




School of Environment, Resources and Development

A photograph of a modern, multi-story building facade. The building is white with horizontal slats and large windows. A prominent tree trunk is visible on the left side. The text 'SCHOOL OF ENVIRONMENT RESOURCES AND DEVELOPMENT' and 'OFFICE OF THE DEAN' is printed on a white horizontal band across the middle of the building. The image is framed by a diagonal orange and grey border.

SCHOOL OF ENVIRONMENT RESOURCES AND DEVELOPMENT
OFFICE OF THE DEAN

ANNUAL REPORT 2019

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From the Dean

I am pleased to present this Annual report 2019, which highlights the major activities carried out in the year of 2019 in the School of Environment, Resources, and Development (SERD). Indeed, this report was due early this year but when we were working on it, we were hit by COVID-19 pandemic forcing to work from home. More than that, every one of us was so occupied dealing with day to day uncertainty and planning for near-term academic and research activities. Nevertheless, the pandemic has taught us a great lesson and raised the need of solidarity and greater sense of responsibility. Sincere apology for the delay to bring out this report.

I take this opportunity to thank everyone in SERD for their continued support and contribution for what we have collectively achieved in 2019 in the area of academic, research and outreach. Thanks are also due to the senior management and colleagues in administration at various levels for their strong support to the school. As the school to be in front line offering the relevant and best programs in the region, we still have several challenges ahead, and hence we need to continue putting more efforts collectively with regard to raising the recognition and visibility of our programs through research and social impacts and students' recruitment. I am confident we can together bring SERD programs to another level.

I am very hopeful that 2020 will prove another successful year for SERD. I wish you all a happy and successful year ahead.

Professor Rajendra P. Shrestha, PhD
Dean
School of Environment, Resources and Development

Introduction

The School of Environment, Resources and Development (SERD) was established in 1993 and the name SERD was adopted after the EARTH Summit in Rio in 1992, emphasizing the important co-existence of environment and development. SERD has been in the forefront developing the new programs as and when it sees the opportunity to provide needed higher education for human resources capacity building in the region.

SERD Mission

SERD responds to the regional needs by mobilizing and enhancing capacities for socially, economically and environmentally sound development in partnership with public and private sectors. The School's interdisciplinary approach integrates technological, natural, and social sciences.

SERD Vision

- SERD will continue its leadership role in offering excellent academic programs relevant to regional needs.
- SERD research will be concentrated toward focal area and are to be conducted by core teams.
- SERD outreach will be community-service oriented.
- SERD Programs will be consolidated and financially viable. The School/Program activities including the students, staff, faculty and curricula will be subjected to quality assessment.

SERD Academic Programs

The followings are the SERD academic programs offered at Master's and Doctoral level in the three respective departments:

Department of Food, Agriculture and Bioresources

1. Agribusiness Management
2. Agricultural Systems and Engineering
3. Aquaculture and Aquatic Resources Management
4. Food Engineering and Bioprocess Technology

Department of Energy, Environment and Climate Change

1. Climate Change and Sustainable Development
2. Environmental Engineering and Management
3. Energy¹
4. Regenerative Sanitation
5. Urban Water Engineering and Management

Department of Development and Sustainability

1. Disaster Preparedness, Mitigation and Management
2. Development and Sustainability started from August 2019 semester
3. Gender and Development Studies
4. Natural Resources Management
5. Regional and Rural Development Planning
6. Urban Environmental Management

SERD also offers the following Professional Master's Programs.

¹ The program is revised and will be offered as Sustainable Energy Transition starting August 2020 semester

1. Environmental Engineering and Management
2. Urban Management
3. Aquaculture and Business Management
4. Environment and Sustainable Development

Student Enrollment

Applications and Enrollment in SERD

SERD received a total of 1,011 applications in the year 2019 including applications for exchange and visiting students (Table 1). The application number decreased during 2016, but has reversed since then and reached highest in 2019.

In the year 2019, 168 (16 % of total applications received) were enrolled. This was comparatively less than 22% enrolled of total applications in 2018, 31% in 2017, 39% in 2016, 24% and 30% in 2014 and 2015, respectively. The pay factor ranged from 0.77 to 0.84 over the years, which was very satisfactory and was the highest in 2019. The reasons for declining enrollment were lack of large number of available full scholarships, better opportunity for some applicants to study in other universities and personal reasons.

Table 1 : Admission status from 2014 to 2019

Admission Year	No. of application received	No. of students enrolled	Pay factor
2014	768	183	.81
2015	718	218	.77
2016	586	201	.82
2017	695	212	.79
2018	817	177	.78
2019	1011	168	.84

Program-wise details on applications, offer and enrolments are presented in Figure 1. In 2019, 829 applicants were offered admission in SERD, 168 applicants or 20% of offered applicants got enrolled and attended various SERD programs. At the end of 2019, there were 420 continuing students in SERD.

