

2025
EDITION



Belt & Road Research Center Annual Report

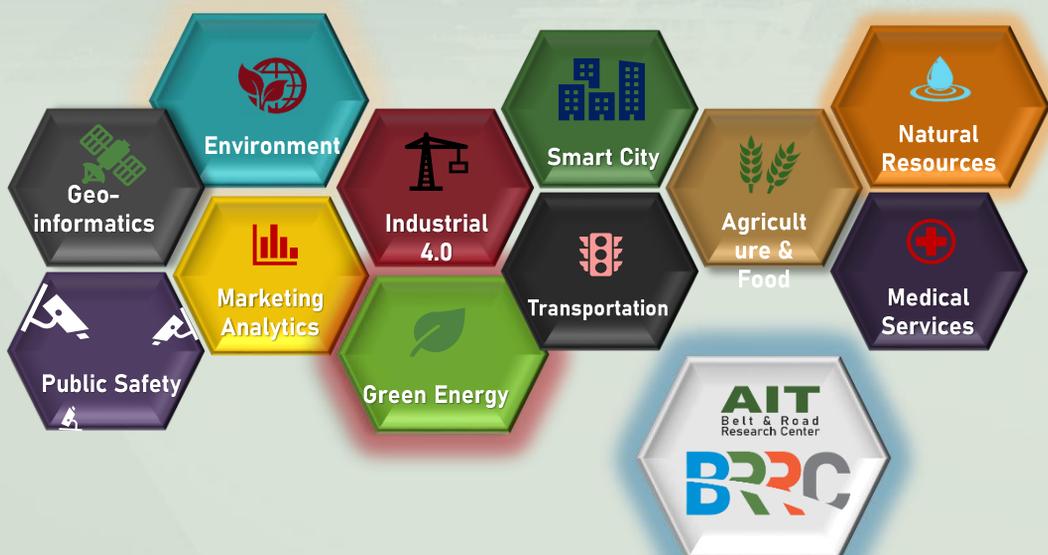


*Regional collaboration
in sustainability
for the Future*



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Introduction of the Center

AIT Belt and Road Research Center (BTRC) was established in late 2019, and its vision is to serve as an International hub for collaborative and innovative research towards robust economic growth and sustainable development in the Belt and Road region.

AIT BTRC's mission covers enhancing AIT's Belt & Road projects, promoting collaboration with China's and other Belt & Road Countries' Universities and Organizations, supporting young scholars/students' research and study in the region with Belt & Road fellowships/scholarships, and disseminating the related collaborative outcomes with wider community through Regional/International Belt & Road Conferences.

As an International Education/Research Institute with diversified students and researchers from all over the world, AIT is in well connection in the Belt & Road Countries and has constructed excellent networks that provide great advantages to support BTRC to fulfill its goals in the future.

AIT Belt and Road Research Center

A warm welcome from the **AIT Belt & Road Research Center (BTRC)**! Our Center aims to serve as an International hub for collaborative and innovative research towards robust economic growth and sustainable development in the Belt and Road Region. Together with our BTRC team, we look forward to bringing impactful research and engagements with our partners and stakeholders in the Region.

Director's message

Associate Professor

Department of Energy,
Environment,
and Climate Change,
School of Environment, Resources,
and Development

Director

Belt and Road Research Center,
Asian Institute of Technology



Dr. Wenchao Xue

A handwritten signature in blue ink, appearing to read 'Wenchao Xue', written over a light blue horizontal line.

RESEARCH TEAMS



Infrastructure research team

Lead by **Dr. Kuo-Chieh Chao**



Green Technology research team

Lead by **Dr. Wenchao Xue**



Digital Belt and Road Research Team

Lead by **Dr. Salvatore G.P. Virdis**

ADVISORY BOARD MEMBERS



Dr. Eden Y. Woon is President of the American Chamber of Commerce in Hong Kong and former President of the Asian Institute of Technology. A retired U.S. Air Force Colonel with a distinguished career spanning academia, business, and policy, he has held senior leadership roles at HKUST, Li & Fung, Toys "R" Us China, and Starbucks Coffee Company in China. Dr. Woon holds multiple degrees in Mathematics and serves as an advisor to several prestigious institutions in Hong Kong.



Prof. Huadong Guo is an Academician of the Chinese Academy of Sciences and Director General of the International Research Center of Big Earth Data for Sustainable Development Goals. A leading scientist in remote sensing and Digital Earth, he chairs the Digital Belt and Road Program and has served in numerous international roles, including with UNESCO and the UN. He has published extensively and received multiple awards for his contributions to Earth observation science.



