

UCRSEA PARTNERSHIP UPDATE, MAY-AUGUST 2018

UCRSEA Partnership Project;

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IDRC Grant/ Subvention du CRDI: 107776-001-Urban Climate Resilience in Southeast Asia Partnership

Urban Climate Resilience in Southeast Asia Partnership

PARTNERSHIP UPDATE
May-August 2018

Floating Village on the Tonle Sap, Cambodia. Photo courtesy of Lea Marajh.

PROJECT NEWS

UCRSEA introduces syllabus on Urban Climate Change Resilience and Governance



Workshop participants received training on how to teach the course in their institutions. (Photo courtesy of Yanjun Cai)

UCRSEA staff introduced a newly developed course syllabus on Urban Climate Change Resilience and Governance during the Curriculum Development Training Workshop held in Chiang Mai, Thailand on May 14-18. Twenty-two scholars and practitioners from the Mekong countries and Canada participated and were trained on how to teach/present the course in their respective institutions. Participants also shared and exchanged information on syllabi, study programmes, and teaching materials and techniques. Prof. Amrita Daniere, UCRSEA Co-Director, and Dr. Yanjun Cai, Postdoctoral Fellow, organized and led the training workshop.

The one-semester (15 weeks) course covers a range of concepts, theories, and issues relevant to and important for understanding the challenge of climate change in cities. It explores how cities are responding to climate change impacts and forecasts, and how urban scholars assess these responses. The varied and competing ideas of resilience as a response to climate change and their different frameworks for assessing and developing resilience were also taken up. To make this graduate course applicable and suitable to the Mekong context, discussions centered around developing, adjusting, and implementing the new course in different academic institutes. Participants also aimed to establish the interdisciplinary collaboration from different institutes and countries when delivering the course in the future.

UCRSEA to develop quality research outputs as Partnership approaches final year



Dr. Pakamas Thinphanga addresses UCRSEA partners. Photo courtesy of TEI.

UCRSEA Partnership partners and collaborators held their annual meeting on May 7-10 in Yangon, Myanmar. As the Partnership prepares for its final year, the meeting focused on providing support for the development of effective and high-quality research outputs designed to reach diverse stakeholder audiences. Workshop activities were designed to enhance the impact of their research data through strengthened theoretical framing, more varied and innovative knowledge mobilization strategies, and more frequent and active engagement with key stakeholders.

Partners reviewed the research outputs and three overarching research questions and future planning. Various knowledge mobilization strategies that the Partnership will be pursuing over the next year were also introduced.

This year's Keynote Speaker was Dr. Carl Middleton of Chulalongkorn University. His [presentation](#) focused on how research can make an impact on real world problems in Southeast Asia. According to him, "The earlier in the research process we work together, the better; process is everything to build trust, legitimacy, networks, and a shared understanding of the problem, the research itself, and ultimately the solutions."

Dr. Carl Middleton interacts with workshop participants. (Photo courtesy of TEI.)



2018 UCRSEA Graduate Fellows spend Fall Term at University of Toronto

Try Thuon and Nguyen Thanh Tu have been selected as recipients of the 2018 UCRSEA Graduate Fellowships. They will spend the Fall Term at the University of Toronto, where they will continue to work on their respective PhD research papers, participate in UCRSEA Project activities, attend courses, seminars and workshops relevant to their research and meet with the Canadian UCRSEA team members and researchers.



Try, who has been involved and participated in UCRSEA activities, is completing his PhD in Social Sciences (International Program) at Chiang Mai University. His research, *"Remaking Urban Space, Livelihood Changes and Resilience Among Peoples in Battambang Town, Cambodia"*, examines how the Strategic Groups formation shape the process of urbanization, land use planning, and climate change adaptation within secondary towns of Cambodia, with focus on Battambang, a UCRSEA project site. He is also a Researcher and Lecturer with the Department of Natural Resource Management and Development, Faculty of Development Studies, Royal University of Phnom Penh.

Tu Nguyen is currently pursuing her PhD in Urban Planning at the National University of Civil Engineering (NUCE), Hanoi, Vietnam. Her research study, *"Fundamental factors to develop green and climate resilient new urban area (KDTM) in big deltas of Vietnam"*, focuses on green/sustainable and resilient new urban area (modern neighborhood or KDTM) in big deltas of Vietnam. It aims to define fundamental factors that KDTM in big vulnerable deltas should contain in order to become green/effectively resource-consuming and climate change resilient. She is also a lecturer at NUCE's Department of Urban and Regional Planning.



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Phnom Penh air is dangerously polluted!

