



REPORT

TISTR International Conference on Air Pollution, Perspective, Prediction, Prevention, and Control

31 August 2023, MR103 Room, Queen Sirikit National Convention Center, Bangkok, Thailand
(Hybrid Event)

[In Conjunction with ASEAN Sustainable Energy Week 2023, 30 August - 1 September 2023]

BACKGROUND:

As the world's population increases, natural resources are consumed accordingly to support human activities and lead to damage to the environment. One of the most concerns nowadays is climate change and air pollution, especially in urban areas.

Particulate matter, especially PM 2.5 is generated primarily from combustion including open fireplaces, car engines, and coal- or natural coal-fired power plants. It is harmful ingredient in polluted air, which has the greatest impact on human health as its size is small enough to bypass human lungs and can even penetrate the bloodstream. People living in high PM 2.5 level, has more heart attack, depressed lung function, worse asthma, and overall die younger. Statistics show that air pollution is responsible for more than 7 million deaths annually.

Like other regions, ASEAN is also facing PM 2.5 problem. Each member establishes their own policy, strategy option, regulatory mechanisms, and good practices to tackle this problem. However, this problem still exists and challenges to eradicate. In this regard, it is a good opportunity for AESAN to share their knowledge and to explore each another country from policy to practices and seek cross-border collaboration to solve the problem through TISTR International Conference on Air Pollutions Perspective, Prediction, Prevention, and Control.

OBJECTIVES:

- To share information about policy, strategy option, regulatory mechanisms, and good practices to tackle PM 2.5 problem.
- To explore and learn existing practices and technologies for prediction, prevention, and control of PM 2.5.
- To strengthen regional cooperation among participating member states to jointly combat the future PM 2.5 crisis.

AGENDA:

**TISTR International Conference on Air Pollution,
Perspective, Prediction, Prevention, and Control**

31 August 2023, 09:30 am-03:40 pm (Thailand Time), MR103 Room,

Queen Sirikit National Convention Center, Bangkok, Thailand (Hybrid Event)

[In Conjunction with ASEAN Sustainable Energy Week 2023, 30 August - 1 September 2023]

Opening Session		
09.30-09.50 am	Welcome Address	Dr. Pratip Vongbandit Deputy Governor, R&D Group for Sustainable Development, Thailand Institute of Scientific and Technological Research (TISTR), Thailand
	Opening Remarks	Dr. Chutima Eamchotchawalit Governor, Thailand Institute of Scientific and Technological Research (TISTR), Thailand
	Group Photo	On-site and online
09.51-10.10 am	Keynote Speaker Perspective on Air Pollution Management of Asia-Pacific Region	Dr. Preeti Soni Head, Asian and Pacific Centre for Transfer of Technology (APCTT), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
Session I: Country Perspectives on Policy, Strategy Option, Regulatory Mechanisms, and Good Practices to Tackle PM 2.5 Problem and Potential Collaboration		
10.11 am-12.10 pm (30 mins including Q&A/each speaker)	Country Perspectives on Policy, Strategy Option, Regulatory Mechanisms, and Good Practices to Tackle PM 2.5 Problem - Thailand - Indonesia - Vietnam	Ms. Siwaporn Rungsiyanon, Expert on Air Quality and Noise Management, Pollution Control Department (PCD), Thailand Dr. Sasa Sofyan Munawar, Head of Research Center for Environmental and Clean Technology, National Research and Innovation Agency (BRIN), Indonesia Dr. Hoang Duong Tung,

