



20TH ANNIVERSARY OF
AUN/SEED-NET

ASEAN-JAPAN: BONDS & BEYOND

IN KNOWLEDGE WE TRUST

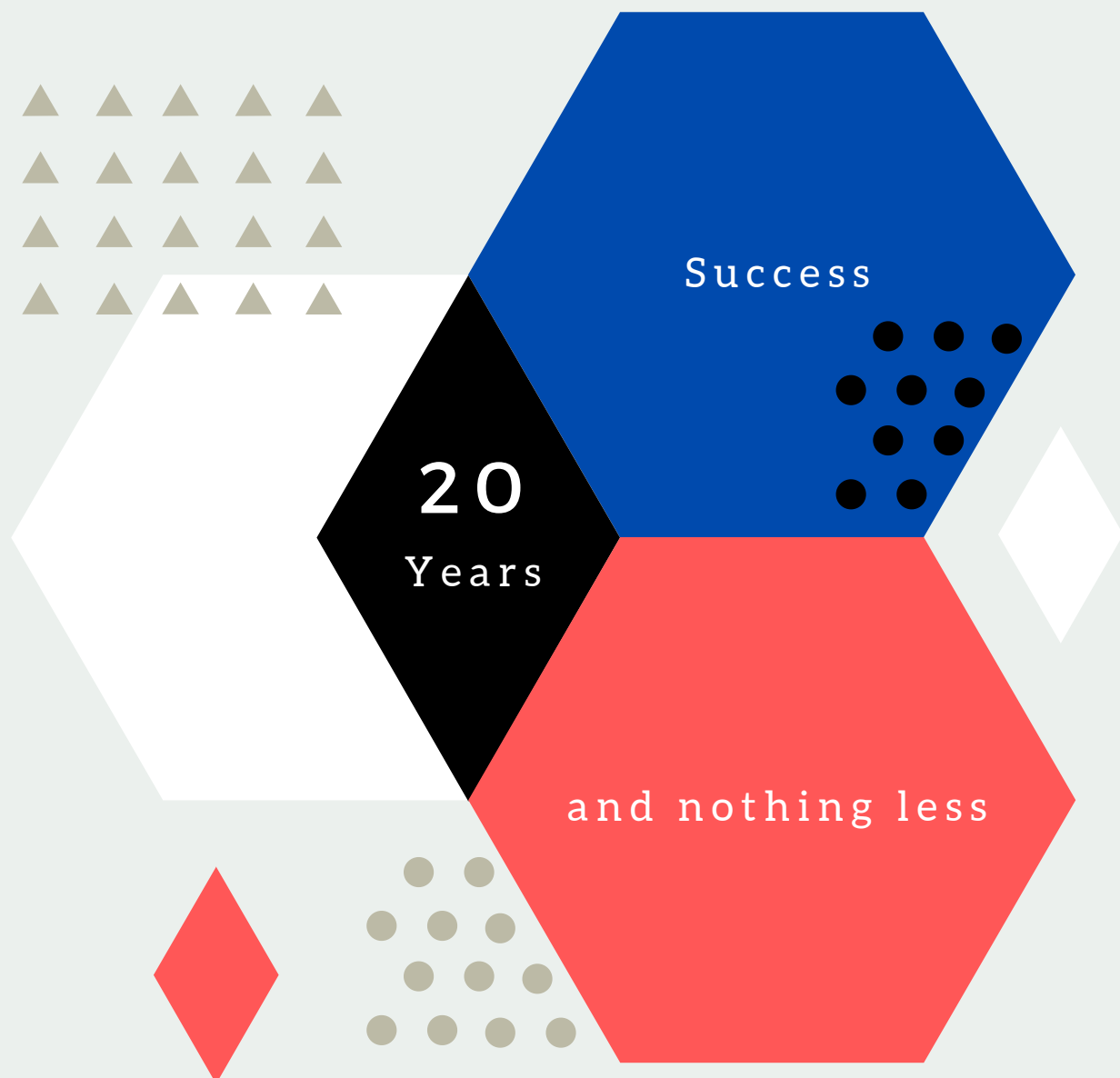
IN OUR BOND WE CHERISH

IN SUSTAINABILITY WE BELIEVE



AUN/SEED-Net





About the 20th Anniversary Booklet

After 20 years of successful operations and fruitful collaboration, the project's Phase IV is coming to an end in March 2023. On this occasion, the AUN/SEED-Net Secretariat would like to commemorate and honor the past bonds, friendships, and contributions from all stakeholders.

***Let this booklet be a forever-living memory
of our network.***



The Hexagon Design:

You will be seeing a lot of hexagons throughout this over 100-page memory book. They didn't come by accident.

The hexagon design in this booklet was chosen for many reasons.

- Hexagon represents harmony and balance, just like our network!
- Hexagon is a polygon with six sides. Six is the number of creations, and perfection, which seems to summarize what an engineer brings to the world.
- Hexagon and engineering share a really close relationship. Hexagonal shapes can bear surface tension and make them naturally stable, like what we see in honeycombs or snowflake patterns. Humans, especially engineers, study and develop countless amazing work based on the uniqueness of hexagonal shapes.
- Based on what's explained above, we can say that these HEXAGONS symbolize our engineering family!!

Meet AJ: Your Tour Guide

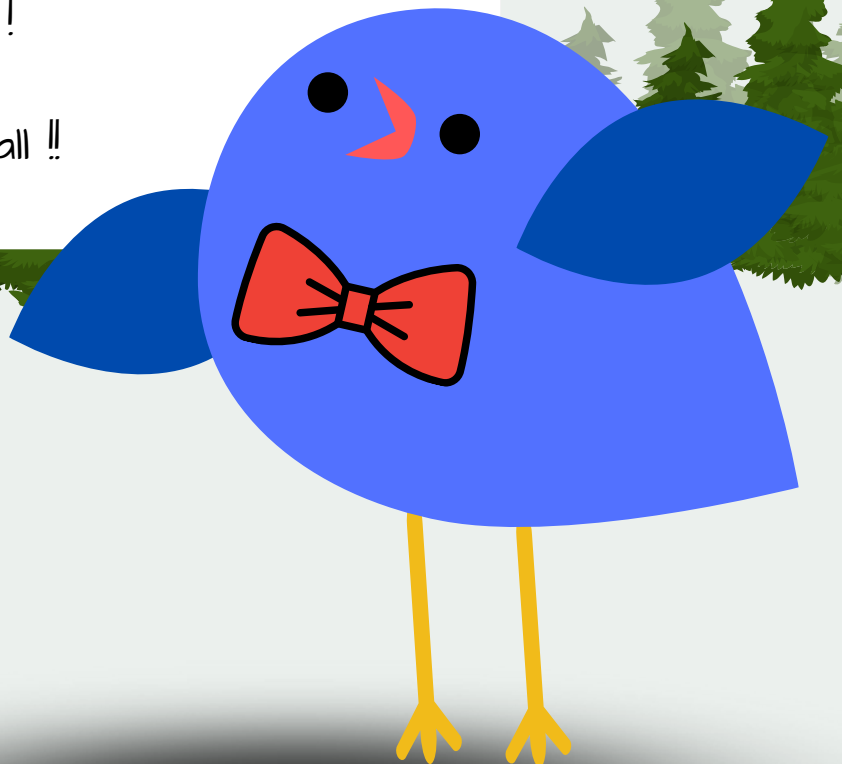
Hi ! I'm AJ !

My name is short for "ASEAN-Japan."

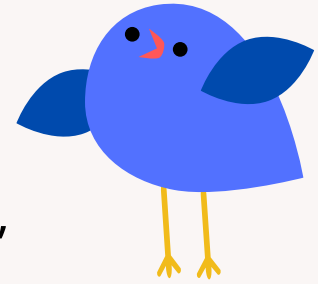
I will be walking you through this 20th Anniversary Booklet: ASEAN-Japan Bonds and Beyond.

It's my job to spread the "SEEDS OF FUTURE" around to sustainably create the "FOREST OF COLLABORATION" and "INTERCONNECTED ROOTS" in ASEAN, Japan, and beyond !

Nice to meet you all !!



THE BOOKLET READING MANUAL



As you **OPEN** this booklet,
CLOSE your eyes, and...

RECALL

All the memories you had with AUN/SEED-Net

REMINISCE

Those times with your peers, friends, and colleagues

REJOICE

As their faces reappear behind your closed eyes

REMEMBER

How we promised we would walk together until the end
of the journey

Even with your eyes closed, your heart can
understand how this book **REUNITES** us all.



Table of Contents

1	Abbreviation List	
3	AUN/SEED-Net: The History	
	• Development and Timeline.....	5
	• Phase I-IV	6
9	AUN/SEED-Net: The Components	
	• Background and Overview.....	10
	• Member Institutions.....	11
	• Japanese Supporting Universities.....	12
	• Engineering Fields.....	13
14	AUN/SEED-Net: The Messages	
	• Message from Asean University Network.....	15
	• Message from the ASEAN Secretariat.....	17
	• Message from JICA Representative.....	19
	• Message from Steering Committee Meeting Chairman 2022.....	21
	• Message from the Japanese Supporting University Consortium.....	23
	• Message from AUN/SEED-Net.....	25

Table of Contents

27 AUN/SEED-Net: Important Events

- Joint Coordinating Committee Meeting and Joint Review Committee Meeting.....28
- Working Group Meeting.....29
- Steering Committee Meeting.....30
- Signing Ceremony of the Cooperative Framework.....32

33 AUN/SEED-Net: Programs and Achievements

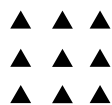
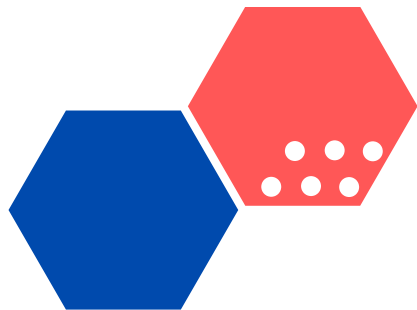
- Program Timeline.....34
- University Consortium Program.....36
 - Collaborative Education Program (CEP).....37
- Programs for Alumni.....52
 - Alumni Support Program (ASP).....53
 - Video Contest for Alumni Network (V-CAN).....60
- Conference and Journal Publication.....65
 - Regional Conference (RC).....66
 - ASEAN Engineering Journal (AEJ).....71
- Scholarship Programs.....74
 - Graduate Degree Programs and Scholarships.....75
 - Material Support.....80
- Research and Mobility Programs.....81
 - Research Programs in Phase I-III.....82
 - Mobility Programs.....87
 - Special Program for Research against COVID-19 (SPRAC).....89
- Other Programs.....91
 - University-Industry Linkage Activities.....92
 - External Linkage.....95



Table of Contents

101	AUN/SEED-Net: The Future	
	• The Global Goals.....	102
	• Photo Compilation.....	108
112	"Every End is a New Beginning"	
113	Contacts	





Abbreviation List

AUN/SEED-NET Activities and Programs

AEJ

ASEAN Engineering Journal

ASP

Alumni Support Program

ASP-E

Alumni Support Program for Events

ASP-R

Alumni Support Program for Research

CEP

Collaborative Education Program

CR

Collaborative Research Program

CRA

Collaborative Research Program for Alumni Members

CRC

Collaborative Research Program for Common Regional Issues

CRI

Collaborative Research Program with Industry

CRX

Collaborative Research with External Partners Program

Integrated

Integrated Graduate Degree Program

JPDP

Japanese Professors Dispatch Program

JSU(s)

Japanese Supporting University(ies)

Master's

Master's Degree Program

MI(s)

Member Institution(s)

MOT

Intensive Course on Management of Technology

PhD Japan

Doctoral Degree Program in Japan

PhD Singapore

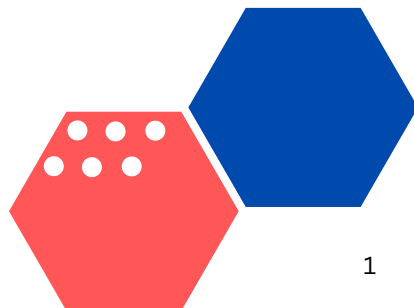
Doctoral Degree Program in Singapore

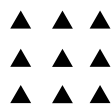
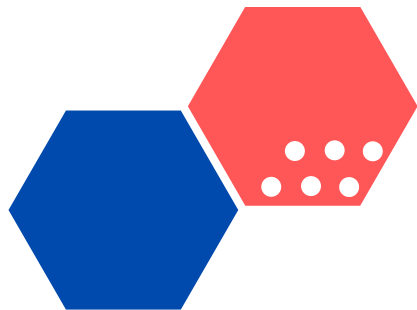
PhD Sandwich

Doctoral Degree Sandwich Program

RA

Research for Alumni Members





Abbreviation List

AUN/SEED-NET Activities and Programs

RC

Regional Conference

RF

Research Fellowship

SDM

Special Research Program for
Disaster Prevention and Mitigation

SPRAC

Special Program for Research
against COVID-19

SRA

Special Research for Alumni Members

SRJP

Short-term Research in Japan

SVAS

Short-term Visit in ASEAN

U-I Linkage

University-Industry Linkage

U-I Directory

University-Industry Directory

U-I Seminar

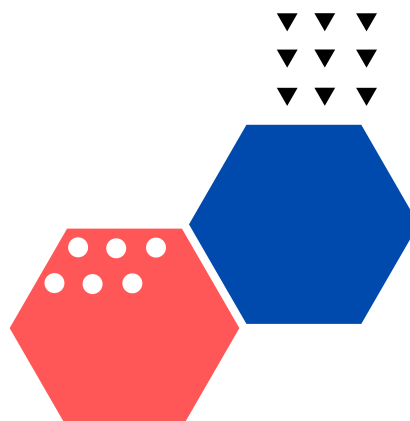
University-Industry Seminar

U-I Training

Intensive Training on Promotion for
University-Industry Linkage

V-CAN

Video Contest for Alumni Network

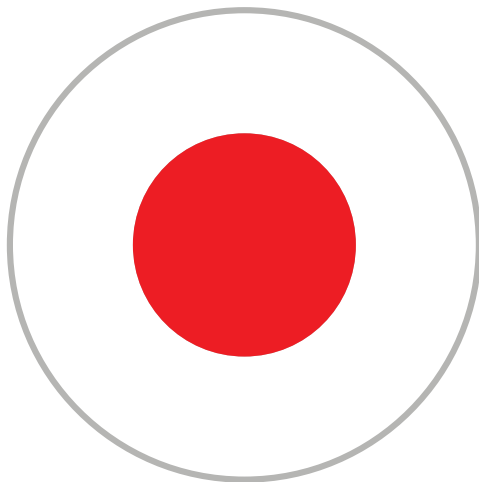




AUN/SEED-Net



AUN/SEED-NET: THE HISTORY



ASEAN-JAPAN: BONDS AND BEYOND

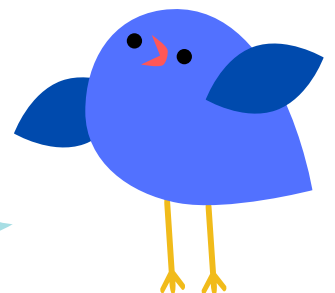
“

**Coming together is a beginning;
Keeping together is progress;
Working together is success.**

- Henry Ford

”

Let's see and celebrate our
achievements and successful
outcomes from Phase I - IV!



From Past to Present

How it all started...



1997

Idea to form a network initiated by the Japanese Government at the Japan-ASEAN Summit Meeting

Project concept further developed at the ASEAN-Plus-Three Summit Meeting

1999

2001

AUN/SEED-Net officially became an autonomous sub-network of the ASEAN University Network (AUN)

AUN/SEED-Net's Phase I: ASEAN's human resource development in engineering

2003

2008

Phase II: Development of interdisciplinary approach to address the key regional challenges

Phase III: More members with the aim of bringing academics and industry closer

2013

2018

Phase IV: The road toward sustainability of the network and programs, contributed by governments and members

20 years and counting...

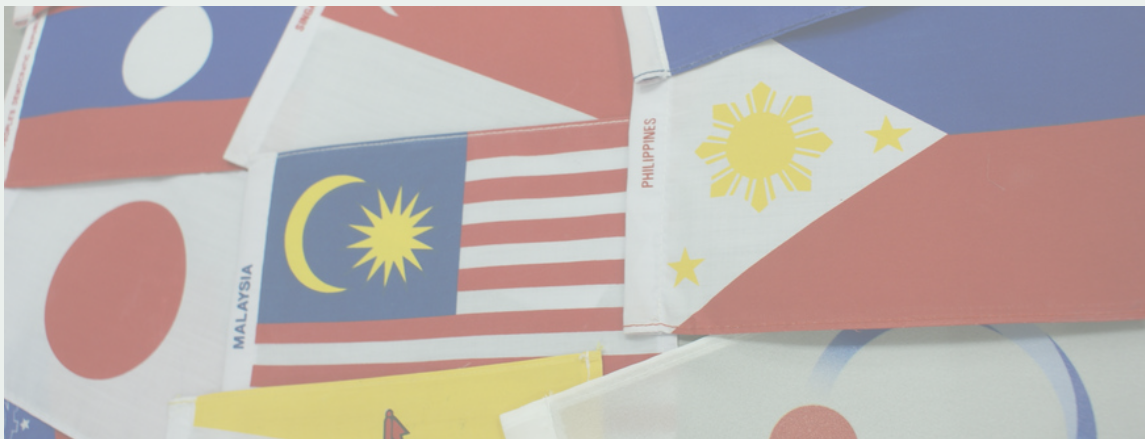
2023



The Signing Ceremony

PHASE I: When it all Began

In March 2003, the first five-year of AUN/SEED-Net started. The first phase (2003–2008) laid the basis for the ASEAN's human resource development in engineering by producing academics, researchers, and professionals to serve the rising needs of the educational and industrial sectors.