As per budget planning, the projected students' intake was 247 in 2019 and SERD was able to achieve 73% of the projected number. SERD achieved 73% and 83% of our projected student intake in the year 2018 and 2017, respectively. The achieved percentage of projected students' intake were 67% in 2016; 80% in 2015 and 73% in 2014. Overall, the intake is more or less not very different from past years in spite of the fact that SERD received the most number of applications in 2019. It is clear that availability of more full scholarships will certainly help recruit more students as there are several applicants who are academically very sound.

Program-wise pay factor in SERD ranged from 0.68 to 0.91 with a school average of 0.84

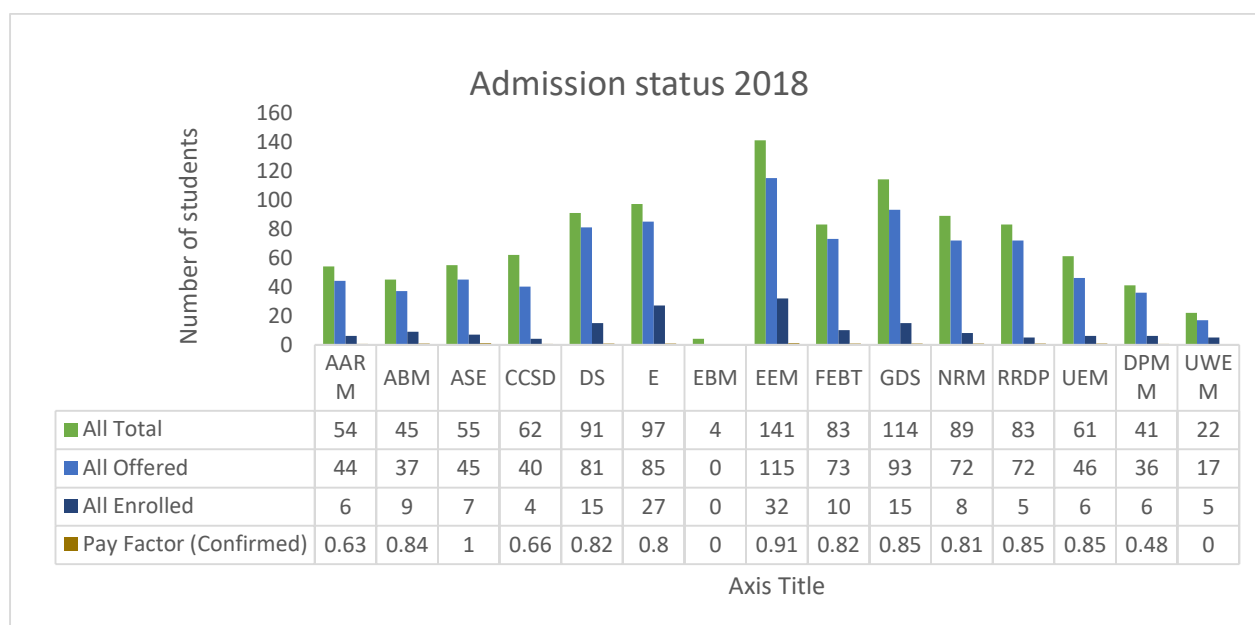


Figure 1 : Admission status of SERD, 2019

SERD Graduates

In 2019, SERD graduated 142 Master students, 31 doctoral and 3 other program students (certificate, diploma and special). Table 2 shows number of graduates from various SERD academic programs from 2016 to 2019. On an average, 151 Master’s and 26 Doctoral students graduate from SERD every year.

Table 2 : Number of SERD graduates from 2016 to 2019

Programs	2016			2017			2018			2019		
	Master	Doctoral	Other	Master	Doctoral	Other	Master	Doctoral	Other	Master	Doctoral	Other
Department of Food, Agriculture and Bioresources												
ABM	5	0	0	10	4	0	3	3	0	14	3	1
ASE	4	1	0	13	6	0	6	1	0	2	1	0
AARM	1	1	4	9	1	1	3	0	0	7	1	0
FEBT	12	2	1	12	1	0	14	3	1	9	7	0
Department of Energy, Environment and Climate Change												
CCSD	3	0	0	2	0	0	7	1	1	3	0	0
ENERGY	16	5	0	28	2	2	31	0	0	35	1	1
EEM	51	5	2	39	4	8	44	2	4	28	2	1
UWEM	1	0	0	7	0	0	0	0	0	8	0	0
Department of Development and Sustainability												
DPMM	5	1	3	6	1	3	10	1	1	7	1	0
GDS	10	3	11	8	0	1	7	0	0	9	2	0

NRM	13	4	1	13	5	1	13	2	0	9	5	0
RRDP	14	4	0	6	4	0	13	1	0	2	5	0
UEM	8	2	0	3	0	0	10	0	0	9	3	0
Total	143	28	22	156	28	16	161	14	7	142	31	3

SERD Financial status

In 2019 SERD's total Annual Revenue was 98.723 MB and the Total Annual Expenses without institute allocation was 78.6 MB These are however unaudited data.

