrible risks and does nothing to address the profligate way humans consume and waste the planet. A wholesale reworking of the built environment that harmonizes and rescales human lives, habits and infrastructures to fit earthly parameters is needed, but this vision can't be realized in a fractious social climate. With no dialogue, collective response is immobilized. The anthropocene is a globalized agent of trauma: situated and historic violences of colonization, caste, racism, systematic subjugation, and the normalized temporal routine of fossil fueled productivity produces wide scale disassociation from environment and blocks collectivized planning. This presentation surveys social movements and creative experiments in building long term consent and trust among groups of people. Mississippi: An Anthropocene River, an Anthropocene Curriculum project which brought people in the river basin together to share research and creative work has evolved into an experimental river-long 'open school.' Other situated anecdotes will be drawn from Mauritius, Argentina, as well as the Bioregional Movement and various artistic experiments, in order to speculate on methods and practices that, in the words of Latour, bring people down to earth.

Anthropocene Commons

ED3-01

Challenges of a Brazilian Anthropocene: education, research, and citizenship

Fernando Silva e Silva

APPH

Since 2022, the project The Earth and us: education, research and citizenship in the Anthropocene, led by the authors of this paper, has aimed to connect existing initiatives – scientific, artistic, educational, philosophical, and beyond – into a Brazilian network of Anthropocene research, experience, and creation. This paper aims to present and assess the challenges of various natures in establishing the concept of the Anthropocene in Brazil, as well as how our engagement with the AC, especially with the Campus format, has enabled us to begin working through these challenges.

Firstly, we will present a general overview of issues concerning ecology and climate change in Brazil, both in a scientific and political sense. Secondly, we will indicate how these issues relate to different challenges on the fronts of research, education, and citizenship. Work on the Anthropocene in Brazil is still in its early stages and fragmented, changing drastically in depth and variety depending on institutions or disciplines. At the same time, there is a great deal of innovation and creativity, as the themes of the Anthropocene find connections with Brazil's rich history of socio-ecological struggles and creations. Lastly, we will offer an account and an analysis of our experience in the Anthropocene Campus Brazil, that took place in 2022.

Environment and industrialization in Asia (1): Japan

ED3-02

Modeling Human and Insect Populations: COVID-19, Malaria, and the Ecological Approach to Infectious Diseases

Akihisa Setoguchi

Kyoto University

One of the most striking measures against COVID-19 was restricting human movement to control this infectious disease. Although there were various restrictions, from strict lockdowns to rather loose ones, most countries tried to control the disease by limiting the movement of their populations. COVID-19 was the first disease that humans tried to control based on the predictions of mathematical models. However, modeling human diseases has a long history. In 1911, Ronald Ross, a doctor at the Indian Medical Service, built a mathematical model of malaria epidemics that included three parameters: populations of humans, malaria parasites, and mosquitoes. In the 1920s, the ecological approach to the control of diseases and insects arose in medicine and entomology. In this approach, scientists try to control the whole environment rather than focusing on eradicating microbes or insect pests. However, the ecological approach to the control of diseases was not a standard public health policy until recently, when the COVID-19 pandemic threatened the world. On the other hand, ecological control of insect pests became quite common in the mid-twentieth century, especially after the 1960s, when Rachel Carson criticized the overuse of chemical pesticides. This presentation provides an overview of the history of the ecological control of insect populations, mainly in Japan, and discusses its implications for recent human disease control.

Environment and industrialization in Asia (1): Japan

ED3-02

"To Bag Wild Ducks with a Net": Japanese Royal Hunting and the (Re) invention of Tradition

Aaron Skabelund

Brigham Young University

In 1922, when Edward, the Prince of Wales visited Japan, Crown Prince Hirohito hosted a wild duck hunt at the Hama Detached Palace. A Japan Times reporter exclaimed that the outing "will doubtless be a novelty to the Prince, who has bagged tigers with his gun, wild pigs with his spear, elephants with strategy and foxes with his hounds. It is to be doubted, however, if he ever … had the opportunity to bag wild ducks with a net."

Like royalty around the world during this era, the Japanese Imperial Family deployed hunting as a means of (geo)political entertainment. For modern Japanese monarchs, hunting was a departure from the recent past. Although hunts had been an important activity for early emperors, by the medieval period hunting was dominated by warriors. By the nineteenth century, emperors had not participated in hunts for many centuries. In 1881, this history was reversed when Emperor Meiji observed a rabbit hunt. Soon, like other Japanese elites who had come to emulate Western modes of hunting, he began to hunt. The Imperial Household Ministry established game preserves, or more aptly hunting grounds, in locales like Nikkō. And emperors from Meiji to Hirohito hosted hunting parties for overseas visitors, foreign legations, and domestic powerbrokers, even as other Japanese hunted throughout their growing empire.

The hunts not only involved the shooting of birds, boar, and deer, but came to include the netting of wild fowl, a practice hailed as unique to Japan and a restoration of a traditional hunting practice. By hosting shooting events that were analogous to those of royalty abroad and netting events that were celebrated as ancient, native, and patrician, the monarchy portrayed itself as both modern monarchs and timeless emperors, the custodians of classical tradition.

This research is part of a book project on hunting—a multispecies entanglement—in the Japanese empire, writ large, from the mid-nineteenth to the mid-twentieth century.

Environment and industrialization in Asia (1): Japan

ED3-02

Japan's Paper Industry in the 1930s: Where Did All the Wood Come From?

M. William Steele

International Christian University

Japan's paper industry began with the establishment of the Oji Paper Company in 1875. Its founder, the entrepreneur and later economic moralist Shibusawa Eiichi (1840-1931), held that a modern paper industry was essential to the advance of Japan as a civilized country. The industry prospered and, by the 1930s, Japan was a global leader in wood pulp, paper, and paper products. Prewar production peaked in 1940 at 1.5 billion tons.

Where did all the wood come from? And of Japan's rich forestry resources, which trees were harvested? Until the end of the nineteenth century, the Japanese paper industry relied primarily on cotton rags and rice straw pulp. However, with the development of new technologies in mechanical and sulfite wood pulp in the early 1900s, core operations moved from central Japan to the vast coniferous forests of Japan's far north. Pulp mills were first established in Hokkaido but, by the end of the 1930s, some 70 percent of Japan's pulp and paper were produced in state-of-the art factories in the southern half of the island of Sakhalin, territory acquired as a result of victory against Russia in 1905.

This presentation examines Japan's use of its forest resources by focusing on the operations of Oji Paper Company in Hokkaido and Sakhalin in the opening decades of the twentieth century. It argues that, despite increasing civilian and military demand for forest products in the 19030s unrestricted access to Sakhalin's primeval forests allowed imperial Japan could maintain its status as a timber rich nation.

Environment and industrialization in Asia (1): Japan

ED3-02

How Japan Became a Have-Not Nation: Copper Resources in the Modern Era

Patricia Sippel

Toyo Eiwa University

Japan entered the modern era as a country rich in mineral and other resources. In 1893, Wada Tsunashirō, head of the government's Bureau of Mining, declared the country's mineral resources to be "almost inexhaustible." Following impressive increases, Japan became the world's number two producer of copper in 1915. In 1917, output reached a peak of more than 108,000 tonnes, with exports also at an all-time peak of 81,000 tonnes.

After the First World War, however, the Japanese copper industry changed abruptly. Japan's mining companies lost their export markets to more efficient foreign competition. In the 1920s, early assertions of abundance gave way to doubts about the adequacy of the country's mineral resources. In 1927, University of Tokyo professor Katsura Benzō described Japan as a country "poor in mineral resources." In the mid-1930s, Japan prepared for war as an importer of copper and other metals and with a growing sense of its vulnerability in natural resources.

How to explain Japan's swift transition to the status of "have-not" nation? Were Japan's mineral resources simply exhausted? This presentation draws on the records of Journal of the Mining Institute of Japan to trace changes in the supply and consumption of copper in early twentieth century. It suggests that technological and business shifts abroad placed Japan at a disadvantage, while military buildup and the growth of heavy industries placed demands on resources, including copper, that Japan – even with its colonies – could not meet. Following its defeat in war, Japan adopted a policy of liberalization that largely ended the domestic extraction of mineral resources and replaced it with overseas exploration and production.

Korean Modern Environmental History, 1960s-1990s

ED3-03

The construction of Uiam Hydroelectric Power Plant and the problem of land

Daehoon Jeong

National Institute of Korean History

This article focuses on the construction of the Uiam Hydroelectric Power Plant (의암수력발전소) in the early 1960s and the issue of land compensation for the submerged area. The Uiam Plant's land compensation problem was the first social conflict related to hydro power generation in South Korea since the liberation, along with the air pollution problem at the Masan Thermal Power Plant(마산화력발전소), which was constructed several years earlier. Private capital's entry into the electric power industry, which began in 1960, continued even after the May 16 coup. Hwa-il Industry's Uiam Plant project was the largest among them. After the coup, Hwa-il Industry obtained a business license and began construction on March 16, 1962. However, the Uiam Plant's construction was sluggish due to difficulties in obtaining loans from Japan. Initially, Hwa-il Industry lacked capital and planned to introduce most of the costs through loans, so construction was delayed as the loan process was delayed. Construction began in March 1962 and was suspended in the summer of 1962. Local residents protested strongly because they had not received compensation for the submerged area. The government took measures such as inspecting the construction site and instructing immediate compensation, but it was difficult to solve the problem unless Hwa-il Industry's funding issue was resolved. Finally, the compensation could only be realized after KEPCO(한국전력) recovered the license from Hwa-il Industry. Along with the Chuncheon Hydroelectric Power Plant(춘천수력발전소), the construction of the Uiam Plant was the first large-scale hydroelectric power plant promoted by the government of Republic of Korea after the liberation. However, unlike the Chuncheon Plant, which was led by the government, the Uiam Plant was plagued with uncertainties from the beginning because it was led by private capital lacking financial power. In the 1960s, large-scale hydroelectric power plant construction projects were structurally fragile, contrary to the government's desire to secure electricity for industrialization.

Korean Modern Environmental History, 1960s-1990s

ED3-03

Development for the Environment: Environmental Crisis and Urban Planning in South

Chuyoung Won

Catholic University of Korea

This paper examines how environmental anxiety emerged in tandem with the establishment of environmental management in 1970s South Korea. Environmental historians have paid attention to the rise of global environmentalism in the 1970s by focusing on the cases of diplomatic policies or social movements in developed countries. On the contrary, the environmental crisis and its handling in developing countries have remained relatively unexplored. This presentation will show how environmental experts of a developing country during the 1970s regarded achieving “development” as being compatible with the environment. They tried to seek a way of ‘sustainable development’ without environmental pollution by devising and implementing reasonable urban plans. For example, Ro Jung Hyun, an environmental expert participating in the UN Conference on the Human Environment of 1972 and director of the Institute for Urban Studies and Development, Yonsei University, claimed that “development” (kaebal) could conceptually be compatible with the conservationist idea of “environment” (hwan'gyŏng). In addition, he argued that developmentalism would be good for developing countries’ environment because it can reduce the uneven development of urban areas. Coincidently, urban planning, as a scientific discipline, was institutionalized in universities, and new “environmental” experts from the fields of architecture and regional development played a crucial role in environmental policy.

Consequently, urban planning in South Korea started to contain concepts for resource conservation during the 1970s. By focusing on urban planning, this paper will show how South Korean environmental experts tried to make a compatible way to handle matters between national development and environmental degradation.

Korean Modern Environmental History, 1960s-1990s

ED3-03

Scientization of Nature and the Construction of Environmental Subjects : A Creation of the National Environmental Research Institute of South Korea, 1978-1981

June Jeon

Chungnam National University

Despite the extensive historical research on the early institutionalization of environmental policies in South Korea, little attention has been paid to the role of scientific organizationsduring this process. This paper aims to fill this gap by examining the early history of the National Environmental Research Institute (NERI). Based on archival studies of governmental reports, media coverage, and public magazines, I argue that the early history of the NERI explains the role of science in environmental policies in contexts of the rapid industrialization and authoritative governmental regime. The NERI was created before the legislation of the Environmental Preservation Act of 1978 and was negotiating its role and responsibility. It succeeded a small department of the Korea National Institute of Health, while it was assumed to carry out scientific studies of Korean environmental problems, especially for the execution of the Environmental Preservation Act of 1978. The NERI's changes of organizational structure and collaborative relationship with civil organizations, politicians, and scientists show that the early institutionalization of Korean environmental policies was accompanied by the construction of various new environmental subjects—scientized, while mobilized. This paper not only contributes to the regional history of Korean environmental policies but also offers insights into the global studies of the role of science in environmental policies.

Korean Modern Environmental History, 1960s-1990s

ED3-03

Whose Garbage? Whose Environment?: Building a National System of Municipal

Sanghee Bae

Seoul National University

South Korea is one of the highest-ranking nations on global indexes concerning municipal waste disposal and recycling. Enforcement of the Volume-Based Waste Fee (Jongnyangje) Policy in 1995 and the following enthusiastic response of the citizens have been counted as the main factors driving the waste management in South Korea. This paper seeks to examine another dynamic that came into play in the early 1990s: the introduction of waste incinerators in Seoul and the citizen resistance it garnered. Nearby residents of incinerator sites mobilized against the government's plan to shift the center of waste management from landfilling to incineration. To win their fight against the government, the residents of Seoul needed to win the approval of the nearby residents of the Sudokwon Landfill where most of Seoul's waste would end up instead. In their coucil meetings, recycling came to figure as the only alternative technology to rechannel the waste flow. By tracing the transformation of Comprehensive National Waste Management Plans (NWMP) spanning the 1990s together with the progress of citizen activism against incinerators and landfills, this paper argues that the South Korean national waste management system centering on recycling policies was shaped by the alternative environmental framework of Seoul residents. Building a national system of municipal solid waste management was, therefore, a project of settling the hierarchy between different technologies of waste management against the backdrop of uneven relationship between the megacity Seoul and its suburban area Sudokwon.

Tension and crisis in East Asian environment

ED3-05

The Darkness of the Great Acceleration: Did the History of Korea Advance in the 20th Century?

Tae-woo Ko

Seoul National University

The current climate and ecological crisis is a “great disaster” pushing human and nonhuman creatures to the limits of survival. To overcome the “modern civilization” itself that led to such a marginal situation, I would like to critically look back on the history of Korea in the 20th century. First, I introduce the discussion of Dipesh Chakrabarty, who has presented a new historical and philosophical outlook in the face of crisis. Next, I show the indicators of Great acceleration while grafting the perspectives of the Anthropocene and Capitalocene to Korea's modern and contemporary history. And I would like to raise the need to improve historical awareness by pointing out the limitations of major opening books of Korean modern and contemporary history. Finally, I suggest studying ecological and environmental history as a method of “negative universal history” based on enhancing historical awareness.

Tension and crisis in East Asian environment

ED3-05

A Survey of Environmental Social Movements in Democratic East Asia: An Historical Perspective

Bulkhia U. Panalondong

Central Mindanao University

Citizens in East Asia are governed by a wide range of political systems—Japan has been democratic since the end of World War II, South Korea, and Taiwan democratized in the late 1980s, while mainland of China is governed by a "democratic dictatorship" according to its constitution. Because of this political diversity across the region, it has been difficult for single books to cover civil society in the whole region. The history of social movements is deeply connected with the struggle for social change. Forming a heterogeneous compound of collective actors with a variety of demands and strategies, social movements essentially represent the “conscious, concerted, and sustained efforts by ordinary people to change some aspect of their society by using extra-institutional means” (Goodwin & Jasper, 2009, p. 3). Guha and Gadgil (1989) demarcated the environmental movements as 'organized social activity consciously directed towards promoting sustainable use of natural resources halting environmental degradation or bringing about environmental restoration'. The study also reveals that democracies should adopt policies that efficiently and effectively counter the spread of antidemocratic practices on its environmental challenges, and should hold each other accountable for living up to democratic ideals. The concluding part of this research discussed its findings and what it means for the study of environmental politics, comparative politics, and Democratic East Asia.

