ACTION AGENDA
FOR THE SEAMEO 7 PRIORITY AREAS
## Contents

**Foreword** ........................................................................................................................................... ix  

**Introduction** ...................................................................................................................................... xi  

- New Education Agenda Background .................................................................................................. xi  
- 2016 Strategic Dialogue for Education Ministers 2 ........................................................................... xii  

**Priority 1 Achieving Universal Early Childhood Care and Education** ........................................... 1  

1.1. Longitudinal Study on the Effects of the Early Childhood Care and Development Programme on the Learning Experience and Performance of Kindergarten to Grade 2 Pupils ........................................................................................................... 3  
1.2. Hué Storytelling Festival ................................................................................................................ 5  
1.3. Pilot Implementation of a Revitalised School Health Care Programme for Selected Public Elementary Schools in Pasay City, Philippines ................................................................................................................................. 8  
1.4. Regional Research on Achieving Inclusive Early Childhood Care and Development in Southeast Asia ...................................................................................................................................................................................... 11  
1.5. Enhancing Early Childhood Care and Education Through Family Education and Health Literacy ...................................................................................................................................................................................... 13  
1.6. International Conference on Early Childhood Care and Education and Parenting .................. 16  

**Priority 2 Addressing Barriers to Inclusion** .................................................................................... 19  

2.1. Southeast Asian Ministers of Education Organisation STAR Village ........................................ 21  
2.2. In-Country Training on Urban Agriculture for Special Education Teachers in Malaysia ............ 27
2.3 Improving Student Literacy and Nutritional Improvement and Entrepreneurial Skills Through School Gardens Amongst Primary and Secondary Schools in Southeast Asia .......................................................... 30

2.4 Towards an Association of Southeast Asian Nations Lifelong Learning Agenda ........................................................................................................................................... 35

2.5 Visiting Research Fellow Programme in Japan ........................................................................................................................................................................ 38

2.6 Workshop on the Japanese Community Learning Centre: Why and How It Functions Effectively in Japan ........................................................................................................ 40

2.7 Capacity-Building Workshop for Community Learning Centres in Lower Mekong ........................................................................................................ 42

2.8 Instructional Resources: Using Soft Skills in Non-Formal Education ................................................................................................................................. 44

2.9 Workshop on Open and Distance Learning and Its Impact on Lifelong Learning ........................................................................................................ 46

2.10 Workshop on Successful Community Learning Centre Models in Southeast Asian Ministers of Education Organisation Member Countries ........................................................................ 48

2.11 Workshop on Lifelong Learning Best Practices in Southeast Asian Ministers of Education Organisation Member Countries ..................................................................... 50

2.12 Model for Partnerships to Translate Guidelines into Practices for the Optimal Diet for the Southeast Asian Community ............................................................................... 52

2.13 Nutrition Goes to School .................................................................................................................. 56

Priority 3 Ensuring Resilience in the Face of Emergencies .................................................................................................................. 61

3.1 Alternative Delivery Modes for Education in the Face of Emergencies .................................................................................................................. 63

3.2 Disaster Risk Management to Preserve the Southeast Asian Cultural Heritage: A School-Based Approach to Promoting Disaster Risk Mitigation for Cultural Heritage Preservation in Brunei Darussalam, the Philippines, and Thailand ...................................................................................... 65

3.3 Southeast Asian Ministers of Education Organisation Student Networking for Learning Science and Mathematics Together .................................................................................. 68
3.4 Mangrove Conservation Education

3.5 Mitigating the Health and Psychosocial Impact of Emergencies and Disasters: Development and Pilot-Testing of a Reference Material or Guide for Teachers

3.6 Enhancing Climate Awareness and Disaster Risk Reduction Education Through Learning Science and Mathematics Together

Priority 4 Promoting Technical and Vocational Education and Training

4.1 Workshop on Urban Agricultural Skills

4.2 Workshop on the Recognition, Validation, and Accreditation of Non-Formal Education

4.3 Towards the Development of Competency Standards for Agricultural Workers in Southeast Asia

4.4 Exploratory Study on Health Care Technical and Vocational Education and Training in Southeast Asia Towards the Development of Regional Competency Standards

4.5 High Officials Meeting for Technical and Vocational Education and Training in Southeast Asia

4.6 Inclusive Technical and Vocational Education and Training for Special Education Teachers in Southeast Asian Ministers of Education Organisation Member Countries

4.7 Inter-country Student Exchange with Industries

4.8 Regional Knowledge Platform for Technical and Vocational Education and Training

4.9 Southeast Asia Technical and Vocational Education and Training Koutou Senmon School Modeling Programme

4.10 Southeast Asian Ministers of Education Organisation-China Technical and Vocational Education and Training Cultural Twinning Programme

4.11 Southeast Asian Technical and Vocational Education and Training Consortium Website: http://seatvet.seameo.org/
4.12 Southeast Asian Technical and Vocational Education and Training Massively Open Online Courses .............................................................. 116

4.13 Young Southeast Asian Technical and Vocational Education and Training Future Farmers Forum ...................................................................... 120

Priority 5 Revitalising Teacher Education .................................................. 123

5.1 Pre-service Student Teacher Exchange in Southeast Asia ...................... 125

5.2 RC-PS-141-1: Fostering Higher-Order Thinking Skills in Primary Science Education ................................................................. 127

5.3 RC-SM-141-2: Enhancing Mathematical Thinking in Secondary Classrooms .................................................................................... 129


5.5 RC-SM-141-4: Enhancing Secondary Mathematics Teaching and Learning Through a Professional Learning Community ........................................................................ 133

