AIT
Asian Institute of Technology

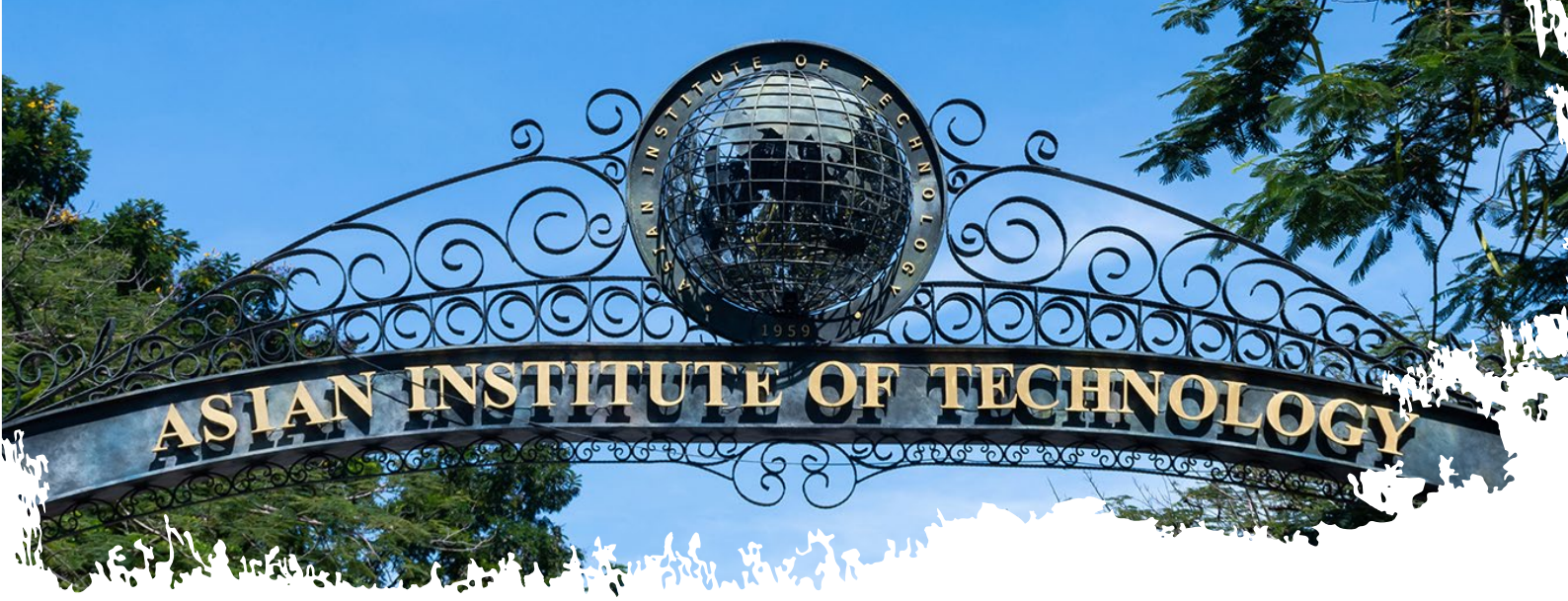
AIT SUSTAINABILITY REPORT 2023

TABLE OF CONTENTS

EDITORIAL BOARD

AIT wishes to thank its faculty, staff, students and the many people who rendered their assistance in preparing the AIT Sustainability Report 2023. The report was designed by Ms. Jennifer Pangilinan*, Coordinator, AIT Entrepreneurship Center, Graphic Designer,* Ms. Pitiruedee Angkhananuchat*, and the team.*

The AIT Sustainability Report is disseminated in digital format only following our **#GreenInitiative** and commitment to environmental considerations. **#PaperlessAIT**



ABOUT THIS REPORT

The Sustainable Development Goals (SDGs) or Global Goals are a set of 17 interconnected global goals that serve as a blueprint for achieving a better and more sustainable future for all. They cover a wide range of areas related to human and planetary well-being and, if achieved, will contribute to a stable and prosperous life for everyone while preserving the health of the planet.

Reaching the 2030 Agenda and the SDGs presents both challenges and opportunities. People worldwide have faced significant hardships and suffering, and the COVID-19 pandemic has compelled us to reevaluate our way of life, underscoring the importance of addressing the SDGs.

As a leading academic institution in Asia dedicated to sustainability, AIT has been collaborating with partners for over six decades to contribute its expertise to the region's sustainable development. Through its five thematic areas - Climate Change, Smart Communities, Food-Energy-Water, Infrastructure, and Technology, Policy, and Society - AIT focuses on learning and research strategies that aim to reduce poverty, mitigate risks, conserve resources, and create green job opportunities by fostering sustainable livelihoods in Asia.

This report provides a summary of AIT's activities in 2023, encompassing teaching, research, outreach, public engagement, and operations, in alignment with the SDGs. While this report highlights some initiatives, AIT undertakes a diverse range of activities across the Institute. AIT strives to provide solutions and recommendations for issues such as climate change, water and food insecurity, air and plastic pollution, biodegradation, biodiversity loss, and many others. The Institute's commitment to sustainable development and positive social impact is evident in its participation in the Times Higher Education (THE) Impact Rankings, where it consistently ranks as a frontrunner in the region.

AIT aspires to lead by example in practicing and promoting sustainability. It has initiated the Botanical Garden Campus Towards Net Zero, building upon previous campus plans, with the goal of transforming the entire AIT into a fully-fledged botanical garden and achieving net-zero emissions by 2030. This campus plan aligns with the direction of the Bio-Circular Green (BCG) Economy in Thailand and the Asia-Pacific region, integrating various ecosystems and biodiversity in the midst of a highly urbanized setting to foster harmonization between nature and humans.

I extend my gratitude to the editorial team for their collaboration with AIT Schools and Centers in highlighting important work in this regard.

Professor Kazuo Yamamoto
President
Asian Institute of Technology (AIT)

THIS REPORT IS CATEGORIZED UNDER THE FOLLOWING:

RESEARCH **OUTREACH** **OPERATIONS** **PROJECT**

TEACHING/TRAINING/ WORKSHOP **PUBLIC ENGAGEMENT** **FIELD SURVEY**

Climate change and its associated impacts, coupled with biodiversity loss, present formidable challenges to humanity. The urgency to address these issues is paramount, considering their far-reaching consequences. In response to these pressing challenges, the Asian Institute of Technology (AIT) has embarked on several key initiatives to combat climate change and promote sustainability.

AIT's commitment to sustainability is evident in its transformative endeavor, the Botanical Garden Campus Towards Net Zero by 2030, initiated under the leadership of President Kazuo Yamamoto. This ambitious project aims to make the entire AIT campus a fully-fledged botanical garden campus, integrating natural assets in alignment with Bio-Circular Green Economy principles. These activities include resource efficiency through biorefinery and the restoration of forest ecosystems and improvement of the existing forests in the respective gardens to offset emissions from energy consumption. A solar farm to reduce the remaining carbon emissions so that a Net Zero Emissions campus can be achieved on time. AIT recognizes the imperative to address its own emissions and has embarked on implementing various measures to mitigate them, including the installation of additional 1.5 MW solar energy sources, adopting nature-based solutions and many other initiatives.

The collective efforts of AIT in addressing climate change and biodiversity loss exemplify the institute's commitment to a sustainable future. AIT's Botanical Garden Campus Towards Net Zero sets a precedent for sustainable development in academic institutions, showcasing the transformative potential of integrating nature-based solutions. By implementing emission mitigation strategies and actively participating in global climate initiatives such as COP 28, AIT demonstrates its dedication to creating a resilient and sustainable future for all.

IPCC Sixth Assessment Report on Mitigation of Climate Change underscores the critical need for immediate action. It advocates halving emissions by 2030 to limit global warming to 1.5°C. Through their research, advocacy, and leadership roles, some of the renowned AIT faculty members as the lead author of the Working Group III report within the IPCC Sixth Assessment cycle report, exemplify the institute's dedication to addressing the challenges posed by climate change on a global scale. Their contributions underscore AIT's commitment to advancing scientific knowledge and shaping policies aimed at building a sustainable and resilient future for all.

In alignment with its commitment to sustainability, AIT actively participated in COP 28, the 2023 UN Climate Change Conference held in Dubai. Showcased AIT's initiatives and engaged in discussions on climate finance, adaptation, and transitioning to renewable energy sources. AIT's presence at COP 28 underscores its dedication to contributing to international efforts in combating climate change.

In conclusion, AIT's pioneering initiatives in climate action and sustainability reflect its commitment to addressing the pressing challenges of our time. As we navigate the complexities of climate change and biodiversity loss, AIT remains steadfast in its mission to lead by example and inspire positive change on a global scale.

"AIT Botanical Garden Campus Towards Net Zero" video compiling the overall plans can be viewed on the following link:

https://youtu.be/G_KjF9Jwr2o

AIT'S EFFORTS ON SUSTAINABILITY RESULTED IN SEVERAL TOP RANKINGS

AIT maintains its position as a leader in addressing sustainable development and social impact in the region by meeting the UN's Sustainable Development Goals (SDGs). Despite the increasing number of competing universities from 1,406 in the previous year, AIT maintained its overall rank of 201-300 out of 1,591 universities from 112 countries/regions.

AIT participated in 13 out of the 17 SDGs and was ranked within the global top 100 for SDG 1 (No Poverty), SDG 2 (Zero Hunger), and SDG 16 (Peace, Justice, and Strong Institutions).

AIT also ranked within the top 200 in **SDG 6 (Clean Water and Sanitation)**, **SDG 10 (Reduced Inequalities)**, **SDG 12 (Responsible Consumption and Production)**, **SDG 13 (Climate Action)**, **SGD 14 (Life Below Water)** and **SDG 15 (Life on Land)**.

AIT's overall score is 81.9 this year, ascribed to its increased collaborations with governments, NGOs, and international organizations, impactful research projects, policies to support its diverse community, and its Sustainability Report.

FIELD DATA COLLECTION ON COLLECTIVE ACTION BY ORGANIC JASMINE RICE PRODUCER GROUPS IN NORTHEASTERN THAILAND

AIT Research Theme: Food-Energy-Water

AIT Unit: NRM & DSP / DDS/ SERD

Project Duration: July 2022 to December 2025

Project Sponsors/Clients: IDE-JETRO (Institute of Developing Economies - Japan External Trade Organization)

Project Partner: Kobe University, Chulalongkorn University.

Expected Social Impact:

- Enhanced knowledge of the stagnant dissemination of organic practices for jasmine rice.
- Increased adoption of organic certificates for rice production.
- Increased income for smallholder farmers through price premium.
- Improved health among smallholders farmers due to reduced application of synthetic inputs such as herbicide and insecticide.
- Improved health among domestic and foreign consumers through consumption of organic food.

Description:

Following the preliminary field visits conducted in 2022 in Roi Et Province, the team of researchers from AIT and Kobe University proceeded to Nakhon Phanom Province in January 2023 to conduct key informant interviews with the Rice Department officials and leaders of different farmer groups with export-standard and Thai-standard organic certificates. Thereafter, the survey instrument was developed and the survey was conducted with 384 farm households in Nakhon Phanom Province and Roi Et Province from March to May 2023.

THE INVESTIGATION OF PRIVATE-SECTOR INPUT SUPPLIERS AND OUTPUT BUYERS THAT MAY BENEFIT FROM THE PROJECT INTERVENTIONS ON CLIMATE-SMART AGRICULTURE, HIGH-VALUE CROPS, AND PRODUCT QUALITY IMPROVEMENT

AIT Research Theme: Food-Energy-Water

AIT Unit: NRM/DDS/SERD; FINH/DFAB/SERD

Project Duration: January 2021 to September 2024

Project Sponsors/Clients: Asian Development Bank - Japan Fund for Prosperous and Resilient Asia and the Pacific (ADB-JFPR)

Project Partners: Nippon Koei, Team Group.

Description:

A field visit was undertaken in Nan Province by two experts, Takuji W. Tsusaka (AIT) and Siriluck Sirisup (Team Group), along with three Ph.D students, Kittipan Tikum, Nitchakan Inkong, and Jarunee Intrasook to explore and identify private-sector input suppliers and output buyers that would benefit from the interventions by the Technical Assistance (TA) project "Climate Change Adaptation in Agriculture for Enhanced Recovery and Sustainability of Highlands."

The objectives of the field mission were as follows:

- To update the list of relevant input suppliers and output buyers such as input dealers, farmer enterprises, and processors.
- To obtain information on the latest requirements for the GAP (Good Agricultural Practice) and PGS (Participatory Guarantee System).
- To investigate the potential for some of the input suppliers to benefit from the TA interventions (i.e., climate-smart agriculture (CSA) practices, high-value crops, product quality improvement).
- To investigate the potential for some of the community enterprises and processors to benefit from the TA interventions.
- To examine how farmers and community enterprises assess the quality and safety of their products as well as their current knowledge of good practices.

The in-depth interview method was adopted in light of the limited population size of relevant companies and the necessity for the exploratory inquiry. The interview checklists were prepared for each type of respondents. The selection of input suppliers was based on their relevance to the three CSA practices and/or the connection with TA farmers, while the selection of output processors was based on their relevance to the six strategic crops of the TA. On one occasion, a focus group discussion was held with five herb producing farmers. In addition, 20 farmers in the TA were interviewed using a structured instrument to assess their capacity for food safety management.

Web links:

The project abstract.

https://www.adb.org/projects/53099-001/main

The post for this activity

http://www.ccaa.ait.ac.th/field-visit-undertaken-to-identify-buyers-and-suppliers-in-bua-yai-subdistrict/

ENHANCING SOCIAL PROTECTION FOR URBAN POOR: A COLLABORATIVE DISCUSSION BY AIT AND FRIEDRICH-EBERT-STIFTUNG

24 August 2023 – The Asian Institute of Technology (AIT), in collaboration with the Friedrich-Ebert-Stiftung (FES) Thailand Office, organized a roundtable discussion on the 'Effectiveness of Social Protection Programmes and Policies for Urban Poor in Bangkok Metropolitan Area' on August 24 in Bangkok.

The discussion brought together experts from various multi-stakeholder groups, including Civil Society Organizations (CSOs), development partners, private organizations, academicians, and representatives from the central and local government. The primary objective of the AIT-FES partnership is to discuss the adequacy of benefits, and inequality in access, coverage, and management of social assistance programs, especially for disaggregated groups like women and children.

Furthermore, this collaboration seeks to uncover untapped opportunities to modernize the level of benefits of social assistance packages and efficiency. Ultimately, the collaboration aims to formulate policy recommendations for the government, aimed at fostering a more equitable and inclusive approach to accessing social protection programs that benefit disaggregated population groups.

Prof. Vilas Nitivattananon from AIT's Urban Innovation and Sustainability (UIS) program of the School of Environment Resource and Development (SERD) delivered the welcome remarks. Ms. Vesna Rodić, Resident Director, FES Thailand, and Dr. Malay Pramanik, Assistant Professor, UIS, SERD, AIT, both underscored their commitment to driving this initiative forward. Both AIT and FES are committed to formulating practical and effective policy options catered to various arms of the Government to make social protection programs more inclusive and viable for segments of the population that have long been marginalized.

The discussions featured multiple sessions, with one being moderated by Dr. Ing Rattikarn Khambud, an Urban/National Spatial Planner from the Department of Public Works and Town and Country Planning, Ministry of Interior, Thailand. Dr. Khambud shed light on issues pertaining to adequacy, inequality, and management of existing social protection and welfare schemes. Another session delved into policy adequacy across various sectors and groups.

The projects will explore the following areas:

- Current issues pertaining to the areas of social assistance programs and discuss possible solutions for improving current policies available for the urban poor;
- Identify ways for improving access and coverage of social safety net programs for the inclusivity of urban poor;
- Strengthen partnerships of the state and non-state actors in Thailand working towards urban and social safety net policy regimes.

AIT EXTENSION'S CSR CAMPAIGN, "DONATION FOR GREENER COMMUNITY,"

The AIT Extension's CSR campaign, "Donation for Greener Community," successfully concluded on September 19, 2023, having run from August 18, 2023. The campaign aimed to promote sustainability and reduce environmental waste by encouraging the AIT community to donate unused items to those in need.

To facilitate participation, the campaign established four convenient donation points across campus:

- Donation Center behind the Purchasing Office at the Administration Building, near the football field, open from 10:00 to 14:30 hrs.
- Dormitory P near the stairway, accessible at any time.
- ST6 near the notice board, accessible at any time.
- AIT Cafeteria, accessible at any time.

The campaign encouraged donations of a wide range of items, including new and gently used clothing, shoes, bed sheets, pillows, hand bags, appliances, crockery, cutlery, utensils, books, DVDs, sporting goods, and toys. Participants were instructed to pack items in bags or boxes and contact the organizers for larger items.

The donated items were collected and organized for distribution to The Mirror Foundation, a local charity dedicated to supporting vulnerable communities. The campaign's collection exceeded expectations, with the AIT community contributing a substantial amount of reusable items.

The success of the campaign demonstrated the AIT community's strong commitment to social responsibility and sustainability. By donating unused items, participants helped reduce waste and support those in need. The campaign also fostered a sense of community and collaboration among AIT members, who worked together to achieve a common goal.

FIVE MASTERS STUDENTS RECEIVE THE PAN MERIT EDUCATION GROUP SCHOLARSHIPS

Pan Merit Education Group and the Asian Institute of Technology signed an agreement on 28 December 2021 to support 5 Million Baht towards 5 Full Master's scholarships to students of any nationality enrolled in any program of the three schools: School of Engineering & Technology (SET), School of Environment, Resources & Development (SERD), and School of Management (SOM). The scholarship recipients are called "AIT Pan Merit Belt and Road Scholars".

After vigorous assessment/ interviews, these scholarships were awarded to Ayesha Kiran from Pakistan enrolled online in Food Engineering & Bioprocess Technology, SERD (January 2022 intake) and currently in Pakistan; Cho Lei Yee Win from Myanmar enrolled in Business

Administration, SOM and John Francis Viloria Pedroso from Philippines enrolled in Water Engineering & Management, SET (August 2022 intake); Talengi Kasambara from Malawi and Jayanga Nishadi Samararathna Kodikara from Sri Lanka, both enrolled in Water Engineering & Management, SET (January 2023 intake).

Pan Merit Education Group has been focused on aviation education and related industries for nearly 30 years. In recent years, the Pan Merit layout integrated two wings of the core development strategy. Explore the collectivized development idea of "Education plus Industry."

AIT President Kazuo Yamamoto expressed his sincere thanks to Pan Merit for these scholarships which will enable these students to further pursue their academic studies at AIT that would benefit them in their future careers. The Institute very much appreciates the scholarships provided by Pan Merit Education Group.

ADVANCING GLOBAL FOOD SAFETY

AIT Research Theme: Food-Energy-Water

AIT Unit: FEBT-FINH/DFAB/SERD

Project Duration: 2023

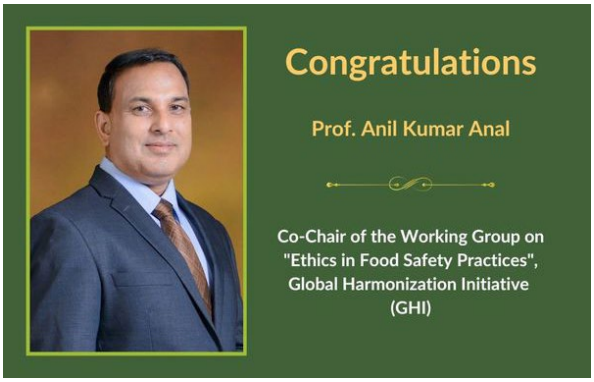
Project Partners: The Global Harmonization Initiative

Description:

Anil Kumar Anal, Professor of Food Engineering and Bioprocess Technology, Asian Institute of Technology, has been elected as the Co-Chair of the Working Group on "Ethics in Food Safety Practices" within the Global Harmonization Initiative (GHI).

AIT is proud to have him as a member of our faculty, and is confident that his expertise will play a pivotal role in promoting food safety and harmonization.

The GHI serves as a network comprising individual scientists and scientific organizations, working together to promote the harmonization of global food safety regulations and legislation through scientific consensus, education, and advocacy.



Developing relevant and enforceable food safety policies and regulations is an essential component ofan effective food safety system. Ethics of collective decisions addressing societal issues, such as public health management through food safety control, involve stakeholders with different perspectives of the system, different expectations from the research, and potential conflicts of interest.

TRAINING CUM EXPOSURE VISIT ON APPLICATION OF INNOVATIVE TECHNOLOGIES FOR CLIMATE-SMART AGRICULTURAL PRODUCTION AND CONSUMPTION

AIT Research Theme: Smart communities

AIT Unit: SERD/AARM

Project Duration: 15 October 2022 to 31 December 2023

Project Sponsors/Clients: AITCV, Vietnam

Project Partners: AITCV, Vietnam

Expected Social Impact:

The project will introduce the unique agri-aqua cultivation practices in Thailand to Vietnamese officers, which will enhance their capacity to adopt and disseminate more intensive and eco-friendly production practices in Vietnam. This will also strengthen our engagement with AIT Centre Vietnam.

Description:

AIT will facilitate the visit and training for government officers from the Cao Mau Province of Vietnam to Thailand in the first week of November 2022

AGRO-METEOROLOGICAL FORECASTS AND ADVISORIES THROUGH MOBILE APPLICATION AND SOCIAL MEDIA FOR CLIMATE-SMART AGRICULTURE IN THAILAND AND VIETNAM-AFAS

AIT Research Theme: Technology, Policy and Society

AIT Unit: SERD/ASE

Project Duration: 5 January 2024 to 4 January 2027

Project Sponsors/Clients: Asian Development Bank (through Landell Mills Ltd.)

Project Partners: -

Expected Social Impact:

The research project will develop a multi-stakeholder platform involving smallholder farmers, regional development partners, relevant government agencies, and policymakers to enhance cooperation and coordinated development for sustainable agriculture and climate adaptation in the GMS region. This will bridge gaps between science and society for climate-adaptive and sustainable food production in the face of increasing climate change impact and pressure on the regionâ€™s food production systems. To ensure meaningful collaboration and participation of stakeholders, we implement iterative interactions and capacity-building workshops with different target groups.

Description:

The main objective of this project is to deploy the Agro-meteorological Forecast and Advisory System (AFAS) in Thailand and Vietnam, to provide small-holder farmers with much-needed agro-meteorological forecast and agronomic advice, ultimately enabling them to implement climate-smart agricultural practices.

AIT UNVEILS CUTTING-EDGE SMART GREENHOUSE, REVOLUTIONIZING SUSTAINABLE AGRICULTURE WITH IOT AND AI TECHNOLOGIES

On 29 November 2023, the Asian Institute of Technology (AIT) made a significant stride in sustainable farming by inaugurating a cutting-edge Smart Greenhouse under the Department of Food, Agriculture, and Bioresources (FAB) at the School of Environment, Resources, and Development (SERD). President Prof. Kazuo Yamamoto led the inauguration of this 10 m × 20 m facility, which was developed under the supervision of Dr. Sushil Kumar Himanshu from the Agricultural Systems and Engineering Academic Program.

The Smart Greenhouse represents a leap forward in integrating technology with agriculture, utilizing advanced Internet of Things (IoT) and Artificial Intelligence (AI) systems to revolutionize cultivation practices. This innovative facility enables precise control over environmental factors such as temperature, humidity, light, and ventilation, ensuring an optimal growth environment for various crops.

Key features include a sophisticated climate control system that employs EVAP cooling, ventilation, farm fans, and fogging systems to create an ideal microclimate. Additionally, automated shading systems enhance sunlight management, while the facility's mobile app allows remote monitoring and control, empowering growers with valuable data on environmental conditions, soil health, and plant phenomics.

The greenhouse is segmented into four distinct zones, each equipped with specialized sensors for soil moisture, pH, NPK, and EC levels. This zonal division promotes efficient resource utilization and allows for tailored growing conditions. The automated drip irrigation system minimizes water wastage by delivering water precisely according to each plant's needs, while the controlled fertigation system optimizes nutrient delivery by continuously monitoring EC, flow rate, and pH levels.

AIT's Smart Greenhouse exemplifies its commitment to advancing Sustainable Development Goals (SDGs), particularly in promoting sustainable agriculture through technological innovation. For more information, please visit the Agricultural Systems and Engineering (ASE) program on AIT's official website.drip irrigation systems minimize water wastage by delivering water precisely based on the specific needs of each plant.

For additional details about the Agricultural Systems and Engineering (ASE) program, please visit the official website: *Agricultural Systems and Engineering at AIT*.

AIT SIGNS MOA WITH PHILIPPINE UNIVERSITIES FOR RESEARCH AND CAPACITY-BUILDING PROGRAMS ON HEALTHY FOOD SECURITY

24 March 2023 – The Asian Institute of Technology (AIT) signed a Memorandum of Agreement (MoA) with a consortium comprising three universities in the Philippines, namely the Mariano Marcos State University (MMSU), the Ilocos Sur Polytechnic State College (ISPSC), and the Don Mariano Marcos Memorial State University (DMMMSU) on March 24, 2023.

The MoA includes implementing the CHED-approved research program titled, "Advancing Ilocos Indigenous Food Systems Through Academia-Industry Collaborative Research and Innovations Toward Healthy Food Security." As part of the agreement, the consortium and AIT, with the support and coordination of MMSU, have committed to conducting capacity-building activities that will enhance the Science, Technology, and Innovation Capacity for Probiotic Food Systems Program.

Prof. Kazuo Yamamoto, AIT President, stated that this collaboration comes at the right time as AIT plans to expand partnerships in the region. He believes this partnership is not just a simple agreement, but a powerful source that brings diverse minds and ideas together. He looks forward to a fruitful collaboration.

Dr. Shirley C. Agrupis, President of MMSU, expressed her gratitude and stated that this collaboration would lead to a strong partnership with AIT for capacity building. They aim to develop the human capital of the Philippines that is locally responsive and locally competitive.

The event was also attended by ISPSC President Dr. Gilbert R. Arce, and DMMMSU President Dr. Jaime I. Manuel, JR. The event was also attended by several officials and representatives from the universities involved in the training program at AIT under this MoA.

Dr. Dionisio S. Bucao, Director for Science and Technology, and Ms. Arlene L. Gonzales, Associate Professor and Chief of International Program, represented MMSU, while Dr. Angelina T. Gonzales, Vice President for Research, attended the meeting from DMMMSU.

Read more: *https://ait.ac.th/2023/03/ait-signs-moa-with-philippine-universities-for-research-and-program-on-probiotic-food-systems/*

REVOLUTIONIZING RICE PRODUCTION IN ASEAN THROUGH REGENERATIVE AGRICULTURE

24 March 2023 – In a groundbreaking initiative that promises to reshape the future of rice production in the Association of Southeast Asian Nations (ASEAN), the Asian Institute of Technology (AIT) has been awarded a USD 300,000 grant by The Rockefeller Foundation (RF) for implementing an ambitious project, "Regenerative Agriculture in ASEAN: Promoting Nature-Positive Solutions for Rice Production" (REGA-ASEAN).

(Project implementation team: Prof. Avishek Datta, Dr. Farhad Zulfiqar, and Dr. Sushil Kumar Himanshu)

With rice being a cornerstone of the region's economy and food security, the urgency to address the challenges posed by climate change and conventional farming practices has never been greater. The REGA-ASEAN project seeks to revolutionize rice production systems by introducing

regenerative agriculture principles in Cambodia, Lao PDR, and Thailand. The empirical evidence generated through this project will be the cornerstone of this revolution.

Read more: *https://ait.ac.th/2023/11/revolutionizing-rice-production-in-asean-through-regenerative-agriculture/*

AIT SDG SUMMER SCHOOL - HACK FOR HEALTH

AIT Research Theme: Healthcare

AIT Unit: AIT Entrepreneurship Center

Project Duration: 24-29 July 2023

Description:

The AIT SDG Summer School, co-hosted by AIT and the University of Geneva, ran from 24-29 July 2023. Three teams developed digital solutions for Tuberculosis management. Participants received mentorship and showcased their ideas. Dieter W. Trau highlighted insights gained, emphasizing digital solutions' potential in healthcare. Teams RSK and TB.AI won the prizes. Teams plan to further develop projects within the EC incubation plan. The award ceremony was held on 30 August 2023, coinciding with AIT EC Open House Day.

Read more: *https://ait.ac.th/2023/07/inspiring-breakthroughs-at-ait-sdg-summer-school-student-teams-forge-innovations-for-digital-tuberculosis-management-in-5-day-challenge/*

TRUNCATE-TB REGIONAL STAKEHOLDERS MEETING-WORKSHOP

AIT Research Theme: Technology, Policy and Society

AIT Unit: AIT Entrepreneurship Center

Project Duration: 1 May 2023 to 31 October 2023

Project Sponsor/Client: Vital Strategies Health Systems (Asia Pacific)

Expected Social Impact: This project supports SDG 3 Goal, Good health and Well Being

Description:

The TRUNCATE-TB trial focuses on investigating a novel strategy for treating pulmonary tuberculosis (TB) with the potential to yield improved outcomes in program settings. The clinical trial was conducted across 18 sites in the Philippines, Indonesia, Thailand, India, and Uganda. The objective of this project is to organize country-focused TRUNCATE-TB national stakeholder meetings. These meetings will facilitate discussions among stakeholders regarding the design, implementation, and funding of research on the TRUNCATE Strategy within local program settings.

AIR QUALITY IMPROVEMENT PROGRAM IN THAILAND (AQIP-THAILAND)

AIT Research Theme: Climate change

AIT Unit: SERD/EEM

Project Duration: 20 February 2023 to 28 February 2025

Project Sponsor/Client: Agence française de développement (AFD)

Project Partner: Egis Airparif Citepa

Expected Social Impact:

The expected social impact of this project is to create healthier living environments, promote environmental conservation, stimulate economic growth, foster social equity, and increase public awareness about air quality issues. By working towards these goals, the project aims to contribute to the well-being and sustainable development of Thailand and its cities.

Description:

The Air Quality Improvement Program in Thailand (AQIP-Thailand) is funded by the Agence française de développement (AFD). It is related to AFD's Regional Program for Air Quality Improvement in Southeast Asia,

which aims to support partner countries and cities in the region in their efforts to develop and implement policies and projects in order to improve air quality. The project is conducted by a consortium of four institutions led by Egis, with AirParif, Citepa, and AIT as partners, focusing on Thailand. The overall objective of this project is to support Thailand and the cities in the country in their efforts to develop and implement policies and projects in order to improve air quality.

THE GIANT PRAWN 2023 CONFERENCE

AIT Research Theme: Food-Energy-Water

AIT Unit: SERD/AARM

Project Duration: 25 September 2023 to 31 December 2024

Project Sponsor/ Client: International Delegates

Expected Social Impact: This project is aimed as the foremost platform dedicated to the farming and conservation of giant freshwater prawns of Macrobrachium spp.

Description:

The 6th edition of the Giant Prawn Conference was organized by the Asian Institute of Technology (AIT) and Shanghai Ocean University (SHOU), China, together with the Department of Fisheries, Thailand, in Bangkok, Thailand, from 27 to 29 November 2023. This international gathering is the foremost platform dedicated to the farming and conservation of giant freshwater prawns of Macrobrachium spp.

Founded by Michael New, OBE, in 1980, the conference holds a significant place in the aquaculture calendar, with a primary focus on the sustainable evolution of freshwater prawn farming. Giant Prawn 2023 marks a return to Thailand, underscoring the country's global contributions to this dynamic industry.

The symposium's theme for this year, "Another Giant Leap for Sustainability," highlights the innate capacity

of giant freshwater prawns to foster sustainable farming practices, setting them apart from marine shrimp farming. The conference delves into cutting-edge technological innovations, especially in biotechnology, aimed at improving prawn stocks, with a spotlight on the advancements within Thailand's freshwater prawn farming industry. This collaborative effort between AIT and SHOU, led by Krishna R Salin and Xuxiong Huang, respectively, signifies the expertise of both institutions in the Aquaculture and Aquatic Resources Management of freshwater prawns on a global scale.

Kazuo Yamamoto, President of the Asian Institute of Technology (AIT), expressed his delight at witnessing the collaboration between AIT and Shanghai Ocean University in organizing this global event. He stated, "As we engage in the sessions, lectures, and panel discussions, opportunities abound for valuable connections and collaborative sparks. Giant freshwater prawns, with their intrinsic potential for sustainable farming, are a focal point. Their contribution to rural livelihoods in Southeast Asia is significant. AIT, alongside Shanghai Ocean University, takes pride in hosting esteemed speakers, fostering discussions that align with our commitment to sustainable development."

Read more: *https://ait.ac.th/2023/11/giant-prawn-2023-conference-advancing-sustainability-in-freshwater-prawn-farming/*

EXPERTISE AND WELL-BEING OF CONSTRUCTION EXPATRIATES

AIT Research Theme: Infrastructure

AIT Unit: SERD/AARM

Project Duration: 10 October 2022 to 30 September 2024

Project Sponsor/Client: Phagos Company, France

Expected Social Impact:

This project holds significant social impact by addressing the living and working conditions of construction expatriates. By investigating the factors influencing their well-being and proposing the Construction Technical Intelligence/Quotient (CTQ), it aims to enhance the quality of life and safety for expatriates while optimizing the allocation of construction professionals to overseas projects. Through improved living conditions, enhanced working environments, and more strategic talent management, the project contributes to promoting fair labor practices, fostering global mobility, and advancing sustainable development goals.

Description:

The project develops and investigates factors that influence the living and working conditions of construction expatriates. A construction technical intelligence/quotient (CTQ) is proposed and developed to assist construction companies in allocating construction professionals to overseas projects.

AIT STUDENT BREAKTHROUGH: TURNING CRUSTACEAN SHELL WASTE INTO SUSTAINABLE SOLUTIONS FOR AGRICULTURE, FOOD, AND HEALTH

In a remarkable research milestone, we proudly announce the exceptional achievement of our student Jyotirmoy Pathak, a second-year master's student studying in the *Bio-Nano Materials Science and Engineering* Program. We extend our warmest congratulations to him. Jyotirmoy has recently co-authored a significant paper entitled "Crustacean Shell Waste-Derived Chitin and Chitin Nanomaterials for Applications in Agriculture, Food, and Health – A Comprehensive Review," which has been published in the prestigious Carbohydrate Polymer Technologies and Applications journal (Impact Factor: 5.5).

Chitin, a naturally abundant polymer, forms the crucial structural component of crustacean shells. The crustacean processing industry generates a considerable annual volume of shell waste, amounting to millions of tons, with the majority unfortunately ending up as environmental pollutants. However, this underutilized waste resource harbors substantial potential for conversion into valuable chitin and chitin nanomaterials.

Mr. Pathak's paper outlines the methodologies for extracting chitin from crustacean shell waste, shedding light on recent advancements in the isolation of chitin nanomaterials, including Chitin Nanocrystals (ChNCs) and Chitin Nanofibers (ChNFs) derived from purified chitin. Moreover, this publication serves as a comprehensive exploration of the current practical applications of chitin and chitin nanomaterials across diverse sectors, encompassing agriculture, biomedicine, and the food industry. It provides valuable insights into the vast potential of this polymer for future research and development endeavors.

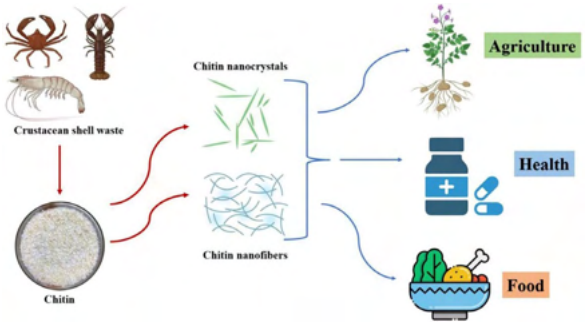


Figure 1: Graphical Abstract of the Paper from Ngasotter, et al. (https://doi.org/10.1016/j.carpta.2023.100349)

This achievement stands as a testament to Pathak's dedication and commitment to producing high-quality work. We take immense pride in witnessing our students engage in impactful research initiatives and collaborate with researchers from various institutions.

For those interested in exploring this groundbreaking research, the paper is accessible via the following link:

https://doi.org/10.1016/j.carpta.2023.100349

FINE PARTICULATE MATTER – A HARMFUL AIR POLLUTANT AND PRESSING GLOBAL PROBLEM

Air pollution is a critical global issue, with advances in technology and increased emissions from vehicles, industries, and waste management identified as major contributors, particularly to fine particulate matter (PM2.5). Thailand's PM2.5 levels exceed the World Health Organization's (WHO) guidelines, posing significant health risks.

Dr. Ekbordin Winijkul, an air pollution expert and Associate Professor at AIT's School of Environment, Resources, and Development, highlights the severe impact of PM2.5 on health, especially for vulnerable groups such as children, the elderly, pregnant women, and those with preexisting conditions. Research shows that inhaled ultra-fine particles can infiltrate the lungs, blood, brain, and other organs, exacerbating health risks due to toxic substances within these particles.

Dr. Winijkul warns that the situation could worsen due to El Niño and climate change, particularly in regions with low precipitation, stagnant air, and increased forest fires. He advises the public to minimize outdoor activities on high PM2.5 days, wear face masks, stay indoors, and use air purifiers. He emphasizes that controlling emissions at their sources—such as reducing diesel exhaust, industrial

fuel combustion, and open burning—is the most effective solution.

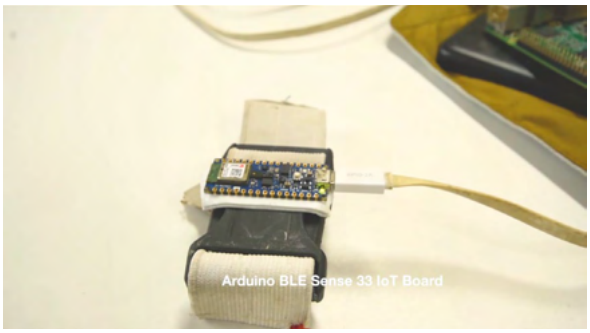
AIT is pioneering efforts in Thailand to measure atmospheric microplastics, aiming to understand their health risks. The institute collaborates with government bodies, international organizations, and other nations to improve air quality. AIT's work includes research on air pollution sources and mitigation for Bangkok, cost-benefit analyses of clean fuels, and the economic impact of air pollution policies at both national and regional levels. These initiatives are part of AIT's broader commitment to addressing air pollution, a pressing issue responsible for approximately seven million deaths globally each year.

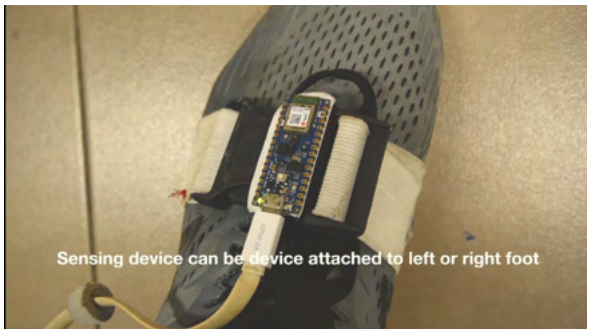
https://ait.ac.th/2023/03/fine-particulate-matter-a-harmful-air-pollutant-pressing-problem-globally/

IOT-BASED WEARABLE DEVICE OFFERS AFFORDABLE AND PORTABLE GAIT ANALYSIS FOR THE EARLY DETECTION OF FOOT DISORDERS AND WALKING IRREGULARITIES

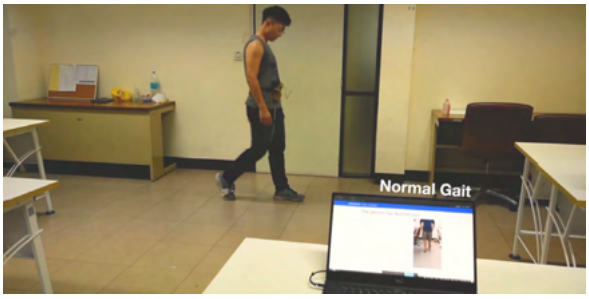
Gait analysis is crucial for detecting foot disorders and walking irregularities such as pronation, supination, and unstable foot movements. Early identification of these issues can prevent injuries, correct walking posture, and potentially eliminate the need for surgery or cortisone injections. Traditional gait analysis methods, however, are expensive and typically confined to laboratory settings.

In response to these limitations, Mr. Sanjeev Shakya, an IoT Systems Engineering student at the Asian Institute of Technology (AIT), developed a novel, cost-effective solution as part of his Master's thesis, supervised by Associate Professor Dr. Attaphongse Taparugssanagorn. This innovation employs Internet of Things (IoT), edge computing, and Tiny Machine Learning (TinyML) technologies to make g ait analysis more accessible. The device, a microcontroller-based system worn on a shoe, uses an Inertial Measurement Unit (IMU) sensor and a TinyML model on an Advanced RISC Machines (ARM) chip to classify and predict abnormal gait patterns.





This smart wearable device offers a portable, low-powered, and affordable method for conducting gait analysis outside of specialized facilities. By making gait analysis more accessible, it allows individuals to detect and correct gait abnormalities in their everyday environments, without the need for expensive lab tests.



Beyond accessibility, the benefits of this technology include early detection of gait abnormalities, which can prevent injuries and improve overall walking posture and health. The use of advanced technologies like AI and IoT not only enhances the accuracy of gait analysis but also empowers individuals to take proactive steps in maintaining foot health, potentially avoiding more invasive interventions.AIT's commitment to integrating cutting-edge technology in health solutions highlights its contribution to Sustainable Development Goals (SDGs) by improving health outcomes and making healthcare more inclusive and affordable.

https://ait.ac.th/2023/03/iot-based-wearable-device-offers-affordable-and-portable-gait-analysis-for-the-early-detection-of-foot-disorders-and-walking-irregularities/

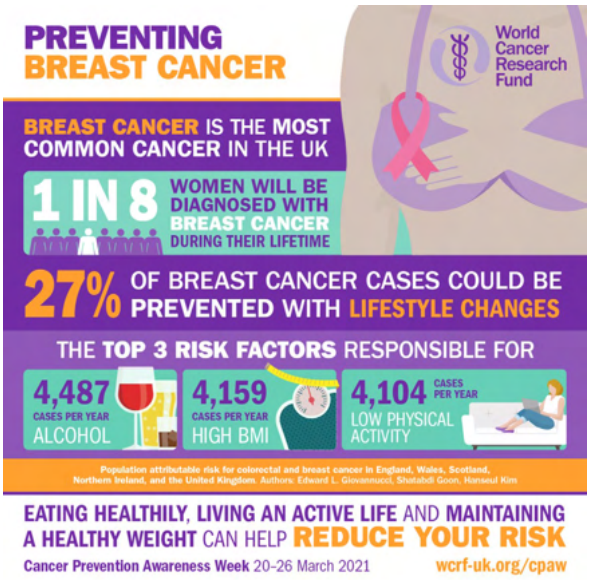
WIRELESS SIGNALS AND A.I.-ASSISTED MICROWAVE IMAGING TO DETECT BREAST CANCER & STROKE EARLY

Cancer, a leading cause of death worldwide, claimed 10 million lives in 2020 alone. As cancer cases continue to rise, early detection becomes crucial in improving survival rates. Traditional diagnostic methods, such as X-rays, ultrasounds, and MRIs, though effective, have limitations, including high costs, potential radiation exposure, and lower accuracy in specific cases like dense breast tissue.

At the Asian Institute of Technology (AIT), telecommunications experts are advancing wireless body-centric diagnostic methods integrated with Artificial Intelligence (AI) to revolutionize cancer and stroke detection. Assoc. Prof. Dr. Attaphongse Taparugssanagorn, known as "Dr. Pong," leads this innovative work, leveraging his expertise in advanced wireless communication, signal processing, and machine learning to develop non-invasive, radiation-free, and low-cost diagnostic tools.

Dr. Pong's research focuses on Wireless Ultra-WideBand (UWB) technology, a short-range, high-bandwidth wireless communication signal used for radar and imaging. By integrating UWB with AI, specifically machine and deep learning techniques, his team aims to enhance the accuracy and efficiency of medical imaging. These algorithms analyze vast amounts of imaging data to detect patterns and features that may be challenging for human experts to identify, enabling earlier and more accurate diagnosis of cancers and strokes.

AIT's work in this field is part of the European Union-funded ROVER project, which brings together international experts to develop on-body and in-body



Pic Credit: WCRF_UK

wireless technologies for healthcare. This collaboration aligns with Sustainable Development Goals (SDGs) by promoting innovation in healthcare, improving early detection, and making advanced medical diagnostics more accessible and affordable globally.

Through these efforts, AIT continues to push the boundaries of AI and telecommunications to improve patient care and contribute to a future where early, accurate diagnosis can save more lives.

SYNERGY INSIGHT COMPANY LIMITED DONATES 1,920 ATK GENODE TEST KITS TO AIT

Mr. Ratchapon Silawiserit, Managing Director of Synergy Insight Company Limited, and Assoc. Professor Dr. Chatnarin Metheekul, the AIT Medical Center lead doctor, visited the Asian Institute of Technology (AIT) to donate 1,920 ATK GENODE test kits. The valuable contribution was gratefully received by Mr. Russell Rein, Vice President for Administration, and Ms. Maybel Diopenes, Director of the Office of Human Resources Services.

These ATK GENODE test kits are set to play a crucial role in bolstering AIT's health and safety measures. They will be strategically distributed across offices within the institute, including the Medical Center, Office of Student Affairs, Office of Human Resources Services, and AIT International School.

AIT expresses its heartfelt appreciation to Synergy Insight Company Limited for choosing the institute as

the beneficiary of this significant donation, marking a milestone in the collaborative efforts to ensure a safer and healthier environment within the AIT community.

OFFICE OF HUMAN RESOURCES SERVICES ORGANIZED A FREE-MEDICAL CHECK-UP ON CAMPUS

The Office of Human Resources Services successfully organized a free medical check-up event in collaboration with the Social Security Office. The initiative was part of HR's employee health and wellness program, intending to provide AIT employees with a convenient way to receive a comprehensive medical test without having to leave the campus.

The registration process was efficiently done online and had a deadline set for September 19th, 2023. On October 11th, 2023, the medical team from Karunvej Hospital visited the AIT campus to conduct the medical test. Out of 177 registrants, 135 employees were able to undergo a wide range of medical tests.

The employees appreciated the convenience of receiving on-campus medical care, which allowed them to prioritize their health without disrupting their work schedules.

The Office of Human Resources Services initiative demonstrated a commitment to the well-being of employees, fostering a culture of health awareness, preventative care, and wellness in the workplace.

"RUN FOR GREENER COMMUNITY" CAMPAIGN, ORGANIZED BY AIT EXTENSION

The "Run for Greener Community" campaign, organized by AIT Extension, took place on August 24, 2023, at the AIT Wellness Park at 5:00 pm. The campaign was designed to promote health and wellness within the AIT community while raising awareness of environmental sustainability.

The event was met with enthusiasm by the community, as participants gathered at the Wellness Park ready to take part in the run. The campaign focused on combining physical activity with a cause that promotes the well-being of both individuals and the environment.

The run encompassed various trails within the park, providing participants with a scenic experience that highlighted the beauty of the natural surroundings. Runners of all levels joined the event, creating a lively and inclusive atmosphere. The event also emphasized the importance of staying active and engaged in eco-friendly practices.

Feedback from participants was overwhelmingly positive, with many expressing their appreciation for the opportunity to engage in a community-oriented event. The run also fostered a sense of camaraderie among participants as they supported each other throughout the course.

In addition to the physical benefits of the run, the event successfully raised awareness about the importance of maintaining a green and healthy environment. It underscored AIT Extension's commitment to promoting health, wellness, and sustainability within the AIT community.

Overall, the "Run for Greener Community" campaign was a great success, leaving participants inspired and motivated to continue pursuing healthier and more sustainable lifestyles. The AIT community looks forward to similar events in the future that promote both individual and environmental well-being.

EFFECTIVE MANAGEMENT SKILLS AND LEADERSHIP

AIT Research Theme: Technology, Policy and Society

AIT Unit: Yunus Center

Project Duration: 20 June 2023 to 31 July 2024

Project Sponsor/Client: OP Jindal Global University

Expected Social Impact: Improved effective management of human capital critical to the success of organizations

Description:

This professional development program aims to enhance knowledge and skills of the educators, education administrators, academic and non-academic officers in the areas of capacity development and leadership management.

CREATING HIGH-QUALITY SUSTAINABILITY EDUCATION PROGRAMMES FOR TEACHERS

AIT Research Theme: Climate Change

AIT Unit: SET / Civil Engineering

Project Duration: 21 May 2023 to 31 August 2023

Project Partner/Client: The Head Foundation (THF)

Project Partners: Can Tho University, Vietnam

Expected Social Impact: Training teachers , Enhancing Education, Targeting Climate Resilience

Description:

The Sustainability Education - Mekong project has the following aims, where teachers:

- Draw on sustainability education research and best practices in developing curriculum and lesson resources.
- Understand about climate policy and how to convey the complexities involved in getting to carbon neutrality using a card game.
- Understand the concept of nature-based solutions (NBS), sustainable development, and climate change, and are able to identify appropriate NBS for different communities, explain how various NBS are implemented by providing examples, and understand how NBS is essential for sustainable development in local and regional communities.
- Demonstrate understanding of the knowledge, skills and dispositions shared during the workshop through developing lesson ideas based on the resources shared.

PROMOTING HIMALAYAN DEVELOPMENT BY STRENGTHENING TEACHING AND RESEARCH ON SUSTAINABLE DEVELOPMENT GOALS

AIT Research Theme: Technology, Policy and Society

AIT Unit: Office of the President

Project Duration: 1 January 2022 to 31 December 2025

Project Partner/Client: Potsdam Institute for Climate Impact Research (PIK) for DAAD, Germany

Expected Social Impact: ForHimSDG hopes to help strengthen teaching and research on the SDGs in the HKH region based on its planned outcomes.

Description: In brief, ForHimSDG will co-develop and implement introductory and advanced courses related to global sustainability. Further, it will build research capacity in the HKH region based on North-South and South-South research exchanges on topics related to sustainability. ForHimSDG will form a network to sustain South-South cooperation and develop new joint projects on topics related to sustainability. For broader outreach,

the project will transfer the co-developed courses to other universities in the HKH region, publish its outcomes in scientific journals together with press.

TANIA AFRIN TONNY AWARDED THE ADB THESIS AWARD FOR HUMAN DEVELOPMENT

AIT Research Theme: Technology, Policy, And Society

AIT Unit: GDS/DDS/SERD

Project Duration: 2023

Project Sponsors/Clients: Asian Development Bank-Japan Scholarship Program (ADB-JSPJapan)

Description: Tania Afrin Tonny, a Ph.D student of the Department of Development and Sustainability of the School of Environment, Resources and Development of AIT won the ADB-Japan "Thesis of the Year" Award 2023 for her Master thesis at AIT, entitled "International Labor Migration amid the COVID-19 Pandemic: The Vulnerabilities of Returning Bangladeshi Migrant Women Workers from the Middle East Countries." Her thesis secured her third place in the "Award for Human Development" category.

The ADB-Japan Scholarship Program Secretariat revealed the winners after a rigorous evaluation process conducted by a screening committee led by Peter Morgan, Advisor to the Dean of the ADB Institute.

Kyoko Kusakabe expressed pride in Tania's dedication: "Tania's research and insightful analysis have made valuable contributions to the advancement of knowledge in human development and will have a positive and influential impact on society."

Tania emphasizes the significance of simplicity, stating, "Our world needs fewer unnecessary complexities and more streamlined approaches. By striving to make things easier for everyone, we can significantly contribute to human development."

The winners, including Tania, had the opportunity to present their theses at the TOYA Workshop in September 2023.

AIT STRUCTURAL ENGINEERING FORUM (SEF): CONNECTING MINDS AND ADVANCING KNOWLEDGE

With the aim of sharing the latest news, innovations, advancements, information, and achievements in the field of structural engineering, the AIT Structural Engineering Forum (SEF) organizes "Monday Motivation" sessions. These sessions provide a unique opportunity for students to engage with industry experts and delve into a wide array of topics beyond their standard curriculum.

SEF, established in December 2022 by students of the Structural Engineering program at the School of Engineering and Technology (SET), is driven by the mission to foster knowledge about cutting-edge technological advancements in global structural engineering. The forum operates under the capable management of students, focusing solely on benefiting their peers. Each session sees a student leader sharing the most recent updates, insights, and breakthroughs in structural engineering, complemented by keynote speakers that include esteemed professors and seasoned industry professionals who generously impart their invaluable wisdom and experiences

Since its inception, SEF has successfully organized a wide range of events, competitions, and educational sessions. One notable event was the "Seismic Performance of the Building Model Competition" held on 18 May 2023. This event brought together engineers, researchers, and students from various national and international universities, challenging them to craft innovative building models capable of withstanding seismic forces.

SEF's vision extends to forging collaborations between the structural engineering program and various universities in Thailand. This forum is a dynamic platform for students to showcase their skills, knowledge, and expertise, fostering knowledge exchange and collaborative opportunities. The Structural Engineering program is providing assistance and guidance to SEF,

with mentorship from Pennung Warnitchai and Chaitanya Krishna G. Membership is open to both current students and alumni of the structural engineering program.