New approaches to environmental history

ED3-06

Changes in Natural System of the Brijuni/Brioni Islands (Adriatic Sea, Northern Mediterranean)

Hrvoje Petric

University of Zagreb

The paper is about transformation of the Brijuni islands from a malaria-ridden and depopulated areas in the popular tourist destination and finally to the national park. At the end of the 19th century Brijuni Island was bought by industrialist Paul Kupelwieser and turned into an exclusive resort. In 1900 Kupelwieser was invited to Brijuni the scientist Robert Koch, to combat malaria. He followed the process of draining the swamp. This resulted in the disappearance of malaria. Afforestation of the islands and drinking water were also carried out. Fields, pastures, vineyards and landscaped lawns have been restored. Exotic plants and trees (from Japan, China and the Middle East) have been planted. Game (deer, roe deer, mouflon, pheasants and rabbits) was also introduced to the archipelago. These activities have changed the environment, but also created the preconditions for the beginning of elite tourism in the archipelago. In 1912, the Zoo on the largest island began work, where the tropical animals from Asia and Africa acclimatized and were subsequently sent to many European Zoos. Since Kupelwieser was an industrialist in the era of intensive industrial pollution, at the end of the chapter the author will try to ask whether Kupelwieser's idea of investing in the environment of the researched archipelago reflects the beginnings of early ecological sensitivity. After WW 2 Brijuni Islands 1947 become a summer Yugoslav presidential residence. At the time of Josip Broz-Tito on the islands were limited tourist activities. Although there was no tourism islands are visited by many foreign politicians, particularly from non-aligned countries, because the Brijuni islands was a function of the the state protocol. At the meeting, Tito, Nehru and Nasser (1956) on Brijuni outlined based Non-Aligned Movement. A few years after the death of President Tito, in 1983 the Brijuni Islands were declared a national park.

New approaches to environmental history

ED3-06

Characteristics of Precipitation Distribution and River Flood Using Historical Precipitation Datasets: A Study for the Northern Kyoto Region, Japan

Ishizuka Masahide

Kagawa University

As we live in a changing global environment, we have paid attention to possible future changes in the natural environment and have conducted many studies using numerical simulations. As a result, we have predicted possible future environmental changes and their effects, and have studied adaptation measures to these changes. However, the problem is that there is no data to verify the prediction results.

On the other hand, for past natural phenomena we have experienced (this study focuses on extreme natural disasters, especially floods), we have observational data, records, and information on human behavior and its effects on the social environment. However, it is difficult to say whether the results of numerical simulations are correct for the reproduction of such past natural phenomena, and whether there is sufficient understanding of how we have behaved during contingencies. Reasons for this include: 1) lack of historical observation data, 2) even if data is available, it is not systematic (lack of unified definition of terms), 3) low spatial resolution of data, 4) scattered data, 5) written in old characters, 6) paper-based data (not digitized), and so on.

In recent years, however, efforts to restore historical hydro-meteorological data have progressed, and a foundation for understanding past natural phenomena is being developed. Therefore, in this study, an archive set of historical precipitation data and climate model outputs aiming to reconstruct past climate changes are used for the northern Kyoto Prefecture area and the Yura River basin (1,880 km2) that flows through the area. Then, characteristics of precipitation distribution, reproduction results of river flood, and issues related to the past precipitation data set are presented.

New approaches to environmental history

ED3-06

Mother Russia's forests and China's recent anti-desertification campaigns

Thomas Hahn

UC Berkeley

Josef Stalin may not be the first name on anyone's mind when it comes to enacting progressive environmental policies. And yet, in 1948, the Soviet leader inaugurated the so-called Great Stalin Plan for the Transformation of Nature, "conceived as a grand attempt to reverse anthropogenic regional climate change in deforested areas, with an emphasis on the promotion of watersheds." According to Bellamy Foster (2015), the Plan constituted "the world's first explicit attempt to reverse human-induced climate change." It was scrapped after Stalin's death in 1953, with grave consequences. Meanwhile, China's forestry administration, under Deng Xiaoping, established a program eventually called the Three North Shelter System (TNSS). The TNSS, continuing into the present and well into the future in fact, "is the largest unified design project the world has ever seen" (Elkin 2022, 171). In my presentation, I will look at the precursors to the TNSS, such as Russian efforts to rehabilitate and strengthen its stressed watersheds in the 1940s to the 1980s or the post-Dust Bowl Prairie States Forestry Project in the US, and discuss the wider social and economic implications of geoengineering projects of such unprecedented scales.

Rethinking Hydraulic Societies

ED3-07

Boundary Perceptions of Wells and Ponds as Sources of Water for Domestic Use in Rural Communities in Northern China from the eighteenth to the twentieth Centuries

Shinobu Iguro

Otani University

This presentation focuses on the use and management of wells and ponds, which have been used as sources of water for domestic use, and clarifies how the line between individual and collective action over domestic water was drawn in rural society in northern China from the eighteenth to the twentieth Centuries. It is generally understood that the larger the size of the water body subject to the governance, the greater the necessity for collective action in the use and management of water resources. Based on this understanding, Wittfogel found its extreme phase in the creation of despotic power associated with large-scale water conservancy projects. On the other hand, the smallest-scale use of water for humans is the ingestion of water into the body through eating and drinking, and in a broader sense, its use as domestic water for cooking, washing clothes, cleaning, is equivalent to this. Between these two polar opposites in terms of the scale, water conservancy projects and domestic water use, collective actions at various levels have been established, which have generated a various types of social bonds. Recent progress in the investigation and collection of stone inscriptions and the accompanying research has shed light on the micro-level issue of social cohesion in rural society. In this presentation, I use these steles as the main resource to examine the relationship between individuals and groups over domestic water in rural society from a historical perspective.

Rethinking Hydraulic Societies

ED3-07

Oriental Despotism or Bottom-up Approach? A Discussion on the Irrigation Maintenance System of the Nile in Ottoman Egypt

Wakako Kumakura

Tokyo University of Foreign Studies

In recent years, it has been pointed out that the irrigation maintenance system in Ottoman Egypt was a bottom-up approach, with the peasants as the main actors. Such arguments are designed to raise awareness of Karl Wittfogel's 'Oriental Despotism' theory and to modify it. Certainly, the bottom-up approach argument is important in that it points out the autonomy of peasants, which has not been adequately dealt with in the previous studies, but it preserves the framework of various dichotomies such as government and peasants, tyranny and autonomy, which were set up in the 'Oriental Despotism' theory. On the other hand, it can be assumed that it was not only people belonging to the government and peasants who played a role in the irrigation maintenance and management system but rather those in between them who played an important role as coordinators between the various clusters of people.

This study discusses their role, relying on sharī'a court registers and water distribution registers, and presents a better model of the irrigation maintenance system in Ottoman Egypt, while being aware of the presence of people between the government and peasants.

Rethinking Hydraulic Societies

ED3-07

A Study of the Local Governance of Water Transportation on the Deccan Plateau in Western India from the Late Eighteenth to the Early Nineteenth Century

Michihiro Ogawa

University of Tokyo

This paper studies how use of water transportation in the rainy season affected the formation of the local socio-economic bonds on the Deccan plateau. In the seventeenth century, major cities and marketing places in the Indian subcontinent were connected to one another by maintenance of the major roads under the Mughal rule, many of which were kept even after the Mughal Empire started to decline in the eighteenth century. Except these imperial roads, however, most of land roads in the Indian subcontinent were not maintained well. Therefore, people relied on pack bullocks or camels for conveying goods, the carrying capacity of which was quite limited. In this situation, river-borne traffic, which enabled larger scale of transportation, was significant for commerce and social life in the inland areas of the subcontinent. However, river-borne traffic was not always useful on the Deccan Plateau in a semi-arid region. Water flow of rivers on the plateau was so low except the rainy or monsoon season (June to September) that ferries were unnavigable in many rivers there during the dry season (October to May).

The Maratha Government, which ruled this region in the eighteenth century, maintained the landing places on banks of rivers (ghāṭ) and collected transit duties (zakat) there. It is found from the records of this tax collection that various people were engaged in river-borne trade in the monsoon season forming the socio-economic bonds. This paper considers how use of water transportation in the limited period viz., the monsoon season affected the formation of the local socio-economic bonds. Even after the British rule started in this region in 1818, the traffic situation did not change before opening of the railways in 1853. This paper tries to show how the colonial rule gave an impact on these bonds in the early nineteenth century.

Global perspectives to the Anthropocene

ED3-08

Planetary Explorations of Anthropocene River Futurities: Fluvial Networks of Creative Resistance

Joseph Underhill

Augsburg University

The terraforming and destruction of landscapes, climates, and human communities manifest in multiple forms and dysfunctions in river systems around the globe. These Anthropocene watersheds provide a particularly rich set of opportunities for understanding the impacts of extractive technologies and environmental injustices associated with petrochemical industry, dam construction, flood control, hydropower, channelization, waste disposal. At the same time, liminal fluvial spaces provide rich ground for imagining ways of staying with and living through these troubles. Drawing on experiences with extended travel, teaching, activism, and research on the Mississippi River, this paper imagines a set of river-based educational and research programs and expeditions as sites of resistance and pedagogical experimentation.

There is an emerging community of practice in the newly forming Anthropocene Commons project, as well as a newly formed River Field Studies Network, which already include a rich array of river studies curricula. With a collective of researchers, teachers, artists, and activists engaging in various forms of immersive and extended investigations on rivers such as the Amazon, Nile, Danube, Ganga, Mekong, Yangtze, Huang He, and others, what can we create in the riparian ruins and what signs of hope do we see in these muddied waters?

Global perspectives to the Anthropocene

ED3-08

The Floating Dakimakura: notes on a found photography

Ana Matilde Sousa

CIEBA – Artistic Studies Research Center & University of Lisbon

An image found on Tumblr in 2013 serves as starting point to explore the local, global, and temporal entanglements of the Anthropocene—specifically, an author- and context-less photography of a dakimakura ("love pillow") floating on turbid waters, stranded on a pile of soaked reeds and domestic debris. Using phenomeno-poetic analysis, I connect the floating dakimakura's cultural-ecological obscenity with Jussi Parikka's concept of "Anthrobscene,"a wordplay indexing what is obscene about techno-optimistic narratives of humankind rising to planetary power. There are multiple references embedded in this image, from the floating dakimakura's possible situatedness as remnant of the 3/11 earthquake and tsunami to its ubiquitous dissemination as product of globalized J-pop. From seventeenth-century dames de voyage (fornicatory dolls used by colonial sailors, purportedly based on Asian bamboo wives, or chikufujin in Japanese) to the evocation of Twin Peaks's Laura Palmer in a body bag. From a phantasmatic boat-grave to Internet memes comparing the floating dakimakura to Millais's painting of the Shakespearean Ophelia in her "muddy death," appearing on the Reddit board r/AccidentalRenaissance. As the floating dakimakura becomes an unprocessed, and morally nprocessable, debris, our "trashy" desires disturb the proper flow of time, just like the dakimakura's polyester cover that won't decompose for the next 100 years.

Global perspectives to the Anthropocene

ED3-08

The impossibility of a planet

Jamie Allen

Critical Media Lab

Jeremy Bolen

Georgia State University

As earthlings, we are increasingly called to understand ourselves as part of a planetary commons. There are modes of thought, experience, and media that provide registers of access to the material fact of kinds of 'planetarity' (Spivak). Prime examples include those much- discussed photographs of the "whole Earth"—1968's "Earthrise" and 1972's "Blue Marble" images—that were thought to have the potential to precipitate a worldwide, common planetary consciousness. Some people and practices are acutely aware of the common planet on which we all live; they are compelled or choose planetary magnitudes as their main frame of reference. In the natural sciences, researchers sample and interpolate data from all over the globe and those who derive large-scale models of planet-wide systems. In macroeconomics and geopolitics, there are those who template and influence things like currencies and markets, international conflict and policies. In the humanities and social sciences, studies of transnational cultures, globalization and migration hold perspectives that include the entirety of planet Earth as a research subject or context. "The Anthropocene," "technosphere," and "planetarity" are characterizations attempting to name such global knowledge practices and orientations.

"The Impossibility of a Planet" is a textual and multimedia artistic research project and multipart film that intertwines discussions with people who have taken active roles in researching planetarity commons. It socializes the active processes that are now helping to reform the imaginaries and realities that come along with the continually resurgent idea of a planet-wide commons. We propose a presentation of the ongoing project, as well as interviews and an activated discussion session with media prompts for participants at the conference.

Global perspectives to the Anthropocene

ED3-08

Snapshots of a global/Italian Anthropocene: strategies of representation in Amitav Ghosh and Wu Ming 1

Lucio De Capitani

Ca' Foscari University of Venice

This paper juxtaposes two texts that take up the challenge of representing the multi-scale unfolding of the Anthropocene by exploring the specificities and the global connections of two Italian landscapes. Gun Island (2019), a novel by the Indian writer Amitav Ghosh, depicts Venice as populated by environmental migrants of various kinds: from Bengali refugees to nonhuman presences, both seemingly 'out of place' within the Venetian cityscape and Lagoon ecosystem, thus framing the historical/climate predicament of the city as shaped by multiple scales of socioenvironmental breakdown. The 2016 literary reportage Un viaggio che non promettiamo breve [We can't promise this will be a short journey], by the Italian writer Wu Ming 1, instead, focuses on the construction of the Turin–Lyon high-speed railway in the Susa Valley (Piedmont). While detailing the decades-old history of this project, its devastating environmental impact, and the ongoing struggle against it, the reportage posits the valley as an observatory for the politics of monumental public infrastructure within the international context of neoliberal governance. I argue that, by exploring different narrative strategies and highlighting different historical-environmental dynamics, both writers provide valuable snapshots of a global/Italian Anthropocene, turning local environmental history into planetary matters.

Global perspectives to the Anthropocene

ED3-08

Comic book “persons of mass destruction” and the reimagining of humankind in the Anthropocene

Hugo Ricardo Noronha de Almeida

NOVA University of Lisbon

This communication will address an essay comic book work-in-progress called “Napalm Life,” which analyzes comic book super-powered beings—in particular, from Japanese“fighting” manga and Usonian superheroes—as visual culture symptoms of a general form of relating to oneself and the environment. The idea of an Anthropocene — a geological epoch caused by the sustained intervention of human actors and organizations in the environment — justifies a reappraisal of what “being human” is. Not only has it contributed to the academic proliferation of critical posthumanist frameworks, which reposition humankind as dependent of a mesh of ecological and technological relationships, it has also led, inversely, to the celebration of humankind’s newfound geological powers, as these seemingly validate Humanism’s program of nature’s domination.

This project connects Mark Millar’s concept of “persons of mass destruction,” originally applied to superheroes as metaphors for the military-industrial complex, with the Anthropocene’s premise of a humankind capable of interfering with planetary systems. Echoing nuclear traumas, images of trans- and posthuman beings levelling cities and mountains are defining for series such as Akira or Dragon Ball. “Napalm Life” looks at pop culture’s appetite for mass destruction as the dramatization of an accelerationist drive preventing the curtailment of capitalism’s effects on the Earth, a fantasy of empowerment in dialectic articulation with the exhilarating sensation of total loss of control.

Environment and industrialization in Asia (2): Southeast Asia

ED3-09

Passages that Tell the Time: Mapping the Anthropogenic Markers of Muaragembong Estuary

Kamil Muhammad

Floating Tech-Lab

This essay seeks to understand the changing landscape of Muaragembong estuary in the North of Java, Indonesia, particularly focusing on its chronological narrative and the assemblage of the linear passages in and around the estuary: the river, the road, and the mangrove. This estuary, like many in the country, is a site of anthropocentric contestation that manifests itself in the form of concrete river embankment, growing development, and the ever expanding aquafarms, to name a few. The passages act as host to human activities that have become both the witness and the body that bear the mark of anthropocentric accretion.

It is through the lens of architecture and bioinfrastructure that we seek to map the anthropogenic markers of Muaragembong estuary. Through these markers, we wish to reveal the bioinfrastructural relationalities of the passages and the ways in which developmental engineering, the lives of fishing communities, and climate change may have contoured the estuary. This reverse engineering of the estuary will at the same time highlight, if anything, the engineering tendency of defending against water flow and to rearticulate that within the spatiality of mangrove.