The forecast of school budget 2020 was submitted to Finance as: Total Operating Revenue at 108.429 MB; Total Operating expenditure excluding institute allocation (OH) at about 84.99 MB.

Scholarships

SERD has received 53.5% of the total scholarships available at institute-wide in 2019 (not considering RTG fellowships), compared to 61% in 2018 and 54% in 2017. This indicates comparatively competitive applications SERD received in 2019. There were less competitive applicants from the GMS countries, and hence more efforts are needed to increase good quality applications from the GMS.

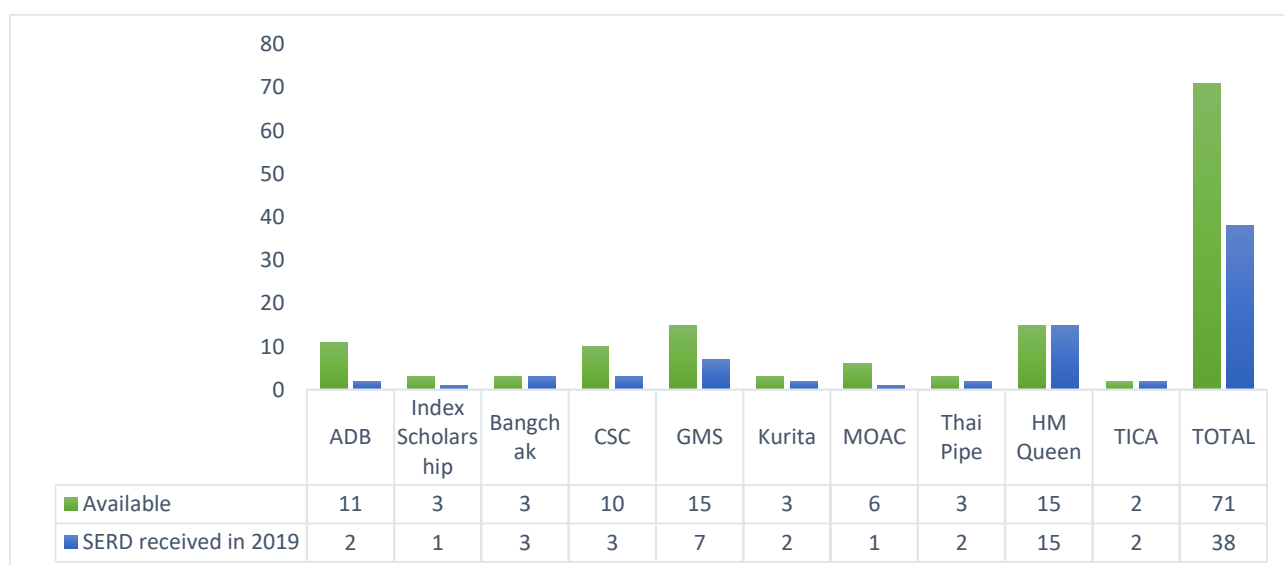


Figure 2 : Scholarships received in SERD

A total of 42 Master students received full Royal Thai Government (RTG) Fellowship in 2019. There were also 8 students who were funded externally by their respective organizations and /or projects. The specific distribution is given below.

RTG 31.5 Credits 1DS (MSC), 1 NRM (Msc), UEM (Msc), 3EEM (Msc.), 1 E (M Eng)

RTG 49 Credits 5 DS (Ph.D.), 1 GDS (Ph.D.), 1 CCS (Ph.D.), 1E (D. Eng), 1EEM (Ph.D.)

RTG 48 (Credits) 5 DS, 1 GDS, 1 NRM, 1 RRDP, 1 UEM, 6 E, 16 EEM, 1 AARM, 4 ABM, 5ASE, 1
FEBT

Externally funded 1 GDS (Ph.D.), 2 E (MEng, CAS), 1 EEM (M Eng), 1 AARM (Msc), 2 ASE (Ph.D.),
DPMM (MEng)

Faculty hiring and renewal

Seven adjunct faculty as show below were appointed in several academic programs of SERD. Table 3 shows the list of new faculty members' appointment during the year 2019.