5.6 Third Country Training Programme-Japan International Cooperation Agency: Primary Science Educators Training for African Countries—Enhancing Constructivist-Based Pedagogy and Content Knowledge ................................................................. 136

5.7 Academic Writing for Professional Development ...................................... 138

5.8 Blended Post-Graduate Diploma in Applied Linguistics ......................... 141

5.9 Master of Arts in Teaching English for Speakers in Other Languages .......... 143

5.10 Master of Teaching Chinese for Speakers of Other Languages ......................... 145

5.11 Research on the Teaching Profession and Teacher Satisfaction with Basic Education in Southeast Asia ................................................................. 147

5.12 Training Workshop on Improving the Communicative English Competence of Learners in Southeast Asia ................................................................. 151

5.13 Training Course on Environmental Education for Sustainable Development .................................................................................. 154
5.14 Training Course on Science Classroom Supervision ............................................. 156

5.15 Training on Earth and Space Science .................................................................. 158

5.16 Training on Science and Technology Education Leveraging Relevance-Science, Technology, Engineering, and Mathematics Education ................................................................. 160

5.17 Annual Training Course on School Health and Nutrition Programme in Asia ................................................................................................................................. 163

5.18 Training Workshop on Culture in Society and in Educational Practices for Special Education Teachers ............................................................................................. 166

Priority 6  Harmonising Higher Education and Research................................................. 169

6.1 Regional Centre for Tropical Biology PhD Thesis Grants Programme ........................ 171

6.2 Supporting and Harmonising Nutrition Training Programmes and Research in the Southeast Asian Region .......................................................... 174

6.3 Southeast Asia-China Educational Research Network ............................................ 177

6.4 Association of Southeast Asian Nations International Mobility of Students Programme .......................................................... 179

6.5 Academic Credit Transfer Framework for Asia ....................................................... 181

6.6 Greater Mekong Sub-region University Consortium ............................................... 183

6.7 Association of Southeast Asian Nations-China Network for Engineering and Technological Universities ........................................................... 184

6.8 Southeast Asian Quality Assurance Network ......................................................... 185

6.9 Southeast Asian Education for Sustainable Development for Higher Education Institutions .......................................................................................................................... 189

6.10 Modernising Indonesian Higher Education with Tested European Pedagogical Practices Project ............................................................... 193

6.11 Open Educational Resources for Teacher Education Institutions ........................................ 196
Priority 7  Adopting a 21st-Century Curriculum................................. 199

7.1 Southeast Asian Ministers of Education Organisation
Schools Network........................................................................................................201

7.2 Southeast Asia Primary Learning Metrics.........................................................203

7.3 Mathematics Region-Wide Assessment .............................................................206

7.4 Southeast Asian Basic Education Standards: Common Core
Regional Learning Standards ................................................................................208

7.5 Southeast Asian Ministers of Education Organisation
Student Networking for Learning Science and Mathematics
Together ......................................................................................................................216

7.6 Regional Intellectual Exchange Forum on Adopting and
Integrating 21st-Century Skills into Basic Education Curricula
in Southeast Asian Countries..............................................................................219

7.7 Southeast Asia Digital Class Phase 2: Intervention Study.............................222

7.8 Mobile Application Language Learning Development Through
the Mobile Application Goethe-Institute and Southeast Asia
Regional Open Learning Centre Camp .................................................................225

7.9 Pilot-Testing the Open and Distance Learning Programme for
Secondary Schools in West Java ..............................................................................229

7.10 Development of Southeast Asia Regional Open Learning
Centre Innovative Education Resources and a Community
Radio Technology as Alternative Solutions for Remote
Areas Without Internet Connection ......................................................................234

7.11 Entrepreneurship in Science Education.........................................................238

7.12 Southeast Asian Ministers of Education Organisation
Community Development: Online Lecture Series and
Training Programmes ..............................................................................................240

7.13 Southeast Asian Ministers of Education Organisation
Regional Centre for the Quality Improvement of Teachers
and Education Personnel in Language Goes to Schools ....................................243

7.14 Developing Higher-Order Thinking Skills Through Language .....................245
The “Action Agenda for the SEAMEO 7 Priority Areas” showcases some of the highly effective initiatives undertaken by units within the Southeast Asian Ministers of Education Organisation (SEAMEO) to improve lives across the Southeast Asian region.

This book presents good practices and examples of pioneering programmes that seek to provide recommendations and solutions to issues and challenges, which address national, regional, and global educational concerns.

SEAMEO’s motto, “Leading through Learning,” reflects the organisation’s leadership and commitment to the region to promote quality education, science, and culture.

Through the activities and strategies undertaken by the 21 SEAMEO regional centres and network, SEAMEO reaches out to diverse communities in Southeast Asia to contribute to the development of human resources and address challenging issues such as alleviating poverty, creating a better quality of life, ensuring educational equity and quality, enhancing agriculture and natural resources, improving health care and nutrition, and promoting the dissemination and exchange of knowledge and learning of indigenous cultures and traditions.

We hope that the “Action Agenda for the SEAMEO 7 Priority Areas” will serve as a source of inspiration for cooperation in education, science, and culture across Southeast Asia. We are also confident that this book will help the general public better understand the nature of the work of SEAMEO, which will continuously expand and grow as we stride into a new stage of growth in the 21st century as described in the SEAMEO 7 Priority Areas.