Environment and industrialization in Asia (2): Southeast Asia

ED3-09

Damming of Mekong Rivers in the Age of the Anthropocene: Feral Frontier in Northern Thailand from an Ecofeminism Perspective

Maya Dania

Chiang Mai University

The Anthropocene is a new geological period in which human activity has significantly influenced the Earth's temperature, land, oceans, and biosphere; that humanity must now be considered a distinct geological force. Adopting the Anthropocene as a new era would formally proclaim that humankind is not just "passive observers" on Earth. Humans as individuals, collectivities, institutions, and nations have changed the entire climate system of the planet. The control of the river system by human-related forces under global hydropower development is now a major feature of the Anthropocene era. As extensive human megaprojects have altered Earth ecosystems, this research situates the Lower Mekong Basin in the Anthropocene and articulates emblematic conditions of multispecies dimensions of environmental crisis. It also highlights the socio-ecological disturbances in the Mekong multispecies lifeworld from the industrial infrastructural frontier expansion under China-backed projects. The LMB inhabitants rely on fish and riverine biodiversity for their protein intake. The decline of fish and the disappearance of local green Algae (Kai) in Chiang Khong in the northern part of Thailand is an obvious indicator of a transformed river that also alters the socioeconomics of the local women. According to Anna L. Tsing, an American professor of anthropology at the University of California, with the arrival of the ideal of the Anthropocene, there is an urgency to reconsider how human and nonhuman agency is inextricably intertwined. However, intra-relational impacts (Barad, 2007) of development projects on Mekong livelihood have not received sufficient recognition as research often assesses them separately. This research focuses on one significant aspect of the Anthropocene: "feral effects," defined as "unintended consequences of undesigned more-than-human responses to human infrastructures" (Tsing et al., 2020). It aims to provide an academic analysis to show the missing link in international development and cooperation toward sustainable development.

Environment and industrialization in Asia (2): Southeast Asia

ED3-09

Mangrove Aesthetics from the Inside: Time Traveling in and against the Landscape Change

Endira F. Julianda (et al.)

Floating Tech-Lab

This essay presents how inhabitants of a Northern Java estuary view and experience the aesthetics of mangroves surrounding them and how it could simultaneously take us on a journey to the past and the future. Aesthetics, in this regard, is less about the idea of beauty than the everyday melancholic relations of living in a damaged landscape. This specific concept of mangal aesthetics is based on an artistic research action project in which we document the oral accounts of estuary dwellers and their interaction with mangroves using the most intimate contemporary media: cell phones. We then present two opposite directions from this documentary: speculating about the past and remembering the future. The first direction refers to a speculative exercise of reconstructing a deep history of human migrations, changing relations with mangrove forests and the island. They open up a possibility of time traveling in and against the Anthropocene, as it also prompts us to imagine an anticipatory critique of the geological epoch.

Environment and industrialization in Asia (2): Southeast Asia

ED3-09

Spectral Storytelling

Novita Anggraini

Floating Tech-Lab

In this essay, we aim to explore the possibilities of prototyping chromatography as a tool to translate a substance into a different spectrum of colors and to make our “chemical regimes of living“ visible, perceptible, articulable, and thus discussable. The pilot site is Muaragembong, an estuary in the suburb of Jakarta, a site of confluence where the sea and the river meet and a mangrove forest and fishermen’s housing intersect. Together with local residents, we will use the technique of paper chromatography and test the following materials: (i) mangrove apple (pidada); (ii) river water around a toilet; and (iii) mudskippers meat. The results of this experiment serve as material for problematising the troubled relations between human settlements in the littoral zone, aquatic pollution and local food production/consumption, and the extent to which the pollutant concentration might have exceeded the threshold limit, albeit it is beyond the horizon of our perceptibility. We thus wish to develop 'spectral storytelling', a form of narration that we will craft from our engagement with residents who have been enduring and surrounded by aquatic pollution beyond the horizon of our bare eye perceptibility. By spectral, we refer to the chromatography experiment of testing different materials (e.g. mud and mudskipper) with the residents and the ghostly, haunting stories of coastal urbanities in the Anthropocene.

Human-Nature Interactions in Public Policy: Korean and Japanese Experiences in the Anthropocene

ED3-10

The Landscape Entanglement of Development and Preservation: The Case of Nodeul Island in the Han River

Yongjoo Han

Seoul National University

This presentation seeks to examine how public policy changes as ecological interest grows. Nodeul Island is an artificial island built by the Japanese Government-General of Korea in 1917 by piling stone walls on the sandy beach along the riverside to build the first footbridge in the Han River. For a while, the island, named Jungjido (中之島) by Japan, was considered an undeveloped space.

This study deals with the history from the purchase of Nodeul Island by the Seoul government in 2005 to the opening of Nodeul Island in 2019. Then mayor of Seoul, a former construction company president, began promoting the construction of an opera house at the end of his term in office and ahead of his presidential run. Several environmental groups and cultural and artistic organizations opposed it.There were three major reasons for opposition: the lack of democratic procedures, the question of economic feasibility, and the importance of preserving the ecosystem of Nodeul Island. The geological and geographical characteristics of being a small sand island raised concerns that it would cost a lot of money to build large buildings and maintain the surrounding traffic. The ecological status of Nodeul Island was emphasized through an endangered species Kaloula borealis.

The current landscape of Nodeul Island was created through three design competitions under three mayors of Seoul. An ecological park called 'Maengkkongi Forest (Forest of Kaloula borealis)' was built on the eastern side of the Hangang Bridge and upstream of the Han River, and a small-scale cultural complex was built on the western side. Even in the center of the city, the behavior of non-humans could be detected which confirms the hybridity created by humans and non-humans together.

Human-Nature Interactions in Public Policy: Korean and Japanese Experiences in the Anthropocene

ED3-10

Community Cat Activities in Japan: A Cognitive Reform Leading to Change in Human-Nature Relationship

Tatsuya Miyazoe
Kiyoka Kondo
Hiroki Oikawa
Yokohama National University

Nature provides many blessings to human society. Food, medicine, purification of sewage, and mitigation of climate change, to name a few. These are generally referred to as ecosystem services. However, nature does not only provide blessings to humans. Nature also provides various harmful effects, such as allergy (e.g., pollen allergy), natural disasters (e.g., typhoon), diseases (e.g., COVID19), and so forth. This can be called ecosystem dis-services.

The problem of stray cats is one such dis-service. Their meowing tends to be regarded as noise, and their feces and urine as sanitation problems. Cats might use gardens as a source of food and playground. And those circumstances have often led to disputes between local residents, particularly when some feed those cats and others complain.

How can we solve or, at least, mitigate such dis-services arising from stray cats? In recent years, community cat activities have been attracting attention in Japan as a way to manage the problem of stray cats. The community cat activity began in Isogo Ward of Yokohama City in 1999 in order to take care of cats in the community without owning them. Since then, similar activities have spread to other areas in Japan, and more than 250 local governments have now subsidized them.

In this presentation, we indicate that, by changing the perception of local residents, how the dis-service of the stray cat has been transformed into the ecosystem service of community cats. The decisive factor in reforming their perception was the way of thinking stray cat problem consists not only of animal welfare issues but also local living environment issues. The experience of community cat activitie in Japan suggests that the relationship between people and creatures is one that can be carefully and craftly institutionalized by making full use of the concept of ecosystem services.

Human-Nature Interactions in Public Policy: Korean and Japanese Experiences in the Anthropocene

ED3-10

Politics of Rice Paddy Knowledge: Survey Sciences and Human-Land Relations in Cheonsu Bay

Hanah Sung
KAIST

This presentation explores the human-land relations in South Korea focusing on policy-relevant survey sciences that represent and construct reclaimed paddy fields of Cheonsu Bay, a region of South Korea. Cheonsu Bay's reclaimed fields were created by the gigantic- scale reclamation projects in the 1980s along the western coastal lines in South Korea and have been cultivated mostly for rice production.

Drawing on STS works of literature on the performativity of knowledge in policy regimes, this research analyzes how two survey sciences identify two different human roles in paddy cultivation. First, in the agriculture policy sector, salinity measurement has been conducted to signal salt damage to the paddies. Measuring and regulating the salinity of rice fields could indicate that the paddy fields should be managed for rice production. However, bird census offers an alternate way to consider human and rice field relations. The Korean government commenced the first winter bird census in the early 1990s and discovered that the rice paddies of Cheonsu Bay served an invaluable habitat for wild birds. Following this finding, some parts of the Cheonsu Bay rice paddies have been reserved for wildlife to feed the migratory birds. The reclaimed rice fields in Cheonsu Bay are now faced with a crisis to disappear as they are viewed as an optimal place for solar power panels. Interestingly, the current vulnerability Cheonsu Bay paddies faced is based on salinity measurement, reflecting the devaluation of rice in the food market. The counter argument is mainly based on the other survey science -bird monitoring sciences, which regard the paddies as the land for birds as well as for farmers. By contrasting the two different survey sciences and their implications for human intervention in rice paddies, this presentation suggests that survey science occupies a significant place for exploring shifting human–land relations in South Korea.

Human-Nature Interactions in Public Policy: Korean and Japanese Experiences in the Anthropocene

ED3-10

Ecosystem Services in the Anthropocene: What Should We Add to the MA (Millennium Ecosystem Assessment) Diagram?

Daichi Kato
Kiyoka Kondo
Hiroki Oikawa

Yokohama National University

The concept of ecosystem services was introduced in the 1970s and became popular through the report of the United Nations Millennium Ecosystem Assessment that was conducted in the early 2000s. The report included a diagram of ecosystem services (hereafter referred to as the "MA diagram"), in which, by making full use of arrows, the delivery of those services to human society was shown to maintain our wellbeing.

In this presentation, we argue that the MA diagram does not adequately capture reality. Specifically, we point out that (1) nature also brings harm to humans (i.e., dis-services), (2) the benefits we receive from nature should not be excessive, (3) there are many cases where the increase in one service causes a decrease in the other, and (4) the diagram does not take into account the factors of time and distance. After pointing out these problems, we would like to propose what kind of arrows should be added to the diagram.

Furthermore, this presentation will argue that it is important not only to increase the number of types of arrows from nature to human society, but also to draw arrows in the opposite direction. In the era of the Anthropocene, nature is not only quiet and vulnerable. It works on humans aggressively. If we are to build a sustainable society under such circumstances, it is not enough to simply protect nature. It is necessary to tame nature which has been ever-changing and works on us more and more aggressively. Adding the arrows in the opposite direction in the MA diagram will be the first step to build a sustainable society.

Imperial forestry in the territorial expansion of Japan: Foresters, science, and management

ED3-11

Formation and development of tropical forestry in modern Japan

Koji Nakashima

Kanazawa University

This paper traces a history of formation and development of tropical forestry in modern Japan and attempts to elucidate relationships of scientific knowledge and politics over tropical forest. Tropical forestry in modern Japan was first launched in colonial Taiwan. Since the 1900s, the experimental research on the tropical resource became a significant matter of concern for the Government-General of Taiwan. The Forest Experiment Station had conducted various research on forest management methods in subtropical climates, plantation experiments of the tropical tree, and utilization of the tropical forest products during the 1910s-1940s. Along with the development of tropical forestry in Taiwan, tropical forestry had become gaining academic ground at Tokyo Imperial University in the 1940s: Tropical Forestry Research Institute (1940), Southern Resource Research Group (1941), Southern Science Research Group (1942), Tropical Arboricultural Research Institute (1943), Southern Natural Science Research Institute (1944) were rapidly established in the early 1940s. The establishment of these tropical forestry-related research facilities and groups was in line with the geopolitical strategy of the Japanese empire to promote its expansion southward. After Japan's defeat in the Asia-Pacific War, most tropical forestry related research organizations and groups in Tokyo Imperial University were dissolved or reorganized. It was not until the mid 1960s that tropical forestry became institutionalized again. In 1966, the Tropical Forestry Association mainly consisting of general trading companies and timber companies was established. It aimed at promoting development of tropical forestry and timber trade. Its official journal was "The Tropical Forestry" that mainly focused on tropical forestry development and forest products in the late 1960. This association was, however dissolved in 1984 in response to growing worldwide criticism of the disappearance of tropical forests. Although the journal itself has been published until 2007 by other organizations, the topics covered by the journal gradually shifted to ecological issues.

In conclusion, it can be said that the significance of tropical forestry in modern Japan has changed in close association with the political and economic context.

Imperial forestry in the territorial expansion of Japan: Foresters, science, and management

ED3-11

Quantitative aspects of forest management and timber trade in the Japanese Empire

Taro Takemoto

Tokyo University of Agriculture and Technology

This paper examined statistical trends in forest management and timber trade in the Japanese empire, focusing on the forest area, ownership, and conservation forests of different regions. In addition, the trends in demand for timber by region and the amount of timber imported into and exported out of the region were confirmed. The forest and wildland areas in Japan proper decreased gradually, while the forest area increased up to 1.5 million hectares in 1933. In Hokkaido, the forest and wildland areas remained stable, while in Taiwan, the forest area slowly decreased. The area of forest cover rate over 30% increased gradually in the Korean peninsula, but deforestation occurred obviously in Sakhalin. Ownership was divided into state, public, and private categories. In Japan proper, the private-owned forest area increased gradually, while the state-owned forest area was more than 4 million hectares. In Taiwan, the state-owned forest area rate was larger than Hokkaido, while public-owned forest rarely existed. In the Korean peninsula, the proportion of ownership was similar to that of Japan proper after 1930. In Sakhalin, all forest and wildland areas were owned by the state. Conservation forests were divided into water conservation, landslide prevention, landscape, and other categories. In Japan proper, water conservation area hardly changed, while the area of landslide prevention doubled. In Hokkaido, most conservation forests were for water conservation. In Taiwan, 10% of forest and wildland areas was designated as conservation forest eventually, while in the Korean peninsula, the rate remained 3%. Few conservation forests were designated in Sakhalin. In analyzing timber trade, it was found that the demand in Japan proper was more than double the total demand of all colonies. While the total export from the colonies to Japan exceeded imports, Hokkaido and Sakhalin had constant export surpluses, whereas Taiwan and Korea had constant import surpluses.

Imperial forestry in the territorial expansion of Japan: Foresters, science, and management

ED3-11

Between the exclusion and promotion of swidden agriculture in imperial Japan: How did scientific foresters rediscover indigenous agroforestry?

Taisaku Komeie

Kyoto University

In the development of scientific forestry in Japan, shifting cultivation and artificial fires were treated with ambivalence. This paper examines the relationship between the introduction of modern forestry science and indigenous forest use with special reference to swidden agriculture in early 20 th century Japan. Modern Japanese forestry scientists and bureaucrats condemned the “destruction” of land cover by shifting cultivation both in their home country and in colonial Taiwan and Korea in the late 19 th and early 20 th centuries. However, they also understood that indigenous private forestry was established as agroforestry in early modern Japan on the basis of swidden agriculture. They could not eliminate swidden burning because it was an essential part of forestry practices in mountainous regions. Seiroku Honda, one of the founders of modern forestry science in Japan, “rediscovered” swidden forestry in the early 20 th century, evaluating Japan’s existing private forestry and, simultaneously, criticizing shifting cultivation without tree plantation. This interest in swidden forestry led to the first national report on swidden agriculture in 1936, which divided shifting cultivation into two categories: with and without forestry. Although swidden agriculture was positioned as an effective way to promote forestry, swidden forestry did not spread throughout the Japanese empire as expected because of the initial costs for tree plantation, prolonged fallow period, and reduction in the amount of land available for cultivation. However, it gradually led to a critical shift in vegetation from diverse forests created by artificial disturbances into simple coniferous forests, thus simplifying livelihoods in mountainous areas.

Imperial forestry in the territorial expansion of Japan: Foresters, science, and management

ED3-11

Settler Colonialism of Foresters in Karafuto, a Subarctic Territory of the Japanese Empire

Taisho Nakayama

Kushiro Public University of Economics

Karafuto, the southern part of Sakhalin Island was a subarctic territory of the Japanese empire and one of the trophies of the Russo-Japanese war. Though Japanese people had advanced into the island since early modern period, they had developed forestry resources only along the coasts because their economic concern had been limited to fishery. Japanese launched their large-scale forestry development, especially for pulp industry and paper manufacturing, since around ten years after the possession. The whole of the forest of Karafuto was national forest and the colonial government provided the right of forestry development to companies such Ōji Seishi and the income had the important position of the finance of the colonial government. The management of the national forest was one of the important issues for each of the colonial elites including the educators, the journalists as well as the officers.“Settler colonialism” in the society of Karafuto has been already pointed out. The colonial elites attempted to justify the mission “kaitaku (agricultural development accomplished by Japanese migrants)” as the construction of the base creating Subarctic culture for more expansion of the nation into the northern area. Can we find a similar phenomenon in the foresters and their community in Karafuto? That is the research concern of this paper. As mentioned above, the forestry development had an important financial role, therefore, a dilemma, development or protection, emerged because a rapid forestry development would result in an exhaustion of the resource and it was clear that it meant the failure of the colonial government, on the other hand, an extreme restriction of forestry development would result in the failure the colonial economy. What kind of opinions and disciplines did they have? Did the settler colonialism motivate them? This paper discusses these research questions mainly with their statements in their academic papers and their articles on the public media such as newspapers and magazines publishes in Karafuto.