Sangam Shrestha, SET Dean, commended the students for establishing a platform like SEF. He expressed his willingness to support and contribute to its future endeavors, recognizing the immense value it brings to students and the broader field of structural engineering.

Read more: *https://ait.ac.th/2023/10/ait-structural-engineering-forum-sef-connecting-minds-and-advancing-knowledge/*

AIT STUDENT SHARES UNFORGETTABLE EXPERIENCES AT GEORGIA TECH SHENZHEN INSTITUTE

Lam Thi My Duyen, known as 'Joyce', from Vietnam and is currently enrolled in the Information Management Program at the AIT School of Engineering and Technology (SET). She shares her experiences during the Shenzhen Summer Exchange Program at the Georgia Tech Shenzhen Institute (GTSI), located in Shenzhen, China. Here is her story:

As a student in the ICT department, my unquenchable thirst for exposure to cutting-edge innovations has always propelled me forward. I've dreamt of visiting leading countries globally, where technology enhances the quality of citizens' lives.

The moment I received an email from my school with the title, "AIT – Shenzhen Exchange Program", I knew I had to seize this incredible opportunity. I applied without hesitation, thinking to myself – OMG!!! It's China, and it's Shenzhen, the Silicon Valley of China!!! After days of anxious anticipation, an email from the International Affairs confirmed my spot in the short-selected list. I express sincere appreciation to GTSI and AIT for providing me with this invaluable opportunity, positioning me as one of six master's students in the inaugural batch of this program.

My heart raced with exhilaration, and without a moment's delay, I booked a flight ticket to return to Thailand from my home country to proceed with my visa process and gather all the necessary documentation. Successfully navigating a series of visa procedures, I embarked on my journey to Shenzhen on June 26, arriving in this vibrant city after a red-eye flight from Hong Kong International Airport and a connecting ferry.

The city welcomed me with its well-organized structure, towering, sleek glass-covered buildings, and immaculate streets. It wasn't a dream; I was standing in one of China's special economic zones and a global center in technology – Shenzhen!

Nestled at the city's heart, Georgia Tech Shenzhen Institute (GTSI) is one of three degree-granting campuses within the Georgia Tech Global Network. It stands as one of the world's top public research universities. GTSI Campus, also known as the Transitional Campus, provides an all-encompassing environment for education, featuring classrooms, labs, a fully-equipped library, event spaces, a wellness center, dance rooms, and even a gym, with a focus on creating an environmentally sustainable and green campus by 2025.

Upon arrival, GTSI extended a warm and well-prepared welcome, making it easy for us to settle in quickly. The orientation session and campus tour further eased the transition, outlining the daily schedule with activities such as attending classes, visiting technology companies, exploring ancient places, and more.

Read more: *https://ait.ac.th/2023/12/ait-student-shares-unforgettable-experiences-at-georgia-tech-shenzhen-institute/*

FORMER AIT BOARD VICE CHAIRMAN CONTINUES TO SUPPORT GEOTECHNICAL AND EARTH RESOURCES ENGINEERING, GTE LABORATORY

John D. Nelson, former Vice Chairman of the AIT Board of Trustees and Principal Engineer of Engineering Analytics, Inc., USA, gives additional support towards upgrading the Geotechnical Engineering (GTE) Laboratory at the Geotechnical & Earth Resources Engineering, School of Engineering & Technology. The AIT student's quality research output depends on having good laboratory facilities. With this additional donation, the GTE students will continue to benefit in conducting their research using more efficient laboratory equipment for a higher quality research output.

President Kazuo Yamamoto expressed his appreciation and sincere thanks to John D. and Darlene M. Nelson for their continued support of the Institute.

On behalf of the School of Engineering and Technology, Dean Sangam Shrestha sincerely thanked John D. and Darlene M. Nelson for their unwavering support. "Your invaluable contribution in establishing essential

engineering equipment has not gone unnoticed, and your steadfast appreciation and dedication to our work have been a true source of inspiration. We eagerly anticipate the possibility of forging similar partnerships," he added.

Kuo Chieh Chao, Head of the Department of Civil and Infrastructure Engineering, expressed profound gratitude to John D. and Darlene M. Nelson for their substantial support to the department and the dual degree program. Their relationship dates back to 1993 when Nelson was Chao's advisor during his master's degree, providing vital encouragement and support. Chao appreciated Nelson's pivotal role in his career and the continued support for AIT. He also pledged to carry forward Nelson's legacy in the field.

Nelson reflected on his AIT experience, considering AIT as a second home to his family. He detailed the diverse paths that brought panel members into geotechnical engineering. He shared his journey, commencing with a Ph.D. opportunity and employment at AIT in Thailand. Despite initial skepticism, he emphasized the wise choice of joining AIT and underscored the importance of giving back to educational institutions, mainly supporting Colorado State University (CSU) and geotechnical students. He also mentioned his collaboration on expansive soil research and contributions to a foundation. He briefly noted his family's incredible experience in Thailand and expressed his delight in continuing to support AIT.

UNIFIED PROGRAM OFFERING OPPORTUNITY FOR SRI LANKAN STUDENTS TO COMPLETE BACHELOR AND MASTERS DEGREE IN 5 AND HALF YEARS

On 13th February 2023, a Memorandum of Understanding (MOU) and Tripartite agreement was signed among the Asian Institute of Technology, Horizon Campus, and Siam University for the Unified Bachelor-Master Degree Program at a ceremony held at Horizon Campus, Sri Lanka.

The program provides opportunities for Sri Lankan students to undertake unified Bachelor's and Master's degree programs at the three institutions. Prospective students will study the first three years of their Bachelor's degree at the Horizon Campus, then proceed to Siam University, Thailand, for their final year. They will then continue for a Master's degree program at AIT for 1.5 years, completing the unified program and gaining both Bachelor's and Master's degrees in a total of 5.5 years.

"AIT and Siam University have been working in various collaborations, including the Unified Bachelor Masters Program. This agreement between three institutions is a significant milestone in our partnership, and I am confident many other activities will spring off based on this MoU in the future", said AIT President Kazuo Yamamoto.

Upul Daranagama, Chairperson of Horizon Campus signed the agreement on its behalf. The event was attended by several delegates from Horizon Campus including Ajitha Wanasinghe, Chief Executive Officer; Theo Fernando, Managing Director; S.J.B.A. Jayasekera, Vice Chancellor; Sisuru Sendanayake, Dean of Faculty and Ayesh Fernando, Director. From AIT, the event was attended by Kazuo Yamamoto, AIT President; Nitin Kumar Tripathi, Director of Special Degree Programs (SDP); Sanjeev Jayasinghe, Executive Director of the Office of Advancement & Alumni Affairs (OAAA) and Sirikate Owasit of OAAA.

On 30 January 2023, Siam University President Pornchai Mongkhonvanit and AIT President Yamamoto signed the agreement on behalf of the respective institutions. The signing ceremony was held at Siam University and was attended by several top officials, including Duminda Jayaranjan, Dean of SU's International College, Wichian Premchaiswadi, Dean of Graduate School, and Trithos Kamsuwan, Dean of Faculty of Engineering. From AIT, Nitin Kumar Tripathi, Director of Special Degree Programs, Arthur Lance Gonzales, and Samuch Oupala from the Office of Thailand Affairs attended the event.

AIT MASTER STUDENTS RECEIVE THE STUDENT EXCHANGE SCHOLARSHIPS

Two Masters students enrolled in the School of Management (SOM) receive the Student Exchange scholarships, namely: Priyanka Thapa from Nepal, going for the exchange program at HHL Leipzig Graduate School of Management, Germany, and Supitcha Napavorakul from Thailand, going for the exchange program at National Taiwan University, Taiwan.

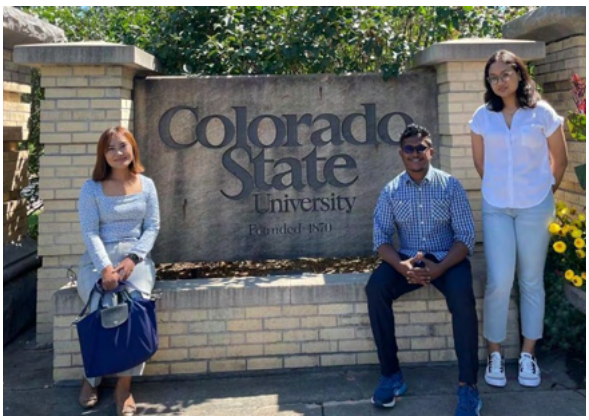
These Scholarship Exchanges will provide our Master's students an opportunity to broaden their international exposure through a one-semester academic exchange, which would further develop their mindset to become responsible citizens of the world. These scholarships will subsidize half of the total airfare, food & accommodation expenses during their exchange program at globally recognized universities that AIT agreements.

President Yamamoto gratefully acknowledged the generous support provided by Subin Pinkayan and the AIT Alumni Association Taiwan Chapter for their continued support to these students in achieving their aspiration of providing the opportunity to go for the Exchange Program.

DUAL DEGREE PROGRAM: A REWARDING EXPERIENCE

Wangmo Ghalley, Kasun Sahabandu, and Avalokita Tuladhar are the First Batch in the Dual Degree Master's Program from the Asian Institute of Technology (AIT), Thailand, and Colorado State University (CSU), United States of America (USA). They completed their first year in the AIT's Water Engineering and Management (WEM) program of the School of Engineering and Technology and departed for the next phase of their studies in the United States of America in August 2022 at CSU. In this dual degree program, they will earn a MEng/MSc in Water Engineering and Management from AIT and MS in Civil Engineering from CSU. They share their experience at CSU:

After having a wonderful time at AIT, the three of us embarked on a journey six months ago to continue our dual-degree master's program at CSU. Arriving on an entirely different continent with no familiar faces, we were ambivalent. Even though we were nervous, we were also excited about starting a new chapter in our lives.



First photo at CSU

The staff and students warmly welcomed us at CSU. During the first week of the semester, we participated in orientations and discovered how CSU values and embraces diversity.

Being an international student at CSU has also been a rewarding experience. There are ample organizations for international students in which we have actively participated. This has allowed us to meet and befriend people from different countries and learn about other cultures and perspectives. Additionally, CSU offers a wide range of classes from different disciplines and fields, which has broadened our knowledge and understanding of various subjects. The university also provides excellent facilities and resources, including research labs, libraries, and computer centers, which has helped us in our studies.

Additionally, we have been working as Graduate Teaching Assistants (GTAs), which has been quite challenging but also a unique and enriching experience. Being part of the teaching team has allowed us to work closely with faculty members and gain valuable teaching experience. We have been able to assist professors in various classes, from introductory-level courses to advanced graduate-level classes. This has allowed us to understand the subject matter more deeply and develop our teaching skills. Furthermore, it gave us a chance to interact and share our knowledge with students from diverse backgrounds.

GEORGIA TECH SHENZHEN INSTITUTE – AIT INTERNATIONAL CAMP FOR YOUNG LEADERS 2023 INSPIRES PRACTICAL MINDS TO ADVANCE SUSTAINABILITY

21 December 2023 - As the year 2023 drew to a close, the Asian Institute of Technology played host from December 15-21 to a first-of-its-kind camp that brought together 22 Chinese master's level graduate students from the Georgia Tech Shenzhen Institute (GTSI) and AIT students of seven Asian and African countries for one week of experiential learning, professional exposure and international solidarity.

Organized by the Office of International and Public Affairs, under the theme of **"Innovation for Environmental and Sustainable Development Challenges: Applying Science to Practice and Policy"**, the International Camp for Young Leaders 2023 immersed 30 bright students in specialized research, practical technologies and policy perspectives. The Camp was designed for the partner institute: GTSI, who hosted AIT students at the 2023 China Program in Shenzhen and the Greater Bay Area in the summer.

Located in the Guangdong–Hong Kong–Macao Greater Bay Area, China, GTSI is an American institution of the Georgia Institute of Technology. It follows the same academic curriculum, standards and requirements as the home campus of Georgia Tech in Atlanta, United States.

AIT President Prof. Kazuo Yamamoto welcomed the Chinese contingent and opened the camp with inspirational words of advice to the gathering of young scholars. "I am happy to see young students and researchers from an esteemed university like yours to gain an experience of practical learnings in Thailand and at AIT, and I believe that you will be inspired by the research and ideas existing beyond your labs and classrooms", Pres. Yamamoto said, kicking off the Camp. "Your understanding and experience of real-world problems will be the very key to unlock progress on achieving Sustainable Development Goals," the president emphasized.

President Yamamoto opens the camp and stresses the importance of digitization in relation to achieving the SDGs by 2030.

The program included academic lectures, field immersions, policy sessions, and a team project competition. Emphasis was placed throughout on how technology plays an important role in promoting the sustainability of human society.

https://ait.ac.th/2023/12/georgia-tech-shenzhen-institute-ait-international-camp-for-young-leaders-2023-inspires-practical-minds-to-advance-sustainability/

EMBARKING ON ACADEMIC DISCOVERY: SUCHERA PUTTHAKOSA'S UNFORGETTABLE JOURNEY AS AN EXCHANGE DOCTORAL STUDENT IN JAPAN

Suchera Putthakosa, a Doctoral student in the Industrial and Manufacturing Engineering (IME) program from the School of Engineering and Technology (SET) in Thailand, shares her remarkable adventure during an exchange program at the Prefectural University of Hiroshima (PUH) in Japan. Here is her story:

The prospect of studying abroad is a dream many students harbor. The exhilaration that coursed through me upon receiving an email from the Dean of the School of Engineering and Technology (SET) about an exchange program is indescribable. The unexpected nature of this opportunity, perfectly aligned with my academic pursuits, made it all the more thrilling. Without hesitation, I applied and was selected. Little did I know that more challenges awaited, such as finding the right advisor to match my academic background. Despite the hurdles, my determination prevailed, and my journey to Japan commenced.

On September 15, 2022, I touched down at Kansai International Airport in Japan, and from that moment onward, I was captivated. The stark contrasts between my home country and Japan—be it in culture, people, language, or way of life—were eye-catching. As a non-Japanese speaker, navigating the language barrier initially daunted me. However, this challenge fueled my determination to immerse myself in the culture and learn as much as possible from this experience.

PUH, a public university in Hiroshima Prefecture, boasts over 2,600 students dedicated to learning, high-quality research, and training. Renowned as one of the top public universities in the Chugoku, Shikoku, and Kyushu areas, PUH encompasses three campuses: Hiroshima, Shobara, and Mihara. I had the privilege of joining Associate Professor Dr. Daisuke Hirotani's lab group on the Hiroshima campus, with accommodation available at the Eikei University dormitory—a mere 25-minute bus/train ride from the Hiroshima campus.

The day after my arrival, I confidently made my way to PUH to meet my advisor. Despite initially taking the wrong bus and getting lost, I arrived on time. During the meeting, I assertively presented my research proposal, only to realize that I was the sole doctoral student due to the absence of a doctoral curriculum at PUH. Subsequently, I was tasked with writing and publishing a research paper within six months, reporting weekly progress, delivering weekly presentations on supply chain management, and attending the intelligent production systems class without earning credits. Despite these demanding time constraints, I was determined to seize this opportunity and accomplish all assigned tasks.

Participating in language classes and cultural events significantly enhanced my experience as an international student. During my time at PUH, I engaged in an introductory Japanese language class, providing essential words and

sentences for daily use. Additionally, I attended a welcome party for international students, where I was paired with a Japanese buddy, facilitating navigation through daily life and language barriers. However, the highlight of my PUH tenure was the two study tours, one of which led me to the Shinshoji Zen Museum and Gardens in Fukuyama City—an amalgamation of Zen and art. The breathtaking natural surroundings, especially the ship-shaped Kohtei pavilion, left an indelible mark on my senses. The Zen meditation at the International Zen Training Monastery was equally unforgettable, providing an hour of profound peace and tranquility.

While at PUH, I actively engaged in weekly discussions with my advisor to finalize the research topic. After presenting and deliberating various options, we settled on "Developing a Two-Stage Supply Chain Model using a Discrete Time Markov Chain Model During Supply Chain Disruptions." Despite the challenging nature of the research, I adeptly managed my time, completing weekly assignments, attending class, preparing presentations, and conducting research at AIT on schedule. This experience underscored the significance of time management and self-discipline in achieving success, showcasing my ability to independently own the research and make consistent progress. Upon returning to Thailand, collaboration with my Japanese advisor culminated in the acceptance of our paper by a journal, slated for publication by December 2023.

https://ait.ac.th/2023/12/embarking-on-academic-discovery-suchera-putthakosas-unforgettable-journey-as-an-exchange-doctoral-student-in-japan/

HRH PRINCESS MAHA CHAKRI SIRINDHORN AWARDS PRESTIGIOUS SCHOLARSHIPS TO 70 OUTSTANDING INTERNATIONAL AIT STUDENTS IN A GRAND CEREMONY AT SA PATHUM PALACE

20 October, 2023 - In a ceremony held on October 20, 2023, 70 outstanding students from 10 countries were honored with prestigious scholarships by Her Royal Highness Princess Maha Chakri Sirindhorn at the magnificent Sa Pathum Palace. The Royal Thai Government (RTG) scholarships, which carry the names of esteemed royal figures, mark a significant step in supporting international education and fostering collaboration among diverse scholars.

The scholarships, supported by various royal patrons, underscore Thailand's commitment to fostering academic excellence and international cooperation.

The recipients of these scholarships hail from ten countries, namely Thailand, Bangladesh, Myanmar, Nepal, Pakistan, Sri Lanka, Bhutan, Philippines, Vietnam, and Cambodia.

The four distinctive scholarships conferred upon these promising young minds include:

- His Majesty King Bhumibol Adulyadej, The Great Scholarship
- Her Majesty Queen Sirikit, The Queen Mother Scholarship
- Royal Scholarships named by His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua
- Lum Nam Khong Pijai Scholarship named by Her Royal Highness Princess Sirindhorn

https://ait.ac.th/2023/10/royal-thai-government-awards-prestigious-scholarships-to-70-ait-students/

IVL FOUNDATION SCHOLARSHIPS: EMPOWERING EXCELLENCE AT AIT

16 October 2023 – AIT President Prof. Kazuo Yamamoto and Mr. Richard Jones, Director and Secretary, IVL Foundation signed the Sponsored Scholarship Agreement for the second batch of students. IVL Foundation generously awarded scholarships to two outstanding AIT students who enrolled for the August 2023 intake. Both are pursuing studies in the School of Environment, Resources and Development. AIT is immensely grateful for the continuous support IVL Foundation has provided starting from the first batch of students in 2021.

The ceremony commenced with a warm welcome from the Office of Advancement and Alumni Affairs Executive Director Mr. Sanjeev Jayasinghe, where he expressed his kind thanks to IVL Foundation for supporting a second batch of students through Masters Scholarships and that it is a great opportunity to have the signing ceremony done in person with the scholarship recipient able to be in attendance.

AIT President Prof. Kazuo Yamamoto shared insights about AIT's ambitious goal of becoming a Net Zero institute by 2030. He also announced that AIT had achieved the status of a Science and Technology Park as conferred by the Board of Investment Thailand. Prof. Yamamoto further discussed plans for curriculum reform to enhance flexibility and customization for students, with an emphasis on increased industry involvement which could be something of interest for future collaboration with IVL Foundation.

https://ait.ac.th/2023/10/ivl-foundation-scholarships-empowering-excellence-at-ait/

ASIAN INSTITUTE OF TECHNOLOGY COMMEMORATES 30 YEARS OF AIT VIETNAM CENTER

27 May 2023 – The Asian Institute of Technology (AIT) marked the 30th anniversary of its Vietnam Center with a grand celebration. Established in 1993 through a collaboration between the Government of Vietnam and AIT, AIT Vietnam takes great pride in being the country's premier non-profit international educational organization. Its training programs have gained high recognition in the region and worldwide.

Over the past three decades, AIT Vietnam has exemplified educational excellence, playing a vital role in post-graduate training, capacity building, research, and technology transfer. Since its inception, the institution has served as a gateway of opportunity for countless ambitious individuals seeking to enhance their expertise.

"Today, we celebrate the outstanding achievements of over 4,200 Master's and Doctoral degree holders who have emerged from AIT Vietnam. These graduates have

not only acquired invaluable knowledge but have also emerged as leaders, driving significant progress in their respective fields both within Vietnam and on a global scale," remarked Prof. Yamamoto.

https://ait.ac.th/2023/05/asian-institute-of-technology-commemorates-30-years-of-ait-vietnam-center/

TRANSFORMING DREAMS INTO REALITY: A JOURNEY OF PROFESSIONAL AND PERSONAL GROWTH

Utcrist Onta, a student in the Construction, Engineering, and Infrastructure Management (CEIM) program at AIT's School of Engineering and Technology (SET), recounts his enriching exchange experience at Jonkoping University (JU) in Sweden.

Growing up with a passion for European architecture and history, Utcrist always dreamed of exploring Europe and diving deeper into the practical aspects of architecture, particularly Building Information Modeling (BIM). However, the pandemic's onset halted his travel plans. Undeterred, Utcrist used this time to research and plan his future, leading him to AIT's CEIM program. His desire for growth led him to apply for an exchange program at JU, supported by the Dr. Rafiul and Mrs. Frances Kasala Ahad Exchange Scholarship.

Upon arriving at JU on September 15, Utcrist was impressed by the university's efficient and welcoming setup. His accommodation was in a modern dormitory with amenities like a cafe, gym, and entertainment options. JU's state-of-the-art facilities, including computer labs, research centers, and a well-stocked library, were complemented by user-friendly mobile apps that streamlined academic tasks.

Utcrist engaged in challenging BIM courses that enriched his knowledge and skills. The collaborative learning environment, practical coursework, and insightful guest lectures broadened his perspective. Group projects

with international peers enhanced his communication and teamwork abilities, while weekly seminars provided opportunities for professional development and networking.

Exploring Jonkoping and its beautiful landscapes added to his experience. He enjoyed traditional Swedish cuisine, participated in local hikes, and cherished the weekly class dinners where students shared dishes from their home countries. These dinners, including his preparation of Nepalese Mo:Mo, were not only a culinary delight but also a chance to bond with classmates from diverse backgrounds.

https://ait.ac.th/2023/05/transforming-dreams-into-reality-a-journey-of-professional-and-personal-growth/

AIT PROFESSORS SHINE GLOBALLY: RECOGNIZED AMONG WORLD'S TOP 2% OF INFLUENTIAL SCIENTISTS FOR CAREER-LONG AND SINGLE-YEAR IMPACT

28 November 2023 - In a remarkable achievement, sixteen professors from the Asian Institute of Technology (AIT) have been recognized among the top 2% of influential scientists globally in their respective fields, as per the latest annual rankings published by Stanford University on 4th October 2023.

The rankings, compiled by statisticians from Stanford University, utilize a range of standardized metrics such as the h-index, co-authorship adjusted hm-index, citations to papers in different authorship roles, and a composite indicator (c-score). This thorough approach is applied to assess both career-long and single-year impacts, ensuring a comprehensive evaluation of each scientist's contribution.

Eleven AIT faculty members and emeritus professors have achieved global recognition for their career-long impact up to 2022, exceeding the top 2% threshold in their respective sub-disciplines. The distinguished individuals and their fields include

1. Prof. Phan Minh Dung – Artificial Intelligence & Image Processing
2. Prof. Chettiyappan Visvanathan – Environmental Sciences
3. Prof. Shobhakar Dhakal – Energy
4. Prof. Anil Kumar Anal – Food Science
5. Prof. Dennes T. Bergado – Geological & Geomatics Engineering
6. Prof. Sangam Shrestha – Environmental Engineering
7. Prof. Peter Edwards – Fisheries
8. Prof. Weerakorn Ongsakul – Energy
9. Prof. Ram M. Shrestha – Energy
10. Prof. Sivanappan Kumar – Energy
11. Prof. Joyashree Roy – Energy

In the category of single-year impact in 2022, fourteen AIT faculty members and emeritus professors secured

positions in the global top 2%, an increase from the previous year. The distinguished scientists for 2022 and their expertise areas are:

1. Prof. Anil Kumar Anal – Food Science
2. Prof. Sangam Shrestha – Environmental Engineering
3. Prof. Shobhakar Dhakal – Energy
4. Prof. Chettiyappan Visvanathan – Environmental Sciences
5. Prof. Phan Minh Dung – Artificial Intelligence & Image Processing
6. Prof. Peter Edwards – Fisheries
7. Prof. Mukand Babel – Environmental Engineering
8. Prof. Dennes T. Bergado – Geological & Geomatics Engineering
9. Prof. Tawatchai Tingsanchali – Environmental Engineering
10. Prof. Joyashree Roy – Energy
11. Prof. Rajendra Prasad Shrestha – Agronomy & Agriculture
12. Prof. Sivanappan Kumar – Energy
13. Prof. Avishek Datta – Agronomy & Agriculture
14. Dr. Ha Thanh Dong – Fisheries

THE JANUARY 2023 SPRING SEMESTER KICKS OFF AT AIT

On January 6, 2023, the Asian Institute of Technology (AIT) welcomed 161 new students through a hybrid orientation event, with 51 attending in person and the rest joining virtually. This diverse group of students, representing 21 countries, began their graduate studies at AIT, with 15% enrolled in Doctoral programs and 40% being female. The distribution includes 35% in the School of Engineering and Technology (SET), 35% in the School of Environment, Resources and Development (SERD), and 30% in the School of Management (SOM). Currently, AIT hosts over 1,500 students globally.

AIT President Prof. Kazuo Yamamoto addressed the newcomers, emphasizing the importance of respect within a diverse community and encouraging them to focus on their studies, expand their professional networks, and contribute meaningfully to society. He noted that their mission is to gain knowledge and make impactful contributions in the future.

Prof. Shobhakar Dhakal, AIT's Vice President for Academic Affairs, highlighted AIT's mission to develop future global leaders for sustainable development. He stressed the institute's role in preparing young professionals to drive positive societal change.

AIT provides a range of opportunities, including internships, assistantships, and international exchanges, supported by collaborations with UN agencies, universities, and the private sector. Prof. Dhakal urged

students to utilize these resources and maintain a balance between their academic and personal lives.

Dr. Naveed Anwar, Vice President for Knowledge Transfer, encouraged students to engage in outreach activities and leverage the university's connections with various sectors to broaden their skills and networks.

Mr. Russell Rein, Vice President of Administration, emphasized the importance of maintaining a healthy balance, making responsible decisions, and respecting Thai culture. He highlighted the wellness and counseling services available to students and advised them to be flexible, adaptable, and tolerant.

The orientation also covered AIT's Harassment Policy, sustainable campus initiatives, and resources such as the Entrepreneurship Center, Language Center, and IT services, providing students with essential information for a successful start at AIT.









AIT AND OPJGU SIGN MOU TO PROMOTE EXECUTIVE EDUCATION AND STRENGTHEN PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT IN ASIA

5 April 2023 – Asian Institute of Technology (AIT) and O.P. Jindal Global University (OPJGU) renewed a Memorandum of Understanding (MoU) on April 5 to strengthen their partnership and promote executive education, enhancing the leadership and governance capabilities of current and future leaders in Asia.

AIT and OPJGU have collaborated since 2015 on various academic and capacity-building activities. AIT's mission is to develop highly qualified and committed professionals who will play a significant role in the region's sustainable development and its integration into the global economy. Meanwhile, OPJGU aims to provide globalized education to produce world-class professionals, scholars, business leaders, and academics in management and other disciplines in India.

The scope of the MoU is to promote executive education in various fields such as Public Administration, Education, Planning and Management, Economic Relation Development, National and Local Governance, Sustainable Development, Law, Industry, Urban Management, Climate Change & Disaster Management, Tourism, and Human Resource Management. In addition, both institutes will collaborate to build capacity for faculties and students, including the exchange of guest speakers, study tours, exposure visits, short- and long-term training, higher studies, research seminars, and workshops.

Prof. Kazuo Yamamoto, AIT President, said, "The shared vision of AIT and OPJGU aligns perfectly, with both institutes striving to enhance regional development through collaboration. Together, we aspire to cultivate effective regional leadership and governance while promoting strength and cooperation through our partnership."

Dr. Sanjeev P. Sahni, Principal Director, Jindal Institute of Behavioral Science (JIBS), Professor and Member of the Governing Body and Advisor to the Vice Chancellor, JGU, shared his enthusiasm about the collaboration, stating that "currently, 22 of our employees from OPJGU are undergoing training at AIT, and the feedback received has been overwhelmingly positive. The training has been highly beneficial for our staff, and we look forward to sending more employees and students for various training programs in the future. Additionally, we invite faculties and students from AIT to visit and utilize the facilities at our campus."

The O.P. Jindal Global University (OPJGU) is a nonprofit global University established by the Haryana Private Universities (Second Amendment) Act, 2009. It was established in memory of Mr. O.P. Jindal as a philanthropic initiative of Mr. Naveen Jindal, the Founding Chancellor. The University Grants Commission has accorded its recognition to O.P. Jindal Global University.






FROM CLASSROOM TO TOKYO: GTE-AIT STUDENTS EMBARK ON A GLOBAL LEARNING ADVENTURE AT SHIBAURA INSTITUTE OF TECHNOLOGY'S 2ND PROJECT-BASED PROGRAM

April 10, 2023 – A total of 15 Geotechnical and Earth Resources Engineering (GTE) & Geosystem Exploration & Petroleum Geoengineering (GEPG) students, faculty, and staff members recently participated in the Global Project Based Learning (gBPL) Program offered by the Shibaura Institute of Technology (SIT), Tokyo, Japan, from February 28 to March 8, 2023. The gPBL program fostered a multicultural atmosphere, bringing together students from diverse backgrounds to collaborate in teams and tackle challenges posed by professors and industry professionals in Japan.

The program's main theme this year was "Developing solutions to combat natural disasters that achieve Sustainable Development Goals (SDGs)." The groups worked together to learn from experiences in their respective countries and institutes to develop mitigation measures and solutions that would promote SDGs and reduce the impact of natural disasters on human communities. It was a unique and valuable opportunity for all partner institutes' students to collaborate on current issues and learn from one another.

During the program, students were also exposed to cutting-edge research and innovations that are currently under development and in practice. They were taken on a field trip to Obayashi Corporation, where they were given a tour of their offices, laboratories, and research facilities. Additionally, Sanshin Corporation, an industry leader in the field of ground improvement, gave a presentation on their various construction activities in the region and demonstrated their chemical grouting technology. The students found it fascinating to witness state-of-the-art solutions from Japanese industries.

About Geotechnical and Earth Resources Engineering (GTE) Program at AIT: GTE Program is under the Department of Civil and Infrastructure Engineering in the School of Engineering and Technology. The program offers two major areas of specialization, Geotechnical Engineering (GE) and Geosystem Exploration & Petroleum Geoengineering (GEPG).

ROCK MECHANICS AND PHYSICS TRAINING COURSE FOR SUBSURFACE TESTING

AIT Research Theme: Infrastructure

AIT Unit: SET / GTE

Project Duration: 1 July 2022 to 30 June 2025

Project Partner/Client: PTT Exploration and Production Public Company Limited (PTTEP)

Expected Social Impact: This research expects to be the reliable research, which can benefit for presenting the alternative for plastic waste issue.

Description: The training aims to equip participants with comprehensive knowledge on rock behavior and stability, crucial for subsurface testing and exploration. This specialized course will cover various aspects of rock mechanics, including stress analysis, failure criteria, and the physics of rock interactions. By improving the technical expertise of the attendees, the course seeks to contribute to more effective and reliable subsurface testing practices.

GTE will organize a training course for PTT Exploration and Production Public Company Limited (PTTEP) personnel. This training aims at improving participants' knowledge of basic and advanced theories of rock mechanics and rock stability.

SCHOOL OF MANAGEMENT HOSTS INSPIRING ANNUAL DOCTORAL COLLOQUIUM 2023, FOSTERING RESEARCH EXCELLENCE AND NETWORKING AMONGST DOCTORAL CANDIDATES

The Annual Doctoral Colloquium 2023, organized by AIT's School of Management, took place on the AIT campus from Saturday, 20th May to Sunday, 21st May 2023. This yearly event provides an invaluable platform for DBA and Ph.D. candidates at various stages of their programs to network, share knowledge, and develop their research skills. It is designed to support doctoral students in their research journey, encouraging active participation and collaboration.

During the colloquium, students present their ongoing research and receive constructive feedback from peers and faculty, which is crucial for refining their ideas and preparing for the viva voce examination. The event not only focuses on enhancing specific research techniques but also emphasizes the importance of effectively presenting and promoting research to make a meaningful impact.

Postgraduate researchers often struggle with self-promotion, but the colloquium helps them understand the significance of building a solid reputation by producing valuable research and establishing themselves within the academic community. The event mirrors academic conference practices, where papers are reviewed by a Chair and a panel of reviewers, offering students a glimpse into the peer-review process.

The colloquium features parallel streams focused on various topics or methodologies, with each stream chaired by an expert. Presentations last 20 minutes, followed by a 10-minute Q&A session. The event also recognizes outstanding contributions with awards such as the Best Paper Award, Best Poster Award, and Best Early Stage Submission.

On Sunday, 21st May, the participants also enjoyed a social event at the NSM Information Technology Museum in Pathumthani, fostering further networking opportunities among the doctoral students.

AIT PRESIDENT MADE A COURTESY VISIT TO MR. ALOKE LOHIA, VICE CHAIRMAN OF THE BOARD AND GROUP CHIEF EXECUTIVE OFFICER INDORAMA VENTURES PUBLIC COMPANY LIMITED

22 March 2023 – AIT President Prof. Kazuo Yamamoto made a courtesy visit to Mr. Aloke Lohia, Vice Chairman of the Board and Group Chief Executive Officer Indorama Ventures Public Company Limited (IVL) on 22nd March 2023.

Indorama Ventures Public Company Limited (IVL), founded in 1994, is a world-class chemicals company with a global integrated lead in Polyethylene Terephthalate (PET) and fibers, serving major customers in diversified end-use markets. The company is one of the world's leading petrochemicals producers with presence in 33 countries and has 125 manufacturing facilities.

AIT President Prof. Yamamoto discussed some of the new initiatives that he plans to start implementing during his tenure as Interim President and also thanked Mr. Lohia for IVL Foundation's generous full Master's scholarships support provided to two AIT Master's students in 2021. Also he further stated that AIT looks forward to receiving the second round of the full scholarships from IVL Foundation this year.

Mr. Lohia kindly agreed to continue supporting AIT and to further develop the on-going collaborations, and he is willing to provide experts from IVL top management to give on-site guest lectures/ talk series to AIT students based on IVL's competencies in Sustainability issues, Digital Transformation, Data Science, AI, Computer Sciences, Six Sigma etc. By this way, it will enable AIT students to get more exposure in practical best practices.

Also attending the meeting were Mr. Sanjeev Jayasinghe, Executive Director, Office of Advancement & Alumni Affairs and Ms. Sirikate Owasit, Senior Advancement Officer, Office of Advancement & Alumni Affairs.

GENDER IMPACT OF LABOR AND ECONOMIC POLICIES

AIT Research Theme: Technology, Policy and Society

AIT Unit: GDS/DDS/SERD

Project Duration: 1 June to 31 December 2023

Project Sponsor/Client: Deutsche Gesellschaft für Internationale Friedrich Ebert Stiftung, Bangkok

Expected Social Impact: There is little reflection on S-curve and BCG policies of Thai government from gender perspective. FES will use this output for their policy advocacy.

Description:

The study analyzes the possible impact on women and men's employment from the current economic policies especially focusing on the S-curve industry promotion and BCG (bio, circular and green economy) model, and

provide policy recommendations for a gender-responsive labor and economic policies in Thailand.

MAKING NBCS IN AQUACULTURE MONITORING MORE GENDER RESPONSIVE IN SOUTHEAST ASIA: WHAT GETS MEASURED GETS DONE

AIT Research Theme: Technology, Policy and Society

AIT Unit: SERD/GDS

Project Duration: 1 September 2023 - 30 September 2027

Project Sponsor/Client: IDRC-AQUADAPT, Canada

Project Partner: GAFS

Expected Social Impact: Improved aquacultural climate resilience, nutritional security and livelihood security through improving the NbCS aquaculture projects to be more gender responsive by using a gender monitoring schema for NbCS aquaculture.

Description:

The project is to develop a gender monitoring schema to ensure integration of gender equity and social inclusion

in nature-based climate solutions in aquaculture system and projects.

CLIMATE CHANGE AND GENDER EQUALITY: MOVING TOWARDS SDG 5

20 February 2023 – Prof. Joyashree Roy and Dr. Shreya Some talk about the existing social dynamics, embedding gender considerations, and facilitating women's participation in the design and implementation of climate change adaptation projects in their recent article "How different initiatives about climate change can improve gender equality and progress toward SDG 5".

Gender inequality originating from historical, socioeconomic, developmental processes, and deeply rooted social norms is a major factor exacerbating vulnerability to climate change impacts across sectors and regions. An important question in this context is whether ongoing adaptation projects, implemented to reduce climate risks and existing vulnerabilities, are widening or resolving this historical burden of gender inequality.

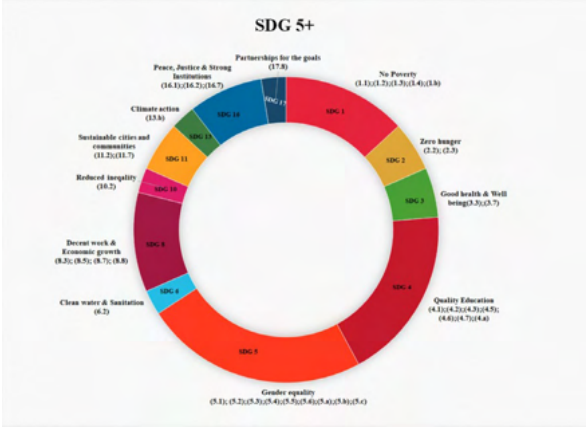
Prof. Joyashree, Dr. Shreya, and their colleagues reviewed more than 17,000 global studies across nine major systems and sectors and synthesized evidence on climate adaptation projects' positive and negative impacts on gender equality.

The assessment found that there is a lack of targeted action for enhancing gender equality. Both positive and negative impacts on gender equality have been created in all nine major systems and sectors. The study pointed out that it is crucial to comprehend the context in which measures taken to adapt to climate change have harmful effects on gender equality and to develop policies around such negative impacts to prevent further escalation of those effects.

In addition, the literature review presents an approach to evaluate the net impact – positive and negative. The study found that such net impacts are negative in four systems and sectors: ocean and coastal ecosystems; mountain ecosystems; poverty, livelihoods, sustainable development, and industrial system transition.

The article highlights that existing societal dynamics disempower women, social exclusion prevents women from accessing technology, and forced migration inflicts labor burdens on women, asserting these as the reasons why climate change adaptation projects have a net negative impact on gender equality within the four systems.

Furthermore, the authors have identified five key areas that would enable future climate change adaptation projects to contribute to gender equality. It includes addressing the structural inequalities at the policy level, designing an inclusive decision-making process, revisiting legislation to regulate welfare measures targeted towards women in the labor force, enhancing active participation of women and marginalized groups and including them in the training information technology, and resources for (new) adaptation projects.



Prof. Joyashree Roy

Dr. Shreya Some

The study also identifies the gaps in evidence and shares future research priorities.

For more:

Article:

https://doi.org/10.1057/s41599-022-01266-6

Blog:

https://gender.cgiar.org/news/how-climate-change-adaptation-projects-can-advance-gender-equality-and-progress-toward-sdg-5/frescoberg/portrait.pdf

UNVEILING THE SPECTRUM: EMBRACING DIVERSITY IN SEXUALITY AND GENDER

17 March 2023 - In a world that champions gender inclusivity and sensitivity, concepts associated with identities, privileges, diversities existing in sexual orientations, gender identities, expressions, consent, and harassment are often ignored and undermined. This can be attributed to the gaps we have in terms of knowledge, attitudes, and practices associated with these sectors, creating a gap in advocacy as well as actions, particularly when it comes to gender issues.

Realizing this and aligning with the campaign #EmbracingEquity, SU Gender and Culture Committee and Gender Equity Movers Society (GEMS) came together to advocate and enhance the knowledge, attitude as well as practices on the issues discussed above, organized the three-session long workshop from March 15- 17, titled "Unveiling the Spectrum: Embracing Diversity in Sexuality and Gender" to mark Women's History Month 2023.

The sessions were led by three students of Gender and Development Studies, Farheen Masfiqua Malek, Renz Prudenciado, and Saittawut Yuthaworakool. The primary focuses of these sessions were Beyond the Binary: Exploring Power Dynamics (Farheen), Unboxing Gender: Discovering Diversities and Celebrating Diversity (Renz), and Labels or Limitations: Empowering Choices through Consent (Matt).

Participants representing different nationalities and fields of study thoroughly enjoyed the sessions in terms of content relevance, content delivery, and discovering the true selves of the individuals. The participants learned the difference between equality, equity, and justice. Gender is not binary, but there are so many layers to it, what consent really means, and all the dimensions it has. They also learned about the diversity of gender and consent. Some participants requested more programs on violence against men, while others emphasized the need for workshops on the Prevention of Sexual Exploitation and Abuse (PSEA).

Participants at the event, Harune Kaneda and Hayatullah Mushwani, shared their positive experiences of the sessions. Harune stated, "I enjoyed all sessions, but particularly making a campaign with a group was most

interesting." Similarly, Hayatullah said how it was interesting for him to learn about gender and sexual orientation.

The trainers also had interesting insights after the program. Renz stated that understanding and accepting diverse sexual orientations, gender identities, and expressions are crucial to becoming a good parent and creating a safe space for others. Matt said that he did not expect that his session would turn out to be an extremely fun and interactive experience.

Concluding the event, Prof. Kyoko Kusakabe, Gender and Development Studies, Department of Development and Sustainability, congratulated the organizers, trainers, and participants for addressing sexual harassment and promoting diversity. She emphasized on the importance of such events at AIT and encouraged open discussion about gender and diversity. "Small actions can create big changes. Through fruitful, fun, and stimulating events like this, we can encourage open discussion and promote diversity and inclusivity on campus. Let's continue to take small steps towards a comfortable learning and working space for all," Prof. Kyoko added.

To honor the continuous support at AIT, SU honored AIT President Prof. Kazuo Yamamoto with the title of "Gender Ally of the Year" for supporting the efforts toward Gender equality. Similarly, SU recognized Prof. Kyoko Kusakabe as a "Leading Lady towards Gender Equality" in appreciation of her relentless work towards fostering Gender Equality and inspiring others to do the same for more than two decades.






NEW CENTER ON GENDER AND FORCED DISPLACEMENT AT AIT'S GDS PROGRAM TO ADVANCE POLICY CHANGE IN SOUTH AND SOUTHEAST ASIA

On May 9, 2023, the Asian Institute of Technology (AIT) launched the Center on Gender and Forced Displacement (CGFD) and inaugurated the IDRC Endowed Research Chair Professor on Gender and Forced Displacement. Professor Paula Banerjee, a distinguished scholar in gender, migration, and forced displacement, will lead the center as its director.

The CGFD is dedicated to producing top-tier research on gender issues related to various forms of forced displacement, including conflict-induced, climate change, environmental disasters, and development-induced displacements, with a focus on South and Southeast Asia. Its goal is to create locally-informed, gender-responsive knowledge that will guide policy-making at national, regional, and global levels.

This initiative aims to address gaps in research and policy concerning the gender dimensions of forced displacement, especially in areas with severe vulnerabilities and limited resilience capacities. The center will explore how gender intersects with other social factors, such as ethnicity, sexual and gender identity, and caste, to understand the diverse impacts of displacement on these groups.

AIT's Gender and Development Studies (GDS) program, which celebrated its 25th anniversary in 2022, has a rich history of research in migration and displacement. The CGFD and the IDRC Endowed Research Chair will build on this foundation and enhance the institute's research capabilities. The center will collaborate with universities, governments, UN agencies, NGOs, and community

organizations to foster cross-learning and build regional research capacity.

AIT Interim President Prof. Kazuo Yamamoto emphasized the significance of the CGFD and its potential to drive innovative solutions for gender-related issues in forced displacement. H.E. Dr. Sarah Taylor, Ambassador of Canada to Thailand, praised the center's focus on gender and displacement, highlighting its alignment with Canada's feminist approach to refugee responses. Professor Banerjee underscored the center's mission to amplify the voices of displaced women and ensure gender considerations are central to policy decisions.

For more details on the CGFD and the IDRC Endowed Research Chair, please visit the AIT website or contact the Gender and Development Studies program.

https://ait.ac.th/2023/05/new-center-on-gender-and-forced-displacement-at-aits-gds-program-to-advance-policy-change-in-south-and-southeast-asia/

Prof. Kazuo Yamamoto

H.E. Dr. Sarah Taylor

Mr. Kundan Mishra

Prof. Paula Banerjee

AIT TO ANCHOR SAR 100 REGIONAL TECHNICAL CAPACITY-BUILDING AND LEADERSHIP PROGRAM FOR WOMEN ENGINEERS IN SOUTH ASIA

On June 30, 2023, the Asian Institute of Technology (AIT) launched the WePOWER SAR 100 program, a pioneering initiative aimed at empowering women in the power and energy sector across the South Asian Region (SAR). This program, part of the South Asia Regional Infrastructure Connectivity (SARIC) initiative, is led by the World Bank and funded by the Australian Department of Foreign Affairs and Trade (DFAT) through Palladium International. It is designed to develop leadership and technical skills among mid-career women engineers from Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.

The SAR100 program spans eight months, featuring ten intensive 3-week modules, each including a supervised practicum. The program culminates in a capstone seminar at AIT's Bangkok campus, where successful participants will earn a 15-credit equivalent professional credential from AIT's Energy Development: Systems, Management & Technology (EDSMAT) program.

Prof. Faiz Shah, the program lead, emphasized the collaborative nature of SAR100, noting its role in enhancing gender diversity in the energy sector—a critical area for sustainable development. He highlighted that the program was meticulously designed in consultation with SAR representatives and involves leading faculty from Australia, North America, and Thailand, as well as national experts from India and Pakistan. Prof. Shah expressed AIT's honor in hosting the program and its Regional Knowledge Hub, welcoming 100 women energy leaders to the institute.

Dr. Jai Govind Singh, the academic lead, expressed excitement about the program's launch, particularly its innovative approach to hybrid education. He noted the involvement of experts from the World Bank, University of Melbourne, Electricity Generating Authority of Thailand, and AIT's energy sector network in SAR countries, underscoring SAR100 as a model for expanding access to high-quality learning.

The SAR100 curriculum is tailored to enhance participants' technical capacity in managing regionally integrated power systems with high renewable energy penetration. It also focuses on understanding power markets and developing leadership skills that promote gender awareness and counter unconscious bias.

WePOWER Bangladesh delegates at AIT

Prof. P. Abdul Salam, Dean of AIT's School of Environment, Resources, and Development, recognized SAR100 as a testament to AIT's commitment to regional development and making quality education accessible to more professionals, particularly women. He highlighted the program's potential to support women in balancing their professional and caregiving roles.Emerging from discussions at the WePOWER regional meeting in December 2022, SAR100 is supported by national training partners across SAR countries, including Bhutan Power Corporation, Bangladesh Power Management Institute, and the National Power Training Institute of India, among others.

https://ait.ac.th/2023/06/ait-to-anchor-sar-100-regional-technical-capacity-building-and-leadership-program-for-women-engineers-in-south-asia/

BREAKING BOUNDARIES: AIT'S GLOBAL INITIATIVE FOR GENDER-INCLUSIVE MIGRATION SOLUTIONS

On 10 November 2023, the Asian Institute of Technology's (AIT) Center on Gender and Forced Displacement held an online seminar focused on gender, forced displacement, and migration challenges. Titled 'Seminar on Gender and Forced Displacements: Protection of Ukrainian and African Refugees,' the event provided valuable insights into the diverse experiences of refugees and migrants, highlighting AIT's commitment to advancing gender equality and social inclusion in migration discourse.

Professor Paula Banerjee, leading the initiative, emphasized the importance of understanding gender dynamics within migration. The seminar aimed to contribute to policy-making and academic discussions that accurately reflect the varied experiences of migrants, particularly through gender-sensitive approaches.

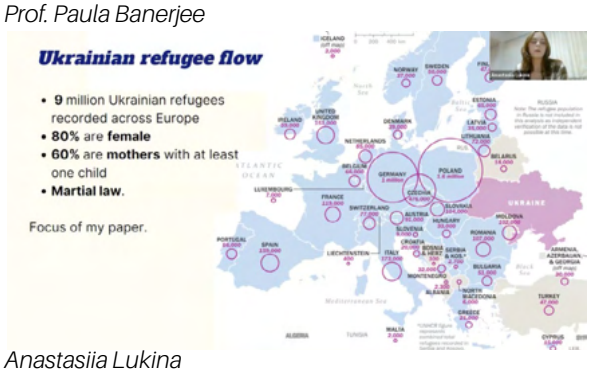
The event featured two notable presentations by emerging scholars. Anastasiia Lukina presented her research on Ukrainian refugee mothers in France, shedding light on the complexities of integration. Her findings, which explored the intersectionality of gender, migration, and identity, underscored the importance of inclusive policies and social initiatives. AIT is using these insights to advocate for more effective migration policies.

Esme Starke's presentation focused on the challenges faced by Rwandan refugees in Nakivale, particularly the paradox of self-reliance. Her research revealed how humanitarian aid could sometimes hinder rather than help refugees' independence. This prompted AIT to call for a reevaluation of aid strategies to better empower refugees.

AIT continues to lead research initiatives on gender and migration, issuing a global call to action. The institution seeks collaboration with policymakers, academics, and NGOs to create a more inclusive and supportive environment for migrants, ensuring that gender considerations remain central to the dialogue. This seminar underscored AIT's dedication to shaping policies that promote equality and empowerment for all displaced individuals.

https://ait.ac.th/2023/11/breaking-boundaries-aits-global-initiative-for-gender-inclusive-migration-solutions/

Prof. Paula Banerjee



Anastasiia Lukina

Esme Starke

AIT'S STRUCTURAL ENGINEERING PROGRAM ACHIEVES REMARKABLE GENDER DIVERSITY MILESTONE

27 December 2023 – In the historically male-dominated field of structural engineering, women have been quietly and steadily making significant contributions for many years. Now, as societal attitudes and opportunities evolve, more and more women are rising to the forefront of this profession, breaking through barriers and challenging long-standing stereotypes.

A remarkable milestone in this journey towards greater diversity and inclusion has been achieved by the Asian Institute of Technology's Structural Engineering (STE) program of the School of Engineering and Technology (SET). Currently, one-third of the students in the program are female. In 1965, there was only one female student in the Masters of Structural Engineering program—a stark contrast to the current 33% representation. This notable shift reflects the growing presence of women in technology and their substantial contributions to the world's development.

This achievement is a testament to AIT's unwavering commitment to an inclusive, forward-thinking, and equal approach to education. The institution's dedication has resulted in an enriched learning environment, allowing for diversity in the world of structural engineering.

The women joining the STE program at AIT hail from various corners of the globe, reflecting the international nature of the institution and the global impact of women in structural engineering. Their diverse backgrounds and experiences contribute to a comprehensive understanding of structural engineering principles and their applications in different regions and contexts.

Among the many inspiring female students at AIT, Kyi Noo Khin from Myanmar, Jutamas Taweesit from Thailand, Sanisha Shakya from Nepal, Nattaporn Ponpai from Thailand, and Nitisha Kafle from Nepal stand out as shining examples of how female role models in the field can inspire and encourage young women to pursue careers in structural engineering.

Ms. Khin, Ms. Jutamas, Ms. Sanisha, and Ms. Nattaporn are actively collaborating on a term project centered around the casting of a beam designed to demonstrate a specific failure mechanism in flexure while maintaining resilience against shear failure. Their primary goal is to ensure a ductile failure mechanism, a critical aspect in structural engineering that allows for deformation and provides warning signals before a potential catastrophic failure. Simultaneously, Ms. Nitisha is dedicated to her Master's Thesis, focusing on the comprehensive testing of a scaled masonry building. Her research aims to deepen the understanding of the structure's behavior during seismic events, offering valuable insights into the field of earthquake engineering.

This achievement at the Asian Institute of Technology is a testament to the transformative power of education in breaking down gender barriers and promoting diversity and inclusion. It marks a significant step towards a more equitable and balanced representation in the field of structural engineering, providing opportunities and inspiration for women worldwide to thrive in this dynamic and essential profession.

Ms. Khin, Ms. Jutamas, Ms. Sanisha, and Ms. Nattaporn (Left to Right)

Ms. Nitisha

BILL & MELINDA GATES FOUNDATION, PIJAR FOUNDATION AND TAHIR FOUNDATION ON A THREE-YEAR PROJECT IN YOGYAKARTA AND SOLO, INDONESIA.