Dr. Gatot Hari Priowirjanto
Director, SEAMEO Secretariat
Introduction

New Education Agenda Background

The SEAMEO Secretariat (SEAMES) conducted a study to gain foresight into education in Southeast Asia using a “futuristic methodology.” The results of this study were summarised into key messages and endorsed by the SEAMEO Executive Committee (SEAMEO EC) on 28 August 2014. These key messages were presented in a background document created for the “SEAMEO Strategic Dialogue for Education Ministers (SDEM)” held on 13 September 2014 in Vientiane, Lao People’s Democratic Republic (PDR). The participants of the meeting included representatives from the SEAMEO Member Countries and observers from the Asian Development Bank (ADB); the United Nations Educational, Scientific and Cultural Organisation (UNESCO); and the Association of Southeast Asian Nations (ASEAN) Secretariat.

The SEAMEO 7 Priority Areas were subsequently presented during the “37th SEAMEO High Officials Meeting (HOM)” and recommended to the SEAMEO Council (SEAMEC) during the “48th SEAMEO Council Conference.” In the Ministerial Round Table Meeting, SEAMEC endorsed the SEAMEO 7 Priority Areas and announced five recommendations for their implementation starting fiscal year (FY)2015–2016.

The SEAMEO 7 Priority Areas are:

1. Achieving universal early childhood care and education (ECCE)
2. Addressing barriers to inclusion
3. Ensuring resilience in the face of emergencies
4. Promoting technical and vocational education and training (TVET)
5. Revitalising teacher education
6. Harmonising higher education and research
7. Adopting a 21st-century curriculum
We, the Ministers for Education and Heads of Delegations of the Member States of SEAMEO, gathered in Bandung, Republic of Indonesia for the second SDEM, within the framework of Forum 1 of the SEAMEO College Initiative, have together reviewed the progress made in moving forward with the identified priorities of SEAMEO for the next 20 years:

• Taking note of the progress by SEAMEO in pursuing the Action Agenda for the SEAMEO 7 Priority Areas to date and issues relating to their implementation;

• Recognising that the realities and concerns in education that we experience within and across countries in the region lend greater opportunities for synergy and collegial sharing amongst key education players;

• Realising that addressing these concerns and sustaining the gains made require significant inputs not only within and amongst SEAMEO units but also meaningful participation by the ministries of education (MoEs);

• Being mindful that the new and shifting demands on the education sector, especially in the context of community building in the region, can be addressed through the power of collaborative work; and

• Welcoming partnerships amongst key stakeholders, including public and private entities, to gain full advantage of the use of new tools and knowledge to operate in the future environment.

We therefore call for action amongst the delegations and institutions represented here to work cooperatively in building a regional education system that is dynamic and resilient amidst current challenges, even as they remain rooted in our shared values and traditions.
To achieve this, cooperation amongst the countries in the region is an essential and potent multiplier, enabling strategic, comprehensive, and systematic transformation and focused collaboration in the following areas:

1. Achieving universal ECCE
2. Addressing barriers to inclusion
3. Ensuring resilience in the face of emergencies
4. Promoting TVET
5. Revitalising teacher education (i.e., making teaching a profession of first choice again)
6. Harmonising higher education and research
7. Adopting a 21st-century curriculum

We recognise that SEAMEO, as an established regional inter-governmental organisation that brings together MoEs in Southeast Asia, through its specialised regional centres, performs an invaluable role in the region’s educational community and must focus on meeting the current and emerging challenges in the regional educational and social development landscape. These should be reflected in the programmes and strategic goals of SEAMEO and articulated in the plans and programmes pursued by its regional centres and networks in the next three years.

We, the Ministers of Education and Heads of the Delegations participating in this strategic dialogue further call for action by SEAMEO, its regional centres, and the region’s educational community to ensure that the views and agreements in this forum are pursued and adequately supported. Convened in thematic round table discussions, we:

• Revisited the context and reflection that the Ministers of Education have undergone in the process of developing the SEAMEO 7 Priority Areas during the first SDEM. We further noted the need to move beyond our national boundaries, thinking as Southeast Asians, solving problems of the region whilst building on our individual country’s strengths;

• Recognised that the region has much to share in ensuring access to and the relevance of programmes to the needs of learners given the diversity of needs, resources, and operational contexts and shared concerns on ECCE, TVET, and lifelong learning whilst keeping them at the centre of learning interventions. In the process of introducing innovations to curricula and learning content, strong fundamental skills such as literacy, numeracy, values, and social and emotional skills should be enhanced;
Recognised that public engagement is very important to the success of programmes and reforms. Different modes and types of public engagement done in the region were explored such as strengthening school community partnerships, promoting open and shared information, and other modalities. In engaging education workers, particularly teachers, it is necessary to instill more than a sense of professionalism and technical competence. Instead, their capacity to nurture, understand, and inspire future citizens in their individual countries should be developed.

We recommend that SEAMES and SEAMEO regional centres focus their efforts on advocacy for support with the commitment of the SEAMEO Member Countries, associate members, affiliate members, and partners and stakeholders.

We further acknowledge the support of the Government of the Republic of Indonesia and ADB through the Japan Fund for Poverty Reduction in bringing together the parties for this strategic dialogue.

We therefore agreed to adopt this statement, calling for action to animate the pursuit of the SEAMEO 7 Priority Areas and mobilising support for the identified initiatives.

Adopted in Bandung, Republic of Indonesia on 28 April 2016.
PRIORITY 1

ACHIEVING UNIVERSAL EARLY CHILDHOOD CARE AND EDUCATION
1.1 Longitudinal Study on the Effects of the Early Childhood Care and Development Programme on the Learning Experience and Performance of Kindergarten to Grade 2 Pupils

SEAMEO INNOTECH
Dr. Ramon C. Bacani
Director
www.seameo-innotech.org

Other SEAMEO Centres and Partners

- Australian Council for Educational Research (ACER)
- United Nations Children’s Fund (UNICEF) Philippines

Background

This four-year-long longitudinal study seeks to gather evidence to guide the implementation of the “Philippine Early Years Act” (Republic Act [RA] No. 10410) and the “Enhanced Basic Education Act” (RA No. 10533) to support curricular development and instruction and guide teacher development in the early years (ECCE through grade 3).