Variegated State-Nature Relationships in East-Asia

ED3-12

Bridging Over the Troubled Waters: Geopolitics of Transnational Cooperation in East Asian Oceanography, 1985-2005

Sungeun Kim

KAIST

How does it become possible to study a sea filled with intense territorial conflicts? This presentation explores the challenges of producing transboundary maritime knowledge through the case study on the East Sea oceanography. The East Sea is a marginal sea surrounded by four historically conflicted nations: South Korea, North Korea, Russia, and Japan. Despite vast oceanographic interests in this region, a scientific survey of the East Sea has been practically impossible due to prolonged geopolitical tensions throughout the late 20th century. In the 1990s, however, the collapse of the Soviet Union created a small window of opportunity for the international oceanographic community to attempt a border-crossing science on this region. This paper follows an international team of Korean, Japanese, Russian, and US scientists who sailed across the oceanic boundaries of the East Sea. It examines the material, political, and rhetorical tactics that the team employed to make their cruise feasible. The international team designed their cruise routes in a way that they could circumvent the complex territorial conflicts of the East Sea. To gain financial support from governments, the team aligned their survey with various national motives to study the basin, such as nuclear waste dumping incidents. At the same time, the team actively framed their research as an apolitical science to understand the impact of climate change on oceans. Analyzing the challenges of international cooperation in troubled waters, this presentation shows how geopolitical conflicts critically shaped the scientific practice and knowledge of oceanic spaces. It further suggests that investigating transnational scientific projects can be a novel method to narrate the changing geopolitics in conflicted regions.

Variegated State-Nature Relationships in East-Asia

ED3-12

The Intertwined Politics of 'Development' and the 'Environment' in Korea during the 1970s

Jihye Yang

Northeast Asian History Foundation

Containers loaded with hazardous waste are sailing to underdeveloped countries even today. Historically, international trade in pollution has been used not only as a means for developed countries to shift the costs of their development to underdeveloped countries but also as a means for underdeveloped countries to quickly access financial resources for development even at the expense of the environment. Korea was not an exception. During the period of rapid economic growth since the 1960s, Korea imported many polluting industrial facilities from abroad, resulting in the generation of huge amounts of hazardous waste. While the problems of environmental degradation such as these were an integral part of Korea's development process, they have received only scant attention in the official history of the country's economic development, often being dismissed as peripheral issues. The present paper aims to go beyond this tendency by examining the intertwined politics of 'development' and the 'environment' that underlay the disputes caused by the importation of polluting industries from Japan in the 1970s.

Variegated State-Nature Relationships in East-Asia

ED3-12

Putting the more-than-human state in its place

Jihoon Park

Chung-Ang University

Jin-Tae Hwang

Korea Institute for National Unification

The more-than-human state is a concept that criticizes the anthropocentrism inherent in political sociologist Bob Jessop's strategic-relational state theory (SRST) while paying attention to the possibility of modifying the human-centric SRST from the perspective of more-than-human geographies. However, in order to establish an SRST that more effectively responds to the more-than-human turn, we would like to remind you that it is necessary to discuss the strategic-relational approach (SRA) as a social theory that is the basis of Jessop's state theory. This is because the SRA primarily deals with social structure, agency, and social change, while the SRST is a political theory based on such a social theory. Previous studies focusing on the state bypassed social structure and agency discussed in the SRA. Our presentation seeks to deepen the understanding of the social in the more-than-human state by examining the SRA from blood transfusions such as more-than-human geographies, critical realism, new materialism, etc.

Human and Nonhuman Animals

ED3-13

The Big Cat in the Western Regions: A Restudy of the Species and Extinction Causes of Xinjiang Tiger in Historical Era

Hao Zheng

Minzu University / UC Berkeley

This paper will re-examines the species and extinction causes of the Xinjiang tiger in historical era. Three types of documents on the Xinjiang tiger show that there are tigers in the history of Xinjiang, but most of the descriptions are too brief and lacking in detail, making it difficult to distinguish between species. The Xinjiang tiger is not a distinct subspecies. Due to the wide range of variation in body length, fur color and stripe pattern, the morphological characteristics recorded in documents cannot be used as evidence for subspecies identification. The difference in the shape of the tiger should be the change in character to adapt to the local ecological environment in the north and south of Xinjiang. Palaeontological studies show that the ancient Chinese tiger and leopard are more closely related. From the perspective of the origin and spread of the tiger, and the ancient geographical changes in the environment, the Xinjiang tiger and the Caspian tiger have a closer relationship. The name of the tiger in Xiyu Tuzhi includes “巴尔” (Dzungaria) and “约勒巴尔斯” (Kashgaria), but the former comes from Mongolian and the latter comes from Uighur, which is the name of the same species in different languages, and does not show the difference of tiger in the north and south. The main reason for the extinction of the Xinjiang tiger is thought to be the radical environmental changes caused by human activities. The Lop people’s view that ants kill tigers is a kind of historical memory in civil society, and is not one of the reasons for the extinction of the Xinjiang tiger. The prevalence of it reflects Lop people’s views on environmental change, and also reflects the relationship between humans and animals in the Anthropocene.

Human and Nonhuman Animals

ED3-13

Big Cats in Korea: A journey through time and culture

Jeong Eun Lim

National Institute of Ecology

The coexistence of big cats and humans in Korea is a fascinating journey through time and culture, particularly in the case of tigers. Initially, during the prehistoric age (B.C. 700,000 ~ B.C. 2333), tigers held a dominant position over humans, and humans lacked the means to hunt them effectively. However, as time passed, humans began worshipping and actively hunting tigers. Over several thousand years, the relationship between humans and tigers became more balanced until the establishment of the Chosun dynasty (1392-1910), when the nation systematically eradicated tigers, leading to their extirpation from the Korean peninsula by the 20th century. Despite their disappearance, the spirit of the tiger continues to affect the lives of 21st century Koreans. The possibility of tigers returning to the Korean peninsula within the next 100 years raises questions about the potential for a renewed relationship between humans and these majestic creatures.

Human and Nonhuman Animals

ED3-13

Elegy for Elephants: The end of the imperial elephant performances and the change of the human-elephant relationship in the late Qing Dynasty

Pei Xiaoshan

Nankai University

Since the 19th century, with the sharp decrease in the number of imperial elephants, the imperial elephant performances had been impacted, but the court still strived to maintain its operation. It was not until around 20 years after Guangxu, when the elephant stable was empty, that the institution was wholly terminated. The disappearance of the imperial elephant performance institutions is related to the sudden drop in the number of domestic elephants, which is embodied in the meager birth rate, extremely high mortality rate, and low replenishment frequency of trained elephants. With the demise of the ceremonial system, the relationship between people and elephants has changed in people's lives, concepts, and cognition. Specifically, since the late Qing Dynasty, with the introduction of private elephant purchases and circuses, elephant taming is no longer mysterious; the interaction between elephant taming and people has surpassed the ritual system and has become increasingly close. With the deepening of the relationship between elephant taming and people, the cultural symbols that people give to taming elephants have also changed: on the one hand, the image of national prosperity symbolized by elephant taming is deepening; Civilian image features. It can be seen that the construction of animal images is closely related to the degree of interaction between humans and animals.

Human and Nonhuman Animals

ED3-13

Increase in Exports of Otter Skin and Its Ecological Environmental Consequences in the Joseon Dynasty

Misung Kim

Yonsei University

The otter is designated as an endangered species both on the Korean Peninsula and globally. The causes of extinction are river pollution, dam construction, and poaching that occurred after industrialization. However, this article will talk about the possibility that the crisis of the otter species on the Korean Peninsula occurred even before modern industrialization.

After the relationship between Joseon and Qing was established, a massive amount of animal skins were required, and otter skins accounted for a large portion of them. For example, when the envoy of the Qing Dynasty came to Joseon in 1647, he took 1,363 sheets of otter skins. This amount was added to the regular tribute that Joseon envoys gave to the Qing Dynasty and this demand persisted for a long time.

As the demand for otter skins increased in the Qing, the number of traffickers also increased. Although there was an official organization purveying otter skin in Joseon, unofficial merchants such as Kaeseong merchants and Ui-ju merchants started to preoccupy the products ahead of the official route. They colluded with otter hunters and Beijing trade brokers to monopolize trade.

As a result of this increase in otter skin exports, it seems that the population and habitat of otters on the Korean Peninsula also changed. Although the geography book of the early part of Joseon recorded that the otters inhabited all over the country, the official otter skin purveyors in the late 18th century said that otters could only be obtained in the vicinity of the East Coast. In the early 19th century, otters were reported to be 'extinct' in Jeju Island.

In previous studies, Joseon merchants' otter skin trade was only mentioned as an example of 'the growth of monopoly capital power', but it is also necessary to look at it as a problem of overhunting of certain animal species from the perspective of ecological and environmental history.

Water Control in Anthropocene East Asia: (Post) Colonial River Engineering and its Multiple Impacts

ED3-14

Witnessing an Ecological Debacle: Sun Moon Lake Hydroelectric Plant and Colonial Environmental Management

Lisa Yoshikawa

Hobart and William Smith Colleges

Taiwan's Sun Moon Lake (Riyuetan) hydroelectric plant, at its 1934 completion, was the largest of its kind in Asia and could supply all of colonial Taiwan's electricity demands. Due to this importance to the island's energy needs, and the complex construction efforts that took fifteen years, many studies exist that examine the relationship between this plant and humans. Less has been discussed about how the building and running of this hydroelectric plant also impacted non-human animals, as concerned contemporary zoologists followed the changes to the environment in and surrounding Riyuetan. The plant's construction process began in 1919, almost exactly when scientists in Taiwan started to lobby for animal and plant protection and conservation amidst increasing environmental destruction caused by Japanese resource extraction. The conservation movement dragged on as well precisely due to the contradiction with colonial goals and culminated in the passage of a preservation law in 1930 and the first two animal protection designations made in 1933. The potential harm that the hydroelectric plant would cause in Riyuetan region was hence not lost on Japanese scientists, who tried at the very least to document the impacts through limnological and other surveys. My paper looks at this interwar process to shed light on colonial scientists' roles in environmental management.

Water Control in Anthropocene East Asia: (Post) Colonial River Engineering and its Multiple Impacts

ED3-14

The Yongding River Water Conservancy Projects in the Republic of China

Miwa Shimada

Keio University

This study examines the Yongding River water conservancy projects in the Republic of China. I particularly focus on the construction of the Guangting Reservoir in North China, during the Republic of China period, to clarify Sino-Japanese relations on Chinese water conservancy projects and the influence of the global knowledge network.
The Yongding River originates in Shanxi Province and Inner Mongolia, passing through Beijing, China's capital, and Tianjin, before reaching the Bohai Sea. Water conservancy projects in the Yongding River basin enable the examination of the relationship between central and local governments, international relations surrounding the Tianjin concession, and the construction of Beijing. The introduction of modern flood control technology for the Yongding River was discussed during the Beijing government period. In this period, Japan became involved because of its interest in water transportation for its military advance into China.
The North China Water Conservancy Committee was established during the Nanjing Nationalist Government period and planned the construction of the Guangting Reservoir on the upper reaches of the Yongding River. Many of the Chinese engineers on this committee had studied civil engineering in Europe and the United States, showing the formation of a global knowledge network. However, after the outbreak of the Manchurian Incident, the Guangting Reservoir construction continued with the technical cooperation of the League of Nations due to the conflict between Japan and China. Japan's expansion into North China also affected China's international relations regarding dam construction, and international involvement in China's water conservancy projects was significant.

Water Control in Anthropocene East Asia: (Post) Colonial River Engineering and its Multiple Impacts

ED3-14

Reshaping the Landscape: The Construction and Impact of the Shihmen Reservoir

Ya-wen Ku

Academia Sinica

The Shihmen Reservoir is perhaps the most well-known reservoir in Taiwan. The idea of constructing a dam in Shihmen originated during the Japanese colonial period in the 1900s, but its basic design and construction did not begin until after the war, in 1955, when the Republic of China government obtained funding and technical assistance from the United States. During the construction period, the Shihmen Reservoir was listed as a must-visit site for foreign dignitaries visiting Taiwan, as it was seen as a symbol of demonstrating the country's power and prosperity. When discussing the reasons for its construction, previous studies focus on the benefits of the Reservoir for irrigation and power generation from a local perspective. In fact, if taking a broader view, the Shihmen Reservoir was once viewed as a small-scale replica of the YVA (Yangtze Valley Authority, a "TVA for the Yangtze Valley") project in Taiwan Province in the early post-war period. After the government of the Republic of China moved to Taiwan in 1949, it became a substitute for the YVA project in "Free China", and therefore was imbued with high political significance.

This article will use newly unearthed archives of the Shihmen Reservoir to re- examine the neglected water history, and explore how this important construction project, driven by the highest principle of "pursuing efficiency" led to the rapid change of the landscape by facilitating cross-settlement migration of people.

Water Control in Anthropocene East Asia: (Post) Colonial River Engineering and its Multiple Impacts

ED3-14

The Inundated City: Dam-Fetishism and the Failure of Flood Control in Seoul during the 1960s and Thereafter

Seohyun Park

National University of Singapore

The flooding of Seoul in the summer of 2022 shocked the public as it paralyzed Gangnam, the nation's wealthiest district. While dominant narratives blamed record-breaking rainfall, the low-lying terrain, or the underprepared mayor for the deadly flood, this paper sheds light on the long-standing failure of Seoul's drainage system. Paying close attention to the postwar expansion of Seoul, I argue that the overreliance on large dams in flood control made city planners implement land development without well-designed flood prevention measures. From the late 1960s alongside rapid population growth, the government developed lowland riverside areas of Seoul to secure more residential areas. National developmentalists believed that building large dams on the upstream Han River—the nation's iconic river, which passes through Seoul—would prevent the city from flooding. This idea was epitomized by the establishment of the Han River Flood Control Office in 1974. Having technical assistance from Japan, the control office viewed flooding not merely as a local incident but as a matter of manipulating the water level of the entire Han River. Within this perspective, containing water with large artificial reservoirs in the upstream river constituted the major strategy of flood control for downstream Seoul. This technical hubris led to the promotion of riverside reclamation plans, including Yeouido, Jamsil, and Gangnam development projects. Yet, chronic deluges, such as the great floods in 1984, demonstrated that damming failed to save the city from floods, exposing larger sections of the city to the risk of disasters without proper measures in place.

Environment and industrialization in Asia (3): South Asia

ED3-16

The Shaping of Crisis for Developing Home in the Eastern Himalayas

Ru-Yu Lin

University of Sussex

Mountain areas are pron-disasters such as landslides, flash floods and heavy snowfall, from the view of sedentary, mainly agriculture-based, natural resource-dependent agents. Arunachal Pradesh is a Himalayan borderland currently under the control of India, the militarisation and periodic border conflicts greatly limit the ancient trade routes with the trans-Himalayan area. Most development funds of this place go to road and urbanisation; yet such development, along with the booming interest in hydro energy and carbon sink, do not holistically enhance the safety and integrity of the mountain eco-society. As global warming has significantly brought a warmer winter and less snow in the Eastern Himalayas, the water crisis is a looming issue that contests the long-term dwelling of the local indigenous communities. However, it is rather rare to perceive the problematization including the local point of view and integrate their understanding and adaptation logic to the environmental change for making development plans. Oral history, folklore, and narratives become useful in this regard for they reflect the human-nature relationship at that place, and people's senses about danger and safety. This article thus takes the interest in the definition of crisis from a pastoralist, mobile, scattered yet well-connected hill community, the Monpa people, who live between China and India. Waving the folk stories, testimonies of interacting with nature spirits, and personal views about extractions, the Tawang Monpa's vernaculars and narratives show how the idea of the environmental crisis goes through a re-identification of the power relations, Self, and home, which ultimately affects their responses and resilience towards hazards. The confluence may also inform the need to reverse a plain-over-hill, nationality-over-border policy thinking, the inner politics about sistainability.