When the Seeds Sprouted and Grew

We couldn't be more delighted to witness every seed we have been nurturing and cultivating with care, sprouted into fully-grown trees.

The growth processes have been memorable and amazing.

PHASE II: The Expanding Roots

AUN/SEED-Net Phase II began in 2008 and ended in 2013. The project brought together nine engineering fields to develop an interdisciplinary approach to address the key regional challenges, namely disaster mitigation, environmental protection, alternative energy resources, natural resources application, or biotechnology, with the collaboration of the industrial sector and the community.

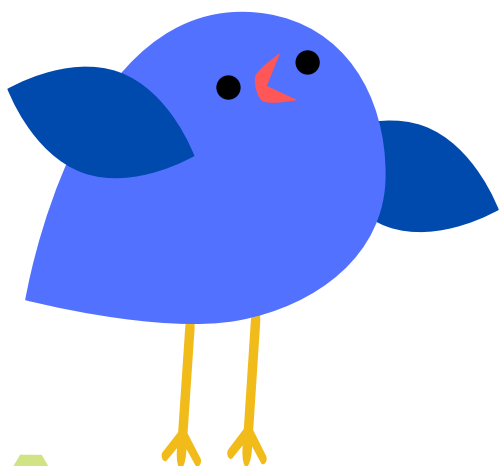
PHASE III: Intertwined with Industry

The project reached its prime during Phase III (2013–2018) when it welcomed more MIs, with AUN/SEED-Net playing a major role in broadening their integration by addressing issues commonly found among the ASEAN and Japan. At the same time, several initiatives were implemented with the aim of bringing academics and industry closer.

AUN/SEED-Net Phase IV (2018-2023)

AUN/SEED-Net Phase IV (2018–2023) is widely recognized as a vital mechanism in the build-up of higher engineering education and research. Realizing the need to sustain the network as well as the development of the ASEAN region, MIs and respective governments have committed to cost-sharing and in-kind support, including scholarship offerings, tuition fee waiving, and resource sharing. These contributions demonstrate the appreciation and strong desire of all MIs to carry on the AUN/SEED-Net legacy.

"Plant the SEED of future,
Grow ASEAN-Japan NETwork for
sustainability."



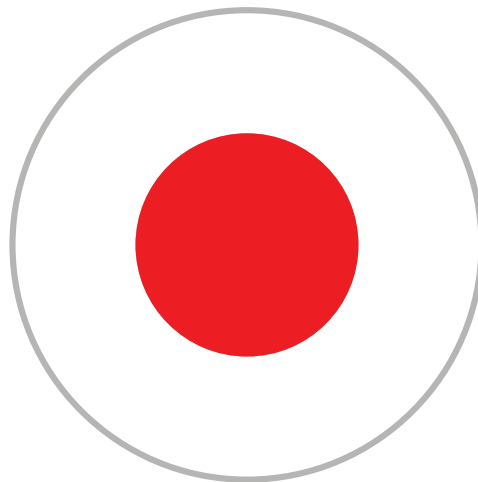
SINCE 2003



AUN/SEED-Net



AUN/SEED-NET: THE COMPONENTS



ASEAN-JAPAN: BONDS AND BEYOND

Background & Overview

Focusing exclusively on the field of engineering, AUN/SEED-Net not only aims to promote collaboration and solidarity among academics, professionals, and industry in the ASEAN and Japan but also enhances the educational and research capacity of Member Institutions (MIs).

Over the past two decades, the membership has evolved extensively. Today, the network consists of 26 MIs from 10 ASEAN countries and 14 Japanese Supporting Universities (JSUs). The Secretariat is located at the Faculty of Engineering, Chulalongkorn University, Thailand, headed by its Executive Director. JICA dispatches the supporting and advisory team, consisting of Chief Advisors, Advisors from Japanese Supporting Universities, Deputy Chief Advisors, and Program Coordinators to the Secretariat.



BRUNEI DARUSSALAM

- Universiti Brunei Darussalam (UBD)
- Universiti Teknologi Brunei (UTB)

CAMBODIA

- Institute of Technology of Cambodia (ITC)

INDONESIA

- Institut Teknologi Bandung (ITB)
- Institut Teknologi Sepuluh Nopember (ITS)
- Universitas Gadjah Mada (UGM)
- Universitas Indonesia (UI)

LAO PDR

- National University of Laos (NUOL)

MALAYSIA

- Universiti Malaya (UM)
- Universiti Putra Malaysia (UPM)
- Universiti Sains Malaysia (USM)
- Universiti Teknologi Malaysia (UTM)

MYANMAR

- University of Yangon (UY)
- Yangon Technological University (YTU)

PHILIPPINES

- De La Salle University (DLSU)
- Mindanao State University-Iligan Institute of Technology (MSU-IIT)
- University of the Philippines-Diliman (UP)

SINGAPORE

- Nanyang Technological University (NTU)
- National University of Singapore (NUS)

THAILAND

- Burapha University (BUU)
- Chulalongkorn University (CU)
- Kasetsart University (KU)
- King Mongkut's Institute of Technology Ladkrabang (KMITL)
- Thammasat University (TU)

VIETNAM

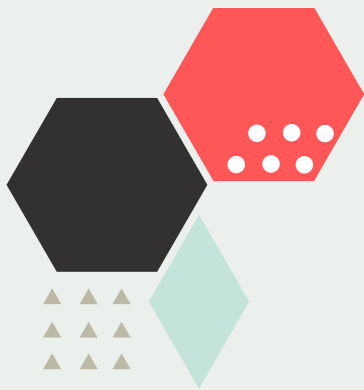
- Hanoi University of Science and Technology (HUST)
- Ho Chi Minh City University of Technology (HCMUT)

14

JSUs

JAPANESE SUPPORTING UNIVERSITIES

- Hokkaido University (Hokkaido)
- Keio University (Keio)
- Kyoto University (Kyoto)
- Kyushu University (Kyushu)
- Nagoya University (Nagoya)
- National Graduate Institute for Policy Studies (GRIPS)
- Osaka University (Osaka)
- Shibaura Institute of Technology (SIT)
- The University of Tokyo (Tokyo)
- Tohoku University (Tohoku)
- Tokai University (Tokai)
- Tokyo Institute of Technology (TIT)
- Toyohashi University of Technology (TUT)
- Waseda University (Waseda)



10 ENGINEERING FIELDS



**CIVIL ENGINEERING
(CE)**



**CHEMICAL
ENGINEERING
(ChE)**



**COMPUTER AND
INFORMATION
ENGINEERING (CIE)**



**ELECTRICAL AND
ELECTRONICS
ENGINEERING (EEE)**



**ENERGY
ENGINEERING
(EneE)**



**ENVIRONMENTAL
ENGINEERING
(EnvE)**



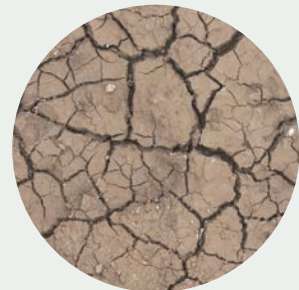
**GEOLOGICAL AND
GEO-RESOURCE
ENGINEERING (GeoE)**



**MATERIALS
ENGINEERING
(MatE)**

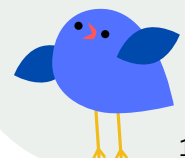


**MECHANICAL AND
MANUFACTURING
ENGINEERING
(ME/ManuE)**



**NATURAL DISASTER
(ND)**

Fun Fact: ND is the last field that was included into the project. It is also considered a unique engineering field in the ASEAN.

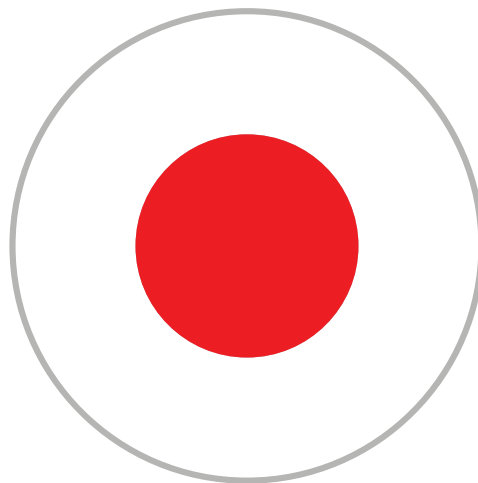




AUN/SEED-Net



AUN/SEED-NET: THE MESSAGES

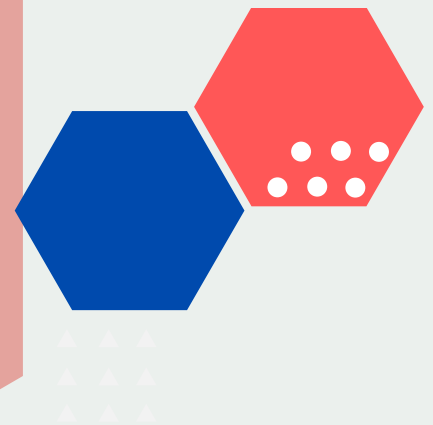


ASEAN-JAPAN: BONDS AND BEYOND

“


**This special
relationship is the
essence of Japan's
close and friendly
relationship with
the ASEAN.**

”



Dr. Choltis Dhirathiti

Executive Director,
ASEAN University Network



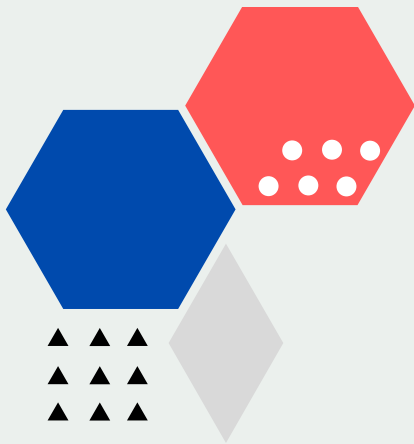
There is no reason to change the habit of friendship and harmony stretching back over 20 years under the ASEAN University Southeast Asia Engineering Education Development Network, or AUN/SEED-Net. It is safe to say that no other international cooperative program has had such a profound effect on ASEAN human resource development in engineering as AUN/SEED-Net. If we look back over the last two decades, using facts, figures, and information provided in this Booklet as well as other recently published reports on AUN/SEED-Net, it can be seen that AUN/SEED-Net is an impressive program with a set of all-encompassing activities, which when combined, yields talented individuals and strengthens engineering education in the ASEAN. We see the continuing evolution of AUN/SEED-Net Program from the early days when it enhanced the quality of academics and graduates in the ASEAN to addressing common regional issues and industry needs and developing a sustainable scheme for collaborative education and alumni support.

AUN/SEED-Net is, and always will be, a serious cooperative program, resolute in its commitment to the principles of knowledge-sharing, co-production (in education), industry engagement, and innovative maximization of the alumni network. These working principles match very well with the current AUN Secretariat's refusal to seek an easy project or ready-made set of proposals at the expense of value-for-money and high-impact outcomes. The success of SEED-Net is not only due to a well-planned program involving four phases from 2003 to 2023, but above all, the support provided by the Japan International Cooperation Agency (JICA) over the past 20 years. This special relationship is the essence of Japan's close and friendly relationship with the ASEAN. Based on this relationship, we have made a determined effort to see that the success of SEED-Net counts for more in the Post-Phase IV period and the continuous strengthening of engineering education in the ASEAN.

Choltis Dhirathiti

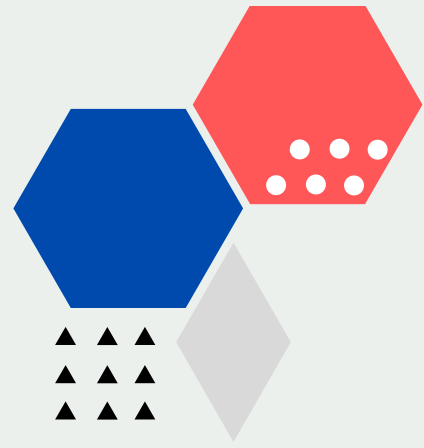
”

The AUN/SEED-Net has played a vital role not only in strengthening the ASEAN-Japan relationship but also enhancing ASEAN’s reputation as a dynamic and forward-thinking region focused on knowledge and innovation.



Ms. Rodora Turalde Babaran

Director of Socio-Cultural Cooperation
Department, ASEAN Secretariat



It is with great pleasure that I extend my congratulations to AUN/SEED-Net on its 20th Anniversary. This is indeed a milestone to celebrate.

The AUN/SEED-Net has played a vital role not only in strengthening the ASEAN-Japan relationship but also enhancing ASEAN's reputation as a dynamic and forward-thinking region focused on knowledge and innovation.

Over the past two decades, the Japan International Cooperation Agency (JICA), through the AUN/SEED-Net, has made a significant contribution to advancing the education and research capacities of higher education institutions in the ASEAN through its various scholarships and research programs. These decades of cooperation among stakeholders, ASEAN universities, Japanese universities, and industries have greatly benefited ASEAN's human resources, leading to the provision of thousands of scholarships, mobility support, and research grants in the region.

The role of science and technology in producing adaptable and future-ready human resources has become even more crucial in light of emerging global trends and challenges. Hence, we recognize and value the contribution of the AUN/SEED-Net in the field by developing internationally competitive personnel and advancing the research capacities of higher education institutions in the region.

The success that AUN/SEED-Net has brought to its graduates and the international community is noteworthy. It has produced thousands of graduates who are thriving in their communities and contributing to the region's development and helped to narrow development gaps, improve people-to-people connectivity, and increase mobility.

The AUN/SEED-Net's contribution also serves as an important part of the region's collective efforts in realizing a higher education space characterized by an increased level of internationalization, harmonization, innovation, and partnerships.

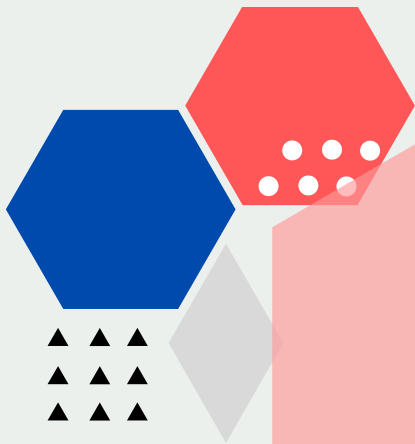
I commend the remarkable contribution of the partners, universities, and Secretariat, who have been key to the successful delivery of AUN/SEED-Net's four main programs: Collaborative Education Program (CEP), Alumni Support Program (ASP), Regional Conference (RC), and ASEAN Engineering Journal (AEJ).

I am looking forward to stronger collaboration and seeing the program outcomes sustained. I wish AUN-SEED-Net continued success in the years to come.

Rodora Turalde Babaran

”

Thousands of those directly or indirectly benefiting from the project are now playing important roles in many different areas of the world.



Mr. SAKUMA Jun

Director General, Human Development
Department, Japan International
Cooperation Agency (JICA)

Firstly, I would like to express my sincere congratulations to AUN/SEED-Net on its 20th anniversary.

It has been 22 years since AUN/SEED-Net was founded in April 2001 and 20 years since its official launch in 2003. Coincidentally, I was involved in the preparations for the establishment of this network at JICA headquarters 20 years ago, but at that time, never expected AUN/SEED-Net to show the great achievements we are now seeing. Over the two decades of the project, 1,425 PhD and master's degree holders have been produced, 265 collaborative research projects supported, and more than 287 research papers published in the ASEAN Engineering Journal. AUN/SEED-Net has not only contributed to upgrading the education and research standard of each Member Institution but also developed human resources in science and technology in the ASEAN. Thousands of those directly or indirectly benefiting from the project are now playing important roles in many different areas of the world. It is my great honor to witness the significant success of AUN/SEED-Net in this 20th memorial year with all those who have walked together with us.

I believe that the success of AUN/SEED-Net can be attributed to three major factors. First, the commitment of all stakeholders has created strong trust among Member Institutions. Usually, as the number of stakeholders increases, it often makes running such a project more difficult. However, the stakeholders of AUN/SEED-Net have thoroughly understood each role and worked very closely and supportively, contributing to the successful implementation of the project.

The second factor is how AUN/SEED-Net has been flexible in developing its activities such as regional conferences, publication of the ASEAN Engineering Journal, joint research in industry-academia collaboration, etc., responding to the current needs of the time. In 2020, we added the Special Program for Research against COVID-19 (SPRAC), while the Video Contest for Alumni Network (V-CAN) was also conducted to enable researchers to build connections for future collaborations. This flexibility has sustained the project and enhanced the value of the network.

Finally, the collaboration with the Middle East and Africa has contributed to the expansion of knowledge and connections for AUN/SEED-Net. In Phase IV, based on the network that has been built and strengthened through the previous phases, university consortiums have been formed, some including universities outside the ASEAN. These consortiums proactively conduct collaborative educational and research activities, developing the capacity of related stakeholders.

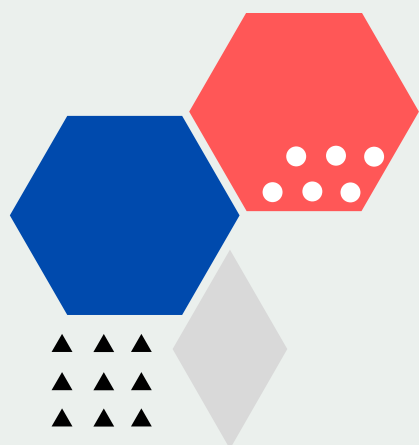
These are some of the reasons which have led AUN/SEED-Net to achieve tangible results in higher education in the ASEAN and beyond.