Objectives

This study seeks to:

- Better understand the cognitive, social, and emotional skills of young Filipino children in different contexts
• Assess how ECCD relates to children’s development, learning experiences, and performance in school

Expected Outcomes

Through this study, the team will analyse:

• The holistic development of children
• The factors that affect children’s learning performance and socio-emotional development
• The children’s oral language skills in Filipino and English

The results of this study will serve as basis and provide helpful information for the formation of national policies and sharing of best practices on early learning.

This project is currently on its second year of implementation after completing two rounds of learner assessment that covers numeracy, literacy, and socio-emotional skills development.

Activities and Time Line

This study will run from 2015 to 2018.

Funding Mechanism

• Department of Foreign Affairs and Trade (DFAT) Australia
• UNICEF Philippines
1.2 Hué Storytelling Festival

SEAMEO SPAFA
Dr. M.R. Rujaya Abhakorn
rujaya@seameo-spafa.org

Other SEAMEO Centres and Partners
Hué University College of Education

Background

SEAMEO Regional Centre for Archaeology and Fine Arts (SPAFA), the Mahasarakham University, and the Hué University have successfully presented the third and fourth storytelling festivals in Thailand and Vietnam in 2015 and 2016. These events brought together world-renowned international storytellers and story lovers, young and old, from many countries, particularly those in Southeast Asia. The events provided entertainment and inter-cultural understanding amongst people of various cultures through the power of folktales and the art of storytelling. These efforts helped engage people in the ASEAN community through the sharing of wisdom, ways of life, beliefs, cultural values, and practices inherent in the tales.

Last year, the Mahasarakham University and SEAMEO SPAFA successfully organised the fourth “International Storytelling Festival” on 1–4 March at the Hué University in Vietnam. This year, SEAMEO SPAFA will be joined by the Hué University as co-host.

This project will tentatively bring together more than 20 famous international storytellers to share folktale stories from Southeast Asia and elsewhere to the primary school sector in Hué City. Although the major emphasis of the festival is to connect the ASEAN community through travel, trade, food, cultural heritage, religion, and art, it is not limited to only one topic or locality. Storytellers may choose to tell their own favourite stories from other cultures. Stories on themes ranging from love, compassion, kindness, sharing, and peace to conserving the natural environment and honouring indigenous wisdom can be shared as well.

Objectives

This project seeks to:

• Provide an international arena for traditional and international storytelling performances for the second time in Hué City
• Provide a forum for Southeast Asian storytellers to share their stories with primary schoolchildren, parents, and teachers

• Offer opportunities to teachers, educators, and other interested people to learn from and share knowledge related to the preservation and revitalisation of folktales and storytelling traditions

• Record oral stories from the Southeast Asian cultural landscape and regional festivities

• Encourage the use of storytelling as an educational tool to address the Priority Area NO. 1—achieving universal ECCE

Expected Outcomes

This project expects to:

• Present tales as an educational tool for teachers

• Document the performances of international storytellers on video for use as models of the art of storytelling

• Collect more than 20 folktales from Southeast Asia and around the world to hopefully bring awareness of similarities and differences amongst the countries, which will promote mutual understanding and peace

• Publish a collection of Southeast Asian folktales

• Use the illustrations from the drawing contest in the collection of folktales obtained from the festival

Participants

• 20 Southeast Asian representatives from Cambodia (one), Indonesia (three), Lao PDR (one), Malaysia (one), Myanmar (one), the Philippines (one), Singapore (one), Thailand (three storytellers and seven observers), and Vietnam (one)

• Four storytellers from the United States (U.S.) (two), South Korea (one), and the United Kingdom (U.K.) (one)
Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation of illustrations from the drawing contest and city tour</td>
<td>College of Education, Huế University</td>
<td>1 March 2017 3:00–5:30 p.m.</td>
</tr>
<tr>
<td>Opening ceremony</td>
<td>College of Education, Huế University</td>
<td>2 March 2017 8:00–9:00 a.m.</td>
</tr>
<tr>
<td>Storytelling showcase</td>
<td>College of Education, Huế University</td>
<td>9:00–11:30 a.m.</td>
</tr>
<tr>
<td>Workshop</td>
<td></td>
<td>1:00–5:15 p.m.</td>
</tr>
<tr>
<td>Dinner</td>
<td></td>
<td>6:00–9:00 p.m.</td>
</tr>
<tr>
<td>Storytelling showcase and workshop in three primary schools</td>
<td>Primary schools</td>
<td>3 March 2017 8:00 a.m.–3:00 p.m.</td>
</tr>
</tbody>
</table>

Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO SPAFA</td>
<td>Airfare, accommodations, meals, and local transportation of resource persons</td>
<td>US$6,500</td>
</tr>
<tr>
<td>Huế University</td>
<td>Drawing contest, gala dinner, production of copies of the &quot;Tale from the Rice Field&quot; (English), storytelling showcase, workshop, and transportation to the three primary schools</td>
<td>US$2,500 (from SEAMEO SPAFA)</td>
</tr>
</tbody>
</table>
1.3 Pilot Implementation of a Revitalised School Health Care Programme for Selected Public Elementary Schools in Pasay City, Philippines

Other SEAMEO Centres and Partners
Department of Education (DepEd) Division of City Schools, Pasay City, Philippines

Background

Health care systems exist primarily to contribute to attaining better health outcomes for all populations. This purpose, first enunciated in the “Declaration of Alma-Ata” in 1978, resonates with the current movement towards universal health care. Attaining this goal is usually done through the primary touch point of the health care system with the target clientele—service delivery.