Environment and industrialization in Asia (3): South Asia

ED3-16

Anthropocene's Carbon

Jahnavi Phalkey

Science Gallery Bengaluru

Carbon is essential to life and humanity, argues the historian and philosopher of science, Bernadette Bensaud-Vincent. Carbon fundamental to life on earth and yet today occupies an overwhelmingly negative space in the debate on climate change. In my presentation, I will examine the outcomes of projects conducted as part of the research festival on Carbon at Science Gallery Bengaluru to explore one question: where is carbon in the day-to-day life of the city, and what do efforts to surface this facet of the element contribute to the understanding of climate change? I am teaching a research and practice based course on Tracing Carbon to design students where we will recover the histories of carbon based craft and livelihoods - from smithery to precision industrial work – in Bengaluru. As part of the course, we will document the histories of the craft but also record oral histories with its practitioners. My presentation will draw upon these findings and their implications for the larger question suggested above.

Environment and industrialization in Asia (3): South Asia

ED3-16

Floristic dynamics and Vegetational analysis of plant community in temple city Bhubaneswar

Sanjeeb Kumar Das

Regional Institute of Education (NCERT)

Globalization and Industrialization have brought rapid urbanization and fast growth of cities that are considered as engines of economic growth. Bhubaneswar, the capital of Odisha is widely known as the temple city of the East. Recently, it has been declared as the smart city by government of India. The present study is to analysis vegetation in Bhubaneswar in terms of qualitative disappearance/ appearance of the species and quantitative analysis of vegetation patches. With exhaustic analysis of vegetation, a total of 442 plant species were recorded sessonally in both Central and Transition Zones belong to 304 genera and 97 families. This collection embraces as many as 138 herbs, 36 shrubs, 100 trees, 35 climbers, 93 grasses, 16 hydrophytes, 2 epiphytes, 3 parasites, 2 bryobhytes and 18 pteridophytes. Among families Fabaceae, Asteraceae and Euphorbiaceae are dominant fami;y among dicotyledons where as in Monocotyledons, Poaceae and Cyperaceae were dominant families. From the study area 10 species were found to be Vulnerable, endangered and threatened and 60 plant species were identified as invasive species. 110 plants were recorded as medicinal plants. vegetation data's were analysed by their synthetic characters like abundance(A), frequency(F), Density(D), Relative frequency(RF), Relative Density(RD), Relative Dominance(RnD), Basal Area, Important value Index(IVI),Family Importance Value(FIV). Different indices like Shannon- Weiner Index, Concentration of Dominance (CD), Species Richness (SR) and Species Evenness (SR) were calculated. In the Central Zone Delonix regia(Boj. ex.Hook) has the highest no. of population where as in Mangifera indica L. had the highest population in Transition zone. A total no. of 5 new species were recorded in the Bhubaneswar city which were neither recorded by previous workers.

Key Words: Floristic dynamics, Vegetation analysis, Diversity Indices,

Environment and industrialization in Asia (3): South Asia

ED3-16

State, business, and the local environment: the history of a post-1949 paper mill in China

Juanjuan Peng

Georgia Southern University

In 1950 when Hanyang Paper Mill was planned as one of the first large-scale industrial projects of the young People's Republic of China, the policymakers, with neither knowledge nor concern about environmental pollution related to paper production, chose a lot lies five kilometers upstream from the metropolitan Wuhan along the Yangtze River. Ever since the paper mill started its operation, its wastewater continuously flowed into the river, posting a threat to the ecological systems of both the local fishing villages and the large metropolitan area of Wuhan. In the 1970s, the deteriorating water quality and the rising environmental awareness urged the Chinese government to regulate the water waste of this important state-owned enterprise that ranked top five among Wuhan factories in both the revenue income it generated and the pollution it created. The introduction of environmental protection policies, together with a changing economic environment following China's economic reform, had later put the business on the verge of bankruptcy by the 1990s. In 1997, the enterprise was privatized, becoming a member factory of Chenming Group. The business's rapid growth after the privatization improved its financial health whereas worsened its pollution problem. Eventually, in 2012, the new private owner was forced to close the factory due to the government's further environmental protection regulations.

By tracing the history of this paper factory, the project will unveil how the business growth of an industrial firm has impacted its local ecological system, with a particular focus on the economic, and social, environmental consequences of the water pollution it created. The paper will also reveal how the worsening water quality and subsequent environmental degradation triggered the protests of local people and the regulation of local government, which in turn led to the decline of the business. In short, the project blends environmental and business history and hopes to understand the development of an industrial firm in its ecological system.

Human and Forest

ED3-18

Sustainable forest management: Biodiversity conservation by sacred groves, sacred landscape & sacred plant species & Traditional Ecological knowledge in India

Baisakhi Bandyopadhyay

The Asiatic Society Kolkata India

The association of people with forests began in India at a very early period. Some of the pre-Aryan communities had their hamlets built inside the forests. All of them used to depend on forests and plants for their sustenance and relief in diseases 1)Forest management and conservation and use of plant .Muslim invaders were all keen hunters and needed patches of forests; hence they ensured that these forests were protected, the trees in these areas were not felled, and the forest ecology was not tampered with. The Mughals showed interest in development of gardens, though the history of botanic gardens in India dates back as- far as 1000-800 BC. As mentioned in the Charaka Samhita—the Materia Medica of ancient India—medicinal herbs were cultivated in tapovans (medicinal gardens) near the ashrams of rishi-munis (sages). 2)Groves dedicated to Gods: The practice of dedicating Groves to deities is common in India. while they provide a haven for birds and animals, they also preserve many species of plants, which would otherwise have become extinct. We are nature worshippers par excellence, and extend protection to more forms of living nature than any other culture in the world. Not content with caring for individual species, we also have our sacred ponds and sacred groves, ancient nature sanctuaries where all forms of living creatures are afforded protection through the grace of any one deity..3)Sacred Fruits offered to Gods for their nutritive values and History and diversity of Fruit Crops in India: The ancient Indian civilization was primarily dependent upon and intimately related with forests and flora. In several Sanskrit writings like, epics, Puranas, scriptures, (like “Vrikshayurveda”, “Upavana Vinoda”, “Brihat Samhita” etc.) the science of plant life has been described and three indigenous fruits viz. mango, banana and jackfruit extensively mentioned.

Human and Forest

ED3-18

Forests and Frontiers: A Study of Forestry Rights in the Yalu River Basin on the Eve of the Russo-Japanese War

Wu Qifang

Northeast Normal University

During the Qing dynasty, northeastern China was the most wooded region in the world. The Yalu River basin was even more forested and richly stocked. Since the implementation of the Russian policy of expansion in the Far East, Russia has repeatedly investigated the forest resources of the Yalu River basin in the name of building roads, planting expeditions and establishing "barriers", with the intention of using "Manchuria" as the basic "sphere of influence" and the Yalu River basin as the basic "sphere of influence". "The Yalu River basin was used as a buffer zone and the Yalu River Forestry Rights Company as a base to prevent Japan from entering Manchuria, thus conflicting with Japanese interests. As a buffer zone, the forested borderlands attracted both Japanese and Russian forces to develop forestry on both sides of the Yalu River basin. In the three subsequent Japanese-Russian negotiations centred on the " Manchu-Korean Exchange Theory", the issue of forestry rights in the Yalu River became an important means of fomenting war sentiment by the Japanese war masters. The outbreak of the war was caused by multiple factors, but the Yalu River was one of the major contributing factors.

Relationship between scientific and public awareness of environment

ED3-19

Science, technology and politics: the birth of an ecological awareness in Italy

Federico Paolini

Università di Macerata

The aim of this paper is to present the results of a national research project (funded by the Ministry of Universities and Research) aimed at investigating how the interactions between science, technology and politics have influenced the affirmation of a growing environmental awareness in Italian institutions and public opinion. The main focus of the analysis is the role of "experts" - in particular of some scientists who held leading positions within scientific research institutions - in the development of environmental policies and the dynamics of their relations with Italian governments. The role of scientists began to be relevant in the late 1950s when a Consultative Commission on Ecology created within the National Research Council was appointed to provide continuous advice used by the institutions involved in initiating a discussion on ecological issues. The debate on the ecological problems of development has taken on a very broad dimension since the publication of the report 'Limits to Growth' (1972), widely discussed also in Italy. The new element is the presence in the public space of organized environmentalism that contributes to the visibility of environmental issues. Technology is becoming increasingly important in the debate, both on the various pollution issues (the Seveso industrial accident in 1976) and on nuclear energy. In the second half of the 1980s the role of scientists and experts reached its peak: In 1986, the Ministry of the Environment was created, recognising a political dimension to environmental problems. In 1987, some scientists and 'experts' at the heart of the public space were nominated for the parliamentary elections of the in a context that saw for the first time the presence of a green party. The research tries to reflect on some issues: the role of scientists, who are not neutral subjects but bearers of political and economic interests; the role of technology experts working within state-owned companies that were much more influential than scientists. The emergence of environmental awareness seems to follow much more concrete interests than the results of research produced by scientists.

Relationship between scientific and public awareness of environment

ED3-19

Technology, Territoriality and environment development of mountain agriculture in Taiwan, 1960’s-1980’s

ChiaHsing Ho (James Hou)

National Chung Hsing University

This proposal will discuss the relationship between technology introduction, territorial development and environment management of mountain agriculture in Taiwan during 1960’s-1980’s by investigating the construction of the Central Cross-Island Highway and the establishment of the three state-owned farms: Fushoushan Farm(1957), Qingjing Farm(1961) and Wuling Farm(1963). At the beginning, three mountain farms grew mostly vegetables, about 1965, they had successfully imported deciduous fruit seedlings and introduced cultivating technology to become a fruit planting demonstration farm. Thereafter those farms became a major production center for temperate fruits and vegetables, these agricultural products not only supplied to the domestic market, but also exported, earning profits for the government and Improved use of the high mountain territory. The development of mountain agriculture was deeply influenced by the advancement of agricultural science and technology. In order to change soil quality, stimulate growth and prevent pests and diseases, farmers were extensive use of fertilizers and pesticides in mountainous areas for growing fruits and vegetables. Not only government officials encouraged farmers to use more pesticides and fertilizers in those farms, agricultural experts also believed that using these technologies in mountainous areas can increase production and bring higher profits. However, the chemical products in mountain agriculture had caused serious water pollution in Dajia River (One of the major rivers in central Taiwan) since 1980s, and the over-exploited hillside has also attracted social attention. The environmental impact caused by the development of mountain farms has gradually become the focus of discussions in various circles of society since 1980s, and it has also prompted the transformation of the farms into tourist attractions. Through this study of the mountain agriculture in Taiwan will present the focus of people's concern shifts from the economy to the environment, from technological progress and environmental utilization to public governance and sustainable management.

Relationship between scientific and public awareness of environment

ED3-19

The Invisible Crisis: Electromagnetic Hypersensitivity (EHS) of public health perspective

Wan-Chun Cheng

Max-Planck-Gesellschaft (MPG)

This proposal discusses how electromagnetic fields (EMFs) affect health problems and the environment, especially concerning people with electromagnetic hypersensitivity (EHS). The effect of electromagnetic fields on human health and the environment has been controversial since the origins of modern epidemiology. Over 25 years ago, Mitchell and Cambrosio mentioned the phenomenon: “Some prominent scientists regard the EMF question as a very serious issue; some others regard it as ‘an imaginary problem’, on a par with believing in black magic or UFOs.” On the one hand, scientists believe that EMF exposure may contribute to health problems. Many experts, scientists, and doctors warn us that EMF exposure and 5G technology will harm human beings and the ecological environment. Because EMF is invisible or hardly perceptible, most people think that this fear is not justified, or that it only poses a low risk to human health. However, millions of people with electromagnetic hypersensitivity (EHS) could prove that EMFs are indeed hurtful to human health, both physically and mentally. Tragically, when society faces important truths which are inconvenient (especially to vested interests) and require courageous action and leadership, there is a great tendency to denial on many levels, and a great temptation to “shoot the messenger” by pretending that the issue is either psychological, a placebo or nocebo response, a media-driven psychosis, by discrediting the patients’ honest stories, or by threatening legal or other action. In fact, EMF pollution and the development of 5G network technology are afflicting millions of EHS people. In the face of the government, industry, vested interests, a large number of Internet addicts, and experts who believe in [scientism] and are naive and optimistic about EMF pollution and 5G technology, they are enthusiastically and continuously promoting 5G policies without any security protection. How should EHS people live and work in peace?

Relationship between scientific and public awareness of environment

ED3-19

Knowing “nature” in late 19th century East Asia

Michael Shiyung Liu

University of Pittsburgh

The translation of “nature” varied when the Chinese and Japanese attempted to translated the new word in western linguistic contexts. For a long period, nature in western language was synonymous to “surrounding” or “natural neighborhood” in Japanese and Chinese context. However, around early 20th century, the translation of “Shizen” has been officially recognized by Japanese government and was eventually copied by Chinese society through the introduction of Chinese abroad students in Japan. This paper will discuss how the word “nature” was first introduced to East Asian societies and how early translators understand the complicated meanings of this word from their traditional linguistic heritages. The study will possibly reveal how different western and eastern cultures “gazes” the natural environment and the artificial neighborhood, the later constently penetrated and used natural environment. By studying the conceptual history of translating nature in Japanese and Chinese societies, the author hopes to further explore some contemporary issues of utilizing nature to meet the criteria of ecological protection. This last part of discussion will touch issues like governmental policies, socio-economic conflicts, and norms of popular ecological civilization.

Human and Wildlife

ED3-20

"Little Cattle with Wings": Industrialization of Farming and Cooking of Ducks in Modern South Korea

Tae-Ho Kim

Jeonbuk National University

This manuscript examines the history of modern duck farming in South Korea and seeks for a historical explanation of why duck recipes in South Korea have not been as diversified as in other Asian countries.

Various kinds of ducks have been native in the Korean Peninsula, and Koreans have a long history of taming and raising ducks in households. However, it was not until the mid-1980s that duck farming was industrialized, and the supply of duck meat was increased enough to push the producers to seek for new recipes to popularize it. One obstacle against the industrialized duck farming was that ducks always needed water to paddle around, and thus cannot be contained in a cage like chickens. Ducks were raised in a small scale in rural households and consumed for special purpose (specifically invigorating in summer) rather than for everyday meals. In the mid-1980s, however, new stains of ducks were imported from Europe (the UK and France). The breeders tried to commercialize these new strains under the product name "mountain ducks [san-ori]" to highlight that the ducks did not need a pond and could be raised in a dry cage.

Still, another problem was that cooking recipes for duck were not diversified enough to promote it for everyday meals. Traditionally, most of duck meat was consumed in the form of stew [tang] as an invigorating food, but its demand was concentrated in summer. Juwon Farm, one of the breeders, advertised their new ducks as "Little Cattle with Wings," and sold duck meat sliced for on-table barbecue, to convince consumers that duck meat could be enjoyed just like beef or pork.

As South Korean economy grew much faster than expectation, however, consumer's demand rapidly shifted toward beef and pork, and duck meat could only occupy a mediocre position. Today, the majority of duck meat is processed into "smoked slices," which have never been a part of Korean cuisine before. This article traces back this history, from rather the perspectives of history of technology than that of culinary history.

Human and Wildlife

ED3-20

Struggles in a shell: socio-ecological transformation of freshwater pearl cultivation in Lake Biwa, Japan

Hsin-Hua Chiang

University of Tokyo

Mussel farming has been a widely commercialized practice for producing foods and gems. On the other hand, its benefits in nutrient mitigation also attract attention in the fields of water environment management. Taking the freshwater pearl mussel cultivation in Japan as an example, the study aims to reveal the intertwining dynamics between market, government, society, and multispecies entanglements mediated by the policies, practices, and narratives. The study applies documental analysis to establish a historical overview of the socio-ecological transformation. The data is collected from governmental reports, newspaper articles, and other materials provided by the public or private sectors. Resembling the technique of implanting tissues into a host mussel to produce pearls, the research indicates the diverse, interweaving, and sometimes competing discourses in the practices. Japan is one of the oldest countries to develop the techniques of freshwater pearl cultivation. In Lake Biwa, the local government, collaborating with a pearl business, launched its first attempt at growing freshwater pearls using the native pearly mussels since the early 20th century. The production has once succeeded in the global market. However, due to the rapid growth of pearl farming in China, as well as unintended impacts of water pollution, disasters, and crossbreeding, domestic freshwater pearl almost lost people's recognition. In recent years, governments start to adopt pearl farming in lakes and rivers as a tool for water quality improvement. Therefore, bringing back freshwater pearl cultivation becomes an alternative to revitalizing the local industry. Meanwhile, the efforts still face problems with socio-ecological struggles and uncertainties, particularly between the species, production, and the environment. Through a comprehensive historical analysis of freshwater pearl cultivation, the research portrays the untold, complicated struggles inside the shell.