Dr. Monthip Sriratana is Senior Advisor to Thailand's National Research Council and Director of the Digital Belt and Road International Center of Excellence in Bangkok. A former Member of Parliament and senior official in Thailand's Ministry of Natural Resources and Environment, she has extensive experience in environmental policy and international cooperation. She has been honored with royal decorations from Sweden and Japan for her contributions to environmental collaboration.



Mr. Chongming Liu is the former Deputy General Manager of China State Construction Engineering (Thailand) Co., Ltd. A registered Senior Civil Engineer in China, he holds degrees from Tsinghua University and AIT and has over three decades of experience managing major infrastructure projects across Southeast Asia and the Middle East, contributing significantly to CSCEC's international operations.



Dr. Sarawut Ninsawat is Dean of the Faculty of Technology at AIT and an Associate Professor in Remote Sensing. He earned his doctorate from Osaka City University and previously served as a postdoctoral researcher at Japan's National Institute of Advanced Industrial Science and Technology. His expertise lies in geospatial technology and its applications in environmental monitoring and sustainable development.



Dr. Ekbordin Winijkul is Dean of the Faculty of Infrastructure at AIT and an Associate Professor in Environmental Engineering and Management. He holds a Ph.D. from the University of Illinois and has worked with organizations such as the World Bank and Argonne National Laboratory. His research focuses on air quality management, emission inventories, and the use of satellite remote sensing for environmental monitoring.

CENTER DEVELOPMENT

On-going Research Projects



1. “Strategic Research Plan for DBAR ICoE-Bangkok, 2024-2026”

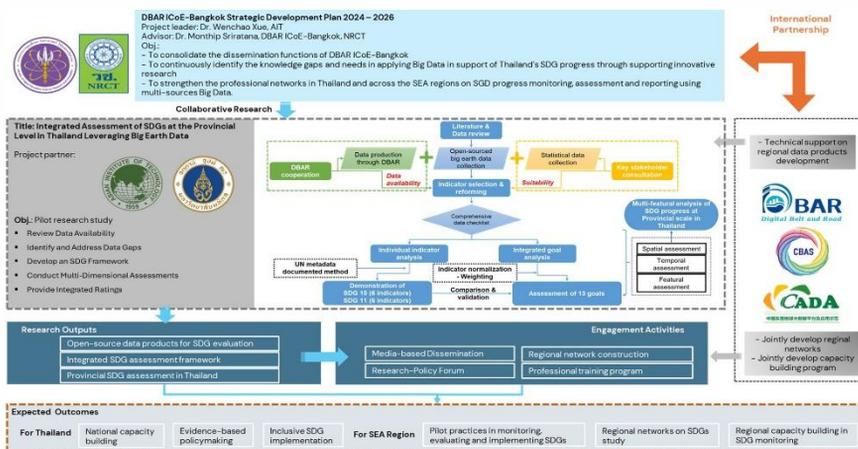


Project Introduction:

This project aims to address critical challenges in the assessment of Sustainable Development Goals (SDGs) in Thailand, aligning with the 2030 Agenda for Sustainable Development set by the United Nations. Collaborating with the Digital Belt and Road Program, the DBAR International Center of Excellence in Bangkok aims to enhance the utilization of Earth observation data for a more comprehensive evaluation of SDG progress. Objectives include further consolidating the function of DBAR ICoE-Bangkok through strategic development planning, identifying data and knowledge gaps, strengthening regional networks, building capacity, and conducting sub-projects focused on integrated assessment of SDG progress at provincial level in Thailand.

Key activities:

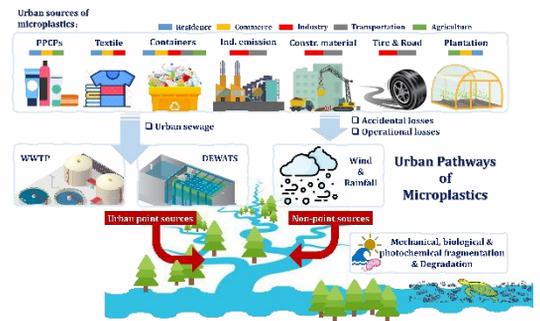
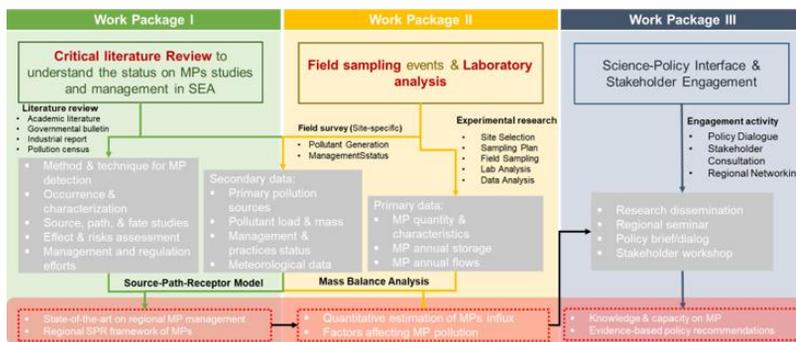
- Review of Open Data Sources to create a list of data availability for SDG progress assessment in Thailand.
- Engage with key stakeholders to identify data gaps and gather insights on data requirements for SDG monitoring.
- Develop a detailed checklist outlining the available data necessary for assessing SDG progress in Thailand
- Conduct an initial assessment of SDG progress at the provincial level in Thailand
- Collaborate with DBAR to produce big earth data.