Air quality in Phnom Penh is badly polluted. A recent study conducted by the Royal University of Phnom Penh shows that harmful particulate matters in the air concentrations or PM2.5 reading was 46 µg/m³ micrograms per cubic meter, exceeding the air quality standard recommended by the World Health Organization at 25 micrograms per cubic meters.



Rapid urbanization in Phnom Penh is affecting its air quality.

Phnom Penh city areas are not equally polluted. The study shows that busy road conjunctions and construction sites are more polluted than city center areas. The high polluted areas include Chroy Chang Va roundabouts, Deoum Kor Market, Diamond Island, 60th Street and AEON 2. These areas have busier road traffics, more construction activities going on, open landfilled and dusty roads. City center areas such as the river fronts and the Independence Monument are less polluted. These areas have fewer construction activities, less traffics, cleaner roads and more green space areas.

PM2.5 refers to particles in the air with a diameter of less than 2.5 micrometers, or around 3% the diameter of a hair. The small harmful particulate matters originate from many sources including emission from vehicles, dusty roads, construction sites and open landfilled areas. Recent rapid development and urbanization in Phnom Penh leads to high level of PM2.5.

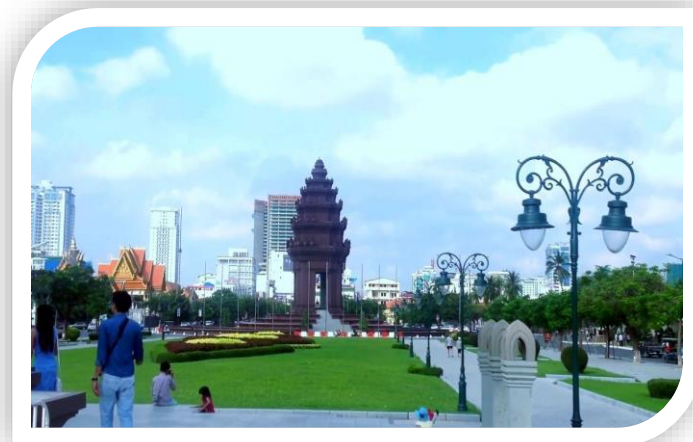
High PM2.5 concentrations are dangerous because they can easily enter our lungs and respiratory systems and they can make asthma, bronchitis and other respiratory problems worse. PM2.5 is linked to early death from heart and lung disease. Children and seniors are more vulnerable to air pollution due to their weak respiratory systems. According to a 2018 Global Air report by the US-based Health Effects Institute, globally, PM2.5 contributed to 4.1 million deaths from heart disease, stroke, lung cancer, chronic lung disease and respiratory infections in 2016. The report highlighted that PM2.5 is even more dangerous than other more well-known risk factors such as alcohol consumption, physical inactivity, or high sodium intake and equivalent number of attributable deaths as high cholesterol and high body mass index. In Cambodia, PM2.5 is responsible for 5,915 human deaths or 72.6 deaths per 100,000 people in 2016, higher than the global death rate. Globally, the average deaths from PM2.5 is 62.5 deaths per 100,000 people.

It is important that PM2.5 concentration level be kept below WHO's air quality threshold at 25 micrograms per cubic meter. To reduce PM2.5 concentrations and make the city air fresher, the study proposed four recommendations:

1. All construction sites are required to cover with blue nets to prevent small particulate matters or dusts from flying out. Big construction sites are usually covered with blue nets but small constructions sites are not.

2. Trucks that carry dirt in and out the city should be covered with net to prevent dirt from falling on the streets.
3. The city should frequently wash all streets, especially in dry season. Dusty roads affect health of road travelers. Cleaning and sweeping may not reduce PM2.5 concentrations.
4. The city should build more green space areas and grow more trees, which help absorb small particles in the air.

The study was conducted in different parts of the city including schools, parks, markets, residence areas and construction sites. It is an outdoor air pollution study. Airbeam device was used to measure air quality. The research team traveled by tuk tuk at a speed of 20-30km/h with their airbeam on to record PM2.5 concentrations in the city. The study was conducted from March to May 2018. This study was supported by the Urban Climate Resilience in Southeast Asia (UCRSEA) project. (Media Contact: Mr. Khan Lyna, Research Coordinator, e-mail: khanlyna@gmail.com)



The airbeam device was used to measure outdoor air quality.

MSU Team Engages Communities to Create Awareness on Air Quality



MSU conducted shared learning dialogues with community members.

The research team at Mahasarakham University (MSU) is engaging the communities in the Maha Sarakham Municipality (MSM) to create public awareness on air pollution hazards and risks and encourage social involvement in mitigating adverse effects associated with it. The team, which conducted its research from November 2017 to July 2018, used the Airbeam device to better understand particulate matter (PM) concentrations. Exposure to PM with a diameter less than 2.5 microns or μm (PM2.5) has been linked to lung and cardiovascular disease and increased in both hospital admission and mortality in MSM.