JICA's technical cooperation project with AUN/SEED-Net, which started in 2001, will end in March 2023. After that, AUN/SEED-Net will be transferred to AUN, with JICA supporting its management on a smaller scale. This does not mean that JICA no longer recognizes the significance of the network, but it is our strategy to make the network more self-sustainable and valuable. The human network built through this project will remain a great asset to both the ASEAN and Japan and should be further developed in a sustainable manner. Hence, I sincerely hope that the stakeholders' continuous commitment to the network and their active participation will make it more attractive even after the project ends.

Finally, I would like to express my deep appreciation to all the AUN/SEED-Net stakeholders for their contribution and dedication.

SAKUMA Jun

”



My research network has been widened while my contribution to research and education has been enhanced. I am also pleased to witness many of our young colleagues who have successfully developed their careers with strong support from AUN/SEED-Net.

Prof. Le Anh Tuan

Chairman of the HUST's University Council
&
Chairperson of the 27th AUN/SEED-Net
Steering Committee Meeting



My name is Le Anh Tuan, Chairman of the Hanoi University of Science and Technology's University Council, Vietnam. On behalf of the member universities, I would like to extend my sincere congratulations to the AUN/SEED-Net Project on its 20th anniversary.

Over the past 20 years, the AUN/SEED-Net Project has become a concrete and reputable platform for collaboration between the ASEAN and Japan in the higher education sector. Through various impactful projects, AUN/SEED-Net has promoted the development of high-quality human resources, as well as supporting ASEAN universities in enhancing their university-industry linkage. Several young researchers have been trained at Master and Doctoral levels at Japanese universities. At the same time, they have had the opportunity to conduct research with influential scientists and enterprises through different research grant schemes such as CRC, CRI, and CRA. Furthermore, through the multiple regional conferences supported by the project annually, researchers in the region have been able to discuss the latest research in their fields and expand the network for future collaboration.

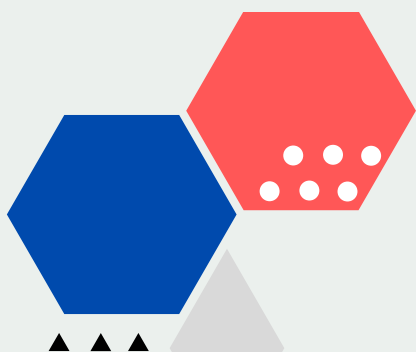
I am very grateful to have received support from AUN/SEED-Net since 2007. It has enabled me to develop many effective activities such as field-wise seminars, regional conferences, staff exchange programs, committee meetings, and the ASEAN Engineering Journal. My research network has widened and my contribution to research and education enhanced. I am also pleased to witness many of our young colleagues who have successfully developed their careers with strong support from AUN/SEED-Net.

In early 2020, the COVID-19 pandemic posed a serious threat to the continuity of learning, teaching, and research in higher education. In that context, the AUN/SEED-Net Project strongly demonstrated its critical role and social responsibility through the launch of different meaningful programs. The "Special Program for Research against COVID-19" supported our scientists in working together to develop a number of impactful innovations for alleviating the consequences of the pandemic on society. The "Equipment Support Program, promoting research and education for MIs under COVID-19" created a significant impact on the digital transformation process of MIs, enabling them to respond to the pandemic and recent global changes.

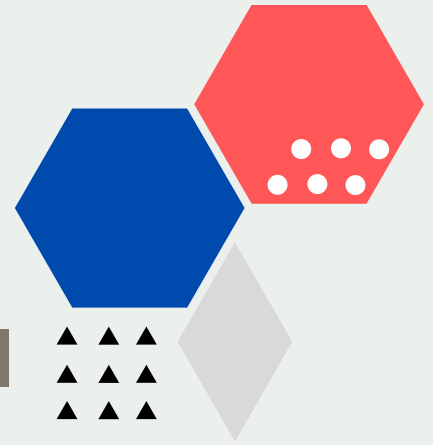
With its relentless commitment to innovation and development, I strongly believe that the AUN/SEED-Net Project will continue to be successful in its mission to "Plant the SEED of the future, grow the ASEAN-Japan network for sustainability." I would also like to express my most sincere thanks to all my colleagues and partners for their contributions over the years in building up and strengthening our close cooperative relationship.

Finally, I wish you all good health and great success, and once again, congratulations to AUN/SEED-Net on its 20th anniversary.

Le Anh Tuan



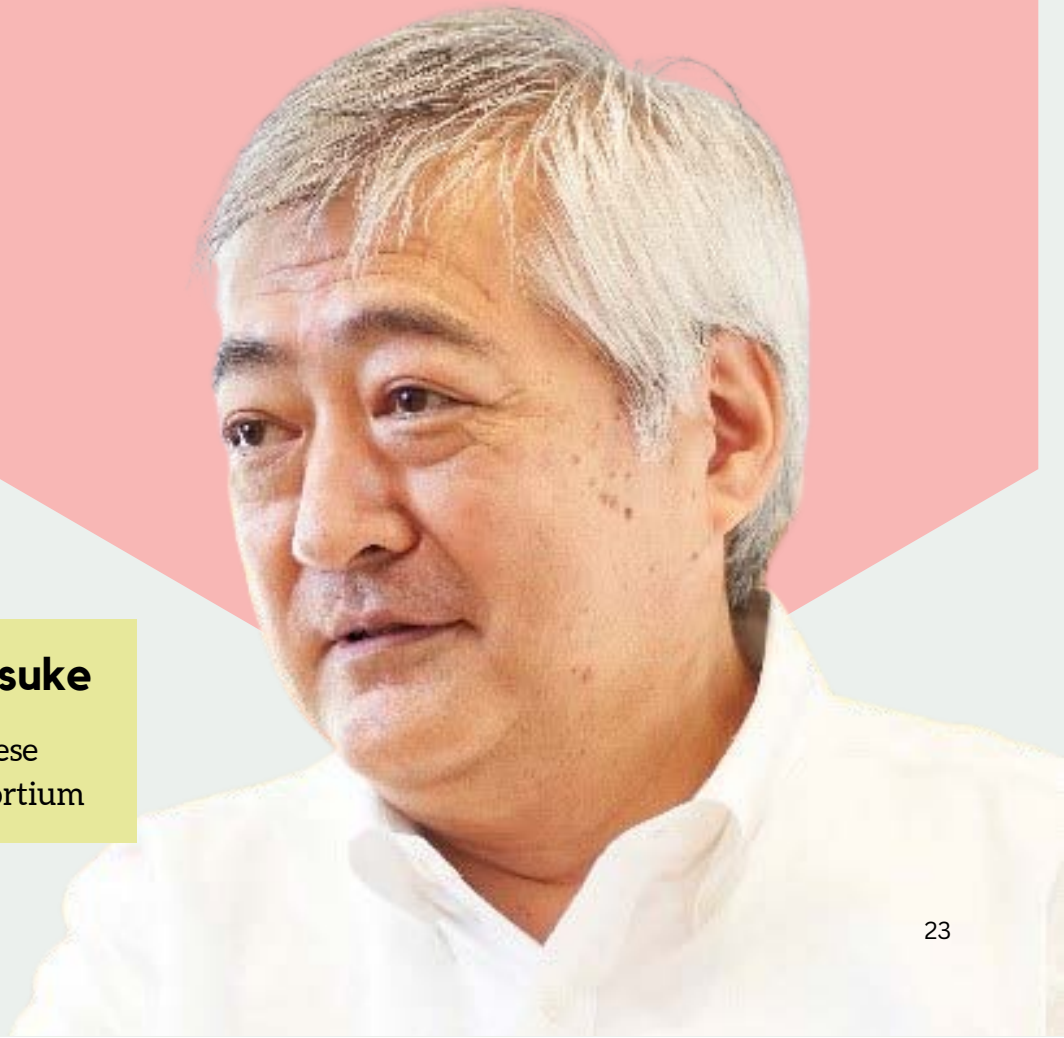
”

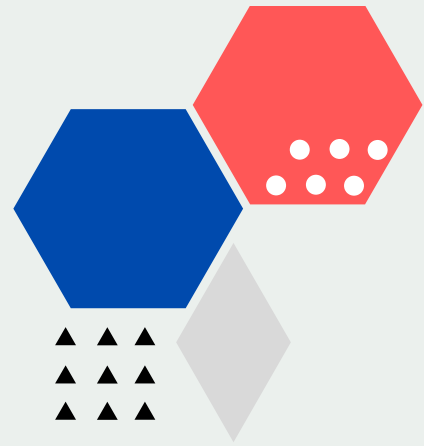


The project support will be transferred from JICA to AUN, but the activities and friendships developed over the past 20 years will persist.

Prof. Dr. OBI Shinnosuke

Chairperson of the Japanese
Supporting University Consortium





It is my great pleasure and honor to have the opportunity to write a message on behalf of the Japanese Supporting Universities to commemorate the 20th anniversary of the AUN/SEED-Net Project.

During the project period, several meetings were held in Tokyo to gather opinions and suggestions from JSU members. I believe these meetings helped to make the project more fruitful. The “Collaborative Education Program” is one such scheme, introduced for the first time in Phase IV. It aims to combine research activities with the development of young researchers by making maximum use of the networks among Member Institutions and their relationships with the Japanese universities of their choice. As a result, the scheme has attracted applications from many Member Institutions, producing excellent outcomes. These activities would not have been possible without the long-term relationships among Member Institutions of SEED-Net, fostered during Phases I to III. It goes without saying that the success of the scheme is rooted in the fact that students participating in SEED-Net have returned to their home universities and established their own research activities. We hope that schemes such as CEP will trigger an increase in inter-university research exchange activities in the region and contribute to the development of the next generation of researchers.

For me personally, participating in the AUN/SEED-Net Project has been an unforgettable experience and a great opportunity to get to know excellent people in this region. My laboratory at Keio University was able to host many students through the various schemes both inside and outside of the project. Exchanges with former students are still ongoing, and a new publication is also being jointly prepared. I am sure that countless such relationships have been established between Member Institutions and other universities in Japan through this project.

The project support will be transferred from JICA to AUN, but the activities and friendships developed over the past 20 years will persist. We look forward to continued opportunities for cooperation between ASEAN and Japanese universities in the future. Finally, I would like to express my sincere gratitude to the SEED-Net Secretariat for its efficient management of this complex project and its energetic activities throughout the project period.

OBI Shinnosuke

“

AUN/SEED-Net:
The 20th year of
pride in the well-
established
ASEAN-Japan
network and
beyond.

”



Prof. Emeritus Dr. UEDA Tamon

Chief Advisor and Acting Executive Director
AUN/SEED-Net



Message from AUN/SEED-Net

“AUN/SEED-Net: the 20th year of pride in the well-established ASEAN-Japan network and beyond.”

Greetings to our respective readers. It is an honor and privilege to say a few words on the publication of the special 20-year anniversary booklet. The booklet proudly outlines the historical path taken by AUN/SEED-Net, from sowing the seeds of collaboration between ASEAN and Japanese member universities to the growth of various programs and activities and finally reaping the benefits of a strong network with successful alumni.

Recognizing the importance of highly-skilled workers as a key contributing factor to sustainable economic growth, the Government of Japan and Japan International Cooperation Agency (JICA), in collaboration with ASEAN Governments, ASEAN Member Institutions, ASEAN Secretariat, and AUN Secretariat, with support from Japanese Supporting Universities, decided to establish AUN/SEED-Net. From day one, AUN/SEED-Net has been devoted to accomplishing its prime mission of producing innovative and highly-skilled human resources in the engineering field through the exchange of collaboration between the ASEAN and Japan. In each phase of the AUN/SEED-Net Project, there has been consistency and continuity in developing advanced engineering education through the established partnerships among academic institutions and the private sector in the ASEAN and Japan. The project has been playing a vital role in supporting high-caliber engineering education to enhance academic quality, serve the industrial sector, and contribute to society in the region and beyond.

Our mission cannot be successfully implemented without the considerable efforts of those directly and indirectly involved. The relentless and continuous support at institutional, faculty, and staff level has been key to the success of mobility activities, research, and exchange programs, enabling AUN/SEED-Net to continuously flourish even in the most difficult times. I would like to extend my sincere gratitude to those who have invested a great deal of their time and energy in bringing concrete results to all program initiatives.

Lastly, I am confident that the next voyage of the project under AUN's network ownership during Post-Phase IV will result in the sustainable expansion of our collaborative network with external partners within and beyond ASEAN.

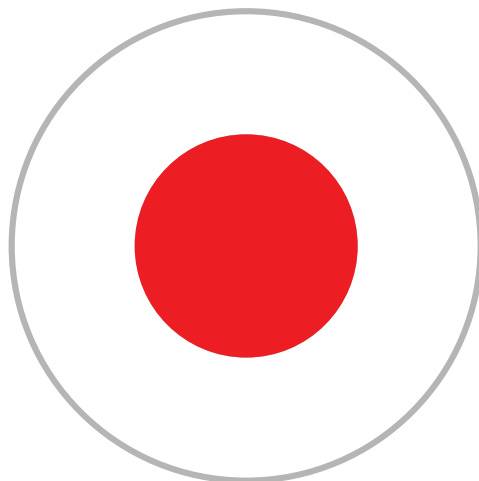
UEDA Tamon



AUN/SEED-Net



AUN/SEED-NET: IMPORTANT EVENTS



ASEAN-JAPAN: BONDS AND BEYOND

AUN/SEED-Net's Important Events

With support from ASEAN and Japanese stakeholders, AUN/SEED-Net has been able to hold Joint Coordinating Committee Meetings (JCC: 2003-2012), Joint Review Committee Meetings (JRC: 2012-2016) and Working Group Meetings (WGM: 2013-2019) to effectively monitor and facilitate the project. In addition, Steering Committee Meetings (SCM) have made significant contributions to fostering AUN/SEED-Net since the beginning of the project. The Signing Ceremony of the Cooperative Framework was also organized prior to the implementation of each phase. We are grateful for the strong collaboration along this long journey.



Joint Coordinating Committee Meeting (JCC: 2003–2012) and Joint Review Committee Meeting (JRC: 2012–2016)

The first Joint Coordinating Committee Meeting (JCC) was organized in 2003 to review the progress of program implementation and to discuss with the Ministry of Higher Education in each ASEAN member state the challenges and issues that need to be addressed for future improvement. In Phase III, the Joint Coordinating Committee Meeting was renamed the Joint Review Committee Meeting or JRC. These meetings proved to be productive and were attended by a number of esteemed delegates from the Embassy of Japan, the JICA Overseas Offices, Member Institutions, and the AUN/SEED-Net Secretariat. The meetings yielded constructive outcomes, which AUN/SEED-Net has taken into account in the design of future programs, with the aim of underscoring the needs of the ASEAN and Japan as a whole.



Working Group Meetings (WGM: 2013–2019)

The Working Group is composed of a representative from each Member Institution and the Secretariat to hold discussions on practical matters regarding AUN/SEED-Net programs. As stated in the Cooperative Framework, the AUN/SEED-Net called for a meeting with the Working Group to discuss operational matters as well as to obtain suggestions on ways and means of enhancing the efficiency of the program and activity execution. During the meetings, the progress of the project was reviewed, and views exchanged on how best to execute project activities. Feedback was obtained through active participation, fruitful discussions, and valuable comments.

The 1st AUN/SEED-Net Working Group Meeting was held in 2013 and then organized annually until the last Working Group Meeting in 2019.

AUN/SEED-Net Steering Committee Meeting

After two years of preparation, the full-scale AUN/SEED-Net operation began in 2003. AUN/SEED-Net is, in principle, an autonomous network, although established under the auspices of the AUN. The organizational structure of AUN/SEED-Net is composed of a Steering Committee and the AUN/SEED-Net Secretariat.

The SCM has been organized annually since 2003. The Steering Committee is composed of one representative from the Member Institutions in each of the ASEAN member states, a representative from the Japanese Supporting University Consortium, a representative from the ASEAN Secretariat, the AUN Executive Director, the AUN/SEED-Net Executive Director, a representative from the Government of Japan, and a representative of JICA.





Functions of the AUN/SEED-Net Steering Committee include:

- The formulation of policies for the operation of the network.
- Reviewing and approving strategic five-year and annual activity plans prepared by the AUN/SEED-Net Secretariat.
- Appointing the Executive Director of the AUN/SEED-Net Secretariat.
- Conducting periodic reviews and evaluations of ongoing projects and activities based on the recommendations and assessment of the Executive Director.
- Reviewing and approving ideas, innovations, or mechanisms for sourcing and generating funds to realize a self-reliant and self-sustaining AUN/SEED-Net.
- Performing other functions that may be necessary to carry out the objectives of AUN/SEED-Net.

Member Institutions with support from the Japanese Supporting University Consortium and the concerned parties in SCM discuss, exchange opinions, and guide the programs and activities of AUN/SEED-Net. The SCM is a significant forum for successfully implementing the programs and activities.

The 27th AUN/SEED-Net Steering Committee Meeting, the last in Phase IV, chaired by Hanoi University of Science and Technology (HUST), Vietnam, will be held on December 16, 2022, at Chatrium Grand Bangkok, Thailand. The objectives of the meeting are to report ongoing activities in Phase IV and discuss and share the programs' key successes. The highlight of the meeting will be an introduction to the draft program and activities planned for implementation during the AUN/SEED-Net Transitional Period.

Signing Ceremony of the Cooperative Framework for AUN/SEED-Net

The AUN/SEED-Net Cooperative Framework identifies the structure and components of the project to tighten the connections and partnerships between the ASEAN and Japan within the network and industry for long-term sustainability. Although the AUN/SEED-Net Cooperative Framework in each phase will focus on a different substance, it is expected to achieve the enhancement of human resources in engineering for the ASEAN.