	Strengths and Challenges of City-level Action Plan for Adopting Technologies for Air Pollution Control in Bangkok	President of Vietnam Clean Air Partnership (VCAP) and Former Deputy General Director of the Vietnam Environmental Administration (VEA), Ministry of Natural Resources and Environment (MONRE) Assoc. Prof. Dr. Ekbordin Winijkul, School of Environment, Resources, and Development, Asian Institute of Technology (AIT), Thailand and National Consultant of Korea-ESCAP Cooperation Fund (KECF) Air Pollution Control Project
Session II: Technology and Innovation to Prediction, Prevention, and Control		
01.30-03.30 pm (30 mins including Q&A/each speaker)	Weather Research Forecast Model and Utilization for Reduction of PM 2.5 Problem Space-based PM 2.5 Monitoring Technology for Supporting Data to Relevant Organization on Prediction, Prevention, and Control Monitoring and Sources Identification of Air Pollution and Case Study Regulatory Air Monitor and Sensor Data Communication: Public Hazard Forecasting During Emerging Wildfire Events	Dr. Sakda Tridech, Director of Air Quality and Noise Innovation Sub-division, Pollution Control Department (PCD), Thailand Ms. Kanjana Koedkurang, Geoinformatics Specialist, Geoinformatics and Space Technology Development Agency (Public Organization): GISTDA, Thailand Ms. Soticha Kitarsa, Research Officer, Expert Centre of Innovative Clean Energy and Environment, R&D Group for Sustainable Development, Thailand Institute of Scientific and Technological Research (TISTR), Thailand Dr. Evan Bing, Atmospheric Measurement Manager, Northwest Clean Air Agency
Closing Session		
03.31-03.40 pm	Closing Remarks	Dr. Pratip Vongbandit, Deputy Governor, R&D Group for Sustainable Development, Thailand Institute of Scientific and Technological Research (TISTR), Thailand

POSTER:

TISTR International Conference on
Air Pollution, Perspective,
Prediction, Prevention,
and Control

31 August 2023

Room MR103
QSNCC, Bangkok, Thailand

09:30 am - 03:40 pm
Time: (Thailand Time, GMT+7)

09:30 am - 09:50 am
Welcome Address & Opening Remark

09:50 am - 10:10 pm
Keynote Speaker
Perspective on Air Pollution Management of Asia-Pacific Region

10:10 am - 12:10 pm
Session I: Country Perspectives on Policy, Strategy Option, Regulatory Mechanisms, and Good Practices to Tackle PM 2.5 Problem and Potential Collaboration

- Country Perspectives on Policy, Strategy Option, Regulatory Mechanisms, and Good Practices to Tackle PM 2.5 Problem from Thailand, Indonesia, Malaysia and Vietnam
- Collaboration Opportunity on Air Quality Management and Emission Reduction and Control of PM 2.5 for Asian Countries

01:30 PM - 03:30 PM
Session II: Technology and Innovation to Prediction, Prevention, and Control

- Weather Research Forecast Model and Utilization for Reduction PM 2.5 Problem
- Space-based PM 2.5 Monitoring Technology for Supporting Data to Relevant Organization on Prediction, Prevention and Control
- Regulation and Promotion Mechanisms Package for Good Air Quality Emission of Industries
- Monitoring and Sources Identification of Air Pollution and Case Study
- Technology and Innovation to Prediction, Prevention, and Control - the Context of the United States

Assoc. Prof. Dr. Ekbordin Winijukul
School of Environment, Resources, and Development, Asian Institute of Technology (AIT), Thailand and National Consultant of KEPC Air Pollution Control Project

Dr. Pratip Vongbandit
Deputy Governor, R&D for Sustainable Development, Thailand Institute of Scientific and Technological Research (TISTR), Thailand