AIT Research Theme: Aquonic technology

AIT Unit: GWSC

Project Duration: 3 years, 2021 to 2025

Project Partner: Bill & Melinda Gates Foundation, Pijar Foundation and Tahir Foundation

Description:

GWSC is collaborating with Bill & Melinda Gates Foundation, Pijar Foundation and Tahir Foundation on a three-year project in Yogyakarta and Solo, Indonesia. This project aims to demonstrate the potential of Reinvented Toilet Technology by implementing Aquonic systems for school sanitation improvement. The project proposes the installation of Aquonic technology in 15 strategic chosen locations in Yogyakarta following the SSK or as recommended by the local governments. The selection process will prioritize locations with high visibility and potential for positive impact. This includes: schools: promoting hygiene practices and sanitation education among future generations, public markets: providing access to clean sanitation facilities for a large number of daily users, tourist areas such as Malioboro: enhancing the hygiene standards and user experience in areas frequented by visitors, park public toilets: improving sanitation options and education in popular recreational spaces, or other public facilities: upgrading sanitation facilities in bus terminals, community centers, or government buildings.

https://ait.ac.th/2022/10/ait-receives-us-8-1-million-grant-from-the-bill-melinda-gates-foundation-to-support-global-water-and-sanitation-initiatives/

Omni-Processor - BMGF

Aquonic systems - BMGF, Pijar Foundation and Tahir Foundation collaboration on a three-year project in Yogyakarta and Solo, Indonesia

STRENGTHENING OF PUBLIC DATA SYSTEMS FOR SANITATION

AIT Research Theme: Food-Energy-Water

AIT Unit: GWSC

Project Duration: 1 year, December 2022 to December 2023

Project Partner: Government of Bangladesh

Description:

GWSC supports the Government of Bangladesh's flagship Strengthening of Public Data Systems programme aiming to catalyze SDG 6.2 outcomes. This involves establishing a centralized & distributed Sanitation Data Command Center, housing an integrated ecosystem of national and sub-national data systems including National Sanitation Dashboard and Integrated City/Municipal Information System for planning, effective service delivery and monitoring & evaluation. In Bangladesh, in partnership with key data partners, we are spearheading the development of foundational elements for the Government of Bangladesh's flagship initiative, "Strengthening of Public Data Systems for Sanitation." This initiative is designed to accelerate SDG 6.2 outcomes while advancing the Smart Bangladesh Agenda 2041. Our focus is on establishing an integrated ecosystem of public data systems that enable seamless information flow from standardized unified sub-national data platforms to the national sanitation dashboard and ultimately to the SDG Tracker. This integration is facilitated by the establishment and implementation of a robust data governance framework, which sets non-negotiable rules and processes for data collection, processing, storage, distribution, and utilization, with a paramount emphasis on safeguarding data privacy and security. In Nepal, our efforts are centered on scaling up the Integrated Municipal Information System. This comprehensive platform leverages geo-spatial technologies to plan, deliver and monitor services. Alongside it aims to bolster, digitize, and optimize municipal functions while fostering transparency and accountability. Likewise, in India, the GWSC, is coordinating and financing the development of a grey water management module to monitor the performances of graywater interventions in Odisha.

SPDSSB - Workshop on Identifying objectives for Data Command Center

Links:

- https://www.gwsc.ait.ac.th/a-collaborative-effort-strengthening-of-public-data-systems-for-sanitation-in-bangladesh-spdssb-workshop/
- https://www.gwsc.ait.ac.th/sanitation-data-command-centre-a-leap-towards-sustainable-development-in-bangladesh/
- https://www.gwsc.ait.ac.th/data-empowered-future-bangladesh/

DEVELOPING A CITYWIDE INCLUSIVE SANITATION PACKAGE UNDER THE CONCEPT OF URBAN-RURAL CONVERGENCE FOR UDAIPUR, DHARMANAGAR & BISHRAMGANJ IN THE STATE OF TRIPURA, INDIA

AIT Research Theme: Water Technology

AIT Unit: GWSC

Project Duration: 7 months, November 2023 to May 2024

Project Sponsors/Clients: ADB

Project Partner: Government of Tripura, India

Description:

The Global Water & Sanitation Center is providing Technical Assistance (TA) support to the Government of Tripura, India, in identifying safe and sustainable sanitation solutions in three selected cities: Udaipur, Dharmanagar, and Bishramganj. This project has been kick-started in response to the Asian Development Bank's (ADB) request to conduct a feasibility study in Tripura to identify contextualized and innovative sanitation interventions, apart from the ADB's ongoing activities related to sanitation in Tripura. In the journey of providing TA support to the Government of Tripura, GWSC is working along with GWSC's technical partner, CDD India[1]. This project is significant due to its focus on exploring the concept of urban-rural convergence in enhancing the optimal utilization of existing sanitation infrastructure and services in the arena.

This feasibility study is primarily based on reviewing the existing sanitation situation, planned sanitation infrastructure, and services in these towns, bringing a geo-spatial analysis aligned with CWIS principles to assess feasible sanitation solutions, exploring the potential of incorporating innovative sanitation technologies, and providing recommendations and solutions to improve the existing sanitation situation. The overall effort of providing TA support to Tripura is leading the way to filling the loopholes in ongoing and proposed sanitation solutions in the state. Furthermore, it ensures safe, inclusive, and sustainable sanitation conditions across the state.

A situation of using desludging vehicles to irrigate the plants in Tripura

A public toilet complex with poor maintenance in Udaipur, Tripura

Links:

https://www.adb.org/projects/53276-001/main

[1] https://cddindia.org/

RETROFITTING NSS GUIDED BY THE CWIS PRINCIPLES IN THE PROPOSED SEWER DPR IN JHARKHAND

AIT Research Theme: Aquonic technology

AIT Unit: GWSC

Project Duration: 5 months, 2023

Project Sponsors/Clients: JUIDCO

Description:

JUIDCO, under the Gov't of Jharkhand, is working on 2 sewerage projects in Dhanbad and Ramgarh, with each project being divided into 2 phases. Phase 1 of both projects is funded by NMCG, while Phase 2 is being considered for funding by ADB and sought GWSC's support to integrate NSS and CWIS principles into the project. GWSC's TA-Hub was initially asked to conduct feasibility studies in both Dhanbad and Ramgarh towns to assess the potential for developing a comprehensive CWIS package. Later, due to the government's budgetary prioritisation, the plan was restructured, and they wanted to focus on Ranchi and Dhanbad. The scope of the assignment includes reviewing of the existing sewerage DPR to identify areas for improvement, technical assessments of alternative sanitation options (NSS) to determine their suitability, and evaluation of institutional capacity and community readiness. An architecture for an integrated information management system (IMIS) and decision-making tools will be developed to optimize sanitation systems. All project activities will be meticulously documented for transparency and knowledge sharing.

The project also encompasses key components like improved toilets for underserved communities, safe wastewater collection and transport through mechanical emptying, transfer stations for remote areas, and safe disposal and treatment facilities (co-treatment/ dedicated FSTPs). Greywater treatment solutions will be implemented in specific locations, public toilets will be upgraded across towns, and a robust IMIS will be introduced for enhanced management and monitoring of municipal sanitation services.

Links:

- https://www.gwsc.ait.ac.th/transforming-the-sanitation-context-in-india-mainstreaming-cwis-citywide-inclusive-sanitation-solutions-in-dhanbad-and-ramgarh/

Meeting with Ramgarh commissioner

Meeting with Dhanbad commissioner

FGD with self-help groups

A SITUATIONAL ANALYSIS TO IDENTIFY THE POTENTIAL INTERVENTIONS FOR IMPROVING SANITATION CONDITION OF SELECTED AREAS (ZONES 2, 3, 6, AND 10) OF DHAKA NORTH CITY CORPORATION, BANGLADESH.

AIT Research Theme: Water Technology

AIT Unit: GWSC

Project Duration: 4 months, 2023 to 2024

Description:

The project aims to conduct a comprehensive assessment of the existing sanitation conditions in Zone 3, Zone 10, Zone 2, and Zone 6 within the Dhaka North City Corporation (DNCC) area. This assessment will cover various aspects of sanitation, including both sewered systems (SS) and non-sewered systems (NSS), as well as decentralized solutions and greywater management. Through field assessments, surveys, and consultations with key stakeholders such as DNCC, DWASA, local communities, NGOs, and experts, the project will identify the baseline conditions, ongoing initiatives, and planned interventions related to sanitation in the selected zones. By analyzing existing data and reports, the project will identify gaps, challenges, and bottlenecks in the current sanitation systems and practices, including urban planning and infrastructure. However, household-level data collection will not be conducted as part of this scope of work.

Following the assessment, the project will propose strategic interventions aimed at improving sanitation conditions and achieving environmental sustainability and increased resilience to climate change challenges. These interventions will include policy recommendations, institutional improvements, capacity-building initiatives, gender and social inclusive strategies, and economic and financial initiatives. Collaboration with DNCC and other stakeholders will be essential in planning and implementing these interventions. The project will culminate in a comprehensive report detailing the findings, analysis, and recommendations to upgrade the existing sanitation situation in the selected zones, providing a roadmap for improving sanitation infrastructure, services, and management practices in the DNCC area.

FAECAL SLUDGE MANAGEMENT (FSM) AND GREYWATER MANAGEMENT (GWM) PROJECT IN SEVEN BANGLADESHI TOWNS

AIT Research Theme: Water Technology

AIT Unit: GWSC

Project Duration: 8 months, 2023 to 2024

Description:

In the FSM and GWM Project, GWSC has conducted Non-sewered Sanitation planning, encompassing a comprehensive analysis of demographics, waste generation, service coverage, infrastructure design, treatment options, costing, financing, and implementation. The Government of Bangladesh (GoB) is working on a project to improve sanitation in seven towns: Bhola, Faridpur, Jhalokathi, Kushtia, Magura, Narail, and Pirojpur. This "Seven Towns Project" is supported by technical advisors (TA) with the goal of implementing Non-Sewer Sanitation (NSS) practices following the City-wide Inclusive Sanitation (CWIS) approach.

The project emphasizes critical review and analysis of available data and reports on NSS planning. This data will be used to assess demographics, quantify and characterize the generated faecal sludge and greywater in the targeted towns.

Furthermore, the project scope will assess the current service coverage and level for both faecal sludge and greywater management. Using the CWIS approach, the project will design infrastructure and investment plans specifically for NSS interventions. The scope also includes analyzing treatment options for faecal sludge and potential resource recovery options. An outline scheme design, cost estimates, and option comparisons for identified NSS interventions will be developed. This includes outlining costs for capacity building, public awareness campaigns, and institutional/governance strengthening.

The project will develop preliminary engineering designs for faecal sludge and greywater management. Financial and economic analyses will be conducted to assess the affordability and establish tariffs for the proposed NSS interventions, with a focus on project sustainability. Finally, the project will estimate the project's capital expenditure (CAPEX) and operational expenditure (OPEX) for NSS, along with the development of an implementation plan.

Field Visit 7 towns in Bangladesh

CITYWIDE INCLUSIVE SANITATION INSTITUTIONAL DEVELOPMENT SYSTEMS PROJECT IN SIEM REAP

AIT Research Theme: Water Technology

AIT Unit: GWSC

Project Duration: 2 years, 2022 to 2024

Description:

GWSC was asked to provide complementary technical assistance support to the Royal Government of Cambodia through the World Bank for the Citywide Inclusive Sanitation Institutional Development Systems Project in Siem Reap. This project aims to develop performance-based contracts for sludge emptying contractors along with capacity building, and the creation of an integrated database system including sanitation information integrated with the existing water billing system operated by the Water Supply Authority (WSA), leading to a more streamlined and effective sanitation service monitoring for Siem Reap city.

TA support components aim to establish a sustainable and integrated sanitation service in Siem Reap city by developing the capacity of Siem Reap Water Treatment Plant Utility (SR-SWTPU) and private desludging operators, leveraging billing collection efficiency, and improving information management through GIS mapping, performance-based contracting, capacity-building, and training of SR-SWTPU and Private Sector FSM Service providers. Create sanitation components for the SR-WSA customer database for a combined billing system and sanitation management information system (MIS).

Presentations by GWSC's partners, GRET and Innovative Solutions, introducing the project's framework and objectives

TECHNICAL ASSISTANCE SERVICES - INNOVATIVE SANITATION SYSTEMS FOR THE MAKKAH AREA

AIT Research Theme: Water Technology

AIT Unit: GWSC

Project Duration: 3 months, 2022

Project Partner: The Bill & Melinda Gates Foundation

Description:

The Bill & Melinda Gates Foundation (BMGF) launched the Reinventing the Toilet (RT) initiative to promote sustainable sanitation solutions. This initiative aligns with the goals of Kidana, a company established by the Kingdom of Saudi Arabia to develop holy sites, including Mina, an area that experiences annual sanitation challenges during the Hajj pilgrimage.

Kidana is considering redesigning toilet facilities in Mina to create separate areas for changing clothes, showering, and toilets. However, they face obstacles due to the site's aging sanitation infrastructure, limited number of toilet cubicles, infrequent cleaning, and a large senior population among the pilgrims.

To address these challenges, Kidana is seeking technical assistance (TA) to implement and test new sanitation systems in the Makkah region before the 2023 pilgrimage.

Overall technical support on innovative sanitation solutions for both BMGF and Kidana. Secondly, Capacity building and knowledge transfer on innovative sanitation solutions, specifically focusing on successful public toilet designs in Asia and South Africa will be done. An assessment of the current sanitation infrastructure

and service delivery in the Makkah city area. Lastly, collaborative development of innovative and inclusive sanitation solutions that address the local challenges and opportunities within the framework of City-wide Inclusive Sanitation (CWIS).

The TA will be delivered through the following components:

1. Capacity building on innovative sanitation solutions for the RT team.
2. A fact-finding mission to assess the sanitation situation in Makkah.
3. Development of conceptual designs for innovative sanitation solutions in targeted areas.

SAFELY MANAGED ON-SITE SANITATION: TECHNOLOGICAL SOLUTIONS FOR CITY DWELLERS AND AUTHORITY - DHAKA NORTH CITY CORPORATION (DNCC)

AIT Research Theme: Water Technology

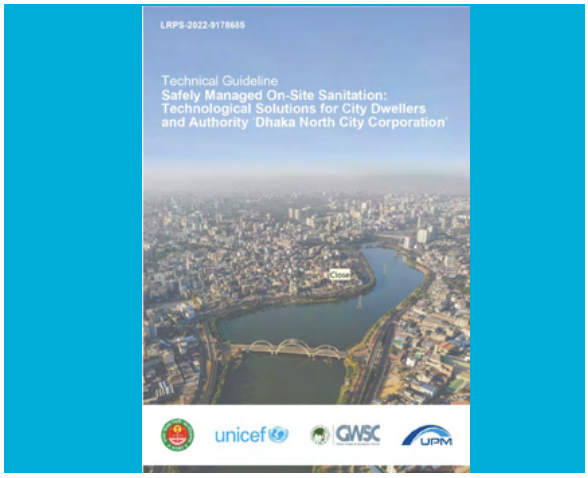
AIT Unit: GWSC

Project Duration: 1 year and 8 months, February 2023 to October 2024

Project Partner: The Bill & Melinda Gates Foundation

Description:

The overall objective of the 'Safely Managed On-site Sanitation (SMOSS): Technological Solutions for City Dwellers and Authority "Dhaka North City Corporation (DNCC)' assignment is to have a feasible on-site sanitation technological solution to guide citizens and city authority to adopt the appropriate solution to improve safely managed sanitation at DNCC area by 2023. The consultant is expected to deliver two outputs: (1) Technical guidelines for the citizens to manage on-



site sanitation at source/containment, and (2) A feasibility report on the technological solution for authority to manage fecal sludge generated at household/local business containment facility.

The World Cities Report 2020 stated that with 2.3 billion people living in cities, Asia has the highest number of urban dwellers worldwide. The region is 50.1 per cent urbanized and accounts for 54 per cent of the world's urban population. Nearly 65 million of urban population live in Bangladesh, and 47.6% of the urban population live in slum areas.

Dhaka is the 9th largest city in the world in 2018 with nearly 20 million people living in the city. The United Nations predicted that 28 million people live in Dhaka by 2030 which will make the city the fourth largest city by population. This fact challenges Dhaka City Corporation to strategically manage the city. Livability of and the quality of life in Dhaka's depends on timely provision of urban facilities and services including provision of wastewater treatment facilities.

Links:

https://www.gwsc.ait.ac.th/dncc-and-dwasa-strengthen-their-collaboration-to-improve-fecal-sludge-management/

https://www.gwsc.ait.ac.th/dhaka-is-tackling-urban-methane-emissions-with-on-site-wastewater-treatment/

https://ait.ac.th/2023/03/bangladesh-minister-of-local-government-rural-development-and-co-operatives-visit-ait-to-explore-water-and-sanitation-solutions/



ASIAN REGION COLLABORATIVE FRAMEWORK TO OPERATIONALIZE UTILITY-BASED WASTEWATER MONITORING AND MANAGEMENT - SDG 6.3.1 WEBINARS

AIT Research Theme: Water Technology

AIT Unit: GWSC

Project Duration: 1 year, 5 September 2022 to 31 August 2023

Description:

Aim and objectives is the provided support and technical assistance to regional municipal or national water utilities. It identified their needs and challenges to improve their capacity to measure, monitor, report, and use wastewater data and information. This ultimately aimed to help countries achieve Target 6.3 by promoting wastewater safe treatment and reuse among sanitation and water utilities, through stimulated investment. The Urban Wastewater 2030 initiative developed and issued a "Call for Action" for governments, water professionals, and financiers to take action on improving sustainable wastewater services and therefore contributing to the SDG 6 Global Framework for Acceleration.

The program's activities benefited utilities by generating valuable data that informed governmental institutions in preparing national statistics on wastewater production and treatment. Improved utility capacity to generate reliable data should also have oriented follow-up investments from donors where gaps were identified. This information was intended to inform sustainable water resources management and policy decisions guided by the polluter pays principle.

Activities included organizing, in collaboration with UN-HABITAT, two series of three technical sub-regional

webinars in South-East Asia and South Asia on wastewater management and monitoring with water and wastewater utilities from Asian countries. The program also supported the utility wastewater data collection process through a questionnaire and methodology developed with UN-HABITAT. It developed a compendium of best practices and lessons learned on wastewater treatment and reuse as well as application of wastewater monitoring concepts. This compendium, along with a learning network, was published on the GWSC website.

Link:

- https://www.youtube.com/playlist?list=PLkXw3G6VLErDi_n48MjXQIENDKTqVzIYA
- https://ait.ac.th/project/asian-region-collaborative-framework-to-operationalize-utility-based-wastewater-monitoring-and-management/

13TH SOUTHEAST ASIA SUBREGIONAL COMMITTEE MEETING, PROPOSAL DEVELOPMENT TRAINING WORKSHOP

AIT Research Theme: Water Technology

AIT Unit: GWSC

Project Duration: 8 months, December 2022 – April 2023

Project Partner: The Bill & Melinda Gates Foundation

Description:

The aim of the project was the organization of the 13th Southeast Asia Subregional Committee Meeting, Proposal Development Training Workshop, Early-Career Professional Networking Session, and Water Security Assessment Tool Training Workshop on 22–26 May 2023. Co-hosted by the APN Secretariat and AIT, the project aimed to strengthen regional cooperation, capacity building, and knowledge exchange on water security in Southeast Asia. A diverse range of participants attended from several countries in Southeast Asia and South Asia.

This event had a Proposal Development Training Workshop (PDTW): Focused on equipping participants with skills to develop competitive proposals for APN funding on water security challenges. Specific areas of focus included knowledge systems, governance, and regional cooperation; Early-Career Professional Networking Session: This session aimed to create an inclusive environment for valuable discussions and interactions; 13th SEA-SRC Meeting: This meeting provided a platform for SEA-SRC members to address

institutional matters related to the subregion and critical water security issues relevant to their mandate. Water Security Assessment Tool (WATSAT) Training Workshop: This workshop aimed to enhance the capacity of participants to measure water security in their regions.

The outcomes of this event were empowering early-career professionals with proposals development skills for water security research, facilitating the creation of a network for early-career professionals focused on water security, strengthening collaboration among SEA-SRC members on water security issues and enhancing.

Link:

https://ait.ac.th/2023/05/ait-and-apn-foster-regional-cooperation-and-capacity-building-for-sustainable-development-in-southeast-asia/

SUSTAINABLE USE OF WATER ON AIT CAMPUS

AIT Research Theme: Food-Energy-Water

AIT Unit: OFAM, OSC, EEM

Description:

AIT water consumption volume for the year 2023 was 502,126 m3. With various measures taken, the consumption reduced by 3% compared to 2022. AIT had its own waste water treatment plant since July 2012, a system that collects all sewage water from the campus, which amounted to 133,131 m3 in 2023, and all treated water was released back to AIT's canal system and reused for watering the garden on campus.

AIT has a closed loop canal system, with rainwater stored for the summer and all landscaping and greenery maintained using this water. This helps save clean water in accordance with the Thai Law to recycle the waste water to maintain the environment.

In addition, AIT has its own reservoir within the campus, with an area of 92,893 m2, storing rainwater to be used during the dry season.

FUSION OF REMOTE SENSING, MODELING, AND GROUND MEASUREMENT TECHNIQUES FOR IMPROVED ESTIMATION OF REGIONAL TERRESTRIAL WATER STORAGE

AIT Research Theme: Water Storage

AIT Unit: Water Engineering and Management

Project Duration: 1 February 2023 to 31 January 2025

Project Sponsor/ Client: Asian Institute of Technology (AIT)

Expected Social Impact:

The AIT high-resolution product includes a variety of environmental variables such as water, energy, climate, soil, and vegetation that are required by a wide range of disciplines. The product is not only useful for scientific advancement, but it is also beneficial for social applications such as agriculture, huma-nimal habitat relocation (due to limited water access), disease control, climate change impact assessment/mitigation, and urban management, to name a few. An ease of use and freely access to data for public, business, and government sectors also contributes to improvement of citizen science in Thailand, which is a crucial part of the country's development.

Description:

Terrestrial or land water storage (TWS) is defined as the sum of surface water, soil moisture, snow water, and groundwater availability and is a crucial indicator for monitoring domestic, industrial, and agricultural water supplies. The capability to obtain TWS information is essential for understanding past events and projecting future changes in the hydrological cycle and water availability, as well as their impact on floods and droughts. The individual components of TWS exert diverse effects on the water resources and climate system. For instance, soil moisture serves as a major water source for agricultural activities, and its interaction with the atmosphere in the terrestrial water cycle significantly impacts the climate system (Seneviratne et al., 2010). Similarly, groundwater variability affects drinking water directly, and its influence on soil moisture and evapotranspiration may modify the long-term change in water availability and climate.

Despite the significance of obtaining accurate TWS estimation, little is commonly known about the spatial and temporal variations of TWS and its components. This is apparent on a regional scale due to the absence of large-scale monitoring systems. Ground-based observations, while accurate, only offer point-wise information. Satellite remote-sensing observations can provide extensive spatial coverage, but they are generally sensitive to only one water storage component and frequently suffer from several limitations. For example, satellite soil moisture observations are only sensitive to the first few centimeters of the soil profile and places with sparse vegetation (Kerr et al., 2012).

Similarly, satellite altimetry data can derive surface water variation, but this approach is currently limited to large water bodies. Because ground or satellite measurements alone are insufficient to monitor comprehensive components of TWS, hydrological or land surface models are often employed. The benefits of models are their ability to distinguish individual TWS components, provide spatially distributed estimates, and simulate historical records. However, the model performance is often influenced by the accuracy of the meteorological forcing data and the quality of the model parameters, leading to high uncertainty of the TWS simulation results. The apparent strength of these three datasets motivates the need to combine the model with satellite remote sensing and ground measurements to obtain a better representation of TWS.

Data fusion and data assimilation approaches can be used to optimize the information from various sources to enhance the performance of TWS estimates. While both are very effective, the development of such integrated systems often faces significant challenges due to a lack of high-performance computational resources to perform model simulation or process big data, as well as a limited understanding of how datasets from various sources should be accurately optimized. As a result, efforts to improve hydrologic systems are often undertaken by a few research groups (mainly from outside Asia) with adequate resources. This results in a shortage of high-quality and high-resolution data across Asia, which is caused not by a lack of information but rather by a lack of scientific expertise and appropriate means to develop them. This project will focus on the developed data fusion system and provide scientific products with greater accuracy and spatiotemporal resolution than the public product (currently available at 25 km).

BLENDED (VIRTUAL & IN-PERSON) CAPACITY DEVELOPMENT TRAINING PROGRAMS FOR CDD INDIA STAFF, 21 NOVEMBER 2023- 03 MARCH 2024

AIT Research Theme: Smart communities

AIT Unit: AIT Extension

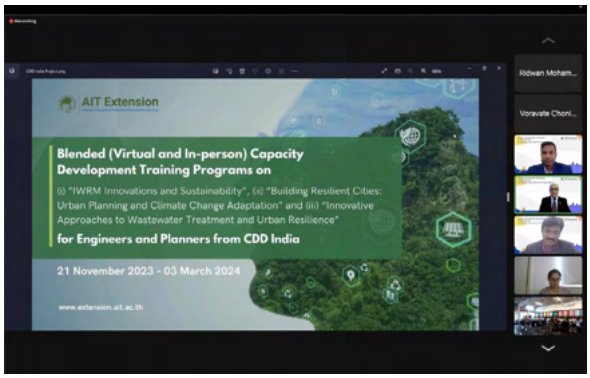
Project Duration: 21 November 2023 to 30 March 2024

Project Sponsor/Client: CDD India

Expected Social Impact:

This project focuses on enhancing the skills and knowledge of officials from CDD India through blended training programs and exposure visits in Thailand. The project, titled "Blended (Virtual & In-Person) Capacity Development Training Programs for CDD India Staff," runs from November 21, 2023, to March 3, 2024. It is designed to support Sustainable Development Goal (SDG) 11, which promotes sustainable cities and communities, and also aligns with SDG 6 for clean water and sanitation.

By offering an integrated learning approach, the program aims to explore innovative water resource management, boost urban resilience knowledge, and improve strategic planning skills. Participants will engage in hands-on exercises, integrative learning, case studies, and best practice discussions. Managed by AIT Extension, the program leverages AIT's expertise in smart communities



to provide meaningful training experiences for CDD India staff. The project is funded by CDD India and seeks to leave a lasting social impact on the participants' professional capabilities.

Description:

Capacity development of officials from CDD India, through blended capacity development training programs and exposure visits in Thailand.

PROFESSIONAL DEVELOPMENT TRAINING PROGRAM ON "PLANNING, DESIGN AND MANAGEMENT OF CLIMATE RESILIENT WATER INFRASTRUCTURES".

Project Duration: 6 – 10 June 2023.

Description:

The professional development training course on Planning, Design, and Management of Climate Resilient Water Infrastructures was designed to equip participants with the knowledge and skills necessary to address the challenges posed by climate change in the water sector. The course aimed to provide a comprehensive understanding of the principles, tools, and strategies for planning, designing, and managing water infrastructure projects that are resilient to climate impacts. This course was prepared in response to a recent request from the ministry of Bhutan. It was a one-week professional development course organized by AIT Extension, Asian Institute of Technology. The program was designed to provide civil engineers with the knowledge and skills necessary to plan, design, and manage water infrastructures that are resilient to climate change. The course covered a range of topics related to climate-

resilient water infrastructure, including risk assessment, adaptation strategies, and sustainable management practices. The program aimed to provide a meaningful and productive experience for all participants from Bhutan.

AIT CO-ORGANIZES GREEN TECHNOLOGY EXPO 2023, ADVOCATES FOR SUSTAINABLE SOLUTIONS AND GLOBAL PARTNERSHIPS

On November 12, 2023, the Asian Institute of Technology (AIT) played a pivotal role as a co-organizer of the successful "Green Technology Expo 2023" held at the Bangkok International Trade and Exhibition Center (BITEC). This event, co-hosted by the Thailand-Sino Association of Sciences and Technology (TSAST) and China Council for the Promotion of International Trade–Shanghai (CCPIT-Shanghai), received support from the Ministry of Energy, Ministry of Higher Education, Science, Research and Innovation of Thailand, and other prestigious institutions. AIT's involvement highlighted its dedication to advancing sustainable technologies in addressing global climate challenges.

Themed "Towards the transition to newer, cleaner, sustained evergreen technology," the expo aimed to support global climate policies and Sustainable Development Goals (SDGs). It focused on Thailand's ambition to emerge as a regional hub for electric vehicle (EV) production within the framework of the Bio-Circular-Green Economy. Attendees benefitted from various services including green energy consumption, business and technology matching, and engaging discussions at the Green Tech Investment Forum.

AIT's representatives, including Mr. Russell Rein, AIT's Vice President for Administration, and Dr. Wenchao Xue, Director of the Belt and Road Research Center, actively participated in the event. Their contributions, along with AIT's involvement in productive business negotiations, collaborative technology development, and showcasing expertise in green mobility and waste management, underscored the institute's commitment to finding sustainable solutions and fostering global partnerships for a greener future.

https://ait.ac.th/2023/11/ait-co-organizes-green-technology-expo-2023-advocates-for-sustainable-solutions-and-global-partnerships/

AIT AND CRES, CHINA, SIGN MOU TO ADVANCE ENERGY AND ENVIRONMENTAL COOPERATION

The MOU establishes a comprehensive cooperation framework between AIT and CRES, focusing on non-governmental exchanges, particularly in technology transfer within energy and environment sectors. Initiatives include soliciting donations from Chinese firms for product showcases, developing a technology transfer mechanism at AIT with entities like the UN, and conducting training programs for Southeast and South Asian markets. Academic exchange plans involve offering AIT students short-term fellowships at CRES, and facilitating personal swaps, with AIT scholars researching in Chongqing and CRES staff joining AIT training programs. The agreement also boosts network collaboration by engaging stakeholders and business partners across both nations, as emphasized by Professor Kazuo Yamamoto at the signing ceremony.

https://ait.ac.th/2023/12/ait-and-cres-china-sign-mou-to-advance-energy-and-environmental-cooperation/

AIT SIGNED A MEMORANDUM OF UNDERSTANDING WITH THE ELECTRICITY GENERATING AUTHORITY OF THAILAND

On May 18, 2023, the Asian Institute of Technology (AIT) and the Electricity Generating Authority of Thailand (EGAT) solidified their collaboration with the signing of a Memorandum of Understanding (MoU). Signed by AIT President Prof. Kazuo Yamamoto and Dr. Jiraporn Sirikum, Deputy Governor-Power Business, the MoU seeks to deepen ties between the two institutions. Its core objective is to establish a scholarship program spanning two years for master's degrees in Engineering & Technology, Environment, Resources and Development, and Management, aimed at enhancing the skills of EGAT employees related to sustainable energy. The ceremony witnessed expressions of gratitude from Mr. Sanjeev Jayasinghe, acknowledging Dr. Jiraporn's dedicated efforts. Prof. Shobhakar Dhakal highlighted the longstanding relationship between AIT and EGAT, expressing AIT's commitment to supporting EGAT in human resource development. Prof. Yamamoto, in his remarks, applauded EGAT for entrusting AIT with this crucial task and anticipated the implementation of the MoU from August 2023. Dr. Sirikum underscored EGAT's dedication to fostering high-performance employees, particularly in sustainable energy, through collaboration with AIT. Notable attendees included key figures from AIT such as Prof. Dieter Trau, Prof. Abdul Salam, Dr. Yuosre Badir, alongside EGAT officials including Miss Phana Supavakul, Miss Sopaphan Suphachan, and others.

https://ait.ac.th/2023/05/ait-signed-a-memorandum-of-understanding-with-the-electricity-generating-authority-of-thailand/

THE PALLADIUM GROUP COMMENDS SAR100 MIDPOINT ACCOMPLISHMENTS; PLANS FUTURE COLLABORATION WITH YCA

21 November 2023 – AIT Vice-President for Administration, Mr. Russell Rein, welcomed The Palladium Group's representative, Mr. Piyush Mohanty, Associate Director on 21 November 2023 along with Prof. Abdul Salam, Dean, School of Environment, Resources and Development (SERD); Prof. Faiz Shah, Executive Director, Yunus Center AIT (YCA) and SAR100 Program Lead; Dr. Jai Govind Singh, Associate Professor, Sustainable Energy Transition and SAR100 Academic Lead; Dr. Pradeep Dash, SAR100 Administrative Lead; and the SAR100 technical team.

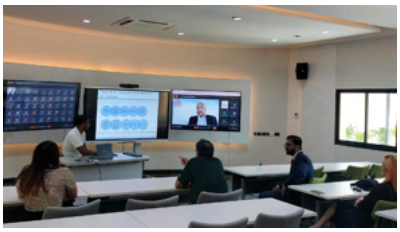
The SAR100 mid-term report was presented, during which Mr. Mohanty appreciated the Yunus team's work in maintaining the quality and momentum of this high-impact regional program. Mr. Rein and Prof Salam highlighted AIT's strengths as a regional learning powerhouse. Prof. Shah and Dr. Singh addressed program-specific questions in the lead up to the SAR100 Capstone Week scheduled 4-8 March 2024.

Mr. Mohanty visited the YCA Regional Knowledge Hub during Mr. S. K Soonee's class and experienced the SAR100 hybrid learning environment in real time. He also visited the Energy Department and campus facilities.

The Palladium Group is managing the World Bank's WePOWER SAR100 program on behalf of the Australian Government. This program is designed to build professional credentials of mid-career women in the energy sector to take on leadership roles in the region's rapidly changing energy environment.

Yunus Center AIT Headquarters

Energy Building



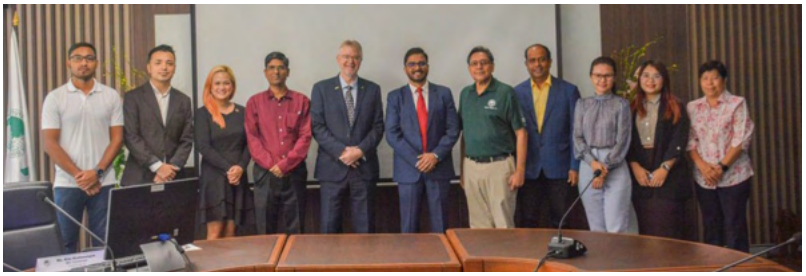
Regional Knowledge Hub (RKH)

Warm welcome from YCA

Energy Park

AIT Landmark

SAR100 mid-term report presented at the AIT Boardroom



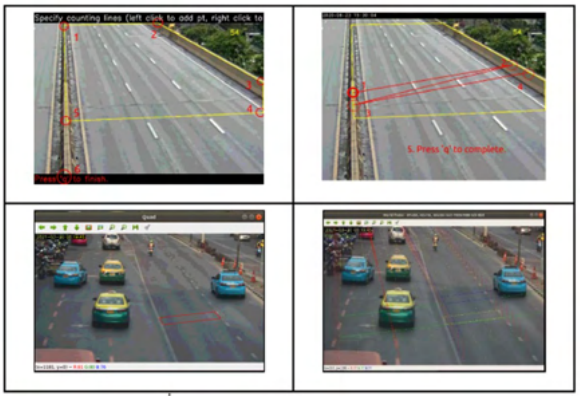
From left to right: Mr. Binay Karna, SAR 100 Technical Lead; Mr. Sanjeet Amatya, Director of Public Affairs, Office of International and Public Affairs; Ms. Kim E. Kiatiwongse, SAR100 MEL Coordinator; Dr. Jai Govind Singh, Associate Professor and SAR100 Academic Lead; Mr. Russel Rein, VP for Administration; Mr. Piyush Mohanty, Associate Director, The Palladium Group; Prof. Faiz Shah, Executive Director, YCA and Program Lead, SAR100; Dr. Pradeep Dash, Administration Lead, SAR100; Ms. Esther Nant May Than Htay , SAR100 GDSI Coordinator; Ms. Saw Theint Theint, Program and Administrative Coordinator; and Ms. Parichad Nuntavong, Program Secretary, YCA

DEVELOPMENT OF NEAR REAL-TIME PROVINCIAL EMISSION INVENTORY SYSTEM

Project Duration: 03 May 2022 to 30 July 2023

Description:

This research has studied and developed the near real-time emission inventory from the three main sources which are traffic, open burning, and industry in Pathum Thani province. The datasets that are used to develop the near real-time emission inventories come from CCTV on the road, google map API, hotspots from satellites and CEMS. The emission inventories are presented to the public via a web application platform by importing the hourly emission to the platform. In the industry sector, almost all emission inventory was calculated from static datasets because the factories that have CEMS have only 6 factories in Pathum Thani province and all of them are power plants. From the results, the most emission came from the food and beverage sector.



AI BASED SMART MICROGRID PLATFORM

AIT Research Theme: Infrastructure

Project Duration: 15 February 2021 to 28 December 2023

Description:

The project "AI based Smart Microgrid Platform" The research project funded by Provincial Electricity Authority (PEA). Thailand has a growing demand for electricity and a trend towards increasing the use of renewable energy sources. There are efforts to integrate electricity into the distribution system. However, alternative energy sources will have limitations due to the uncertainty in supplying electricity into the power distribution system. The electricity distribution system has been developed to be more stable and flexible by utilizing Microgrid systems, which incorporate advanced control algorithms. The creation of Smart Microgrid systems, enabling the capability to purchase, distribute electricity and control the distribution system both in connection with the main

grid (On-grid) and independently (Islanding mode). This is beneficial for the electricity distribution network of the Provincial Electricity Authority (PEA), particularly in remote areas at the end of transmission lines, allowing residents in remote areas to have access to electricity.

COMTRADE INTELLIGENT DATA CLUSTERING AND ANOMALY ANALYSIS PLATFORM (CIDCAAP)

AIT Research Theme: Infrastructure

Project Duration: 23 September 2021 to 31 December 2023

Description:

Thai people have an increasing demand for electricity, but sometimes there are disruptions in the electricity supply, leading to power outages. If a power outage lasts for more than 20 seconds,

it can have consequences on people's lives and properties, including safety and livelihoods. Therefore, electricity producers must work continuously to address and develop solutions to meet the increasing demand. Currently, the regional electricity sector has developed and utilized equipment capable of measuring electricity consumption, which is suitable for managing and monitoring energy issues (DFR, Relays, and PQ Meters).

The electricity consumption data collected is used to identify the causes of deficiencies in the electricity system, aiming to improve its stability and enhance the quality of life for all Thai people.

RESEARCH PROJECT ON EDSSEA- ENERGY DEMAND IN SOUTH AND SOUTHEAST ASIA

AIT Research Theme: Infrastructure

Project Duration: 2022-2026

Description:

The main objective of the project on Energy Demand Changes Induced by Technological and Social Innovations is to create a research community with a focus on end-use, demand-side perspectives that further dialogue and cross- fertilization of research and policy analysis through data, concepts and methodologies. The goal of EDSSEA- Energy Demand in South and Southeast Asia is also to develop a service-oriented bottom-up demand model to help in providing inputs to climate policy analysis. South Asian countries are expected to experience fast economic growth and infrastructure development in the coming three decades. Most of the demand in the region does not have historical path dependency and hard lock-in effect. This provides enough scope and opportunities for planning to decouple energy demand growth from emission growth. Such energy demand planning can have the benefit of reduced cost of supply capacity expansion planning and synergies with near term SDGs Framework. It is funded by the Research Institute of Innovative Technology for the Earth (RITE), Japan. Active participation of SMARTS team in online and offline meetings continued through 2023. Joyashree Roy spoke on "What is wellbeing in the Global

South and how to achieve it" and moderated the session on "EDITS innovations to fill in research gaps", at EDITS Annual Meeting, 6-10 November 2023, Lisbon, Portugal. She also delivered talk on "The costs and potentials of demand-side interventions from a Global South perspective" and participated in the Panel discussion on "Demand-side innovations and their connection to energy security" at the session on "EDITS: Demand-side solutions to disruptions", Hosted by the Japanese Pavilion at COP28, Expo City Dubai, United Arab Emirates, 11th December 2023.

RESEARCH PROJECT ON MULTI-COUNTRY ELECTRICITY TRANSITION POTENTIAL AND CHALLENGES

AIT Research Theme: Clean Energy

Project Duration: 2022-2026

Description:

The "Research Project on Multi-Country Electricity Transition Potential and Challenges" (MCET) focuses on clean energy, running from 2022 to 2026. The primary goal is to establish energy modeling teams proficient in creating zero-carbon pathways and scenarios, enabling cross-country comparisons. The project currently centers on Thailand and Bangladesh, investigating their potential for electricity transition and the specific challenges they face. By fostering the development of these teams, MCET aims to enhance the capacity for sustainable energy planning and implementation. This initiative will facilitate knowledge exchange and the development of tailored strategies, contributing to each country's unique context and accelerating their progress towards clean energy goals. The project ultimately seeks to provide a framework for other nations to follow, promoting global advancements in sustainable electricity transition.

Weblink:

https://www.smartscenter.org/copy-of-edssea

TALK ON "WHAT IS WELLBEING IN THE GLOBAL SOUTH AND HOW TO ACHIEVE IT" AND SESSION ON "EDITS INNOVATIONS TO FILL IN RESEARCH GAPS", AT EDITS ANNUAL MEETING

AIT Research Theme: Innovations

Project Duration: 6-10 November 2023

Description:

At the EDITS Annual Meeting held from November 6-10, 2023, in Lisbon, Portugal, Center Director Professor Joyashree Roy delivered an insightful talk on "What is Wellbeing in the Global South and How to Achieve It." Her presentation focused on understanding wellbeing from the perspective of the Global South, emphasizing the importance of addressing social, economic, and environmental challenges unique to these regions. Professor Roy highlighted the critical role of innovation and sustainable development in achieving wellbeing, aligning her discussion with Sustainable Development Goals (SDGs) 7, 9, 11, and 12. In addition to her talk, Professor Roy moderated a session on "EDITS Innovations to Fill in Research Gaps," where she facilitated discussions on cutting-edge innovations designed to bridge existing research gaps. This session showcased various innovative projects and research initiatives aimed at promoting sustainability and addressing pressing global challenges, furthering the mission of EDITS.

MODE DECOMPOSITION-BASED SHORT-TERM MULTI-STEP HYBRID SOLAR FORECASTING MODEL FOR MICROGRID APPLICATIONS

AIT Research Theme: Clean Energy

Project Duration: 2023

Description:

A sustainable energy sector and achieving carbon neutrality in microgrids require a firm commitment to renewable energy resources. A sharp focus on solar energy holds the most promising potential for a low-carbon energy pathway. Efficient and optimal energy management application in the case of such microgrid systems requires the development of an accurate forecasting technique. A significant obstacle in creating such an accurate prediction tool is the intermittent nature of solar energy. To address this challenge, this research proposes a novel threefold hybrid model that integrates empirical mode decomposition (EMD), convolutional neural networks (CNN), and long short- term memory (LSTM) neural networks to forecast solar radiation up to three steps ahead. We do this utilizing two distinct solar radiation datasets obtained from two different sites in Thailand: one at 30-min intervals and the second one at 15-min intervals. To assess the forecasting capabilities of the proposed model, this study has carried out a comprehensive analysis by comparing it to six alternative models considering hybrid and stand-alone options. The

proposed model outperformed them all, establishing its supremacy with the lowest mean absolute error (MAE), root-mean-square error (RMSE), and mean absolute percentage error (MAPE), additionally, ensuring that it meets the industry standards for forecasting applications. The proposed model's effectiveness in accurately predicting solar radiation has been successfully tested for a microgrid case study site in Thailand which supplies power to a business complex and uses the innovative Green Energy Management System (GEMS) developed by Leonics Co. Ltd.

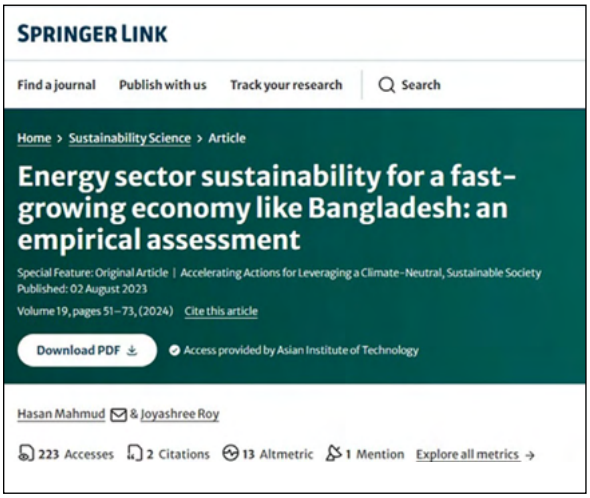
ENERGY SECTOR SUSTAINABILITY FOR A FAST-GROWING ECONOMY LIKE BANGLADESH: AN EMPIRICAL ASSESSMENT

AIT Research Theme: Clean Energy

Project Duration: 2023

Description:

Fast-growing economies like Bangladesh are expected to experience high growth in GDP, and in energy use with structural shifts towards digitalization and industrialization in the coming decades. However, given the goal of global net zero carbon growth, energy sector development will need to satisfy multiple sustainability criteria simultaneously. This paper examines empirically the trends in sustainability indicators for Bangladesh's energy sector to assess the current status based on past trend. A long list of 438 indicators is compiled from the literature used in various country contexts for understanding energy sector sustainability but this study identifies a short list of 38 Bangladesh- specific indicators and develops a composite index. Principal Component Analysis (PCA) method was used for weighting individual indicators to arrive at the composite index. Results show that Bangladesh is showing marginal progress towards



sustainability of the energy sector. While progress in social and economic indicators such as increasing access to cleaner fuel, electrification, productive use of energy, increased diversity of fuel mix has aided in advancing sustainability, the deteriorating environmental indicators over time is pulling down the sustainability status of the energy sector. Among other things, increasing share of fossil fuel in energy mix, lack of adequate improvement in energy efficiency in all sectors, increase in methane emissions need attention and solution to make energy sector sustainable.

These steps can also help in reducing overall energy demand and emissions without adversely impacting social and economic growth through deployment of appropriate fuel choice, technologies and infrastructure. For better monitoring of energy sector sustainability, some data gaps for Bangladesh have also been identified.

ENERGY DEMAND CHANGES INDUCED BY TECHNOLOGICAL AND SOCIAL CHANGES IN SOUTH AND SOUTHEAST ASIA

AIT Research Theme: Technology, Policy and Society

AIT Unit: SMARTS@AIT /SERD

Project Duration: 1 September 2022 to 30 April 2026

Project Sponsors/Clients: It will evolve over time. Currently: In India (GCP-JU, IIT Guwahati, SAFE) In Bangladesh (JNU, ULAB, Science connect) In the region (SANDEE)

Project Partners: : It will evolve over time. Currently: In India (GCP-JU, IIT Guwahati, SAFE) In Bangladesh (JNU, ULAB, Science conenct) In the region (SANDEE)

Expected Social Impact: Sustainable energy production and consumption solutions, Low energy demand with high human well being

Description:

South Asia and South East Asian countries are expected to experience fast economic growth and infrastructure development in the coming three decades due to the regionâ€™s poverty reduction imperative along with population growth and income growth. So, levels and structure of energy and resource demands are bound to go up. But the interesting point is that most of this structure and infrastructure and demand is going to be new so most of the demand does not have historical path dependency and hard lock in effect. This provides

enough scope for planning for decoupled energy demand growth. Embedding these solutions within policy planning early on and without further delay will not lock the region in unsustainable pathways now which will mean many irreversible or stranded asset consequences in future. By themselves physical resource demands are not directly enhancing human welfare and wellbeing (or utility). Rather it is the services and amenities that the use of energy and other resources provide that is the ultimate social goal of resource use. Taking a service lens provides many new emission mitigation pathways and potentials for demand shift, improvement and avoidance possibilities. How to imagine and model consumers is an interesting domain both theoretically and empirically.

SUSTAINABLE ENERGY CONSUMPTION ON CAMPUS

In 2023, the total electricity consumption at AIT amounted to 10,809,720 kWh, marking a 5% rise compared to the previous year. This increase can be attributed to the installation of additional infrastructure, including air conditioners and water heaters in Student Village-2 and Student Village-3. Breakdown of electricity usage revealed that 35% was allocated to chilling operations, 21% for academic purposes, 15% for residential needs, and 27% for other operational requirements.

AIT's energy infrastructure includes rooftop photovoltaic (PV) units with a combined capacity of 50 kW. These units have an average solar electricity generation of 175

kWh/day, contributing 20-25% of power to the Institute's library. In 2023, the PV system generated 65,194.20 kWh of electricity. Additionally, AIT expanded its solar energy capacity from 4.2 kW to 12 kW in October 2019, located on the Energy building. This system generates an average of 50 kWh/day, supplying 50% of the building's power needs. In 2023, the Energy building PV system produced 16,063.83 kWh of electricity. AIT's commitment to sustainability is further underscored by a contract with BCPG Public Company Limited (Bangchak) to install a 1.5 MW solar rooftop PV system on various campus buildings. This initiative is scheduled for completion by September 2024, aligning with AIT's goal to become a Net Zero Campus.

To promote the use of electric vehicles (EVs) among employees and students and reduce emissions, AIT, in collaboration with EA (Energy Absolute), installed two AC/DC electric vehicle fast-charging stations in 2018. These were the first of their kind at AIT, aimed at facilitating the adoption of EVs on campus. The increased presence of EVs on campus in 2023 serves as evidence of the effectiveness and importance of these charging stations in encouraging sustainable transportation practices.

EDSMAT3-C-16-DAM SAFETY AND DISASTER PREVENTION

AIT Research Theme: Infrastructure

AIT Unit: Yunus Center

Project Duration: 7 November 2022 to 31 December 2024

Project Sponsors/Clients: World Bank, Pakistan Water and Power Development Authority (WAPDA)

Project Partner: ECEWI and Menaal International

Expected Social Impact: Improved efficiencies in energy services, management, and technologies enhance energy security for citizens of Pakistan

Description:

Dams are crucial infrastructure that impacts national socio-economic development goals. They are also crucial in terms of the risks they pose to the surrounding communities, the energy infrastructure, and overall public safety should an emergency or unforeseen event happen. This course develops the competencies of engineers and staff of hydropower projects and facilities of Pakistan's Water and Power Development Authority to analyze and mitigate potential disasters and implement measures to ensure safety. In particular, the course helps participants:

a. Understand the elements of an effective dam safety program
b. Learn and apply best practices and guidelines of dam safety
c. Identify and assess risks in hydropower operations
d. Learn and apply strategies in emergency response planning

EDSMAT3-C-13: HYDROPWER PROJECT MANAGEMENT & EDSMAT3-C-14: CONSTRUCTION MANAGEMENT AND QUALITY CONTROL FOR HYDEL PROJECTS

AIT Research Theme: Infrastructure

AIT Unit: Yunus Center

Project Duration The EDSMAT3-C-14 :

07 November 2022 to 13 December 2024

Project Duration The EDSMAT3-C-13 :

17 August 2022 to 31 December 2024

Project Sponsors/Clients: The World Bank

Project Partner: Entura Clean Energy & Water Institute (ECEWI) Menaal Travel Iraj Consultants

Expected Social Impact:

By improving construction management and quality control in hydel projects, the EDSMAT3-C-14 initiative aims to significantly boost the efficiency and reliability of energy services in Pakistan. This enhancement will contribute to increased energy security, ensuring a stable and sustainable energy supply that can meet the growing demands of the population. The program seeks to empower participants with the skills necessary to implement and oversee projects that not only advance technological capacities but also foster economic growth and environmental sustainability in the region.

Description:

The EDSMAT3-C-13 module Hydropower Project Management course is designed for engineers of Pakistan's Water and Power Development Authority to develop competencies in mana ging and implementing activities of hydropower projects. It is aimed at strengthening individual skill sets vital to a smooth implementation of the entire project and the successful achievement of its desired outcomes. The course helps participants:

a. Enhance their understanding of the project cycle and organizational structure

b. Understand roles and responsibilities of engineers and other project staff

c. Understand the importance of testing and essential operational procedures

d. Analyze project costs and budgets

e. Learn to develop a project implementation plan

The EDSMAT3-C-14 module is an integral part of the broader EDSMAT3 Program, focused specifically on hydroelectric (hydel) project development. This module aims to profoundly enhance the competencies of professionals involved in the construction and oversight of hydel projects, ensuring they are equipped with cutting-edge methods in construction management and rigorous quality control standards. Under the guidance of Project Principal Investigator (PI) Dr. Faiz Shah, participants will engage in an in-depth curriculum that covers advanced techniques in project planning, execution, and management tailored specifically to the unique demands of hydel infrastructure. The training will also emphasize the importance of adhering to international quality standards to mitigate risks and ensure the operational longevity and efficiency of energy projects.