2. “Enhancing the Science–Policy Interface to Manage Microplastic Influx from Major Cities into the Oceans in Southeast Asia”

Project Introduction:

The project aims to strengthen the science–policy interface in managing microplastic (MP) pollution originating from major Southeast Asian cities and entering marine ecosystems. Funded by the Asia-Pacific Network for Global Change Research (APN), the initiative brings together experts from Thailand, Vietnam, and Indonesia to develop evidence-based frameworks and enhance policymaking capacity in the region. Through interdisciplinary research, the project focuses on developing a Source–Pathway–Receptor (SPR) framework, conducting mass balance assessments, and building capacity among policymakers and stakeholders to manage urban microplastic pollution effectively.



Project Activities in 2025:

- The second project meeting was held at the Ho Chi Minh City University of Technology, bringing together partners from Thailand, Vietnam, and Indonesia to review progress and plan the next steps. It concluded with a strong sense of strong collaboration among the partners



3. Development and Application of In-situ Microplastic Detection in Water Environments Using Electrical Sensing Zone Method Empowered by Machine Learning Techniques



Project Introduction:

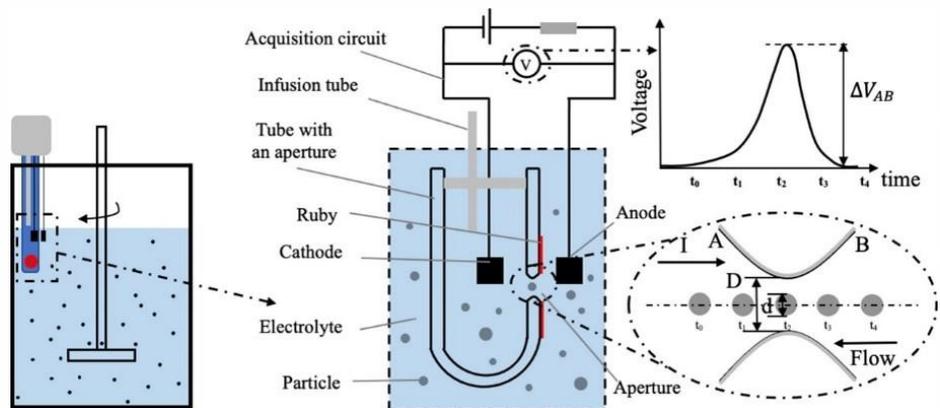
This collaborative research initiative aims to develop a novel and cost-effective approach for in-situ detection and monitoring of microplastic pollution in aquatic environments. The project utilizes the Electrical Sensing Zone (ESZ) method enhanced by machine learning (ML) techniques to improve accuracy, data interpretation, and real-time analysis. Ultimately, this innovation seeks to support water environment protection and sustainable development across developing countries within the Belt and Road region.

Project Objectives:

This project aims to develop a novel, cost-effective method for in-situ monitoring microplastic pollution in aquatic environments using the electrical sensing zone (ESZ) method empowered by machine learning techniques, with the goal of promoting its future application in support of water environment protection in developing countries within the Belt and Road region.

Project Activities in 2025:

On December 11, 2025, the project was inaugurated with a kick-off event and training workshop organized by AIT's Belt and Road Research Center (BTRC).

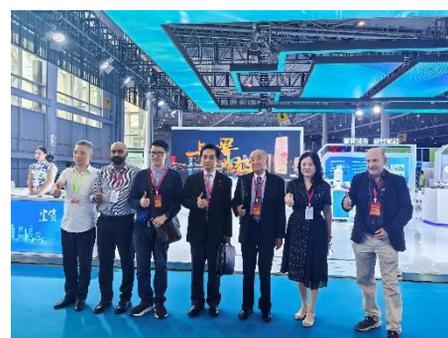


On-going Industrial Collaboration Projects

1. Green Industry Innovation and Development Exchange Program

From July 11st to July 15th, 2025 – AIT Belt and Road Research Center and Chongqing Renewable Energy Society(CRES) organized the fourth Green Industry Innovation and Development Exchange program & The 3rd International Forum on Regional Cooperation for Green and Sustainable Development in Mountainous Areas in Chengdu and Chongqing, southwest China. The AIT alumni delegation visited Chongqing and marked another significant milestone in the growing green energy partnership between China and Southeast Asian nations. The delegation, comprised seven alumni representatives from Thailand, Laos, Myanmar, Vietnam, and Nepal.