With respect to the health of children, however, it is notable that the focus of government programmes in recent decades has been primarily on the crucial first five years of life, as exemplified by the Millenium Development Goals (MDGs) and the “National Objectives for Health.” In essence then, the main aim is to ensure child survival.

The prospect of improved life expectancy amongst children manifested as a reduction in both infant and under-five mortality, which triggered the strengthening of health care programmes directed towards ensuring that children five years and above can attain age-appropriate expectancies in environments that are safe and conducive to enhanced growth and development. Capacities must likewise be developed to enable them to make informed choices in terms of their health, especially amongst those transitioning towards adolescence. Finally, institutional and state policies ought to support a nurturing environment that will help a child grow into a healthy and productive adult.
The diversity of health concerns has been ably addressed by DepEd through the formulation of the School Health and Nutrition Programme. Implementation, however, remains a challenge, given the limited health human resource complements available at the school level, the many individual components comprising the overall school health care programme, and a constantly increasing student population in public schools. In short, integration, operationalisation, and monitoring and evaluation are primary system gaps that need to be addressed.

Meanwhile, the College of Public Health (CPH), also known as the “SEAMEO Regional Centre for Tropical Medicine (TROPMED) for Public Health, Hospital Administration, Environmental, and Occupational Health,” has been entrusted with the mission to deploy the expertise of its faculty, professional staff, and students to contribute to health care development in different communities and settings. As a relevant institution under the auspices of the Health Sciences Centre of the University of the Philippines (UP), CPH will accomplish this mission through, amongst others, collaborative programmes with other national, regional, or international organisations. It is in this context that this project has been proposed.

Objectives

This project primarily aims to institutionalise a model school health care programme in selected schools in Pasay City by the end of December 2017. Overall, it will contribute to Sustainable Development Goal (SDG) No. 3—ensure healthy lives and promote well-being for all across ages.

Expected Outcomes

This project expects to:

- Process the evaluation of existing school health care programmes by May 2017 to identify gaps, if any, in the implementation of their various components
- Develop a model school health care programme by May 2017
- Train schoolteachers to implement the model school health care programme by May 2017
- Determine the baseline health status of schoolchildren in selected schools in Pasay City by June 2017
- Conduct a preliminary assessment of the model school health care programme implementation by December 2017

Participants

At least 10 public schoolteachers in purposively selected schools in Pasay City (pilot implementation)
# Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social preparation (discussions with partners and stakeholders)</td>
<td>July–December 2016</td>
</tr>
<tr>
<td>Process evaluation of existing school health care programmes</td>
<td>January–May 2017</td>
</tr>
<tr>
<td>Development of a model school health care programme</td>
<td>March–May 2017</td>
</tr>
<tr>
<td>Training teachers on the model school health care programme</td>
<td>May 2017</td>
</tr>
<tr>
<td>Assessment of the baseline health status of schoolchildren</td>
<td>June 2017</td>
</tr>
<tr>
<td>Implementation phase</td>
<td>June–December 2017</td>
</tr>
<tr>
<td>Preliminary assessment of the model school health care programme</td>
<td>December 2017</td>
</tr>
</tbody>
</table>
1.4 Regional Research on Achieving Inclusive Early Childhood Care and Development in Southeast Asia

SEAMEO INNOTECH
Dr. Ramon C. Bacani
Director
www.seameo-innotech.org

Other SEAMEO Centres and Partners

Asia-Pacific Regional Network for Early Childhood (ARNEC)

Background

This research will document and analyse the patterns of marginalisation that affect young children’s participation in ECCD in Southeast Asia and the policies and programmes implemented in response to this phenomenon.

Objectives

This regional study aims to provide a comprehensive description and differentiated analysis of the state of ECCD for children who belong to marginalised groups in Southeast Asia.

Expected Outcomes

The findings of this study will serve as basis for evidence-based policy formulation to attain equal access to and quality ECCD in the region.
Activities and Time Line

This project is 40% complete. Various data-gathering tools were used. In-country experts were engaged. Draft country reports were prepared. This project is expected to be completed by June 2017.

Funding Mechanism

- SEAMEO Regional Centre for Educational Innovation and Technology (INNOTECH) Endowment Fund
- Supplemental funding from ARNEC
1.5 Enhancing Early Childhood Care and Education Through Family Education and Health Literacy

SEAMEO TROP MED Network
Dr. Ma. Sandra B. Tempongko
Deputy Coordinator
jolinatwoph@yahoo.com

Other SEAMEO Centres and Partners

- Directorate of Early Childhood Education, Ministry of Education and Culture (MoEC) Indonesia
- TROP MED Malaysia
- TROP MED Philippines
- TROP MED Thailand
- SEAMEO Southeast Asia Regional Open Learning Centre (SEAMOLEC)
- SEAMEO Regional Centre for Food and Nutrition (RECFON)

Background

ECCE refers to “a range of processes and mechanisms that sustain and support development during the early years of life.” It encompasses educational, physical, social, and emotional care; intellectual stimulation; health care; and nutrition. It also includes the support a family and community need to promote children’s healthy development (UNESCO, 2012). The first eight years of a child’s life can be maximised to ensure optimal development since this is an immense period of growth and development. Studies have shown the different benefits that quality ECCE programmes can bring to an individual as well as the larger community.
Parents and family members are usually the first caregivers at age 0–3. Parents’ health literacy influences a child’s health and education. Every day, parents make decisions and take actions that influence children’s health. Studies have shown an association between poor health literacy and poorer perceptions of health, less utilisation of services (particularly those related to disease prevention), and poorer understanding of verbal and written instructions for self-care. Thus, it can be surmised that parents with poor health literacy can negatively affect their children’s health and development.

