ASEAN IVO Forum

The ASEAN IVO Forum is an annual event providing an opportunity for all ASEAN IVO members to exchange ideas, discuss R&D topics and coordinate projects. Each year, the ideas exchanged lead to new project teams forming in time for the following Call for Proposals. The Forum is hosted in a different ASEAN country each year.

Past Forums:

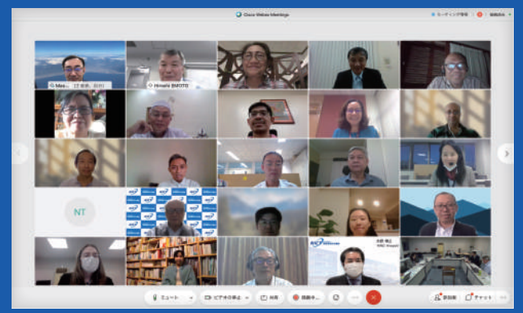
2020	November 25 - January 11, Online
2019	November 20-21, Manila, The Philippines
2018	November 27-28, Jakarta, Indonesia
2017	November 23-24, Bandar Seri Begawan, Brunei Darussalam
2016	November 24, Hanoi, Vietnam
2015	November 26, Kuala Lumpur, Malaysia

Pictures from ASEAN IVO Forum 2019 in Manila

Steering Committee

A Steering Committee formed from the ASEAN IVO member institutes and NICT, with one or two representatives for each ASEAN country. The Steering Committee is responsible foroverseeing ASEAN IVOactivities. Meetings are typically held twice a year.

The Steering Committee : Selects proposals for collaborative projects; Reviews ongoing projects and provides feedback; Promotes ASEAN IVO with relevant ministries andorganizations and identifies sources of support forASEAN IVO activities; Decides overall ASEAN IVO policy andadministrative matters.



Picture of the ASEAN IVO Online SC Meeting March 2021

For More Information

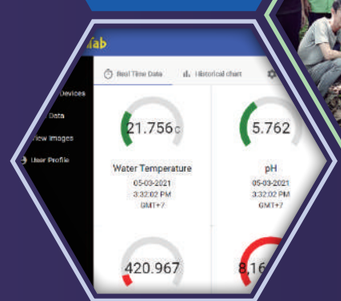
Homepage:
http://www.nict.go.jp/en/asean_ivo/

ASEAN IVO Secretariat:
Email: asean_ivo_sc_nict@ml.nict.go.jp

ICT Virtual Organization

of ASEAN Institutes and NICT

2021.04



About ASEAN IVO

"ICT Virtual Organization of ASEAN Institutes and NICT" (ASEAN IVO) is a global alliance of institutes and universities in the ASEAN region and Japan focused on ICT research and development.

The mission of ASEAN IVO is to seek and identify strategic ICT research areas in the ASEAN region and support collaborative projects in them, promoting international alliance amongst universities and research institutes in the ASEAN region and Japan.

Collaborative projects aim to address common challenges such as communication limitations in rural areas and disaster situations, language barriers, network security, energy, infrastructure, agriculture etc.

The idea for ASEAN IVO was conceived at the "International Roundtable on ICT R&D Collaboration in the ASEAN Region" held in 2013 by NICT. A proposal to establish the Organization was brought by NICT and approved at the second Round Table in 2015. ASEAN IVO began in 2015 with 23 members from 8 ASEAN countries plus Japan. Now membership includes all ASEAN countries, with 60 members as of April 2020 and rising.

Membership

ASEAN IVO members can apply to make presentations on their research activities at the ASEAN IVO Forum, with the possibility of receiving support for travel expenses. Additionally, member universities and public research institutes from ASEAN countries are eligible to receive financial support for collaborative projects.

Membership is open to universities, institutes and companies located in the ASEAN region. Depending on the type of organization, the following conditions may apply:

1. Organizations applying for membership must be involved in research and development in the field of ICT.
2. Organizations from non-ICT sectors can be accepted as members, if their aim in joining is ICT development for their field.
3. Private companies are welcome to apply for membership if the company applying provides matching funds for ASEAN IVO joint projects. No financial support will be provided to the company.

Research Collaboration

New collaborative projects are selected for support through an annual call for proposals. All projects are required to include participant institutions from at least two different ASEAN countries. Proposals from all technical fields are welcome and are evaluated on the potential benefit of output.

ASEAN IVO supports research collaboration by:

1. Developing common technologies in broad areas based on common considerations
2. Forming multinational collaborative projects for research, field trials, etc. to address common regional needs
3. Promoting collaborative research through researcher exchange
4. Sharing knowledge through international joint workshops and other academic events

A call is periodically made to ASEAN IVO members for proposals related to the above, financial support is offered by NICT.

Some ASEAN IVO Projects

An Energy Efficient, Self-Sustainable, and Long Range IoT System for Drought Monitoring and Early Warning (2020)

Leader: LQDTU (VNM)

Members: UEC (JPN), KIT (JPN), KMUTT (THA), KMITL (THA), NAWAPI (VNM), MDH (SWE), UTC (VNM), PTIT (VNM)

This project is to develop a low cost, real-time drought monitoring and early-warning system based on Internet of Things (IoT) for river basin regions of Vietnam. This year (2021), made a trip to Vu Gia Thu Bon in Vietnam to assess the river basin to determine how many nodes and monitoring stations will be needed as well as to test the communication distance of the nodes.

Evapotranspiration (ET)-Based Irrigation System with Internet of Things (IoT) Integration for Smart Farming Application Addressing the ASEAN Impending Water Crisis (2017)

Leader: MAPUA (PHL)

Members: CLSU (PHL), UTM (MYS), UCSY (MMR), NICT (JPN)

The objective of this project is to evaluate the suitability of evapotranspiration (ET)-based irrigation scheduling technologies for agricultural applications, specifically, the ability of the technologies to: apply the appropriate amount of water at the appropriate time, using the estimated reference ET (ETo) in a particular field. This year, researchers travelled to testing sites to test and make adjustments to a prototype.

NAPC: Networked ASEAN Peat Swamp Forest Communities (2018)

Leader: UPM (MYS)

Members: BPPT (IDN), RAJ (JPN), MIMOS (MYS), Bogor Agricultural U (IDN), UTB (BRN), JIRCAS (JPN)

This project is to enable connectivity for IoT-based monitoring system in peat swamp forest areas in three ASEAN countries. This way the forest management community and researchers can further understand peat swamp forest ecosystem by analyzing the collected micro climate data. The system will also serve as a peat swamp forest fire monitoring system for immediate human and automated interventions via FDRS. In 2020, field testing of LoRa nodes was carried out to get transmission measurements .

FarmTab: Precision Agriculture System using Internet of Things and Artificial Intelligence for Urban Farming (2019)

Leader: USM (MYS)

Members: UTAR (MYS), HUST (VNM), UNHAS (IDN), UB (IDN), KyotoU (JPN)

The objective of FarmTab is to boost the productivity of urban farming by automating the farming process by embedding Internet of Things (IoT) and Artificial Intelligence (AI) technologies into one platform. FarmTab is designed to enable seamless data collection from various sensors, such as pH level, temperature, humidity and moisture in urban farm conditions. The AI models track and predict variousenvironmental impacts on crop yield for urban farms. This year, field testing was carried out on the built system to gather data on crop growth rate and fine tune the system.