The visit featured a special “AIT Alumni Roundtable” where entrepreneurs and experts shared valuable insights on green energy development, technological cooperation, and youth engagement. Beyond the main forum, delegates engaged in green technology matchmaking sessions, business discussions, and visited multiple green enterprises in Chongqing, gaining firsthand experience of China's low-carbon transformation practices in mountainous urban environments.





2. 2025 Southeast Asian Green Energy Application Technology Training in Kunming, China

During November 14 to 22, 2025, BRRC co-organized with the Yunnan Green Energy Industry Association the “2025 Southeast Asian Green Energy Application Technology Training” at Kunming University of Science and Technology. This program was hosted by the Yunnan Provincial Department of Science and Technology. The training was strategically integrated with the parallel “2025 Green Energy Carbon Peak and Carbon Neutrality International Conference,” creating a powerful platform for knowledge exchange and regional collaboration in sustainable energy.

A group of 6 participants from the Climate Change and Sustainable Development (CCSD) program, attended this program with full financial support. The members of this group are from Thailand, Myanmar, the Philippines, and Indonesia. The curriculum of this training program was designed to provide holistic learning experience, combining thematic seminars on green energy application technology, practical system operations, and exclusive visits to characteristic local green energy projects in Yunnan does not open to the public. On November 15, a cooperation Memorandum of Understanding between Yunnan Green Energy Industry Association and AIT was signed to strengthen cooperation in green energy and environmental sustainability, including joint training programs, seminars, forums, institutional and personnel exchanges, as well as scientific research collaboration, technology transfer, and market promotion, further advancing green economic transformation in Asia.



3. China-Thailand Forum on Clean Water Technology Cooperation

On December 8, 2025, BRRC co-organized the China-Thailand Forum on Clean Water Technology Cooperation in Bangkok. Held as a key side event of the 2025 IWA Water and Development Congress & Exhibition, the forum was jointly sponsored by the Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences (RCEES, CAS), and the International Water Association (IWA). This high-level gathering successfully brought together leading scientists, policymakers, and industry experts from both nations, including distinguished attendees such as Academician Qu Jiahui and representatives from Thailand's Hydro-Informatics Institute and Kasetsart University, to address pressing regional water security challenges. During the forum's thematic session, Dr. Wenchao Xue, Director of BRRC and Associate Professor at AIT, delivered a critical presentation titled "Emerging Microplastic Pollution in Thai Waters and Control Strategies."

During the event, the Belt and Road Environmental Innovation Lab was officially launched, serving as a significant milestone in industry-academia collaboration. This laboratory is the flagship outcome of the strategic partnership between AIT and Lihe Technology (Hunan) Co., Ltd., established through a Memorandum of Understanding signed in November 2023. The launch represents the successful translation of a collaborative framework into a tangible platform for research and development.



Capacity Building Programs

1. Inaugural Summer Program for Zhejiang University Students on International Perspective and Global Competency for Sustainable Development

From July 1st to July 5th, 2025- AIT BRRC successfully organized a specialized summer program for a delegation of students and faculty from the College of Environmental and Resource Sciences at Zhejiang University (ZJU). The five-day program, designed to foster international perspective and competency development, provided an immersive experience in sustainable development and cross-cultural exchange in Thailand.

The program featured several core components, meticulously planned by the BRRC to ensure a rich learning experience: 1. Expert Lecture given by distinguished experts from AIT and Mahidol University on the latest research in environmental and resource sciences. 2. Field Visit to Mangrove Ecosystem including the Sirinart Rajini Mangrove Ecosystem Learning Center, the Phetchaburi coastal area. 3. Government Dialogue with officials from the Department of Marine and Coastal Resources of Thailand. 4. Cross-Cultural Immersion at AIT. 5. Group Task and Presentation.

The summer program underscores BRRC's commitment to strengthening academic collaboration and people-to-people bonds between Thailand and China, building a shared future for sustainable development by empowering the young generation.



2. “Appreciation of Civilizations Along the Silk Road” Global Competency Program for Students from Henan Normal University

From July 21–25, 2025, Bangkok, the Asian Institute of Technology’s Belt and Road Research Center (AIT BRRC) launched the “Appreciation of Civilizations Along the Silk Road” program, welcoming students from China’s Henan Normal University (HNU) for an intensive capacity-building initiative focused on global sustainability challenges, cross-cultural dialogue, and leadership development. Students engaged in a meticulously designed curriculum blending academic rigor with experiential learning, including Expert-Led Sustainability Workshops, International Exposure to UN ESCAP and Mahidol University, Yunus Center, Tours of AIT’s Smart Greenhouse, Digital Agriculture Lab, and Energy Park , Cross-Cultural Collaboration with International student from Thailand, India, Bangladesh, and Myanmar on group projects designing SDG-based solutions for global issues, Career Pathway Guidance from Chinese Government Scholarship recipients at AIT. This program underscores AIT’s role as an SDG hub in Asia and China’s commitment to global talent development. By merging theoretical knowledge with practical exchanges, it empowers students to become ambassadors for sustainable development and Silk Road cultural dialogue.