EDSMAT3-D-18-HEALTH AND SAFETY STANDARDS FOR HYDROPOWER PROJECTS

AIT Research Theme: Infrastructure

AIT Unit: Yunus Center

Project Duration: 31 October 2022 to 31 December 2024

Project Sponsors/Clients: World Bank, Pakistan Water and Power Development Authority (WAPDA)

Project Partner: GEEC Ltd (Dr. Masud Karim) Menaal International (Mr. Saqib Izhar) HSE-Vision (Mr. Bilal Mustafa Syed) Iraj Consultants (Mr. Irshad Ahmed)

Expected Social Impact: Improved efficiencies in energy services, management and technologies enhance energy security for citizens of Pakistan

Project Description:

Hydropower is a crucial resource that enables Pakistan to achieve its national development objectives. However, while it may bring great benefits to the country and power people's homes, and sustain the industry, it also poses a lot of environmental, health, and safety risks. This course helps develop the competencies of engineers and staff of hydropower projects and facilities of Pakistan's Water and Power Development Authority to identify, mitigate and manage health and safety risks and ensure the sustainability of hydropower in the context of Pakistan. In particular, the course helps participants:

a. Understand the need for health and safety standards within the project organization

b. Explain the operational and non-operation factors affecting health and safety

c. Analyze health and safety scenarios, operations and inspection procedures, and emergency and crisis situations,

d. Demonstrate the behavioral and leadership qualities of a successful health and safety professional

EDSMAT3-E21-IMPLEMENTING SELECTIVE ERP APPLICATIONS & EDSMAT3-E-20- PERFORMANCE-BASED EVALUATION SYSTEMS & EDSMAT3-E-22-INSTITUTIONAL DEVELOPMENT GAP ANALYSIS AND PDNA

AIT Research Theme: Infrastructure

AIT Unit: Yunus Center

Project Duration EDSMAT3-E21:

21 November 2022 to 31 December 2024

Project Duration EDSMAT3-E20 & E22:

05 December to 31 December 2024

Project Sponsors/Clients: World Bank, Pakistan Water and Power Development Authority (WAPDA)

Project Partners: ECEWI and Menaal Travel

Project Description:

EDSMAT3-E21 Implementing Selective ERP Applications course is designed for engineers of Pakistan's Water and Power Development Authority to implement the selective ERP applications. Improved efficiencies in energy services, management, and technologies enhance energy security for citizens of Pakistan

EDSMAT3-E20 the Performance-Based Evaluation Systems course intends to build the capacity on how to access and evaluate the performance by the system for the hydro-power projects.

EDSMAT3-E21 the Institutional Development Gap Analysis and PDNA project is on capacity building in the area of Hydropower Infrastructure|Renewable Energy|Energy Management|WAPDA|EDSMAT

EDSMAT3-F-23-INVESTMENT ANALYSIS OF RENEWABLE ENERGY PROJECTS & EDSMAT3-F-24-FINANCIAL AND ECONOMIC PLANNING FOR ENERGY PROJECTS & EDSMAT3-F-25-HYDROPOWER FINANCING AND RISK MANAGEMENT

AIT Research Theme: Infrastructure

AIT Unit: Yunus Center

Project DurationEDSMAT3-F-23:

21 November 2022 to 31 December 2024

Project DurationEDSMAT3-F-24, 25:

05 December 2022 to 31 December 2024

Project Sponsors/Clients: World Bank, Pakistan Water and Power Development Authority (WAPDA)

Project PartnerEDSMAT3-F-23 :

ECEWI and Menaal Internal Travel

Project PartnerEDSMAT3-F-24, 25:

Menaal International Travel, Jerson Remo and Team

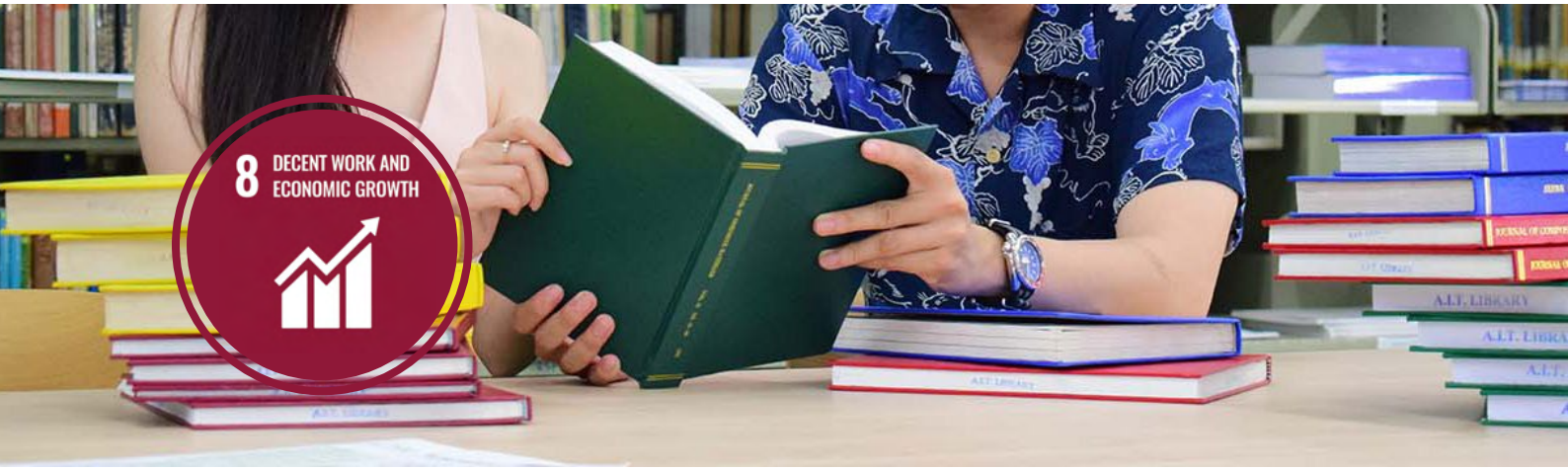
Project Description:

EDSMAT3-F-23 the Investment Analysis of Renewable Energy Projects project is focused on Materials and Procurement for Hydropower Projects, for Improved efficiencies in energy services, management, and technologies enhance energy security for the citizens of Pakistan

EDSMAT3-F-24-Financial and Economic Planning for Energy Projects course is designed for engineers

of Pakistan's Water and Power Development Authority to develop competencies in Financial and Economic Planning activities of hydropower projects. It is aimed at strengthening individual skill sets vital to the smooth implementation of the entire project and the successful achievement of its desired outcomes.

EDSMAT3-F-25-Hydropower Financing and Risk Management course is designed for engineers of Pakistan's Water and Power Development Authority to develop competencies in Hydropower Financing and Risk Management activities of hydropower projects. It is aimed at strengthening individual skill sets vital to the smooth implementation of the entire project and the successful achievement of its desired outcomes.



WORLD TOURISM DAY HYBRID CELEBRATION AT ASIAN INSTITUTE OF TECHNOLOGY (AIT) RECOGNIZES SUSTAINABLE TOURISM VISIONARIES

Embarking on an inspiring journey of innovation and sustainability , 27th September, 2023 was celebrated as The World Tourism Day. Seminars were co-hosted by the Natural Resources Management(NRM), Agribusiness Management (ABM), and Urban Innovation and Sustainability (UIS), academic programs at the Department of Development and Sustainability of School of Environment, Resources and Development.

Students, advocates, researchers, and experts gathered for the hybrid celebration of World Tourism Day. The focal point of the event was the recognition of outstanding individuals in the field of sustainable tourism through the Green Investment for Sustainable Tourism Essay Competition.

In this competition, there was participation from 20 individuals from AIT and other universities in Asia. The submissions were meticulously evaluated by a panel of judges in a blind peer review process. Four exceptional individuals emerged as the winners, each recognized for their distinct contributions to sustainable tourism:

1. Sustainable Tourism Visionary: Muhammad Hammad
2. Innovation Trailblazers in Tourism: Huyen Truong, Linh Yen Ngoc Le
3. Eco-Tourism Innovator: Kezang Deki
4. Green Investment Pioneer: Huyen Truong

Following their victory in the essay competition, the winners were invited to partake in a stimulating panel discussion alongside industry experts and students. The discussion encompassed various vital topics, including tourism practices and trends in several Asian countries, underlining the importance of indigenous and decolonial knowledge, digital technology's role, youth empowerment, and evidence-based policymaking in tourism management.

Moreover, the event featured illuminating keynote addresses by distinguished figures in the tourism industry. Prof. Nophea Sasaki emphasized the significance of sustainable tourism technology, Dr. Pisit Tuntipisitkul advocated for the role of local communities in safeguarding sustainable tourism,

and Philip Kao envisioned the eco-tourism infrastructure of the future. These insights shed light on the trajectory of sustainable tourism and its potential positive influence on local communities.

The event also witnessed the presence of esteemed professors, further enhancing its success. Prof. Mokbul Ahmad, Prof. Vilas Nitivattananon, and Prof. Rajendra P. Shrestha were among the eminent personalities who guided and contributed to the event.

In conclusion, Renz Prudenciado, the host of the event, left the audience with an inspiring message, emphasizing the significance of valuing every individual and promoting sustainable tourism practices. The event successfully celebrated sustainable tourism visionaries and provided a platform for impactful discussions shaping the future of the tourism industry.

PROFESSIONAL DEVELOPMENT COURSES FOR TASHI INFOCOMM LIMITED, BHUTAN

AIT Research Theme: Smart communities

AIT Unit: AIT Extension

Project Duration: 31 March 2023, to 30 June 2023 (91 days)

Project Sponsor/Client: Tashi InfoComm Limited, Bhutan

Research Keywords: SHRM, Leadership, Marketing

Expected Social Impact:

- Gain a better understanding of the impact of effective strategic leadership and management on achieving business results for decent work and economic growth.
- Gain a better understanding of the impact of effective marketing innovation, customer experience & engagement, digital experiences, and marketing innovation on achieving business results for decent work and economic growth.

Activities/Tasks:

The program will incorporate various training methods including interactive lectures, participatory learning techniques, small group discussions, brainstorming, demonstrations, observations, project work, case studies, and hands-on practices.

Financial Detail:

- Total Gross Budget: 345,982.40 THB
- Currency: Thai Baht
- AIT Sponsored and Contracted Project Unit

SUPPORT FOR SOCIAL RESEARCH CAPACITY IN MYANMAR

AIT Research Theme: Technology, Policy and Society

AIT Unit: GDS/DDS/SERD

Project Duration: 15 December 2022 to 31 December 2023

Project Sponsor/Client: The SecDev Foundation, Canada

Project Partner: The SecDev Foundation

Research Keywords: SHRM, Leadership, Marketing

Expected Social Impact:

- Gain a better understanding of the impact of effective strategic leadership and management on achieving business results for decent work and economic growth.
- Gain a better understanding of the impact of effective marketing innovation, customer experience & engagement, digital experiences, and marketing innovation on achieving business results for decent work and economic growth.

Description:

This project will supports coordination with the SecDev's project in building research capacity in Myanmar through funding small research projects lead by Burmese researchers.

AIT CAREER FAIR 2023: OPENING AVENUES FOR PROFESSIONAL GROWTH BY CONNECTING STUDENTS WITH INDUSTRY PROFESSIONALS

On March 29, 2023, the Asian Institute of Technology (AIT) Career Center hosted the AIT Career Fair, a pivotal event designed to connect students with industry professionals. The fair saw participation from over 200 students from AIT and other universities, along with 40 organizations from across Thailand and Asia. The event aimed to facilitate networking and provide valuable career opportunities.

Prof. Shobhakar Dhakal, AIT's Vice President for Academic Affairs, opened the fair with a welcome speech highlighting its importance for both the institution and the students. He acknowledged the contributions of participating companies and guest speakers, praising AIT students for their in-depth knowledge, international experience, critical thinking, and strong communication skills. Prof. Dhakal emphasized the growing role of Asia in the global economy and the need for professionals adept at working in diverse environments.

Dr. Naveed Anwar, Vice President for Knowledge Transfer at AIT, provided the opening remarks, focusing on the critical roles of finance and human resources (HR) in organizational growth. He stressed the importance of HR in finding and supporting suitable candidates, particularly for those seeking organizations aligned with their values.

The fair featured a range of activities, including career talks on topics such as decentralized finance, tax integration for foreign employees, mindfulness, and job market trends. Notable speakers included Mr. Khunakorn Kabkham from Kasikorn X, Mr. Jirapas Amonpiticharoen, Mr. Sarin Sony

from Me Hug Mental Health Services, and Mr. Wrapol Palbonudsrakum from JobsDB.

The event also included a Research Exhibition showcasing 12 student research posters, a JobsDB Resume Clinic, and a Career Advice Corner. Attendees enjoyed various food options from the AIT Food Market and had the chance to win prizes through raffle draws.

The AIT Career Fair, held each semester, remains a highly anticipated event for students, providing essential opportunities for internships and job placements. Ms. Carla Gonzales, AIT Career Center Coordinator, expressed optimism for future fairs, anticipating even greater participation from companies and organizations to benefit AIT students.

https://ait.ac.th/2023/03/ait-career-fair-2023-opening-avenues-for-professional-growth-by-connecting-students-with-industry-professionals/





YOUTH IN ICT 2023: EMPOWERING THE FUTURE OF TECHNOLOGY WITH INSPIRING TALKS AND CAREER DEVELOPMENT

23 June 2022 – The Youth in ICT 2023 event was held on 22 June, jointly organized by the Asia-Pacific Telecommunity (APT) in collaboration with the Asian Institute of Technology (AIT).

The event aimed to inspire and engage and encourage youth to develop an interest in ICT and equip them with the necessary skills to succeed in the field. Attendees had the opportunity to participate in career development talks and experience-sharing sessions with experts from academia, government officials, private companies, UN agencies, and other organizations. The session provided valuable insights into the latest trends and technologies in the ICT industry.

In recent years, the demand for ICT skills in the workforce has become vital in various industries. Young individuals with ICT skills have a distinct advantage in the job market as employers increasingly seek technologically proficient employees. Youth involvement in ICT is crucial for the technology industry's future, bringing fresh perspectives, innovative ideas, and adaptability to new technologies.

The event featured distinguished lectures from academics, government agencies, private companies, and UN agencies. This event was attended by 60 participants from various universities of Thailand in physical mode.

Youth in ICT is essential to the technology industry's future, as it brings new perspectives, ideas, knowledge, and the ability to adapt to new technologies. Dr. Naveed Anwar, Senior Advisor to the President at AIT, emphasized the significance of technology in our lives, with ICT empowering people to connect and share knowledge. He highlighted the younger generations' role in bridging the gap between people, communities, and beyond boundaries and the importance of effective communication. "This conference encouraged

individuals from diverse backgrounds, including those without conventional ICT training, to acquire skills that enhance their knowledge and job prospects. He added that meaningful discussions were fostered with telecommunications, computers, and information experts.

Mr. Forhadul Parvez, Programme Officer at APT, stated that digital skills are now essential for everyone, ranging from basic usage to advanced technical expertise, as they prepare individuals for the future digital society. He stressed that empowering young people with ICT skills gives them a competitive edge in the job market and boosts their confidence, creativity, and problem-solving abilities.

The event also focused on career development talks and experience sharing from speakers and experts in academia, government officials, and private companies. Panel discussions covered topics such as Artificial Intelligence, Blockchain technology, Chat GPT, Entrepreneurship, tech startups, Urban Farming with IoT implications, ICT career experiences and success stories, and youth and women empowerment.

AIT AND PRMPU, PAKISTAN, SIGN MOU AND DISCUSS FURTHER COLLABORATION

8 March 2023 – The Asian Institute of Technology (AIT) and Punjab Resource Management & Policy Unit (PRMPU), Government of Punjab, Pakistan, signed a Memorandum of Understanding (MoU) on 8 March to enable cooperation for long-term and short-term training programs for civil service officers working in various departments of the Government of Punjab.

The scope of the MoU includes enrolling officers in one-year Master's degree programs and participating in the short-term and customized training programs offered by the three schools (School of Engineering and Technology, School of Environment, Resources and Development, and School of Management) and AIT Extension, as well as exposure visits to the staff of PRMPU and other departments. Previously, AIT and PRMPU signed a Memorandum of Agreement (MoA) for Training in June 2022.

Prof. Kazuo Yamamoto, AIT President, stated that AIT and PRMPU have many areas of synergy and areas of collaboration, and the MoU is beneficial for both institutions, with anticipated expanding areas of collaboration.

Ms. Neelam Ifzal, Managing, Director, PRMPU, expressed joy over the successful training of PRMPU staff at AIT in August 2022 and said that they are exploring avenues for further collaboration and look forward to a strong and fruitful partnership. Ms. Ifzal was accompanied by Ms. Naima Rashid, Assistant Director of PRMPU.

From AIT the event was attended by Prof. Shobhakar Dhakal, Vice President for Academic Affairs; Prof. Dieter Trau, Dean of the School of Engineering and Technology and Director of AIT Entrepreneurship Center; Dr. Yuosre Badir, Associate Dean of the School of Management; Mr. Voravate Chonlasin, Executive Director; Dr. Md. Zakir Hussain, Director (Programs); Ms. Narumon Wangnai, Director (Programs) from AIT Extension and Mr. Shawn Kelly, Executive Director; Dr. Sumana Shrestha, Director, International Affairs and Mr. Sanjeet Amatya, Director, Public Affairs from the Office of International and Public Affairs.

The delegates also met with the AIT Extension team and discussed future training programs. AIT Extension is currently conducting the second batch of the professional development training course on the Management and Implementation of Development Projects for PRMPU officials at AIT. The delegation also met with the Dean of the AIT School of Engineering and Technology (SET), Heads of Departments, and faculty members of SET and visited Structural Engineering and Water Engineering and Management labs. They also met the Associate Dean and AIT School of Management representative. Additionally, they also visited the Global Water & Sanitation Center and discussed the areas of collaboration.

Punjab Resource Management & Policy Unit (PRMPU) is under the administrative control of the P&D Board, Government of Punjab. PRMPU has been mandated to revive the Public Sector Capacity Building initiatives through an approved scheme, 'Institutional Strengthening of P&D Board and Capacity Building of Public Sector Employees. The program has been designed to enhance the technical capacity of officers of the Government of Punjab in demand-driven areas through a foreign and local short training. Capacity building of provincial officers has remained a core policy area in the reform agenda. To complement reform interventions and raise the absorptive capacity of the available human resource, numerous capacity-building initiatives have been introduced by PRMPU.






AIT ALUMNA, MS. SAMINA ALAM, WINS DAILY STAR - UNDP "NIRBHAYA" AWARD

17 March 2023 - AIT alumna Ms. Samina Alam from Bangladesh, a recipient of the ADB-JSP scholarship, who has graduated from the Master's of Engineering in Energy currently known as Sustainable Energy Transition Program of the School of Environment Resources and Development, won the Daily Star – UNDP "Nirbhaya" award on 5th March 2023.

On the occasion of International Women's Day, Six Women, including Ms. Samina, have been recognized as "Nirbhaya (fearless)" by The Daily Star and United Nations Development Programme (UNDP) Bangladesh. The Australian High Commission supported the program in Bangladesh.

Ms. Samina recently won an idea competition that was launched in Bangladesh to find a new and innovative improved cookstove for rural women of Chittagong hill tracts. The competition was organized by the Ministry of Chittagong hill tracts affairs and UNDP and funded by Global Affairs Canada. Within one week of starting classes at AIT in 2018, Ms. Samina learned she was pregnant. Caught in a dilemma that most South Asian women face, many of her nearby people advised her to drop out of AIT and return home so that she could focus on becoming a mother. However, she chose to continue her master's studies despite societal obstacles, and completed her study.

She returned to Bangladesh in 2021 with a new dream to better her hometown of Chattogram and won an Improved Cooking Stoves (ICS) designing competition organized by Strengthening Inclusive Development in Chittagong Hill Tracts (SID-CHT) with technical assistance from a2i's iLab and financial support from Global Affairs Canada. Samina's ICS will help reduce smoke from straw stoves and improve the lives of those living in the Chittagong Hill Tracts. She was recognized for fighting against all odds and becoming a role model using digital platforms to serve society.

AIT congratulates Ms. Samina for her outstanding achievement and extends best wishes for future endeavors.

STRENGTHENING EVIDENCE-BASED SCP POLICIES AS A VEHICLE FOR ECONOMIC AND SOCIAL TRANSFORMATION

AIT Research Theme: Service control policies

Project Duration: 15 - 16 June 2023

Project Description:

The two-day workshop on Sustainable Consumption and Production (SCP) and circularity featured insights from key speakers representing UNEP, PAGE, and various institutions. Day 1 focused on SCP assessments, PAGE approaches, and circular economy modeling. Representatives from Thailand and India shared insights

on inclusive green economy transformations, while Indonesia highlighted progress in promoting circular economy for green recovery. The session also addressed green job policies in Thailand and Pakistan. Day 2 delved into the SCP-HAT tool functionalities and the IRP Global Material Flows Database, providing practical applications and group work sessions for country and sector-level questions. Mushtaq Memon led both days, ensuring comprehensive coverage and active participation. AIT Entrepreneurship Center provided the technical support as a team to run the workshop smoothly for two days.

KNOWLEDGE EXCHANGE VISIT PROGRAM ON IMITATION JEWELLERY IN CHINA

AIT Unit: AIT Extension

Project Duration: 28 May 2023 to 4 June 2023

Description:

The Knowledge Exchange Visit Program on "Imitation Jewellery in China" was jointly designed and coordinated by the Youthink Center in China and the AIT Extension of the Asian Institute of Technology (AIT). The program was held in China (Guangzhou, Hangzhou, and Zhuji) and the participants were from Palli Karma-Sahayak Foundation (PKSF), Bangladesh. Upon completion of this program, participants were able to familiarize in designing, making and marketing of different types of jewelleries from different materials in China. They came across simple concepts to advanced practices in managing and developing the imitation jewellery industries in China including companies that use latest and cutting-edge technologies. They were able to learn also the ways in empowering small and medium enterprises by meeting leading foundations/companies. The participants also gained knowledge and exposure from multiple merchants and companies who have almost 80-90 % of the trade volume in the industries.

PROFESSIONAL DEVELOPMENT PROGRAM ON "LEADERSHIP AND ORGANIZATIONAL RENEWAL" (BATCH-1 & BATCH-2)

AIT Unit: AIT Extension

Project Duration: 3 - 14 March 2023 (Batch-1)
20 - 30 August 2023 (Batch-2)

Description:

The Professional Development Course on Leadership and Organizational Renewal batch 1 and 2 was designed for participants from Nepal Telecom Co, Ltd, Nepal, Nepal to enhance their understanding and capabilities in the field of leadership and organizational renewal.

The program provided participants with exposure to current and evolving leadership practices and methodologies, with a focus on leadership concept and organization change, strategic thinking, vision setting and building right culture for company , teamwork and motivation , leadership and innovation,

financial awareness in organization improvement, agile best practice for organization transformation and AI technology for business management.

Weblink:

https://extension.ait.ac.th/news/leadership-and-organizational-renewal

ADVANCED POLICY AND REGULATORY FRAMEWORK IN INSURANCE BUSINESS 24-27 OCTOBER 2023

AIT Research Theme: Technology, Policy and Society

AIT Unit: AIT Extension

Project Duration: 24 October 2024 to 24 April 2024

Project Sponsor/ Client: Green Delta

Expected Social Impact: The objectives of the exposure visit are:

1. To broaden perspectives on general insurance policy and regulation in agricultural and climate risk insurance being practiced in developed world;
2. To exchange lessons learned on policy support programs that increase expansion of climate risk insurance service;
3. To identify key areas for building foundation of organizations responsible for supervision and regulation of climate risk, livestock insurance and mice; and
4. To observe economic and social impacts from implementation of insurance policies

TRAINING-CUM-STUDY TOUR PROGRAM ON "PROJECT MANAGEMENT"

AIT Unit: AIT Extension

Project Duration: 27 September 2023 to 6 October 2023

Description:

This training-cum-study tour program was designed to enhance participants' understanding and capabilities in the field of project management. The program provided participants with exposure to current and evolving project management practices and methodologies, with a focus on project planning and execution skills, including project cycle management and result-based monitoring and evaluation.

The program's ultimate goal was to support participants in guiding project work processes towards clearly defined objectives, enhancing project impact, and improving the quality, efficiency, and effectiveness of both small and large projects. The program facilitated the exchange of knowledge and experiences between project managers, policymakers, and planners from government and non-government organizations in Thailand. The accompanied study visits allowed participants to observe and learn about project management practices in various organizational contexts.

EXPERIENTIAL LEARNING FOR INTERNATIONAL MARITIME BUSINESS DEPARTMENT FOR MASSACHUSETTS MARITIME ACADEMY MAJOR SDG:

AIT Unit: AIT Extension

Project Duration: 22 January to 10 February 2023

Description:

AIT Extension, AIT's capacity-building arm which contributes to the development of the region, is organizing an Experiential Learning Program for International Maritime Business Department at Massachusetts Maritime Academy during 22nd January to 10th February 2022. There were 24 Maritime students from the International Maritime Business Department at Massachusetts Maritime Academy joining the program.

The purpose of the visit was to get a first-hand experience of the shipping, logistics industry and Maritime insurance in Thailand. This was also an attempt to improve their global cultural awareness. The students visited various maritime business interests in Bangkok and other places in Thailand, participated in the discussions during the field visits and interacted with the resource persons and the experts during the field visits.

On the 2nd day of the program, Joyshree Roy, Bangabandhu Chair Professor, showed her presentation

on "Issues in Climate Change and Impact in Maritime Operations." The participants discussed the IPCC (Intergovernmental Panel on Climate Change), SDGs (Sustainable Development Goals), oil-rich countries, e.g., Saudi Arabia, transitioning into a "greener" economic force, limiting warming to 1.5°C, reducing emissions by 45% in 2030, and leading towards the 'net zero' goal by 2050.

Weblink:

https://extension.ait.ac.th/news/experiential-learning-international-maritime-business-department-massachusetts-maritime-academy

NUTRIENT AND IRRIGATION WATER MANAGEMENT THROUGH SMART AGRI-TECH APPROACHES

AIT Research Theme: Food-Energy-Water

AIT Unit: SERD / ASE

Project Duration: 3 April 2023 to 2 April 2027

Project Partner/ Client: Indian Council of Agricultural Research (ICAR), India

Expected Social Impact: Experience for sustainable agricultural development

Description:

The overall aim of the project is to carry out an internship for undergraduate students from the agricultural science discipline from Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior, Madhya Pradesh, India to

provide them with technical and practical experience for sustainable agricultural development on the topic entitled.

(2 DAYS WORKSHOP): GREEN JOBS FOR THE FUTURE: SKILLS DEVELOPMENT, GREEN JOBS AND TECHNOLOGIES TO ACCELERATE THE CIRCULAR ECONOMY

AIT Research Theme: Environment Sustainability and Workforce Development

Project Duration: 14 - 15 September 2023

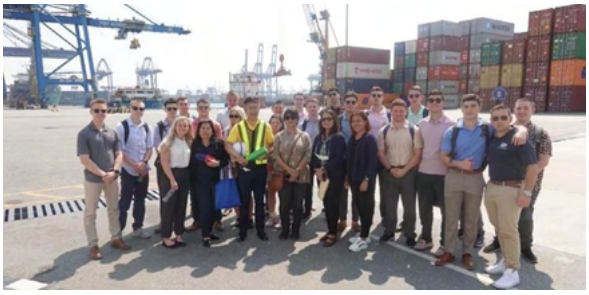
Project Partner: UNEP

Description:

The 2-day workshop on "Green Jobs for the Future," organized by AIT and UNEP, with support from various partners, addressed the skills gap for circular economy practices. AIT Entrepreneurship Center provided the technical support for the program to run smoothly. Day 1 focused on trends and skill requirements for green jobs, attracting over 100 participants online and in person. Day 2 highlighted educational efforts to promote green skills and encouraged students to align their studies and careers with sustainability principles. Stakeholders including students, lecturers, private companies, and government representatives engaged in discussions about sustainable consumption, production, and youth skills development

Weblink:

http://ec.ait.ac.th/toolkit/



STRATEGIC HUMAN RESOURCE MANAGEMENT & LEADERSHIP FOR BUSINESS TRANSFORMATION

AIT Research Theme: Technology, Policy and Society

AIT Unit: AIT Extension

Project Duration: 2 April 2023 to 31 December 2023

Project Partner/ Client: OP Jindal Global University

Expected Social Impact: Improved effective management of human capital.

Description:

The one weeks professional development training course on a Strategic Human Resource Management and Leadership for Business Transformation is designed to polish and broaden the key functional knowledge areas, develop the core competencies on the important topics and help broaden the perspectives of the mid-level / senior professional officials to learn about; managerial

effectiveness, people management, leadership and team building, interpersonal effectiveness and leadership excellence and strategic cost and performance management.

AIA LEARNING MANAGEMENT SYSTEM

AIT Research Theme: Technology, Policy and Society

AIT Unit: AIT Extension

Project Duration: 15 September 2023 - 30 June 2024

Project Partner/Client: AIA Company Limited

Expected Social Impact: Develop technical and managerial skills of all the AIA employees in the area of technology and data analytics in order to better serve their customers and the community.

Description:

This course develops 10 virtual self-paced modules focusing on Technology and Data Analytics (TDA) in the following 2 phases:

- Phase 1: Develop and deliver 6 virtual self-paced modules.
- Phase 2: Develop and deliver 4 virtual self-paced modules.

CASSAVA PRODUCTION AND PROCESSING (BENCHMARKING ON MECHANIZATION AND OTHER TECHNOLOGIES)

AIT Research Theme: Benchmarking on Mechanization and Other Technologies

AIT Unit: Yunus Center

Project Duration: 21 August 2023 to 31 December 2023

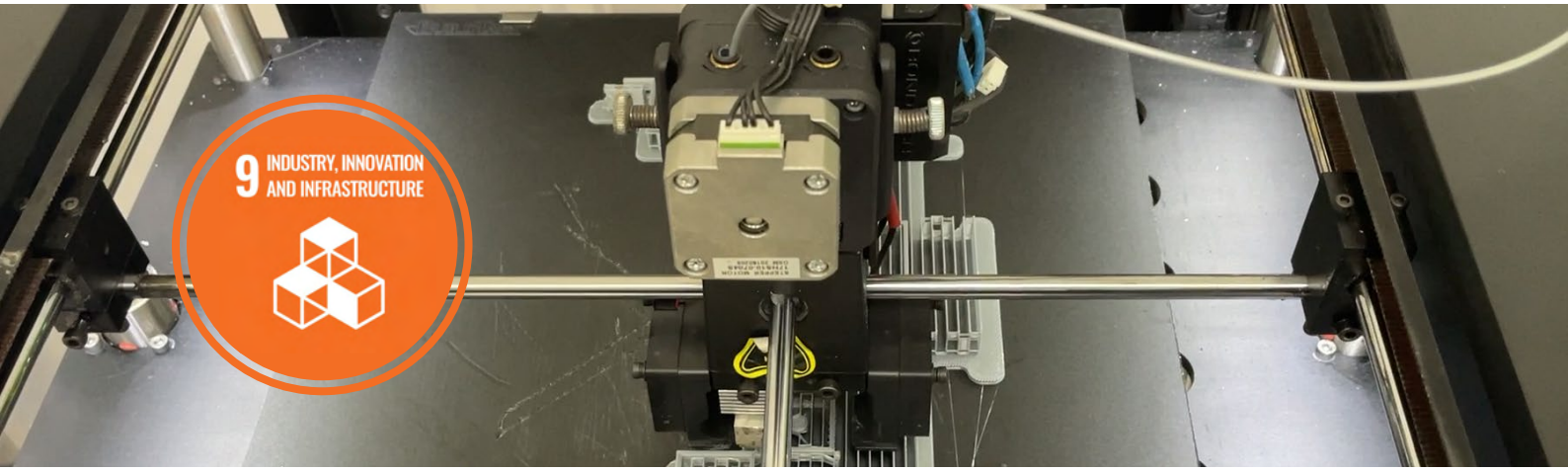
Project Sponsor/ Client: Fatima Multi-Purpose Cooperative (FMPC)

Project Partner: Agriterra and PhiRootCrops

Expected Social Impact: Improve effective management production and increase mechanization

Project Description:

The main objective of the study visit is to expose Fatima Multi-Purpose Cooperative (FMPC) to knowledge and experiences in cassava production, trading and processing that can help them improve their cassava business, expand their production, increase their mechanization, and eventually be able to capitalize and set up its starch. Training and classroom session will be delivered at Yunus Center AIT and study visit to research center and farm in provinces



PROFESSIONAL DEVELOPMENT TRAINING PROGRAM ON "STANDARD TURNKEY / EPC CONTRACT"

AIT Research Theme: Technology, Policy and Society

AIT Unit: AIT Extension

Project Duration: 18 July 2022 to 5 January 2023.

Project Partner/ Client: the Local Government Engineering Department (LGED)

Description:

This Professional Development Certificate Course was designed for 23 participants from the Local Government Engineering Department (LGED), Bangladesh. Its six different fields allowed the practicing engineers in LGED to develop their skills and strengthen their knowledge through active participation and learning the most up-to-date engineering theory and techniques delivered by AIT's renowned faculties and practitioners. The program was broadly addressing the technical and practical issues encountered by the engineers in their work as well as enhance their engineering skills in applying the modern tools and techniques. With the emerging technologies and innovative materials for the design and construction of safe and economical infrastructure in the region, AIT Extension has designed tailor-made professional

development certificate programs on the following engineering fields (areas of specialization):

- Transportation Engineering (TE)
- Geotechnical Engineering (GE)
- Construction Engineering and Infrastructure Management (CEIM)
- Sanitation and Plumbing (S&P)
- Earthquake Engineering (CM)
- Construction Management (CM).

"WEEKEND TRAINING: MASTERING CONSTRUCTION MANAGEMENT IN THAILAND—A TAILORED PROGRAM FOR INDUSTRY PROFESSIONALS"

AIT Research Theme: Technology, Policy and Society

Project Duration: 4 -25 November 2023.

Description:

The professional development training course on "Construction Management in Practice," meticulously designed to cater to the needs of Thai construction stakeholders. This four-day program was strategically scheduled over weekends, acknowledging the demanding schedules of industry professionals, allowing them to expand their skill set without interrupting their weekday commitments. Hosted by the reputable AIT Extension, this course was a beacon for those seeking to deepen their expertise in construction management within the unique context of Thailand's construction landscape. Through a comprehensive curriculum crafted specifically for Thai professionals, participants delved into the core intricacies of construction project management. From project planning, budgeting, and scheduling to risk management and quality control, the course offers an in-depth exploration of industry-relevant practices. Guided

by seasoned industry experts and practitioners, the program seamlessly integrates theoretical principles with practical applications, ensuring that attendees acquire the necessary tools and knowledge vital for navigating the dynamic and evolving construction sector in Thailand. This course was a unique opportunity for Thai construction stakeholders to acquire invaluable insights and strategies while maintaining their work commitments during the week. A total of 23 participants from varies Thai construction industries, enrolled for this course.

TECHNOLOGICAL INNOVATIONS TO MEET THE FUTURE CHALLENGES OF AGRICULTURE AND ALLIED SECTORS

AIT Research Theme: Food-Energy-Water

AIT Unit: Internet Education and Research Laboratory

Project Duration: 25 January 2023 to 24 January 2026

Project Partner/Client: Indian Council of Agricultural Research (ICAR), India

Expected Social Impact: Capacity building: Technology transfer

Description:

This project focuses on addressing the future challenges facing agriculture and allied sectors through innovative technological solutions. Running from January 2023 to January 2026, it is a collaborative effort between the Asian Institute of Technology (AIT) and the Indian Council of Agricultural Research (ICAR), India. Aligned with AIT's Food-Energy-Water research theme, the initiative is spearheaded by the Internet Education and Research Laboratory.

The project aims to provide stakeholders with essential technical knowledge and hands-on experience for promoting sustainable agricultural practices. By emphasizing capacity building and technology transfer,

the project seeks to empower agricultural professionals to implement advanced technologies in their operations, thereby enhancing productivity and sustainability.

The partnership between AIT and ICAR highlights the shared commitment to fostering innovation in agriculture, ensuring that farmers and agricultural practitioners are well-equipped to meet the demands of a rapidly evolving sector. The expected social impact includes strengthened capacities in agricultural technology, contributing to long-term sustainable development in the region.

INCUBATION SERVICE: DRONACHARYA AERIAL INNOVATIONS

AIT Research Theme: Smart communities

AIT Unit: Entrepreneurship Center

Project Duration: 1 February 2024 to 28 February 2025

Project Sponsor/Client: DroneAcharya Aerial Innovations Ltd.

Expected Social Impact:

- Deliver drone solutions for creating a sustainable environment.
- Accessibility to certified talent for drones and GIS
- Engagement of faculty and students on live projects.

Description:

AIT Entrepreneurship Center shall provide shared services of the following at its premises to the client, DroneAcharya:

- Project and seating space at one unit at EC Incubation Space (not shared)
- Manpower support by AIT Staff/Consultant/SA

- Conference room use
- Telecommunication/video conferencing equipment access.
- Listing on AIT EC webpage
- Others as specified in the contract

ASIAN SUMMER SCHOOL FOR GEOINFORMATICS AND ISSUES ON SUSTAINABLE DEVELOPMENT IN ASIA 2023

AIT Research Theme: Technology, Policy and Society

AIT Unit: SET/RSGIS

Project Duration: 1 July 2023 to 31 December 2023

Project Sponsor/Client: Chubu University

Project Partner: TERC

Expected Social Impact:

Participants are expected to realize rapid development and issues in Asia through site visits as well.

Description:

To Provide lectures, demonstrations, lands on, study tour and seminars for Under Graduates from Chubu University, Japan and other Asian participants. Lectures will be issues related to sustainable development in Asia and lectures on Geoinformatics and its contribution in order to deepen the awareness on status and issues in Asia where a rapid development is taking place. Student is expected to realize rapid development and issues in Asian through site visit as well

INTERLAB IOT DEVELOPMENT 2022

AIT Research Theme: Information Technology

AIT Unit: Internet Education and Research Laboratory

Project Duration: 1 September 2022 to 29 February 2024

Project Sponsor/ Client: Asian Institute of Technology

Project Partner: Asian Institute of Technology

Expected Social Impact:

The project will receive internal fundings from other projects in AIT, which in turn intERLab will deliver the custom made IoT products and services on demand.

Description:

intERLab would like to open the IoT development project to support the development of IoT devices such as low-cost air quality sensor and other edge computing devices. The project will receive internal fundings from

other projects in AIT, which in turn intERLab will deliver the custom made IoT products and services on demand. The estimated budget 1,000,000 THB will be allocated to intERLab to operate the project in from 1 September 2022 to 31 December 2023.

SEMINAR ON DIGITALIZATION IN CONSTRUCTION FROM DESIGN TO CONSTRUCTION AND PROJECT MANAGEMENT

Duration: April 2023

Description: On April 26th and 27th 2023, AIT Solutions, and CIC Technology and Consultancy JSC, Vietnam, with support from AIT Center Vietnam organized a seminar on Digitalization in Construction from Design to Construction and Project Management, covering various aspects from structural design, construction, to project management. The event was held in Ho Chi Minh City and Hanoi, Vietnam, providing participants an opportunity to attend and learn from experts in the field.

During the seminar, AIT experts shared their insights on the latest Trends and Advancements in Structural Design of Bridges, and on Trends and Advancements in Structural Design of Tall Buildings.

The seminar provided a platform for professionals to network and exchange ideas, paving the way for future collaborations and partnerships in the field of construction.

https://solutions.ait.ac.th/seminar-on-digitalization-in-construction-from-design-to-construction-and-project-management-vietnam/

STRUCTURAL ENGINEERING: PRESERVING PAST, PROTECTING PRESENT, BUILDING FUTURE

Duration: April 2023

Description: On May 22nd and 23rd, 2023, Computer and Structures Inc. (CSI), USA, and the Asian Institute of Technology (AIT) Thailand jointly organized an international event Structural Engineering: Preserving Past, Protecting Present, Building Future. This international event attracted a diverse audience of structural engineers, architects, developers, esteemed academic experts, and aspiring engineering students. The event kicked off with a captivating Opening Keynote delivered by Dr. Ashraf Habibullah, President and CEO of Computers and Structures Inc., USA. During the event, attendees were treated to insightful project presentations. Siam Sindhorn Co. Ltd., Thailand, showcased their remarkable Sindhorn Village Project, while Rockwell Land Corporation, Philippines, presented their CTBUH award winning Proscenium project. Mr. Jose A. Sy, the President & CEO of SY^2+Associates, Philippines, shared his valuable expertise on "Designing Resilient Structures in the Philippines: Past, Present, and Future." Additionally, Prof. C.V.R. Murty, P.S. Rao Institute Chair Professor at the Indian Institute of Technology Madras, India, delivered a captivating presentation on "Earthquake Resistant Design of RC Buildings in Near Fault Regions." Another distinguished speaker, Prof. Atch Sreshthaputra from the Department of Architecture at Chulalongkorn University, Thailand, enlightened the audience with his talk on "Computer Simulation for Sustainable Building Design in Thailand." Prof. Vilas Nitivattananon presented his research on "Enhancing Urban Sustainability through the Built Environment System." The event provided a valuable platform for exchanging knowledge and fostering collaboration among experts in the field of structural engineering.

Weblink:

https://www.csiait2023.ait.ac.th/

INTERNATIONAL SEMINAR – BUILDING TALL AND RESILIENT, HYDERABAD, INDIA

Duration: July 2023

Description: On 17th July 2023, Dr. Naveed Anwar, CEO CSi Bangkok; Prof. Pennung Warnitchai, Structural Engineering, Asian Institute of Technology (AIT); Dr. Geoff Chao, Civil & Infrastructure Engineering, Head of Department, AIT; Mr. Thaung Htut Aung, Director AIT Solutions; and Dr. Narong Leungbootnak, Chairman, Future Engineering Consultant Co. Ltd., Thailand shared invaluable insights on the latest practices in structural engineering, geotechnical engineering and construction management to 600+ participants at Building Tall and Resilient-2023, Hyderabad, India. AIT Solutions is the Knowledge Partner for Building Tall and Resilient-2023, Hyderabad, India.

Weblink:

https://solutions.ait.ac.th/ait-solutions-resilient-hyderabad-india/

AIT JOINS THE LAUNCH OF 'FRANCO-THAI YEAR OF INNOVATION 2023'

The "Franco-Thai Year of Innovation 2023" was launched in spectacular fashion at a space-themed event at Benchakitti Park, Bangkok, featuring the Asian Institute of Technology (AIT) among its esteemed participants. The event, hosted by the French Embassy, brought together over 2,000 visitors and showcased collaborations between large French and Thai companies, universities, and other institutions.

Thailand and France share a rich history and culture, breathtaking landscapes, and world-renowned gastronomy. Today, the two nations are also united in their commitment to advancing innovation across diverse fields, from space exploration to healthcare, culture, and environmental sustainability.

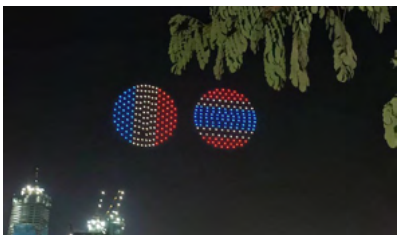
At the invitation of H.E. Mr. Thierry Mathou, French Ambassador to Thailand, AIT participated in the event with a booth titled "AIT & Space: Social Impact with Innovation for Thailand and Asia-Pacific." The exhibit highlighted AIT's contributions to space research, supporting sustainable development in Thailand and the Asia-Pacific region. The booth also paid tribute to HRH Princess Maha Chakri Sirindhorn's connection to AIT, particularly her involvement in Remote Sensing as a student in 1984 and her later role in inaugurating the AIT Geoinformatics Center in 1999.

AIT's participation was led by Vice President for Knowledge Transfer, Dr. Naveed Anwar, alongside Assoc. Prof. Dr. Sarawut Ninsawat from the Remote Sensing and Geographic Information Systems program and GIC Director Dr. Manzul Kumar Hazarika. Their showcase included research projects from the RS-GIS program at AIT's School of Engineering and Technology and the AIT Geoinformatics Center.

The event also featured special dignitaries, including Olivier Becht, French Minister Delegate for Foreign Trade, French astronaut General Jean-Pierre Haigneré, and artist Olivier d'Agay, grand-nephew of Antoine de Saint-Exupéry. A spectacular drone show themed on Franco-Thai friendship and space captivated attendees, alongside an exhibition dedicated to "The Little Prince," which will remain open at Benchakitti Park for three months.

Famed French astronaut Dr. Claudie Haigneré, the first French woman to travel to space, mingled with AIT officials at their booth. Dr. Haigneré made history in 1996 when she joined the Russian-French Cassiopée mission aboard Soyuz TM-24 and later became the first European woman to visit the International Space Station in 2001.

https://ait.ac.th/2023/01/ait-joins-the-launch-of-franco-thai-year-of-innovation-2023/



EXPERT TALK ON ENGINEERING DIGITALIZATION IN OUR BUILT ENVIRONMENT

Duration: October 2023

Description: The Expert Talk on Engineering Digitalization in our Built Environment delved into the transformative power of technology in shaping the landscape of modern engineering practices. From innovative software solutions to advanced data analytics, the discussion highlighted how digitalization is revolutionizing the way we design, construct, and manage our built environment. Experts emphasized the importance of leveraging digital tools to enhance efficiency, improve sustainability, and streamline processes in construction projects. Moreover, the conversation underscored the need for collaboration across disciplines and industries to fully harness the potential of digitalization in engineering, ensuring that our built environment evolves in harmony with the demands of the future.

Weblink:

https://ait.ac.th/event/expert-talk-on-engineering-digitalization-in-our-built-environment/

STRUCTURAL DESIGN REVIEW OF CIRCULO VERDE ACCESS BRIDGE, PHILIPPINES

Duration: July 2023

Description: AIT Solutions conducted the structural design review of Circulo Verde Access bridge using the current state-of-the-art in terms of methodologies, techniques, technologies, and tools. AITS created several computer models of bridge structure with varying complexity and refinement suitable for developing, understanding of the response. The bridge structure was analyzed using all applicable demands including moving load analysis, wind load analysis, seismic analysis, and construction sequence analysis. Design check was carried out for key structural components including substructures and superstructures.

TECHNOLOGY MAGAZINE: GREEN BUSINESS & CIRCULARITY TECHNOLOGIES

Duration: July 2023

Description: : This issue of Technology Magazine was dedicated to the inspiring world of Green Business & Circularity Technology. As we navigate the challenges of the 21st century, the importance of sustainability and environmental consciousness has become increasingly evident. In this edition, we delved into the innovative and transformative initiatives that are driving the green business revolution and advancing circularity technology. Within this issue, a diverse range of stories, insights, and expert perspectives that explore the advancements in green business practices. This issue shines a spotlight on the businesses and individuals who are leading the way in implementing sustainable strategies, showcasing their innovative business solutions and services that prioritize the well-being of our planet. Additionally, this issue delves into the exciting world of circularity technology, which is revolutionizing how we consume, produce, and manage waste.

Weblink:

https://solutions.ait.ac.th/magazines/

FOSS4G THAILAND AND STATE OF THE MAP ASIA 2023: A GEOSPATIAL EXTRAVAGANZA IN BANGKOK

In a celebration of geospatial innovation and open mapping, the Free and Open Source Software for Geospatial (FOSS4G) and State of the Map Asia 2023 conference took center stage in the vibrant city of Bangkok, Thailand. The Asian Institute of Technology (AIT) co-organized the event alongside Srinakharinwirot University, OSGeo-TH, and i-bitz Company Limited. This collaborative effort facilitated a dynamic environment for the exchange of ideas, fostering connections among professionals and academics passionate about open mapping. Hosted from November 16 to 17, the event brought together over 215 attendees, including geospatial experts, GIS enthusiasts, developers, humanitarian workers, and policymakers from across Asia.

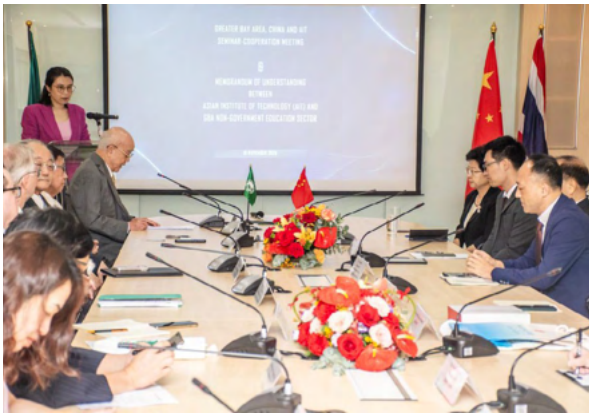
With 25 speakers, 39 sessions, and 10 workshops, FOSS4G Thailand and State of the Map Asia 2023 offered a comprehensive program covering diverse aspects of geospatial technology. Attendees were treated to a wealth of knowledge and insights, ranging from the latest advancements in open mapping to real-world applications of geospatial solutions.

The Asian Institute of Technology made a significant impact on the conference, with a group of current students and several alumni from the School of Engineering and Technology (SET) presenting their cutting-edge research. Notable among them was Sarawut Ninsawat who presented his research on "Mobility Data Analysis for Reducing Carbon Emission". Additionally, master's student Zaw Thu Htet shared insights on "STAC for Climate Data" in a presentation that added depth to the conference's exploration of cutting-edge topics.

CHINA MEETING KICK-STARTS AIT'S COOPERATION WITH THE GREATER BAY AREA

AIT Chairman Anat Arbhabirama, AIT Trustee Viraphol Sarasin, and AIT President Kazuo Yamamoto on 16 November 2023 collectively welcomed Wang Huan, First Secretary of the Embassy of China to the campus to preside over the inaugural AIT- Guangdong-Hong Kong-Macao Greater Bay Area, China Cooperation Meeting.

The special event brought together senior representatives of the Embassy of China to Thailand, AIT strategic liaison partner Guangzhou Modern Industry Development Research Institute (MIDRI); senior level representatives of 15 Chinese universities and colleges representing the Non-Government Education Sector in China's Greater Bay Area (GBA), AIT trustees and senior administration officials.



Read more:

https://ait.ac.th/2023/11/china-meeting-kick-starts-aits-cooperation-with-the-greater-bay-area/

STRATEGIC COLLABORATION FOR SUSTAINABLE FUTURES: AIT AND LIHE TECHNOLOGY (HUNAN) CO., LTD JOIN FORCES IN ADVANCING ENVIRONMENTAL ENGINEERING AND MANAGEMENT

In a significant stride towards fostering international collaboration in environmental engineering and management, the Asian Institute of Technology (AIT) and Lihe Technology (Hunan) Co., Ltd. have inked a Memorandum of Understanding (MoU).

This MoU signifies a commitment to joint academic and research endeavors to advance innovation, technology transfer, and economic development in environmental sustainability.

Under the MoU, several collaborative activities are outlined. Lihe Technology will provide environmental quality monitoring and analyzing equipment to AIT for joint projects and research activities, with AIT managing the daily application and maintenance. Collaborative research and development initiatives are emphasized, focusing on developing programs for innovation, technology transfer, economic development, and co-applications for grants and resources. Both parties aim to jointly establish an environmental quality research center or laboratory. Additionally, academic-industrial cooperation encompasses talent education, recruitment, entrepreneurship, training, professional development

programs, and consultancy, further solidifying the comprehensive collaboration between AIT and Lihe Technology.

https://ait.ac.th/2023/11/strategic-collaboration-for-sustainable-futures-ait-and-lihe-technology-hunan-co-ltd-join-forces-in-advancing-environmental-engineering-and-management/

CETEAU (THAILAND) CO. LTD. SECOND DONATION TO GTE LABORATORY

AIT President Kazuo Yamamoto and Nuttapong Kavittayanun, Managing Director of CeTeau (Thailand) Co. Ltd. came together to sign the second donation agreement towards the upgrading of AIT's Geotechnical & Earth Resources Engineering (GTE) Laboratory. This contribution will undoubtedly have a significant impact on the future research development and enhance the quality of education for our AIT students.

Sanjeev Jayasinghe, the Executive Director of Office of Advancement and Alumni Affairs warmly welcomed Nuttapong Kavittayanun and his team to the signing ceremony and expressed his appreciation for their second generous donation. Sanjeev and Nuttapong have had a longstanding relationship, which was initiated through the introduction provided by Dennes Bergado, Emeritus Professor.

Read more:

https://ait.ac.th/2023/11/ceteau-thailand-co-ltd-second-donation-to-gte-laboratory/

DSAI CONFERENCE 2023: A GLOBAL TRIUMPH IN ADVANCING DATA SCIENCE AND ARTIFICIAL INTELLIGENCE

The 1st International Conference on Data Science and Artificial Intelligence (DS&AI), held from November 27 to 29, 2023, in Bangkok, Thailand, was a resounding success, organized by the Department of Information and Communication Technologies (ICT) of the School of Engineering and Technology (SET), to foster interdisciplinary collaboration and contribute to the growth of knowledge in data science and artificial intelligence, particularly in developing countries. The conference featured many research presentations focusing on driving progress in data science and artificial intelligence. The conference attracted participants worldwide, creating a platform for AI researchers and practitioners to share experiences and expertise.

In his opening remarks, Sangam Shrestha, Dean of SET, highlighted the rapid evolution of technology and underscored the crucial role of collaboration in advancing the fields of data science and artificial intelligence. He commended the sustainable partnership forged through the Erasmus+ Capacity Building in the field of Higher Education Project, which led to the successful development of a new master's Program in 'Data Science and AI.' Professor Shrestha congratulated the program committee chairs, Chutiporn Anutariya and Marcello M. Bonsangue. He expressed his wishes for a productive conference and a delightful stay in Bangkok for all participants. He thanked the sponsors for their significant contribution in organizing this event.