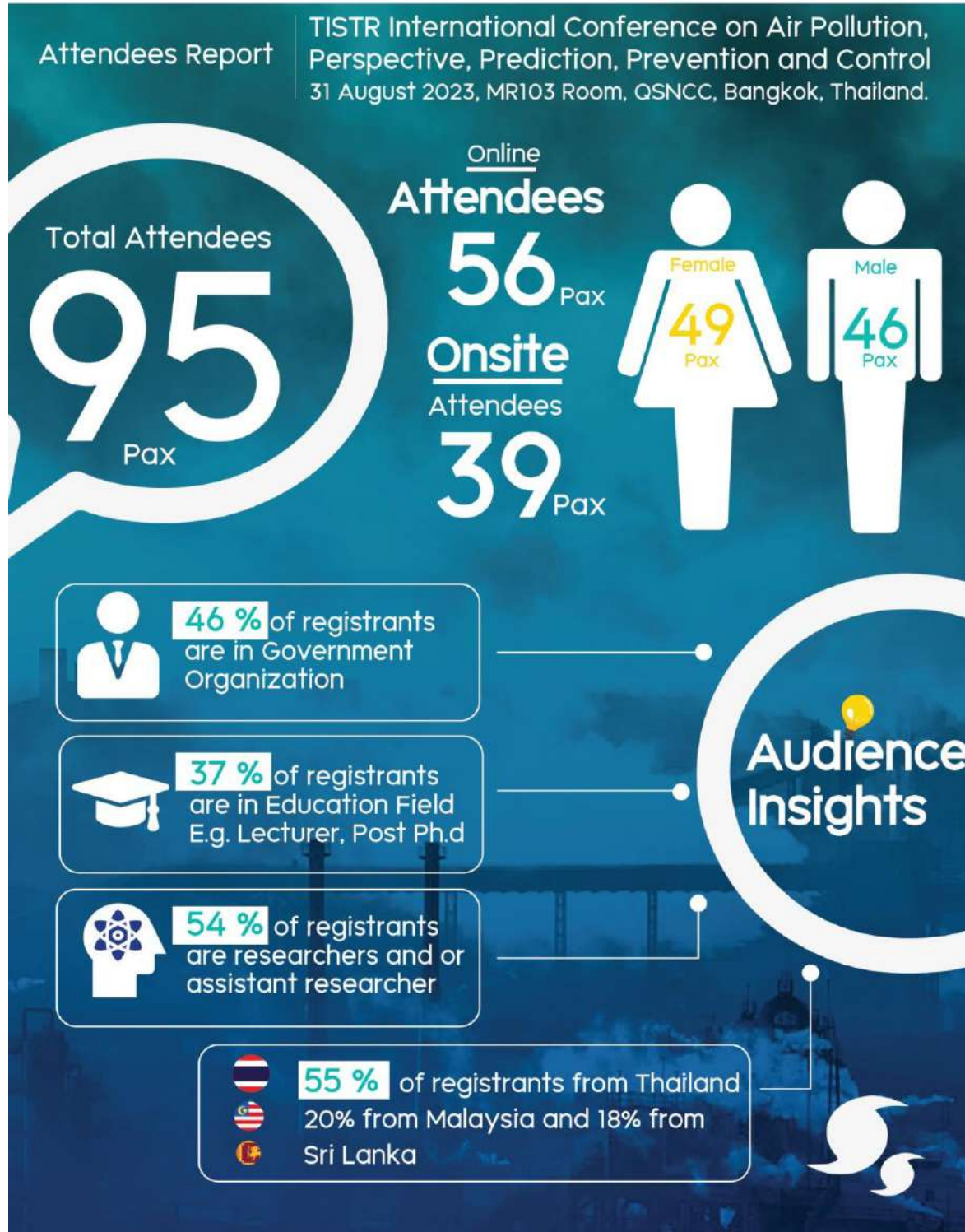
Dr. Chutima Eamchotehawalit
Governor, Thailand Institute of Scientific and Technological Research (TISTR), Thailand

Dr. Preeti Soni
West, Asian and Pacific Centre for Transfer of Technology (APCTT), United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

PARTICIPANTS:



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LIST OF PARTICIPANTS:

Governmental Organizations

- Ministry of Higher Education, Science, Research and Innovation
- Thailand Institute of Scientific and Technological Research (TISTR)
- Geo-Informatics and Space Technology Development Agency (GISTDA)
- Electricity Generating Authority of Thailand (EGAT)
- Pollution Control Department
- Department of Land Transport
- Thai Credit Guarantee Corporation
- Jiangsu Industrial Technology Research Institute (JITRI)
- Standard and Industrial Research Institute of Malaysia (SIRIM)
- Industrial Technology Institute, Sri Lanka
- The Asian and Pacific Centre for Transfer of Technology (APCTT)
- British Embassy

Educational Institutions

- Asian Institute of Technology
- Thammasat University
- Chulalongkorn University
- Walailak University
- National Institute of Development Administration (NIDA)
- Monash University

Private Sectors

- Toyota Daihatsu Engineering & Manufacturing (TDEM)
- TPI Polene Power Public Company Limited – Renewable Energy
- Thaipol Energy Services Company Limited
- SGS (Thailand) Co., Ltd.
- Index International Group Public Company Limited

Others

- The Truth International
- United Nations
- Samudhabhipat Foundation

MEETING SUMMARY:

Thailand Institute of Scientific and Technological Research (TISTR) is an implementing organization, which conducts the project entitled “Enhanced capabilities to adopt innovative technologies for city air pollution control in selected countries of the Asia-Pacific”, in cooperation with Asian and Pacific Centre for Transfer of Technology (APCTT), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). The project is funded by Korea-ESCAP Cooperation Fund (KECF), Republic of Korea.

In this connection, TISTR organized TISTR International Conference on Air Pollution, Perspective, Prediction, Prevention, and Control on 31 August 2023, during 09:30 am-03:40 pm in order to share perspectives towards the air pollution control for the good quality of life.