Completed Research Projects

“China-Thailand High Speed Railway Collaboration Project between AIT and CSCECTH”, 2022-2025

Project intro

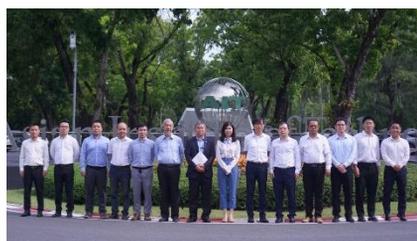
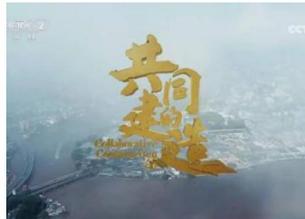
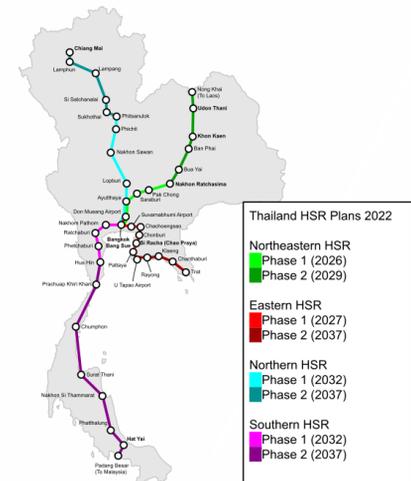
The China-Thailand High-Speed Rail (HSR) project, aims to strengthen connectivity between Thailand and China while integrating regional transportation networks across Southeast Asia. This project is designed to link Bangkok to Nong Khai on the Laos border, eventually connecting with the China-Laos railway and creating a continuous high-speed rail route from Kunming in southwest China through Laos and Thailand, down to Malaysia and Singapore. The project was proposed with the common goal to enhance regional economic and trade cooperation, reduce transportation costs, and facilitate the movement of goods and people.

The collaboration, formalized under a Memorandum of Agreement (MoA) signed in March 2022, leveraged AIT's academic and research expertise in three key fields: Structural Engineering (SE), Geotechnical & Earth Resources Engineering (GTE), and Construction, Engineering, and Infrastructure Management (CEIM). The research collaboration aims to achieve research outcomes through the joint efforts of AIT, CSCECTH, and BTRC. These outcomes could include research papers, innovative technologies, experimental findings, or any other relevant contributions to the respective fields of study.

On October 7, 2025 – the closure meeting for its research collaboration with China State Construction Engineering (Thailand) Co. Ltd. (CSCECTH) was held in AIT. The meeting marked the culmination of a fruitful partnership aimed at supporting the landmark Thailand-China High-Speed Rail (HSR) project.

Project Achievements:

- 2 Journal papers have been published;
- 3 Conference papers have been published;
- Certified FIDIC Training for engineers;
- Series of test reports have been done and submitted;



Networking & Partnership

Visiting from CAS Bangkok and Institute of Oceanology, CAS on January 15, 2025



This visit and meeting are to explore the possibility of research collaboration in Thailand, regarding marine resources and environment.

Visiting from Chinese Research Academy of Environmental Sciences(CRAES) and Strategy 613 on January 17, 2025



A preliminary discussion on research works related to air pollution and water pollution done by AIT and CRAES, current air pollution project in Bangkok by CRAES, Environmental protection-related initiatives of BRRCC, plans for celebrating activities for the 50th anniversary of China-Thailand diplomatic relations and potential areas for collaboration in the future, were carried out in the meeting.

Visiting from China Southwest Architectural Design and Research Institute Co. Ltd. (CSWADI) on January 22, 2025



A preliminary discussion focusses on “Urbanization and Industrial Park development” in Thailand, Collaboration between AIT & CSCEC on Thai-China High Speed Railway Project, and potential areas for collaboration in the future.

Visiting from Development Research Institute (EDRI), China South Power Grid (CSG) on February 25, 2025



This visit and meeting laid a foundation for future collaboration between the two sides in energy connectivity and green transition across southeast Asia and South Asia, through activities including research projects, capacity building programs, expert exchanges, etc. The intension and initiative for cooperation fit well with the mission of Belt and Road Initiative (BRI) and the Lancang-Mekong Cooperation (LMC) in the regions, which will be facilitated by the strengths of the two institutions.