Table 3 : New faculty members' appointment

Academic program	Country of origin	Gender	Faculty Name
ABM	Ghana	Male	Dr. John K. M. Kuwornu
ASE	India	Male	Dr. Peeyush Soni
AARM	Sri Lanka	Male	Dr. Amaratne Yakupitiyage
AARM	Nepal	Male	Dr. Ram C. Bhujel
EEM	Japan	Male	Mr. Tomohisa Kume
RRDP	Thailand	Female	Dr. Soparth Pongquan
RRDP	India	Male	Prof. Jayant K. Routray

Nine faculty's contract whose contract were expiring in 2019 were assessed; 8 were renewed, and 1 was re-employed beyond retirement age of 60. Similarly, 11 administrative and technical staff contract were also assessed and renewed. Four new administrative staff and two new technical staff were hired as replacement in 2019. Several new faculty hiring process was started in 2019.

Courses Offered

A total of 110 courses (58 courses in January semester, 12 courses in Inter-semester and 53 in August semester) were offered school-wide in 2019. The total courses offered in 2018 was 130 (Table 4).

Table 4 : Courses offered

Academic Program	Jan 2017	Inter-sem 2017	Aug 2017	Jan 2018	Inter-sem 2018	Aug 2018	Jan 2019	Inter-sem 2019	Aug 2019
DEPARTMENT OF FOOD, AGRICULTURE AND BIORESOURCES									
ASE	3	0	3	2	0	3	1	0	3
ABM	5	0	4	3	0	2	4	0	2
AARM	8	0	5	5	0	4	5	0	4
FEBT	5	0	3	4	0	4	4	0	4
TOTAL	21	0	15	14	0	13	14	0	13
DEPARTMENT OF ENERGY, ENVIRONMENT AND CLIMATE CHANGE									
CCSD	6	2	5	4	2	2	4	2	2
ENERGY	9	2	11	10	2	11	11	1	9
EEM	7	3	8	8	3	8	8	4	7
TOTAL	27	7	30	22	7	21	23	8	18
DEPARTMENT OF DEVELOPMENT AND SUSTAINABILITY									

DS WIDE COURSE	0	0	0	1	1	3	0	0	2
DS							1	0	1
DPMM	3	0	8	3	0	5	3	0	4
GDS	4	3	4	6	2	5	5	2	4
NRM	7	0	4	6	0	5	4	0	5
RRDP	5	1	3	6	1	3	4	1	3
UEM	6	1	3	2	1	3	4	1	3
TOTAL	25	5	22	24	5	24	21	4	22
OVERALL TOTAL	73	12	67	60	12	58	58	12	53

Sponsored Research

A total of 43 research sponsored projects were initiated in 2019 with a gross total budget of Baht 110.33 million THB, of which the overhead to the institute was Baht 11.94 million THB including the additional allocated revenue for RC of 5.9 million THB and RSF 1.278 million THB (Table 5).

Some of the selected sponsoring partners included: Shanghai Ocean Univ (SHOU), Huazhong Agricultural University, Wuhan, WaterAid Bangladesh, Japan Water Research Center (JWRC), UN Industrial Development Organization (UNIDO), Assam Agriculture University, India, Education, Audiovisual and Culture Executive Agency – EACEA, Mitsubishi Chemical Co., Ltd., Economic Research Institute for ASEAN and East Asia – ERIA, The Network of Aquaculture Centres in Asia-Pacific – NACA, Ochanomizu University & Nagoya University of Foreign Studies, Delacon Biotechnik GmbH, IHE Delft Foundation, Development Design Consultants Limited (DDCL), Bangladesh Agricultural Research Institute, National Fisheries Development Board (NFDB), The UN Environment World Conservation Monitoring Centre, Newcastle University, UK, Energy Division, United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP), Ministry of Agriculture, Indonesia, Pollution Control Department of Thailand, Global Challenges Research Fund (GCRF), Ministry of Education and Training (MOET), Vietnam, Anpario Plc, UK, United Nations, SWIOFISH2-Project, Madagascar/ Worldbank, BORDA, Thailand.

Table 5 : Sponsored research projects

43 SERD Research Sponsored Project initiated in(Jan– Dec)	Total Budget (Baht)	Overhead (Baht)	Faculty Time (Baht)		
			RC	PDF	RSF
	110,335,404	11,943,771	5,938,395	1,974,125	1,278,332

Centers in SERD

SERD has few Centers and dedicated laboratory, which mainly serve the students for their research and are also associated with research and innovations. Their major achievements in 2019 are described below.