UNESCO Bangkok, as part of its advocacy to expand the quality of ECCE programmes, established the Parenting Education Programme to support parents and families to become effective caregivers and educators (UNESCO, 2012).

MoEC Indonesia’s ECCE programme includes family education. During the consultation meeting with the Directorate Generals of the MoEC on 23–24 February 2017, the idea of enhancing ECCE through family education and health literacy was discussed and received a positive response. It is in this context that this proposal is being prepared.

Objectives

This project aims to:

• Develop a model of family education and health literacy component as part of the overall ECCE programme of MoEC Indonesia
• Develop modules and educational materials for health literacy
• Pilot-test materials in selected schools that implement ECCE programmes in Indonesia
• Establish facilitating and inhibiting factors that influence the implementation of health literacy
• Recommend measures for upscaling the health literacy component for national implementation and possible adaptation and implementation in other SEAMEO Member Countries

Expected Outcomes

This project should result in a tested health literacy programme component for parents and family members that can enhance ECCE programmes along with the necessary materials.

The results of the development and pilot test will be presented to the high officials of MoEs of SEAMEO Member Countries for endorsement and possible implementation.
## Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordination meetings with the Directorate of ECCE of MoEC Indonesia to discuss the project concept, identify sites, and clarify the roles and responsibilities of each stakeholder</td>
<td>Indonesia</td>
<td>4Q 2017</td>
</tr>
<tr>
<td>Planning meetings for the parents’ health literacy component</td>
<td>Indonesia</td>
<td>1Q 2018</td>
</tr>
<tr>
<td>Development of modules and materials</td>
<td>Indonesia</td>
<td>Until the end of 2Q 2018</td>
</tr>
<tr>
<td>Orientation of participating teachers on utilising the materials</td>
<td>Indonesia</td>
<td>3Q 2018</td>
</tr>
<tr>
<td>Pilot-testing in selected schools and year levels</td>
<td>Indonesia</td>
<td>Academic Year (AY)2018−2019</td>
</tr>
<tr>
<td>Monitoring of the pilot tests</td>
<td></td>
<td>AY2018−2019</td>
</tr>
<tr>
<td>Evaluation of the implementation</td>
<td></td>
<td>End of AY2018−2019</td>
</tr>
<tr>
<td>Revision of materials and processing, if necessary, based on the results of the evaluation</td>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>Dissemination of results at the local, national, and regional levels</td>
<td></td>
<td>2019</td>
</tr>
</tbody>
</table>
1.6 International Conference on Early Childhood Care and Education and Parenting

SEAMEO CECCEP

Other SEAMEO Centres and Partners

- SEAMES
- Directorate-General of the ECCE, MoEC Indonesia

Background

The “2017 International Conference on Early Childhood Care Education and Parenting (ICECCEP),” hosted by SEAMEO Centre for Early Childhood Care Education and Parenting (CECCEP) in collaboration with MoEC Indonesia and SEAMES, will bring together diverse stakeholders of early childhood care education and parenting (ECCEP) from the governments of SEAMEO Member Countries as well as public and private educational institutions. The conference will be a platform for participants to share new learning paradigms and practices, exchange perspectives on current issues and concerns surrounding ECCEP in Southeast Asia, and build a regional consensus on how ECCEP can effectively contribute towards improving human development in the region.

We are now living in an era of globalisation where most things in life are aided by modernisation. Children living in the world today surely differ from those who lived before. They are growing up with highly sophisticated media amidst a technological environment. To produce a high-quality future generation, educators should pay more attention and carefully prepare the education system for their generation.
Early childhood, the first five years of life, is a time of rapid cognitive, linguistic, social, emotional, and motor development. It is the most important period of development in a child’s life. The development of a child’s brain depends on environmental stimulation, especially when it comes to the quality of care and interaction that he or she receives. Children who are nurtured and well-cared for are more likely to fully develop cognitive, language, emotional, and social skills; grow up healthier; and have higher self-esteem. Each of these areas is crucial to our well-being as adults, as our experiences in early childhood shape who we ultimately become. Whilst home is the most important environment during early childhood, it is crucial that children are also exposed to some form of quality early childhood services such as those provided in ECCD centres.

The SDEM held in Vientiane, Lao PDR on 13 September 2014 agreed to focus on collaboration and interaction in the next two decades for the SEAMEO 7 Priority Areas to address issues and challenges, including promoting ECCE.

ECCE will be a main concern of the region towards achieving universal pre-primary education by 2030. This includes giving special attention to disadvantaged groups who can benefit most from such programmes, including children from poor families, those living in remote areas and marginalised ethnic and linguistic communities, and children with disabilities and special learning needs.

Meanwhile, parenting education programmes are also considered important in leveraging the quality of human development. Parenting education focuses on enhancing parenting practices and behaviours such as developing and practicing positive disciplinary techniques, learning age-appropriate child-development skills and milestones, promoting positive play and interaction between parents and children, and locating and accessing community services and support. The following programmes and resources have been useful in supporting parents and strengthening parenting skills.