The DSAI 2023 conference displayed esteemed speakers who delivered insightful keynotes and invited talks, shedding light on the latest trends and innovations in data science and artificial intelligence (AI). Peter Flach from the University of Bristol, UK contributed a keynote addressing Explainable Artificial Intelligence (XAI). His presentation provided insights into the behavior of AI models, contributing to understanding this crucial aspect of AI development. Noteworthy presentations included Sakriani Sakti's exploration of a machine speech chain framework based on deep learning. Sakti, an Associate Professor at the Japan Advanced Institute of Science and Technology (JAIST), discussed the training mechanism that enables machines to learn to listen or speak.

CHAIRMAN OF THE AIT EXECUTIVE COMMITTEE, RECEIVES THE PRESTIGIOUS BANGKOK POST CEO OF THE YEAR 2023: GREENOVATION LEADERSHIP AWARD

The Asian Institute of Technology (AIT) is delighted to extend its heartfelt congratulations to Chaiwat Kovavisarach, Chairman of the AIT Executive Committee and the Group Chief Executive Officer and President of Bangchak Corporation Plc, for being honored with the "Bangkok Post CEO of the Year 2023: Greenovation Leadership" award. This award recognizes Chaiwat's visionary leadership and outstanding contributions to the business landscape, reflecting his commitment to sustainability and innovation.

Chaiwat is an AIT alumnus who received his degree of Master of Engineering in Industrial Engineering and Management from the School of Advanced Technologies in 1991.

The Bangkok Post Awards are renowned for acknowledging excellence in various categories, each

reflecting different facets of the dynamic business landscape. These awards recognize not only visionary strategies and transformative leadership but also the significant contributions that leaders make to society and the broader economy.

ADVANCING SUSTAINABLE MATERIALS AND TECHNOLOGIES: AN INTERVIEW WITH CHEMICAL ENGINEERING PROFESSOR PEDRAM FATEHI

AIT Alum Professor Pedram Fatehi holds a position as a Chemical Engineering Professor at Lakehead University, Canada. His research interests focus on developing smart bio-based polymers and advanced materials and technologies for sustainable wastewater and water treatment. His work involves understanding the fundamental principles of these processes and their applications and commercialization potential.

Fatehi has published extensively in high-impact journals such as ACS Applied Materials and Interfaces, ACS Sustainable Chemistry and Engineering, Small, Green Chemistry, ChemSusChem and his research has been cited over 7100 times. He also serves on the editorial board of several academic journals and has been recognized with several prestigious awards for his contributions to the field of chemical engineering, including the Hatch Innovation award, Emerging Leaders of Chemical Engineering from Canadian Society of Chemical Engineers. He completed his Ph.D. in Chemical Engineering from University of New Brunswick in

Fredericton, Canada, in 2009 and a Master's in Pulp and Paper Technology in 2005 from the AIT.

Read more:

https://ait.ac.th/2023/05/advancing-sustainable-materials-and-technologies-an-interview-with-chemical-engineering-professor-pedram-fatehi/

INTERNET OF THINGS WORKSHOP BY AIT EMPOWERS UNDERGRADUATE STUDENTS IN SRI LANKA

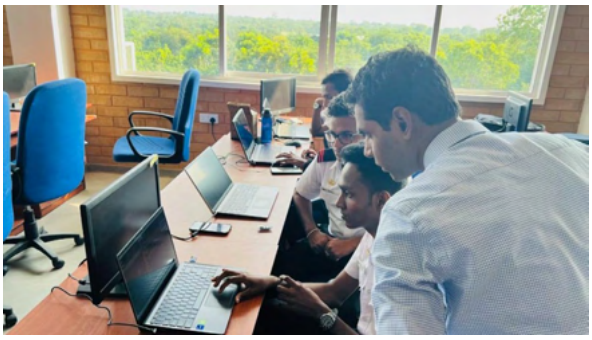
January 4, 2023: Internet of Things (IoT) experts from AIT organized a one-day hands-on workshop at General Sir John Kotelawala Defence University (KDU), Sri Lanka, to share the latest trends and technologies in IoT with the students.

AIT's Senior Research Associate at the Advanced Telecommunication Laboratory, Arunya Senadeera, presented the range of best practices in designing an IoT system related to real-world applications. Participants had the opportunity to engage in hands-on exercises, learn about cutting-edge research, and discuss future trends in IoT applications.

This workshop was held as a science communication program for the international community to share knowledge of IoT. It also aimed to improve the visibility of AIT's IoT program among undergraduates; give hands-on experience in developing a simple IoT system with free and open-source tools to raise interest in academic research careers in the younger generation. Attaphongse Taparugssanagorn, Program Chair of AIT IoT Systems Engineering, and Premma Rao, Administrative officer, were in the organizing committee from AIT.

Thirty undergraduate students participated in the workshop held on January 4 2023, at the Faculty of Computing at the KDU Southern Campus premises. Major RMM Pradeep, Department Head of Information Technology, MWP Maduranga, Lecturer, Ashen Wanniarachchi, Lecturer, and Dasuni Ganepola, Instructor, attended the workshop from KDU.

The workshop introduced the ICT Department's research expertise and possible collaborations. KDU students and staff expressed their interest in joining the internship with the Advance Telecommunication Laboratory and the postgraduate program with the ICT department at AIT. IoT workshop's hands-on experience strengthened the



partnership with KDU and AIT's IoT program. In addition to hands-on sessions, there were interactive discussions about the impact of IoT system designs for the Sri Lankan technological sector. KDU's staff admired the AIT IoT program's contribution and collaboration opportunities.

On November 14 2022, AIT and KDU, Sri Lanka, signed a Memorandum of Agreement (MoA) for a Capacity Building Partnership Program culminating in the award of a Master's or Doctoral Degree. As per the agreement, three Ph.D. students and two Master students will be joining AIT starting in 2023 for graduate studies and advanced training.

AIT STRENGTHENS ITS PARTNERSHIP WITH IDEA AND NIC, JAPAN, WITH THE LAUNCH OF THE NEW MERCURY LAB

On January 27, 2023, the Asian Institute of Technology (AIT) unveiled its new Mercury Lab at the IDEA EEM Laboratory/ IDEA R&D Center, marking a significant milestone in South East Asia. Supported by IDEA Consultants, Inc. and Nippon Instruments Corporation (NIC) from Japan, the lab represents a major advancement in environmental research and technology.

AIT's partnership with IDEA began in 2016 with a Memorandum of Understanding, which led to the establishment of the IDEA EEM Laboratory in 2017. This collaboration was strengthened in 2022 with the renewal of the MOU for another five years, and further enhanced

by a tripartite Memorandum of Agreement signed with NIC in September 2022. This agreement aims to foster research and academic cooperation through the IDEA EEM Laboratory and the IDEA R&D Center.

During the launch event, AIT President Kazuo Yamamoto expressed gratitude to the Government of Japan for its longstanding support and to NIC for donating the mercury analyzers. Yamamoto emphasized that the lab exemplifies the strong collaboration between AIT and IDEA, and highlighted its potential to advance environmental research and future collaborations.

Yuichi Oba, Deputy Chief of Mission at the Embassy of Japan in Thailand, shared insights on Japan's experience with mercury contamination and recovery. He praised the lab's opening as a crucial step towards managing mercury pollution in the region.

Isao Hamanaka, President of NIC, expressed pride in the mercury analyzers' role in advancing scientific research and anticipated their impactful use in the new facility. Toru Matsumura, Director of the Board at IDEA R&D Center, highlighted that this lab is unique in South Asia and will significantly benefit regional research.

The event was attended by representatives from various organizations, including the Pollution Control Department of Thailand, the UNEP Asia and the Pacific Office, and the National Research Council of Thailand, reflecting broad support for the initiative.

https://ait.ac.th/2023/01/ait-strengthens-its-partnership-with-idea-and-nic-japan-with-the-launch-of-the-new-mercury-lab/

INNOVATIVE SMART TECHNOLOGIES FOR SUSTAINABLE FARM MANAGEMENT

AIT Research Theme: Technology, Policy and Society

AIT Unit: ASE/DFAB/SERD

Project Duration: 11 March 2023 to 10 March 2027

Project Partner/Client: Indian Council of Agricultural Reseach (ICAR), India

Expected Social Impact: Practical experience on different Smart Farming and Postharvest Technologies for sustainable agricultural development to Undergraduate students.

Description:

The main objectives are: (i) to provide experience in field design and experimental set up, (ii) to Provide practical experience in on-farm manual and sensor-based data collection (iii) to familiarize students with agricultural systems and engineering facilities in Thailand, and (iv) to provide basic information and hands-on training on applications of GIS.

ASIAN INTERNET ENGINEERING CONFERENCE 2023

AIT Research Theme: Technology, Policy and Society

AIT Unit: Internet Education and Research Laboratory

Project Duration: 1 March 2023 to 31 March 2024

Project Partner/Client: ACM SIGCOMM

Expected Social Impact: RThe Asian Internet Engineering Conference (AINTEC) provides an international technical forum for experts from industry and academia, especially aiming at addressing issues pertinent to the Asia and Pacific region with vast diversities of socio-economic and networking conditions while inviting high quality and recent research results from the global Internet research community.

Description:

The 18th Asian Internet Engineering Conference (AINTEC), in cooperation with ACM SIGCOMM, provides an international technical forum for experts from industry and academia. AINTEC especially aims at addressing issues pertinent to the Asia and Pacific region, with vast diversities of socio-economic and networking conditions, while inviting high quality and recent research results

from the Internet research community at large. AINTEC 2023 follows the previous seventeen successful editions. The conference is single-track and features a technical program with significant opportunities for individual and small-group discussions among a diverse set of participants. The technical sessions will include invited talks by leading experts, presentations of papers, demos, and posters. A student author of the AINTEC Best Paper Award is eligible for the ACM SIGCOMM geo-diversity grant program to attend ACM SIGCOMM 2024 in New York.

SMART FARMING TECHNOLOGIES FOR SUSTAINABLE AGRICULTURAL DEVELOPMENT

AIT Research Theme: Food-Energy-Water

AIT Unit: ASE/DFAB/SERD

Project Duration: 13 February 2023 to 12 February 2027

Project Partner/Client: Indian Council of Agricultural Research (ICAR), India

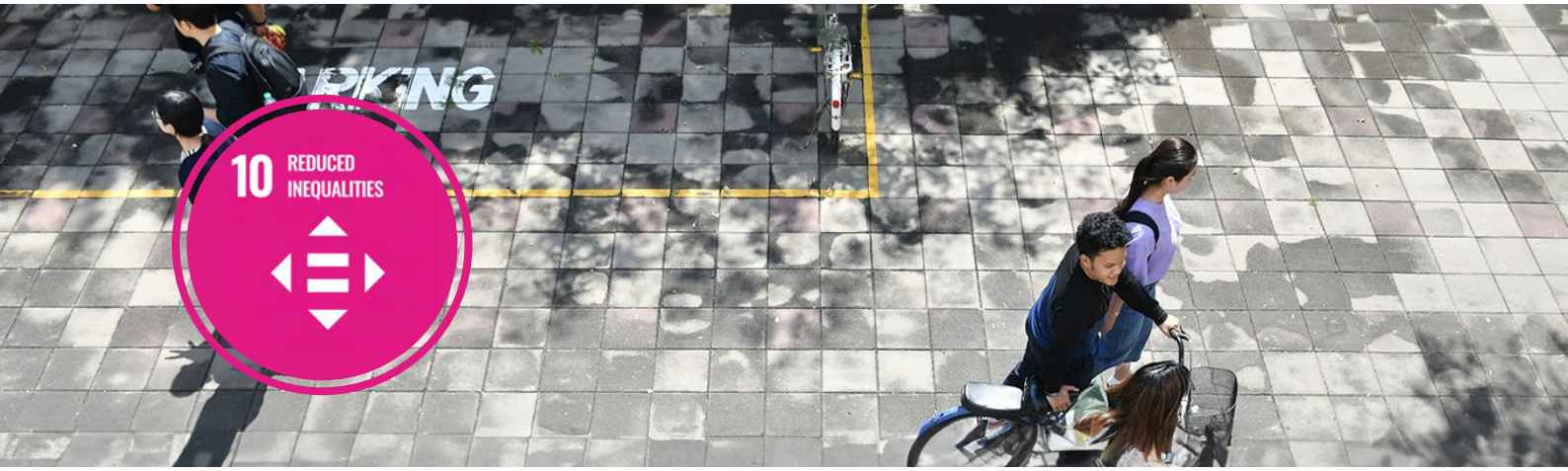
Expected Social Impact: Capacity building: Technology transfer

Description:

To provide them with technical and practical experience for sustainable agricultural development on the topic entitled"Smart Farming Technologies for Sustainable Agricultural Development".

The overall aim of this project is to carry out an internship for postgraduate students in agriculture-related disciplines from Navsari Agricultural University, Navsari, Gujarat, India to provide them with technical and practical experience for sustainable agricultural development on the topic entitled "Smart Farming Technologies for Sustainable Agricultural Development". The main objectives are: (i) to provide experience in agricultural

field design and experimental set-up, (ii) to provide practical experience in data collection (crop nutrient, irrigation water management, salt stress, and iron toxicity) using different agrotechnology, and (iii) to provide basic information and hands-on training on applications of Crop Simulation Modelling, GIS, Remote Sensing, IoT, and Big data in agriculture.



SYSTEM INTEGRATION AND DEVELOPMENT OF WEB-BASED APPLICATIONS (ELDER CARE2)

Project Duration: 1 October 2022 to 16 January 2025

Description:

The research project funded by The National Broadcasting and Telecommunications Commission (NBTC) have the purpose to increase the quality of life of the elderly in the community to protect them from living alone by AI technology (Elder care System) and Telehealth Monitoring and Assistive Systems for Elderly and Disabled People. The AI Center, AIT has developed an AI Video Analytics system for early detection systems for monitoring an elderly person or a disabled person.

Work Package1: A wearable raman spectroscopy system for Non-invasive Blood Glucose Monitoring.

Work Package2: Activity Monitoring, Mobility Analysis, and Detection using Video Analytics and Deep Learning. Using machine vision, Deep Learning, Wi-Fi Learning.

Work Package3: Telemedicine, Telerehabilitation, Haptic.

Work Package4: Cloud and Mobile-based Platform for Management, Analytics and Visualization of Health, Activity and Rehabilitation Data for Elderly and Disabled People.

SIGN LANGUAGE PRODUCTION USING DEEP LEARNING

AIT Research Theme: Smart communities

AIT Unit: SET / CS

Project Duration: 3 November 2023 to 28 February 2025

Project Sponsor/Client: AIT Research Initiation Grant

Expected Social Impact:

This project holds immense social significance as it endeavors to break down communication barriers for individuals with hearing impairments. By developing a real-time sign language production system, it empowers them to engage more fully in social interactions, education, and employment opportunities. Through its deployment on online platforms, it not only provides access to a wider range of information and entertainment but also promotes greater societal understanding and acceptance of the challenges faced by the hearing-impaired community. Ultimately, this project has the potential to greatly enhance the quality of life for individuals with hearing impairments by fostering inclusivity, empowerment, and equal participation in society.

Description:

This project aims to develop a real-time sign language production (SLP) system for hearing impaired people. We propose using a deep learning-based system to develop the SLP that enhances accuracy with acceptable computational complexity. The proposed system will be deployed on online VDO channels to test its performance in different contexts. Key Performance Indicators (KPIs) for evaluating the success of the project could include:

- Accuracy Rate: Measure the percentage of correctly interpreted sign language gestures compared to total gestures produced by the system.
- Latency: Assess the time taken by the system to interpret and produce sign language gestures in real-time.
- Computational Complexity: Evaluate the computational resources required by the system, such as CPU and memory usage, to ensure it remains within acceptable bounds.
- User Feedback: Gather feedback from hearing-impaired individuals who use the system to assess user satisfaction, ease of use, and effectiveness in facilitating communication.
- Performance Across Contexts: Test the system's performance in different environments and lighting conditions to ensure robustness and reliability.
- Integration with Online Channels: Measure the integration and performance of the system when deployed on various online video platforms, including its compatibility and reliability.
- Scalability: Evaluate the system's ability to scale, particularly concerning the number of users it can support simultaneously without compromising performance.
- Accessibility: Assess the accessibility features of the system, such as compatibility with different devices and assistive technologies, to ensure inclusivity.
- Tracking these KPIs will provide insights into the effectiveness, efficiency, and user satisfaction of the real-time sign language production system.

"EMPOWERING MIGRANT WORKERS: BRIDGING CULTURES AND BUILDING ADVOCACY IN JAPAN" LEARNING ACROSS AND BEYOND BORDERS: OUR LEARNING AND EXPERIENCE DURING THE EXCHANGE PROGRAM WITH OCHANOMIZU UNIVERSITY, TOKYO, JAPAN

22 August 2023 – The Asian Institute of Technology (AIT) has consistently advocated "Learning across borders" over the years. It promotes learning across borders from students worldwide and allows its students to travel and learn different interesting perspectives through exchange programs. We were lucky enough to be a part of one of those exciting exchange programs at Ochanomizu University, Japan, from our course Gender and Development Studies, as a part of the agreement between Gender and Development Studies at AIT and the Institute of Gender Studies at Ochanomizu University. The seven-night, eight-day program was enriching and exciting. It enhanced our personal and academic avenues. The visits to different organizations and experts advocating and researching migrant workers based in Japan were particularly interesting. We garnered a lot of insights and information associated with the data and status of migrant workers based in Japan, particularly from our countries of origin, Myanmar and Nepal.

The very first interaction of the visit was with "Link to Myanmar," an organization based in Japan working on the rights and placements of Myanmar migrant workers. We not only learned about the issues faced by Myanmar migrant workers in Japan but also were excited to hear about the effort made by the organization to resolve the issues. It was interesting how the organization, led by an international couple originally from Myanmar and Japan, was working so passionately towards orienting migrant workers from Myanmar to adapt to the Japanese working environment, also facilitating them to settle in Japan through the provision of jobs, helping in accommodation and other necessities for incumbent migrant workers from Myanmar. It mainly showed their respect and empathy towards each other's culture while embracing their differences to promote people from each other's country.

Another key highlight was the visit to "Solidarity Network with Migrants, Japan," based in Ueno, Tokyo, where we learned about the challenges faced by the migrants in Japan and how they were attempted to be mitigated by this institution. It was particularly intriguing to know the pros and cons of different training programs attracting many migrant workers to Japan, leading to terrible violence through systems, violated labor laws, and poor living conditions. However, the attempt made by this institution explored our horizons on how a national network of organizations and individuals has been attempting to resolve the issues from policy to individual levels. A representative of this institution, whom we interacted with later, National General Workers Group, Nambu, further portrayed the advocacy campaigns they were undertaking to protect the female migrant workers and strengthened social protection of the migrant workers from the end of government. This particularly led to understanding the feminized migrational theories we learned back in AIT and their applicability in professional settings, which were extremely exciting and empowering

https://ait.ac.th/2023/08/learning-across-and-beyond-borders-our-learning-and-experience-during-the-exchange-program-with-ochanomizu-university-tokyo-japan/.

SENTINEL ASIA AND CAPACITY BUILDING

AIT Research Theme: Technology, Policy and Society

AIT Unit: Geoinformatics Center

Project Duration: 20 May 2022 to 19 May 2027

Project Sponsors/Clients: Japan Aerospace Exploration Agency (JAXA) and others, Japan

Expected Social Impact: Sustainable communities and poverty reduction.

Description:

The "Sentinel Asia and Capacity Building" project focuses on leveraging satellite and drone data processing to support emergency response activations and capacity-building initiatives. Sponsored by JAXA for the past 15 years, this project has established a robust framework for uploading value-added products and coordinating with national agencies to enhance disaster response strategies. It includes comprehensive training programs and workshops aimed at strengthening skills and knowledge across various sectors.

This ongoing initiative aligns with the AIT Research Theme of Technology, Policy, and Society, reflecting a

commitment to integrating technological advancements with policy development and societal needs. The main Sustainable Development Goal (SDG) targeted by this project is SDG 11, which promotes sustainable cities and communities. Additionally, it supports SDG 1, focusing on eradicating poverty in all its forms.

Looking ahead, the Sentinel Asia project is set to continue for the next five years, further developing its capabilities and extending its impact on regional resilience and capacity building.

SMART CITY ASEAN LEARNING NETWORK

AIT Research Theme: Smart communities

AIT Unit: SET / Mechatronics

Project Duration: 1 April 2022 to 31 March 2024

Project Sponsor/Client: Universiti Malaya

Expected Social Impact: Skilled personnel in Smart City

Description:

The "Smart City ASEAN Learning Network" project is dedicated to the professional development and upskilling of both existing and future smart city experts.

It seeks to offer sufficient educational opportunities to young students and the current workforce, crucial for facilitating a fair, efficient, and sustainable evolution into smart cities. The initiative directly supports Sustainable Development Goal (SDG) 11, which aims to make cities and human settlements inclusive, safe, resilient, and sustainable. Additionally, the project aligns with SDG 4, which emphasizes the importance of quality education for all, and SDG 9, which promotes resilient infrastructure and fosters innovation and industrial development. This strategic focus not only enhances professional capabilities but also ensures that the transition towards smart cities occurs within a robust educational framework, preparing societies for future technological advancements and sustainable growth.

IN-DEPTH MOTORCYCLE ACCIDENT INVESTIGATION TRAINING PROGRAM 2022

AIT Research Theme: Technology, Policy and Society

AIT Unit: SET/TrE

Project Duration: 1 November 2022 to 31 December 2023

Project Sponsor/Client: Asian Honda Motor Co., Ltd., Thailand

Expected Social Impact: The trainees can conduct the MC AI in their own countries.

Description:

The AIT research project, under the "Technology, Policy, and Society" theme, is led by the School of Engineering and Technology (SET), Transportation Engineering (TrE) unit. Running from 1 November 2022 to 31 December 2023, this initiative is sponsored by Asian Honda Motor Co., Ltd., Thailand. The project focuses on providing comprehensive Motorcycle Accident Investigation (MC AI) Training for Honda personnel across four countries. The training aims to equip participants with the skills and knowledge necessary to conduct in-depth investigations

into motorcycle accidents in their respective regions. By enhancing the technical expertise of Honda's personnel, the project seeks to improve road safety outcomes and contribute to reducing motorcycle-related accidents. The expected social impact is significant, as the trained individuals will be able to apply their newly acquired skills within their home countries, fostering a safer driving environment and potentially saving lives.

ROAD ASSESSMENT PROGRAM IN LAO_13S

AIT Research Theme: Infrastructure

AIT Unit: SET/TrE

Project Duration: 1 July 2022 to 30 April 2024

Project Sponsors/Clients: LEA Associates South Asia Pvt. Ltd. And Jv Dongsung Engineer Co., Ltd.

Expected Social Impact: The approach of Star Rating represents a systematic approach to road infrastructure design about where severe crashes are likely to occur. The Star Ratings by iRAP protocols enables the benchmarking and can be used as a basis of performance tracking after the road safety improvement program. The road assessment will be illustrated in a risk mapping and star ratings. In this project, the star rating model will be used as a simple and objective measure of the level of safety provided by road infrastructure.

As the Ministry of Public Works and Transport (MPWT) of Lao PDR is implementing the "NR13 South Improvement

and maintenance contract" with financing from World Bank, AIIB and EIB. The Star Rating will be used as a performance indicator to demonstrate the risk reduction after the project is implemented. Therefore, the star ratings of the road infrastructure before and after the road improvement need to be conducted

Description:

The project is to conduct the road assessment following iRAP protocol for NR13 South in Lao PDR, starting from KM 71 in Tha Phrabath District, Bolikhamxay Province and ending at KM 346 in Thakhek District, Khammouan Province with a length of 275km . The Star Rating by iRAP was used as a performance indicator to demonstrate the risk reduction after the project is implemented. The purpose of the iRAP assessment is to identify areas of concern for the safety of the travelling public, and the recommendations based on the iRAP Star rating will be prepared for the mitigation of identified risks.

The project will conduct the field surveys for the base-line assessment including the survey of operating speed and pedestrian volume, and the data were used as inputs in the coding process to prepare the iRAP star rating report.

Research/Training:

1. Road assessment process will be conducted following iRAP protocol. Detailed workplan and schedule for each site survey will be presented in the report. Types of data to be collected and survey activities will be described.

2. Coding of Project Road Data:

The coding of project road data will be conducted based on the results from site surveys. The following information will be used in the iRAP coding process:

- Existing designs, either conceptual design or detailed design, where completed
- Videos of the section before construction started, as well as photographs, available through Mapillary, Google Street View images, and videos recorded from the site survey.
- Traffic data, operating speed data, pedestrian volume, and accident data (if available).
- All of the road attributes data will be compiled in every 100 m intervals as required for the iRAP star rating and safer roads investment plans. The coding will be done through ViDA-online Software provided by iRAP, and will be checked at two levels, by coding team leader and iRAP coding specialists to ensure the accuracy of coding process.

3. Baseline iRAP Star rating

The field surveys for the base-line assessment will be conducted, driving the project road in each direction. The additional data collection will include the survey of operating speed and pedestrian volume and will be used as inputs in the coding process. After the coding completion, the iRAP star rating report will be presented with the risk map for different road users : 1) vehicle occupants, 2) motorcyclists and 3) pedestrians. The report will include the identification of the high-risk locations, suggested road safety countermeasures and recommendations, and predicted star ratings with recommended countermeasures. It will also include estimated reductions in fatal and serious accidents as a result of identified cost-effective countermeasures.

URBAN COOLING SERVICES AND BLUE-GREEN INFRASTRUCTURE PLANNING TOWARD MITIGATING URBAN HEAT ISLAND AND CITY SUSTAINABILITY: A CASE STUDY OF BANGKOK

AIT Research Theme: Climate Change; Infrastructure; Technology, Policy and Society

AIT Unit: SERD/UIS

Project Duration: 1 January 2023 to 31 March 2024

Project Sponsor/Client: Asian Institute of Technology Initiation Grant

Expected Social Impact: The project will developed the insights into the various advantages of urban blue and green infrastructures based on different cooling demand under changing climate and the spatial equity though residents accessibility to urban green infrastructures cooling services in Bangalore. These research outcomes will be shared with the policymakers and involved policy audiences in consultations for information, sensitization, and future policy considerations. The interview with policy makers also will provide the opportunity to sensitize with the urban green infrastructures related planning and concerns. The Photo Story book planned as an outcome of the project will also be circulated among policy makers and relevant stakeholders. The insights of the urban green infrastructures will also be communicated to the policy makers and other key stakeholders.

Description:

The phenomenon of urban heat islands is evident in a large number of locations with higher local temperatures, heat stress, extreme heat waves, and thermal discomfort. Therefore, the present research propose for suitable solution for the spatial development characteristics and urban heat island controlling mechanism by urban cooling services and blue-green infrastructure planning

THAILAND EARTHQUAKE RESEARCH CENTER

AIT Research Theme: Infrastructure

AIT Unit: SET/StE

Project Duration: 19 April 2023 to 18 April 2024

Project Sponsor/Client: National Research Council of Thailand (NRCT)

Project Partner: TERC has more than 30 members; they are researchers and professors from Department of Mineral Resources, Thai Meteorological Department, Chulalongkorn University, Kasetsart University, Chiang Mai University, King Mongkut's University of Technology Thonburi, King Mongkut's University of Technology North Bangkok, Rajamangala University of Technology Thanyaburi, Rajamangala University of Technology, Thammasat University, Burapha University, Phayao University, Mahidol University, Sripatum University. Professor Pennung Warnitchai of AIT is serving as the Director of TERC.

Expected Social Impact:

1. A national-level earthquake conference.
2. Several training workshops to disseminate knowledge, technology, and innovation on earthquake-related issues.
3. One-stop digital platform to share knowledge and data related to earthquake to researchers and general public.
4. Cooperation agreements with similar national-level research centers in other countries.
5. Lessons learned from earthquake events both domestic and international through earthquake reconnaissance surveys.

Description:

Earthquakes are multi-hazard events that occur infrequently, but when they do, their impact can be severe and devastating. Therefore, it is crucial to be well prepared for such disaster events. In Thailand, a series of research projects aiming at mitigating earthquake risk have been conducted over the past 20 years in five phases, under the support of the Thailand Research Fund (TRF). These projects involved over 30 researchers from 10 universities and government agencies, resulting

in more than 30 projects and numerous publications in academic journals. The knowledge gained from these projects has been widely disseminated to the public through mass media and to engineers and stakeholders through academic lectures and seminars. Seismic hazard maps have been updated and major changes to engineering regulations & standards for earthquake-resistant building design have been made by the impact of the research findings. Currently these active research activities are continued, with 11 earthquake-related research projects are being funded by the National Research Council of Thailand (NRCT).

With this background, it is reasonable to establish a national center for earthquake research in the country: the Thailand Earthquake Research Center (TERC). This center will promote greater collaboration among researchers and various key stakeholders in mitigating earthquake risk. According to the plan, TERC will not belong to any single institution; it will be a neutral national research center where researchers from various institutions in Thailand can contribute and work together on critical issues related to earthquake risk. A funding of 5,000,000 Baht per year will be provided by NRCT to support all activities of TERC. These activities are not research-based, as NRCT has already provided separate funding to support ongoing research projects (more than 20,000,000 Baht per year). TERC's activities will include organizing conferences and training workshops, conducting earthquake reconnaissance surveys, developing a one-stop data and knowledge digital platform for researchers and the general public, and creating a system to share research facilities among various institutions.

DEVELOPMENT OF A CATASTROPHE MODEL FOR EVALUATING SEISMIC LOSSES AND IMPACTS (YEAR 2)

AIT Research Theme: Infrastructure

AIT Unit: SET/StE

Project Duration: 30 April 2023 to 29 April 2024

Project Sponsor/Client: National Research Council of Thailand (NRCT)

Project Partner: Mahidol University, Chiang Mai University

Expected Social Impact:

1. Earthquake Catastrophe Model of Chiang Mai City and Chiang Rai City to assess the seismic losses and impacts caused by earthquakes in these areas.
2. Earthquake Impact Assessment Methodology for Thailand to be used in evaluating the potential impact of earthquakes in other areas of the country.
3. Earthquake Preparedness Plan and Risk Mitigation Programs based on the use of the model to minimize the potential impact of earthquakes on these areas.
4. Increased public awareness of earthquake risk by disseminating the results from the model and promoting the implementation of the Earthquake Preparedness Plan and Risk Mitigation Programs.

Description:

Earthquakes can cause severe damage to buildings and structures and result in significant economic and social losses. However, because earthquakes occur less frequently than other disasters, the general public and key stakeholders often lack experience and understanding of proper earthquake emergency response and risk mitigation. To address this issue, this research project aims to develop an earthquake catastrophe model for Chiang Mai City and Chiang Rai City. The model will incorporate geospatial data on seismic hazard, geological conditions, exposures (buildings, structures, population, etc.), and their seismic vulnerability. It will compute various types of earthquake-induced losses and present them in GIS maps, enabling stakeholders and the public to visualize the impacts of possible future earthquakes without the need to wait for a real earthquake to happen.

Research:

1. Conduct a comprehensive survey of Chiang Mai and Chiang Rai cities to develop detailed maps of earthquake hazard zones, and create an inventory of buildings and infrastructure in these areas.
2. Analyze multiple earthquake scenarios and their potential impact on the two cities using sophisticated seismicity models to estimate potential losses and assess the risk level of each scenario.
3. Develop an effective emergency response plan based on the analysis of earthquake scenarios, and identify and recommend risk mitigation strategies to minimize losses.
4. Document the earthquake catastrophe model and distribute it to stakeholders and the general public for use in risk assessment, emergency planning, and disaster preparedness.
5. Develop and implement a public outreach and education program to increase awareness of earthquake risk and prepare the general public for disasters.

CAR ACCIDENT INVESTIGATION PROJECT: YEAR 2022

AIT Research Theme: Infrastructure

AIT Unit: SET/TrE

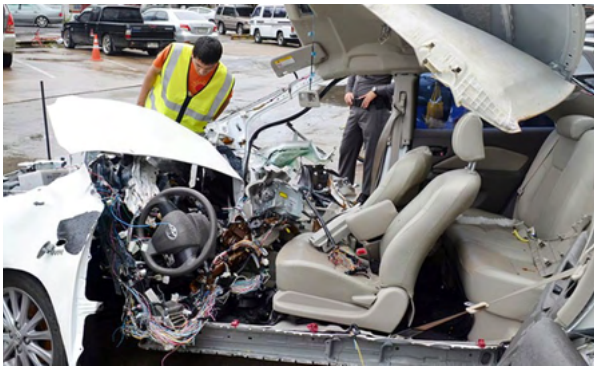
Project Duration: 31 December 2022 to 31 March 2024

Project Sponsor/Client: Toyota Daihatsu Engineering & Manufacturing

Expected Social Impact: To find the causes of car crashes by investigation the speed from Event Data Recorder (EDR).

Description:

The AIT research project, conducted under the "Infrastructure" theme by the School of Engineering and Technology (SET) and Transportation Engineering (TrE) unit, spans from 31 December 2022 to 31 March 2024. Sponsored by Toyota Daihatsu Engineering & Manufacturing, the project aims to investigate car crashes by analyzing speed data retrieved from Event



Data Recorders (EDRs). By focusing on specific crash patterns, the research seeks to uncover the underlying causes of these accidents. The data extracted from EDRs provides critical insights into vehicle dynamics and driver

behavior leading up to crashes, enabling a thorough analysis of contributing factors. The project's findings are expected to have a substantial social impact by identifying key factors that contribute to car accidents, ultimately leading to improved vehicle safety designs, better road safety measures, and more effective accident prevention strategies.

INTERNATIONAL SYMPOSIUM ON DISASTER RESILIENCE AND SUSTAINABLE DEVELOPMENT 2023

AIT Research Theme: Infrastructure

AIT Unit: SET/DPMM

Project Duration: 3 July 2023 to 31 December 2024

Project Sponsor/Client: Registration fees of the participants

Expected Social Impact: Encouraging research on the conference theme.

Description:

Organising International Symposium on Disaster Resilience and Sustainable Development at AIT Conference Centre. This is the third event of this series.

Disaster Preparedness Mitigation and Management (DPMM) AIT is pleased to invite you to participate in the upcoming event "The 3rd International Symposium on Disaster Resilience and Sustainable Development (DRSD 2023)".

The "3rd International Symposium on Disaster Resilience and Sustainable Development" (DRSD 2023) organized by the Asian Institute of Technology brings together discussions on improving developmental practices to reduce long-term complex risks from disasters and

climate change and promote equitable sustainability.

The Symposium invites academics, practitioners, students, public officials, NGOs, CSOs, private institutions, innovators, social motivators, and early career researchers globally to join an exciting discourse on disaster resilience and sustainable development. The Symposium will include keynote speeches, panel discussions, technical sessions, poster presentations, and academic exhibitions. DRSD 2023 is a continuation of DPMM-AITs previously successful DRSD symposia which were held in 2019 and 2021.

https://ait.ac.th/event/3rd-international-symposium-on-disaster-resilience-and-sustainable-development-drsd-2023/

ENHANCING AND SCALING UP THE JOINT AIT AND UNEP'S EFFORTS FOR AIR QUALITY MANAGEMENT

AIT Research Theme: Climate change; Smart communities

AIT Unit: SERD/EEM

Project Duration: 7 July 2023 to 30 April 2024

Project Sponsor/Client: UN Environment Programme

Project Partner: UN Environment Programme

Expected Social Impact:

Better air quality management at the global , regional, and national levels.

Project Description:

This project is designed to amplify the collaborative efforts between AIT and the UN Environment Programme in air quality management on global, regional, and national scales. By engaging stakeholders from the private sector, financial institutions, and donors, the initiative seeks to implement more effective air quality

strategies across various levels of governance. The expected social impact is a significant improvement in air quality management, which is anticipated to contribute to healthier environments for communities worldwide. The initiative is spearheaded by AIT's SERD/EEM unit and is supported by the UN Environment Programme, serving as both the project partner and sponsor. The project commenced on July 7, 2023, and is scheduled to conclude on April 30, 2024, aiming to create sustainable outcomes in environmental health and policy.

THE STUDY OF MOTORCYCLE ACCIDENT CAUSATION AND COUNTERMEASURES DESIGN TO REDUCE THE SEVERITY OF MOTORCYCLE ACCIDENT AT NIGHTTIME

AIT Research Theme: Infrastructure

AIT Unit: SET/TrE

Project Duration: 16 November 2023 to 31 December 2024

Project Sponsor/Client: Department of Land Transport

Expected Social Impact:

To reduce fatality of MC accidents at nighttime.

Description:

The project is to conduct in-depth motorcycle accident investigation with high severity at nighttime and to identify the factors related to motorcycle accident at nighttime to develop proper countermeasures to reduce the number and severity of motorcycle accident at nighttime.

BREATHE-CITIES: BOLSTERING RESILIENCE AND ENVIRONMENTAL AIR-QUALITY THROUGH TRANSFORMATIVE HEALTHY EMISSION TRANSPORT IN CITIES

AIT Research Theme: Climate change; Technology, Policy and Society

AIT Unit: SERD/UIS

Project Duration: 15 December 2023 to 31 July 2024

Project Sponsors/Clients: Research and Innovation for Development (RIDA), the United Kingdom through University of Huddersfield

Project Partners: University of Huddersfield (the United Kingdom); The University of Sheffield (the United Kingdom); Doh Eain -Renewing Yangon - Private architect Farm (Myanmar); Asian Institute of Technology (Thailand)

Expected Social Impact:

The projectâ€™s objective is to explore resilient and sustainable urban transport strategies that mitigate transport-induced pollution's repercussions. This will be achieved by integrating advanced sensor-driven models from Manchester and Bangkok with societal and policy insights from Yangon, addressing unique ASEAN socio-political and environmental challenges. Emphasizing community engagement, this approach focuses on comprehensive well-being and developmental progression to facilitate context-specific interventions across diverse urban landscapes.

The project aims to develop a comprehensive approach to mitigate transport-induced air pollution in urban areas, with a focus on Manchester, Bangkok, and Yangon. It seeks to leverage advanced technologies, stakeholder engagement,

and policy innovation to create sustainable and healthy urban environments.

Description:

The project aim is to explore resilient and sustainable low emission strategies for urban transportation and spatiotemporal models, with a strong emphasis on community impacts and localized adaptation options, aimed at mitigating air pollution and its adverse health effects. The project is grounded in empirical evidence linking transport emissions to deteriorated air quality and health adversities (Cohen et al., 2005). The focus on health as a priority area is supported by essential preliminary research and established links with Health and Environmental partners in the involved regions, reiterating the urgency of intervention.

Global urban areas are witnessing an escalation in transport-induced air pollution, aggravated by climate anomalies, Urban Heat Islands (UHIs) and Urban Pollution

Islands (UPIs) effects (EPA, 2022) posing significant human health challenges with public health, social, economic, and environmental repercussions. The World Health Organization estimates around 7 million premature deaths annually due to air pollution (WHO, 2022), highlighting the need/urgency for mitigation strategies. The project outlines a thorough examination/analysis of transport patterns and consequent air pollution emissions in Manchester, UK; Bangkok, Thailand; and Yangon, Myanmar, assessing a selection of diverse urban complexities.

THAILAND ROAD SAFETY FORUM

AIT Research Theme: Infrastructure

AIT Unit: SET/CE

Project Duration: 1 February 2024 to 31 July 2024

Project Sponsors/Clients: Mitsubishi Motor Thailand

Expected Social Impact:

Exchange knowledge on road safety.

Description:

This project is to organize the 1st Thailand Road Safety Forum. To reduce fatalities, injuries, and financial losses in Thailand, the Ministry of Transport launched a study on road accidents with support from the World Bank. This endeavor led to the formulation of the Thailand Road Safety Master Plan, identifying crucial challenges in implementing preventive, corrective, and mitigative measures. Collaborating entities such as the Department of Highways, Volvo Car Cooperation in Sweden, and

the Asian Institute of Technology (AIT) facilitated the establishment of TARC. The forum aimed to deepen understanding of the current and future road accident situations in Thailand, spotlighting data analysis, law enforcement, and road safety policies.

WEB AND MOBILE APPLICATION FOR AIR QUALITY INFORMATION

AIT Research Theme: Haze Monitoring and Forest Fire Detection

AIT Unit: Artificial Intelligence Technology Center

Project Duration: 26 May 2022 to 31 December 2024

Project Sponsor/ Client: Sithiporn Associates Company Limited

Expected Social Impact:

To improve the good health and well being of Bangkok and the metropolitan population from the effects of air pollution such as pneumonia or bronchitis. They also include discomfort such as irritation to the nose, throat, eyes, or skin. Air pollution can also cause headaches, dizziness, and nausea. Bad smells made by factories, garbage, or sewer systems are considered air pollution.

To raise public awareness of the true pollution problem in cities and encourage people to make energy-saving changes in their lifestyle. Using public transportation instead of driving a car or riding a bike instead of driving a carbon-emitting vehicle are two ways to reduce air pollution. Others include not using aerosol cans, recycling yard trimmings rather than burning them, and not smoking cigarettes.

Description:

As stated in the Bangkok Development Plan 2022 to make Bangkok a pollution-free city , and to achieve the objective mentioned goals , The Office of the Environment is in full control of air quality management established air quality monitoring station in 50 different district in Bangkok province with various type of monitoring method to collect the data and creating the air pollution database dring 2019-2022. Aiming to create the model of air quirity to help measure and strategic planning to build the air quality in Bangkok .

The Pollution Control Department began a project to develop an air quality management information system with the goal of 1) linking the exchange of air quality data from various Bangkok air quality monitoring stations and 2) sharing the information between internal and external agencies by collecting data to analyze, process, and comparison the air quality measurement results, giving rise in more accurate processing of the air quality data center before publicizing the outcomes. And allow policymakers and air quality managers to rely on cutting-edge science to establish regulations and make management decisions to reduce and control air pollution with cost-effective approaches.

The information and status of air quality will be publicized to the population in various zones via mobile and web applications that will allow people to access real-time population information in order to avoid entering the hazard zone that is highly polluted and may affect their health.

EXPERT TALK ON SUSTAINABILITY IN PRACTICE

Duration: September 2023

Description: A talk on 'Sustainability in Practice' was conducted by AIT Solutions. Mr. Jagdish Rele, Founder and CEO of Chaiam Consultants and a Former World Bank and UN delivered this talk to the Master students of Structural Engineering in AIT by sharing his experience in managing and implementing international corporate real estate projects and providing backbone support to mega development projects across geographies, even in fragile and conflict affected states.

WEBINAR ON PERFORMANCE-BASED SEISMIC STRUCTURAL HEALTH MONITORING OF TALL BUILDINGS

Duration: June 2023

Description: In this webinar Mr. S M Zia Uddin, Coordinator of Wind Tunnel Testing and Structural Health Monitoring at AIT Solutions, delivered his insights on Performance-Based Seismic Structural Health Monitoring. The talk focused on the emerging promising solution of Structural Health Monitoring of buildings, that helps in rapidly assessing the damage after an earthquake, minimizing confusion, and ensuring informed decisions.

Weblink:

https://youtu.be/agYmnYPPP2osi=jUaWDpG2E86oUULh

AIT SUSTAINABILITY EXPO 2023

Duration: July 2023

Description: On 25th August, AIT Solutions organized a workshop on Building Resilient and Sustainable Infrastructure at AIT Sustainability Expo 2023. For this workshop, AIT Solutions invited Dr. Narong Leungbootnak, Chairman Future Engineering Consultants Co. Ltd., Thailand; Dr. Chaitanya Krishna, Assistant Professor, School of Engineering and Technology, AIT, and Dr. Saratchai Ongprasert, Executive Director (SP), TEAM Consulting Engineering and Management PCL, Thailand to share their insights respectively on Construction and Demolition Waste Management in Response to Sustainable Construction in Thailand; Structural Health Monitoring of Low-rise RC Building Updating; and Digital Twin for Smart Asset Management.

Weblink:

http://osc.ait.ac.th/day-3/

STRUCTURAL ENGINEERING EXPO 2023 – ADVANCING PERFORMANCE-BASED SEISMIC DESIGN IN THE PHILIPPINES

Duration: December 2023

Description: Association of Structural Engineering of the Philippines (ASEP) organized a Structural Engineering Expo on 30th Nov - 1st Dec. 2023. The event celebrated the practice of Filipino Structural Engineers.

Mr. Thaung Htut Aung, Director, AIT Solutions was invited by ASEP to be one of the speakers at the Expo. In his presentation on 'Advancing Performance-based Seismic Design in the Philippines', Mr. Aung provided a glimpse of the collaborative work that AIT Solutions has done with Filipino structural engineering consultants and also the various knowledge sharing and transfer activities that were conducted to advance the structural engineering profession in the Philippines.

WIND TUNNEL TESTING OF MENARCO TOWER 2

Duration: March to May 2023

Description: Menarco Development Corporation engaged the services of AIT Solutions, Asian Institute of Technology (AIT), Thailand, to carry out the wind tunnel test of Menarco Tower 2 located in Taguig City, Philippines. The project is a mixed-use 42-story tower comprising of residential and office floors with 5-underground basements. AIT Solutions worked closely with the various stakeholders (project engineers and developers) to enhance the reliability and cost-effectiveness of the structural designs while ensuring occupant comfort, optimizing the façade design, and enhancing pedestrian comfort.

PUBLICATION OF "AIR QUALITY MANAGEMENT STATUS AND NEEDS OF COUNTRIES IN SOUTH ASIA AND SOUTHEAST ASIA, PUBLISHED ELECTRONICALLY, 22 SEPTEMBER 2023

Duration: 23 September 2023

Description: A peer review research article on "Air Quality Management Status and Needs of Countries in South Asia and Southeast Asia" was created by RRC.AP, Air Pollution Cluster and was published online by APN Science Bulletin on 22 September 2023.

In its content, a capacity building workshop on AQM was held in September 2022, representing 17 countries (8 from South Asia and 9 from Southeast Asia).

The workshop aimed to gather information on existing AQM facilities, challenges, and needs of participating countries. Based on the findings, most countries have limited monitoring stations, there were data gaps since a handful of countries have begun compiling data on emissions inventories, and there were air pollution policy challenges.

These findings reveal opportunities for improvement on the following:

- **Investment in AQM:** Countries can prioritize strengthening various aspects of AQM, including increased investment in infrastructure and technical expertise.

- **Financial Resources:** International funding agencies can play a crucial role in mobilizing financial resources to support these efforts.

By addressing these challenges and taking advantage of available opportunities, the countries in South Asia and Southeast Asia can work towards cleaner air for their citizens.

Weblink:

https://www.apn-gcr.org/bulletin/article/air-quality-management-status-and-needs-of-countries-in-south-asia-and-southeast-asia/

PUBLICATION OF "AIR QUALITY TRENDS IN COASTAL INDUSTRIAL CLUSTERS OF TAMIL NADU, INDIA: A COMPARISON WITH MAJOR INDIAN CITIES, PUBLISHED ELECTRONICALLY, OCTOBER 2023

Duration: October 2023

Description: A peer review research article on "Air Quality Trends in Coastal Industrial Clusters of Tamil Nadu, India: A Comparison with Major Indian Cities" was created by RRC.AP, Air Pollution Cluster and was published online by Environmental Advances in October 2023.

In its synopsis, India developed several industrial clusters nationwide, including in the state of Tamil Nadu to boost manufacturing. This study documented air quality trends in industrial cluster cities of Tamil Nadu and compared them with those in Indian major cities. Between 2015-2020, data on key air quality parameters, such as particulate matter (PM10 and PM2.5), nitrogen dioxide (NO2), sulphur dioxide (SO2), and National Air Quality Index (NAQI) measured in these cities, were analyzed. Our results suggest that the air quality parameters in coastal industrial cluster cities did not exhibit much seasonal variability owing to the influence of coastal meteorology compared to the

hinterland cities, such as Delhi. Among the cities, Delhi showed the highest PM10, PM2.5, NO2 concentration levels, and NAQI, while Mumbai had the highest SO2 concentration levels. We observed that over the years, the concentration levels of NO2 were showing a decreasing trend in all the cities and can be attributed to the air pollution reduction measures implemented in the cities.

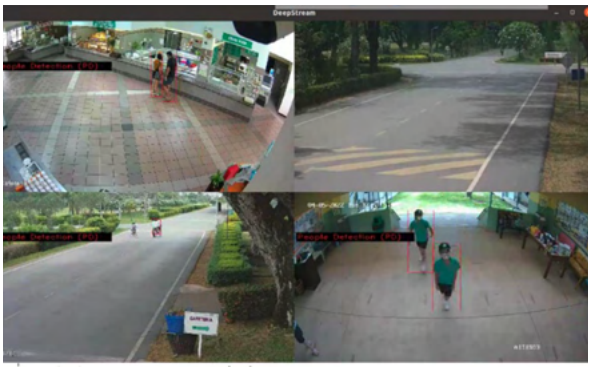
Weblink:

https://www.sciencedirect.com/science/article/pii/S2666765723000704?via%3Dihub

AUTOMATIC SUSPECT TRACKING USING MULTI-CAMERA SYSTEM

Duration: 5 October 2020 to 30 December 2023

Description: To carry out this research project, the research team has been working on the research and development of an Automatic Suspect Tracking using Multi-camera System. The system includes a video processing module which will constantly process the video stream from the camera to detect and track a person. The tracking data is passed on to the identity extraction module which extracts clothing type and color information as well as extracting face information. The extracted identity information is recorded in the database system. This data is used to track the appearance of suspects in each camera view. The identity extraction module was implemented in the form of microservices to decouple the system and to enable scalable system deployment. The research team developed a deep learning model to segment



clothes region, clothing type and color. We use the Distilled Neural Network Training techniques to reduce the number of processing parameters to minimize the resource usage during inferencing.

EMISSION INVENTORY AND AIR QUALITY MODELLING FOR EMISSION AND AIR QUALITY PREDICTION IN MAE MOH AND LAMPANG PROVINCE USING AN AUTOMATED NEAR REAL-TIME DATA COLLECTION ELECTRICITY GENERATING AUTHORITY OF THAILAND

Duration: 20 September 2021 to 30 July 2024

Description: This project "Emission Inventory and Air Quality Modelling for Emission and Air Quality Prediction in Mae Moh and Lampang Province Using an Automated Near Real-time Data Collection Electricity. Data was collected using focus group discussion with local leaders in the affected areas and from related documents and research. The Mae Moh electricity generating plant has prevented or mitigated the impacts, The Electricity Generating Authority of Thailand (EGAT) has developed a system for assessing particulate matter quantity and air quality. These measures will be successful if there is full participation of the stakeholders, community, local leaders, and local administrative organizations.

WEBINAR ON MAKING CITIES RESILIENT 2030 (MCR2030): CAPACITY BUILDING MODELS AND TOOLS TO STRENGTHEN CITIES RESILIENCE IN ASIA AND THE PACIFIC, VIRTUAL MEETING

Project Duration: 23 February 2023

Description:

AIT RRC.AP hosted a webinar titled Making Cities Resilient 2030 (MCR2030): Capacity Building Models and Tools to Strengthen Cities' Resilience in Asia and the Pacific on 23 February 2023. Over 160 online participants joined the live session.

Dr. Guilberto Borongan, Director of AIT RRC.AP, shared that the MCR2030 initiative provides a roadmap for cities to commit to building resilience to climate and disaster risks, and is comprised of three stages which includes, (i) improving cities' understanding of risks and committing to reduce; (ii) strengthening cities' capacity to develop local risk reduction strategies and plans; and (iii) supporting implementation. He stressed the importance of an integrated approach to building resilience to both climate change and disaster risks which can benefit from cities' ability to leverage existing efforts. He emphasized some key factors which could be beneficial to achieving the MCR2030 goals, including, (i) vertical integration between national and local governments; (ii) private sector involvement; (iii) cities' access to different resources and partners; (iv) access to finance; (v) strong policy support and political commitment; and

(vi) capacity-building, awareness raising and effective information sharing and advocacies. He highlighted that the ultimate goal of MCR2030 is for cities to be inclusive, safe, resilient and sustainable for all by 2030.

Weblink:

http://www.rrcap.ait.ac.th/news/Pages/vol24no1-03.aspx

Video link:

https://www.youtube.com/watch?v=JSXoCRLP07o

UNITING THROUGH MUSIC: A DSAI MAJOR'S JOURNEY OF CONNECTING WITH HIS PASSION AT AIT

As the sun sets on the AIT campus, Sunny Tuladhar, a Data Science and Artificial Intelligence (DSAI) major, shares his musical talents by a serene lake with fellow students. Sunny's deep-rooted passion for music, nurtured from a young age in a household rich with diverse musical influences, led him to combine his love for both music and technology.

Sunny's journey began with the keyboard in grade 6 and flourished with the guitar in grade 8. Over 15 years, he developed his skills as a guitarist, eventually releasing his first album, ⁎Traveler's Tale⁎, in 2015, and his second, ⁎Charades in the Sky⁎, in 2020. His dedication to music has earned him recognition in the Nepalese music scene, where he continues to thrive as a singer, songwriter, and producer.

At AIT, Sunny's musical interests have fostered strong connections with a diverse group of campus musicians. He finds that music serves as a universal bridge, helping him connect with others and build lasting friendships. Through his involvement with the Student Union, Sunny has organized impactful music events and workshops, teaching students the basics of guitar and ukulele and inspiring a love for music within the campus community.