Bangchak Initiative and Innovation Center

The Center of excellence called Bangchak Initiative and Innovation Center at AIT (BIIC@AIT) has been established at SERD with the signing of Memorandum of Agreement (MOA) on 25 July 2017 between Bangchak Corporation Public Company Limited (BCP) and AIT with funding support of BCP for five years. BIIC@AIT aims to act as a living laboratory and technology business incubator for greenenergy and greenovation. The Center supported 5 students in SERD to study Master and doctoral programs in 2019.

Centre for Aquaculture Development (Aqua-Centre)

The Mission of Aqua-Centre is to develop highly skilled human resource required for developing, disseminating and applying practical and innovative aquaculture technologies for the continuous growth of sustainable aquaculture and efficient management of aquatic resources.

Aqua-Centre provides thorough knowledge and helps develop skills on proven innovative aquaculture technologies to interested investors and entrepreneurs to make their dreams come true. Many of them earn good income from using technologies. So far, we far the centre has trained over 550 professionals and entrepreneurs. Some of them have started their own businesses, while others manage large corporate or government units/farms.

During 2019, Aqua-Centre implemented the following projects.

1. EU project – It is one of the largest projects at AIT with the budget of nearly 1 million Euros. It has 13 partners; 4 from Europe and 9 from Indonesia, Thailand, and Vietnam. The main objective of this project is to develop new curricula/courses on sustainable seafood and nutrition security to be used by Asian partner institutions, and also provide training to the teachers.
2. Biomin, Austria: It was the first private company to collaborate. There were four projects during the period to test commercial products as feed supplements funded by the company which has its headquarters in Austria but has its global presence. At least two journal articles and a conference proceeding have been published.
3. Delacon, Austria – Altogether three projects were funded by Delacon. One was closed on Dec 2019 and other two will continue to 2020. These trials are to test and compare their products. Students are involved and they learn about the trial.
4. Anapario, UK – an agreement has been signed with a new company based in the UK to test a product (feed binder). An intern from UK who joined Aqua-internship at AIT a few years back is working with the company and served as the linkage for this research.
5. LAARH Agro, Pakistan – An agreement has been signed with a company based in Sindh Province of Pakistan to upgrade its existing fish farm to a large commercial fish farm using latest technology. First site visit was organized during Dec 21-25, 2019.
6. Training projects and study tour are one of the reliable sources of funding for AquaCentre. During 2019, a total of 7 training programs were organized attracting a total of 44 trainees. Vast majority was from Asia (80%) followed by Africa (15%), Europe (4%) and Australia (1%). The number of participants from Africa increased and reached slightly more than from Asia in 2019.

Naturally Acceptable and Technologically Sustainable (NATS)

NATS team comprises of diverse group of enthusiastic experts from Asian Institute of Technology (AIT) that adheres in building tools for planning and execution of sustainable FSM project. Objective of NATS is to utilize market-led approach to commercialize expertise and innovative system to change and improve the water-waste management system. Some notable achievements of NATS in 2019 are:

Events organized:

1. Visit Program of Chinese Academy of Science, China

Points discussed:

1. Suitable technology for rural wastewater treatment in Thailand (Southeast Asia)
2. Thailand's decentralized wastewater treatment assessment system and the possibility of cooperation with China
3. Decentralized wastewater management systems in Thailand and China
4. Others

Activities:

1. Special Lecture “Rural Sanitation and Wastewater Management in China: Toilet Revolution and Challenges” by Prof. Yuansong Wei, Research Professor, Research Center on Eco-Environmental Science, Chinese Academy of Science
2. Visit Fecal sludge treatment plant, Nonthaburi province
3. Visit Environmental study center under the Royal King Initiative project, Phetchaburi province
4. Visit Decentralized wastewater treatment of Sirindhorn Center, Phetchaburi province
5. Visit small-scale wastewater treatment plant of Bang Pla municipality, Samut Sakhorn province