This conference is expected to bring about regional commitment to ensure wider access to ECCE within Southeast Asia. It aims to provide a wisdom platform for ECCE stakeholders, both national and international, to reflect on how shared experiences of Southeast Asian countries can help enhance new teaching and learning paradigms, especially in ECCE. It has five sub-themes for the paper presentations and discussions, namely:

- Prepare ECCE teaching standards
- Establish different learning models for ECCE in different countries
- Provide parenting education to enhance parents’ capacity and confidence in raising healthy children
- Build children’s dreams for the future
- Integrate 21st-century education into ECCE
Objectives

ICECCEP 2017 has three primary goals, namely:

• Provide a platform for conversations on experiences and best practices on the implementation of ECCEP on diverse topics that support the improvement of human development in the region

• Promote regional understanding, commitment to shared action, mutual collaboration, and closer cooperation amongst ECCEP stakeholders in Southeast Asia

• Ensure wider access to ECCEP best practices in the region

Expected Outcomes

At the end of the conference, the extensive conversations and discussions amongst resource persons, experts, and participants are expected to come up with a common understanding of how SEAMEO Member Countries are coping with ECCEP challenges and shaping common pathways to achieve improved ECCEP learning paradigms.

Participants

• Representatives from the 11 SEAMEO Member Countries

• Educators from government organisations

• Representatives from public and private ECCEP institutions

• Speakers

• Moderators

A total of around 300 people are expected to participate in ICECCEP 2017. Two types of speakers will be invited—honourable speakers and selected paper presenters. Honourable speakers will be invited by the hosts (from UNICEF, UNESCO, and experts from Southeast Asia). Paper presenters, meanwhile, will be invited to present should the abstracts they submitted be selected by the committee.
PRIORITY 2
ADDRESSING BARRIERS TO INCLUSION
2.1 Southeast Asian Ministers of Education Organisation STAR Village

Other SEAMEO Centres and Partners

- SEAMEO RECfon
- SEAMEO Regional Centre for the Quality Improvement of Teachers and Education Personnel (QITEP) in Language
- SEAMEO QITEP in Mathematics (SEAQIM)
- SEAMEO QITEP in Science (SEAQIS)
- SEAMEO SEAMOLEC
- Agathis

Background

For the past almost 50 years, SEAMEO has been bringing to fore developments in education, science, and culture in the region through its various centres and units. SEAMEO has instituted several programmes and special initiatives to address regional concerns and promote inter-centre collaboration in the process. Partnership and commitment to development play key roles in what SEAMEO has accomplished throughout the years.

The Community Involvement Programme (CiP), which was recommended by SEAMEC in 1997, primarily aims to enhance the existing Adopt-a-School Programme by improving the capacities of teachers, students, officials, and parents as well as the schools’ learning facilities and community involvement.
The importance of CiP to the functions of each SEAMEO centre and unit has become more pronounced with the promulgation of the MDGs in 2000. The MDGs provided a framework for partnership amongst governments and institutions, including SEAMEO, to work together for development across the globe. As such, CiP has evolved throughout the years to carry out various types of development activities for the target communities and stakeholders of SEAMEO centres and units as part of their corporate social responsibility or outreach programmes.

The United Nations (UN) adopted a new set of development agenda during the “Sustainable Development Summit” held in September 2015 to build upon the achievements of the MDGs. Tagged the “Post-2015 Sustainable Development Agenda,” this framework proposed more targets than the MDGs, which will require greater partnerships and commitment from all sectors to ensure progress.

To support the agenda, SEAMEO has also identified 7 Priority Areas during its council meeting in 2014, namely:

- Achieving universal ECCE
- Addressing barriers to inclusion (by providing access to basic learning opportunities to all learners, particularly those who are out of school or over-aged primary schoolchildren)
- Ensuring resilience in the face of emergencies (by preparing school leaders, teachers, students, and local communities)
- Promoting TVET (amongst learners and their parents)
- Revitalising teacher education (to make the teaching profession a first choice)
- Harmonising higher education and research
- Adopting a 21st-century curriculum
These priorities should be carried out through the research, capacity-building, information-exchange, and community-involvement mandates of SEAMEO centres and units. Having a specific community to implement these is ideal, considering that expertise and resources should be maximised and effects monitored and measured properly in the spirit of inter-centre collaboration. The figure below shows the implementation framework of this project.

**Objectives**

In general, this project aims to develop a community-based sustainable development model that reinforces CIP, especially to help address the SEAMEO 7 Priority Areas (particularly Priority Nos. 2 and 5, addressing barriers to inclusion and revitalising teacher education, respectively) and the “Post-2015 Sustainable Development Agenda.” This project specifically aims to:

- Empower a target village to achieve economic, social, and environmental development in specific areas where the expertise, services, and products of SEAMEO centres in Indonesia are called for and can ably facilitate

- Transform a target village into a community learning centre (CLC) and a model that other communities can learn from

- Strengthen collaboration amongst the SEAMEO centres involved

- Enhance the community development and other community relationship skills of the respective staff members of the SEAMEO centres involved
Expected Outcomes

After three years of implementation, the project is expected to:

• Implement at least 18 development interventions (one activity per centre each year) within any of the sustainable development pillars to make a target village a “star” and a model of community-based development

• Institutionalise best practices on inter-centre collaboration

• Enhance staff skills in community development and related aspects

• Enhance the image of SEAMEO as a community development agent aided by the local government of a target village and partner institutions

• Contribute to achieving the SEAMEO 7 Priority Areas and the “Post-2015 Sustainable Development Agenda”