Before starting each phase, AUN/SEED-Net will organize a Signing Ceremony of the Cooperative Framework. Since its establishment, four signing ceremony events have been organized. The most recent one was organized back in 2017, at the beginning of AUN/SEED-Net Phase IV.

The next Signing Ceremony of the Cooperative Framework for the AUN/SEED-Net Transitional Project covering the period from 2023–2026 will be held on December 16, 2022, at Chatrium Grand Bangkok, Thailand. The critical element of this Cooperative Framework is the increasingly important role the ASEAN University Network (AUN) will play in AUN/SEED-Net. By 2026, AUN/SEED-Net will be managed and administered by AUN with minimum support from JICA.

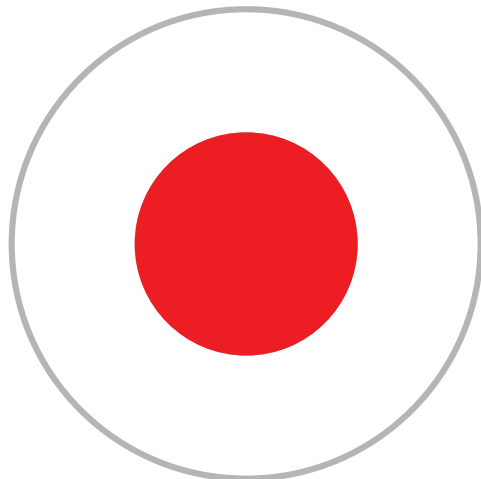




AUN/SEED-Net



AUN/SEED-NET: PROGRAMS & ACHIEVEMENTS



ASEAN-JAPAN: BONDS AND BEYOND

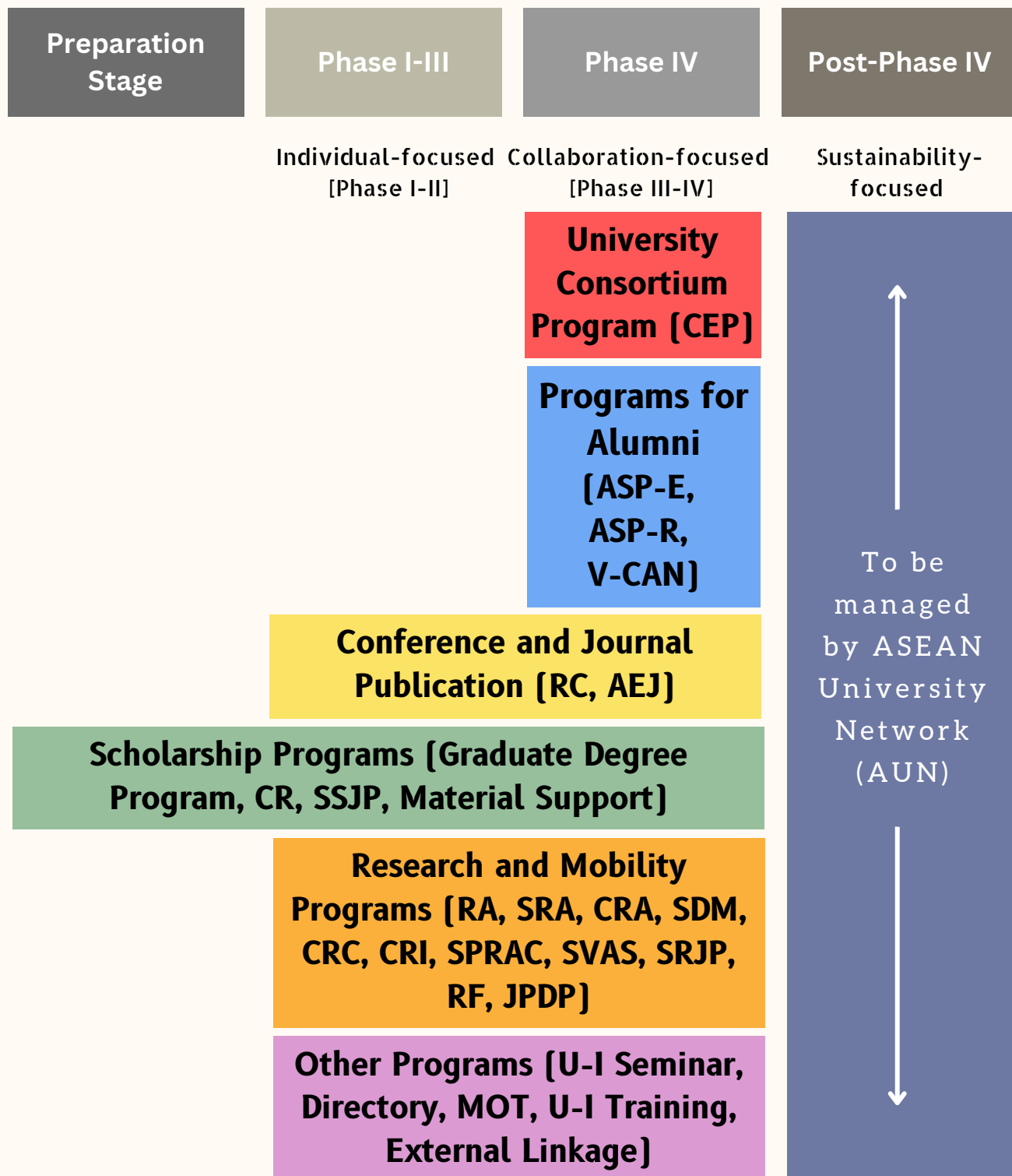
Program

TIMELINE

20 years is a long time.
Through our love and bond,
it went by in a blink of an eye.

History was written,
friendship strengthened,
our network will live within us
and never dies.

C
A
T
E
G
O
R
Y



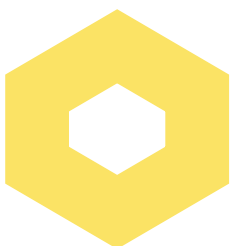
See the color tones for each section!



UNIVERSITY CONSORTIUM PROGRAM



PROGRAMS FOR ALUMNI



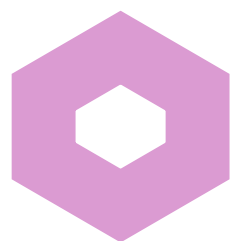
CONFERENCE AND JOURNAL PUBLICATION



SCHOLARSHIP PROGRAMS



RESEARCH AND MOBILITY PROGRAMS



OTHER PROGRAMS



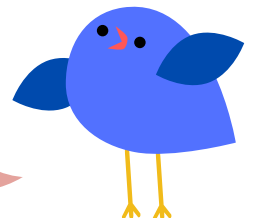
“

**Success is BEST when it's
SHARED.**

- Howard Schulz

UNIVERSITY CONSORTIUM PROGRAM

We collaborated.
We worked together.
We collectively put efforts, and
now it's time we share the
SUCCESS!





Collaborative Education Program (CEP)

Established: 2018 (Phase IV)

Main Objective: The program aims at leveraging the long-established network to create a more official, institutional-level partnerships.

The foundation of the partnership is based on university consortiums consisting of Member Institutions, Japanese universities, ASEAN universities, and industry. With funding from AUN/SEED-Net, they outline their expected outputs and define the appropriate higher education activities to deliver them. The outputs vary from one consortium to another, ranging from Master's and PhD recipients and collaborative research, to exchange and mobility schemes. Evolving from within the ASEAN and Japan, the CEP has since expanded to include certain countries in South Asia and Africa.



10 Consortiums



6 FULLY-FUNDED

- ✓ Maximum grant of USD 450,000
- ✓ Implementation period: Four years



4 CO-FINANCED

- ✓ USD 100,000 funded by AUN/SEED-Net during the first year period
- ✓ Co-financing contributions from consortium members for the remainder of its implementation

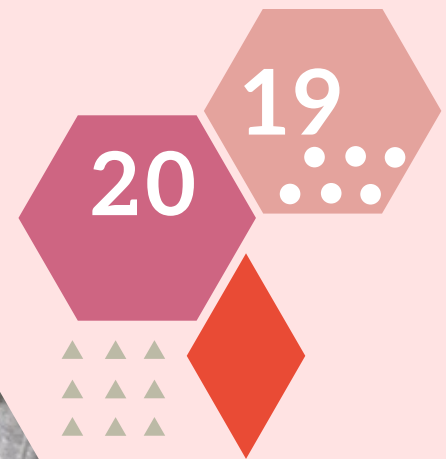




6

FULLY-FUNDED
CEP





ASEAN University A

Universiti Teknologi Malaysia (UTM), Malaysia

Japanese University B

University of Tsukuba

ASEAN University C

Institute Teknologi Sepuluh Nopember (ITS),
Indonesia

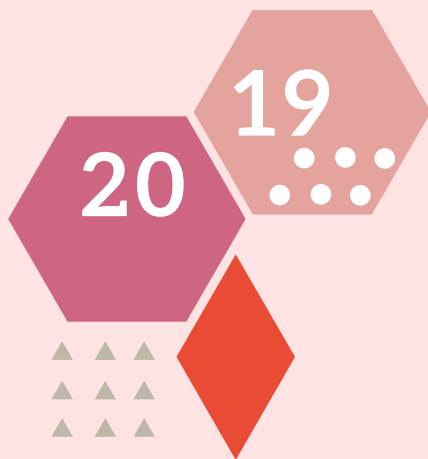
Industry

1. Indah Water Konsortium Sdn. Bhd., Malaysia
2. Nippon Koei Co., Ltd., Japan

CEP-SEEN

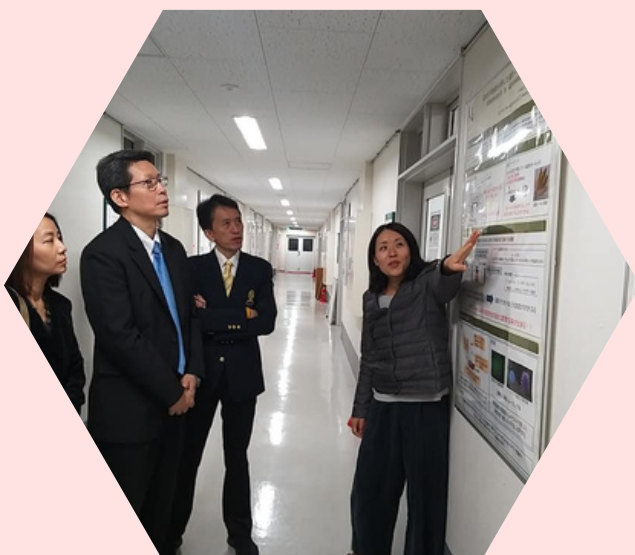
Collaborative Education Program for Sustainable Environmental Engineering Network

- Two PhD and eight Master's degree on-going students in environmental engineering.
- Published 12 international co-publications and more than 15 publications in progress among consortium members.
- One research project in the process of IPR copyright and four more projects are during application process.
- Adopted Japanese-style-oriented research methodologies for effective data analysis.
- Laboratory visit and knowledge exchange at ITS, Indonesia, University of Tsukuba, Japan, and industrial partners; Indah Water Konsortium Sdn. Bhd., Malaysia and Nippon Koei Co., Ltd, Japan.
- Facilitated collaborative research projects across consortium members, including industrial partners
- Conducted mobility activities such as seminars, conferences, and workshops



GAICCE

**Global Academia-Industry Consortium
for Collaborative Education Program**



ASEAN University A

Chulalongkorn University (CU), Thailand

Japanese University B

Nagaoka University of Technology

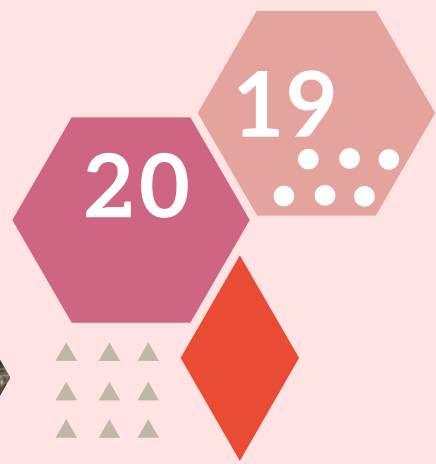
ASEAN University C

1. Hanoi University of Science and Technology (HUST), Vietnam
2. Universiti Sains Malaysia (USM), Malaysia

Industry

1. Takasago Thermal Engineering Co., Ltd. in Thailand, Vietnam, Malaysia, and Japan
2. Biotech Japan Corporation, Japan
3. Aikawa Engineering Co., Ltd., Japan

- Six Master's and two Doctoral Double Degree holders graduated.
- Three new Master's/Doctoral Double Degree programs have been completed.
- Arranged eight guest lecturers among consortium members.
- Conducted 14 co-research projects/proposals among consortium members and industry with intensive co-funding from companies
- Produced 18 international journal co-publications among consortium members
- Facilitated the participation of 56 Master's and PhD students in student mobility programs



ASEAN University A

Kasetsart University (KU), Thailand

Japanese University B

Nara Institute of Science and Technology

ASEAN University C

1. National University of Laos (NUOL), Laos
2. University of Yangon (UY), Myanmar
3. Universiti Kebangsaan Malaysia, Malaysia
4. SRM Institute of Science and Technology, India
5. Tribhuvan University, Nepal

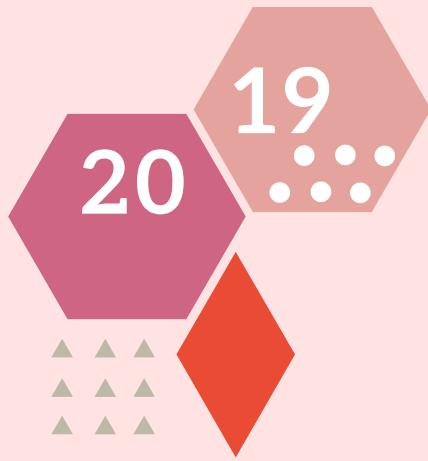
Industry

1. Okuno-Auromex (Thailand) Co., Ltd., Thailand
2. Primetech Corporation, Japan
3. Shimadzu Corporation, Japan
4. Global Power Synergy Public Company Limited, Thailand
5. Shera Public Company Limited, Thailand
6. Silicon Craft Technology Plc., Thailand

ICE-MATTER

International Collaborative Education Program for Materials Technology, Education, and Research

- Six Master's and one PhD student are scheduled to graduate in December 2022, with plans to continue under KU and MEXT scholarships
- Successfully launched the "KU-NAIST Master's Double Degree program," with student enrollment by the end of 2022
- Started more than 10 collaborative research projects, two with generous financial support from the private sector
- Conducted 20 mobility activities and six block lectures at the Nara Institute of Science and Technology for students in partner countries
- Arranged for seven exchange students to attend Nara Institute of Science and Technology
- Organized two international joint symposiums with 38 presentations from members



JACEP

Japan-ASEAN Collaborative Education Program

- Recruited and trained 12 Master's degree scholarship students in renewable energy engineering
- Completed a comprehensive report on renewable energy technologies, issues, challenges, and social acceptance in the ASEAN
- Organized guest lectures by consortium members, including industry partners, and Shri Mata Vaishno Devi University (SMVDU), India
- Completed an MoU between UM and SMVDU to facilitate ongoing and future collaborative research projects
- Constructed a prototype of a solar thermal cooling system and developed community engagement under collaborative research with SMVDU
- Developed a collaboration plan for renewable energy with the Indian Institute of Technology Hyderabad, India
- Achieved the targeted number of paper publications in journals and conference proceedings
- Organized three academic workshops and one international conference on renewable energy related topics

ASEAN University A

Universiti Malaya (UM), Malaysia

Japanese University B

Kyoto University

ASEAN University C

1. Can Tho University, Vietnam
2. Institute of Technology of Cambodia (ITC), Cambodia
3. National University of Laos (NUOL), Laos
4. University of Brunei Darussalam (UBD), Brunei Darussalam
5. Yangon Technological University (YTU), Myanmar

Industry

1. Daikin Research & Development (Malaysia) Sdn. Bhd., Malaysia

19
20



MCM

JICA/AUN-SEED-Net: Consortium of Master in Construction Management

- Enrolled eight Master's degree students into the Construction Management program
- Facilitated lectures on the development of steel structure engineers and acquired 500,000 JPY scholarships from industry partners
- Produced practical software for the construction industry developed from a student's thesis
- Entered into an MoA to develop a Double Degree program between Yokohama and HCMUT
- Entered into an MoU to develop academic and cultural interchange between YTU and HCMUT
- Established academic collaboration in construction management with South Asian partners, including the Royal University of Bhutan, University of Peradeniya, Indian Institute of Technology Roorkee, and Indian Institute of Technology Hyderabad
- Organized an international seminar on "Construction Management" and one international conference with the participation of South Asian partners
- Published at least eight international conference papers and proceedings

ASEAN University A

Ho Chi Minh City University of Technology (HCMUT), Vietnam

Japanese University B

Yokohama National University

ASEAN University C

Yangon Technological University (YTU), Myanmar

Industry

JFE Steel Corporation, Japan

20

18



SIIT-HU-ITC CEP CONSORTIUM

JICA-AUN-SEED/Net: SIIT-HU-ITC CEP Consortium by SIIT



ASEAN University A

Sirindhorn International Institute of Technology (SIIT), Thammasat University, Thailand