Among the key activities undertaken by the team were: development of GIS spatial data for spatial analysis of PM2.5 pollution as well as looking for proper sites to install an air quality and meteorological monitoring station; identification of particulate air pollution risk areas with community participation; air pollution source inventories and mapping; investigation of potential air pollution sources over three polluted areas; and health effect assessment

The research team promoted and shared their findings in various creative formats, including a website (<http://air-soil-res.msu.ac.th/>), local newsletter, posters, shared learning dialogues, social media advocacy (<http://www.facebook.com/dinponclub/>; <http://www.facebook.com/NoPlasticCampaignMSU/>) and videos (<https://goo.gl/3fzfLF>). MSU undergraduate students from the Faculty of Environment and

Resource Studies were the key drivers of these activities. After enrolling in a class on “Air and Noise Pollution for Environmental Management” and training on the use of the AirBeam, they carried out a small project using the device. They worked together with the MSM communities and their health volunteers to convey their message on the impacts of PM2.5 on air quality.



Photos taken and clips recorded during shared learning dialogue on July 5, 2018.

Shared learning lessons, which focused on health volunteers from 30 communities in Mahasarakham City, were done in cooperation with the MSU Faculty of Applied and Fine Arts. There were two shows produced: one for the general public and another for the target group, i.e., approximately 60 health volunteers from 30 communities. The shows can be viewed at: <https://goo.gl/3fzfLE>. A clip from one of the shows will be used as a supplementary for learning and to raise awareness on the impact of PM2.5 on human health. It will be distributed to schools in Mahasarakham.

The MSU AirBeam team also released a news article entitled, “Problems on fine particulate matter from ASEAN to MSU”, published in *Siangthaibaan*, a local newsletter. MSU students and people in the community were the target audience.

UCRSEA SPREADS THE WORD

@ The RUPP Lecture Series, June 16th



Yanjun at the RUPP lecture.

Dr. Yanjun Cai, current UCRSEA Postdoctoral Fellow, was the keynote speaker for the Keynote Lecture Series of the Faculty of Development Studies at the Royal University of Phnom Penh on June 16th. Her academic presentation entitled, “Photovoice and Social Media Application: Proactive Urban Climate Resilience”, explored how the application of participatory methods and technological innovations can promote more just and transformative resilience

building in Southeast Asia. The presentation was followed by discussions centered on community resilience, vulnerability assessment, and participatory planning, which are critical topics that UCRSEA aims to address.

@ 2018 Canadian Association of Geographers, August 9th



UCRSEA's panel session, "*Urban Climate Resilience in Southeast Asia*", at the 2018 CAG Conference was held on August 9th. Prof. Amrita Daniere led the panel with the following paper presenters:

- Social Capital to Improve Climate Action (Katherine Laycock)
- The implementation gap: Reality vs. environmental rhetoric in Lao Cai, Vietnam (Gwenn Pulliat)
- Social Media Affordances and Urban Resilience in Myanmar (Yanjun Cai)
- Why Focusing on Urban Climate Change Resilience in Southeast Asia is Relevant and Urgent (Amrita Daniere)

The conference program is available [here](#).

NEW UCRSEA PUBLICATIONS

Emerging Livelihood Vulnerabilities in an Urbanizing and Climate Uncertain Environment for the Case of a Secondary City in Thailand

Astrud Lea Beringer and Jutamas Kaewsuk, International Research Center for Sustainable Environmental Management in Greater Mekong Sub-Region, Faculty of Environment and Resource Studies, Mahasarakham University

Increasing flood risks in Thailand are leading to new challenges for flood management and subsequently for livelihoods, which are still significantly agricultural. Policy makers prefer building flood protection infrastructure over utilizing non-structural measures like urban planning regulations to mitigate risks. The authors argue that unplanned urbanization intensifies flood risks and livelihood vulnerability and may even create new poverty patterns in peri-urban areas. However, urbanization can also strengthen the adaptive capacity of people in flood risk areas by providing more secure employment opportunities. The full paper appears in the Sustainability Journal and is also available at <http://www.mdpi.com/2071-1050/10/5/1452>.