Sunny's DSAI studies allow him to merge his artistic passion with technical innovation. His projects include developing a music-selling database, analyzing music streaming data, creating a song recommender system, and exploring how music affects concentration. He even used deep learning to identify guitar tones and developed a chord recognition script using Google's MediaPipe.

Looking ahead, Sunny envisions a future where AI and music converge, yet he believes the human touch will always be essential. "AI can create music, but the human voice will always express something special," Sunny reflects. He remains committed to blending technology and music, hoping to continue creating and experiencing music in its most human form.

https://ait.ac.th/2023/02/uniting-through-music-a-dsai-majors-journey-of-connecting-with-his-passion-at-ait/

AIT ALUMNI ASSOCIATION BANGLADESH CHAPTER SUPPORTS THE REFURBISHMENT OF ONE SINGLE UNIT STUDENT DORMITORY

27 November 2023 – On 25 November 2023 during the 52nd AITAA Governing Board meeting, AIT President Prof. Kazuo Yamamoto and AITAA-Bangladesh Chapter Advisor Prof. Dr. Md. Kamal Uddin on behalf of Mr. Abdul Kashem Md. Shirin, President AITAA Bangladesh Chapter signed the donation agreement for the renovation of a Single Unit Student Dormitory.

With newly upgraded facilities, this renovation will help to improve our student's learning environment and overall experience of living in AIT in a more comfortable living space. As a result, AIT students will be able to enjoy better accommodation during their time at AIT.

President Yamamoto expressed his heartfelt gratitude and appreciation to the AITAA Bangladesh Chapter for their kind assistance towards the Institute. This donation is greatly appreciated.

GLOBAL EXPERTS CONVERGE AT DRSD 2023: SHAPING THE FUTURE OF DISASTER RESILIENCE AND SUSTAINABLE DEVELOPMENT IN ASIA PACIFIC AND BEYOND

On December 7-8, 2023, the Asian Institute of Technology (AIT) hosted the 3rd International Symposium on Disaster Resilience and Sustainable Development (DRSD 2023) at its Conference Center in Pathumthani, Thailand. This biannual event, supported by numerous institutional partners, attracted over 220 participants from 25 countries, including experts, practitioners, policymakers, and students from various sectors such as academia, non-governmental organizations, government agencies, multilateral banks, and the private sector.

The symposium aimed to foster regional dialogue and showcase academic research on disaster resilience and sustainable development. The event was inaugurated by AIT President, Prof. Kazuo Yamamoto, and Dr. Indrajit Pal, Chair of the DRSD 2023 Organizing Committee. Prof. Yamamoto highlighted the crucial link between disaster resilience and sustainable development goals, emphasizing AIT's ongoing efforts to promote these objectives. Dr. Pal, also Chair of the Disaster Preparedness, Mitigation, and Management (DPMM) Program, stressed the importance of collaboration for achieving sustainability and resilience.

Keynote addresses were delivered by Dr. Sanjay Srivastava from UN-ESCAP and Dr. Bhichit Rattakul from the Thai Network for Disaster Resilience (TNDR). Over the two days, five international experts spoke on topics including delta resilience, urban flood management, international disaster collaboration, and infrastructure resilience to climate hazards.

The symposium featured four panel discussions on crucial topics: water supply and sanitation during emergencies, infrastructure resilience, disaster and climate resilience in coastal systems, and regional collaboration among Global South countries. Over 150 participants from more than 70 institutions presented their research through 126 oral and 24 poster presentations on themes such as climate change, remote sensing, governance, and ecological systems.

The event concluded with closing remarks from Dr. Roger Levermore, Dean of AIT's School of Management, and Dr. Indrajit Pal, who emphasized the need for continued collaboration to build sustainable and disaster-resilient communities.

https://ait.ac.th/2023/12/global-experts-converge-at-drsd-2023-shaping-the-future-of-disaster-resilience-and-sustainable-development-in-asia-pacific-and-beyond/

Prof. Kazuo Yamamoto, AIT President

Dr. Indrajit Pal, Chair and Assoc. Prof of DPMM Program

Dr. Sanjay Srivastava

Dr. Bhichit Rattakul

ANALYSIS AND FINAL REPORTING FOR THE "PROMOTION OF COMMUNITY RESILIENCE AGAINST PLASTIC POLLUTION AND CLIMATE CHANGE IN THE MEKONG RIVER BASIN"

AIT Research Theme: Food-Energy-Water

AIT Unit: NRM (DDS), GDS (DDS), and EEM (EECC) of SERD; AIT Solutions; Entrepreneurship Center; Geoinformatics Center; AIT EEO

Project Duration: September 2022 to March 2023

Project Sponsor/Client: UNEP and the Government of Japan

Project Partners: Pollution Control Department (PCD), Bangkok Metropolitan Authority (BMA)

Expected Social Impact:

- Improved understanding of the climate-plastic nexus in urban informal settlements.
- Enhanced community resilience to climate change and plastic pollution.

Description:

The project "Promotion of Community Resilience against Plastic Pollution and Climate Change in the Mekong River Basin" aims to address the nexus of plastic pollution and climate change in targeted slum areas of Thailand and Vietnam. Based on the household survey and key informant interviews conducted in 2022, the team worked on quantitative and qualitative analyses of community resilience against interactive impacts of climate change and plastic pollution in urban slums. The data analyses were performed as a collaborative effort among the AIT experts, namely, Takuji W. Tsusaka, Kyoko Kusakabe, and Atitaya Panuvatvanich.

REGIONAL WORKSHOP ON TOOLS AND PROTOCOLS FOR RIVERINE PLASTIC POLLUTION MONITORING

AIT Research Theme: Food-Energy-Water

AIT Unit: NRM (DDS) and FINH (DFAB) of SERD; Geoinformatics Center; AIT EEO; Entrepreneurship Center

Project Duration: August 2023 to March 2024

Project Sponsor/Client: UNEP and the Government of Japan

Project Partners: Mekong River Commission, Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE, Vietnam), International Union for Conservation of Nature (IUCN, Sri Lanka), Ministry of Education, Youth, and Sport (Cambodia), Ministry of Environment (Sri Lanka), Living Indus (Pakistan), Royal Government of Cambodia, UN Resident Coordinator Office (Pakistan), Mahidol University, Bangkok Metropolitan Administration, Pollution Control Department (Thailand)

Expected Social Impact:

Expanded capacity for monitoring upstream plastic pollution.

Description:

The workshop was organized on 16th and 17th October 2023 as the first regional activity under the CounterMEASURE II extension project, formally titled "Promotion of Action Against Marine Plastic Litter in Asia," led by two AIT experts, Takuji W. Tsusaka and Anil Kumar Anal. The workshop was joined by Kittiphon Boonma of the Geoinformatics Center of AIT. This phase of the project aims to promote science-based and evidence-driven action to reduce and prevent the influx of plastic into Asian rivers through the development of roadmaps for plastic pollution monitoring in rivers, and the formulation of bankable project proposals in five project countries, namely, Cambodia, Pakistan, Thailand, Sri Lanka, and Vietnam. The workshop emphasized the technologies and protocols for monitoring and tracking plastic pollution at sources, which were developed during the previous phases of the CounterMEASURE project. In addition, this workshop shed light on the topic of microplastic pollution in food chains and its potential impacts on human health.

RESEARCH PROJECT ON A SYSTEMS ANALYSIS APPROACH TO REDUCE PLASTIC WASTE IN INDONESIAN SOCIETIES (PISCES)

AIT Research Theme: Food-Energy-Water

Project Duration: January 2022 to December 2026

Description:

The project titled A Systems Analysis Approach to Reduce Plastic Waste in Indonesian Societies (PISCES) aims to create 'hope spots' in Indonesia's battle against plastic waste with the help of an international multi-disciplinary team, and has Multiple Work Packages. The aim of the work package for SMARTS@AIT is to estimate economic 'costs' and 'benefits' for municipalities mainly focusing on drainage systems and the impact of plastic debris on their productivity & damage to the engineered infrastructures in cities (e.g. engineered storm water and sewerage drainage systems).

Objectives:

- To identify the chain of actors addressing plastic impacts through alternative instruments viz. regulatory, incentive based, non-economic, etc. including links to social and cultural issues.
- To determine the economic cost burden through valuation of total welfare loss using a production function approach. The team from the center working for this project participated and presented at the multiple events of PISCES with other global and regional partners in Banyuwangi, Indonesia, during 2023.

Weblinks:

- https://www.piscespartnership.org/
- https://www.smartscenter.org/copy- of-research-sponsored-projects-1

STAKEHOLDER CONSULTATION CUM EXPERT REVIEW WORKSHOP UNDER THE PROJECT DEVELOPMENT AND DISSEMINATION OF TECHNICAL GUIDELINES FOR PLASTICS AND PELLETS LEAKAGE PREVENTION FROM FACTORIES AND INFORMAL RECYCLING SECTOR IN THE ASEAN, HANOI

Project Duration: 28 March 2023

Description:

The Waste and Resource Management Cluster (WaRMC) of the AIT RRC.AP organized an In-country Stakeholder Consultation cum Expert Review Workshop on 28 March 2023 in Hanoi. The hybrid workshop aimed at harnessing the experiences, perspectives, roles, and expertise from the formal and the informal recycling center to support the development and dissemination of technical guidelines to prevent or reduce plastics and resin pellets leakage from factories and informal recycling sector in the ASEAN. It was organized to review and receive inputs

from experts and stakeholders for two draft documents developed within the framework of the project: 1) Report on assessment of plastic leakage status in Hanoi city and 2) Technical guidance on preventing leakage of plastic and plastic fragments from factories and informal recycling areas in ASEAN. Key national and regional experts from the relevant government line ministries, city government offices, academia, waste management companies, private consulting firms, civil society organization, recycling facilities and cleaner production centers participated in the workshop.

Clear guidelines and best practices are crucial to minimize plastics and resin pellet pollution and guide prevention, cleanup, and disposal efforts.

Weblink:

http://www.rrcap.ait.ac.th/news/Pages/vol24no1-04.aspx

1) PISCES 2ND ANNUAL MEETING AND CO-DESIGN WORKSHOP, 2) PISCES QUARTERLY MEETING AND WORKSHOP IN BANYUWANGI, INDONESIA

AIT Research Theme: Bio-Circular-Green Economy

Project Duration: 17 May to 9 December 2023

Project Sponsor/Client: PISCES

Description:

Joyashree Roy Joyashree Roy presented the economic costs of action and inaction related to plastic waste and contributed to the development of alternative product concepts on behalf of the SMARTS project team for the PISCES project (Joyashree Roy, Joyee S Chatterjee and Satabdi Datta), in Banyuwangi, Indonesia, 17- 24 May 2023 at the 2nd PISCES annual meeting. The team also conducted stakeholder consultation sessions and participated in sessions of other work packages. Satabdi Datta participated and provided inputs in Co-design workshop organized in Banyuwangi, Indonesia by work

package 6 team of the project in 2023. Joyashree Roy also participated in PISCES Quarterly Meeting and Workshop in Banyuwangi, Indonesia, December 4 - 9 2023.

Weblink:

https://www.piscespartnership.org/2nd-annual-meeting/

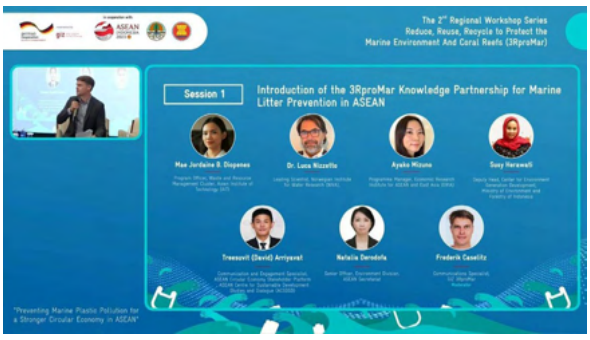
AIT RRC.AP AT THE 2ND REGIONAL WORKSHOP SERIES: REDUCE, REUSE AND RECYCLE TO PROTECT THE MARINE ENVIRONMENT AND CORAL REEFS (3RPROMAR), BALI

Project Duration: 22 May 2023

Description:

The AIT RRC.AP participated in the 2nd Regional Workshop Series: Reduce, Reuse and Recycle to Protect the Marine Environment and Coral Reefs (3RproMar) at Prama Sanur Beach Hotel, Bali, Indonesia on 22 May 2023.

The workshop saw the launch of the Regional Knowledge Partnership between AIT RRC.AP and GIZ, alongside two other partners, the Economic Research Institute for ASEAN and East Asia (ERIA) and Norsk institutt for vannforskning (NIVA). Mae Jordaine B. Diopenes presented the Know Waste Knowledge (KWK) Platform,



AIT RRC.AP's contribution to the project, during Session 1: Introduction of the 3RproMar Knowledge Partnership for Marine Litter Prevention in ASEAN. She noted the current role of AIT RRC.AP in the region in general and highlighted the key features of the platform.

Solomon Huno gave his reflections as part of the panel during Thematic Session 2B: Leveraging Behavioural Change, Communication Strategy to Improve Waste Management and Drive the Circular Economy.

Weblink:

http://www.rrcap.ait.ac.th/news/Pages/vol24no2-01.aspx

Video link:

https://www.youtube.com/watch?v=rlw_18PY5-Q&t=4045s&ab_channel=DitjenPPKL

DEVELOPMENT AND DISSEMINATION OF TECHNICAL GUIDELINES FOR PLASTICS AND PELLETS LEAKAGE PREVENTION FROM FACTORIES AND INFORMAL RECYCLING SECTOR IN THE ASEAN: IN-COUNTRY STAKEHOLDER CONSULTATION CUM EXPERT REVIEW WORKSHOP IN PATTAYA CITY, CHONBURI

Project Duration: 25 July 2023

Description:

The Waste and Resource Management (WaRM) Cluster of the AIT RRC.AP organized an In-country Stakeholder Consultation and Expert Review Workshop in collaboration with the Bureau of Natural Resources and Environment of Pattaya City, and SERD, AIT on 25 July 2023 in Pattaya City. The technical consultation workshop was organized to review and receive inputs from stakeholders, including experts, policy makers, and informal recyclers, to the two draft documents developed by the project: 1) Report on assessment of plastic leakage status in Pattaya City and 2) Technical guidance on preventing the leakage of plastic and plastic fragments from factories and informal recycling areas in Pattaya City.

The workshop was attended by key national and regional experts from academia, government officers from the Bureau of Natural Resources and Environment, Pattaya City, waste recyclers, private consulting firms, and civil society organizations. The development and implementation of guidelines and industry best

practices for plastic and resin pellet leakage prevention is necessary to minimize micro- and macro-plastic losses to the environment and serve as a good reference for developing preventative and remedial measures to prevent, clean up, and dispose of pellets where spillage occurs.

Weblink:

http://www.rrcap.ait.ac.th/news/Pages/vol24no3-11.aspx

DEVELOPMENT AND DISSEMINATION OF TECHNICAL GUIDELINES FOR PLASTICS AND PELLETS LEAKAGE PREVENTION FROM FACTORIES AND INFORMAL RECYCLING SECTOR IN THE ASEAN: IN-COUNTRY STAKEHOLDER CONSULTATION CUM EXPERT REVIEW WORKSHOP IN PATTAYA CITY, CHONBURI

Project Duration: 8 September 2023

Description:

The Waste and Resource Management (WaRM) Cluster of the AIT RRC.AP organized yet another In-country Stakeholder Consultation and Expert Review Workshop in collaboration with the City Environment and Natural Resources Office (CENRO) of the Local Government Unit, Iloilo City on September 8, 2023. The hybrid workshop was organized as part of the activities of the ongoing project which aimed to harness the experiences, perspectives, roles, and expertise of formal and informal recyclers to support the development and dissemination of technical guidelines to prevent or reduce plastic and resin pellet leakage from factories and the informal recycling sector in the ASEAN.

Inputs and reviews were made to the two draft documents developed by the project: 1) Report on assessment of plastic leakage status in Iloilo City and 2) Technical guidance on preventing the leakage of plastic and plastic fragments from factories and informal recycling areas in Iloilo City.

The workshop was attended by relevant city stakeholders from academia, government – technical officers of the CENRO, Barangay Heads, Barangay MRF's representatives, informal waste workers representatives, junkshop owners and consolidators, private consulting firms, and city and regional experts from civil society organizations.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no3-04.aspx

DEVELOPMENT AND DISSEMINATION OF TECHNICAL GUIDELINES FOR PLASTICS AND PELLETS LEAKAGE PREVENTION FROM FACTORIES AND INFORMAL RECYCLING SECTOR IN THE ASEAN: IN-COUNTRY STAKEHOLDER CONSULTATION CUM EXPERT REVIEW WORKSHOP IN MANILA CITY, PHILIPPINES

Project Duration: 12 September 2023

Description:

The Waste and Resource Management (WaRM) Cluster of the AIT RRC.AP organized an In-country Stakeholder Consultation and Expert Review Workshop in collaboration with the Department of Public Services (DPS), Manila City on September 12, 2023, in Manila City.

The hybrid workshop was organized as part of the activities of the ongoing project which aimed to harness the experiences, perspectives, roles, and expertise of formal and informal recyclers to support the development and dissemination of technical guidelines to prevent or reduce plastic and resin pellet leakage from factories and

the informal recycling sector in the ASEAN. It proposed to review and receive inputs from stakeholders, including experts, policy makers and managers, and informal recyclers, to the two draft documents developed by the project: 1) Report on assessment of plastic leakage status in Manila City and 2) Technical guidance on preventing leakage in the City of Manila.

The workshop was attended by key national and regional experts from academia, government - technical officers of the DPS, Barangay Heads, Barangay MRF's representatives, informal waste workers representatives, junkshop owners and consolidators, private consulting firms, and civil society organizations from the city.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no3-03.aspx

CLEAN SEAS FOR HEALTHY FISHERIES: AIT RRC.AP JOINS THE 38TH INTERNATIONAL COASTAL CLEANUP DAY 2023 AT THE BASECO BEACH, MANILA, THE PHILIPPINES

Project Duration: 16 September 2023

Description:

The AIT RRC.AP participated in the **38th International Coastal Cleanup Day 2023 at Baseco Beach, Manila.** As part of its commitment to promoting sound environmental management in the region, the RRCAP participated in the cleanup activity led by the **Department of Public Services** on 16 September 2023. The event was in partnership with the Department of Environment and Natural Resources, Alaska Milk Corporation, Coca-Cola Beverages Philippines Inc., International Container Terminal Services Inc., Ocean Conservancy, Barangay 649 headed by P/B Diana Espinosa and Council, Manila's Department of Engineering and Public Works, Manila Disaster Risk Reduction and Management Office, Manila Traffic and Parking Bureau, City General Services Office, Manila Police District, and volunteers from various non-government agencies, civic groups, private organizations, academe, etc.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no3-02.aspx

THAILAND'S BIO-CIRCULAR-GREEN ECONOMY MODEL: AWARENESS RAISING, CAPACITY BUILDING AND INTERNATIONAL PERSPECTIVES

AIT Research Theme: Bio-Circular-Green Economy

AIT Unit: Belt and Road

Project Duration: 25 July 2022 to 31 August 2023

Project Sponsor/Client: Mahidol University

Project Partners: Mahidol University, The National Research Council of Thailand, United Nation (UN Thailand), NSTDA, Ministry of Foreign Affairs.

Expected Social Impact:

The project is expected to increase the public awareness of Thailand's Bio-Circular-Green Economy Model and enhance the technology, policy and society interface regarding the BCG Model in Thailand and the region.

Description:

This project aims to enhance the public awareness and promote Thailand's Bio-Circular-Green Economy Model in four thematic areas. A series of four seminars were delivered through video conferencing. The seminars covered the four sectors on which the BCG model focuses: (i) The food and agriculture sector; (ii) The health and wellness sector; (iii) The bioenergy, biomaterial and biochemical sector; and (iv) The tourism and creative economy sector. A national conference was held following the final seminar to present the major findings from the four seminars and identify priority actions and opportunities for future application of the BCG model in Thailand and regionally.

SUSTAINABLE DEVELOPMENT OF AGRICULTURE AND LIVESTOCK MANAGEMENT

AIT Unit: Yunus Center

Project Duration: 29 August 2022 to 1 March 2023

Project Sponsors/Clients: Asian Development Bank (ADB)

Expected Social Impact: Better understanding of the sustainability in livestock and agriculture management

Description:

Professional Development Training and Study Visit program on: Sustainable Development of Agriculture and Livestock Management were conducted from 29 August.

There were 12 participants attending this course funded by Nepal Resident Mission, Asian Development Bank. This training and study visit program focused on the challenges facing the management of livestock and agriculture from the large scale down to the small scale. The course aimed to provide knowledge, develop skills

for sustainability in livestock and agriculture management and inculcate the skills needed to formulate the strategies to develop a sustainable economy and benefit the nation and society in general.

TECHNICAL ASSISTANCE AND STRENGTHENING RESEARCH AND INNOVATION PRACTICES FOR WASTE MANAGEMENT ACROSS THE MALDIVES

AIT Research Theme: Waste Management

AIT Unit: Global Water and Sanitation Center

Project Duration: 1 September 2022 to 30 April 2024

Project Sponsor/Client: The World Bank

Project Partners: The World Bank The Maldives MEERY Project ProBlue Trust Funded Waste-to-wealth Program Maldives Institute of Technology (MIT)

Expected Social Impact:

The AIT team delivered tangible outcomes that support waste management projects and government initiatives in the Maldives, focusing on research-driven, long-lasting solutions that promote waste as a resource.

Description:

AIT specifically provides the capacity to work and support the ongoing waste-to-wealth project implemented

through MIT. AIT assisted the MIT in sustaining project deliverables being implemented as part of the MEERY Project for the coming years and facilitating MIT to benefit and promote waste-to-wealth interventions across the Maldives.

The AIT team provided tangible outcomes from activities that contributed to waste management projects and

government initiatives in the Maldives. These efforts were supported and implemented through research and innovation practices, aiming for long-lasting solutions to waste management and promoting waste as a resource across the country.

1. Inform the establishment of a Waste Transformation Research Center (WTRC)
2. Undertake research activities related to waste management for re-use or recycling.
3. Undertake research related to assessment of damage to reefs and the reef ecosystems due to waste disposal at sea
4. Carry out research on product development using collected waste
5. Bring expertise to guide MIT in preparing training materials to operate and maintain currently available and used equipment. Harnessing what already works the following categories:
6. Assist with outlining areas to promote youth entrepreneurship on waste to wealth management
7. Provide tangible outcomes from activities that contributed to waste management projects and government initiatives in the Maldives.

TRUCK MOBILITY DATA ANALYSIS FOR REDUCING CARBON EMISSION

AIT Unit: GWSC

Project Duration: 17 October 2022 to 31 August 2024

Project Sponsors/Clients: Bangchak Corporation Public Company Limited

Project Partner: Apichon Witayangkurn, Sirindhorn International Institute of Technology (SIIT), Pathumthani

Expected Social Impact:

- Reduced carbon emissions
- Pathway to netzero business

Description:

With the advancement in IoT, Big Data, and AI, the synergy among technologies would provide unprecedented potential. The information feeding from truck vehicles provides truck routing information. Unlike personal vehicles, trucks have many restrictions such as operating time, U-turn location, and parking zone. Even different types of trucks have different constraints e.g., gasoline trucks. According to the Thai regulation, GPS tracking devices are mandatory for truck data collection transferring to the Department of Land Transportation. in reducing truck traveling time, avoiding traffic accidents, better utilizing highway/local roads, and ultimately reducing carbon emission. In this work, we propose a multiple-phase project. The objective is to design and build an open AI for Trucking platform. Collect and perform data cleaning of previous gasoline truck information from Bangchak

- Truck mobility data analysis
- Analysis driving behavior and carbon emission
- Develop Hadoop and Big Data Analytic system (platform)
- Develop the truck fleet data acquisition pipeline and mobility data analysis task
- Develop the dashboard and monitoring system

SUPPORT TO THE GLOBAL STRATEGY FOR SCP, THE GO4SDGS, AND THE SEA CIRCULAR IN ASIA

AIT Research Theme: SCP, the GO4SDGS, and the Sea Circular

Project Sponsor/ Client: UNEP

Project Partner: UNEP

Expected Social Impact:

Increased awareness and capacity for promoting Sustainable Consumption and Production (SCP), leading to more environmentally responsible behaviors. Enhanced industry sustainability and youth empowerment, fostering a new generation of leaders committed to sustainable practices and innovation.

Description:

The main objective of this project is to strengthen AIT's support of the 17 SDGs, particularly SDG 12. The

project highlighted the utilization of UNEP's Sustainable Consumption Production Hot Spot Analysis tool and other science driven tools to facilitate the development and execution of SCP strategies and initiatives in Asia

1. Development of a regional Booklet an infographic rich document with a regional assessment of key environmental indicators and hotspots
2. Develop and organize regional workshop with a workshop report
3. Develop and organize two regional roundtables on sustainable lifestyles and Green jobs forYouth Pact with reports
4. Develop and organize two thematic hybrid workshops on SCP in textiles and agri-food sectors with reports
5. A full report/assessment of the overview of the green jobs prospective, green skills gaps and requirements in Thailand through research by an intern.

DEVELOPING AND DELIVERING A CAPACITY BUILDING TRAINING AND STUDY TOUR PROGRAM ON BEHAVIORAL CHANGE IN PLASTICS AND PLASTIC WASTE MANAGEMENT IN ASEAN

AIT Unit: GWSC

Project Duration: 1 December 2023 to 31 December 2024

Project Sponsor/ Client: SEA-MaP Project Management Unit

Project Partner: Regional Resource Center for Asia and the Pacific (RRC.AP)

Expected Social Impact: These activities will emphasize the identification and exploration of applicable and transferable technologies and policies that are pertinent to the ASEAN context

Description:

This project is committed to creating and institutionalizing Platforms for innovation, investment, knowledge sharing, and partnerships across ASEAN to address plastic pollution. These platforms, aiming to bolster sustainability, fostered collaboration with regional private-sector champions and support existing data and research networks. They are designed to promote circular economy solutions and encourage plastic reduction partnerships. Further, these platforms seek to catalyze private sector investment and support. The Platforms provided technical assistance

to plastics innovators, especially focusing on women-owned innovations, social enterprises, and NGOs, to help to turn innovative ideas into proofs of concept, pilots, and bankable business solutions.

1. Conduct a rapid stocktaking of existing plastic waste management related training, knowledge exchange program and the relevant program in ASEAN.
2. Design and develop a training program and study tour program for the SEA-MaP Project.
3. Deliver the training and the study tour in the host country.
4. Summarize the training and study tour and post-event satisfaction survey.

STRENGTHENING PLASTIC POLLUTION MANAGEMENT IN ASIA AND THE PACIFIC - COST OF INACTION

Project Duration: 8 December 2023 to 30 June 2024

Project Sponsor/ Client: UNEP

Project Partner: UNEP, Mekong River Commission

Expected Social Impact: Raised public awareness of plastic waste pollution

Project Description:

The project aims to support the implementation of "Strengthening Plastic Pollution Management in Asia and the Pacific (Mekong River Basin)," funded by the Government of Japan. The objective is to enhance tools

and protocols for the assessment and monitoring of plastic pollution within the Mekong River Basin.

The activities include:

1. Develop a draft plan for the knowledge- sharing event to reduce plastic pollution in the Asia- Pacific region (hybrid format) including a one-day field visit.
2. Organize knowledge-sharing event to reduce plastic pollution in the Mekong and the Pacific region (hybrid format) including a one-day field visit
3. Develop a preparatory report on the cost of inaction for plastic pollution and organize a webinar on the topic.

SHARING ENVIRONMENTAL RESEARCH FOR A GREEN, CIRCULAR, AND INCLUSIVE FUTURE

Project Duration: 13 September, 2023

Project Sponsor/ Client: UN Environment Programme

Project Partner: UN Environment Programme

Project Description:

The "Green Circular and Inclusive Future" workshop, moderated by Sheng Fulai, featured speakers from AIT, UNEP, and partner institutions. Dieter W. Trau, AIT Entrepreneurship Center, welcomed participants, highlighting AIT's entrepreneurial initiatives. Mushtaq Memon, UNEP, thanked AIT for support, emphasizing the importance of human resources. Youngran Hur discussed AIT-UNEP collaborations, focusing on sustainable development goals. Trau presented a green startup toolkit, while Sayaka Ono and Kittipong Boonma addressed plastic pollution in riverine communities. Ekbordin Winijkul discussed microplastic's impacts on

air pollution, and Wenchao Xue highlighted BRI's role in regional collaboration. Lastly, Chen and researchers from Beijing Normal University presented insights into wind energy and low-carbon consumption in China. The event concluded successfully.

OCEAN PLASTIC TURNED INTO AN OPPORTUNITY IN CIRCULAR ECONOMY

AIT Research Theme: Technology, Policy and Society

AIT Unit: EEM / SERD

Project Duration: 1 November 2022 to 31 October 2023

Project Partner: SINTEF Community

Expected Social Impact: The research aims to provide reliable and practical solutions for addressing plastic waste issues, contributing to the reduction of plastic leakage into oceans and promoting sustainable practices in the circular economy.

Description:

Ocean Plastic Turned into an Opportunity in Circular Economy (OPTOCE) is a regional project developed by SINTEF. The OPTOCE project is showcasing a possible solution to stopping the leakage of low-quality plastic waste to our oceans. In Thailand, SINTEF has contributed to the project alongside Siam City Cement (INSEE) Ecocycle. AIT has been involved as a technical consultant,

where its main task is to assist SINTEF with the Project. AIThas to support in preparing pilot demonstration together with SINTEF and INSEE Ecocycle, Support in conducting and reporting the pilot demonstration, literature study on waste treatment options from landfill/ dumpsite mining and contribute to write progress report and final report/article.

ASSESSMENT OF SLCP FROM FOREST FIRE AND OPEN BURNING IN THE LMS TO SUPPORT THE ASEAN HAZE CONTROL

AIT Unit: EEM / SERD

Project Duration: 16 November 2023 to 31 December 2024

Project Sponsor/ Client: UN Environment Programme

Project Partner: Thailand Pollution Control Department

Expected Social Impact:

Strengthen the ASEAN Hazefree Roadmap 2022-2030 and CLEAR Sky Strategy by developing database of air pollution, Greenhouse Gas and Short-Lived Climate Pollutant (SLCP) emission to assess the contribution of open burning and forest fires in Lower Mekong Sub-region (LMS), including Cambodia, Laos, Myanmar, Thailand and Vietnam

Description:

The Roadmap on ASEAN Cooperation towards Transboundary Haze Pollution Control with means of Implementation (ASEAN Hazefree Roadmap) 2022-2030 was adopted in August 2023. However, the final review of the previous roadmap (Haze-Free Roadmap, 2016-2020) identified that under Strategy 8, "Reducing health and environmental risks and protecting global environment" was scored as "Low - Medium", meaning

that the information on the impacts of the haze problem is still lacking. The recommendations include "Introduce a more robust and standardized socio-economic analytical assessment approach for each Roadmap Strategy to include impact, cost-benefit, environmental, health, and social protection platforms" and "Common database on correlation between public health and haze should be established" for the Hazefree Roadmap 2022-2030. Moreover, Thailand has proposed the "CLEAR Sky Strategy" to ASEAN which includes exchanging information and implementation of legislative measures.

DEVELOPMENT AND DISSEMINATION OF TECHNICAL GUIDELINES FOR PLASTICS AND RESIN PELLETS LEAKAGE PREVENTION FROM FACTORIES AND INFORMAL RECYCLING SECTOR I

AIT Research Theme: Technology, Policy and Society

AIT Unit: UIS / SERD

Project Duration: 22 May 2022 to 30 April 2023

Project Sponsor/Client: ERIA through RRC.AP

Project Partner: Regional Resources Centre for Asia and the Pacific (RRC.AP)

Expected Social Impact: Reduce poverty and environment and health protection of the recyclers for better livelihood.

Description:

The project is to contribute to preventing the plastics and resin leakage into marine environments through the promotion of best practices and guidelines at resin producing factories and informal recycling facilities in ASEAN member states.

Output 1: Participation in kickoff cum inception meeting

Output 2: Development of situation assessment report on the status and plastic leakages related to operations of informal recycling actors and plastic industry.

Output 3: Development and or update of context specific draft guidelines/manual and best practices for preventing plastics (by informal recyclers) and pellet losses by factories

Output 4: Submission of final guidelines/manual in English and in local language versions

Output 5: Participation in knowledge dissemination and capacity building workshop

ATMOSPHERIC BROWN CLOUD (ABC)

AIT Unit: RRCAP

Project Duration: 1 July 2023 to 31 August 2025

Project Sponsor/ Client: Stockholm University

Project Partner: Stockholm University

Expected Social Impact:

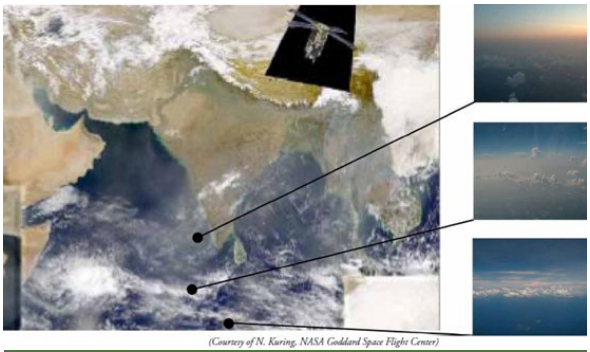
- Increased understanding on regional impacts of transboundary air pollution, particularly aerosols and trace gases (ABCs)
- Increased understanding on interaction of ABCs with climate change factors.
- Expanded capacity of young researchers, students, and policymakers of the South Asian region.

Project Description:

The project involves implementing Atmospheric Brown Cloud (ABC) activities at the Maldives Climate Observatories (MCOH) for the period of 2023 to 2025.

Activities

- Conduct continuous measurements of air pollution, atmospheric components, and meteorological parameters, including operation and maintenance of scientific instruments.
- Analyze atmospheric data combined with, as appropriate, satellite observations, model simulation outputs and other supplementary data, and prepare scientific reports/publications;
- Provide training to scientists, technicians, and young researchers;



(Courtesy of N. Kuring, NASA Goddard Space Flight Center)

AIT DELEGATION AT COP 28: ADVANCING SUSTAINABLE SOLUTIONS AND FORGING KEY PARTNERSHIPS FOR CLIMATE ACTION

28 October 2023 - Representatives from AIT actively participated in COP 28, the 2023 UN Climate Change Conference held in Dubai from November 30 to December 12, 2023. Notable attendees included P. Abdul Salam, Dean of the School of Environment Resources and Development; Guilberto Borongan, Director of Waste and Resource Management Cluster; Ramesh Soysa, Head of the Climate Change Cluster of AIT Regional Resource Centre for Asia and the Pacific (AIT RRC.AP); and Faiz Shah, Director of AIT Yunus Center.

COP 28 witnessed a significant shift towards renewable energy and sustainable practices, with commitments from over 100 countries to triple global Renewable Energy Capacity and double Energy Efficiency by 2030. Additionally, more than 20 countries launched a 'Declaration to Triple Nuclear Energy by 2050.' The outcomes included the first Global Stocktake (GST), outlining a roadmap for achieving net-zero goals by 2050. Key discussions

emphasizedexpediting the adoption of zero- and low-emission technologies, including renewables, nuclear energy, and carbon capture and utilization.

Website:

https://ait.ac.th/2023/12/ait-delegation-at-cop-28-advancing-sustainable-solutions-and-forging-key-partnerships-for-climate-action/

SMARTS CENTER AT SERD/AIT IS HOSTING THE IPCC TG-DATA SIXTH ASSESSMENT REPORT SCENARIOS DATABASE FOR ASIA WEBINAR FOR THOSE WORKING ON AND INTERESTED IN MODELING/SCENARIOS/ DATA.

Date: 20 April 2023

Description: The findings of the AR6 WGIII report were underpinned not just by the scientific literature, but also by quantitative data on emissions, energy, land and sectoral transformation scenarios. Substantial efforts were made to coordinate and collect scenario data, which were submitted by the modeling teams around the world and assessed by lead authors. The AR6 Scenarios Database has been publicly online since the WGIII approval, aiming to transparently support the findings of the report and also provide a useful resource for researchers.

This event has been organized to introduce the database from regional perspectives, and include a hands-on activity/ tutorial such that users can also explore the data online as the AR6 Scenario Explorer.

The webinar included the following presentations:

- Welcome remark.
- Jim Skea (Co-chair WGIII IPCC AR6): opening remark.
- Joyashree Roy (AIT): AR 6-Global, national and regional scenarios and Bottom up assessment of global mitigation.
- Shreya Some (AIT): Use of TG data portal-Specific data download.
- Sebastian Vicuna, David Huard (TG-Data), Alaa Al Khourdajie (WGIII TSU), Adam Milward

(MetadataWorks): Introduction to TG Data, FAIR Principles & general guidelines, DDC overview

- Edward Byers (IIASA): Introduction to AR6 Scenario explorer; Hands-on demonstration to Scenario Explorer.
- Q&A
- Joyashree Roy (AIT): Closing remarks.

Website:

https://ait.ac.th/event/ipcc-tg-data-webinar-on-ar6-scenarios-database-for-asia-hosted-by-smarts-center-at-serd-ait/

STRIDING TOWARDS A SUSTAINABLE FUTURE: AIT'S NET ZERO COMMITMENT

28 August 2023 – In a determined journey towards becoming net zero by 2030, AIT has been unwaveringly advancing various initiatives. Demonstrating its commitment to sustainability, AIT hosted the Sustainability Expo from August 23rd to 25th, 2023.

This expo showcased AIT's steadfast dedication to sustainability and provided a platform for profound dialogues and collaborations on urgent global challenges. It unveiled and explored pathways to achieving the global SDGs while fostering the exchange of knowledge and expertise.

AIT President Kazuo Yamamoto emphasized that all participants have convened at the event with a profound purpose – to propel AIT's evolution into a net-zero carbon botanical garden campus by 2030. He said, "It is a vision that drives us and defines us. We acknowledge it is a bold and ambitious goal, but we are committed and confident of achieving it. As each day unfolds, the consequences of inaction grow graver, imperiling our ecosystems, economies, and the well-being of generations to come."

Yamamoto called upon everyone to embark on this journey toward net zero, embracing it as both a responsibility and an opportunity to foster transformative change collaboratively.

Spanning three days, the AIT Sustainability Expo comprised an Inter-university Research Fair, Inter-university Hackathon, and expert-led Sustainability Talks covering crucial topics such as water conservation, climate change, waste management, air pollution, sustainable buildings, remote sensing, social business, GIS, and sustainable farming.

The Inter-University Research Fair showcased groundbreaking research that seeks to tackle the current pressing challenges. In addition, AIT's research centers, including GWSC, GIC, RRC.AP, Yunus Center, AITE, and AITS, hosted captivating workshops that ranged from sustainable infrastructure and digital technologies to clean environments, Genki Campus initiatives, synergizing SDG 6 with other goals, and the concept of sustainable urban communities.

The "Hacking Zero" Hackathon co-organized by the AIT Entrepreneurship Center (AIT EC), highlighted tech's

power for innovative green solutions through constructive green financing. AIT EC has been collaborating with diverse global partners to host a range of hackathons to address pressing issues and promote sustainability with an inclusive approach, ensuring that no one is left behind. The event facilitated teamwork to brainstorm and create practical, inventive answers for pressing environmental problems.

The expo was a productive networking ground for researchers, businesses, and organizations, facilitating the exchange of knowledge, expertise, and innovative projects contributing to sustainability. Participants seized the opportunity to engage with exhibitors, gain insights into sustainable endeavors, and forge potential collaborations.

The event also offered various engaging activities, with vendors outside the AIT Conference Center presenting fun games, delectable food, clothing, and other products. The event's primary sponsor, Indorama Ventures,

along with co-sponsors including Kazuo Yamamoto, AIT President, Naveed Anwar, CEO of Computers and Structures Inc. Bangkok, and Bhargab Mohan Das, Managing Director and CEO of Christiani & Nielsen Energy Solutions Co., Ltd, played a pivotal role in making this event a reality.

Website:

https://ait.ac.th/2023/08/striding-towards-a-sustainable-future-aits-net-zero-commitment/

IPCC OUTREACH EVENT "CLIMATE CHANGE: RESILIENCE, TRANSFORMATION, AND EQUITY"

AIT Unit: SMARTS Center

Project Duration: 28 April 2023

Description:

The SMARTS Center of AIT hosted the outreach event "Climate Change: Resilience, Transformation, and Equity" with the participation of the IPCC on 28th April 2023 at Bangkok, Thailand. The event disseminates results of the IPCC Sixth Assessment Report including contributions from three Working Groups and a Synthesis Report with topics relevant to Thailand and the region with inputs from the Global South. The latest @IPCC Climate Change Synthesis Report confirms that achieving the 1.5°C limit is still possible with critical action from all sectors and levels such as investing in renewable energy. During IPCC's outreach event in Bangkok organized by @AITasia, Parimita Mohanty from @UNEPROAP highlights how gender equality and inclusivity are essential to a just energy transition. EmPower: Women for Climate-Resilient Societies, a programme jointly implemented by UN Women and UNEP, invests in climate action by and for women. There were four sessions: Session 1: Observed Warming and Future Scenarios: Impacts and Vulnerability, Session 2: Equity and Justice in Transformation, Session 3: People, Policy, and Finance to Deliver the Change; and, Session 4: Communication and Policy. Each session had expert speakers from the IPCC, academia, and other relevant organizations. Each session had expert speakers from the IPCC, academia, and other relevant organizations.

DATTA & ROY (2023). THREATS FROM WEATHER EVENTS, URBANIZATION AND RESILIENCE: A CASE STUDY OF A COASTAL GEOGRAPHY IN INDIA. JOURNAL OF INTEGRATIVE ENVIRONMENTAL SCIENCES.

Project Duration: Published in 2023

Description:

Urbanized coastal geographies with high population density but with low adaptive capacity are more exposed to threats of both rapid and slow onset weather events. Altered coasts along the Bay of Bengal is one such geography where general urbanization trend coupled with new policy driven tourism activity promotion is increasing exposure to frequent and intense disaster events.The current study takes a deeper dive into a 17 km long coastal stretch along Digha-Shankarpur-Mandarmoni in the Bay of Bengal in India. Community consultation using questionnaire-based survey is the primary source of evidence for this study. Community's perception about threats from changing weather events and risks perceived by the coastal community engaged in various livelihood categories have been used to assess their resilience status, awareness of various local adaptive interventions and measures undertaken for local resilience building. With already predominant traditional agricultural and fisheries practices, promotion of tourism is altering the natural ecosystem faster through hard infrastructure expansion. The prevalent threats from weather events in the region lead to the loss of ecosystem services with adverse impacts on the communities whose livelihoods are closely linked to the ecosystem service flows. In this context, how to build resilience is the major research question. Nine impact indicators are used to assess risk using qualitative and quantitative methods. The analysis shows that individual and the community scale resilience increases with livelihood diversification, inclusive

community engagement, polycentric governance structure, maintenance of diversity in ecosystem service flows, access to science based information on threats and opportunities, inclusion of local knowledge available with the communities in various livelihood categories for designing appropriate social protection measures. The study comes up with policy recommendations. It is important to avoid lack of long-term vision in the policies, enhance local institutional capacity through sector specific associations to deal with multiple threats quickly, overcome lack of awareness about preventive and soft adaptation measures, restoration actions, increase interaction and involvement of local stakeholders for local knowledge. Additionally, there is an urgent need to involve multiple even if sometimes conflicting scientific views on solutions vis-à-vis community wisdom for strengthening resilience.

Website:

https://www.tandfonline.com/doi/full/10.1080/1943815X.2023.2218474

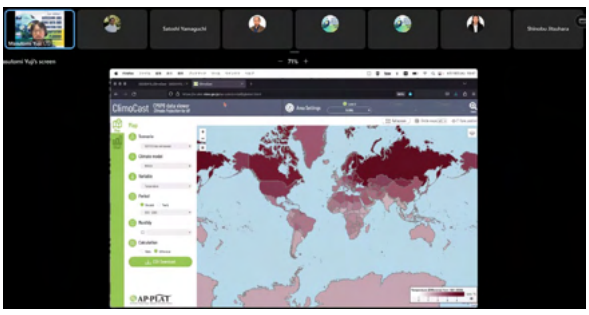
WEBINAR ON ACCESSING AND USING DATA AND INFORMATION FOR ADAPTATION PLANNING, VIRTUAL MEETING

Project Duration: 19 April 2023

Description:

AIT RRC.AP hosted a Webinar titled Accessing and Using Data and Information for Adaptation Planning on 19 April 2023. Around 70 online participants from across the Asia and the Pacific region attended the live webinar which reflected on the essential climate change adaptation tools that are freely available for use in climate scenario planning and strategic decision-making.

The session started with the welcoming remarks of Guilberto Borongan, Director of AIT RRC.AP, followed



by an opening remark by Yuko Yoshida, Acting Director, Climate Change Adaptation Office, Global Environment Bureau, Ministry of the Environment, Japan. Presentations on the three tools were then delivered and all questions related to the topics were carefully answered by the panelists. The three tools presented were as follows:

- Presentation 1: Introduction to FloodS, an online flood simulation tool, by Satoshi Yamaguchi, Chief Researcher, Research & Development Group, Hitachi, Ltd., Japan.
- Presentation 2: Introduction to ClimoCast, an online tool for climate forecasting by Masutomi Yuji, Head of Asia-Pacific Climate Change Adaptation Research Section, Center for Climate Change Adaptation, National Institute for Environmental Studies, Japan.
- Presentation 3: Introduction of S8DS climate downscaling tool by Hnin Lai Win, Programme Offices of the RRC.AP, AIT, Thailand.

Weblink:

http://www.rrcap.ait.ac.th/news/Pages/vol24no1-08.aspx

REGIONAL TRAINING WORKSHOP ON BUILDING CITIES RESILIENCE TO CLIMATE AND DISASTER RISKS, BANGKOK

Project Duration: 8-11 May 2023

Project Sponsor/ Client: Project Partner:

Description:

AIT RRC.AP organized the Regional Training Workshop on Building Cities Resilience to Climate and Disaster Risks on 8 – 11 May 2023 in Sukosol Hotel, Bangkok, Thailand. The face-to-face event was conducted with financial support from the Ministry of Environment, Japan (MoEJ) and in collaboration with the United Nations Office for Disaster Risk Reduction (UNDRR), the United Nations Development Programme (UNDP), the United Nations Office for Project Services (UNOPS), the International Federation of Red Cross and Red Crescent Societies (IFRC), the Local Governments for Sustainability (ICLEI), the United Cities and Local Governments (UCLG), the Asian Disaster Preparedness Center (ADPC), and the Educational Partnerships for Innovation in Communities Network (EPIC-N).

Around 30 participants, including municipality/city officials and academicians from Indonesia, Lao PDR, Nepal, Philippines, Thailand and Vietnam as well as representatives from the partner organisations attended the 4-day training workshop which aimed at enhancing capacities of different stakeholders to develop and implement city resilience action plans.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no1-01.aspx

THE AIT'S INSIGHTS TO STREAMLINING NATURE-BASED SOLUTIONS ENHANCE MITIGATION AND CLIMATE RESILIENCE IN THE ASIA AND THE PACIFIC, BANGKOK

Project Duration: 15 May 2023

Description:

On 15 May 2023 during the seventy-ninth session of the ESCAP at the United Nations Conference Centre in Bangkok, Guilberto Borongan, Director, AIT RRC.AP, participated and presented interventions and insights at a side event titled "Streamlining Nature-based Solutions to Enhance Mitigation and Climate Resilience in the Asia and Pacific." The side event was co-organized by IUCN Asia and the Embassy of Japan with session focused on Nature-based Solutions (NbS) to address environmental and sustainable development challenges in the Asia-Pacific region. It also discussed policy challenges and best practices from the region, and highlighted needs to support the mainstreaming of NbS for mitigation, food security, climate adaptation and resilience, financing for NbS (through the GCF, Adaptation Fund, and GEF), and transparent, inclusive governance.

Borongan discussed academia's contribution to scaling up NbS in the Asia-Pacific region, as well as knowledge gaps and research priorities for AIT to scale up NbS in

the Asia-Pacific region. He described a two-pronged approach that combines research-based data and information generation with knowledge transfer and capacity building on nature-based solutions throughout the region.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no1-01.aspx

THE REGIONAL TRAINING WORKSHOP ON NATIONAL ADAPTATION PLAN DEVELOPMENT PROCESS: STRENGTHENING CAPACITY FOR MULTI-SECTORAL INVOLVEMENT IN THE NAP PROCESS IN ASIA PACIFIC REGION, BANGKOK

Project Duration: 6-8 June 2023

Description:

The AIT RRC.AP conducted the Regional Training Workshop on National Adaptation Plan Development Process: Strengthening Capacity for Multi-sectoral Involvement in the NAP Process in Asia Pacific Region on 6 – 8 June 2023 in Sukosol Hotel, Bangkok, Thailand. The event was organized with financial support from the Ministry of Environment, Japan (MoEJ) and in collaboration with the United Nations Office for Disaster Risk Reduction (UNDRR) and the Asian Disaster Preparedness Center (ADPC). Around 20 participants, representing governments and academic institutions from 10 countries in Asia-Pacific, namely, Indonesia, Kazakhstan, Kyrgyztan, Lao PDR, Malaysia, Maldives, Mongolia, Philippines, Thailand and Vietnam, together with representatives from the partner organisations, took part of the 3-day capacity-building and training program designed to support governments in their national adaptation planning (NAP) and project development processes.

The training program which consisted of eight sessions, each comprising of informative presentations and group exercises, equipped participants with useful insights and practical knowledge encompassing various aspects of the NAP development processes.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no2-04.aspx

TRAINING WORKSHOP ON DEVELOPING CONCEPT NOTES FOR THE GREEN CLIMATE FUND: URBAN CLIMATE RESILIENCE IN INDONESIA, JAKARTA, INDONESIA

Project Duration: 12-16 June 2023

Description:

The Training Workshop on Developing Concept Notes for the Green Climate Fund: Urban Climate Resilience in Indonesia was successfully conducted on 12 – 16 June 2023 in Jakarta, Indonesia. The event was organized by the AIT RRC.AP with financial support from the Ministry of Environment, Japan (MoEJ) and in collaboration with the Fiscal Policy Agency, The Ministry of Finance Indonesia, and the Global Green Growth Institute (GGGI), Indonesia. There were around 35 participants, representing National Designated Authority (NDA), Accredited Entities (AEs), Direct Access Entities (DAEs), and representatives from various Local Government Units (LGU), civil society organizations, and consultancy firms in Jakarta and the nearby provinces in Indonesia, who took part in the national training program designed to empower these stakeholders to develop high-quality concept notes aimed at securing climate finance, with a specific emphasis on the GCF.

The comprehensive 5-day training program which consisted of lectures, group exercises, and presentations, enabled the participants to successfully deliver four concept note project proposals relating to water/flood management, agriculture system, public health system and solid waste management, as a final output of the training workshop.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no2-05.aspx

AIT SUSTAINABILITY EXPO 2023: A SEMINAR BY AIT REGIONAL RESOURCE CENTRE FOR ASIA AND THE PACIFIC, "CLEAN AND SUSTAINABLE ENVIRONMENT IN CHANGING CLIMATE", AIT CONFERENCE CENTER, PATHUM THANI

Project Duration: 24 August 2023

Description:

RRC.AP successfully hosted a seminar focused on the ***"Clean and Sustainable Environment in Changing Climate"*** on the morning of second day, 24th August 2023 of the AIT Sustainability Expo 2023, at the AIT Conference Center, Thailand. The seminar aimed to share knowledge and insights about RRC.AP's work program and activities, particularly in assisting countries across the region in their sustainability efforts. Approximately 100 participants from both on-site and online attended

this meaningful seminar, representing government policymakers, academics, scientists, young researchers, students, and members of community organizations. The diverse range of topics covered in the seminar, including waste and resource management, air pollution, and climate change, showcased the multidisciplinary approach necessary for achieving a sustainable and climate resilient future.

The seminar commenced with the welcome speech by ***Guilberto Borongan***, Director of AIT RRC.AP, followed by ***Yuko Yoshida***, Deputy Director, Climate Change Adaptation Office, Global Environment Bureau, Ministry of the Environment, Japan (MoEJ), who delivered the welcome remarks virtually. Then, the opening speech by ***Roger Levermore***, Vice President for Development, AIT.