2. As NATS-Lab is also a training and learning center under contributing and supervision of Prof.Thammarat and his team. NATS microbiology laboratory arranged training on "Helminth Eggs Analysis from Decentralized Wastewater Treatments and Onsite Sanitation System" to participants who are currently working at ENPHO laboratory, Nepal.
3. NATS project welcomed the participants from "Water & Sanitation for the urban poor (WSUP)" consisting a number of government organizations and private companies staff from Bangladesh. NATS project organized about Learning Visit to Faecal Sludge treatment plants in Thailand. The aim of this learning visit was that participants were able to apply and acquire the knowledge on the operation and managing the FS treatment plants. The number of treatment plants that NATS project provided to participants were 4, Testing site and NATS laboratory at AIT, Nonthaburi Treatment Plant, Nong Khaem Nightsoil Treatment Plant and Thongthawil company at Rayong Province.
4. Internship activities for exchange students from the University of Yamanashi, Japan was organized by NATS. The training sessions were:
 - a. Participation in lecture of Solid Waste Management course by Prof. Thammarat Koottatep and Dr. Nawatch Surinkul, Environmental Chemistry by Dr. Oleg V. Shipin, Wastewater Treatment by Dr. Wenchao Xue and Drinking Water Treatment by Prof. Chettiyappan Visvanathan.
 - b. Training on wastewater analysis by #NATSLAB.
 - c. Visit of wastewater treatment technologies developed by NATS.
5. Delegation of Asian People's Exchange (APEX), Japan led by Dr. Nao Tanaka, Executive Director visited Asian Institute of Technology. With collaboration from AIT Solution, NATS had the opportunity to welcome and bring guests to visit solar septic tank technology. The visit focused on wastewater treatment and technology development.
6. Profound celebration of the World Toilet Day (19-11-19) by consultative meeting with Director and senior officials of the Department of Diseases Control and the Department of Health, on "How should Thailand create Safely-Managed Sanitation for All. A model city using the Reinvented Toilet Technology and Effective Fecal Sludge Management Tools of NATS Reinventing the Toilet would be a trigger and means to achieve SDG 6.

New Initiatives

MoU/ MoA Initiated:

Eight new Agreements were initiated in 2019.

1. MoU between AIT and Universiti Teknologi Malaysia, (February 2019)
2. MoU between AIT and The Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD) (June 2019)
3. MoU between AIT and Ministry of National Resources and Environment (MONRE), Thailand (August 2019)
4. MoU between AIT and University of Newcastle, Australia
5. MoU between AIT and Yangon University of Economics, Myanmar
6. MoU between AIT and Institute National d'Etudes Supérieures Agronomiques de Montpellier (Montpellier SupAgro)
7. MoU between AIT and The Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences (RCEES)
8. MoA between AIT and Tra Vinh University, Tra Vinh Province, Vietnam (September 2019)

Outreach and Promotion

SERD Instagram

SERD has started Instagram which is used for promotion of SERD along with SERD Facebook page and SERD website. SERD Instagram was started during the end of 2019. With Instagram it is easy to target our audience, engage with our prospective students and also use as a medium to connect and share information with all interest audience.

Promotional activities

Along with regular promotional visits to local universities in Thailand, faculty members also made promotional visits to Cambodia, Indonesia, Sri Lanka, Vietnam, Japan, India and other countries whenever they made any visits (conference, seminar, project visit etc.). SERD also participated in AIT Days and AIT Roadshows (name changed for AIT day during latter part of the year).

SERD carried out successful online advertisements in Thailand, Myanmar and Nepal and received a number of queries for admissions.

To promote RTG fellowship for August semester, mass emails and reminders were sent to all SERD alumni and partner institution. Information and RTG details were also sent to 30 different Universities in Thailand.

Below is the list of selected promotional activities carried out during the year 2019 (Table 6).

Table 6: Selected list of promotional activities carried out by faculty members

Activity	Date
Mahidol University	23 Jan 2019
RMUTT	23 Jan
Chang Mai University	25 Jan
Thammasat University (booth)	28 Jan
Suranaree University	1 Feb
Chang Mai University	5 Feb
AIT Day in Nepal	7-9 February
Silapakorn University (booth)	13 Feb
AIT day in Myanmar	17 February
Kon Khen University	22 February
Kasetsart University	19 March
Rangsit University	19 March
AIT day in Bangladesh	10-11 March
AIT day in Philippines	15 March
Kasetsart University	21 March
OCSC exhibition	2-3 November
QS Exhibition	9 November
CRMA	18-20 November

All three departments in SERD had conducted various activities related to students' promotions. Conferences were organized, promotional travels were carried out and visitors from different universities and companies were welcomed. Each department has also come up with respective department websites which has been linked and connected in the main SERD website.

The three departments have also prepared Department level brochure. This is helpful and useful in promoting programs under each department. EECC also comes up with their monthly newsletter, program banners and fliers which is being used for promotional activities.

Visitors and Seminars

During the academic year 2019, SERD hosted 35 seminars and lectures delivered by the individuals from number of different organizations / companies / industries and universities. SERD also hosted visitors from 14 different organizations (Annex 1) for collaboration/partnership /student visit activities.

60th Anniversary celebration

Along with other AIT celebrations to mark the 60th Anniversary of AIT, SERD had organized different programs to welcome alumni. Research done by faculty and students were displayed in the form of poster in the school. Timeline showing the various activities of SERD from 1973-2020 was displayed showing the history of the school. SERD programs also welcomed their alumni and had several interactions and discussions. This was an opportunity for SERD to network with all alumni who had come to join the AIT celebration. Few SERD academic programs even organized made specific arrangements to welcome and interact with their alumni.