Assessing the Potential of a Low-carbon Future for Cambodia

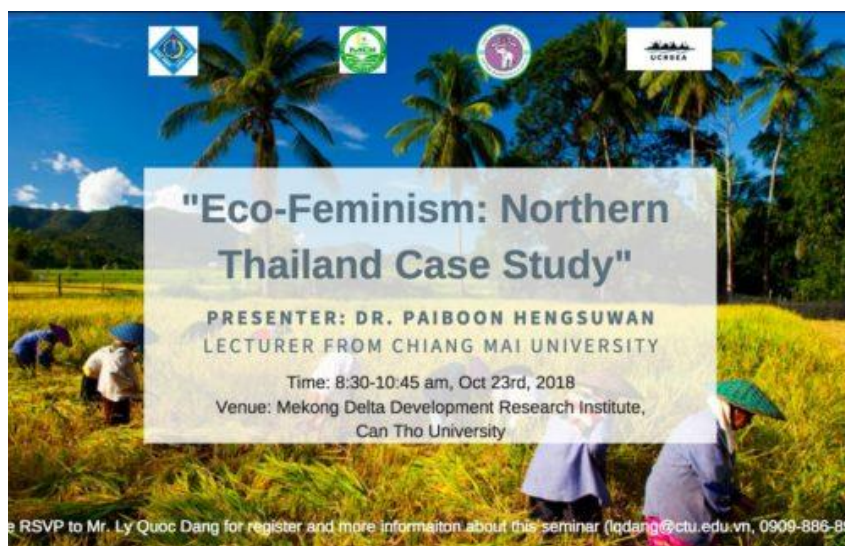
Furqan Asif, University of Ottawa; Melissa Marschke, University of Ottawa; and Chanrith Ngin, Royal University of Phnom Penh

This paper examines Cambodia's current carbon pathway and considers if Cambodia could move towards a low carbon future. The authors do so by examining two of Cambodia's largest carbon emitting sectors: energy and transportation. They argue that Cambodia has a unique window of opportunity to pursue a low carbon pathway given that, despite significant economic growth, the country is currently producing less CO₂ per capita compared to most other countries across Asia. Cambodia could benefit greatly (in economic, social, and environmental terms) from adopting a low carbon pathway. The full article appears on the Journal of Renewable and Sustainable Energy and is available at <https://aip.scitation.org/doi/full/10.1063/1.4978495>.

UPCOMING EVENTS & ANNOUNCEMENTS

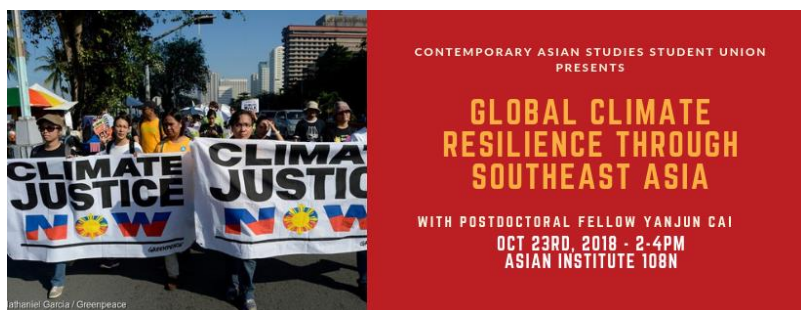
Eco-Feminism: Northern Thailand Case Study
October 23, 2018, 8:30-10:45 am
Mekong Delta Development Research Institute
Can Tho University, Vietnam

The Seminar will focus on the eco-feminism and environmental movement in Northern Thailand, including the eco-feminism in developing countries and formation in Thailand, environmental situation in Thailand from a gender perspective, and the eco-feminism and social movement to protect the resource base. Two guest speakers from Chiang Mai University are: Dr. Ariya Svetamra, Lecturer, Department of Women's Studies, Faculty of Social Sciences, Chiang Mai University, and Dr. Paiboon Hengsuwan, Lecturer, Department of Women's Studies, Chiang Mai University.



For more information, contact Mr. Ly Quoc Dang at lqdang@ctu.edu.vn; 0909-886-896.

Global Climate Resilience Through Southeast Asia – Urban Climate Action in the Philippines
October 23, 2018, 2:00-4:00 pm
Munk School of Global Affairs & Public Policy



Dr. Yanjun Cai, UCRSEA Postdoctoral Fellow, will give a talk on climate resilience during the event which is presented by the Contemporary Asian Studies Student Union and sponsored by the Asian Institute, Munk School of Global Affairs and Public Policy, University of Toronto. The panel aims to explore how urban climate resilience and participatory approaches intersect with environmental

governance in Southeast Asia, such as Myanmar and the Philippines.

For more information, contact:

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Facebook: <https://www.facebook.com/ucrsea/>

We want to hear from you!

If you, or your organization, have any upcoming events, news, or announcements you'd like us to include in the next issue of the UCRSEA Partnership Update, please contact us at ucrsea@gmail.com.



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