Participants in the seminar gained significant insights and networks that may lead the way for new solutions and valuable contributions to both global and regional sustainability goals.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no3-09.aspx

LOCAL TRAINING ON ADAPTATION PLANNING TOOLS AT CITY LEVEL TITLED "INTERNATIONAL FORUM ON CLIMATE CHANGE – NEVER AGAIN YOLANDA: LESSONS TOWARD RESILIENCY", TACLOBAN CITY, THE PHILIPPINES

Project Duration: 7 November 2023

Description:

The AIT RRC.AP Climate Change Cluster played a pivotal role in organizing the "International Forum on Climate Change - Never Again Yolanda: Lessons Toward Resiliency" during the 2nd Regional Disaster Resilience Forum (RDRF) on November 6-7, 2023, at the People's Center in Tacloban City, Philippines. Dr. Guilberto Borongan, Director of AIT RRC.AP, actively participated and represented RRC.AP at The RDRF 2023, which coincided with the 10th anniversary commemoration of Super Typhoon Yolanda. In alignment with this event, RRC.AP conducted the Adaptation Planning Tools and Green Climate Fund Concept Note Development Seminar in collaboration with Eastern Visayas State University (EVSU) and with funding from the MOEJ. The forum successfully convened approximately 70 participants from various stakeholders, including representatives from regional line departments such as DENR, DAR, DILG, DOT, as well as local government units (LGUs), NGOs like

Save the Children, and participants from EVSU. Tacloban City, Philippines, bore the brunt of Typhoon Yolanda (Haiyan) in 2013, and the forum aimed to dissect lessons learned from the disaster and explore effective strategies for enhancing climate resilience across the Philippines.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no4-03.aspx

AIT RRC.AP'S KEY HIGHLIGHTS, NOTABLE EXPERIENCES, AND INSIGHTS FROM CONFERENCE OF THE PARTIES (COP 28), DUBAI, THE UNITED ARAB EMIRATES

Project Duration: 2 - 8 December 2023

Description:

On 2-8 December 2023, Dr. Guilberto Borongan and Dr. Ramesh Soysa of AIT RRC.AP participated in the COP 28 side events and exhibition in Dubai, The United Arab Emirates. AIT RRC.AP actively participated in COP 28 by showcasing and promoting through an exhibition booth, jointly organized with ICIMOD. The exhibition, held from December 4 to 6, 2023, attracted around 200 participants. During this event, introductions were made for both the AIT and RRC.AP, along with showcasing MOEJ Adaptation Tools like FloodS. These tools were effectively introduced, marketed, and demonstrated - which is accessible in AP-PLAT.

Key highlights, notable experiences, and insights from COP 28 encompassed significant declarations and prominent side events tackling vital themes like Climate Change and Health, Climate Change and Cities, and Climate Empowerment and the Gender Action Plan. The COP President emphasized that the outcomes of COP 28 represent a pivotal moment in climate action rather than a conclusion. UN Climate Change Executive Secretary Simon Stiell stated, "While we didn't close the fossil fuel era in Dubai, this outcome signals the beginning of its end."

During the COP closing, key takeaways for the Meeting of the Parties to the Paris Agreement were highlighted.

These include the Work Programme on just transition pathways, the Sharm el-Sheikh mitigation ambition and implementation work programme, and the Glasgow Sharm el-Sheikh work programme on the global goal on adaptation, including the Youth Climate Champion as the UAE Consensus. Loss and damage funding arrangements were discussed, with parties pledging a total of USD 700 million. It was unanimously agreed that Azerbaijan will host COP 29 and Brazil will host COP 30, with dates set for November 11-22, 2024, and November 10-21, 2025, respectively.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no4-01.aspx

HALSNÆS ET AL. (2023). BEYOND SYNERGIES: UNDERSTANDING SDG TRADE-OFFS, EQUITY AND IMPLEMENTATION CHALLENGES OF SECTORAL CLIMATE CHANGE MITIGATION OPTIONS. SUSTAINABILITY SCIENCE.

Project Duration: Published in 2023

Description:

Mitigation actions needed to achieve the ambitions of the Paris agreement to limit global temperature rise to 1.5 °C or below 2 °C have to align with sustainable development. In the near term, this implies a better understanding of context- specific challenges in integrating sustainability with climate policies during the designing, planning, implementation and financing stages. Through a review of selected studies across regions, this paper draws out conclusions focussing on SDG trade-offs, with implications on costs and equity for different development contexts. Studies show that trade-offs depend on how the option is implemented and at what scale; mitigation

options such as afforestation, biomass production and digitalisation are examples of this. Some options could also result in significant adverse environmental impacts as in the case of battery waste and raw material resources for electric vehicle (EV) or air pollution associated with compact urban development. We find the most important factors influencing equity include unequal access (e.g. urban green spaces and public transportation), high costs (e.g. EV) and financial constraints. Major knowledge gaps include (i) limited empirical evidence of SDG-related trade- offs associated with scaling up mitigation options, (ii) limited understanding of the extent to which benefits are experienced by different groups, (iii) an understanding of the extent to which local context was considered when assessing mitigation–SDG interaction, including the engagement of stakeholders and (iv) synergies and trade-offs associated with cross-sectoral policies. The paper recommends ex-post analysis of detailed and place-based cases that document how synergies and trade-offs emerged and how these were addressed.

Weblink:

https://link.springer.com/article/10.1007/s11625-023- 01322-3

ERIK HAITES, PAOLO BERTOLDI, MICHAEL KÖNIG, CHRISTOPHER BATAILLE, FELIX CREUTZIG, DIPAK DASGUPTA, STÉPHANE DE LA RUE DU CAN, SMAIL KHENNAS, YONG-GUN KIM, LARS J. NILSSON, JOYASHREE ROY & AGUS SARI (2023): CONTRIBUTION OF CARBON PRICING TO MEETING A MID- CENTURY NET ZERO TARGET, CLIMATE POLICY

Project Duration: Published in 2023

Description:

A mid-century net zero target creates a challenge for reducing the emissions of emissions-intensive, trade-exposed sectors with high cost mitigation options. These sectors include aluminium, cement, chemicals, iron and steel, lime, pulp and paper and petroleum refining. Available studies agree that decarbonization of these sectors is possible by mid-century if more ambitious policies are implemented soon. Existing carbon pricing policies have had limited impact on the emissions of these sectors because their marginal abatement costs almost always exceed the tax rate or allowance price. But emissions trading systems with free allowance allocations to emissions-intensive, trade-exposed sectors have minimized the adverse economic impacts and associated leakage. Internationally coordinated policies are unlikely, so implementing more ambitious policies creates a risk of leakage. This paper presents policy packages a country can implement to accelerate emission reduction by these sectors with minimal risk of leakage. To comply with international trade law the policy

packages differ for producers whose goods compete with imports in the domestic market and producers whose goods are exported. Carbon pricing is a critical component of each package due its ability to minimize the risk of adverse economic impacts on domestic industry, support innovation and generate revenue. The revenue can be used to assist groups adversely impacted by the domestic price and production changes due to carbon pricing and to build public support for the policies.

Weblink:

https://www.tandfonline.com/doi/full/10.1080/14693062.2023.2170312#:~:te xt=Relying%20solely%20on%20a%20carbon,sectors%20with%20high%20cos t%20mitigation

PROMOTING DISASTER PREPAREDNESS AND RESILIENCE BY CO-DEVELOPING STAKEHOLDER SUPPORT TOOLS FOR MANAGING THE SYSTEMIC RISK OF COMPOUNDING DISASTERS

AIT Unit: Geoinformatics Center

Project Duration: 1 October 2022 to 31 December 2026

Project Sponsor/ Client: European Research Executive Agency (REA)

Expected Social Impact:

The project follows a Responsible Research and Innovation approach as a process where all societal actors (citizens, transport infrastructure managers and operators, public authorities, business and industry, academia, Research and Innovation (R&I), and other relevant stakeholders) work together during the whole R&I process to align R&I outcomes to the values, needs, and expectations of the society, enabling easier access to scientific results, as well as the take-up of gender and ethics in the R&I content and process. The project will create an impact by increasing awareness of the benefits of a gender perspective in research, development, and innovation. From a long-term perspective, the gender mainstreaming approach will contribute to favorable conditions for innovation systems and a more secure and sustainable society.

Description:

The ongoing pandemic and climate crisis have taught us hard lessons about the systemic impact of compounding disasters. Stakeholders in disaster risk management are faced with the challenge to adapt their risk reduction policies and emergency plans but lack the tools to account for the cross-sectoral impacts and dynamic nature of the risks involved. The PARATUS project aims to fill this gap by developing an open-source platform for dynamic risk assessment that allows to analyze and evaluate multi-hazard impact chains, risk reduction measures, and disaster response scenarios in the light of systemic vulnerabilities and uncertainties. These services were co-created within a unique transdisciplinary consortium of research organizations, NGOs, SMEs, first and second responders, and local and regional authorities. To gain a deeper understanding of multi-hazard impact chains, PARATUS will first conduct forensic analysis on historical disaster events, augment historical disaster databases with hazard interactions and sectorial impacts, and exploit remote sensing data with artificial intelligence methods. Building on these insights, PARATUS will then develop new exposure and vulnerability analysis methods that enable systemic risk assessment across sectors (e.g. humanitarian, transportation, communication) and geographic settings (e.g. islands, mountains, megacities). These methods will be used to analyze risk changes across space and time and to develop new scenarios and risk mitigation options together with stakeholders, using innovative serious games and social simulations. The results will be hosted on two stakeholder hubs related to crisis management and humanitarian relief, and provide stakeholders with a range of tools for risk reduction planning in dynamic multi-hazard environments. The service-oriented approach with active stakeholder involvement will maximize uptake and impact of the project, and help to increase European's resilience to compounding disasters.

REGIONAL-CES NATIONAL WORKSHOP IN THAILAND - PROMOTING REGIONAL CIRCULAR AND ECOLOGICAL SPHERE (REGIONAL-CES)

AIT Unit: Disaster Preparedness, Mitigation and Management

Project Duration: 1 October 2022 to 31 March 2023

Project Sponsor/ Client: IGES APN

Project Partner: IGES

Expected Social Impact:

By centering on the Sustainable Development Goals (SDGs), this project aims to provide a clear and actionable vision of integrated approaches that address economic, social, and environmental dimensions in a holistic manner. This initiative aspires to enhance the understanding of interlinkages and synergies at local scales, thereby contributing to more effective and sustainable development outcomes tailored to specific local needs, priorities, and opportunities.

Description:

The Regional-CES National Workshop in Thailand, focused on promoting the Regional Circular and Ecological Sphere (Regional-CES), brought together local, sub-national, and

national-level policymakers, decision-makers, practitioners, and private sector representatives. The workshop familiarized participants with the prospects of the Regional-CES framework in integrating climate change issues with the circular and ecological economy. It also scoped activities and interventions that address these issues simultaneously. Additionally, the workshop aimed to co-develop development plans and priorities that incorporated and adapted key elements of the CES framework to the specific local needs, priorities, and opportunities.

DEVELOPMENT OF E-LEARNING VIDEOS ON CLIMATE ADAPTATION

AIT Research Theme: Climate Change

AIT Unit: Regional Resource Center for Asia and the Pacific

Project Duration: 18 August 2022 to 30 June 2024

Project Sponsor/ Client: Institute for Global Environmental Strategies (IGES)

Project Partner: IGES

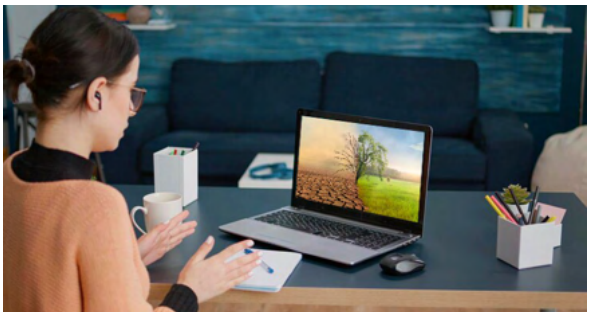
Expected Social Impact:

- Local Adaptation and Resilience through Waste Management and Resource Management strengthened
- Climate Change Adaptation and Disaster Risk Reduction mainstreamed in the SDGs

Description:

Two video development projects:

1. E-learning video on Strengthening Local Adaptation and Resilience through Waste Management and Resource Management
2. E-learning video on Integration of Climate Change Adaptation and Disaster Risk Reduction:



Activities :

1. The video script for the E-learning video on Integration of Climate Change Adaptation and Disaster Risk Reduction has been completed and accorded approval from the Ministry of Environment, Japan
2. The video script for the E-learning video on Integration of Climate Change Adaptation and Disaster Risk Reduction is in the final review process and will be submitted for approval.
3. Video development contractor has been sourced and the contract signing is underway.

INTERNATIONAL CONFERENCE ON CLIMATE CHANGE

AIT Research Theme: Climate Change

AIT Unit: Agricultural Systems & Engineering

Project Duration: 9 November 2022 to 08 November 2024

Project Sponsor/ Client: Sebelas Maret University, Indonesia

Description:

The AIT research project, under the "Climate Change" theme, is hosted by the Agricultural Systems & Engineering unit and spans from 9 November 2022 to 8 November 2024. Sponsored by Sebelas Maret University, Indonesia, the project centers on organizing a conference aimed at accommodating and discussing regional findings related to adaptation and mitigation strategies for climate change. The conference provides a platform for researchers, policymakers, and practitioners from around the world to share insights and develop actionable strategies to address the global challenges posed by climate change. By facilitating dialogue and collaboration, the conference aims to enhance understanding of effective climate change responses, promote the exchange of best practices, and foster international cooperation in implementing sustainable solutions to mitigate the impacts of climate change.

DEVELOPMENT OF UNIQUE CARBON STORAGE CAPACITY OF THE 3R FRESHWATER MANGROVE MUSEUM AT AIT

AIT Unit: Entrepreneurship Center

Project Duration: 15 March 2023 to 15 March 2024

Project Sponsor/ Client: AirTrunk Singapore Holding Pte. Ltd.

Project Partner: Carthago Consultancy International Levant Consultant 360 Engineering & Management Solutions Z-Tech Solutions

Expected Social Impact:

- Improved waste management through 3R (Reduction, Re-use, Recycling) approach
- Enhanced urban food production (agriculture and aquaculture) utilizing waste nutrients for safe product-of-value generation (initially for AIT community, eventually for commercial sale)

Description:

AirTrunk Singapore Holding Pte. Ltd. is funding the project on carbon capturing and green economy to extend the existing AIT Mangrove Museum and test new mangrove, planting and cultivation methods, extending the biodiversity of the museum.

- Enhanced Carbon storage by highest rate C sequestration characteristic of mangrove trees constituting climate change mitigation.

- Dramatic landscape improvement to university campus and other involved urban environments leading to greater
- Expansion of the Freshwater 3R Mangrove Museum based on the novel 3R biotechnology across the AIT campus.
- Undertake a one-year expansion of the Freshwater 3R Mangrove Museum based on the novel 3R biotechnology across the AIT campus
- Undertake a one-year diversification of mangrove trees and associates, introducing new species, thereby enhancing ecological value of the novel freshwater mangrove ecosystem

NATIONAL ADAPTATION PLANNING IN THE ASIA-PACIFIC, AND ACTIVITIES UNDER FLAGSHIP OF ASIA-PACIFIC ADAPTATION NETWORK

AIT Unit: RRC.AP

Project Duration: 1 July 2022 to 31 December 2025

Project Sponsor/ Client: Ministry of the Environment, Government of Japan (MOEJ)

Project Partner: Ministry of the Environment, Government of Japan (MOEJ)

Expected Social Impact:

The project will enhance the knowledge and capacity of stakeholders from the region on climate issues to develop resilient climate plans and actions, thereby continuing to support climate adaptation for the most vulnerable people in the region.

Description:

Contribution by RRC.AP to support National Adaptation Planning in the Asia-Pacific, and activities under flagship of Asia-Pacific Adaptation Network.

i. Capacity building and mentoring of nationally identified Direct Access Entities (DAE), National Designated Authorities (NDA), and project developers to have access funding from the Green Climate Fund (GCF) for climate adaptation projects.

ii. Capacity building of the national and city government officials and planners to strengthen their knowledge and equip them with new tools, methodologies, and guidelines in climate change adaptation and disaster risk reduction, and to support them in building resilient cities through wider city development plans and strategies.

iii. Making the S8 downscaler tool relevant and readily available online for the users and bridging knowledge gaps on climate data and information both at the local and regional level in understanding and predicting climate change and mainstreaming them into adaptation plans.

iv. Introduction of a new tool called Flood to forecast floods to help countries implement an integrated climate-resilient flood risk management approach and improve their existing capacity to understand the potential impacts of climate change on flooding and flood risk management and enhance the resilience of vulnerable communities.

v. Advocate nature-based solutions for climate adaptation in the region to enhance understanding of the application of NbS for climate adaptation, their effectiveness, and financing mechanisms to benefit planners, climate researchers, project developers, and academic personnel. vi.Capacity building of country National Adaptation Plan (NAP) focal, decision-makers responsible for the overall launch and steering of the NAP process, and also Non-Governmental Organizations (NGOs) and stakeholder groups involved in the NAP process from the least developed countries to raise their awareness on the NAP process, challenges and opportunities, identifying institutional and financial needs, and provides specific knowledge, tools, models, and methodology on the NAP development and implementation process.

EXPANSION & INTEGRATION OF DATABASE DEVELOPMENT FOR FLOOD SIMULATIONS IN DECISION SUPPORT SYSTEM IN SINDH FLOOD EMERGENCY REHABILITATION PROJECT

AIT Unit: Artificial Intelligence Technology Center

Project Duration: 6 January 2023 to 31 December 2024

Project Sponsor/ Client: The World Bank

Project Partner: Carthago Consultancy International Levant Consultant 360 Engineering & Management Solutions Z-Tech Solutions

Expected Social Impact:

A making flood management decisions during the planning stage, flood fighting stage and post flood recovery stage, requires comprehensive support in order to properly account for all flood impacts. By using

an enhanced system Sindh Irrigation Department and other related agencies will make better planning and better decision making to mitigate the floods or minimize the impact of floods. In the proposed system a user or decision making authorities the affected areas and possible solutions to manage the disaster at community level to minimize the human and economical losses.

Description:

Flood risk mitigation during real time flood events comprising heavy rain fall under hydrological uncertainty is particularly challenging. Giving this due consideration, the aim is to expand and enhance a Decision Support System for the real time operation of embankments and the lower indus channel downstream. The objective of this project is to enhance preparedness planning, response, and recovery with emphasis on flood monitoring, emergency response, and public involvement.

1. Ground Survey and Hotspot Identification
2. HEC-River Analysis System (RAS) for 2D unsteady river analysis and flood inundation mapping
3. Batch processing all the Flood Models with Scenarios and Hazard Mapping
4. Database Development and Integration with current system
5. Redesign Decision Support System
6. Data Center and Sub Centers Expansion

BANGCHAK REFINERY AND OIL TRADING BUSINESS PATHWAY TO NET ZERO

AIT Unit: SERD/EEM

Project Duration: 29 November 2022 to 31 May 2024

Project Sponsor/ Client: Bangchak Corporation Public Company Limited

Expected Social Impact: Initiate the movement toward Net Zero Emission community.

Description:

The project objective is to provide suggestions for Bangchak Refinery to achieve Carbon Neutral and Net Zero and identify market-scale technology for Carbon Capture and Utilization.

1. Conduct desk study on the policies regarding Carbon Neutral and Net Zero Emission
2. Provide roadmap for Bangkok Refinery to meet Carbon Neutral and Net Zero Emission target

3. Investigate available Carbon Capture and Utilization technologies for refinery
4. Suggest the best Carbon Capture and Utilization technologies for Bangchak refinery

DEVELOPMENT AND INTEGRATION OF KIRTHAR MODEL AND OPERATIONS AND MAINTENANCE OF DATA CENTER UNDER SINDH FLOOD EMERGENCY REHABILITATION (SREFP)

AIT Unit: Artificial Intelligence Technology Center

Project Duration: 1 April 2023 to 31 December 2024

Project Sponsor/ Client: The World Bank

Project Partners: Levant Pakistan 360 Engineering and Management Solutions Carthago Consultancy International Z-Tech Solutions MERIDIAN PF GENERAL TRADING LLC (Hardware)

Expected Social Impact:

Overall, the project's expected social impact on the right bank of the Indus River includes improved disaster management, sustainable resource management, informed development planning, employment opportunities, stakeholder engagement, and technological advancement. These outcomes can contribute to the well-being, resilience, and sustainable development of the local communities in the region.

SINDH FLOOD EMERGENCY REHABILITATION PROJECT

Description:

Design and implement a sophisticated model that integrates data from various sources to provide comprehensive insights and facilitate informed decision-making processes. Coordinate with selected vendors to procure the required hardware components, such as servers, networking equipment, storage systems, and infrastructure devices. Ensure timely delivery and installation of hardware, adhering to project timelines.

Establish seamless integration of diverse data sources, including satellite imagery, weather data, population demographics, and infrastructure information. This integration will enable the Kirthar Model to generate accurate and up-to-date analysis, predictions, and recommendations for improved decision-making.

Set up and maintain a robust data center infrastructure to ensure the secure storage, processing, and accessibility of critical data. This includes implementing industry best practices for data security, backup systems, server maintenance, and disaster recovery procedures to minimize downtime and safeguard information.

Identify and hire skilled personnel with expertise in data center operations and management. Recruit individuals experienced in network management, database management, hydro-informatics and technical support. Build a competent team capable of effectively managing the data center's day-to-day operations.

TECHNOLOGY NEEDS ASSESSMENT PROJECT IV - SUPPORT TO THE COUNTRIES

AIT Unit: Sustainable Energy Transition

Project Duration: 1 May 2023 to 30 June 2024

Project Sponsor/ Client:: UNOPS

Expected Social Impact:

- Access to cleaner, environment-friendly technologies
- Improvement of socio, economic and environmental conditions

Description:

Technology needs assessment (TNA) is grounded in national sustainable development plans, builds national capacity, and facilitates analysis and prioritization of climate technologies to support the implementation of the UNFCCC Paris Agreement. In 2009, the first TNA was initiated and concluded in 2013. In this fourth phase of TNA, AIT is supporting three countries in the Asia Pacific region, namely Maldives, Timor-Leste, and Papua New Guinea.

WATER RESOURCES RISK AND COUNTERMEASURE FOR SUSTAINABLE DEVELOPMENT UNDER CHANGING ENVIRONMENT IN THE PAN QINGHAI TIBETAN PLATEAU

AIT Unit: Centre for Water and Climate Adaptation

Project Duration: 1 August 2023 to 31 December 2026

Project Sponsor/ Client: Alliance of International Science Organizations

Project Partners: Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences (CAS), China Institute of Water Problems, Hydropower and Ecology, National Academy of Sciences of Tajikistan Institute of Water Problems, Hydropower and Ecology National Academy of Sciences of Tajikistan

Institute of Geology, National Academy of Sciences of the Kyrgyz Republic (NAS KR) Department of Space Science, Institute of Space Technology, Islamabad Pakistan

Expected Social Impact:

The project will help in increasing the awareness and knowledge related to climate change impacts and adaptation in the region. It will be useful in improving the water management and support to achieve sustainable development. It is expected to overall reduce the social and economic costs/damages associated with climate change by building social cohesion and resilience among the various actors in the society. The findings of the research will also support the policy and decision-makers in formulating measures to cope with the adverse impacts of climate change and achieving SDGs in the region.

Description:

As the world strives to achieve SDGs, climate change could significantly hinder the progress. Understanding the impacts of climate change on water resources and sustainable development is paramount to devising measures to enhance resiliency. The Pan-Qinghai Tibetan Plateau (PQTP) is one of the hot spots as the observed impacts of climate change in the region is higher than the global average. PQTP is also called the water tower of Asia, as many large rivers, such as Yangtze, Yellow, Mekong, Indus, etc., originate from this region and the region has been considered as an amplifier of global climate change. A population of over one billion people depends on the rivers originating in PQTP for their livelihoods and is vulnerable to any changes in the water resources in the region resulting from changing climate. This study will improve the future projections of regional climate in PQTP by using state-of-the-art climate models and dynamic downscaling techniques. Hydrological modeling and machine learning techniques were applied to assess the impacts on the water resources in the region. The combined impacts of climate change and changes in water resources on SDG6 and SDG13 in the region were be assessed using the indicator/ indices-based approach. Finally, the study will rigorously explore the adaptation options for building resiliency and adaptive capacity of communities.

DEVELOPMENT OF 2 E-LEARNING MATERIALS FOR ADAPTATION

AIT Unit: Regional Resource Center for Asia and the Pacific

Project Duration: 24 October 2023 to 31 May 2024

Project Sponsor/ Client: IGES

Project Partner: Institute for Global Environmental Strategies

Expected Social Impact: Enhance resilience to climate catastrophes. Enhance adaptive measures to combat floods and coastal catastrophes. Enhance resilience in vulnerable communities.

Description:

1. E-Learning materials " Integrating Gender and Indigenous Factors into Locally-Led Adaptation " (tentative name) (about 3 modules, about 2 hours total, in English, narrated by a native speaker, video format, the other materials shall have a similar structure)
2. "Using the FloodS, a Flood Forecasting Tool for Adaptation Planning at the City Level " (tentative name) will be developed and provided as a service. (about 3 modules, about 2 hours total, in English, narrated by a native speaker, video format, the other materials shall have a similar structure)

Expected users of these e-learning materials are government officials (central and local government

line ministries and agencies) in disaster prevention, agriculture, water resources, and transportation infrastructure sectors, mainly in in developing countries in the Asia-Pacific region, and development consultants involved in the ODA project formulation in the same fields in the same region (private companies that conduct projects by AP-PLAT partner organizations). The module should aim to enhance the capacity of GCF certified AEs and National Designated Authorities (NDAs) staff.

SPECIAL SEMINAR ON INNOVATING FOR A GREENER TOMORROW: CARBON MARKETS AND THE PATH TO SUSTAINABILITY

Description:

On 18 September 2023, Nophea Sasaki delivered an insightful seminar titled "Innovating for a Greener Tomorrow: Carbon Markets and the Path to Sustainability" to an audience of graduate students, researchers, and faculty members at Mahidol University in Thailand. The presentation provided a deep dive into the significance of carbon markets as a strategic tool for mitigating climate change impacts. It covered the objectives of the Paris Agreement, analyzed trends in carbon markets, and distinguished between compliance and voluntary markets. The seminar also elucidated the mechanisms of emission trading, including cap-and-trade and baseline-and-credit schemes, bolstered by examples from around the world. Highlighting innovations such as blockchain and carbon capture and storage technologies, Sasaki showcased how these advancements are revolutionizing carbon market efficiencies. Through case studies on Verra and the Thailand Voluntary Emission Reduction Program (T-VER), the seminar emphasized the importance of

global collaboration, technological innovation, and market-based strategies in advancing net-zero emissions and achieving sustainability goals.

REAL-TIME EDGE COMPUTING NETWORK ON HAZE MONITORING AND FOREST FIRE DETECTION

AIT Unit: Internet Education and Research Laboratory

Project Duration: 1 July 2022 to 30 June 2024

Project Sponsor/ Client: TEIN*CC and ThaiREN

Expected Social Impact:

The expected outcome of this proposal, SEA-HAZEMON@TEIN- II, will have a strong impact on environmental research, especially in the field of wildland fire and public health. Besides, the proposed project also aims to build the Future Internet Architecture testbed by developing the Information Centric Networking on a live IoT platform.

Description:

This project is an extension of SEA-HAZEMON@TEIN which is co-funded by EU and NRENs under the 5th call of Asi@Connect research program. The project aims to exploit the use of Information Centric Networking (ICN) on the SEA-HAZEMON air quality monitoring platform. The project also aims to introduce advanced network architecture with IoT applications and edge/fog computing. Research collaborations are to be conducted

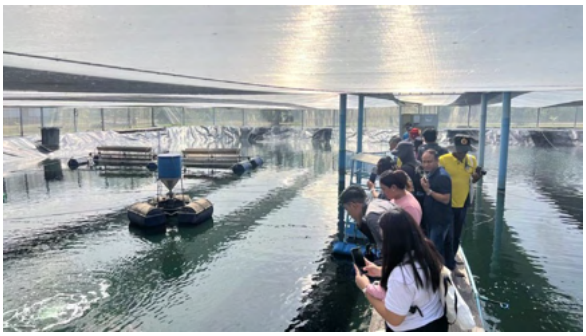
through meetings and joint workshops discussing the research components and roadmap for further collaborations. This is to provide capacity development for TEIN community for the Information Centric Network for IoT which is one of the key areas in Future Internet agenda.

- Activity 1:Workshop on Information Centric Networking on Internet of Things (ICN-IoTs)
- Activity 2: Development of ICN-IoT platform
- Activity 3: System Validation

AIT'S AQUACULTURE TRAINING PROGRAM SUCCESSFULLY CONCLUDES, PAVING THE WAY FOR FUTURE COLLABORATIONS IN THE PHILIPPINES

Description:

The Asian Institute of Technology (AIT) recently concluded its innovative Aquaculture Training Program in November 2023, led by Dr. Salin R. Krishna, which has set a precedent for future collaborations in the Philippines' aquaculture sector. This initiative, designed to impart knowledge on advanced and sustainable aquaculture technologies, successfully brought together professionals across the industry for a week of intensive learning. Through lectures, hands-on sessions, and field visits meticulously curated by AIT's relevant experts, participants delved into modern practices essential for the environmental sustainability and economic viability of aquaculture. Dr. Krishna's leadership in the program not only facilitated a rich exchange of ideas and experiences among attendees but also highlighted AIT's commitment to fostering innovation and sustainable development in aquaculture, paving the way for impactful collaborations in the Philippines and beyond.



MASTERCLASS: CUTTING-EDGE FEED TECHNOLOGIES FOR 21ST CENTURY AQUACULTURE

Description:

AIT successfully organized a comprehensive training program on "Advanced Aquaculture Nutrition and Feed Technology" from April 17th to 28th, 2023. Led by AIT's distinguished aquaculture experts, the event aimed at equipping industry professionals with the latest insights and practical approaches in nutrition and feed technology crucial for the aquaculture sector's sustainability and efficiency. Held at AIT's campus, the program meticulously covered essential topics, including advanced feed formulation techniques, species-specific nutritional requirements, and the adoption of cutting-edge feed technologies. This initiative underscored AIT's dedication to fostering sustainable aquaculture practices through superior education and collaboration, thereby setting new industry standards in nutrition and feed technology.

AIT SUCCESSFULLY HOSTED THE "IFLOCS 2023: MASTERING THE ART OF SUSTAINABLE SHRIMP FARMING" PROGRAM

Description:

A landmark event dedicated to advancing sustainable practices in shrimp aquaculture. Conducted from May 15th to 26th, 2023, this specialized training aimed at enhancing the skills and knowledge of aquaculture professionals in the intricacies of sustainable shrimp farming. Participants were immersed in a deep dive into the latest sustainable methodologies, biosecurity measures, and technological innovations in shrimp farming. The program, which drew experts and participants from across the globe, emphasized eco-friendly practices and innovative technologies that align with global sustainability goals. Through a blend of theoretical sessions and practical workshops, IFLOCS 2023 effectively contributed to shaping a future where shrimp farming thrives as a sustainable and profitable sector, reflecting AIT's commitment to fostering environmental stewardship and economic viability in aquaculture.

GIANT PRAWN CONFERENCE 2023

Description:

Giant Prawn 2023 Conference, organized by AIT in November 2023, significantly underscored the institution's pivotal role in fostering sustainable advancements within the freshwater prawn farming sector. This renowned event gathered eminent aquaculture experts, researchers, and industry practitioners from around the globe, offering a dynamic platform for the exchange of innovative ideas, cutting-edge research findings, and sustainable practices crucial for the industry's advancement. Salin R. Krishna, alongside esteemed AIT faculty, contributed significantly to driving the discourse on adopting eco-friendly approaches and technological innovations aimed at enhancing the environmental sustainability of prawn farming. Through engaging discussions, technical sessions, and collaborative initiatives, the conference highlighted AIT's dedication to leading the aquaculture sector towards a more sustainable and economically viable future. It also spotlighted the critical need for global

cooperation and knowledge sharing in overcoming the challenges facing the aquaculture industry, further establishing AIT as a cornerstone in the pursuit of sustainable aquaculture development.

INTERNATIONAL FISHERIES SYMPOSIUM 2023 CONCLUDES WITH GLOBAL COLLABORATION FOR SUSTAINABLE AQUACULTURE AND FISHERIES

24 November 2023: The 11th International Fisheries Symposium (IFS) 2023, hosted by the Asian Institute of Technology (AIT) in Bangkok, Thailand, has successfully concluded. Organized from 22-24 November 2023 under the theme "Building Sustainable Fisheries and Aquaculture for Future Generations," the symposium witnessed the participation of over 350 delegates from 25 countries, fostering collaboration and knowledge exchange in the realm of responsible fisheries and aquaculture.

The annual conference, organized by the ASEAN-Fisheries Education Network (ASEAN-FEN), brought together 37 universities from the ASEAN region, featuring core members and associates dedicated to fisheries and aquaculture education programs.

H.E Dr. Suwit Khunkitti, AIT's Vice Chair of the Board, emphasized the importance of achieving sustainable development goals, focusing on SDG 14's imperative for conserving and sustainably using oceans. Stressing the relevance of fisheries and aquaculture, he urged that sustainable practices should address the inequality in marine resource distribution and contribute to alleviating poverty in coastal regions. He further underscored the imperative of considering human rights, democracy, and the well-being of those reliant on fisheries and aquaculture as a livelihood opportunity.

Acknowledging the vital significance of responsible fisheries and aquaculture practices, Prof Kazuo Yamamoto, AIT President, stressed that this event served as a key platform for global scientists, practitioners, and policymakers. It facilitates the exploration of cutting-edge research and initiatives contributing to the sustainable management of our oceans and public resources. He further said that the symposium served as a hub for dynamic discussions, idea exchange, and a catalyst for meaningful action.

Dr. Krishna R. Salin, Chair of AITs Aquaculture and Aquatic Resources Management Program and

President of the World Aquaculture Society-Asian Pacific Chapter (WAS-APC) highlighted that the fisheries and aquaculture sector is increasingly becoming crucial for global food security but faces the challenge of meeting the rising demand for food with a growing population. He stressed that the event aims at industry growth, emphasizing the importance of collaboration and knowledge exchange.

Throughout the event, attendees engaged in discussions and explored cutting-edge research on responsible and environmentally sound practices in fisheries and aquaculture. The symposium addressed the challenges and opportunities in maintaining healthy fish stocks, conserving biodiversity, and promoting responsible aquaculture for sustainable livelihoods in coastal communities.

The ten technical sessions, including Aquaculture Biotechnology and Engineering, Aquaculture Nutrition and Physiology, and Fisheries Resources Technology and Management, provided a platform for scholars, experts, and industry professionals to share advancements in the field.

Countries such as Belgium, Cambodia, China, Denmark, India, Indonesia, Japan, Malaysia, Peru, Philippines, Spain, Sri Lanka, Thailand, UK, USA, Vietnam, and others were represented, highlighting the global nature of the discussions. The symposium also featured farm tours on Aquaculture and Fisheries Technology, providing participants with hands-on experiences in the field.

H.E Dr. Suwit Khunkitti

Prof. Kazuo Yamamoto

Dr. Krishna R. Salin

MARINE DEBRIS FIELD SURVEYS AND DATA ANALYSIS IN THAILAND

AIT Research Theme: Technology, Policy and Society

AIT Unit: EEM / SERD

Project Duration: 1 May 2023 to 30 June 2024

Project Sponsor/Client: Commonwealth Scientific and Industrial Research Organisation (CSIRO)

Project Partners: Prince of Songkla University (PSU), Thailand and Burapha University (BUU), Thailand

Expected Social Impact: Reduce the amount of litter entering the oceans.

Description:

Marine debris has been identified as a significant risk to biodiversity, economies, human health, fisheries management, tourism, and invasive species transport. Most marine debris, with estimates up to 80% or more, comes from land-based sources. We are therefore better poised to understand where, why and when plastic is leaked into the environment when we have information from across the landscape.

SUPPORTING DEVELOPMENT OF NATIONAL PLASTIC ACTION PLAN IN MYANMAR

AIT Research Theme: Food-Energy-Water; Technology, Policy and Society

AIT Unit: GIC

Project Duration: 6 June 2022 to 30 June 2023

Project Sponsor/Client: Institute for Global Environmental Strategies (IGES), Japan

Social Impact or Outcomes: Strengthening Capacity for Marine Debris Reduction in ASEAN Region under Japan-ASEAN Integration Fund

Description:

JAIP (Japan-ASEAN Integration Fund) has engaged GIC as a Consultant (Service Provider) for the implementing the JAIF Myanmar Phase II project (Strengthening

Capacity for Marine Debris Reduction in ASEAN Region through Formation of National Action Plans for ASEAN Member States and Integrated Land-to-Sea Policy Approach Phase 2.

SUPPORTING DEVELOPMENT OF NATIONAL PLASTIC ACTION PLAN IN MYANMAR

AIT Research Theme: Food-Energy-Water

AIT Unit: NRM (DDS) and FINH (DFAB) of SERD; AIT EEO

Project Duration: August 2023 to March 2024

Project Partners: Mekong River Commission, Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE, Vietnam), International Union for Conservation of Nature (IUCN, Sri Lanka), Ministry of Education, Youth, and Sport (Cambodia), Ministry of Environment (Sri Lanka), Living Indus (Pakistan), UN Resident Coordinator Office (Pakistan), Mahidol University, Bangkok Metropolitan Administration, Pollution Control Department (Thailand)

Project Sponsors/Clients:

UNEP and the Government of Japan

Social Impact or Outcomes: Strengthening Capacity for Marine Debris Reduction in ASEAN Region under Japan-ASEAN Integration Fund

Description:

The online capacity building session was organized on 13th December 2023 by AIT, led by Takuji W. Tsusaka and Anil Kumar Anal in collaboration with UNEP as part of the CounterMEASURE II extension project, formally titled "Promotion of Action Against Marine Plastic Litter in Asia", which aims to promote science-based and evidence-driven action to reduce and prevent the influx of plastic into Asian rivers through the development of roadmaps for plastic pollution monitoring in rivers, and the formulation of bankable project proposals in five project countries, namely, Cambodia, Pakistan, Thailand, Sri Lanka, and Vietnam. The online training was intended

to provide tips and guidelines to the partners in the five project countries for drafting bankable project proposals to tackle marine plastic pollution.

REDUCE, REUSE, RECYCLE TO PROTECT THE MARINE ENVIRONMENT AND CORAL REEFS (3RPROMAR)

AIT Research Theme: Health and Environment

AIT Unit: Regional Resource Center for Asia and the Pacific

Project Duration: 1 November 2022 to 30 June 2025

Project Sponsor/ Client: The German Agency for International Cooperation or (GIZ)

Project Partner: ASEAN Secretariat, Environmental Division - Deutsche Gesellschaft Internationale Zusammenarbeit (GIZ) GmbH - ERIA - NIVA

Expected Social Impact: Health and Environment

Project Description:

To provide a common platform for information and knowledge sharing for enhanced capacity on information decision making in combating marine litter in the ASEAN.

1. Enhancement of knowledge platform features and knowledge content for strategic focus on Marine Litter

2. Partnership building for effective legitimate sourcing and endorsing of data on marine plastic litter data and knowledge
3. Capacity building of AMS focal points on waste data management
4. Knowledge dissemination activities on marine debris and circular economy

INNOVATIVE SOLUTIONS FOR PLASTIC FREE EUROPEAN RIVERS

AIT Research Theme: Climate change

AIT Unit: Geoinformatics Center

Project Duration: 30 May 2023 to 31 August 2027

Project Sponsors/Clients: European Climate, Infrastructure and Environment Executive Agency

Expected Social Impact: Clean a few European rivers from plastic and provide clean water to the population living along these rivers.

Description:

INSPIRE's main objective is to contribute to the drastic reduction of litter, macro and microplastics in European rivers in a holistic approach, by bringing together 20 technologies and actions for: DETECTION of the pollution present in the river and at the riverbank, COLLECTION of litter and macroplastics at the river bank and litter, macro and microplastics in the river, PREVENTION of litter, macro and microplastics to enter the river by collecting it from its waste stream before it can enter the river and by developing biodegradable

alternatives for currently non-degradable polluting products, to avoid them will further be used and arrive in the river as litter. Six use cases are defined in INSPIRE to install and test the technologies and actions, to model the processes related to the water purification activities, to obtain 7 well defined solutions at detection, collection or prevention level and combinations thereof. The technical feasibility is backboned by a techno-economical analysis with the development of business cases for the solutions, action plans towards upscaling and replication and together with mapping and modeling all elements are brought together to develop a Master Plan for tackling the challenges of the mission and contributing to the objectives of the mission. The INSPIRE project will be very visible due to its well developed dissemination and communication plan and strategy for community engagement. Apart from the general dissemination and communication tools and activities, specific activities will be set up on festivals, promoting 100% biodegradable products as a result of INSPIRE. INSPIRE's consortium is composed of 26 partners with complementary expertise and a good balance of academia, industry, communication specialists and soft skills organizations is obtained, who all together will work towards the target of having a number of successful solutions that can find their way to the market and put INSPIRE on the radar.

INSPIRE
Innovative Solutions for Plastic Free European Rivers

OPEN SEMINAR AT THE UNIVERSITY OF TOKYO

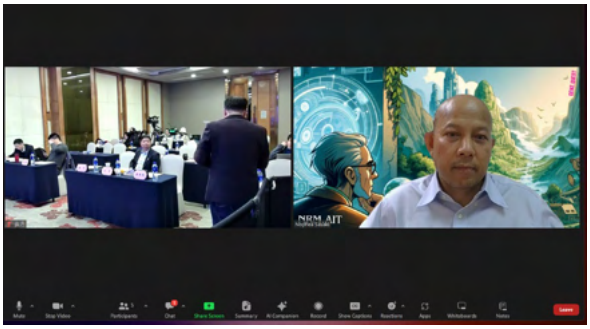
Description:

The Open Seminar at the University of Tokyo on March 3, 2023, presented by Prof. Nophea Sasaki from the Asian Institute of Technology, explored "Baseline Emissions and Emission Reductions in Forestry Projects under a Global Standard." This event highlighted the significant growth of the global carbon market, valued at $899 billion in 2021, and the expected rise in the voluntary carbon market to $17 billion by 2027. The seminar covered the necessity for substantial emission reductions, as emphasized by the IPCC's 6th Assessment Report, which calls for a 43% reduction in greenhouse gases by 2030 from the 2019 baseline. Sasaki discussed various global carbon standards, such as the Verified Carbon Standard and Gold Standard, and detailed the carbon project cycle, including project design, validation, and verification processes. A case study of the Keo Seima REDD+ Project in Cambodia was presented, showcasing the project's approach to calculating baseline emissions, emission reductions, and forest carbon monitoring. The seminar, attended by students, professionals from the private sector, professors, and NGO representatives, underscored the importance of adopting recognized carbon standards and methodologies for global carbon credit sales, emphasizing action effectiveness for emission reduction success.

INTERNATIONAL ACADEMIC CONFERENCE ON CARBON PEAKING AND HIGH QUALITY DEVELOPMENT: THEORIES AND PRACTICES

Description:

At the International Academic Conference on Carbon Peaking and High Quality Development: Theories and Practices, hosted by the School of Economics, Jiangxi University of Finance and Economics (JUFE) in Nanchang, Jiangxi Province, China, Prof. Nophea Sasaki delivered a compelling virtual presentation titled "Towards Net-Zero Emissions on University Campuses: Nature-based and Technology-based Strategies at the Asian Institute of Technology." The presentation emphasized the urgent need for emission reduction strategies in urban settings, particularly on university campuses, to combat the escalating challenges of air pollution, declining green spaces, and ecosystem disruption. Prof. Sasaki outlined the Asian Institute of Technology's comprehensive approach to achieving net-zero emissions by 2030, integrating both technology-based solutions, such as solar energy installations, and nature-based solutions, including improved forest management and biochar applications. Through detailed analysis of baseline emissions, projected emission



reductions, and strategic implementation of carbon sequestration methods, the presentation highlighted AIT's commitment to harmonizing human activities with nature and advancing sustainable urban planning. The session concluded with discussions on the scalability of these strategies to broader urban environments, underscoring the importance of adopting holistic and innovative approaches to achieve carbon neutrality and enhance urban wellness.

ERIA WORKING GROUP MEETING: "NAVIGATING THE COMPLEXITIES OF ENERGY TRANSITIONS IN ASEAN AND EAST ASIA REGION"

Description:

At the ERIA Working Group Meeting in Bangkok on October 18-19, 2023, Prof. Nophea Sasaki delivered an insightful presentation on "Carbon Taxation and Forest Sustainability in ASEAN and East Asia: Challenges and Policy Implications." Highlighting the dependence of ASEAN's population on wood fuel and the forest sector's significant carbon emissions, Prof. Sasaki advocated for carbon taxation as a crucial tool for encouraging sustainable forest management and reducing deforestation and degradation. The talk explored the effectiveness of carbon taxes across various forestry practices, emphasizing their potential to incentivize conservation, enhance carbon stocks, and promote the sustainable management of forests. By addressing the current state of carbon taxes and ETSs in the region, and offering a glimpse into the challenges and policy implications, Prof. Sasaki's pioneering work sets a foundation for leveraging carbon taxation to achieve forest sustainability in ASEAN and East Asia, supporting the region's transition towards sustainable environmental practices amidst urban growth and global climate change challenges.

NRM SEMINAR 'EMPOWERING SMALL-SCALE FARMING FAMILIES: BRIDGING RESEARCH WITH SUSTAINABLE SOLUTIONS'

Description:

On October 16, 2023, Prof. Nophea Sasaki and his NRM colleagues organized in a seminar titled "Empowering Small-Scale Farming Families: Bridging Research with Sustainable Solutions," held at AIT. The seminar aimed at students, professors, and staff, centered on marrying academic research with actionable sustainable agricultural solutions, spotlighting AIT's Natural Resources Management (NRM) program's pioneering research alongside ECHO's on-the-ground efforts in uplifting farming communities globally. Prof. Sasaki elaborated on the pressing challenges posed by the triple planetary crisis—climate change, biodiversity loss, and pollution—and their impacts on agriculture. Through case studies such as Defire, Bamboost, and BiocharPals, the presentation vividly illustrated how technological innovations could significantly contribute to sustainability in farming. The seminar fostered discussions on scalable

solutions and potential collaborative ventures, aiming to enhance the resilience and sustainability of small-scale farming families across Asia and beyond. ECHO was represented by Dr. Abram Bicksler, the President/CEO of ECHO

INTERNATIONAL SEMINAR 'CHANGES TOWARDS LOW CARBON SOCIETY IN ASIA AT CHULALONGKORN UNIVERSITY

Description:

The International Seminar 'Changes towards Low Carbon Society in Asia' held on December 6, 2023, at Chulalongkorn University, showcased Professor Nophea Sasaki's insights on achieving net-zero emissions on university campuses. Focused on the Asian Institute of Technology (AIT), the seminar outlined the necessity of decarbonization, introducing AIT's sustainability plans which aim for net-zero by 2030 through technology-based and nature-based solutions. Participants included a diverse group from the private sector, NGOs, the UN, students, and faculty members, all contributing to discussions on strategies for reducing carbon emissions. The seminar emphasized the importance of integrating academic and research activities with sustainability, highlighting initiatives like botanical gardens and solar energy installations as part of AIT's journey towards a carbon-neutral future.

Nophea Sasaki presenting his research to the audience.

BRIDGING INNOVATIONS: EXPLORING COLLABORATIVE OPPORTUNITIES BETWEEN KIT AND NRM

Description:

At a seminar held on December 21, 2023, Prof. Nophea Sasaki engaged with students, professors of AIT, staff, and the Vice President of Kirirom Institute of Technology (KIT) to discuss "Recent Research by NRM Program: Bridging Technology with Sustainability." The event, focusing on collaborative opportunities between KIT and AIT's NRM program, highlighted groundbreaking work at the intersection of technology and sustainability. Prof. Sasaki shared insights into NRM's significant achievements and rankings, stressing the urgency of addressing the triple planetary crisis through innovative solutions. The seminar showcased select projects from NRM, emphasizing improved forest management, biochar utilization, and initiatives towards achieving net-zero emissions on the AIT campus. Highlighted case studies, including ParkPals, Defire, Bamboost, and KaseChar, illustrated the practical applications of technology in enhancing sustainability. The discussion ventured into potential collaborations for tech development and expansion, aiming to leverage KIT's technological prowess alongside NRM's sustainability expertise. This seminar underscored the vital role of academic and research collaborations in advancing global environmental stewardship and technological innovation for a sustainable future. KIT or the Kirirom Institute of Technology was represented by Dr. Masamu Kamaga, Vice President for Global Engagement, KIT.

Masamu Kamaga, Vice President of KIT and Karma Rana, Institute Secretary of AIT

Questions and discussions among participants and speakers

INTERNATIONAL DAY OF FORESTS

Description:

The Natural Resources Management academic program (NRM) at the AIT's Entrepreneurship Center hosted a highly successful Forest Video Contest in celebration of the International Day of Forests on March 21, 2023. The event, which also featured an online component, was aimed at fostering greater awareness of the crucial roles that forests play in supporting the livelihoods of over 2 billion people and maintaining healthy ecosystem functions.

The contest opened on March 1, 2023, and attracted a multitude of entries by the closing date on March 14. Participants were tasked with creating videos that showcased their creativity, originality, and deep understanding of forest ecosystems. The content was expected to reflect thoughtful consideration of the topic, incorporating personal experiences and insights. All entries were adjudicated by a panel of NRM faculty members and external experts, focusing on creativity, originality, message content, and story flow.

Winners were announced on March 17, 2023, through NRM's website and Facebook page, as well as via direct email notifications. The competition featured a range of prizes, with the first prize winner receiving 3000 B and a Certificate of Recognition. Second and third places were awarded 2000 B and 1000 B respectively, along with certificates. Additionally, a Special Award and certificates of participation were given to other noteworthy entries.

The contest also included a People's Choice Award, which engaged the public through voting on Facebook, allowing broader interaction and engagement with the themes of forest conservation.

The Forest Video Contest effectively heightened awareness about the importance of forests, engaging an enthusiastic community of students who shared powerful messages about the importance of healthy forests for a sustainable future.

Weblink:

https://dds.ait.ac.th/international-day-of-forests-2023/

ASSESSMENT OF NATURAL RESOURCES, LAND DEGRADATION, BIODIVERSITY AND CLIMATE CHANGE IMPACTS USING GEOSPATIAL TECHNOLOGIES AND BUILDING CAPACITIES

AIT Research Theme: Natural Resources

AIT Unit: Geoinformatics Center

Project Duration: 3 August 2023 to 30 November 2024

Project Sponsor/ Client: Food and Agriculture Organization of the United Nations (FAO)

Expected Social Impact:

The project will estimate the rangelands, water resources, disaster-prone areas etc., which will help in improving livelihood and food security.

Description:

Combating land degradation and biodiversity loss by promoting sustainable rangeland management and biodiversity conservation in Afghanistan Project is a five-year intervention under the sponsorship of the Food and Agriculture Organization of the United Nations (FAO) and funded through the Global Environment Facility (GEF). This project aims to strengthen local stakeholders and communities capacity to address the environmental problems by promoting sustainable rangeland management and biodiversity conservation in these vulnerable landscapes of eastern Afghanistan. The project was launched in April 2021 and is expected to be completed by March 2026. The project has three major components:

i. Strengthening capacity of national, provincial, and local stakeholders for CBNRM and integrated landscape planning and management;

ii. Integrated management and restoration of degraded landscapes for biodiversity conservation and sustainable/regenerative rangeland management;

iii. Systematic creation and sharing of knowledge, project coordination, monitoring and evaluation (M&E), and institutional capacity development.

Activities:

- Compile the baseline data for analysis
- Conduct Inception workshop and finalize baseline for indicator-based assessment of natural
- resources, land degradation, and biodiversity (Online)
- Literature review and finalized technical approach for compilation of indicators and develop a calculation routine for the compilation of indicators
- Compile and process data for indicator-based assessments
- Conduct training and capacity-building activities
- Prepare a natural resources and biodiversity atlas

ESTABLISHING A KNOWLEDGE HUB AND BUILDING CAPACITY ON URBAN ECOSYSTEM-BASED ADAPTATION (EBA) IN LAO PDR

AIT Research Theme: Knowledge Hub

Project Duration: 11 September 2023 to 20 May 2025

Project Sponsor/ Client: Ministry of Natural Resources and Environment, Lao PDR

Project Partner: National University of Laos

Expected Social Impact: increase awareness on EbA

Description:

To support the National University of Laos to develop their capacity in the areas of curriculum development; Joint research on EBA; support to design and validate permeable paving, and Production of some communication/knowledge products/materials.

Activity

- Preparation of EbA curriculum integrating engineering and ecosystem-based solutions targeting the graduate students
- Conduct joint research on relevant topics on EbA including Ecosystem Services, Forest restoration in Wetland, Hydrological Modelling, Drought and Soil Erosion
- Produce joint knowledge products on urban EbA
- Design and demonstrate permeable pavement solutions

TEERAPAT SANGUANKOTCHAKORN APPOINTED AS BOARD OF GOVERNORS FOR THE THIRD TERM AT THAI PUBLIC BROADCASTING SERVICE

Description:

Teerapat Sanguankotchakorn, a faculty member at Telecommunications Academic Program, ICT Department, School of Engineering and Technology, has been selected by the searching committee consisting of 4 Permanent Secretaries from the Ministry of Education, Ministry of Finance, Ministry of Culture and Office of the Permanent Secretary, Prime Minister Office and 11 representatives from large media organizations in Thailand to be a Board of Governors (for the 3rd term) of Thai Public Broadcasting Service (Thai PBS), the only one public broadcaster in Thailand and South-East Asia.