The conference began with the welcome address by Dr. Pratip Vongbandit, Deputy Governor of R&D Group for Sustainable Development, TISTR, and opening remarks by Dr. Chutima Eamchotchawalit, Governor of TISTR, followed by the presentation on Perspective on Air Pollution Management of Asia-Pacific Region by the keynote speaker.

There were two sessions, which were 1) Country Perspectives on Policy, Strategy Option, Regulatory Mechanisms, and Good Practices to Tackle PM 2.5 Problem and Potential Collaboration from Thailand, Indonesia, and Vietnam speakers in the morning and 2) Technology and Innovation to Prediction, Prevention, and Control in the afternoon. Finally, we ended the conference with the closing remarks.

In this regard, Dr. Preeti Soni, Head of the APCTT, UNESCAP participated as the keynote speaker in the conference to present on the Perspective on Air Pollution Management of Asia-Pacific Region.

Representatives from many organizations also attended the meeting to exchange their views and missions related to air pollution issues, in terms of policies, technologies, and practices as details following:

SESSION 1: Country Perspectives on Policy, Strategy Option, Regulatory Mechanisms, and Good Practices to Tackle PM 2.5 Problem

1st speaker: Ms. Siwaporn Rungsiyanon, Expert on Air Quality and Noise Management, Pollution Control Department, Thailand to share the perspectives in term of Thailand.

2nd speaker: Dr. Sasa Sofyan Munawar, Head of Research Center for Environmental and Clean Technology and Dr. Widiatmini Sih Winanti from National Research and Innovation Agency (BRIN), Indonesia to share the perspectives on policy, strategy option, regulatory mechanisms, and good practices to tackle PM 2.5 problem in Indonesia.

3rd speaker: Dr. Hoang Duong Tung, President of Vietnam Clean Air Partnership (VCAP) and Former Deputy General Director of the Vietnam Environmental Administration (VEA), Ministry of Natural Resources and Environment (MONRE) to share the perspectives on policy, strategy option, regulatory mechanisms, and good practices to tackle PM 2.5 problem in Vietnam.

4th speaker: Assoc. Prof. Dr. Ekbordin Winijkul, School of Environment, Resources, and Development, Asian Institute of Technology (AIT), Thailand and National Consultant of Korea-ESCAP Cooperation Fund (KECF) Air Pollution Control Project to give a presentation on the Strengths and Challenges of City-level Action Plan for Adopting Technologies for Air Pollution Control in Bangkok.

SESSION 2: Technology and Innovation to Prediction, Prevention, and Control

5th speaker: Dr. Sakda Tridech, Director of Air Quality and Noise Innovation Sub-division, Pollution Control Department to make a presentation on “Weather Research Forecast Model and Utilization for Reduction PM 2.5 Problem”.

6th speaker: Ms. Kanjana Koedkurang, Geo-informatics Specialist, Geo-Informatics and Space Technology Development Agency (Public Organization) or GISTDA, Thailand, Thailand to present on “Space-based PM 2.5 Monitoring Technology for Supporting Data to Relevant Organization on Prediction, Prevention, and Control”.

7th speaker: Ms. Soticha Kitarsa, Research Officer from the Expert Centre of Innovative Clean Energy and Environment, R&D Group for Sustainable Development, TISTR, Thailand to present on “Monitoring and Sources Identification of Air Pollution and Case Study”.

8th speaker: Dr. Evan Bing, Atmospheric Measurement Manager, Northwest Clean Air Agency, United States to present on “Regulatory Air Monitor and Sensor Data Communication: Public Hazard Forecasting During Emerging Wildfire Events”.

SHARING SESSION: Perspectives Towards Air Pollution Control in terms of Policies and Technology by Stakeholders

We were open for questions from on-site and online participants. A sharing session on perspectives towards air pollution control in Thailand, considering policies and technology, would involve inputs from various stakeholders, including government officials, industry representatives, and general public. Each group shared their perspectives on how to address this critical issue. Here are different viewpoints from the stakeholders:

1. Government Officials:

- **Regulatory Framework:** Government officials, particularly those from the Ministry of Natural Resources and Environment emphasized the importance of strong regulatory frameworks. They would argue that stricter emissions standards, monitoring systems, and enforcement mechanisms were essential to reduce air pollution.
- **Incentives:** They also discussed the importance of providing incentives to encourage industries to adopt cleaner technologies and practices. Tax breaks, subsidies, and grants could be part of their strategy.
- **Public Awareness:** Officials emphasized the need for public education, awareness, and campaigns to engage citizens in air quality monitoring and control efforts.