Human and Wildlife

ED3-20

Born-in-America in the Kingdom of Plants: Tobacco and the Psychoactive Revolution in Early Modern Korea

Sang-ho Ro

Ewha Womans University

The arrival of new mind-altering substances from the Americas to East Asia was as revolutionary as that of many of the new crops that also arrived in the sixteenth and seventeenth centuries. Tobacco plants (Nicotiana tabacum) found their new habitat in the Korean Peninsula after the Hideyoshi Invasions of 1592–97, while smoking tobacco leaves dramatically transformed how people consumed vegetation. As a cash crop, Nicotiana tabacum received a warm welcome from farmers and disrupted the old substance-oriented agriculture. This paper analyses how tobacco created a new popular demand for plant life through pleasure and addiction. Tobacco–popularly known as "Spiritual Weeds from the South" (Namryŏngch'o 南靈草)–caused a variety of responses in elite and popular societies. Therefore, smoking tobacco can give us a rare opportunity to better understand the contested relations between humans and plants. Chosŏn Korea did not yet open trade with European trading empires, but it could not stay astray from the psychoactive revolution in the age of globalization. This paper will revisit tobacco history in Korea with a question: How did one plant transform the kingdom of plants in early modern Korea and East Asia?

Human and Wildlife

ED3-20

The post-disaster transformation of interspecies dependencies: From talkative buffalo to desemiotised cows on the slope of Mt. Merapi, Indonesia

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Universitas Islam Indonesia

Riin Magnus

University of Tartu

This paper suggests how natural disasters may serve as the final propulsion for changes already taking place within a society. While focusing on shifts in human–non-human animal relations, this text also discusses their embedding in broader transformations of human–environment relations and the underlying economic and cultural change. It carves out interspecific dependencies that constitute an agro-ecosystem and follows their demise as the agricultural species are switched to market economic production in a post-disaster context. It thereby suggests that the human-facilitated semiotic fitting of the agricultural species is replaced by human-imposed fitting, where the species composition is largely determined by the market prices. At the same time, the paper draws attention to the cessation and transformation of human–non-human communication as a marker, but also an experiential corollary, of modernization and market economy. As a case study, it focuses on the 2010 Mt. Merapi eruption in Indonesia and its aftermath in the villages on its slope. The study analyses how the shift from using plough buffalo to utilizing market economic cattle farming reflects not just an economic, but also an affective and semiotic change stemming from a shift in the intensity and kind of human–animal relations.

Keywords: human–non-human animal relations; post-disaster social change; modernization; political ecology; anthropological zoosemiotics; semiotic fitting.

ED3-21

The Wrtting of Landscape in Hexi Corridor from the Perspective of the Aggregation Reclamation: Mainly Based on the Period of Qing Dynasty

Chen Zhiwei, Zhang Jingping

Lanzhou University

Landscape, refers to the scene or scenery of a place. Whether natural landscape or cultural landscape, it can reflect the content of human-land relationship and social relationship, which has been paid attention to. As a pattern of land utilization, the aggregation reclamation greatly shapes the local landscape (especially in frontier areas) in the interaction between human and nature. Since the Western Han Dynasty, the Hexi Corridor had become an important region of aggregation reclamation. However, it showed different characteristics in the Qing Dynasty, because there existed extensive civilian reclamation in the Hexi area at this time, which required a large number of local workers and created a considerable number of civilian facilities. Therefore, with the help of relatively abundant literature of the Qing Dynasty, we can from the local perspective and the non-militarized social management, discuss how the government's operation activities in frontier areas with the main line of aggregation reclamation shaped and changed the landscape of the Hexi Corridor -- its "shanshui" (mountains and rivers), villages, fields, military facilities -- and people's cognition of them.

Keywords: The Hexi Corridor, Aggregation Reclamation, Landscape, Frontier

The Water in Northwest China

ED3-21

Water landscape construction of Jiuquan Oasis from Qing Dynasty to Republic of China period

Wang Ruixue

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Landscape is formed by the joint action of man and nature. As one of the most important natural conditions of Jiuquan oasis, water plays an extremely important role in the formation of Jiuquan urban landscape. The construction of Jiuquan water landscape began in the Qing Dynasty, which mainly included three aspects: water conservancy project, water culture and water conservancy politics. Water conservancy project construction is a necessary condition for urban and agricultural development in arid areas. The belief of water god and water landscape garden in water culture reflect the feelings of water culture of people in arid areas. Water conservancy political construction guarantees the rational utilization of water resources and social equity in arid areas. This paper mainly discusses the formation process of Jiuquan oasis water landscape in the Qing Dynasty and the Republic of China period and the relationship between man and land and society reflected behind it.

The Water in Northwest China

ED3-21

The "Marginal Population" in the absence of the State: A study on the problem of "moving-hills households" in Minqin, Gansu Province from 1900 to 1950

Pan Wei

Yunnan University

In the interaction between environment and society, the role played by "marginal areas" and "marginal people" is often ignored. This paper examines the water conservancy modernization process of Hexi Corridor in the 20th century from the perspective of a group of "marginal people". Minqin, Gansu Province is located in the northeast of Hexi Corridor. Under the infiltration of the lower reaches of Shiyang River, it has become a narrow oasis between Tengger Desert and Badain Jaran Desert. Moving-hills households refer to the farmers who migrated from outside the Shiyang River basin to the oasis during the Qing Dynasty. These farmers were labeled with this identity by the Qing government for generations and had no right to open canals to divert water locally. Irrigation ranked at the bottom of the county and was in a marginal position of social economy. After the disintegration of the Qing Dynasty, this group of people began to try to break their "marginal status", requiring the re-arrangement of irrigation order in Minqin County, leading to several "hegemonizing water cases" in the early years of the Republic of China, and the traditional water conservancy order of the Qing Dynasty gradually collapsed. In the 1930s, as the climate of Hexi Corridor turned to warm and dry, the impact of moving-hills households on the current system became more and more intense, and large-scale fighting continued. At this time, the National Government of Nanjing began to directly manage the irrigation and water conservancy in Hexi, and modern irrigation facilities, rules and projects were formulated or constructed one after another. The " moving-hills households " believed that the time had come to get rid of their marginal status and resolutely sided with the government. In order to maintain the vested interests, the ordinary farmers strengthened the traditional water conservancy order in the Qing Dynasty. The war between "moving hill households" and ordinary people for water continued until the end of the 1950s, which became the main obstacle to the modernization of water conservancy in Minqin. During the "March to the Desert" movement and the construction of "Three Cases Canal" in the 1950s, the identity problem of " moving hill households" was really solved, and the equality of water conservancy rights of households in Minqin area was realized, and the traditional society of canal and dam was truly transformed into a modern irrigation area.

The Water in Northwest China

ED3-21

Case study on water conservancy dispute and administrative district adjustment of Tianshan South Road in late Qing Dynasty

Wu Yi-qun

Xinjiang University

In 1898, the 24th year of Guangxu's reign (1898), the government of Xinjiang Province made some adjustments to the Wushi Zhili Hall and Wensu Zhili Prefecture under Aksu Road, mainly driven by the better distribution of water resources and the convenience of taxation. In the 28th year of Guangxu's reign (1902), Mala Bashi Zhili Office was changed to Bachu Prefecture, which was also influenced by water conservancy disputes. On the basis of consulting relevant archives, this paper makes a case study of the two cases of administrative district adjustment under the motivation of water conservancy disputes, and compares the restrictive relationship between water conservancy factors and administrative district adjustment, in order to sum up the historical experience of frontier governance in northwest China.

Key words: Tianshan South Road in late Qing Dynasty; Water conservancy disputes; Adjustment of government districts; Frontier governance

Theoretical Discussion and Empirical Study on Environmental History of the Northeast China (1)

ED4-01

Nature and Frontier -- The Dimension and Paradigm of the Study of Environmental History in Northeast China

Teng Haijian

Liaoning University

As the frontier of China, Northeast China has its uniqueness in terms of history, culture, natural geographical environment and their mutual relations. This uniqueness is embodied in many aspects: the first is the relationship between “nationality” and natural geographical environment. Historically, Northeast China is the ethnic groups habitat of the “North” or “Northeast” that are “non Han”. The formation of the lives and livelihoods, beliefs and customs of these northern ethnic groups is related to the unique natural and geographical environment of Northeast China. The generation, spatial distribution and development of the three major economic cultures in Northeast China - farming culture, nomadic culture and fishing and hunting culture can also be interpreted from the natural geographical environment and its historical changes. The second is the relationship between human and nature in the history of Northeast China as a "frontier". The northeast frontier has the convergence and diversity in culture and ecology, which also determines the diversity and complexity of the relationship between human and nature. In modern times, with the development of trans-regional and even international trade, the northeast frontier has become a region with frequent trans-regional species communicate and exchange, which has also caused serious ecological consequences. The third is the relationship between the invasion of modern colonialism and the natural geographical environment of the northeast frontier, so it is necessary to introduce the international perspective of the study of environmental history in Northeast China. The uniqueness of natural resources endowment in Northeast China not only attracted domestic immigrants, but also became one of the main reasons for the invasion of international imperialist forces. The study of environmental history in Northeast China needs to break through traditional concepts and paradigms, introduce new concepts such as nationality, frontier and colonialism, and realize the transformation of research paradigms.

Theoretical Discussion and Empirical Study on Environmental History of the Northeast China (1)

ED4-01

Environment, Immigration and Diet: The changes of Dietetic Culture in Northeast China in Modern Times

Fan Lijun

Jilin Normal University

Modern northeast food culture is the product of specific natural environment and social environment. The unique natural environment in Northeast China has given birth to the soil of food culture. The social environment created by immigrants has created important conditions for the formation and development of food culture. Since modern times, a large number of immigrants inside shanhaiguan pass have entered the northeast, which has led to the changes of the food culture in the northeast. The immigrants have a great impact on changing the traditional dietary structure in Northeast China, including improving cooking techniques, changing dietary behavior and concepts, and so on. The arrival of immigrants has promoted the diversified development of the northeast food culture, forming a characteristic diet culture that is neither completely equal to that in the northeast, nor consistent with that in Central Plains. As a result, the food culture in Northeast China shows regional characteristics such as adaptability, initiative, inclusiveness and so on.

Theoretical Discussion and Empirical Study on Environmental History of the Northeast China (1)

ED4-01

A Discussion on the Influence of Climate, Landform and Other Environmental Factors in the War of the Jin Dynasty

Li Yujun & Guo Xin

Liaoning Normal University

In the war of ancient China, due to the underdevelopment of productivity and the low level of science and technology, the success or failure of military activities is more vulnerable to various environmental factors. Bad weather, complex climate, precipitous landform and inefficient traffic conditions will more or less affect the outcome of the war. Climate, topography and other environmental factors also played a key role in the military activities of the Jin Dynasty to defeat Liao and Song and to resist Mongolia. First, in the war of the Jin Dynasty, bad weather such as a shower of heavy rain, a heavy snowfall and a sudden reducing of temperature might have a significant impact on the war process and the victory of both sides. Secondly, the characteristics of characters created under long-term stable climate conditions and their adaptability to different climates would affect the formulation of strategic plans by the generals of both sides of the war. For example, Jurchens were accustomed to the cold and dry climate in the Northeast and were not adapt to the humid and hot climate in the South. Therefore, when fighting with the Song Dynasty army, they often choose to march in the cold autumn. Thirdly, as a fishing and hunting nation living in the inland areas of the Northeast, the Jurchen nationality was good at land fighting (especially fighting on horse), but was greatly inferior in water fighting.

Environmental Challenges in China and Korea, Past and Present

ED4-02

A Climate of Crisis: The Confluence of Mongol Imperialism and Climate Transition in Late Goryeo (1258-1392)

Aaron Molnar

University of British Columbia

The Mongol period in Goryeo is often interpreted as both a moment of crisis followed by a moment of opportunity as the peninsula was first invaded, exploited and then beneficially incorporated into the larger political and economic system of the Mongol Yuan. That crisis, though couched in political and economic terms has largely overlooked any important ecological or environmental consequences from Mongol invasion and exploitation. Moreover, the narrative is anthropocentric, leaving climate change as an operative factor in that moment of crisis outside the focus of the historian's lens. Yet, in terms of climate history Goryeo was uniquely positioned between the Medieval Climate Anomaly and the Little Ice Age(mid-13th to late-14th centuries). Bruce Campbell has elucidated how that climate transition globally was experienced as a period of climate destabilization that brought with it socio-economic and political dislocation. This paper seeks to understand that moment of crisis as both the combination of Mongol imperialism and climate transition from MCA to LIA. Mongol invasion and exploitation led to ecological dislocation in agricultural and sylvan ecologies. Burgeoning evidence from paleoclimatology suggests the peninsula received less precipitation and became cooler overall. Evidence from paleoclimatology and land-use patterns after incorporation into Mongol Eurasia indicate less productivity that compounded attempts at recovery. Documentary proxies also point to fluctuations between unseasonal and extreme weather events (drought, flooding, locusts etc.) combined first with Mongol invasion and the subsequent destabilization of the demise of Mongol hegemony to contribute to the fall of the Choe autocracy in 1258 and ultimately the end of Goryeo in 1392. Last, this approach seeks to bring medieval Korea into global narratives of the impact both of the Mongol Empire and climate transition on human societies and their ecologies.

Environmental Challenges in China and Korea, Past and Present

ED4-02

The Eruption of Mount Tambora and The Agricultural Production in Taiwan and China from 1815 to 1815: Perspectives from Adaptation Measures

Yu-Chien Jen

University of Carlos III

This paper aims at focusing on the agricultural production conditions in Taiwan and Yunnan province of China when encountering the anomalous weather pattern caused by the eruption of Mount Tambora in Indonesia from 1815 to 1816. Primary narrative sources and second-hand research data demonstrate will perform the research.

Although suffering from unprecedented snow and frost disasters, Taiwan's agricultural sector experienced stable rice production, which could contribute to the proper adaptation measures adopted by the residents and governments. Relevant approaches included the intensive labor forces from mainland China aggregated with the natural evolution of various rice forms and advanced growing methods brought by the immigrants from China.

The root causes were the long-term unstable living and political turmoils along the eastern coastal areas of China from the earliest of the 15th to the 19th centuries, forcing many citizens to move to Taiwan for better living qualities such as occupying the lands and focusing on rice production.

The immigrants became intensive labor forces for rice production and brought different rice forms and growing methods, which adapted to specific areas' geographical patterns. These factors became indispensable in sustaining rice growth when unfavorable weather happened from 1815 to 1816.

In contrast to Taiwan's case study, Yunnan province in China also encountered unusually low temperatures and snow issues during the same period. Nevertheless, neither citizens nor authorities tried to enforce related adaptation methods to ensure the production growth of the crops. Afterward, the area experienced severe harvest failure, and famine prevailed among the residents.

The conclusion suggests that the proper and in-time adaptation approaches were indispensable for countries' agricultural sectors facing disadvantageous climatic shocks. Moreover, these methods relied on the long-term development evolving from historical backgrounds.

Environmental Challenges in China and Korea, Past and Present

ED4-02

Reeds, Snails, and Parasites: Bilharzia Disease and Riverine Ecology in China's Lower Yangzi Delta during the Nineteenth and Twentieth Centuries

Yu-Cheng Shih

Brown University

This paper articulates the necessity of historicizing the wetland ecosystem and its interaction with human factors for understanding the spread of epidemics through China's riverine societies. The Lower Yangzi Delta, known as Jiangnan in Chinese, was one of the most economically developed regions in both China and the world for centuries, and has therefore been the topic of substantial historical research. Based on the previous scholarship on social and agricultural developments, my study foregrounds the bilharzia disease—Schistosoma japonicum, also called "snail fever" or the "blood-sucking worm disease," one of the most devastating parasitic diseases in the world only second to malaria—by tracing the environmental changes of the low-lying ecosystems on which Jiangnan's prosperity relied. By studying areas adjacent to Lake Tai such as Suzhou and Kunshan—the bottom basin of the Lower Yangzi Delta with the most intensive systems of farms and ditches, I examine why and how the riverine systems and shoreline dynamics eventually turned the acres through swampy areas into devastated zones of bilharzia infection. With an effort to bridge aspects of social, environmental, and medical history, the essay sheds lights on how the changing wetland flora and fauna, featuring species like reeds and snails, exposed human bodies to pest threats and reveals the extent to which riverside management reshaped the anthropogenic landscape of modern China.