Visiting from Kunming University of Science and Technology on April 29th, 2025



A preliminary discussion focusses on future collaborations on talent cultivation, professional development and management, technology and verification standard transfer, capacity building program collaboration for practitioners in engineering, graduate level exchange programs, etc., were carried out between the two sides. Since the two institutions overlap in many areas and aspects, both sides hold high hopes for future solid cooperations.

Visit from General Institute of Water Resources and Hydropower Planning and Design (GIWP), China on July 24th, 2025



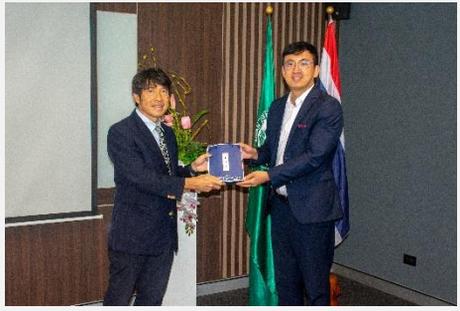
The discussions covered a wide range of topics, including integrated water resources management, climate resilience, and the application of innovative technologies in hydropower planning and design. This engagement marks a significant step towards establishing a strategic partnership between AIT and GIWP, promising to leverage both institutions' expertise to contribute to sustainable water resources management in the region and beyond.

Visiting from China Renewable Energy Engineering Institute (CREEI) on July 25th, 2025



The AIT-CREEI alliance, formalized in 2021, has driven critical initiatives such as policy frameworks for ASEAN clean energy transitions and joint contributions to the China-ASEAN Clean Energy Week. The 2024 meeting further solidified commitments to establishing cooperative labs and advancing AIT's pioneering initiatives in sustainable development. This visit aims to translate these ambitions into actionable projects, with BRRC spearheading coordination.

Visiting from Yunnan Normal University, China on August 4th, 2025



Key topics explored in the meeting include joint research projects, joint academic programs, potential student and faculty exchange programs, opportunities for co-hosting workshops, seminars, or conferences, leveraging the belt and road research center as a platform for joint initiatives. The visit marks a significant step in fostering a concrete partnership between Yunnan Normal University and AIT, facilitated through the Belt and Road Research Center. The shared research interests and commitment to sustainable development discussed today lay a strong foundation for future collaborative endeavors in education, research, and innovation.

Hosting Chinese Alumni Delegation on September 8, 2025



The meeting served as a dynamic forum for alumni, hold influential positions across various sectors, to share their insights and recommendations on AIT's future development prospects in the region. The delegation also reaffirmed their commitment to providing continuous support and leveraging their extensive professional networks to contribute to AIT's growth and its deepening engagement in region development.

Visiting from Chengdu Center of China Geological Survey (CC-CGS) on September 11, 2025



The core agenda focused on practical collaboration in talent development and technological innovation. Both parties discussed concrete steps to advance the construction of the China-ASEAN Geosciences Information Big Data Platform. Specific proposals included inviting AIT faculty to contribute to the platform's development, establishing scholar exchange programs, and exploring joint research projects.

Visiting from International Research Center of Big Data for Sustainable Development Goals (CBAS), CAS on October 20, 2025



The discussions centered on establishing a robust framework for partnership. Key areas of collaboration identified included joint research projects, faculty and student exchange programs, co-supervision of graduate students, and the organization of joint seminars and workshops. This partnership aims to synergize AIT's regional expertise and educational mission with CBAS's cutting-edge capabilities in big Earth data analysis and SDG monitoring, thereby significantly enhancing research capacity and generating data-driven insights for sustainable development across Southeast Asia.

MoU with to Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences (RECCS/CAS) on October 29, 2025



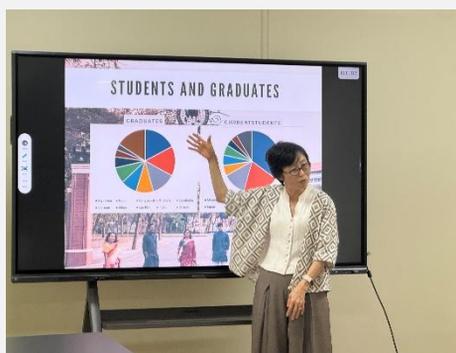
On October 29, 2025, President Prof. Pai-Chi Li and Dr. Wenchao Xue, Director of the Belt and Road Research Center (BRRC), paid a strategic visit to the Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences (RECCS/CAS) in Beijing, as a significant step to deepen Sino-Thai scientific cooperation. The cornerstone of the visit was the formal signing of a Memorandum of Understanding (MOU) between AIT and RECCS/CAS, establishing a framework for long-term collaboration in environmental science and sustainable development. This institutional agreement marks a pivotal expansion of AIT's network with leading Chinese research academies.