Japanese University B

Hokkaido University

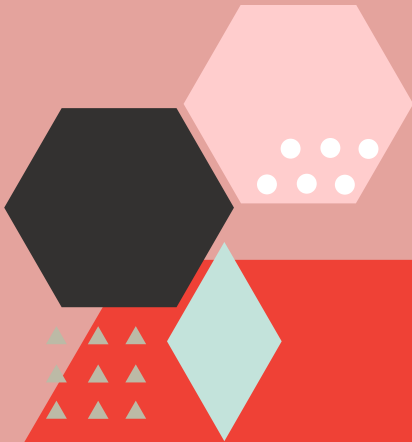
ASEAN University C

Institute of Technology of Cambodia (ITC), Cambodia

Industry

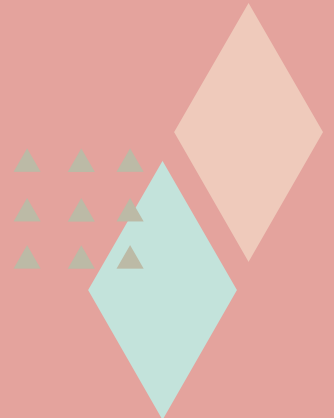
1. Thai Obayashi Corporation Limited, Thailand
2. Taiheiyo Cement Corporation, Japan
3. Neuron Mobility Pte. Ltd., Singapore

- Enrolled seven PhD candidates into a Double Degree program at Hokkaido University and recruited four Master's degree candidates for the Civil Engineering program
- Accommodated student engagement with professional communities/industry sector in their home countries as extracurricular activities
- Organized two technical workshops with CEP as well as students from partner universities
- Conducted eight research projects with industrial partners
- Planned the publishing of at least 15 international publications



4

CO-FINANCED
CEP



CEP-SME-AISA

Collaborative Education Program for
Sustainability Management of Effluents
from Agro-Industry in Southeast Asia

ASEAN University A

National University of Laos (NUOL), Laos

Japanese University B

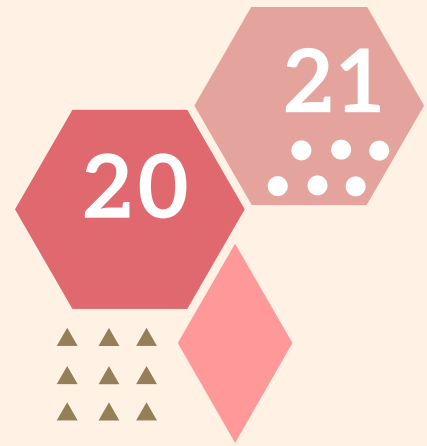
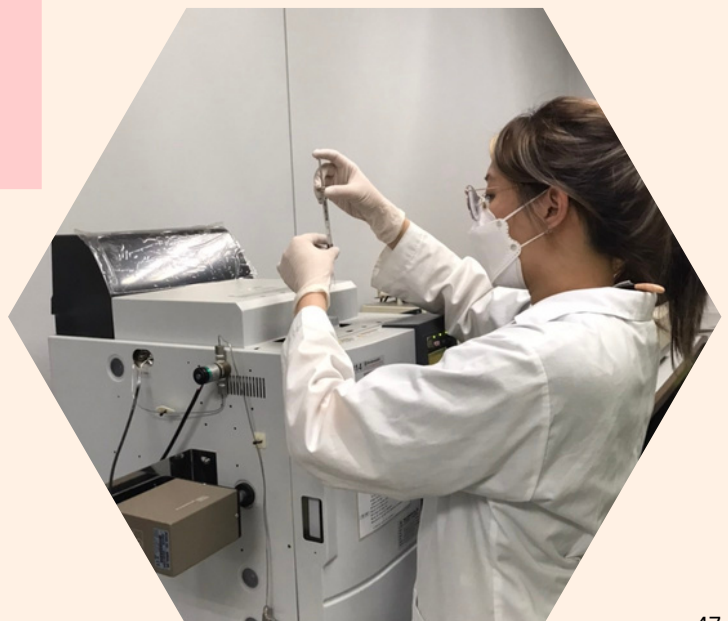
University of Kitakyushu

ASEAN University C

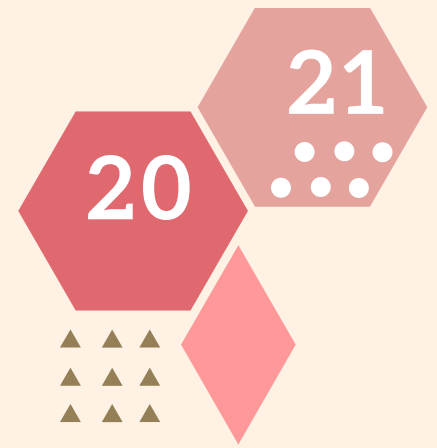
1. King Mongkut's University of Technology
North Bangkok, Thailand
2. King Mongkut's University of Technology
Thonburi, Thailand
3. Rajamangala University of Technology
Rattanakosin, Thailand

Industry

1. Thailand Institute of Nuclear Technology,
Thailand
2. Chalong Latex Industry, Thailand
3. Suksoomboon Palm Oil Co., Ltd., Thailand
4. Lao Agrotech Public Company, Laos
5. XP Trading Lao-Chine Co., Ltd., Laos



- Recruited a total of eight students and young professionals into Chemical Engineering programs: two PhDs, two Master's, and four professionals
- Secured USD 480,000 in external funding from the government, research institutions, universities, and international organizations
- Upgraded the research facilities at partner universities
- Established eight collaborative research projects across consortium members, including industry partners
- Organized an online symposium and virtual laboratory demonstration
- Published five papers in journals and conference proceedings



CUBE-ASEAN

**Collaborative Education on Urban
Geology in the ASEAN Region**

ASEAN University A

Universitas Gadjah Mada (UGM), Indonesia

Japanese University B

Kyoto University

ASEAN University C

1. Chulalongkorn University (CU), Thailand
2. Hanoi University of Mining and Geology,
Vietnam

Government agency

Meteorological, Climatological, and
Geophysical Agency, Indonesia

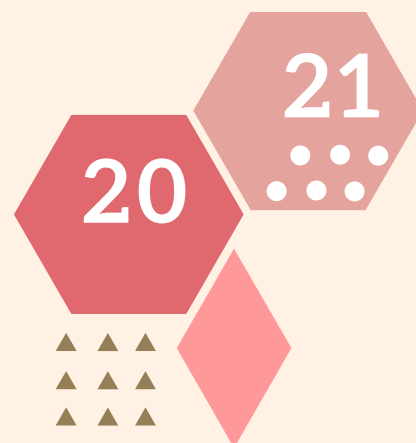
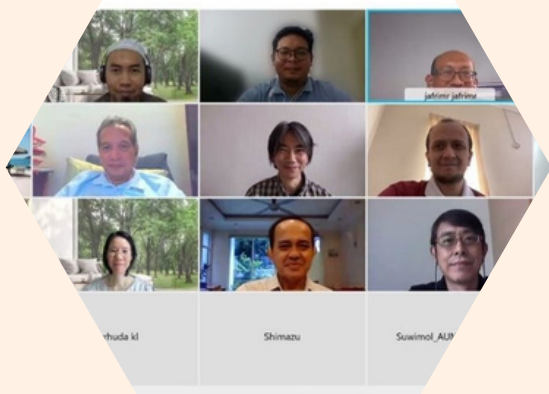
- Recruited and trained five students under the Master's Degree program with joint supervision in geological engineering
- Provided additional scholarships to students wishing to join the PhD program in the CUBE-ASEAN Project
- Organized a virtual mobility program, including virtual lectures and visits by consortium members to Kyoto University
- Conducted four student research projects and two additional collaborative research projects between CU and Hanoi University of Mining and Geology
- Published five papers in indexed international proceedings

FUTURE

Biomass and Solar Renewable Energy System – The Future Energy for ASEAN Region



TM Future En



ASEAN University A

Universiti Teknologi Malaysia (UTM), Malaysia

Japanese University B

Nagoya Institute of Technology

ASEAN University C

1. Hanoi University of Science and Technology (HUST), Vietnam
2. Universitas Gadjah Mada (UGM), Indonesia

Industry

MyBamboo Sdn. Bhd., Malaysia

- Recruited six Master's degree candidates who have almost finished their studies
- Conducted virtual activities, including online seminars among members during the COVID-19 pandemic
- Acquired university's matching grant and additional international funding

WATER

Water and Wastewater Treatment Engineering Research Consortium

ASEAN University A

Universiti Teknologi Malaysia (UTM), Malaysia

Japanese University B

Kobe University

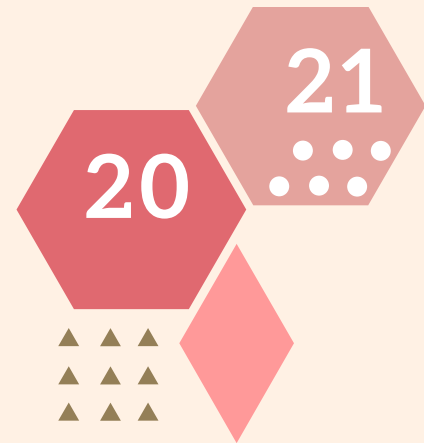
ASEAN University C

1. Institut Teknologi Sepuluh Nopember (ITS), Indonesia
2. Prince Songkhla University, Thailand

Industry

Kasui Techno Sdn. Bhd., Malaysia (formerly known as Kubota Kasui Malaysia Sdn. Bhd.)

- Recruited six students: five Master's degree, and one PhD with joint supervision
- Five Master's degree students participated in the 2nd International Conference of Sustainable Environmental Technology
- Obtained a UTM matching grant to carry on research attachment in Japan, a benchmarking visit at Kobe University, knowledge dissemination to stakeholders, and progress meetings
- Organized two industrial visits in Kuala Lumpur and Langkawi
- More than 12 published papers




FAQ: WHAT ARE THE BENEFITS OF...



- 1 Opportunity to establish and strengthen the academic network with industrial partners and other international institutions in the region and beyond.
- 2 Better access to research resources and human resource development for faculty members and students.
- 3 Enhancement of academic mobility and exchange with partner universities.
- 4 Development of competency in the implementation and operation of the designed curriculum.
- 5 Knowledge expansion in related engineering fields and contribution to the academic and social sustainability.



[Not so] Fun fact: In 2020, due to the COVID-19 pandemic, almost all campuses were locked down, leading to a shift in the academic year, a pause in regional mobility, and the disruption of planned activities. In the battle against the unprecedented situation, the consortiums adopted responsive measures and adjusted their strategies to ensure as much progress as possible was achieved.

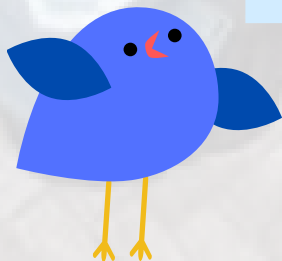


Individually we are one drop.
Together, we are an ocean.

- SATORO Ryonosuke

PROGRAMS FOR ALUMNI

We are indeed
stronger together.
Japan-ASEAN, we are
like brothers and
sisters!!





ALUMNI SUPPORT PROGRAM

For Event (ASP-E)
For Research (ASP-R)



Established: 2018 (Phase IV)

Main Objective: The project focuses on the academic cooperation and research capacities of AUN/SEED-Net alumni through collaboration of engineering's higher education institutions and industries in ASEAN and Japan.

Human resources are crucial for strengthening and expanding the network. During 20 years of collaboration, we have seen many seeds grow and blossom. Our alumni work in both public and private sectors, mostly at AUN/SEED-Net Member Institutions. Many of our scholarship graduates subsequently become faculty members, transferring knowledge and nurturing their students while continuing to support the network.

“Plant the SEED of Future, grow ASEAN-JAPAN Network for Sustainability,” is, hence, becoming more and more realistic.

Since 2001, over 1,400 scholarships have been granted, and 200 collaborative research projects, 150 conferences, and more than 2,500 academic mobilities accomplished, representing the strength of our engineering education community.

Engineering integrates the concepts of science, putting them into context through social considerations, and providing tangible outcomes for society. It is essential that engineering not only works in the laboratory but also in real-world situations.



ASP-E

The **Alumni Support Program for Event (ASP-E)** was initiated in 2018, and since then, seven grants have been awarded to alumni groups. As a result, our alumni have organized many valuable events, such as seminars, workshops, industrial visits, and meetings. These not only benefit the alumni themselves but also other colleagues and students at their institutions.



ALUMNI SUPPORT FOR EVENT **ASP-E**

The Alumni Support Program for Event (ASP-E) was initiated in 2018, and since then, seven grants have been awarded to alumni groups, as shown in the following table. Our alumni have organized many valuable events, such as seminars, workshops, industrial visits, and meetings. These not only benefit the alumni themselves but also other colleagues and students at their institutions.

MI/Country	Japanese Fiscal Year (JFY)	Alumni Group/ Association
HCMUT, Vietnam	2019, 2020, 2021, 2022	HCMUT AUN/SEED-Net Alumni Association (H3A)
HUST, Vietnam	2018, 2019, 2020, 2021, 2022	HUST/SEED-Net Alumni Group
ITC, Cambodia	2018, 2019, 2020, 2021, 2022	AUN/SEED-Net Alumni of Cambodia (ASAC)
MSU-IIT, Philippines	2021	AUNSEED-net Alumni of MSU-IIT
NUOL, Laos	2022	AUN/SEED-Net Alumni in NUOL for ICT Sustainability and collaboration <i>Remark: For JFY 2020 and 2021, the awarded alumni group was FEN-NUOL-ALUMNI</i>
UM, Malaysia	2022	AUN/SEED-net UM Alumni Club
UTM, Malaysia	2019	UTM Engineering & Sustainability SEED.Net Alumni

ASP-R

In 2021, with our community's strong interest in research, the Alumni Support Program for Research (ASP-R) was created to expand the research on JICA socio-economic priority areas. The nine awardees published a paper and gave presentations on various interesting topics.



ALUMNI SUPPORT FOR RESEARCH **ASP-R**

ASP-R or Alumni Support Program for Research was only available in JFY 2021 to support alumni in conducting research responses to the following JICA Socio-economic priority areas:

1. Smart manufacturing and supply chain management
2. Quality infrastructure development
3. Water resource development
4. Climate change mitigation and adaptation
5. Agriculture and rural development
6. Health and medical care
7. Disaster resilience

The nine awardees published a paper and gave presentations on various interesting topics, as shown in the following table.

MI/Country	Principal Investigator's Name	Research Topic
ITC, Cambodia	Dr. Rathborey Chan	Nutrient recovery from aquaculture wastewater: An aquaponic recirculation System
ITC, Cambodia	Dr. Saret Bun	Experimental and empirical investigation of oily wastewater separation using air flotation Integrated coagulation process
UGM, Indonesia	Asst. Prof. Muhammad Akhsin Muflikhun	Development of GFRP and carbon black composite laminates coated with Nano-silver as anti-pathogen capability

MI/Country	Principal Investigator's Name	Research Topic
NUOL, Laos	Dr. Phanthoudeth Pongpanya	Development of landslide vulnerability maps of Laos national roads for landslide management Purposes
USM, Malaysia	Assoc. Prof. Dr. Mohd Ashraf Mohamad Ismail	Development of quantitative weathering method using multi model image analysis technique for rock slope instability assessment in tropical region
UTM, Malaysia	Dr. Mohd Hafiz Dzarfan Othman	Contamination of endocrine disrupting compounds in Southeast Asia's water supply: Sunlight-driven photocatalytic membrane as a potential treatment technology
MSU-IIT, Philippines	Dr. Carl John Salaan	Drone with NDT device for infrastructure inspection - Phase 1: Development of aerial perching mechanism
TU, Thailand	Dr. Pruettha Nanakorn	An efficient numerical scheme for material distribution optimization of bi-directional functionally graded planar curved beams
HCMUT, Vietnam	Dr. Nguyen Xuan Thanh Tra	Development of Ibuprofen loaded porous apatite granules as orthopedic drug delivery system - An effective treatment for COVID 19 elder patients with bone disease



V-CAN

**Video Contest
for
Alumni Network**



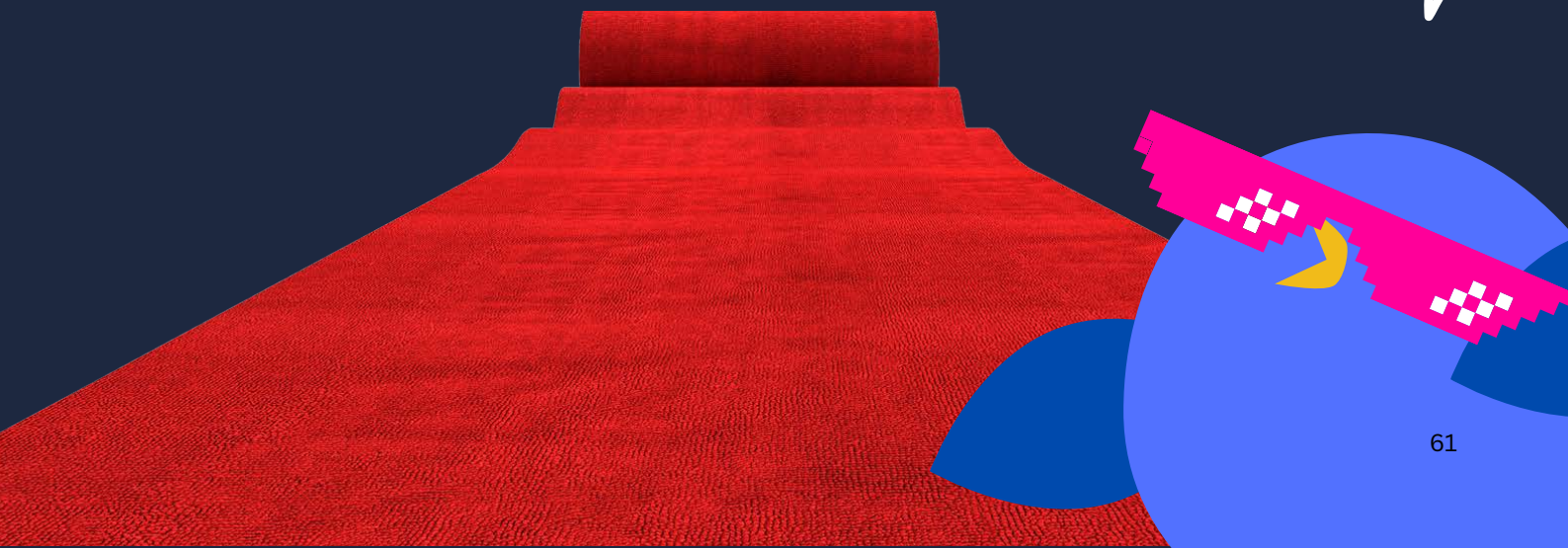
LAUNCHED: 2020

Objectives:

With over 2,000 alumni, we look forward to sustaining our good collaboration and expanding the network further. The Video Contest for Alumni Network (V-CAN) was launched as an alternative platform for our alumni to get to know each other, increase collaboration opportunities, and we wanted to give a voice to our outstanding alumni community, allowing them to tell their stories of participating in AUN/SEED-Net programs and activities and the impact of the experience on their career and academic path via a dynamic video.