His appointment was approved by the Prime Minister of Thailand and was announced in the Royal Thai Gazette on February 1st, 2023. His role as a Board of Governors is to oversee and direct the Thai PBS, with an operating budget of THB 2 billion annually, to serve Thai society in terms of news and programme content on all platforms, namely Digital Terrestrial Broadcasting Network, Online as well as OTT.

NERPS CONFERENCE 2023 – EXPERTS DISCUSS ISSUES RELATED TO PEACE AND SUSTAINABILITY

Description:

The NERPS Conference 2023 brought together experts and stakeholders from over 20 countries to deliberate on the interconnected issues of peace and sustainability. Hosted by Hiroshima University and AIT, the conference aimed to foster transdisciplinary dialogue and collaboration towards achieving the SDGs. Keynote speakers, including H.E. Suwit Khunkitti and Armida Salsiah Alisjahbana, emphasized the importance of addressing global challenges through open-mindedness and diverse perspectives. With 187 participants from 69 universities across 24 countries, the conference facilitated meaningful discussions and connections to advance

towards peaceful and sustainable societies. Supported by various sponsors and partners, including Columbia University and the Embassy of Japan in Thailand, the conference underscored the significance of international cooperation in addressing complex global issues.

Read more:

https://ait.ac.th/2023/03/nerps-conference-2023-experts-discuss-issues-related-to-peace-and-sustainability/

APPOINTMENT OF PROFESSOR PAULA BANERJEE AS THE IDRC ENDOWED RESEARCH CHAIR ON GENDER AND FORCED DISPLACEMENT

26 January 2023 - Banerjee, who has a long research experience and publication record on forced migration and gender in both South And Southeast Asia, will start her role officially as the new IDRC Chair in April 2023. She will also be the founding Director of the new Center on Gender and Forced Displacement hosted by GDS, AIT.

Read more:

https://ait.ac.th/2023/01/appointment-of-professor-paula-banerjee-as-the-idrc-endowed-research-chair-on-gender-and-forced-displacement/

AIT- HIROSHIMA UNIVERSITY 2023 INTERNATIONAL CONFERENCE ON PEACE AND SUSTAINABILITY

AIT Research Theme: Climate change, Technology, Policy and Society

AIT Unit: Office of President

Project Duration: 1 August 2022 to 30 March 2023

Project Sponsor/ Client:

Project Partner: Hiroshima University, Japan

Expected Social Impact: Public discourse and awareness raising

- Network building with stakeholders
- Enhancing policy connections in this areas with scholars

Description:

The Network for Education and Research on Peace and Sustainability (NERPS) at Hiroshima University and the Asian Institute of Technology (AIT) will jointly host the NERPS Conference 2023 â€" the second edition of the Hiroshima International Conference on Peace and Sustainability from February 28 to March 3, 2023, in Thailand.

The conceptual and empirical linkages between peace and sustainability are widely recognized in academic and policy circles. The adoption of the 2030 Agenda for Sustainable Development confirms this recognition. However, much of the initiatives on peace and sustainability operate in silos, undermining the positive and mutually-reinforcing relationship between them. An enhanced integration of peace and sustainability component is imperative for addressing complex challenges that come with global transformations that are manifested environmentally, socially, politically, and economically across levels. It is, therefore, crucial to identify the pathways that enhance the peace-promoting potential of sustainability and the sustainability-promoting potential of peace. The theme of this conference will focus on various pathways that bridge peace promotion and sustainable development.

FIDIC COURSE

AIT Research Theme: Infrastructure

AIT Unit: AIT Extension

Project Duration: 17 September 2022 to 30 April 2023

Project Sponsor/ Client: China State Construction Engineering (Thailand) Company Limited

Expected Social Impact: This will foster a strong cooperation between the Government of Thailand and China State Construction Engineering (Thailand) Company Limited in the field of developing infrastructure works for the benefits of the people of Thailand.

Description:

Executive FIDIC Course The main activity is to impart professional training to 15 construction engineers from China State Construction Engineering (Thailand) Company Limited on FIDIC. The training will be for five with a duration of five hours per day, a total of twenty five contact hours.

SUPPORT FOR SOCIAL RESEARCH CAPACITY IN MYANMAR

AIT Research Theme: Technology, Policy and Society

AIT Unit: Gender and Development Studies, SERD

Project Duration: 15 December 2022 to 31 December 2024

Project Sponsor/Client: The SecDev Foundation, Canada

Project Partner: The SecDev Foundation

Expected Social Impact: Social research capacity in Myanmar will be strengthened.

Description:

The objectives of this project designed to enhance the research capabilities within Myanmar. Specifically, the initiative aims to support the coordination of SecDev's overarching project that focuses on building research capacity in the region. This will be achieved through the allocation of financial resources to fund a series of smaller, targeted research projects. These projects will be led by Burmese researchers, underscoring a commitment to nurturing local expertise and leadership in the academic field. By investing in these local researchers, the project not only aims to bolster individual and team research skills but also intends to foster a sustainable, self-sufficient research environment that can contribute to broader academic and developmental goals in Myanmar.

GOVERNANCE AND ANTI-CORRUPTION: THE METHOD AND TOOLS BEHIND AN EFFECTIVE CORRUPTION-ERADICATION STRATEGY (BATCH 1&2)

AIT Research Theme: Technology, Policy and Society

AIT Unit: AIT Extension

Project Duration: 27 February 2023 to 30 June 2024

Project Partner: CIAA, Nepal

Expected Social Impact: Enhance skills and capabilities of the CIAA officers on practical approaches and methods to implement anti-corruption strategies to help create a well-disciplined and uncorrupted culture in the organizations.

Description:

The project offers a training course tailored to address corruption within public organizations. The course is designed to enhance the understanding and implementation of anti-corruption strategies in developing countries. Participants are expected to gain practical knowledge on various anti-corruption methods, such as preventive measures, and learn about successful practices observed in Thailand.

TRAINING PROGRAM ON GEOSPATIAL TECHNOLOGIES AND DATA ANALYTICS FOR SUSTAINABLE DEVELOPMENT OF URBAN AREAS IN BELT AND ROAD REGION

AIT Research Theme: Technology, Policy and Society

AIT Unit: SET/RSGIS

Project Duration: 1 August 2023 to 31 December 2025

Project Partners: University of Chinese Academy of Sciences, China Visayas State University, Philippines Department of Agricultural Land Management, Ministry of Agriculture and Forestry, Lao PDR

Expected Social Impact:

- Competence development: the participants will develop fundamental to intermediate level understanding of traditional and recent advances in geospatial technologies.
- The participants will approach a spatial related problem with confidence, knowledge, and skill.
- Further, the training program will definitely extend ANSO's world influence.

Description:

Over the past few decades, and particularly in the last one, geospatial technologies have evolved significantly. As the innovations and advancement of technologies improve and digital devices become more affordable, there is also an explosion of huge amounts of archived and real-time geospatial data. This data is gathered through multitudinous sources viz., satellites, sensor networks, Internet of Things systems, and the hyper-connectivity of our society. It is diversified, containing rich information across different geographic scales and resolutions. However, a massive challenge also exists on how this data has been exploited and explored to understand and solve problems to achieve the sustainable development goals (SDGs).

With global unprecedented increasing trends of urbanization across the world in developed, developing, and underdeveloped countries, the population is aggregating in urban areas. According to the United Nations (UN) statistics, in the 1950s only 30% of the world's population lived in urban areas, which has increased to 55% in 2018, and it is expected that by 2050, every two out of three people are likely to live in urban areas.

The major goal of this training is to work together to strengthen geospatial skillset at all levels - local, national, regional, and global and to fully realize the potential of geospatial knowledge services by developing novel, practical, and scalable solutions to problems related to achieving selected SDGs related to urban studies and applications. It will expand the opportunities available to the participants, assist them in developing their skills in geospatial technologies, enable them to use these toolsets for achieving SDGs, and advance the process of global economic integration.

PROMOTING TECHNOLOGY INNOVATION IN CLIMATE CHANGE RESILIENCE

AIT Research Theme: Climate Change; Technology, Policy and Society

AIT Unit: Office of the President

Project Duration: 1 September 2022 to 15 November 2023 (440 days)

Project Sponsor/Client: Oak Foundation Ltd.

Expected Social Impact: Enhance skills and capabilities of the CIAA officers on practical approaches and methods to implement anti-corruption strategies to help create a well-disciplined and uncorrupted culture in the organizations.

Description:

Organizing a two-part conference focusing on problem identification and solution development for disadvantaged communities.

CONSTRUCTION CONTRACT MANAGEMENT IN PRACTICE & STANDARD TURNKEY / EPC CONTRACTS FROM 28 OCTOBER TO 28 NOVEMBER, 2023

AIT Research Theme: Infrastructure

AIT Unit: AIT Extension

Project Duration: 31 October 2023 to 30 June 2024

Project Sponsor/Client: Advertised Course (Thailand)

Expected Social Impact: : Improving job site efficiency, reducing project delays and cost overruns, benefiting construction companies and local communities through timely and cost-effective infrastructure development.

Description:

Participants engage in project scheduling, cost estimation, risk management, site supervision, budget planning, subcontractor coordination, and safety compliance.

AIT DELEGATES MADE A COURTESY VISIT TO H.E.ALI AL-TAMIMI, AMBASSADOR OF THE STATE OF QATAR TO THAILAND

12 January 2023 - H.E. Dr. Suwit Khunkitti Vice Chairman, AIT Board of Trustees and AIT President Prof. Kazuo Yamamoto made a courtesy visit to H.E Ahmed Ali Al-Tamimi, Ambassador Extraordinary and Plenipotentiary of the State of Qatar to the Kingdom of Thailand at Embassy of the State of Qatar.

H.E. Dr. Suwit Khunkitti thanked the Ambassador for the warm hospitality accorded to the AIT delegation and for the fruitful deliberations on possible collaborations that will establish a range of initiatives between AIT and the Government of the State of Qatar. AIT being a neutral platform in the Asian region could be a conduit for Qatar to use to further its outreach and presence in the Asia Pacific region.

AIT President Prof. Yamamoto conveyed his thanks to the Ambassador for inviting AIT to submit a concept note on the possible areas of collaboration with the State of Qatar which the Ambassador has offered to help facilitate and transmit to the concerned authorities in Qatar for their consideration.

Also attending the meeting were Mr. Sanjeev Jayasinghe, Executive Director, Office of Advancement & Alumni Affairs, Mr. Karma Rana, Institute Secretary and Ms. Sirikate Owasit, Senior Advancement Officer, Office of Advancement & Alumni Affairs.

AIT EXPLORES COLLABORATIVE OPPORTUNITIES WITH ASIAN DEVELOPMENT BANK TO DRIVE REGIONAL SUSTAINABLE DEVELOPMENT

22 May 2023 - The President of the Asian Institute of Technology (AIT), Prof. Kazuo Yamamoto, paid a courtesy visit to Asian Development Bank (ADB) President Masatsugu Asakawa in Manila, Philippines, on 22 May 2023. Accompanied by Prof. Shobhakar Dhakal, Vice President for Academic Affairs at AIT; Prof. P. Abdul Salam, Dean of the School of Environment, Resources and Development, and Dr. Chutiporn Anutariya, Associate Dean of the School of Engineering and Technology, President Prof. Yamamoto provided an update on AIT's impact in the region and the ongoing activities for the region's development. The objective of the visit was to explore areas of mutual interest and explore opportunities for collaboration between the two institutions.

In addition to a courtesy visit to ADB President, the AIT team, led by Vice President Prof. Dhakal, engaged in a series of meetings and discussions with other key members of ADB's Senior Management Team. The deliberations focused on how ADB and AIT can work together to enhance regional capacity in areas of climate change, energy transition, water, social development, and urban development. The aim was to explore opportunities for AIT's complementary role and collaboration in various sectors.

AIT team met Mr. Haruto Takimura, Chief Advisor to the President; Mr. Woochong Um, Managing Director General

from the Office of the President; Mr. Kenichi Yokoyama, Director General of South Asia and Mr. Norio Saito, Director, Urban Development and Water Division of the South Asia Department. Additionally, discussions were held with Mr. Ramesh Subramaniam, Director General and Chief- Designate Sectors Group; Mr. Toru Kubo, Senior Director-Designate of Climate Change, Resilience and Environment and Ms. Noelle O'Brien, Chief of Climate Change and Disaster Risk Management Thematic Group Concurrently Director, Climate change and Disaster Risk Management Division.

AIT Team engaged in productive discussion with Ms. Ayako Inagaki, Director, Human and Social Development Division; Ms. Neeta Pokhrel, Chief of Water Sector Group; Mr. Priyantha Wijayatunga, Chief of Energy Sector Group; Mr. Manoj Sharma Chief of Urban Sector Group, Urban SG, Sector Advisory Service Cluster, from the Sustainable Development and Climate change Department. The team also met with Mr. Alessio Giardino, Senior Water Specialist (Climate Change), Water Sector Group; Mr. Hong So Lee, Senior Urban Specialist (Smart Cities), Urban Sector Group; Ms. Luxmi Sharma, Senior Urban Development Specialist of Urban Development and Water Division of the South Asia Department and Ms. Architrandi Priambodo, Senior Energy Specialist, Energy Division; and Ms. Emma M. Veve, Senior Advisor, Office of the Director General of the Southeast Asia Department.

The meetings with ADB officials highlighted the significance of AIT's collaboration with ADB, particularly through the ADB-Japan Scholarship Program (JSP).

The AIT team interacted and shared experiences of the ADB-Japan scholarship program with Mr. Hiroki Kasahara, Principal Financing Partnership Specialist of the Partner Funds Division, Mr. Sho Tabata, Financing Partnership Specialist of the Partner Funds Division, and other members of the fund providing ADB-Japan scholarship. AIT expressed gratitude for the collaboration and highlighted the impressive impacts of the ADB-Japan scholarship program in the region through AIT. The AIT team also visited SDCC/SDPF's Photo Exhibit for the JFPR History Book- Two Decades of Japan Fund for Poverty Reduction (JFPR).

The visit underscored the immense potential for partnership and collaboration between ADB and AIT in promoting regional capacity building and addressing the pressing challenges faced by Asian countries. By harnessing their synergies, both institutions can make a lasting impact in driving sustainable development in the region.

AIT AND APN FOSTER REGIONAL COOPERATION AND CAPACITY BUILDING FOR SUSTAINABLE DEVELOPMENT IN SOUTHEAST ASIA

From 22 to 26 May 2023, the Asian Institute of Technology (AIT) and the Asia-Pacific Network for Global Change Research (APN) co-hosted a series of pivotal events aimed at enhancing regional cooperation, capacity building, and knowledge exchange. These events, held at AIT's main campus in Bangkok, Thailand, included the 13th Southeast Asia Subregional Committee (SEA-SRC) Meeting, Proposal Development Training Workshop (PDTW), Early-Career Professional Networking Session, and Water Security Assessment Tool (WATSAT) Training Workshop.

The events commenced with opening remarks from distinguished speakers such as Prof. Dieter Trau, Dean of AIT's School of Engineering and Technology, Dr. Monthip Sriratana, APN National Focal Point for Thailand, and Dr. Linda Anne Stevenson from the APN Secretariat. They emphasized the significance of these events in fostering collaboration to address global change and sustainability challenges.

A keynote address by Prof. Sangam Shrestha, Professor of Water Engineering and Management at AIT, focused on proposal development and project implementation, setting the stage for an interactive panel discussion. AIT faculty

members highlighted the importance of collaborative research, interdisciplinarity, and the engagement of early-career professionals.

The PDTW, a flagship event, spanned two and a half days and aimed to equip early-career professionals from Southeast Asia with the skills to develop competitive project proposals for APN funding. This year's workshop concentrated on "Water security: improving knowledge systems, governance, and regional cooperation," involving

active participation from APN members, early-career professionals, and AIT experts.

Concurrent sessions included the Early-Career Professional Networking Session and the 13th SEA-SRC Meeting, fostering inclusive discussions and interactions. The networking session led by Dr. Saurav KC, introduced the Asia-Pacific Network of Early Career Professionals (APN-ECAP), a platform for early-career visibility in global change and sustainability issues.

The event concluded with the WATSAT Training Workshop, aimed at enhancing participants' capacity to assess urban water security. The closing session reflected on the week's meaningful discussions and the long-term impact of regional cooperation among early-career professionals in addressing global challenges.

https://ait.ac.th/2023/05/ait-and-apn-foster-regional-cooperation-and-capacity-building-for-sustainable-development-in-southeast-asia/

Prof. Dieter Trau

Dr. Monthip Sriratana

REGIONAL TRAINING WORKSHOP ON CLIMATE ADAPTATION TOOLS ORGANIZED

From 29 to 31 May 2023, the Asian Institute of Technology's Regional Resource Centre for Asia and the Pacific (AIT RRC.AP) successfully hosted the "Regional Training Workshop on Climate Adaptation Tools." The event, supported by the Ministry of Environment of Japan (MoEJ), was held in collaboration with the National Institute for Environmental Studies (NIES), University of Tsukuba, and Hitachi, Ltd., Japan.

The three-day workshop aimed to build regional capacity to understand and predict local climate change impacts using advanced climate modeling. It also focused on translating climate projection results into practical, results-driven interventions. The workshop was attended by 20 participants, including government officials, researchers, and representatives from various sectors across the Philippines, Bangladesh, Japan, Nepal, Vietnam, Myanmar, Thailand, Sri Lanka, and India.

In his opening remarks, AIT President Prof. Kazuo Yamamoto emphasized the urgent need for adaptation actions in response to the widespread effects of climate change. He highlighted that the climate adaptation tools presented in the workshop enable practitioners to evaluate local climate scenarios without requiring highly specialized technical skills, helping to assess impacts, vulnerabilities, and adaptability.

Mr. Orita Tomonori, Climate Change Adaptation Specialist from Japan's Ministry of the Environment, underscored the MoEJ's commitment to overcoming adaptation challenges in vulnerable countries. He encouraged participants to

leverage the tools provided to address local adaptation issues effectively.

The workshop featured hands-on sessions on key tools, including ClimoCast, S8DS, and FloodS. Dr. Masutomi Yuji from NIES introduced ClimoCast, an online climate forecasting tool, while Prof. Hiroyuki Kusaka from the University of Tsukuba and Mr. Shusaku Nakamura from Pacific Consultants Co., Ltd. (virtually) presented the S8DS tool for downscaling regional climate data. Dr. Satoshi Yamaguchi from Hitachi, Ltd., showcased FloodS, a tool for flood forecasting and climate change adaptation.

Participants engaged in practical exercises, exploring how these tools could be used to assess vulnerabilities and develop adaptation strategies. The workshop concluded with participants presenting their findings and proposed adaptation solutions tailored to their regions, followed by a certificate award ceremony recognizing their achievements.

https://ait.ac.th/2023/05/regional-training-workshop-on-climate-adaptation-tools-organized/

Prof. Kazuo Yamamoto, President, AIT

Mr. Orita Tomonori, Climate Change Adaptation Specialist, Ministry of the Environment, Japan

Dr. Guilberto Borongan, Director, AIT RRC.AP

SCHOOL OF ENGINEERING AND TECHNOLOGY SEMINAR ON "EXPLORING OPPORTUNITIES BETWEEN AIT AND THE APN CALL FOR PROPOSALS"

8 December 2023 - The Asia-Pacific Network for Global Change (APN) organized a seminar titled "Exploring Opportunities between AIT and the APN Call for Proposals" at the Asian Institute of Technology (AIT). The event featured Ms. Naomi Young, the Program Officer for APN. This seminar was also attended by Dr. Saurav KC, Deputy Executive Director of the Center of Research for Environment, Energy and Water (CREEW), Nepal. Dr. Chutipon Anutariya, Associate Dean of SET, and Dr. Sumana Shrestha, Director of International Affairs at AIT, and SET students extended a warm welcome to the representatives.

The seminar aimed to familiarize participants with the APN's Call for Proposals, providing insights into research funding opportunities, the application process, and associated deadlines. Priority areas for proposal submissions included Climate Change and Climate Variability, Disaster Reduction, Transboundary issues like air pollution and marine plastics, Big Earth Data for SDGs, Bio-circular green economy, circular ecological economy, and achieving Sustainable Development Goals (SDGs) amidst a changing climate.

APN, established in 1996 as an international non-profit organization with 22 member countries, is headquartered in Kobe, Hyogo Prefecture, Japan. With a vision to address global change and sustainability through innovative research and capacity development, APN aligns its direction with key global agendas, including the UN Sustainable Development Goals, the Paris Agreement, Sendai Framework for Disaster Risk Reduction, Global Biodiversity Framework, UN Decade of Ocean Science,

IPBES, and IPCC, as outlined in its Fifth Strategic Plan (2020-2026).

In recent years, APN has achieved significant milestones, with 77.6% of projects led by researchers from developing countries during FY 2020–FY 2022. Notably, in 2022, 60% of funded projects were spearheaded by early career

professionals, and in FY 2021, 75% of projects actively involved early career professionals.

The School of Engineering and Technology (SET) at the Asian Institute of Technology expressed gratitude to APN for its ongoing support and research funding since 2012. This collaboration has played a pivotal role in advancing impactful and sustainable research initiatives at AIT.

For more information about APN Call for proposals for 2024, please visit the site:

https://www.apn-gcr.org/opportunities/calls-for-proposals/

AIT AND FHI 360 RENEW COLLABORATION FOR SUSTAINABLE DEVELOPMENT IN ASIA PACIFIC

On 12 December 2023, the Asian Institute of Technology (AIT) and Family Health International (FHI 360), USA, renewed their Memorandum of Understanding (MoU), reinforcing their collaboration in research, education, health, technology, and development across the Asia-Pacific region. The partnership, which began in February 2018, aims to strengthen ties and explore mutually beneficial opportunities.

The MoU sets a framework for cooperation in various fields, including joint research, innovation, and the development of concept notes and proposals for resource mobilization. AIT and FHI 360 will focus on leveraging big data and analytics for development, integrating these methods into ongoing projects, and co-authoring concept papers. The agreement also facilitates the exchange of experts and offers AIT students internship opportunities, providing them with practical experience. The collaboration extends to technical areas such as health, environment and climate change, education, and civil society engagement.

Prof. Kazuo Yamamoto, AIT President, emphasized the transformative potential of the partnership through AIT's new School of Practice, highlighting the importance of training, digitalization, and FHI 360's expertise in climate change and air pollution. He noted the alignment of their environmental initiatives and commitment to achieving net-zero emissions by 2030. AIT's AI and technology centers are poised to support FHI 360's impactful projects.

Dr. Jacqueline McPherson, Regional Director of FHI 360 Asia Pacific, expressed enthusiasm for future collaborations, including business opportunities, innovative solutions, and the application of Artificial Intelligence. She anticipates joint efforts in addressing

critical issues like air and plastic pollution, and climate-smart healthcare, alongside joint events, roundtables, and meetings.

The signing event was attended by key representatives from both organizations, underscoring the strategic importance of this renewed collaboration in driving sustainable development and addressing global challenges.

https://ait.ac.th/2023/12/ait-and-fhi-360-renew-collaboration-for-sustainable-development-in-asia-pacific/

PUBLICATION OF THE AIR QUALITY MANAGEMENT AND EMISSION REDUCTION OF PM2.5 WORKSHOP REPORT, PUBLISHED ELECTRONICALLY

AIT Unit: RRC.AP

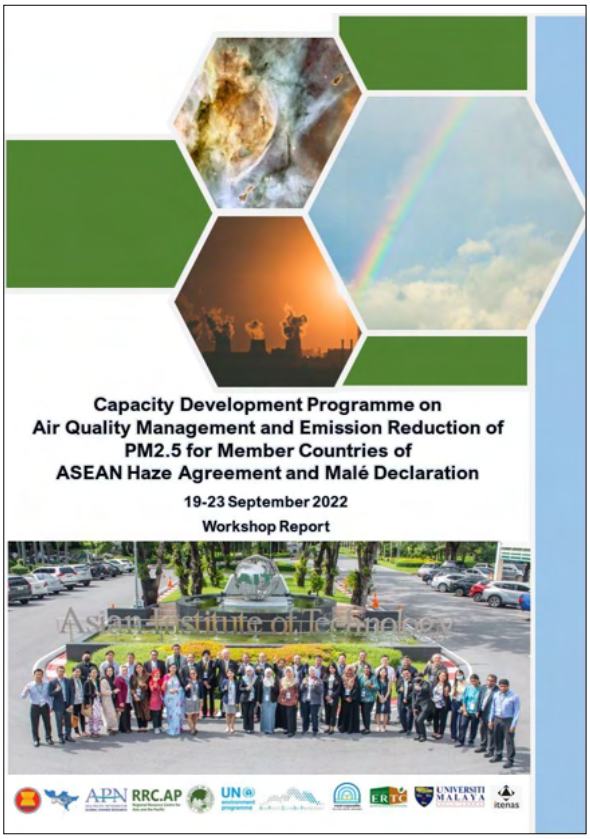
Project Duration: March 2023

Description:

The AIT RRC.AP had published the Workshop Report of the "Capacity Development Programme on Air Quality Management and Emission Reduction of PM2.5 for Member Countries of ASEAN Haze Agreement and Malé Declaration". The report can be downloaded from RRC.AP website (*http://www.rrcap.ait.asia/Publications/AQM_Workshop_Report_2022.pdf*).

The report was also published by the Asia-Pacific Network for Global Change Research (APN) on their website (*https://www.apn-gcr.org/wp-content/uploads/2023/03/AQM_Workshop_Report_2022_Final_for_Publication_v1.pdf*) as the project was funded by the APN.

The programme mainly aimed to build the capacities of the member countries of the ASEAN Haze Agreement and the Malé Declaration on air quality management and emission reduction of PM2.5. This e-publication is a compilation of the session outcomes of the capacity development programme workshop that was held from 19-23 September 2022 organized by the AIT RRC.AP.



Weblink:

- *http://www.rrcap.ait.asia/Publications/AQM_Workshop_Report_2022.pdf*
- *https://www.apn-gcr.org/wp-content/uploads/2023/03/AQM_Workshop_Report_2022_Final_for_Publication_v1.pdf*

THE STAKEHOLDERS CONSULTATIONS, WORKSHOP, AND TRAINING ON KATHMANDU CLEAN AIR PROGRAMME (KCAP) IN KATHMANDU, KATHMANDU, NEPAL

AIT Unit: RRC.AP

Project Duration: 3 - 7 April 2023

Description:

The AIT (including RRC.AP) lead a back-to-back stakeholders consultation workshop during the week of 2-7 April 2023 in Kathmandu, Nepal. Present among the key stakeholders were FHI360, Tribhuvan University, ICIMOD, MinErgy, and USAID of the USAID Clean Air (or Kathmandu Clean Air Programme (KCAP)). The consultations were aimed to strengthen collaboration

and partnership for the implementation of the USAID Clean Air activities.

On 5 April 2023, a workshop on Air Quality Monitoring and Emission Inventory was organized and a total of 59 participants including organizers, academia, policymakers, international organizations, and private sectors attended the workshop. The AIT team played a pivotal role as resource persons. The workshop discussed the establishment of the Consortium of Atmospheric Researchers in Nepal (CARN). CARN aims to provide scientific and technical support to USAID Clean Air.

Furthermore, on 6-7 April 2023, an Emission Inventory Training Workshop was organized. The training workshop covered key factors and processes involved in conducting the emissions inventory and demonstrated and provided hands-on training on an Excel-based tool to develop EI for key sources. A total of 26 participants (10 male and 16 female) from various organizations working on air pollution in Nepal have participated in the workshop.

MALÉ DECLARATION RECEIVED GREAT ATTENTION AT THE UNEP-CCAC CLEAN AIR WEEK, BANGKOK

AIT Unit: RRC.AP

Project Duration: 29 May to 1 June 2023

Description:

UNEP-Climate and Clean Air Coalition (CCAC) organized a clean air week at the UNCC, Bangkok, from 29 May 2023 to 1 June 2023. The CCAC brings together 79 state partners representing 50% of global short-live climate pollutants (SLCP) emissions alongside intergovernmental organizations, businesses, scientific institutions, and civil-society organizations committed to protecting the climate and improving air quality through actions to reduce SLCPs.

Several plenary sessions and side events were organized during the Clean Air Week. Dr. R. L. Verma, Coordinator of the Malé Declaration Secretariat (hosted by RRC.AP), and Mr. J. S. Kamyotra, Regional Facilitator, Malé Declaration, were invited to share the progress and future plans of the Malé Declaration. Dr. Verma contributed as a panelist in the plenary session on the "Regional Cooperation to Air Quality" and shared Malé Declaration's brief history, achievements, progress, and future plan which was well received by the participants. The Malé Declaration received great attention during the UNEP-CCAC Clean Air Week. Dr. Verma and Mr. Kamyotra had bilateral consultations with several UN organizations and international organizations to establish and strengthen the partnership on addressing air pollution issues in the Asian region.

Dr. R. L. Verma and Mr. Kamyotra serving as panelist at the plenary sessions in the UNEP-CCAC's Clean Air Week.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no2-02.aspx

BACK-TO-BACK WORKSHOPS ON MERCURY MASS FLOW AND MONITORING IN MALDIVES, MALDIVES

AIT Unit: RRC.AP

Project Duration: 20 -22 June 2023

Description:

On the 20th to 22nd of June 2023, AIT RRC.AP supported in organizing the back-to-back workshops on mercury mass flow and monitoring on mercury in Malé, Maldives. This is part of the Japan-funded project implemented by United Nations Environment Programme (UNEP) titled "Project for Promoting the Minamata Convention on Mercury by Making the most of Japan's Knowledge and

Experiences." The first workshop was a full day session held on 20th June with participants from government institutions, titled "Workshop for improving knowledge management within national stakeholders and frontline agencies, using mercury mass flow model". The second workshop was held on 21st June with participants from different regional hospitals around the Maldives for half a day, titled "Training of sample collectors as part of the nationwide mercury biomonitoring program to identify the significance of mercury exposure within Maldives".

The program concluded with a site visit to Thilafushi, a national landfill on a separate island near Malé, to gain insight about the current state of waste management in the Maldives. The site is managed by Waste Management Corporate Limited (WAMCO) who presented their procedures and future plans to expand operations.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no2-06.aspx

AIT SUSTAINABILITY EXPO 2023: PAVILION OF ACTIVITIES, AIT CONFERENCE CENTER, PATHUM THANI

AIT Unit: RRC.AP

Project Duration: 23-25 August 2023

Description:

The Asian Institute of Technology (AIT) successfully hosted the dynamic three-day Sustainability Expo from August 23 to 25, at the AIT Conference Center, reflecting an encouraging step forward in fostering environmental transformation and achieving its goal of becoming a net-zero campus by 2030. This event served as a platform for global experts, researchers, and students to explore innovative solutions and share insights to meet the Sustainable Development Goals (SDGs). It comprised several engaging components including the Inter-university Research Fair, the Inter-university Hackathon, and a variety of informative workshops that covered diverse areas including water conservation, climate change, waste management, air pollution, sustainable buildings, remote sensing, social business and GIS, and sustainable farming.

Regional Resource Centre for Asia and the Pacific (RRC.AP) was an integral part of the AIT Sustainability EXPO showcasing its work through a booth and a hybrid half a day seminar conducted on the morning of 24th August 2023. During the AIT Sustainability Expo, RRC.AP enthusiastically engaged in the exhibition through the booth, showcasing its regional experiences, activities, and services to the participants. Visitors to the RRC.AP booth were provided with an extensive display of the organization's initiatives which ranged from capacity-building programs, climate adaptation tools, e-learning courses as well as knowledge sharing products.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no3-08.aspx

THE AIT RRC.AP PARTICIPATED IN THE PAVILION OF PARTNERSHIP DURING THE AIT-BOI SCIENCE AND TECHNOLOGY PARK LAUNCH, PATHUM THANI

AIT Unit: RRC.AP

Project Duration: 7 September 2023

Description:

The Regional Resource Centre for Asia and the Pacific (AIT RRC.AP) participated in the Pavilion of Partnership at designated booths in the exhibition area during the historic launching of the Asian Institute of Technology (AIT) - Thailand Board of Investment (BOI) approved Science and Technology Park (BOI STP). The event was held on 7 September 2023 at the AIT Conference Center that aims to foster innovation and collaboration between academia, industry, and government.

The science and technology park is located on the AIT campus in Pathum Thani, Thailand, and offers a range of services and support to businesses, including business incubation and acceleration, access to state-of-the-art research facilities and equipment, IP licensing support, fully equipped workspaces, and a pool of highly skilled and qualified interns and researchers. Companies that

set up in the park are eligible for a range of tax and non-tax incentives, including an exemption from corporate income tax for up to 12 years.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no3-06.aspx

THE 3RD INTERNATIONAL FORUM ON TRANSBOUNDARY AIR POLLUTION, SEOUL, SOUTH KOREA, (HYBRID EVENT)

AIT Unit: RRC.AP

Project Duration: 8 September 2023

Description:

The 3rd International Forum on Transboundary Air Pollution (IFTAP) was held on 8 September 2023 in Seoul, South Korea, in commemoration of the 3rd International Day of Clean Air for blue skies. The forum was a hybrid event, with both in-person and virtual components, and brought together experts, policymakers, scientists, and other stakeholders from the Northeast Asia region and beyond.

The forum focused on the following key topics:

- The current status and response strategies for air pollution in Northeast Asia
- Lessons and implications drawn from Europe's scientific and data-based approaches to air pollution
- The mutual benefits of addressing climate change and air pollution
- Envisioning a regional modality on air pollution in the Northeast Asia and the Asia Pacific

Dr. Ram Lal Verma represented the AIT RRC.AP and served as one of the resource speakers in the forum's session 1: ***Addressing Air Pollution in Northeast Asia: Where we are and the Way Forward.*** The title of his topic is ***"Air Quality Trends and Policy Measures in Northeast Asia"***.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no2-06.aspx

WORKSHOP ON AIR QUALITY MANAGEMENT WITH A FOCUS ON AIR QUALITY MODELING, KATHMANDU

AIT Unit: RRC.AP

Project Duration: 10 October 2023

Description:

The Asian Institute of Technology (AIT) including Regional Resource Centre for Asia and the Pacific (RRC.AP), served as an implementing partner for the USAID Clean Air (Kathmandu Clean Air Programme). In collaboration with FHI360, the AIT-team hosted a one-day workshop titled "Air Quality Management with a focus on Air Quality Modeling" on 10 October 2023, in Lalitpur (Kathmandu), Nepal.

The workshop brought together 36 participants, including government officials, researchers, and international experts involved in air quality management in Nepal. The diverse group of 17 male and 19 female attendees fostered a dynamic exchange of knowledge and experiences.

Key outcomes of the workshop included:

- Sharing ongoing research: Participants presented updates on their research in air quality management, specifically focusing on air quality modeling techniques relevant to Nepal.
- Building collaboration: A mechanism for ongoing coordination among air quality researchers in Nepal was established, facilitating future knowledge sharing and collaborative efforts.

- Sustainable modeling practices: Strategies for conducting air quality modeling in a sustainable and efficient manner within the Nepalese context were identified and discussed.
- Future research partnerships: Potential areas for collaborative research projects among the attending researchers were explored, paving the way for future studies that address Nepal's unique air quality challenges.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no4-06.aspx

TRAINING WORKSHOP ON AIR QUALITY MANAGEMENT WITH A FOCUS ON AIR QUALITY MODELING, KATHMANDU

AIT Unit: RRC.AP

Project Duration: 11 -12 October 2023

Description:

The Asian Institute of Technology (AIT) including Regional Resource Centre for Asia and the Pacific (RRC.AP), served as an implementing partner for the USAID Clean Air (Kathmandu Clean Air Programme). In collaboration with FHI360, AIT-team held a 2-day training workshop on "Air Quality Management with a focus on Air Quality Modeling" in Lalitpur (Kathmandu), Nepal, from 11-12 October 2023. This intensive workshop aimed to equip participants with the technical skills and knowledge necessary for air quality modeling and its application in managing Kathmandu Valley's air quality.

Over the two days, participants gained a solid foundation in air quality modeling principles and its role in effective air quality management. The workshop also presented relevant case studies applicable to Kathmandu Valley and provided hands-on experience with meteorological and air quality dispersion modeling tools. A total of 13 participants (3 male, 10 female) actively engaged in the learning process.

This successful workshop empowered participants with valuable technical expertise, contributing to improved air quality management strategies for Kathmandu Valley.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no4-05.aspx

CONSORTIUM FOR AIR QUALITY RESEARCHERS OF NEPAL (CARN), KATHMANDU

AIT Unit: RRC.AP

Project Duration: 13 October 2023

Description:

The Asian Institute of Technology (AIT) including Regional Resource Centre for Asia and the Pacific (RRC.AP), served as an implementing partner for the USAID Clean Air (Kathmandu Clean Air Programme). On October 13, 2023, AIT-team collaborated with FHI 360 to host the 3rd Meeting of the "Consortium for Air Quality Researchers of Nepal (CARN)" in Lalitpur, Nepal. This gathering aimed to foster better coordination and collaboration among the nation's air quality and atmospheric researchers. By facilitating timely exchange of science-based information, CARN ultimately hopes to influence policy-making and drive effective improvements in air quality across the country.

The meeting provided a platform to discuss CARN's progress, showcase ongoing collaborative research projects, and share results and findings from previous measurement campaigns conducted by various research groups in Nepal. Participants explored future directions and possibilities for collaboration. A total of 33 individuals (17 male and 16 female) attended the meeting, representing universities, research organizations, international organizations based in Nepal, and private sector entities.

Weblink:

http://www.rrcap.ait.asia/news/Pages/vol24no4-04.aspx

CIFAL BANGKOK PARTICIPATED IN UNITAR XX ANNUAL STEERING COMMITTEE MEETING IN GENEVA TO SET PLAN WITH CIFAL MEMBERS TO PROMOTE SDGS

AIT Unit: AIT Extension

Project Duration: 13-15 November 2023

Description:

Between 13 and 15 November, with other 30 CIFAL Centers all over the world, CIFAL Bangkok participated in the annual Steering Committee Meeting of the CIFAL Global Network coordinated by the United Nations Institute of Training and Research (UNITAR) at the Palais des Nations in Geneva. During the 3-day meeting, UNITAR and CIFAL Centers reviewed accomplishments achieved in the past year, celebrated two decades of building capacities in support of local sustainable development, and collectively defined a roadmap for the upcoming years. This Steering Committee Meeting highlighted the important role that CIFAL Centers have in empowering governments, private companies, universities, and civil society to implement and promote the SDGs at the ground level.

Weblink:

https://www.unitar.org/about/news-stories/news/cifal-global-network-celebrates-its-20th-anniversary

UNITAR AND AIT JOINTLY LAUNCHED CIFAL BANGKOK TO FOCUS ON SUSTAINABLE DEVELOPMENT

AIT Unit: AIT Extension

Project Duration: 2 August 2023

Description:

On 2 August 2023, in partnership with AIT, United Nations Institute for the Training and Research (UNITAR) established the International Training Centre for Authorities and Leaders (CIFAL) in Bangkok to offer a range of learning opportunities on sustainable development-related areas and facilitate knowledge sharing between government officials and leaders across Asia Pacific. The partnership was signed in a special ceremony with community stakeholders at the AIT campus in Bangkok, Thailand, between Mr Nikhil Seth, United Nations Assistant Secretary-General and Executive Director of UNITAR, and Prof. Kazuo Yamamoto, President of the Asian Institute of Technology. 47 representatives from UN agencies, (I) NGOs, government offices, universities, and private sectors attended this ceremony to build cooperation with CIFAL Bangkok for the promotion of all SDGs.

As an international training center, CIFAL Bangkok aims to strengthen the capacities of individuals and institutions, serving public officials and leaders of Asia Pacific countries in order to improve the decision-making process and encourage sustainable development. CIFAL Bangkok will hold training activities and events centered around critical thematic areas including climate change, smart communities, water-energy-food, infrastructure, technology, policy and society.

Weblink:

https://ait.ac.th/2023/08/unitar-and-the-asian-institute-of-technology-jointly-launch-cifal-centre-to-focus-on-sustainable-development/

AIT AND STOCKHOLM ENVIRONMENT INSTITUTE JOIN FORCES TO ADDRESS GLOBAL CHALLENGES

26 October 2023 - The Asian Institute of Technology (AIT) and the Stockholm Environment Institute (SEI) solidified their commitment to collaboration by signing a Memorandum of Understanding (MoU). This partnership aims to advance common goals related to global change and sustainability in the Asia-Pacific region. The MoU delineates various collaborative activities, including joint workshops, research support, exchange programs, and capacity development initiatives. Prof. Kazuo Yamamoto, President of AIT, stressed the institution's dedication to addressing global challenges such as climate change and Sustainable Development Goals (SDGs), highlighting the significance of partnering with esteemed institutions like SEI. Mr. Niall O'Conner, Center Director

of SEI Asia, emphasized the potential for collaboration in areas like urban development, gender equality, and climate change mitigation, aiming to influence global agendas and policies. Cynthia McDougall, Senior Research Fellow at SEI, suggested thematic partnerships and interdisciplinary approaches to tackle sustainability issues. The partnership between AIT and SEI promises to drive sustainable solutions and positively impact the Asia-Pacific region. Attendees from both institutions included key figures, indicating strong support and enthusiasm for this collaborative endeavor.

Website:

https://ait.ac.th/2023/10/ait-and-stockholm-environment-institute-join-forces-to-address-global-challenges/

MS. ANU VÄNSKÄ, EXECUTIVE DIRECTOR, ASIA-PACIFIC REGION, AALTO EXECUTIVE EDUCATION ACADEMY PTE LTD. (SINGAPORE) AND DELEGATION FROM EMBASSY OF FINLAND MEET WITH AIT MANAGEMENT

2 February 2023 - Prof. Vilas Nitivattananon, Dean, School of Environment, Resources & Development (SERD), Dr. Roger Levermore, Dean, School of Management (SOM), Mr. Voravate Chonlasin, Co-Executive Director, AIT Extension, Mr. Sanjeev Jayasinghe, Executive Director, Office of Advancement and Alumni Affairs, and Ms. Sirikate Owasit, Senior Advancement Officer, Office of Advancement and Alumni Affairs had a meeting with Ms. Anu Vänskä, Executive Director, Asia-Pacific Region, Aalto Executive Education Academy Pte Ltd. (Singapore) and Delegation from the Embassy of Finland led by Mr. Kai Tuorila, Counsellor for Trade and Investment, Embassy of Finland.

Aalto University was established in 2010 as a merger of three major Finnish universities: the Helsinki University of Technology, the Helsinki School of Economics and the University of Art and Design Helsinki. Aalto has had a long history with AIT, as several Finnish Professors were seconded to AIT in the 90's who were coming from Helsinki University of Technology, which is part of Aalto now. Aalto University Executive Education (Aalto EE) in Singapore provides executive education, professional development services, and training for public and private sector clients all around Asia.

Dean SERD will have further details discussion in the areas of sustainability and smart city, similarly, Dean SOM has highlighted the Executive MBA program and Professional Master's program in Environmental, Social, and Governance (ESG), and Co-Executive Director AIT Extension will discuss the possibility of having Aalto EE as a partner to offer joint program on tailor made short-term training program.

A GLOBAL REUNION AT THE 52ND AITAA GOVERNING BOARD MEETING HELD AT AIT

26 November 2023 –The Asian Institute of Technology (AIT) campus buzzed with energy and nostalgia as it welcomed its alumni for the 52nd AITAA Governing Board Meeting. Hosted by the AITAA South East Asia Chapter from November 24 to 26, this event marked a significant gathering under the theme 'Move Forward AIT,' emphasizing the alumni's role in shaping the institute's future.

The event saw over 45 official delegates from 18 countries, including Australia, Bangladesh, Cambodia, Canada, India, Japan, Lao PDR, Myanmar, Nepal, New Zealand, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan ROC, Thailand, the USA, and Vietnam. This diverse attendance highlighted the global reach and impact of AIT's alumni network.

Day 1: Reconnecting with Roots

The event kicked off on November 24 with the arrival of delegates, followed by a campus walking tour, allowing alumni to revisit and reminisce about their time at AIT. The day concluded with a welcome dinner at the AIT Conference Center, setting the stage for days of fruitful discussions and reunions. Honorable Dr. Subin Pinkayan, AIT Alum and former AIT Board of Trustees Chairman welcomed all the delegates to AIT Thailand. Dr. Pinkayan is one of the first graduates of AIT after completing his Master's in Hydraulics in 1961. He has attended several GBMs in many countries.

Dr. Subin Pinkayan

Visiting AIT School of Management

Day 2: Inaugural Ceremonies, Discussions and Election

November 25th began with the official opening of the Governing Board Meeting. Highlights of the day included the welcome address by Dr. Duminda Jayaranjan, President of the AITAA SEA Chapter, and Mr. Taweechai Termkunanon, President of AITAA.

A welcome message from AIT President *Prof. Kazuo Yamamoto* emphasized alumni's importance in shaping AIT's future. He said: "As we move forward, the insights and experiences of our alumni are invaluable. Together, we can elevate AIT to greater heights in research, innovation, and global impact."

Dr. Anat Arbhabirama

Dr. Anat Arbhabirama, Chairman of the AIT Board of Trustees, also addressed the gathering, underlining the institute's commitment to excellence and innovation. He emphasized that the strength of AIT lies in its diverse and dynamic alumni network. Their contributions and ongoing engagement are vital in steering AIT towards new horizons of excellence.

The day was filled with activities, including chapter reports, networking breaks, a session dedicated to the AITAA's business affairs, and an election in which Dr. Donald M. Ugsang from the Philippines was elected as the new AITAA President.

Gala Dinner and Awards

One of the event's highlights was the gala dinner, where seventeen distinguished alumni awards were presented, along with an honorary member recognition. These awards celebrated the achievements and contributions of AIT's alumni to their respective fields and communities. Among the 17 awardees were the AIT Faculty and Dean of the School of Engineering and Technology, Prof. Sangam Shrestha, Executive Director of the Office of Alumni and Advancement Affairs, Mr. Sanjeev P. Jayasinghe, and Business Development Director of AIT Extension, Dr. MD. Zakir Hossain. Details of the awardees can be found on the AITAA website here.

https://www.aitaa.asia/DAA%26HM

The reunion was not just an occasion for formal meetings but also an opportunity for alumni to reconnect with their alma mater and each other. Attendees shared stories, visited their old schools, and relived cherished memories, rekindling connections and reinforcing the sense of community within the AIT family.

The success of the event was not just in its turnout but also in the enthusiasm and engagement of the alumni. Their continuous support is crucial for the advancement and enduring legacy of AIT. As the institute looks forward, the role of its alumni in driving growth and innovation remains pivotal.

As this year's meeting concluded, the baton was passed to the Laos PDR Chapter, which will host the next AITAA Governing Board Meeting in 2024. This announcement was met with anticipation and excitement, promising another eventful reunion for the AIT alumni community next year.

The AITAA Governing Board Meeting stands as a testament to the enduring bonds and collective aspirations of the AIT alumni. As they departed from their beloved alma mater, they carried with them not just memories but also a renewed commitment to 'Move Forward AIT' into a bright and impactful future.


AIT WALL OF FAME




SUSTAINABLE DEVELOPMENT GOALS DASHBOARD

SCHOOL	DEPARTMENT	PROGRAM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Website
School of Environment, Resources, and Development	Department of Development and Sustainability	Development and Sustainability	■	■		■	■	■	■			■	■	■	■	■	■	■	■	Development and Sustainabilty
		Development Planning Management and Innovation	■	■		■	■					■	■	■	■			■	■	Development Planning Management and Innovation
		Gender and Development Studies	■	■		■	■					■			■			■	■	Gender and Development Studies
		Natural Resources Management	■	■				■	■				■	■	■	■	■		■	Natural Resources Management
		Society and Environmental Governance	■	■								■	■	■		■	■	■	■	Regional and Rural Development Planning
		Urban Innovation & Sustainability	■			■		■	■				■	■	■				■	Urban Environmental Management
	Department of Energy, Environment, and Climate Change	Climate Change and Sustainable Development													■					Climate Change and Sustainable Development
		Environmental Engineering and Management						■						■			■		■	Environmental Engineering and Management
		Marine Plastic Abatement											■	■	■	■	■		■	Marine Plastic Abatement
		Regenerative Sanitation						■							■	■	■		■	Regenerative Sanitation
		Sustainable Energy Transition							■						■		■		■	Sustainable Energy Transition
	Department of Food, Agriculture, and BioResources	AgriBusiness Management		■						■				■			■		■	AgriBusiness Management
		Agricultural Systems & Engineering		■		■								■			■		■	Agricultural Systems and Engineering
		Aquaculture and Aquatic Resources Management		■												■	■		■	Aquaculture and Aquatic Resources Management
		Food Engineering and Bioprocess Technology		■		■				■							■		■	Food Engineering and Bioprocess Technology
		Food Innovation, Nutrition and Health		■										■			■		■	Food Innovation Nutrition and Health
School of Engineering and Technology	Department of Civil and Infrastructure Engineering	Construction, Engineering and Infrastructure Management				■				■	■		■					■	■	Construction Engineering and Infrastructure Management
		Geotechnical and Earth Resources Engineering				■				■	■		■					■	■	Geotechnical and Earth Resources Engineering
		Structural Engineering				■				■	■		■					■	■	Structural Engineering
		Transportation Engineering				■				■	■		■					■	■	Transportation Engineering
		Water Engineering and Management		■	■	■		■		■	■		■	■	■		■	■	■	Water Engineering and Management
	Department of Information and Communication Technologies	Computer Science				■				■	■		■	■			■	■	■	Computer Science
		Data Science and AI				■				■	■		■					■		Data Science and AI
		Information & Communications Technologies				■				■	■		■					■		Information and Communications Technologies
		Information Management				■				■	■		■					■	■	Information Management
		IoT (Internet of Things) Systems Engineering				■				■	■		■					■		Internet of Things (IoT) Systems Engineering
		Remote Sensing and Geographic Information Systems				■				■	■		■	■			■	■	■	Remote Sensing and Geographic Information Systems
		Telecommunications				■				■	■		■					■	■	Telecommunications
	Department of Industrial Systems Engineering	Bio-Nano Material Science and Engineering				■				■	■		■					■		Bio-Nano Material Science and Engineering
		Industrial and Manufacturing Engineering				■				■	■		■	■			■	■	■	Industrial and Manufacturing Engineering
		Mechatronics				■				■	■		■	■			■	■	■	Mechatronics
		Microelectronics and Embedded Systems				■				■	■		■	■			■	■	■	Microelectronics and Embedded Systems
School of Management		Management				■		■		■	■			■					■	Management
SET & SERD		Disaster Preparedness, Mitigation, and Management	■	■	■	■		■		■	■	■	■	■	■		■	■	■	Disaster Preparedness Mitigation and Management
		Urban Water Engineering and Management				■		■		■	■		■					■	■	Urban Water Engineering and Management

SUSTAINABLE DEVELOPMENT GOALS DASHBOARD

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Website
AIT's Five Thematic Research Areas																		
Climate Change	■					■	■						■				■	
Food, Energy, Water Security	■	■				■	■					■	■	■	■		■	
Infrastructure									■		■						■	
Smart Communities						■	■		■		■		■				■	
Technology, Policy and Society	■	■			■	■	■	■		■		■	■				■	
Institute Outreach Centers																		
AIT AI Technology (AIT^2) Center	■	■	■	■	■	■	■	■	■	■	■	■						*AIT AI Technology (AIT2) Center*
AIT Center in Vietnam (AITCV)							■		■			■						*AIT Center in Vietnam (AITVN)*
AIT Extension	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	*AIT Extension*
AIT Solutions				■					■		■				■			*AIT Solutions*
Belt and Road Research Center				■				■	■								■	*Belt & Road Research Center*
Center for Global Challenges		■				■	■	■	■	■		■	■			■		
CIFAL Bangkok - International Training Centre for Authorities and Leaders for South and Southeast Asia established by the AIT and UNITAR						■	■		■		■		■			■	■	*CIFAL Bangkok*
Entrepreneurship Center				■	■				■		■	■					■	*AIT Entrepreneurship Center*
Geoinformatics Center (GIC)		■											■	■	■			*Geoinformatics Center*
Internet Education & Research Laboratory (intERLab)				■				■		■	■		■					*Internet Education and Research Laboratory*
Regional Resource Center for Asia & the Pacific (RRC.AP)							■				■	■	■				■	*Resource Center for Asia & the Pacific (RRC.AP)*
SMARTSCenter - The South and South-east Asia Multidisciplinary Applied Research Network on Transforming Societies of Global South	■				■		■	■	■	■	■	■	■	■		■	■	*SMARTS Center*
Yunus Center AIT	■	■	■	■	■	■	■	■	■	■	■	■	■			■	■	*Yunus Center AIT*
Institute Service Centers																		
Facilities		■				■	■				■	■	■		■			*Office of Facilities & Assets Management*
Human Resources			■		■											■		*Human Resources Office*
Student Affairs	■	■			■					■						■		*Admissions / Career Center*

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