2. Industry Representatives:

- **Compliance and Innovation:** Industry stakeholders acknowledged their roles in pollution and emphasized their commitments to comply with regulations. They showcased technological innovations aiming to reduce emissions.

- **Balancing Economic Growth:** They expressed concerns about the economic impact of stringent regulations and advocated for a balanced approach that allowed businesses to grow while reducing pollution.
- **Collaboration:** Some industry leaders emphasized the importance of collaboration between government and businesses to find practical solutions.

3. General Public:

- **Health Concerns:** The general public was likely to be most concerned about their health and families. They urged for immediate action to improve air quality for better living conditions.
- **Behavioral Changes:** The citizens argued for changes in personal behavior, such as reducing car usage or adopting energy-efficient appliances as part of a broader solution.
- **Support for Policies:** The public expressed support for governmental policies that aimed to control air pollution, but they also demanded transparency and accountability.

In a sharing session, the key to success would be finding common ground among these perspectives. Achieving a balance between environmental protection, economic growth, and public health was challenging as it required collaboration, innovation, and a long-term commitment from all stakeholders. Additionally, technology would play a crucial role, not only in monitoring and controlling pollution but also in finding sustainable energy solutions to reduce emissions from various sources.



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ASEAN SUSTAINABLE ENERGY WEEK

Survey analysis

Responder Demographic



50% of responders are Female



80% of responders are institution / Academic



65% of responders are from Thailand



PRESS RELEASE IN THAI



วว. / พันธมิตรอาเซียน ร่วมขับเคลื่อนนโยบาย แผนปฏิบัติการระดับเมือง
นำเทคโนโลยี นวัตกรรม ควบคุมมลพิษทางอากาศภูมิภาคเอเชียแปซิฟิก



ดร.ชุติมา เอี่ยมโชติชวลิต ผู้ว่าการ สถาบันวิจัยวิทยาศาสตร์และเทคโนโลยีแห่งประเทศไทย (วว.) กระทรวงการอุดมศึกษา วิทยาศาสตร์ วิจัยและนวัตกรรม (อว.) เป็นประธานเปิดการประชุม TISTR International Conference on Air Pollutions, Perspective, Prediction, Prevention and Control (In conjunction with ASEAN Sustainable Energy Week 2023, ASEW) ซึ่งได้รับเกียรติจาก Dr. Preeti Soni Head, Asian and Pacific Centre for Transfer of Technology (APCTT), United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) เป็น Keynote Speaker ในหัวข้อ Perspective on Air Pollution Management of Asia-Pacific Region โดยมี ดร.ประทีป วงศ์บัณฑิต รองผู้ว่าการวิจัยและพัฒนาด้านพัฒนาอย่างยั่งยืน วว. กล่าวต้อนรับผู้เข้าร่วมประชุมและวิทยากรผู้ทรงคุณวุฒิจาก วว. กรมควบคุมมลพิษ สำนักงานพัฒนาเทคโนโลยีอวกาศและภูมิสารสนเทศ (องค์การมหาชน) Asian Institute of Technology และผู้ทรงคุณวุฒิจาก เวียดนาม อินโดนีเซีย สหรัฐอเมริกา โอภาสนี้ นายสมพร มั่งมี กรรมการ วว. ดร.สุวิทย์ อัจฉริยะเขต ผอ.ศูนย์เชี่ยวชาญนวัตกรรมหุ่นยนต์และเครื่องจักรกลอัตโนมัติ วว. เข้าร่วมกิจกรรมด้วย ภายใต้การดำเนินงานของ วว. ที่เป็นหน่วยงานหลักของประเทศไทยดำเนินโครงการ Enhanced capabilities to adopt innovative technologies for city air pollution control in select countries of the Asia-Pacific ร่วมกับ Asian and Pacific Centre for Transfer of Technology (APCTT), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) โดยการสนับสนุนจาก Korea-ESCAP Cooperation Fund (KECF) มีวัตถุประสงค์เพื่อขับเคลื่อนนโยบายและแผนปฏิบัติการระดับเมือง ให้สามารถนำ เทคโนโลยี นวัตกรรม มาใช้ในการควบคุมมลพิษทางอากาศในภูมิภาคเอเชียแปซิฟิก แลกเปลี่ยนความรู้ ข้อคิดเห็น เกี่ยวกับช่องว่าง ความจำเป็นของเทคโนโลยีในการควบคุมมลพิษทางอากาศ (วันที่ 31 ส.ค. 2566 ณ ห้อง MR 103 ศูนย์การประชุมแห่งชาติสิริกิติ์ และรูปแบบไฮบริด)