Highlights:

- Two Seasons (2020 & 2021)
- 20 videos submitted and 29 individuals participated
- Winners received equipment support worth USD 5,000



V-CAN



In honor of AUN/SEED-Net's 20th anniversary, we are celebrating two decades of success in enhancing education and research capacities in the engineering field, fostering innovative and highly skilled human resources, strengthening university-industry linkages, and solving regional issues and challenges. V-CAN is a replay of all those good memories! Let's meet the winners of 2020 and 2021!!



V-CAN 2020 Awardees



Gold Award

Video Title: "Voice of Cambodian AUN/SEED-Net Alumni, Dr. Saret Bun"

Presented by: Saret Bun, Institute of Technology of Cambodia (ITC)

(URL: <https://youtu.be/gzrQUMepcQY>)

Silver Award

Video Title: "Thank You, AUN/SEED-Net for Improving ASEAN's Human Development Index"

Presented by: Muhammad Fatih Qodri, Institut Teknologi Nasional Yogyakarta

(URL: https://youtu.be/OXAXFMWQ_uY)



Bronze Award

Video Title: "AUN/SEED-Net Video Contest Rio Pramanagara, West Papua - Indonesia"

Presented by: Rio Octovinary

Pramanagara, University of Papua

(URL: https://youtu.be/aBiDHab_S-c)



Popularity Award

Video Title: "AUN/SEED-Net Alumni from Cambodia"

Presented by: Reasmey Tan, Institute of Technology of Cambodia (ITC)

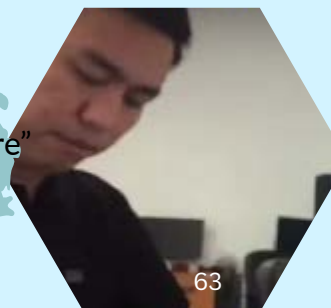
(URL: <https://youtu.be/uxuwYRi3VVU>)

Popularity Award

Video Title: "AUN/SEED-Net Seed for the Future"

Presented by: Rimmon Salvacion Labadan, Thammasat University (TU)

(URL: <https://youtu.be/N9sZVl3vLHw>)



V-CAN 2021 Awardees



Most Popular Award

Video Title: "Chan's Brothers in AUN/SEED-Net Network"

Presented by:

- 1) Dr. Rathborey Chan, Institute of Technology of Cambodia (ITC)
 - 2) Mr. Ratboren Chan, Institute of Technology of Cambodia (ITC)
- (URL: https://youtu.be/cQY_Pt-Fmk0)

Best Content: Contribution to Community/Industrial Partners/External Partners

Video Title: "What we were meant to be after AUN/SEED-Net Scholarship"

Presented by:

- 1) Dr. Kimleang KHOEURN, Institute of Technology of Cambodia (ITC)
 - 2) Mrs. Chan Arun Phoeurn, Institute of Technology of Cambodia (ITC)
- (URL: <https://youtu.be/4AczoRSTsYc>)



Best Content: Contribution to the Network

Video Title: "AUN-SEED/Net Alumni Collaboration at NUOL"

Presented by:

- 1) Dr. Sounthisac Phommachanh, National University of Laos (NUOL)
 - 2) Dr. Hanthanou Luangxaysana, National University of Laos (NUOL)
- (URL: <https://youtu.be/8GiCN3Sj4sY>)


Most Creative Award

Video Title: "Seed and Network of AUN/SEED-Net Grow for Sustainable Development"

Presented by:

- 1) Dr. Saret Bun, Institute of Technology of Cambodia (ITC)
 - 2) Mr. Penghour Hong, B2G Engineering Co., Ltd
- (URL: <https://youtu.be/Tfr2TzH9nSw>)



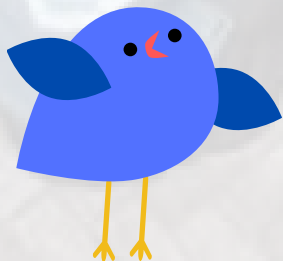


An investment in knowledge
pays the best interest.

- Ben Franklin

CONFERENCE AND JOURNAL PUBLICATION

We invest time and
efforts to see
our collaboration
GROW!



Regional Conference (RC)



At the beginning phase of AUN/SEED-Net, the principal objectives of the project were to develop human resources by providing students with a higher degree and establish an academic network in the ASEAN. Under this fundamental plan, the idea of organizing a “Field-wise Seminar” was initiated and later developed into a “Regional Conference (RC).”

RC and its Significance

Launched: Phase II (2008-2013)

RC has played an important role in bringing together people in the engineering network. Academically, the RC provides a venue for presenting new knowledge and technology in respective fields emerging during the year. Furthermore, it is a gathering of people from the education, public, and private sectors who share the same interests, providing opportunities for more collaboration after the event. Organized in rotation by MIs annually, the RC helps to build strong connections among significant engineering figures in the ASEAN.



Gathering of researchers



Technological advancement



Cultural exchange

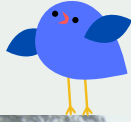


Knowledge sharing



Strengthened relationship

online



On-site



Nothing can Break us Apart!

**NOT EVEN COVID-19 AND
BORDER RESTRICTIONS,
BECAUSE WE WENT ONLINE!!**

In 2013, marking the start of Phase III, the idea of Field Management Universities was developed at the RC. The RC is organized annually by fields in the ASEAN region with technical support and consultancy from Field Management Members who were faculty staff assigned from Field Management Universities. The RC provides a forum for researchers, faculty staff, and students to present the research outputs, exchange information on research and technology trends, and pursue discussions on future collaborative research topics. This RC structure has continued into Phase IV. Moreover, the RC aims to maximize the outreach of the AUN/SEED-Net Network to strengthen its impact by involving external participants such as representatives from the government, industry, community, and other professional organizations. Each year, over 1,000 participants from various groups participate in the RCs from across the ASEAN, Japan, and beyond.

Due to the COVID-19 pandemic, changes have had to be made to the Regional Conferences, and they are now organized on both on-site and online platforms. However, AUN/SEED-Net still continues to provide financial and technical support to the organizers and participants.



8,000+
Researchers
participated in RCs

124 RCs
have been held by
Member Institutions

Regional Conference, formerly known as Field-wise Seminar program, was set up to facilitate the gathering of all experts concerned to discuss the project and systematize collaborative research activities among Member Institutions.

The Japanese Fiscal Year 2003 was the first in which Field-wise Seminars were organized for all nine engineering fields. The 14 seminars were organized not only at the respective Host Institutions but also at Non-host Member Institutions, involving 46 Japanese professors being dispatched to participate in the events. Hence, this could be considered a good start to building an academic network in engineering between the ASEAN and Japan.

Built from the Field-wise Seminar in Phase I of the AUN/SEED-Net Project, the Regional Conference program (RC) was launched in Phase II. The RC is an extension of the Field-wise Seminar in all aspects.

Throughout the past 20 years, every RC has served its purpose as a bridge between industry and private sector, and also as a platform for researchers to exchange knowledge and develop new ideas.

In Phase III-IV, RC is considered one of the core programs of AUN/SEED-Net. The supported Engineering Fields and Field Management Universities in Phases III & IV are shown in the table below:

Field	ASEAN (Host)	Japan
Chemical Engineering	<u>DLSU</u>, UGM, UM	<u>TIT</u>, Kyoto, Tokyo
Civil Engineering	<u>CU</u>, UM, UTM, TU	<u>Hokkaido</u>, TIT
Computer and Information Engineering	<u>KMITL</u>, UGM	<u>Tokai</u>, Hokkaido, TUT
Electrical and Electronics Engineering	<u>CU</u>, ITS, UM, UP	<u>TIT</u>, Keio
Energy Engineering	<u>ITB</u>, KMITL, USM	<u>Kyoto</u>, Kyushu

Field	ASEAN (Host)	Japan
Environmental Engineering	<u>UP</u> , CU, ITB, KU	<u>Tokyo</u> , Kyoto
Geological and Geo-Resource Engineering	<u>UGM</u> , CU, USM	<u>Kyushu</u> , Hokkaido, Waseda
Material Engineering	<u>USM</u> , UGM, UM	<u>TUT</u> , Kyoto, TIT
Mechanical and Manufacturing Engineering	<u>ITB</u> , DLSU, UM	<u>Keio</u> , Tokai, TUT
Natural Disaster	<u>UGM</u> , CU, ITB	<u>Kyoto</u> , Kyushu, TIT

Underlined = Main field Coordinator





I'M A SCOPUS-INDEXED JOURNAL!!



E-ISSN: 2586-9159

ESTABLISHED: 2011

WEBSITE: [HTTPS://JOURNALS.UTM.MY/AEJ/](https://journals.utm.my/AEJ/)

Fun Fact: AEJ was perhaps one of the journals with the largest number of Editors-in-Chief. Total of 10 - One for each field! (Now two!!)



ASEAN Engineering Journal: From Network to Knowledge

Established in 2011, ASEAN Engineering Journal (AEJ) marks another extraordinary achievement of AUN/SEED-Net. It represents how the solid academic bond among ASEAN countries and Japan could be translated into something concrete, tangible, relevant, and everlasting --- a publication. AEJ's uniqueness that makes it stands out from other engineering journals is that the research topics are set to revolve around the common regional issues in ASEAN, at the same time, these topics also demonstrate the focused points of AUN/SEED-Net Project itself.

AEJ aims to serve as an international platform for scholars, researchers, and students throughout ASEAN countries to publish new and innovative knowledge from academic research outcomes in the fields of engineering. AEJ demonstrates and encourages the exchange of research information and advancement among scholars from ASEAN, Japan and beyond, which contributes greatly to the development of strong academic society and network in the region.

Over 280 manuscripts have been published over the past decade; each and every of them reflected collaboration among researchers from different Member Institutions (MIs) under AUN/SEED-Net and also regions beyond ASEAN. Currently published in four issues per year, the journal features peer-reviewed papers covering 10 engineering fields.



2021 - Transferred to UTM



2019 - Indexed by Scopus



2015 - Indexed by TCI/ACI



2011 - First launched

Bringing it on: The Milestones of Success

AEJ has grown in all aspects: size, frequency, and quality of publication throughout the years, which ultimately earned it a global recognition. Owing to the outstanding contribution of the Editorial Board, consisted of respectable lecturers, scholars and researchers from MIs; AEJ always thrives on success and consistent development of the journal standard. In 2015, AEJ was indexed by Thai Journal Citation Index (TCI) and ASEAN Citation Index (ACI), then in 2019, the journal progressed to be enlisted on Scopus Index database. The coming year, AEJ might also be celebrating a new index status on ESCI (Emerging Sources Citation Index).

Passing it on: The Road to Sustainability

AUN/SEED-Net couldn't be prouder of AEJ and all its past fruitful achievements, as the journal is a living proof that when strength of the network is secured; everything is possible. To ensure the continuation and sustainability of the journal, AUN/SEED-Net decided to transfer AEJ to UTM, one of the MIs, in 2021. Since then, AEJ, as one of the most celebrated legacies of the Project, has opened another chapter, and a new history is in the making. At the same time, the journal's most valuable assets, including quality research, diverse pools of talented researchers and authors, and the rootedness in the regional engineering perception of publication scope, have been promised to continue on, after the termination of AUN/SEED-Net Phase IV in 2023.

In this occasion of the Project's 20th year anniversary, JICA Project for AUN/SEED-Net would like to express our sincere gratitude toward all the past contributions and commitments of MI and non-MI partners who collectively put strong efforts that motivated the journal to achieve thus far.

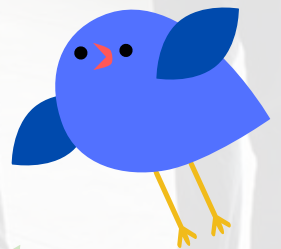


“

**Education is the most powerful
weapon, which you can use to
change the world**

- Nelson Mandela

SCHOLARSHIP PROGRAMS



Knowledge sharing leads to new
findings and many other
discoveries that help advance
technology. We believe this is
where all the changes start.



GRAD

Graduate Degree Program

LAUNCHED: 2001

“

It has become evident that the role of human resource development is critical to the success of long-term economic growth.

OBJECTIVES

The project is expected to contribute significantly to human resource development through the enhancement of research capability and education in the engineering field in the ASEAN. Hence, the Graduate Degree Program has become the core element of AUN/SEED-Net.

Graduate Degree Programs are the program providing scholarships to students in **five different types**:

- 1. Master's Degree Program** at Host Institutions in the ASEAN with collaborative research support from Japanese professors (in operation since 2001).
- 2. Doctoral Degree Sandwich Program** at Host Institutions in the ASEAN with collaborative research support from Japanese professors involving short-term study in Japan once or twice for a total duration of eight months (in operation since 2003).
- 3. Integrated Graduate Degree Program** at Host Institutions in the ASEAN with collaborative research support from Japanese professors involving short-term study in Japan once or twice for a total duration of 10 months (in operation since 2014).
- 4. Doctoral Degree Program in Singapore** offering a direct pathway to doctoral level for bachelor's graduates (in operation since 2006).
- 5. Doctoral Degree Program in Japan** at Japanese Supporting Universities (in operation since 2002).



Additional Scholarship Support for ASEAN Students

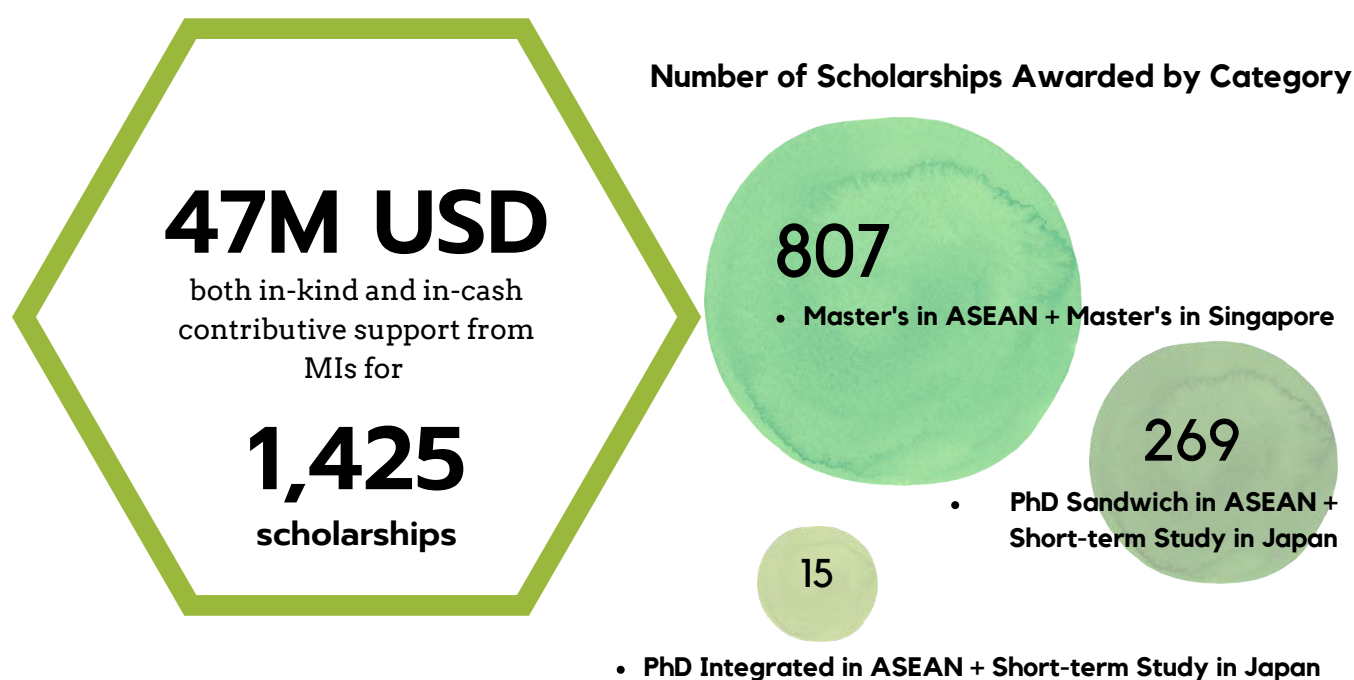
Funding for
1,091
Collaborative
Research