Visiting from Research Center for Eco-Environmental Sciences (RCEES), CAS on December 11th, 2025



Discussions focused on identifying key synergies in areas such as joint research initiatives, scholar and student exchanges, and technology transfer. This dialogue effectively connected AIT's interdisciplinary expertise in sustainable development with RCEES's scientific prowess and the industry partners' applied innovation.

Facilitating Meeting for AIT Faculty with Visiting Scholar from Henan Normal University on December 12th, 2025



BRRC Successfully Concludes Visiting Fellowship for Henan Normal University Scholars for a visiting term of 6 months in December 2025. A highlight of their tenure was the organization of thematic discussions with AIT's Gender and Development Studies (GDS) program and faculties including Professor Kyoko Kusakabe and Dr. Duanghathai Buranajaroenkij, on December 12th, 2025, where they exchanged expertise and explored interdisciplinary approaches to common development challenges. The conclusion of this fellowship marks not an end, but a significant milestone in the sustained academic partnership between AIT and Henan Normal University. It strengthens institutional ties and identifies clear pathways for continued collaboration, including potential student exchanges and joint research initiatives.

PARTICIPATION & ENGAGEMENT

1. The 9th Digital Belt and Road Conference (DBAR 2025)

From June 8–11, 2025, Dr. Wenchao Xue participated in the 9th Digital Belt and Road Conference (DBAR 2025), in Chengdu, China. The conference, hosted by the Digital Belt and Road Program (DBAR), the Aerospace Information Research Institute of the Chinese Academy of Sciences (AIRCAS), and Chengdu University of Technology.

Dr. Wenchao was appointed Co-Chair of the DBAR Task Force on “Big Earth Data in Support of the Sustainable Development Goals in Southeast Asia (DBAR-SEA),” reflecting a significant milestone in AIT’s regional engagement in digital sustainability research.

On June 10, Dr. Xue co-chaired a side event titled “Advancing Sustainability through Digital Science and Innovation in Southeast Asia,” and presented her work on “Leveraging Big Earth Data for SDG Assessment at the Provincial Scale in Thailand.” The session marked the official launch of the DBAR-SEA Task Force, setting the stage for strengthened collaboration and capacity building across the region.





2. Thailand Research Expo 2025

Bangkok, 17 June 2025 – Dr. Wenchao Xue, Director of the Belt and Road Research Center (BRRC) attended the high-level forum “Evaluating Thailand’s Path to Sustainable Development through Big Earth Data”, held at Centara Grand, Bangkok, co-organized by the National Research Council of Thailand (NRCT) and the DBAR International Center of Excellence – Bangkok, commemorated the 50th anniversary of diplomatic ties between Thailand and China.

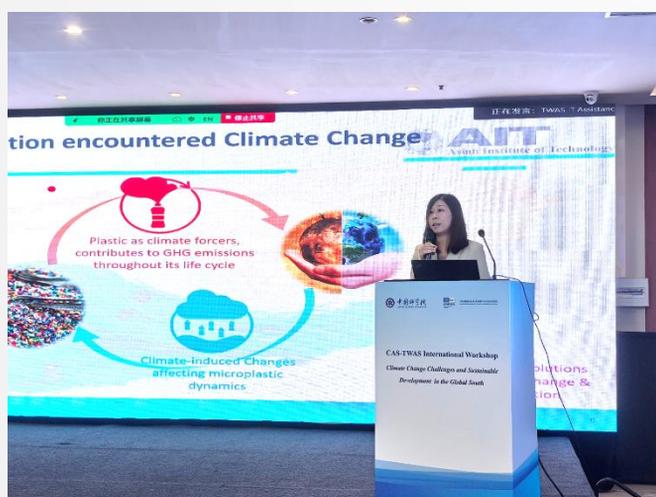
Dr. Wenchao presented a collaborative research project developed with Mahidol University and SEAMEO SEARCA, which applies Big Earth Data to assess progress on the Sustainable Development Goals (SDGs) in Thailand. The meeting concluded with a clear consensus: leveraging Big Earth Data supported by regional cooperation, open data sharing, and capacity building is essential to accelerate measurable, inclusive progress toward the 2030 Agenda.



3. CAS-TWAS International Workshop on “Climate Change Challenges and Sustainable Development in the Global South”

On June 26, 2025 – Dr. Wenchao Xue Director of the Belt and Road Research Center (BRRC), was invited to speak at the CAS-TWAS International Workshop on “Climate Change Challenges and Sustainable Development in the Global South,” in Beijing, China. As a member of the UNESCO TWAS Young Affiliates, Dr. Wenchao represented AIT in contributing to high-level discussions on environmental resilience in the Global South, with a presentation titled “Interlinking Climate Change and Microplastic Pollution: Impacts on Urban Water Resilience in Thailand”.