Energy Program celebrated 40th Anniversary (1979-2019) with the theme “Cherish the Past, Celebrate the Present, Reflect the Future”. More than hundreds of Energy Alumni since 1979 attended the event and shared the memories of their days in AIT.

EEM celebrated their 55th Anniversary on this occasion. Various homecoming program for alumni was organized, which included memory talks; time with current & former mentors; visiting facilities, ongoing research, achievements; EEM timeline tracer; photos album. About 120 participants joined this event.

Faculty and staff achievements

1. Dr. Shobhakar Dhakal of the Department of Energy, Environment and Climate (EECC), was promoted to the rank of full Professor. His promotion was confirmed at the meeting of the AIT Board of Trustees held on 31 January 2019.
2. Dr. Loc Thai Nguyen of The Department of Food, Agriculture and Bioresources was promoted to the rank of Associate Professor. His promotion was announced by President in Jan 2019.
3. A new book edited by AIT faculty member Dr. John K. M. Kuwornu titled “Climate Change and Sub-Saharan Africa: The Vulnerability and Adaptation of Food Supply Chain Actors” was released in Jan 2019.
4. On May 2019, Dr Ram C. Bhujel, Director of Aqua-Center and Research Associate Professor at academic program Aquaculture and Aquatic resource Management was selected as a member of Technical Advisory Committee – Aquaculture group. He is one of the two aquaculture-professionals from Asia amongst 13 advisors serving for the Seafood Watch program of the Monterey Bay Aquarium headquartered in California, USA.
5. A book titled “Regenerative Sanitation: A New Paradigm for Sanitation 4.0,” was published by International Water Association Publications in June 2019. This book is authored by Prof. Thammarat Koottatep, Dr. Peter Emmanuel Cooney, and Prof. Chongrak Polprasert.

6. A Book titled “An Interdisciplinary Approach for Disaster Resilience and Sustainability” Co-edited by Dr. Indrajit Pal and Dr. Sangam Shrestha was announced on 28 October 2019.
7. Dr. Krishna R. Salin, Associate Professor in the academic Program of Aquaculture and Aquatic Resources Management at the Department of Food, Agriculture, and Bioresources in SERD was elected as the Director of World Aquaculture Society-Asia Pacific Chapter (WAS-APC) on June 2019. World Aquaculture Society (www.was.org) is the world’s biggest professional organization in aquaculture with its headquarters in the USA.
8. Dr. Wenchao Xue, Assistant Professor in the academic program Environmental engineering and Management was named as the first Director of the Belt & Road Research Centre in AIT inaugurated on November 2019.
9. The Naturally Acceptable and Technological Sustainable (NATS) lab in Environmental Engineering and Management was awarded a "Certificate of Excellence" by Waters ERA for achieving 100% acceptable data in their proficiency testing. Over 1000 laboratories participated in this testing process. NATs project is under Professor Thammarat.
10. The 2019 Mary Fran Myers Gender and Disaster Award was awarded to Dr. Bernadette Resurrección, former faculty member of Gender and Development Studies academic program and currently Distinguished Adjunct Faculty at AIT.
11. Prof. Weerakorn Ongsakul, from Energy Academic Program received the IEEE PES Outstanding Engineering Award 2019 on 21 November 2019.
12. Dr. Nophea Sasaki, Associate Professor and Dr. Manjunatha Venkatappa, both in Natural Resources Management at SERD won the "Next Step" Award from Google at the Geo for Good Summit at Google Cloud office in San Francisco on 19 September 2019. The award was for their Krumap technology, a science-based technology for detecting deforestation and forest degradation in the tropics.
13. Dr. P. Abdul Salam (Energy/EECC) received distinguished research award 2019 in the Research Leader (Senior) category. The researcher awards are based on the evaluation of faculty members' sponsored activities and publications during the year 2018.

SERD Alumni achievements:

1. Ms. May Sabe Phyu was one of the winners of 2019 N-Peace Awards under the untold story category. The Untold Stories category recognizes the work of women with demonstrated skills in conflict resolution, prevention, and peacebuilding in their local communities. She graduated in January 2011 from Gender and Development Studies academic program from The School of Environment, Resources and Development.
2. Dr. An Pich Hatda, SERD alumnus, was appointed Chief Executive Officer (CEO) of the Mekong River Commission (MRC). He assumed office on January 18, 2019. Dr. Hatda earned a Master’s in Agricultural Systems from AIT in 1997, after which he completed doctorate in Development Studies at the University of Tokyo.
3. Doctoral student Dr. Jedsaporn Sathapatyanon , from Agribusiness Management Program was awarded the Highly Commended Paper Literati Awards 2019 from Emerald Publishing. The award ceremony was held in SERD Deans Office Meeting Room S101 on 4 June 2019.