Short-term study
trips to Japan

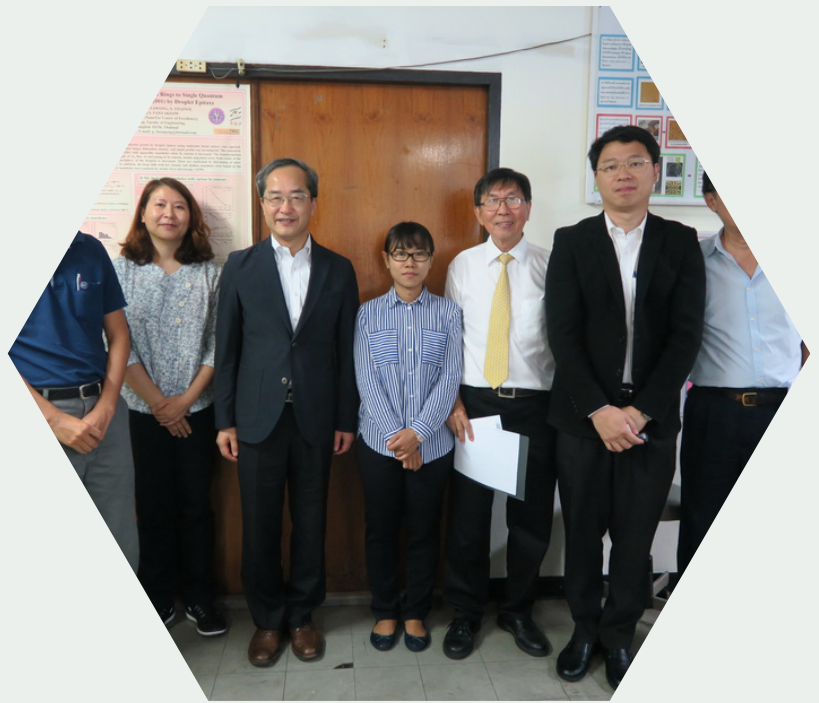
353



- Students or faculty staff in the ASEAN may choose to apply according to their interests.
- The major contribution of Japanese Supporting Universities was to assist the Host Institutions in the “joint thesis research supervision” of AUN/SEED-Net students to upgrade the quality of thesis research, conducted through a **“Collaborative Research Program.”**
- In Phase III, the AUN/SEED-Net network expanded and welcomed new members from the ASEAN and Japan.
- **More than 1,400 scholarships have been provided for students and faculty staff across the ASEAN in the past 20 years.** Our alumni are working in both the private and public sectors. Some are working at the forefront of research, joining leading companies, or pursuing careers as faculty staff. **They remain valuable assets to the country, region, and the world.**



Programs/ Timeline	Prep stage & Phase I	Phase II	Phase III	Phase IV	Total
Master's	311	230	249	17	807
PhD Sandwich	66	99	94	10	269
Integrated	-	-	15	-	15
PhD Singapore	13	27	17	1	58
PhD Japan	56	91	110	19	276
Total	446	447	485	47	1,425



Collaborative Research (CR)

The Collaborative Research Program (CR) is designed to enrich research collaboration between MIs and JSUs under joint supervision for AUN/SEED-Net students. The program is available for Master's, PhD Sandwich, and Integrated Graduate students. It helps to ensure the students achieve high-quality research and timely degree completion. AUN/SEED-Net students can utilize CR funds for research expenses such as purchasing equipment, reference books, or expenses for presenting their papers at international conferences.



Short-term Study Program in Japan (SSJP)

The Short-term Study Program in Japan (SSJP) was designed as an attachment feature for the AUN/SEED-Net Doctoral Degree Sandwich Program, and Integrated Graduate Degree Program, aiming to provide the opportunity for students to conduct their research at Japanese Supporting Universities under the supervision of a Japanese co-advisor.

With a maximum period of eight-month study in Japan for PhD Sandwich and ten-month study in Japan for Integrated Graduate Degree, students may choose to conduct one eight-month-long or two separate trips during their scholarship period (one month on a Short SSJP and another seven months on a Long SSJP).

Ideally, students were recommended to arrange two trips. They could then plan their research direction during the first trip and conduct actual research activities during the seven-month visit to Japan. However, this would be based on the agreement of their advisors and co-advisors at Japanese Supporting Universities.

Fun Fact: The Graduate Study Program or AUN/SEED-Net Scholarship is the most popular and longest-running program to date!



Special thanks on GRAD

To all the focal points, advisors, and Institution staff for their hard work, support, and contributions.

Host Institutions in the ASEAN

CU, DLSU, ITB, ITS, KMITL, KU, NTU, NUS, TU, UGM, UM, UP, UPM, USM, UTM

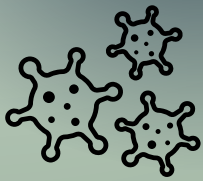
Japanese Supporting Universities acting as Hosts

Hokkaido, Keio, Kyoto, Kyushu, Nagoya, Osaka, Shibaura, TIT, Tohoku, Tokai, Tokyo, TUT, Waseda



MATERIAL SUPPORT

Special Fund for the Purchase of Scientific Literature



CAUSE

With the spread of COVID-19 in early 2020, the academic progress of AUN/SEED-Net scholarship holders was significantly hindered.

Almost every student was prohibited from entering university campuses. Therefore, students were required to enroll in online classes and complete thesis projects while confined to their dormitories or homes. This disruption impeded their academic progress and decreased their likelihood of graduating on time.



SOLUTIONS




The program “Special fund for the purchase of scientific literature” was considered as one of the various means of assisting students to continue their studies without interruption.



The aim of this program was to provide students with the opportunity to purchase additional educational materials to supplement their studies in this dynamic and demanding setting.



In the Japanese Fiscal Year 2020, a total of USD 6,900 was allocated to assist 23 scholarship holders as part of this material support initiative.

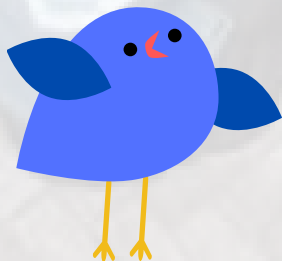


Research is creating new
knowledge.

- Neil Armstrong

RESEARCH PROGRAMS

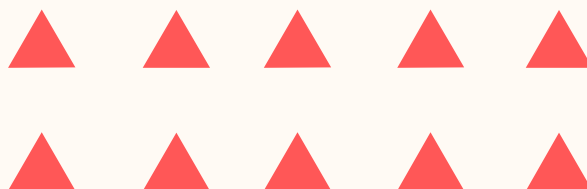
Never say 'NO'
to new
knowledge!!





RESEARCH AND MOBILITY PROGRAMS

[PHASE I-III]





230+

RESEARCH
GRANTS



1,500+

MOBILITY
SUPPORT

The 230 research grants can be categorized into three different objectives for supporting alumni to conduct research in home country, solving common regional issues, and strengthening networks with industrial partners.

I. Research for Supporting Alumni

1

Research for Alumni Members (RA x 80 awards)

RA aims to support alumni members in conducting further research in their home country, preferably relating to topics studied during the Master's/Doctoral scholarships of AUN/SEED-Net. Grants of up to USD 2,000 were awarded with a one-year research period.

2

Special Research for Alumni Members (SRA x 20 awards)

SRA is also designed to primarily support AUN/SEED-Net alumni employed as full-time faculty staff at AUN/SEED-Net MIs in the ASEAN to enhance their capacity by researching on a larger scale. The budget was increased to USD 25,000, with a research period of up to two years per project.

3

Collaborative Research for Alumni (CRA x 38 awards)

CRA is a continual part of SRA from Phase II to Phase III. CRA was designed to primarily support AUN/SEED-Net alumni members employed as full-time faculty members or researchers at AUN/SEED-Net MIs in the ASEAN. Grants of up to USD 25,000 were awarded within a two-year research period.

RA-SRA-CRA created the opportunity for academic staff at MIs to stay connected with their alliances at JSUs and tighten the ASEAN-Japan collaborative bonds through many exciting pieces of research.



II. Research for Solving Regional Common Issues

1

Special Research Program for Disaster Prevention and Mitigation (SDM x 4 awards)

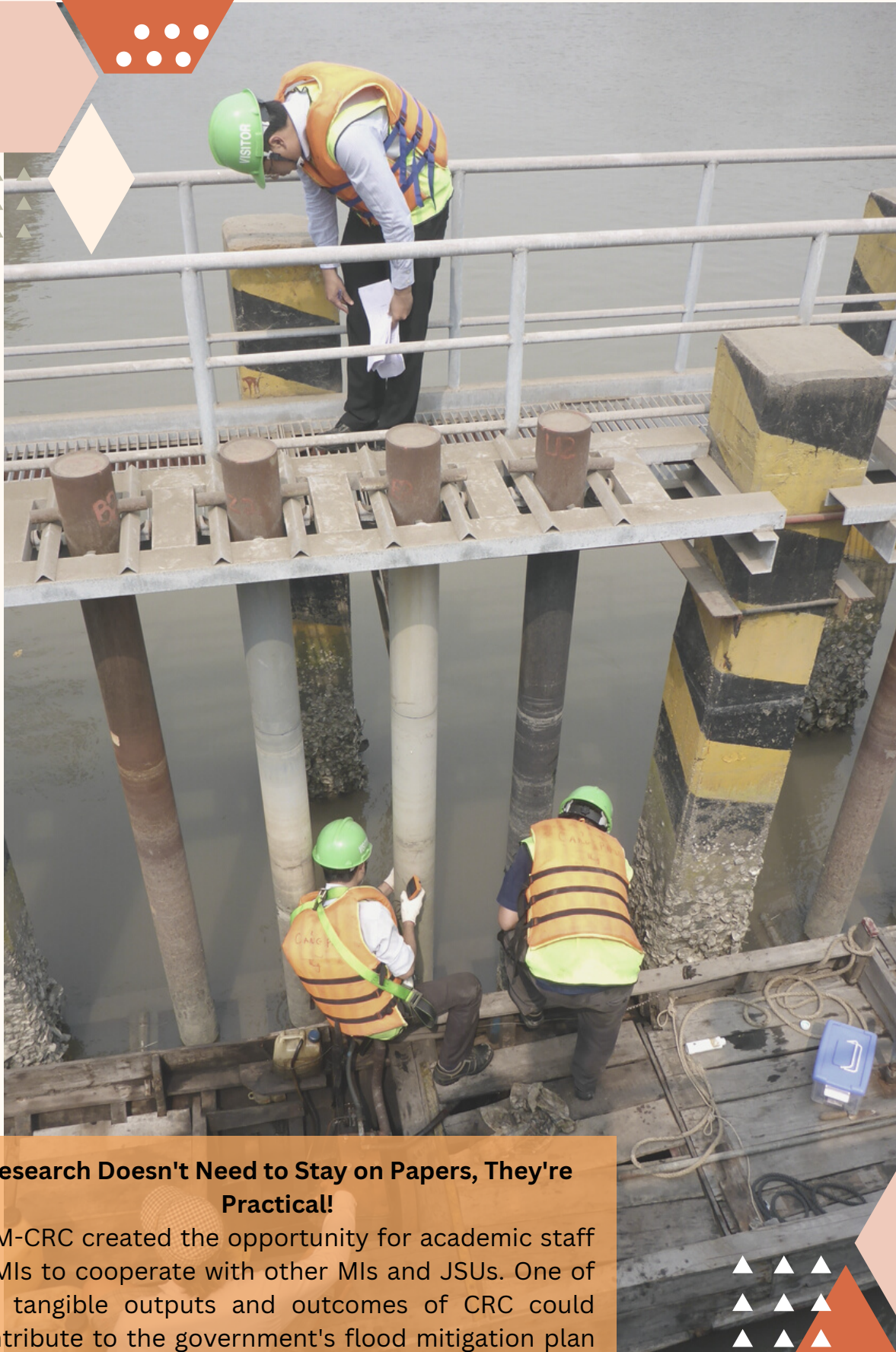
Following the 2011 earthquake and Tsunami in Japan, the Japanese Government allocated an additional budget to respond to the everyday needs of disaster prevention and mitigation in the ASEAN region. The SDM was launched with the offer of a research grant of up to USD 50,000 for any full-time faculty staff member of AUN/SEED-Net MIs in the ASEAN to join hands with ASEAN professors at MIs in different country and Japanese professors at AUN/SEED-Net Japanese Supporting Universities (JSUs). The supporting period of the research grant was up to two years.



2

Collaborative Research for Common Regional Issues (CRC x 41 awards).

CRC is a continual part of SDM from Phase II to Phase III with the aim of conducting a research project that focuses not only on disaster prevention and mitigation but also on other common regional issues requiring urgent solutions and substantially benefiting the region. With the requirement to collaborate with at least one professor of MIs in different country and at least one Japanese professor at AUN/SEED-Net JSUs, CRC aims to promote and strengthen human and academic collaboration between the ASEAN and Japan. A research grant of up to USD 50,000 was offered with a supporting period of two years.



Research Doesn't Need to Stay on Papers, They're Practical!

SDM-CRC created the opportunity for academic staff at MIs to cooperate with other MIs and JSUs. One of the tangible outputs and outcomes of CRC could contribute to the government's flood mitigation plan in the region, especially in Thailand and the Philippines, where there were severe floods spread through every part of the country.

III. Research for Strengthening Network with Industrial Partners



Collaborative Research with Industry (CRI x 47 awards)

- In Phase III, one of the objectives of AUN/SEED-Net was to improve the commerciality of academic research, cohesiveness, and the needs of the industrial sector. Academic researchers liaise with industry players to understand core regional issues and conditions and build rapport.
- CRI made more direct contributions to the socio-economic development of the region and Japan. It was also a crucial platform for promoting university-industry collaboration.
- The research grant was up to USD 50,000 with a supporting period of two years.



The Masterpiece: The Gama-Cha Project

In 2014, one of the awarded projects found the suitable method and formula to fabricate carbonate apatite bone graft, and successfully commercialized the apatite bone graft called “Gama-CHA.” The products were distributed all over Indonesia. It was the first-ever commercialized tissue engineering product in the country.

IV. MOBILITY PROGRAMS



1

Short-Term Visit in the ASEAN (SVAS x 225 awards)

SVAS aims to promote the mobility of faculty staff from MIs to foster collaboration. The aim and scope are related to the academic purpose but not limited to research experiment. The range of activities can vary, such as discussing future collaboration, technical assistance, promoting AUN/SEED-Net scholarships at institutions, etc.



2

Short-Term Research in Japan (SRJP x 217 awards)

The SRJP allowed faculty staff from MIs to connect with Japanese professors at JSUs by offering the awardees a trip allowance, accommodation allowance, round-trip air ticket, and travel insurance. The purpose of the trip is related to joint collaborative research between the ASEAN and Japan.



3

Research Fellowship (RF x 18 awards)


RF targeted the post-doctoral faculty members at MIs, who were given the opportunity to conduct research activities for six months at the accepting institutions they graduated from, either in the ASEAN or Japan. The main purpose of RF is to enhance the research and education capacity of AUN/SEED-Net graduates working as faculty staff, and to contribute to higher academic standards.



4

Japanese Professor Dispatch Program (JPDP x 1,131 awards)

JPDP is an AUN/SEED-Net's mobility program operated by JICA HQs to support Japanese professors in visiting the AUN/SEED-Net Secretariat Office and MIs in the ASEAN. The purpose of the visit could be part of collaborative research, regional conference, program implementation and screening, and scholars supervision, etc.



In total, more than 1,500 mobility grants were awarded to faculty staff at AUN/SEED-Net MIs and Japanese professors at AUN/SEED-Net JSUs during Phase I-III.

Academic mobility enhances ASEAN and Japan's connectivity. The academics were able to discuss and share several research ideas for collaborative research in resolving common regional issues. In addition, the mobility also enriches research collaboration between MIs and JSUs under the joint supervision of AUN/SEED-Net scholars. It helps ensure scholars' high-quality thesis research and timely degree completion. Some of the academics were able to promote and recruit potential candidates to their universities' graduate degree programs through mobility supports.

**Launched: June 2020, in response to the
COVID-19 pandemic**

Special Program for Research against



SPRAC

The initial discussion prior to implementing this program was fueled by a firm and genuine belief that innovation and research collaborations on engineering-based COVID-19 relevant topics between Member Institutions (MIs), Japanese Supporting Universities (JSUs), and other industry partners could provide society with unique and transdisciplinary engineering ideas as well as novel methodologies and technologies, to address this global issue. Overarching objectives of the program included promoting social and economic rehabilitation and strengthening community resilience among network members.



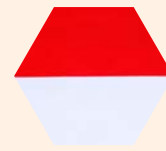
61 proposals
submitted



35 projects
awarded

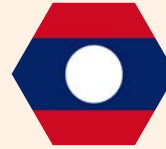


USD 50,000
as maximum grant



Indonesia

- ITS 2
- UGM 2



Laos

- NUOL 1



Malaysia

- UM 3
- USM 10
- UTM 5



Thailand

- CU 1
- KU 2
- KMITL 1
- TU 2



Vietnam

- HUST 2
- HCMUT 4

At the conclusion of the program in December 2021, all 35 SPRAC projects were proven to be inspiring examples of what we, as a network, can achieve together to contribute to the mitigation of COVID-19 crisis-related issues. AUN/SEED-Net is proud to have been a part of these exceptional accomplishments. The key areas of the 35 research projects are summarized below:

- **Antiviral/self-cleaning materials**
- **COVID-19 detection, treatment, medication, and vaccine-related technologies**
- **Waste management technologies, i.e., face mask and Personal Protective Equipment (PPE)**
- **Cleaning and disinfection devices**
- **Surveillance systems and data collection methods employed during the pandemic**
- **Pandemic resilience in various industries**

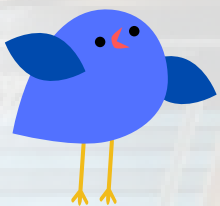
Fun Fact: The number of SPRAC proposals was one of the largest volumes of research proposals ever received by AUN/SEED-Net. The following awards were given to 12 Member Institutions in five different countries.