นำเสนอข่าวโดย กองประชาสัมพันธ์ สำนักสื่อสารองค์กร วว. โทร. 0 2577 9360 E-mail : pr@tistr.or.th Line@tistr IG : tistr_jg YouTube /TKTOK : @tistr2506

English Press of the TISTR International Conference on Air Pollution, Perspective, Prediction, Prevention, and Control

On 31 August 2023, Thailand Institute of Scientific and Technological Research (TISTR), affiliated by the Ministry of Higher Education, Science, Research and Innovation (MHESI) in cooperation with the Asian and Pacific Centre for Transfer of Technology (APCTT), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) organized the TISTR International Conference on Air Pollution, Perspective, Prediction, Prevention, and Control in conjunction with ASEAN Sustainable Energy Week 2023 at Queen Sirikit National Convention Center in a form of a hybrid conference.

On this occasion, Dr. Chutima Eamchotchawalit, Governor of TISTR addressed the opening remarks, Dr. Pratip Vongbandit, Deputy Governor of R&D Group for Sustainable Development delivered the welcome speech, Mr. Somporn Mangmee, Board Member of TISTR and Dr. Suwit Auchariyamet, Director of the Expert Centre of Innovative Industrial Robotics and Automation, TISTR were eager to join the conference.

In this regard, we had the honour from Dr. Preeti Soni, Head of the APCTT, UNESCAP to be the keynote speaker, presented on the Perspective on Air Pollution Management of Asia-Pacific Region. Additionally, we had invited speakers from National Research and Innovation Agency (BRIN), Indonesia, Vietnam Clean Air Partnership (VCAP), Northwest Clean Air Agency, USA, and relevant Thai organizations namely Pollution Control Department, Asian Institute of Technology, Geo-Informatics and Space Technology Development Agency (Public Organization), and Expert Centre of Innovative Clean Energy and Environment, TISTR presented on Session 1: Country Perspectives on Policy, Strategy Option, Regulatory Mechanisms, and Good Practices to Tackle PM 2.5 Problem and Potential Collaboration and Session 2: Technology and Innovation to Prediction, Prevention, and Control of PM 2.5.

TISTR in collaboration with APCTT have implemented the project entitled “Enhanced Capabilities to Adopt Innovative Technologies for City Air Pollution Control in Select Countries of the Asia-Pacific”, which is funded by the Republic of Korea. The objective of the project is to strengthen policies and city-level action plans to facilitate the adoption of innovative technologies for air pollution control in the Asia-Pacific region. The project aims to improve the availability of technical knowledge regarding innovative technologies, good practices, and better understanding of technology needs and gaps for air pollution control in the selected cities namely Dhaka (Bangladesh), Gurugram (India), and Bangkok (Thailand).

PRESS RELEASE in MEDIA

-  **BRANDBIZNEWS** | 01 ก.ย. 2566
<http://brandbiznews.com/news/detail/ccb027bd-a607-40bc-9ba8-f2a2b4a7efa2>
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<https://lensnews21.com/v/6328>
-  **TISTR.OR** | 31 ส.ค. 2566
<https://www.tistr.or.th/PressCenter/news/7686/>
-  **RYT9** | 31 ส.ค. 2566
<https://www.ryt9.com/s/prg/3449849>
-  **THAILAND.SHAFQAQA** | 31 ส.ค. 2566
<https://thailand.shafaqna.com/TH/AL/1817227>
-  **THAILAND4** | 31 ส.ค. 2566
<https://www.thailand4.com/th/MFOK>
-  **NEWSWIT** | 31 ส.ค. 2566
<https://www.newswit.com/th/ifpuxmpn3wzatadgthvo9aal5wgti6ev>
-  **THAI PR** | 31 ส.ค. 2566
<https://www.thaipr.net/manufacturing/3377158>
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-  **Facebook: TISTRINTER** | 6 September 2023
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-  **TISTR English Official Website** | 6 September 2023
<https://www.tistr.or.th/tistrinter/news/783/>

PHOTO ALBUM