Environmental challenges in China and Korea, past and present

ED4-02

Sanitation, Disease and Drinking Water in Kashgar City from the Late Qing Dynasty to the Early Republic of China Period

Limin Wang

ShaanXi Normal University

From the late Qing Dynasty to the early Republic of China period, Kashgar was the core city in the southern Xinjiang and an important treaty port for foreign officials, merchants, missionaries and explorers. Due to the influences of areal geology, temperature variation and residents' hygiene, the drinking water from pools and wells in the urban district were brackish and dirty, which provided required environmental conditions for prevalence of water-borne infection disease, such as goiter, dysentery and typhoid fever. The natives mixed the water for personal drinking with the water for physical hygiene as well as livestock, and they lacked of the scientific doctor that made diseases difficult to cure. Chinese officers and soldiers drunk boiled tea, dug out the deeper wells with setting up the doors and fences to keep dogs and cats away. And westerners adopted to filter, sediment and boil the drinking water in sequence, and visited the patients, opened up the clinic and hospital, which maintained the better relationship with the natives and Chinese officials to get admission to dwell in Kashgar and carry out missionary work. Compared with the three groups, this research examined how the differences in drinking water quality, animal management and hygiene practices among urban residents had a bearing on the different immunity of the water-borne infection disease. Furthermore, this article illustrates the environmental changes between drinking water and water-borne infection disease in Kashgar city from mid-nineteenth century to early twentieth century, and reveals the adaptive process of clearing drinking water, managing animals and treating disease among diverse urban residents, which implies the relations of culture and power in the introduction of western sanitary knowledge and medical facilities after treaty port opened.

The Human-Environment-Climate Nexus: Exploring Disaster Responses and Water Related Hazards in East and Southeast Asia

ED4-03

Future Scenario or Historic Fact?: Making it Rain in Hong Kong c. 1890-1930

Fiona Williamson

Singapore Management University

The early-twentieth century saw a small, but dedicated investment by the US, Russia and European imperial powers such as France and Britain in weather modification, especially rainmaking. The scientific optimism of the late nineteenth century had brought this potential into the public domain, the ability to control nature rapidly becoming less a question of fiction but one of tangible near-future scientific reality. A series of disastrous droughts affecting large areas of the globe, especially in the 1870s, 1890s, 1920s and 1930s, provided additional incentive for transforming theory into practice. 'Rain-making' could render the social and economic ramifications of major droughts null. This paper explores the first 'peak' of rain-making activities from around 1890 to the early 1930s from the little- known perspective of experiments being undertaken in Hong Kong. It explores the particular circumstances of Hong Kong government's increased interest; links to the global story and, the reception of rain-making in governmental, meteorological, and public arenas, adding to a small but growing literature on atmospheric knowledge making and unstable atmospheres.

The Human-Environment-Climate Nexus: Exploring Disaster Responses and Water Related Hazards in East and Southeast Asia

ED4-03

Rainfall and agriculture in Java in the 1900s

Atsushi Ota

Keio University

Crop failures in colonial Java have attracted scholarly attention, but the climate has not been discussed seriously as an important cause of poor crops, because climate data has not been readily available. However, the rainfall data of colonial Java is now accessible as result of the recent joint collaboration between the Dutch and Indonesian meteorological offices (KMNI and BMKG respectively) to recover and reconstruct climate data from the 1860s to the 1990s for the Netherlands East Indies. Combining this rainfall data with descriptive narrative contained in reports such as the 1908 Dutch survey Onderzoek naar de Mindere Welvaart der Inlandsche bevolking op Java en Madoera (survey of the worsening welfare of indigenous people in Java and Madura), this presentation argues how extreme climatic conditions, such as drought and excessive rain, created particular plant diseases, which, often in combination with poorly thought-out government policy, caused crop failures in some parts of Java.

The Human-Environment-Climate Nexus: Exploring Disaster Responses and Water Related Hazards in East and Southeast Asia

ED4-03

A tale of three storm surges, and, three towns, under three flags

James F. Warren

Murdoch University

In the Visayan Islands of Samar and Leyte storm surges associated with typhoons historically make sea-to-land crossings. On October 12, 1897, November 24-26, 1912, and November 3-11, 2013, the exposed coastal towns of Hernani and Guiuan on Samar and Tacloban on Leyte were destroyed by storm surges. The recurrent damage and destruction that resulted from these storm surges and cyclonic storms has increased as the cascade chain of the hazard changed through time, shifting from thousands to millions of people displaced and their livelihoods and communities destroyed between October 1897 and November 2013.

Environment in the Making

ED4-04

Dialectics of Future Forest Cities in East Asia

Duskin Drum

New York University

Anthropocene urban development has been characterized by continuous and accelerating deforestation. This presentation clarifies and reinforces the inevitability of cities growing into forests in the Anthropocene. And more tentatively argues this is an incipient and latent consensus. Examining images of ecotopias and vegetated ruins in East Asian urban projects and post-apocalyptic popular media, I will present aspects of a larger project diagnosing the inevitability of cities growing into forests. I borrow from Walter Benjamin dialectic method of studying the changing city in Europe from the 18th to 19th century and May Ee Wong's work tracing the ideologies of the global sustainable city in developing Singapore. My dialectical examination of forest cities goes between examples of images of recent green developments and popular media depictions of future cities as overgrown ruins. I will examine both the poetics and aesthetics of the forested city, and present a summery of analytical evidence of their necessity. The poetics of forest cities connects fantasy, yearning for communal life and less alienation, and notions of quality of life, but also aesthetics of property and control. The analytical evidence includes current urban planning, a summary of the effects of increased CO2 and more energetic hydrological system, and paleo-climate evidence.

My green development examples include images and rhetoric from Incheon City's Green New Deal, Singapore's ecocity efforts, and architecture like Urban Forest designed by Koichi Takada Architects. My examples of images from post-apocalyptic and solarpunk forest cities include art from Tokyo Genso, and @Munashichi, and anime such as Coppelion and Shangri-la. I will also share Anuj Vaidja's ethnographic description of latent forests in Mumbai.

I end with a survey and complimentary zine introducing the larger project, PhloemPhloem, and inviting contributions and alliances.

Environment in the Making

ED4-04

Multispecies Storytelling in Restoration and Consevation of Jeju Hanon Crater

Halla Jeeae Ko

Ewha Womans University

The purpose of this study is to examine troubles around restoration and conservation policies for Hanon crater on Jeju Island, in the Republic of Korea, in aspect of multispecies storytelling. Paying attention to Donna Haraway's suggestion of making companion species in the Chthulucene, I will propose Citrus Unshiu as the nonhuman kin that characterize the complicated situation in designation of Hanon wetland as conservation area. Therefore, I will rewrite multispecies storytelling at Hanon Crater on the perspective of Citrus Unshiu.

I suggest that the reason of troubles inside restoration and conservation narrative of Hanon crater and its wetland is absence of multispecies storytelling. Since Hanon comes from Jeju dialects meaning that big rice paddy, Hanon crater has been one of important farmland on Jeju Island over five hundred years. However, previous studies often villainize the agricultures, especially citrus farmer, and require its restriction for environmental reason. Noting the historical fact that the only period when Hanon crater was evicted during Jeju April 3rd Uprising, this approach could neglect the complex situation around Hanon crater.

To reconstruct multiple voices, this study will focus on Hanon Halla farm at Hanon crater. Hanon Halla farm has been farming Citrus Unshiu for four generations, and its location is close to Hanon Catholic church, known as Father Emile Taquet who brought Citrus Unshiu from the Empire of Japan for the first time in Jeju. I will analyze the narrative between environmental policies of Hanon from 2003 to 2022, and the interviews from third and fourth generation citrus farmers from Halla Hanon farm, who were often eliminated from the official records. Through narrative analysis, Citrus Unshiu will show the relationships of agriculture, policy, and ecosystem at Hanon crater. In conclusion, understanding Citrus Unshiu as significant other will reconstruct multispecies storytelling around the troubles of Hanon crater.

Environment in the Making

ED4-04

"Overcome the Wetlands and Educate the Youth": State Farm Construction and the Sent Down Youth Movement from the 1960s to the 1970s

Bingru Yue

Queen's University

From the 1960s to the 1970s, a new wave of mass mobilization, the "Sent-Down Youth Movement", was initiated by the Chinese Communist Party-led government. In Shanghai, thousands of urban youth were sent to work on draining wetlands and cultivating the land at the state farms of Chongming Island, located in the north of the city. This paper discusses the radical expansion of the state farms featured the sent-down youth movement during this period. By analyzing sent-down youth memories, the history of mobilizing the urban youth and reshaping the landscape of Chongming Island is reconstructed. Urban youth re-education, wetland drainage, and land cultivation were intertwined as a response to social crisis during Mao's era. To deal with the demands to improve food supply, relief urban unemployment, and cultivate a new generation of revolution, the farms and wetlands were treated as an experimental site to fulfill the goals. This paper examines how the top-down socialist campaign promoted misguided views on the human-environment relationship leading to the destruction and abuse of the materials world, including the ecology and humans. The sent-down youth was required to implement certain methods and techniques to drain more wetlands and improve soil fertility, exacerbating human encroachment on the wetland ecosystem. However, it is proved to be ineffective and inappropriate as the farming ideas and practices ignored the environmental and geological conditions of Chongming Island. The food production was not ideal, resulting in the loss of ecological diversity and wetlands. In addition to the destruction of the environment, the sent-down youth experienced abuse and exploitation as they were asked to comply with the radical plans and contribute their manual labour.

Politics, Cold War and environment in East Asia

ED4-05

Soilless agriculture and War, focusing on the role of hydroponic farms in Japan as supply bases for Korean War

Kaihei Koshio

Tokyo University of Agriculture

In ancient history, there recorded some proto-aquaculture, like "Hanging Gardens in Babylon", "Chinampa Floating Gardens in Aztec", or "Soilless culture in Nail ", but the scientific soilless culture could be rooted back to the research of British scientist, John Woodward, who investigated the effect of water source and treatment on fresh weight increase and transpiration loss from spearmint cultures and their ratio in 1699, though this paper was long been neglected. At experimental level, German botanist Julius von Sachs and Wilhelm Knop established solution culture systems, but it could be said that W.F. Gericke was the first man who established the practical hydroponic system to provide large amount of vegetables.

In his book "The complete Guide to Soilless Gardening" published in 1940, he expressed his gratitude for some companies. Among those, Pan American Air was the most important partner who supported his research and strongly proceeded their business in the Pacific to provide fresh vegetables in small barren islands like Wake, and Io-jima island. Their hydroponic system finally contributed greatly to the Allied Forces in the Pacific War.

Based on such successful experiences in the Pacific War, Allied Forces established two big hydroponic farms in Japan in 1946. One was in Chofu, Tokyo and the other was in Otsu, Shiga prefecture, both of which supported US soldiers at the front of Korean War supplying fresh vegetables.

In case of Chofu hydroponic farm, many BC class war criminals were assigned to work for harvest. A convoy of trucks were engaged to carry them from Sugamo prison to Chofu hydroponic farm, counting as many as 300 prisoners just after Korean War initiation.

Politics, Cold War and environment in East Asia

ED4-05

Making of "Pristine Vegetables" : Construction and Shifting Concepts of Environmental Contaminants in Korea, 1960~1990s

JUNG Junho

Jeonbuk National University

The "Pristine Vegetables(청정채소, 淸淨菜蔬)" referred as organic products without use of pesticides and chemical fertilizers in 21st century Korea, the meaning of "Pristine" was radically different until 1970s. After Korean War, infection rate of intestinal parasite reached almost 100% in Korean population. Disruption in manufacture of chemical fertilizers pressured farmers to use night-soil, which was contaminated with parasite eggs, causing the vicious cycle of infection. At the same time, rapid urbanization increased the demands of fresh vegetables in the city, drawing large amount of semi-urban agricultural practices. This was closely linked with national economy, as most of Korean vegetable products were contaminated with parasites, it was deemed unsuitable for exportation. In 1957, US Army stationed in Seoul issued a guideline for producing local vegetables acceptable for US troop consumption. This give rise to the concept of "Pristine Vegetables" that were free of any infectious materials. However, these practices continued well into the 1970s, as with lack of sewage treatment system, faeces of urban population provided necessary fertilizer for these farmers without much cost. For securing public health, Korean government actively encouraged use of chemical fertilizer, naming the vegetables "Pristine". This effort included ban of night-soil in urban and semi-urban farms and establishment of Pristine Vegetable Shops. However, with rapid decline of parasitic diseases in the population, with rising concerns of environmental pollutions reshaped Pristine Vegetables from chemical to organic in the 1980s. Thus, Pristine Vegetable in Korea during late 20th century exemplifies rapid transformation of urban environment, showing shifted concept of cleanness and contaminants among the public and policymakers, as well as acceptable risk of urban environment in Korea.

Politics, Cold War and environment in East Asia

ED4-05

Environmental Civil Society Organizations and the State in China: Institutional Analysis of the Dynamics, 1980s-2010s

Kyoung Shin

National Tsing Hua University

The answer to the oft-asked question of state-civil society relations and the latter's role in environmental governance in China seems to be "in the eyes of the beholder." Relying on a snapshot of a given space and time, a number of discrepant accounts, narratives, and theories continue to be offered by China scholars and experts. This paper takes a different approach. Based on a more nuanced longitudinal analysis, this article shows that there have been at least three kinds of relationship between the Chinese state and environmental civil society in the last four decades, each defined by a distinct institutional field. The dynamics of these institutional changes have been anything but linear or predetermined. This paper contributes to the existing debate by offering a more systematic and analytical account of the nature of state-society relations in China's environmental governance. They also point to the need for more dynamic and evolutionary, rather than static, analyses in future scholarship.

Politics, Cold War and environment in East Asia

ED4-05

Remaking North Korea Nature at the West Sea Barrage

Joseph Seeley

University of Virginia

In the 1980s, at a time where global environmentalists sought to protect “nature” and sequester it from human influence, the leaders of the Democratic People’s Republic of Korea sought to transform and “remake” it instead. In 1981 the DPRK regime announced the beginning of “four major nature re-making tasks.” These were major infrastructure projects designed to transform the North Korean landscape in agriculturally productive ways. The symbolic cornerstone of all these efforts was the 8-kilometer long concrete seawall and assemblage of dams, locks, and sluice gates variously called the West Sea Barrage or Nampo Dam. Located just 40 kilometers from the North Korean capital where the Taedong River met the Yellow Sea, the West Sea Barrage was designed to decrease the salinity of the river’s drinking and irrigation water and improve transportation access by blocking the region’s high sea tides. But the causeway was also important, ideologically, as a manifestation of the socialist state’s ability to beat back the sea and “remake” nature in a triumph of human will and engineering. The use of soldiers as the project’s primary labor force also reinforced the increasingly militarized nature of North Korean development. This paper analyzes the West Sea Barrage as a critical case study in the history of North Korea’s Anthropocene. By examining how the seawall was constructed, we can understand not only the ideological and material underpinnings of the North Korean state’s drive to “remake nature” in the face of considerable economic and engineering challenges, but also the practical consequences of the dam for the local coastal environment.

Theoretical Discussion and Empirical Study on Environmental History of the Northeast China (2)

ED4-06

The Statute and Ordinance and Environment: The interaction between Qing Dynasty rulers and environment before the Qing entered the pass in 1644 from “The Statute and Ordinance in Manchu Archives of Shengjing

Wan wenjie

Liaoning University

It is one of the ways to build a bridge between legal history and environmental history to study environment from the perspective of the statute and ordinance. Many environmental laws and regulations can be found in "The Statute and Ordinance in Manchu Archives of Shengjing which can also provide a basis for discussing the environmental thoughts of Qing Dynasty rulers before the Qing entered the pass in 1644. Through the interpretation of the statute and ordinance, it can be found that Nurhaci ,Hong Taiji and Manchurians had active interaction with the ecological environment of Northeast China and close relationship between them.They realized the protection and utilization of the environment by making strict decrees, mainly involving products, land, agriculture, fishing and hunting, resources and other aspects. It constructs a magnificent picture of the interaction between the Qing Dynasty rulers and the ecological environment in Northeast China before they entered the pass in 1644.