“

**Sustainable development
requires human ingenuity.
People are the most
important resource.**

- Dan Shechtman



This is why we believe in
human resource
development, because
humans are key to make
our dream of achieving
SDGs come true!



university

Industry

U-I LINKAGE

One of the key programs implemented
from 2013 to 2017 [Phase III]

OBJECTIVES:

To bridge the gap between academia and the private sector, and for Member Institutions to generate highly qualified graduates who can contribute to the development of industry.

The 5 Initiatives



1. ADVISORY COMMITTEE

- Provides practical guidance as well as recommendations for AUN/SEED-Net to further develop its strategy for U-I activities.
- Members consisted of high-profile engineering professionals and academicians.

2. TRAINING

- **Management of Technology (MOT)** course is recommended for AUN/SEED-Net students and young academic staff to enable them to understand the importance of conducting research on the essential technology required in the industrial sector.
- **University-Industry Linkage Promotion Training** provides a short training program for faculty staff from Member Institutions in Japan on how to create a linkage with industry through research.

3. U-I Linkage Seminars

AUN/SEED-Net organized five seminars, to which several notable figures from both international industry and academia were invited to share their perspectives on U-I collaboration in the ASEAN region.

Event	Year	Date	Theme	Venue	No. of Participants			
					Total	Industry	University	Others*
1st	2013	June 21, 2013	Innovation through University-Industry Engineering Collaboration, in light of AEC	Bangkok, Thailand	214	59	83	72
2nd	2013	September 18, 2013	Successes and Challenges in University-Industry Collaboration for Accelerating Indonesian Economic Growth	Jakarta, Indonesia	231	32	47	152
3rd	2014	September 18, 2014	U-I Linkage Enhances Research Commercialization	Kuala Lumpur, Malaysia	181	20	133	28
4th	2016	October 14, 2016	Promoting University Advancement through Internationalization and University-Industry Linkage	Hanoi, Vietnam	209	61	127	21
5th	2017	October 24, 2017	Strengthening University-Industry Linkage toward Integration and Development	Ho Chi Minh City, Vietnam	209	86	112	11



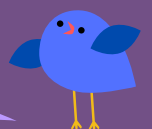
4. U-I DIRECTORY

To facilitate matchmaking among member universities and industrial sectors in the ASEAN and Japan, AUN/SEED-Net also published a “Directory for Engineering”. The publication simply contained details of the research facilities and laboratory services available at each member university. Eight editions were published for eight ASEAN Member States (Brunei and Singapore being the two exceptions).

5. COLLABORATIVE RESEARCH WITH INDUSTRY (CRI)



For more information about CRI, please turn to page 86.



EXTERNAL

LINKAGE

FOIP: The Starting Concept

Following the emergence of the "Indo-Pacific" as a regional concept in the preceding decade, the Abe administration formulated the "**Free and Open Indo - Pacific**" (**FOIP**) as a core diplomatic policy of the Japanese government. As AUN/SEED-Net Phase IV began its implementation in 2018, the FOIP simultaneously started to gain more international recognition, becoming the primary diplomatic priority for Japan.





In response to the growing significance of the FOIP policy, AUN/SEED-Net launched two initiatives:

- **External Linkage under the Existing Collaborative Education Program**
- **The Collaborative Research with External Partners (CRX)**

The **objectives** are to foster people-to-people connections and the free movement of knowledge and skills throughout **ASEAN member states, Japan, South Asia, and Africa.**

I. External Linkage under the Collaborative Education Program (CEP)

- Introduced in 2020
- **Objective:** To establish connections between human resources in engineering education and research in the ASEAN, Japan, South Asia, and Africa by leveraging the already existing Collaborative Education Program (CEP).
- During the Japanese Fiscal Years 2020 to 2022, AUN/SEED-Net offered to provide extra funding assistance to any CEP consortiums expressing interest in expanding their connections with external partners in South Asia and Africa.
- The additional funding gave CEP consortiums the opportunity to collaborate with external partners on a variety of research and education projects.

- The External Linkage under CEP initiative has enabled the formation of the following partnerships.

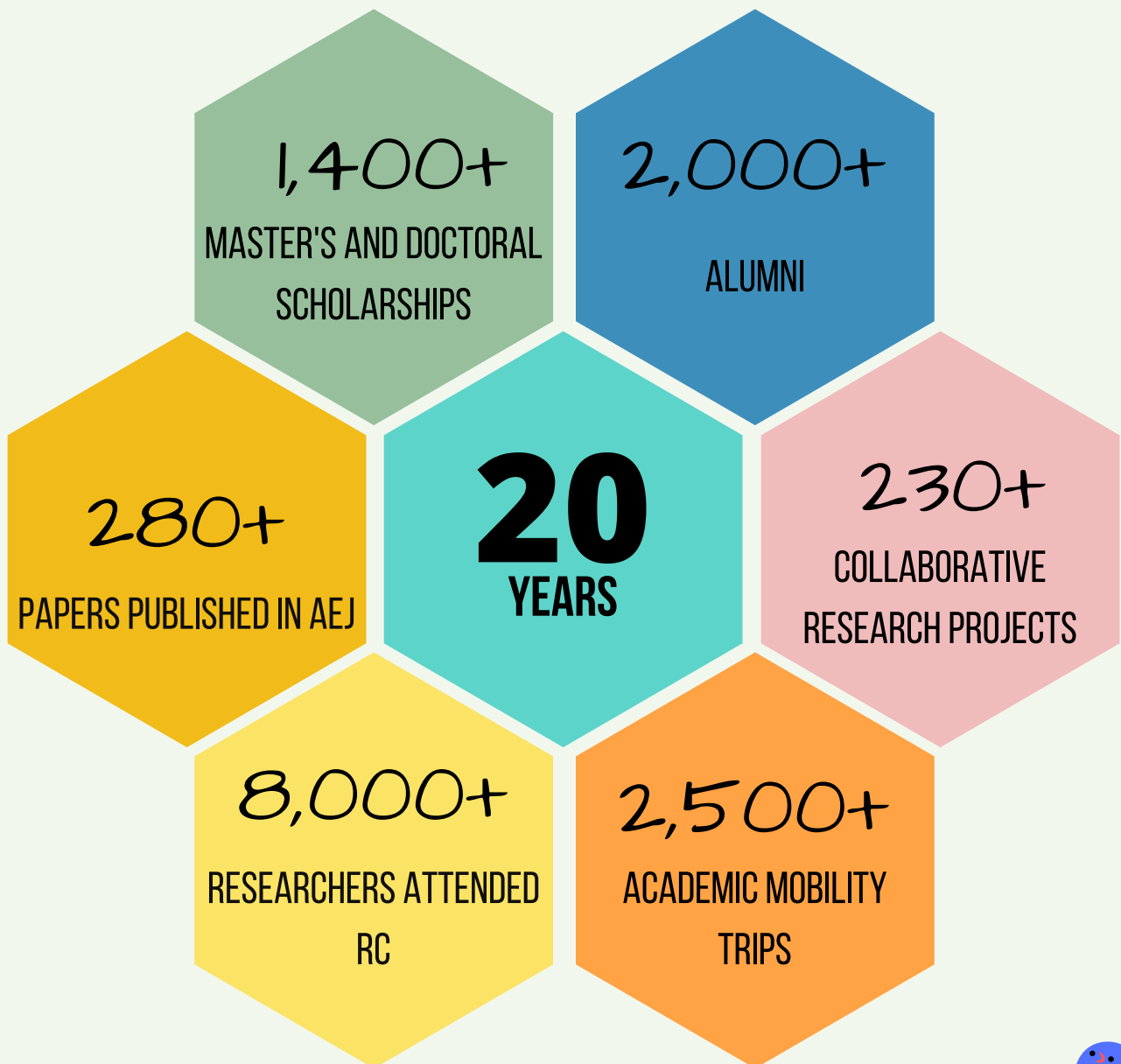
CEP Consortium	Leading Institution	External Partner	Collaboration
MCM	Ho Chi Minh City University of Technology (HCMUT)	<ul style="list-style-type: none"> • UOP, Sri Lanka • RUB, Bhutan • IITR, India • IITH, India 	<ul style="list-style-type: none"> • Special lectures in Civil Engineering and Construction Management for CEP students
ICE-Matter	Kasetsart University (KU)	<ul style="list-style-type: none"> • TU, Nepal • SRM, India 	<ul style="list-style-type: none"> • Research collaboration in Materials Engineering
JACEP	Universiti Malaya (UM)	<ul style="list-style-type: none"> • SMVDU, India • IITH, India 	<ul style="list-style-type: none"> • Research collaboration on Solar Energy • Community engagement project for a solar thermal cooling system prototype • Other research collaborations in Renewable Energy



II. Collaborative Research with External Partners Program (CRX)

- Introduced in 2021
- **Objectives:** To reflect the endeavors of the Japanese government and JICA in connecting Africa and Asia under the FOIP policy. This program aims to encourage and empower Member Institutions to create and foster research and academic partnerships with Higher Education Institutions (HEIs), government agencies, or private companies in South Asia and Africa to address common regional issues and promote the free exchange of technologies and know-how to ultimately develop and maintain peace and prosperity in the Indo-Pacific region.
- CRX grants were awarded to **three research project groups under a collaboration between Chulalongkorn University (Thailand), Jomo Kenyatta University of Agriculture and Technology (Kenya), and the National Energy Technology Center (Thailand) in 2021 and 2022.**

PROJECT	COLLABORATION
Feasibility Study on Croton/Oleander-based Biodiesel Production and Its Utilization in Engines for Energy and Environmental Sustainability	<ul style="list-style-type: none"> • Collaborative study on the feasibility of croton/oleander-based biodiesel production in Kenya • Thailand-Kenya workshops on biodiesel value chain research
Business Continuity Management of Sustainable Healthcare System in Kenya and Thailand	<ul style="list-style-type: none"> • Collaborative study on BCM in the public healthcare sector • Online seminars on BCM in critical infrastructure during disasters
AI-Based Video Analytics for Smart Farming	<ul style="list-style-type: none"> • Collaborative study on AI-based video analytics for smart cattle farming in Kenya • Training workshops on AI-based video analytics and Python programming • Co-supervision for research students



WHAT ARE THESE NUMBERS TELLING US?

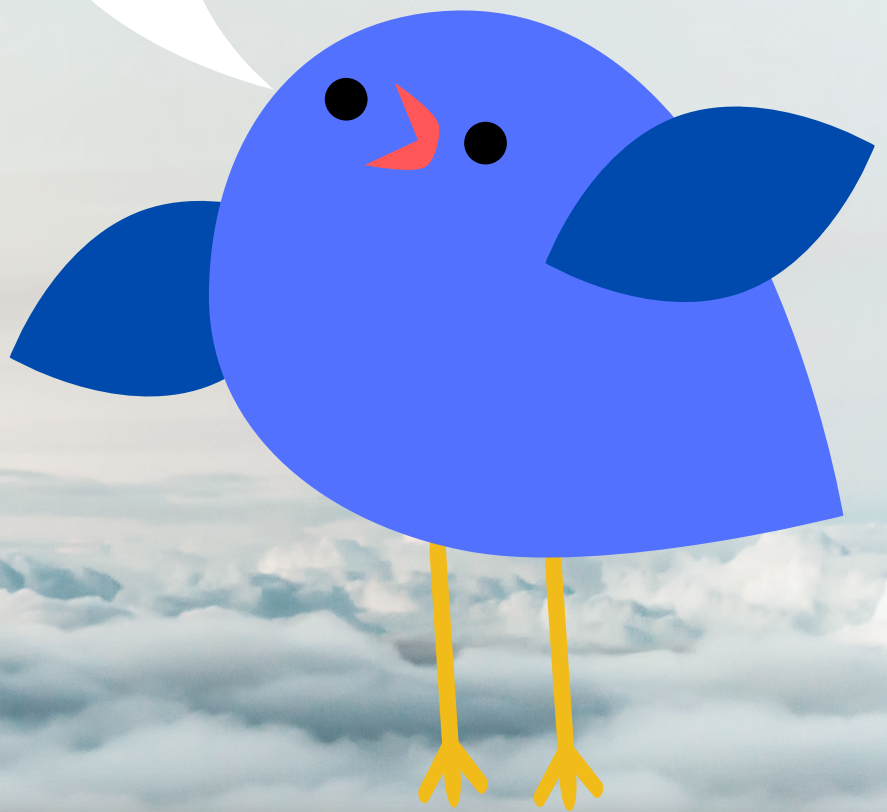
They tell us how far together we have come.

They tell us the journey doesn't end here.

They tell us that legacies have been made and shall be carried onto the road to sustainability.

The past 20 years have been a solid evidence that our collaboration thrived, our network expanded, and our friendship tightened. Now, not only between ASEAN and JAPAN; we are spreading these seeds of future to the horizon and beyond.

So what will our future look like?

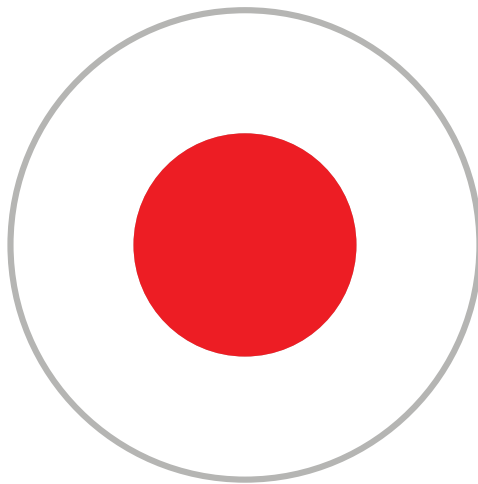




AUN/SEED-Net



AUN/SEED-NET: THE FUTURE



ASEAN-JAPAN: BONDS AND BEYOND



THE GLOBAL GOALS

Every aspect of our lives: things we use, food we eat, clothes we wear, even the environment surrounding us are involved with engineering. Engineering education and human resources are vital to the prosperity of economies, development of our society, advancement of technology, conditions and health of all living things --- they basically drive all changes in the world today. That is why we believe in developing engineering human resource, and securing the sustainability of our network. Because we believe we can be a part of something bigger than us --- The Global Goals.

To achieve the Sustainable Development Goals (SDGs) 2030, engineering knowledge is undoubtedly a key part to take us there.

We are not just a network of people; we are a network of the world changers, the global developers, and the sustainability drivers.

We are AUN/SEED-Net.



THE GLOBAL GOALS



We are not just a network of people;



We are a network of world-changers,



global developers,



Thank you for all your contributions!





PHOTO COMPIlation



PHASE I-IV

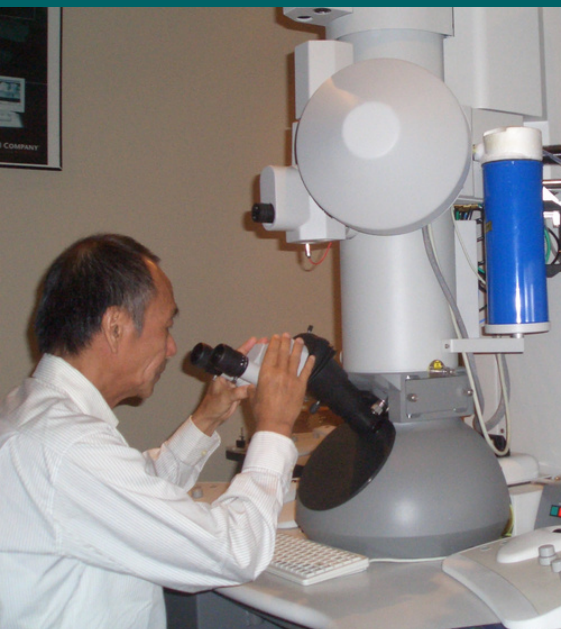




REFLEXES
THAT



WE SHARED





Memorable



Moments





Unforgettable



Memories



People say "Every end is a new beginning,"
so as our journey.

Just like sunset shall bring a new dawn sky
where birds roam free.

Underneath, trees, sprouted from little
seedlings, stand tall.

Intertwined roots hold the ground together
and for all.

This is the network of lives,
grown from the seeds of hope and future,

Blessing this world with its magic of
innovation and knowledge power.



AUN/SEED-Net



Let's Stay Connected!

LIKE - FOLLOW - SUBSCRIBE



contact@aun-seed.net



<https://seed-net.org/>

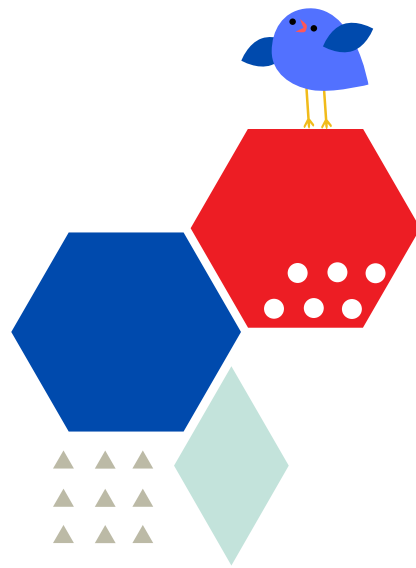


www.facebook.com/jicaaunseednet



www.youtube.com/@jicaaunseednet293





We entrust the ASEAN University
Network (AUN) and all MIs to
continue what we have established
and achieved together throughout
the past 20 years.