Dr. Wenchao highlighted ongoing initiatives across Southeast Asia focused on generating scientific evidence to support policy and regulatory development for microplastic pollution management. Her participation underscores AIT’s commitment to addressing pressing global environmental challenges through research, regional collaboration, and capacity building. The workshop, co-organized by the Chinese Academy of Sciences (CAS) and The World Academy of Sciences (TWAS), provided a dynamic platform for fostering South-South cooperation and knowledge exchange to support sustainable development in climate-vulnerable regions.



4. UN Youth Energy Competition in Bangkok

On September 2nd, 2025, Dr. Wenchao Xue, Director of the Belt and Road Research Center (BTRC) , AIT, served as a judge for the global final of the ISETS-ESCAP Global Competition of Youth Voice on Energy Transition. The event, a key part of the United Nations Asia-Pacific Energy Week in Bangkok, showcased innovative proposals from young leaders worldwide aimed at advancing sustainable energy solutions.

In her role, Dr. Xue provided expert evaluations and insights on the participants' projects, emphasizing the critical importance of youth innovation in driving the global energy transition. Her participation highlights BTRC's active commitment to fostering international dialogue and supporting the next generation of thinkers in shaping sustainable development pathways.



5. ANSO General Conference 2025 and the 4th ANSO General Assembly in Beijing

From October 28 to 31, 2025, The Asian Institute of Technology (AIT), represented by President Prof. Pai-Chi Li and Dr. Wenchao Xue, Director of the Belt and Road Research Center (BTRC), participated in the ANSO General Conference 2025 and the 4th ANSO General Assembly in Beijing. The event gathered scientists, policymakers, and representatives from leading scientific organizations to discuss collaborative strategies for tackling shared challenges in sustainability and innovation. This engagement underscores AIT's continued commitment to being at the forefront of international scientific cooperation and its strategic role within the ANSO network since joining as an international organization member in 2020.



6. The 20th CAS-TWAS-WMO International Climate Forum

From October 27 to 29, 2025, Dr. Wenchao Xue, Associate Professor at the Asian Institute of Technology (AIT) and Director of the Belt and Road Research Center (BRRC), actively participated in the 20th CAS-TWAS-WMO International Climate Forum held in Beijing. The forum, co-sponsored by the Chinese Academy of Sciences (CAS), The World Academy of Sciences (TWAS), and the World Meteorological Organization (WMO), convened over 150 scholars from 21 countries. During the forum, Dr. Wenchao Xue delivered a scholarly presentation titled "Spatiotemporal Simulation of Non-Point Source Pollution under Changing Climate and Land Surface Processes: A Cross-Basin Study between China and Thailand." Furthermore, Dr. Xue contributed to the leadership of the event by co-chairing the specialized session on "Prediction and Application," facilitating in-depth discussions among international experts. Her dual role as a presenter and session chair underscores the BRRC's commitment to advancing substantive, solutions-oriented research dialogue within the framework of Belt and Road scientific cooperation on climate resilience and sustainable development.



Center Work Summary 2025

In 2025, the AIT Belt & Road Research Center (BRRC) has evolved from a hub of collaboration into a visionary catalyst for sustainable transformation. We have redefined partnership, moving beyond traditional research to forge a dynamic ecosystem where science, policy, and industry converge. Our pioneering work in leveraging Big Earth Data for the SDGs, confronting transboundary microplastic pollution, and incubating the Belt and Road Environmental Innovation Lab exemplifies a new model of actionable science. These initiatives are not merely projects; they are the foundational building blocks for a more resilient and data-empowered future across the region.

Our vision is crystallizing through an ever-expanding constellation of strategic alliances. This year, we have intentionally woven a stronger tapestry of connectivity with leading academic, governmental, and private institutions across China and Southeast Asia. Each signed MoU and collaborative forum—from green energy transitions with Yunnan to advanced hydrological planning with GIWP—represents a deliberate step toward a shared destiny. We are constructing more than a network; we are nurturing a living community of innovators and leaders committed to co-creating solutions for our planet's most pressing environmental and developmental challenges.

Looking forward, BRRC is positioned at the forefront of shaping tomorrow's sustainability agenda. Our leadership on global stages, from the Digital Belt and Road Conference to UN energy forums, allows us to amplify regional voices and inject cutting-edge research into international policy dialogues. We are committed to empowering the next generation, having dedicated our expertise to judging youth innovations and mentoring scholars who will carry this vision forward. As we close 2025, we do not see an end, but a launching pad—a moment of momentum from which we will accelerate our journey toward a greener, more interconnected, and prosperous world for all.



Contact us

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