4. Abdul Aziz Mohibbi, alumnus from the academic program Natural Resources and Management, was appointed as chancellor of Bamyan University by the Ministry of Higher Education of Afghanistan in August 2019.
5. Md. Rafi Hayat, a master's graduate from Urban Environmental Management (UEM, 2018), was appointed Mayor of Kandahar, Afghanistan.
6. SERD alumna Fathimath Yumna (Master's in Gender and Development Studies, 2004) was appointed as Deputy Minister of Gender, Family and Social Services, Republic of the Maldives. She previously served as consultant to the collaborative project between the South Asian Association for Regional Cooperation (SAARC) and UNWOMEN and also as Director General in the Department of Gender and Family Protection Services in the Maldives' Ministry of Health and Family.
7. Mr. Chira Wongburana, SERD alumnus was appointed Director General of the Wastewater Management Authority of Thailand. He graduated with a Master's in Environmental Engineering and Management (EEM) from School of Environment, Resources and Development (SERD) in 2007.
8. Dr. Phan Thi Van, who received Danida scholarship (MSc at AIT in Aquaculture, 1998) was awarded the Danida Alumni Prize 2019. She is the first women to be awarded this prize. The motivation for awarding Phan Thi Van the Danida Alumni Prize was her ambition, drive and tireless promotion of scientific research in the sustainable development of aquaculture, not only nationally, but also internationally.
9. Dr. Sanaullah Panezai, an RRDP Alumnus, launched a new research journal in December 2019. The title of the journal is "Journal of Geography and Social Sciences (JGSS)". He serves as Editor-in-Chief of the JGSS. This newly launched journal is an open access, peer-reviewed, multidisciplinary journal that publishes rapid publication of substantive and integrative research articles in all areas of geography and social sciences. JGSS has an International Editorial Board and uses online submission system for receiving articles.

SERD Student achievements:

1. A team of three students from the academic program Natural Resources and Management won the 2019 International Day of Forests (2019 IDF) organized by the Food and Agriculture Organization of the United Nations on 21 March 2019.
2. In August 2019 three students from the Department of Development and Sustainability (DDS), School of Environment, Resources and Development (SERD) attended the summer program at Tonji University, Shanghai, China, with the theme of sustainable urban and rural development.
3. Research poster prepared by doctoral student Ms. Arlene Lu Gonzales from Climate Change and Sustainable Development academic program was chosen to be displayed at the Chulachomklao Royal Military Academy Exhibition which took place on 19-20 November 2019 at its campus in Nakhon Nayok Province.
4. Ms. Wipatsaya Srimanoi from Environmental Engineering and Management Program was invited to be a speaker at the 6th Mekong forum on youth perspective, Pullman Bangkok King Power, 8th July. She was also selected to participate in the Young Southeast Leader Initiative (YSEALI) Program in the field of "Environmental Issues and Natural Resource Management" at the University of Montana, USA for 5 weeks (during August – September 2019)

5. Mr. Moaz Altaf was awarded full scholarship to attend the Social Youth Exchange Program with selected students from AIT and 3 different Korean universities in August 2019 and The Association of Top Achievers' Scouts of the World Award, awarded him at the Embassy of Indonesia in January 2019.
6. Ms. Raquel Santiago-Arenas, doctoral students from the Department of Food, Agriculture and Bioresources, was selected for the '2019 SEARCA (Southeast Asian Regional Center for Graduate Study and Research in Agriculture) Ph.D. Research Scholarship'. The award is available to graduate students in Agriculture and related sciences (including biological sciences, fishery, environmental science, statistics, forestry and social sciences). The topic of the applicant's Ph.D. research must be aligned with SEARCA's thrusts of Inclusive and Sustainable Agricultural and Rural Development (ISARD) towards food security and poverty alleviation in Southeast A

Annex 1: Guests who visited SERD in 2019

S.No	Visit from University/Company
1	North China Electric Power University (NCEPU)
2	Asian Institute of Management, Manila
3	Ministry of Agri and forestry
4	Yangon University of Economics
5	Royal Society for Protection of Nature (RSPN), Bhutan
6	Delegates from University of Ciputra, Surabaya, Indonesia visited SERD , Department of FAB
7	Asian Institute of Management, Manila
8	The Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD)
9	"University of Southampton, Highfield Campus
10	Six students from Shanghai Ocean University (SHOU)
11	16 students from Huazhong Agricultural University (HAU), Wuhan
12	A delegation from the College of Environmental and Resource Science, Zhejiang University, China
13	60 students and 3 lecturers from Universitas Gadjah Mada
14	KMUTT delegates



AIT
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