Theoretical Discussion and Empirical Study on Environmental History of the Northeast China (2)

ED4-06

Flood in Northeast China in Modern Times and its Countermeasures under the Evolution of Regional Environment

Tan Yuxiu

Northeast Normal University

From 1840 to the outbreak of the September 18th incident, the rich forest resources in Northeast China were artificially cut down, the original ecological environment being destroyed, and thus the climate became more and more abnormal. Furthermore, the government was negligent in prevention, which eventually led to many floods in the region and brought great disasters to the people. In order to deal with the flood, the government and people from all walks of life have taken a variety of measures, such as allocating relief funds, collecting charity funds, reclaiming wasteland, planting trees, building water conservancy, donating money and materials, organizing relief and so on, so that the victims have been resettled to a certain extent. However, at that time, the situation in Northeast China was turbulent; the funds for flood control were insufficient, and the quality of officials was mixed, and what's worse, officials did not do their best to perform their duties, so that the disaster situation could not be effectively alleviated. To sum up, there is a considerable correlation between the changes of the regional environment in Northeast China and the occurrence and response of floods. Under the evolution of the regional environment, the state and society not only actively carry out the aftermath of relief, but also focus on prevention and cure from the environmental dimension, from which it is not difficult to see the two-way game between man and nature.

Theoretical Discussion and Empirical Study on Environmental History of the Northeast China (2)

ED4-06

Feeding Revolution: The Enterprise of Corn in North China, 1938-1950

Lei Zhang

Lingnan University

During the Second Sino-Japanese War a folksong spread throughout the anti-Japanese base of North China. Its lyrics included these words: "The Golden Queen is yellow, the sister is busy with harvesting you; the glittering maize are full of hills, hey! Soldiers and civilians unite together against the famine." The "Golden Queen" here refers to an American corn variety characterized by high yields and good adaptability. The Chinese Communists popularized it throughout the anti-Japanese bases in Shanxi, Shandong, Henan, Hebei, and Liaoning. By 1949 the Golden Queen was being cultivated in seven provinces of North China, with acreage of 10 million mu. As a consequence, the communists established a corn-based agriculture that not only changed the planting system in North China but, more importantly, was crucial to the state-making of the CCP.

Unlike previous research that focuses on production means such as land reform, cooperative organization, and land reclamation in the revolution history of Chinese communists, this paper will examine the establishment of communist rule in North China through the cultivation of corn from the perspective of environmental history and food history based on primary sources housed in China, Japan and United States. Utilizing the concept of environmental colonialism, this paper argue that Chinese communists used corn as a colonial crop to attach peasants to the land and produce the grain needed to feed the revolution. Corn was employed not only to supply food, but to establish the political and economic integration of the communist regime, which persisted into the post-1949 period and profoundly shaped the agricultural campaign of the early People's Republic of China (PRC).

Kichi (機智), Resourceful Eco-Techne with Material

ED4-07

Disconnected Network: A Human-Nature Assemblage Reformatted through the Techno-natural Disaster Narratives of Undersea Cable in South Korea from the 1990s to the 2000s

Yeon-Kyoung LIM

Ewha Womans University

Disconnected Network deals with the construction of undersea cables in South Korea by the Korean Telecom (KT) from the 1990s to the 2000s with the focus on the so-called human- nature assemblage in installing and maintaining these crucial media infrastructure. These undersea cables, invisible when they work smoothly enabling our inter-continental communication, reveal themselves when they slowed down or failed to connect owing to techno-environmental 'disasters' like earthquakes. These environmentally induced shortcomings of connection brought human into the sea and create unique human-nature assemblages through human labor, which this paper explores and contemplates on.

Kichi (機智), Resourceful Eco-Techne with Material

ED4-07

Crossing Boundaries with Tak trees: Transmission of eco-techne by moving with material

Jung Lee

Ewha Womans University

Crossing Boundaries with Tak trees follows slash-and-burn farmers and monk-cum-artisans who moved with the papermaking material of tak trees, crossing various social and ecological boundaries together with their resourceful attachment with tak trees transmitting their sociomaterial techniques in the reshaping world. With the above cases, it reflects on the concept of kichi (機智), an East Asian Techne that inseparably combines ki the machine with chi the wit by re-considering successes and failures in our materially attached, inspired, and resourced ways of surviving various calamities.

Kichi (機智), Resourceful Eco-Techne with Material

ED4-07

“Was that Mountain Really There?” Posthuman Ecological Approach to History of Nanjido Landfill

Ae-Ryung Kim

Ewha Womans University

"Was that Mountain Really There?" deals with the history of the Nanjido Landfill, stinky waste heaps transformed into "ecological park" since 1993. The landfill built in 1978 once constituted two artificial mountains filled with the waste of Seoul citizens, and had visualized the social and environmental problem of the city for 15 years, fuming stench from decay and frequented by urban waste diggers. Yet, it became the success story of ecological restoration since the construction of the ecological park. The paper examines what happened to the waste mountain with the "post-human ecological approach" of capturing living and made things, discarded and rediscovered things as well as people, policies, and their successes and failures throughout their history.

Towards a Planetary History and Planetary Humanities

ED4-08

From Environmental Humanities to Planetary Humanities

Sekhar Mahapatra

Jadavpur University

The human activities have altered the ecosystem of the Earth in an unprecedented geological scale. This ecological deviation has adversely affected the planet by global warming along with the associated climatic irregularities. The ecological catastrophe has brought about a grave situation for the human civilizations. With the arrival of the Homo-Sapiens on the Earth, 100,000 years ago the situation took a turn for the worse. Our written history is a few thousand years old. The future of our Universe is dependent on the wellbeing of human civilizations. It is now necessary to create a new conceptual category of planetary humanities which will help to initiate a dialogue between the historical time, on the one hand, and the geological time and biological time on the other. This discourse will bring the importance of the contextualised planetary history as well as the further promotion of environmental humanities which will produce transdisciplinary wisdom in social sciences.

Towards a Planetary History and Planetary Humanities

ED4-08

Martin Heidegger and the Creation of ‘Earth’ as a philosophic category

Mili Ghose

Independent Researcher

Martin Heidegger, the philosopher, introduced the word ‘earth’ in a philosophic sense in his lecture delivered in 1936 in Berlin. He separated the earth from the planet. The planet, he said, does not concern the humans. The planet is left to the geologists and the astronomers.
Using the Heidegger’s language, we can say that the harder we work the earth in or quest for profit and power, the more we shall encounter the planet. Under the changed situation, not only the earth but the also the planet is becoming a category in humanist thought. The rise of planetary humanities is just a matter of time.

Towards a Planetary History and Planetary Humanities

ED4-08

Expanding the Frontier of Temporality: A Conversation between Historical and Planetary Times

Aryama Ghosh

Jadavpur University

Historians have long viewed this world as the "bounds of Human Empire" since the advent of the scientific and Enlightenment ethos, an idea that is fundamentally Eurocentric. However, after three centuries of plundering the planet with an essentially acquisitive mentality, which was perceived under a fleeting illusion of destructive progress, humanity experienced an existential crisis. The impending crisis compelled new historians to think beyond the conventional, anthropocentric temporality and consider expanding the boundaries of time's concept in history beyond human endeavours. In order to find a practical methodological solution regarding the sense of time, this article attempts to connect anthropocentric temporality with later theoretical innovations like "bio-centric," "geocentric," and finally "planetary" temporality.

Conflicts, Epidemics, and Climate Crisis: An Environmental History in Comparative Perspectives

ED4-09

Soldiers, Epidemics and bohemian rural enviroment in the 18th and 19th century

Josef Grulich
Václav Černý
University of South Bohemia

Paper will try to point out the connection between the mortality of the rural population and the military campaigns. The numerous marches of the troops across the manorial domains were connected with an accommodation of soldiers in the farmsteads and houses of ordinary villagers and brought with them numerous difficulties. These could also be a disease spreading rapidly among the soldiers, as well as problems with supply or feeding quartered military units. The lack of food could lead to famines which were, in addition to epidemics, another source of the demographic crises that affected the South Bohemian countryside in the 18th and 19th centuries. Not only individual demographic crises originating from plague, cholera and famine epidemics related to the War of the Austrian Succession (1740–1748), Seven Years' War (1756–1763), War of the Bavarian Succession (1778–1779), French Revolutionary and Napoleonic Wars (1792–1815) and Austro-Prussian War (1866) will be presented. Since the march of the armies brought with it not only the hardships for the villagers but also the deaths of the soldiers of the warring armies which were incidentally recorded in rural area, this topic will also be included in the conference paper. We will use small, localised probes in two estates in South Bohemian region – Estate of Protivín and Estate of Třeboň to present echoes of land wide mortality crisis in selected localities of a researched area. The conference paper will be based on the available literature based on previous researches and mapping individual mortality crises in the Bohemia in the observed period, and on local serial sources – registers of deaths and on narrative sources - chronicles.

Conflicts, Epidemics, and Climate Crisis: An Environmental History in Comparative Perspectives

ED4-09

The Earth System as an agent of humanity: perspectives derived from a comparative study on environmentally local economies

Satoshi Murayama
Kagawa University

In the era of the Anthropocene and the climate crisis, it is reasonable to say that the time for thinking about human life alone has come to an end. This is because the humanities and social sciences need to go beyond the familiar interrelationships between individual and collective human beings, and to look not only at the reproduction of all species, but also to understand the convergent Earth System itself as an extremely important agent of humanity. Therefore, I would like to extend the institutional approach to the relationship between the individual and the collective, which has made great strides especially in the fields of economics and economic history, to the field of ecosystems and the Earth System. In this presentation, I would like to focus on some environmentally local economies in Eurasia and consider what can be drawn from them for this purpose.

Conflicts, Epidemics, and Climate Crisis: An Environmental History in Comparative Perspectives

ED4-09

Characteristics of Precipitation Distribution and River Flood Using Historical Precipitation Datasets: A Study for the Northern Kyoto Region, Japan

Masahide Ishizuka,
Toru Terao,
Satoshi Murayama

Kagawa University

As we live in a changing global environment, we have paid attention to possible future changes in the natural environment and have conducted many studies using numerical simulations. As a result, we have predicted possible future environmental changes and their effects, and have studied adaptation measures to these changes. However, the problem is that there is no data to verify the prediction results.

On the other hand, for past natural phenomena we have experienced (this study focuses on extreme natural disasters, especially floods), we have observational data, records, and information on human behavior and its effects on the social environment. However, it is difficult to say whether the results of numerical simulations are correct for the reproduction of such past natural phenomena, and whether there is sufficient understanding of how we have behaved during contingencies. Reasons for this include: 1) lack of historical observation data, 2) even if data is available, it is not systematic (lack of unified definition of terms), 3) low spatial resolution of data, 4) scattered data, 5) written in old characters, 6) paper-based data (not digitized), and so on.

In recent years, however, efforts to restore historical hydro-meteorological data have progressed, and a foundation for understanding past natural phenomena is being developed. Therefore, in this study, an archive set of historical precipitation data and climate model outputs aiming to reconstruct past climate changes are used for the northern Kyoto Prefecture area and the Yura River basin (1,880 km2) that flows through the area. Then, characteristics of precipitation distribution, reproduction results of river flood, and issues related to the past precipitation data set are presented.

The Politics of Sustainability: Elemental Media and Contemporary Art in East Asia and Beyond

ED4-10

Invasive Species, Colonialism, and Artistic Practice

Eunha Chang

Independent Curator

This presentation examines the relationship between invasive species, colonialism, and artistic practice through the analysis of four artists: TJ Shin, Alaa Abu Asad, Chulayarnon Siriphol, and Mooni Perry. By using the concept of invasive species as a lens for understanding colonialism and post/decolonization, it aims to reconfigure the relationships between human, non-human, gender, nature and geopolitics. In doing so, it argues that Asia emerges as a richly layered mode of entanglements, where the species' pasts, colonialism and modern governmental policies, and the embattled legacy of colonial ruins that are still found in the present and future intersect.

The presentation will provide a detailed examination of the artistic practices of four artists and how they engage with the themes of invasive species. In the work of TJ Shin, the artist explores the intertwined narratives and meaning of invasive species such as mugwort on the environment.

Similarly, Alaa Abu Asad's work focuses on how invasive species have been used as a tool of colonialism to reshape the world, while Chulayarnon Siriphol's work examines the impact of colonialism on Thai society and how it has been shown through invasive species. Mooni Perry's work delves into the intersections of race, gender, and colonialism and how they intersect with the impact of migrant species.

By critically analyzing the work of these four artists, this presentation will provide a nuanced understanding of the ongoing legacy of colonialism and how it continues to shape our environment, society, and culture through invasive species. Furthermore, the presentation will highlight the potential of art as a means of understanding and addressing complex issues related to colonialism and invasive species, promoting awareness, and fostering critical engagement with these themes.

The Politics of Sustainability: Elemental Media and Contemporary Art in East Asia and Beyond

ED4-10

The Aesthetics of Air and Tactile Politics in Wang Te-yu's Inflatable Art, circa 1996

Pei-chun Viola Hsieh

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"My inflatable object is about pushing and grasping the edge of air." This statement, by
Taiwanese contemporary artist Wang Te-yu, reveals the intentions she has for the inflatable, balloon-like installations that have become her signature work over the past decade. Her work bodies forth a radical aesthetics of air that both challenges the habitual nature of our sensual vitality and opens unexpected political possibilities. In her playground of the possible, visual experience is largely displaced by rich, immersive, tactile experiences of the air. Making our way through one of her inflatable objects, we first encounter the resistance of the inflatable: air pressure; next, we sense the vibrations as we rebalance ourselves among other stumbling spectators; lastly, we encounter the permeability of the work, prompting us to reorient ourselves in the floating maze in relation to others. Namely, in Wang's inflatable spheres, the materiality of air is made explicit for us to touch and wrestle with.

Taking a cue from Wang's tactile aesthetic of air, this paper argues that Wang's pneumatic structures prompt a sensory reformation and thus enrich the discussion of the air as the environing medium. Her exploration on tangible forms—including horizontal platforms, domes, and their combinations—fosters a breath commune via touch. In this spirit, I suggest that Wang's intimate, pneumatic structure provides us dynamic fields that not merely demonstrate the condition of possibility of air in a tangible way, but stimulates an introspective micro- community, where the scale of human is being tested, pressed, stretched, and with potential line of flights through one breath commune to another.

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ED4-10

A Restoration of the Oldest Media in the Works of Lee Seung-taek, Kim Ku-lim, Park Hyun-ki

Bookyung Son

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This study reconsiders the boundary of the early environmental art in the post-war Korean avant-garde movement through the works of Lee Seung-taek, Kim Ku-lim, and Park Hyun-ki. A series of environment-related practices – a sculptural structure using natural objects, a happening performed against the backdrop of nature, and documentation of conceptual marks on the natural landscape – was one of the prominent formats in the larger field known as Korean avant-garde art. In the historicization of the local avant-garde, such environmental elements in their works are understood mainly in terms of either an immaterial expansion in the formal sense or a critical gesture to address the rapid industrialization of Korean society. While the initial discourses of environmental art contributed to situating its diverse modalities within a familiar boundary of global contemporary art, the focal point of this study is oriented more to the age-old, rooted relationship between natural materials and cultural habits, both regionally peculiar to Korea.

To revise the narrative of environmental works, this study examines the three exemplary works of the artists: Kim Ku-lim's From Phenomenon to Traces (1970), Lee Seung-taek's Greening Campaign (1976), and Park Hyun-ki's Media as Translator (1982). Each work juxtaposes natural elements and other man-made cultural products in different ways. Through an analysis concerning the interdependency of nature and the new material situation in the juxtapositions, their approaches to the natural environment can be reconceptualized as already chained to a technological environment in each period. In this respect, it can be said that the works I discuss here remind the long-standing operation of the natural environment as a material infrastructure for its inhabitants and also the oldest media for its inhabitants in forming a culture. The works are environmental, not just because they present an environmental form or message, but because their region-specific practices are heading to the point before the modern ideology of nature-technology distinction was imported.