Participants

• All primary, secondary, and vocational schoolteachers in Indonesia

• At least 100 farmers, housewives, and out-of-school youth (OSY) in Indonesia

• All community health care centre staff members in a target village in Indonesia
### Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2017</strong></td>
<td></td>
</tr>
<tr>
<td>Workshop on digital class teaching for teachers (intermediate level) by SEAMEO SEAMOLEC</td>
<td>14–16 March</td>
</tr>
<tr>
<td>Training trainers on nutrition and health care for adolescents (at least 30 junior and senior-high schoolteachers)</td>
<td>21–22 March</td>
</tr>
<tr>
<td>Training on basic food processing for at least 30 housewives by SEAMEO BIOTROP</td>
<td>3–5 April</td>
</tr>
<tr>
<td>Training on applying inquiry-based science education (IBSE) for at least 30 secondary schoolteachers</td>
<td>7–9 April</td>
</tr>
<tr>
<td>Training on joyful learning in mathematics classes for at least 30 primary schoolteachers by SEAQIM</td>
<td>2–4 May</td>
</tr>
<tr>
<td>Workshop on fun and meaningful mathematics learning for at least 30 parents by SEAQIM</td>
<td>5–7 May</td>
</tr>
<tr>
<td>Training on basic entrepreneurship for at least 60 farmers and housewives by SEAMEO BIOTROP</td>
<td>19–21 July</td>
</tr>
<tr>
<td>Nutrition education for community health care workers on promoting complementary feeding recommendations (CFRs) to caregivers of children under five years old</td>
<td>25–26 July</td>
</tr>
<tr>
<td>Training on English language skills development for at least 30 secondary schoolteachers by SEAQIL</td>
<td>7–12 August</td>
</tr>
<tr>
<td>Nutrition education for junior- and senior-high-school students (by teachers) or caregivers (by cadres) through various activities by SEAAMEO RECFON</td>
<td>7–25 August</td>
</tr>
<tr>
<td>Monitoring the implementation of nutrition education for elementary schoolchildren by teachers (as a follow-up to 2016 activities) by SEAAMEO RECFON</td>
<td>7–8 March</td>
</tr>
<tr>
<td><strong>2018</strong></td>
<td></td>
</tr>
<tr>
<td>Workshop on digital classroom teaching (advanced level) for at least 30 secondary schoolteachers by SEAMEO SEAMOLEC</td>
<td>13–15 March</td>
</tr>
<tr>
<td>Training on compost making and nursery management for at least 35 OSY by SEAMEO BIOTROP</td>
<td>April</td>
</tr>
<tr>
<td>Mathematics camp for primary schoolteachers by SEAQIM</td>
<td>May</td>
</tr>
<tr>
<td>Workshop on developing higher-order thinking skills (HOTS) questions for science for at least 30 junior and vocational schoolteachers by SEAQIS</td>
<td>June</td>
</tr>
<tr>
<td>Workshop on using hand-held information and communication technology (ICT) tools in mathematics teaching and learning for at least 30 primary and secondary schoolteachers by SEAQIX</td>
<td>July</td>
</tr>
<tr>
<td>Training on basic entrepreneurship for OSY by SEAMEO BIOTROP</td>
<td>August</td>
</tr>
<tr>
<td>Monitoring of nutrition education activities delivered by teachers or cadres by SEAAMEO RECFON</td>
<td>To be determined</td>
</tr>
<tr>
<td>Monitoring and evaluation of small-scale enterprises developed by villagers by SEAMEO BIOTROP</td>
<td>To be determined</td>
</tr>
</tbody>
</table>

The exact venues for each activity have yet to be determined.
Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO Centres in Indonesia</td>
<td>Training materials Meals and snacks of participants, centre staff members, and resource persons Honoraria of resource persons Transportation and accommodations of centre staff members Travel allowances of participants</td>
<td>US$2,500–3,000 per activity (part of the regular budget allocated to each centre from the Government of Indonesia)</td>
</tr>
</tbody>
</table>

Potential Donours

- MoEC
- Ministry of Health (MoH)
- Ministry of Agriculture
2.2 In-Country Training on Urban Agriculture for Special Education Teachers in Malaysia

SEAMEO BIOTROP
Dr. Jess Fernandez
Deputy Director
j.fernandez@biotrop.org

Other SEAMEO Centres and Partners

• SEAMEO Regional Centre for Special Education Needs (SEN)

• Malaysian Agricultural Research and Development Institute (MARDI)

Background

Urban agriculture is now becoming a global trend, as it addresses issues that confront urban areas in terms of livelihood, health care, and environmental protection. People are willing to get involved in this global movement to help create a much greener environment, promote household and community food safety and security, contribute to a healthy living, and become more self-reliant for their daily needs.

Urban agriculture is practiced in cities and peri-urban areas—household backyards, terraces and rooftops, private lands (either owned or leased), or public lands (parks, along the roads, railways, and school yards). Activities include planting vegetables and fruits directly in plots or pots; practicing hydroponics, aquaponics, and verticulture; raising small animals (goats, lambs, rabbits, ducks, and chickens); domestic waste segregation and composting; small-scale mushroom culture; harvesting free solar energy for indoor lighting; harvesting and conserving rainwater for flower pot irrigation; and so on. The types and scales of crops to produce and levels of technology to use in urban agriculture mostly depend on the types of location and the capacities of the people in a particular urban setting.

As a life skill, knowledge on and technologies for urban agriculture should be made accessible and beneficial to a wide range of possible users, including people with special needs. This will help address the concern for inclusive development as one of the major principles of the 2030 Global SDGs.
SEAMEO Regional Centre for Tropical Biology (BIOTROP) (based in Indonesia) and SEN (based in Malaysia) share the concern for inclusive development, especially towards breaking barriers in inclusive education as one of the SEAMEO 7 Priority Areas. To address this, SEAMEO BIOTROP and SEN collaborated to conduct a pilot training session on urban agriculture for vocational and SPED teachers, which was held in Bogor, Indonesia in March 2016. This training benefited 26 Indonesian vocational and SPED teachers from nine provinces and 10 Malaysian SPED teachers from four states.

To continue this effort and build the capacity of more SPED teachers in Malaysia, SEAMEO BIOTROP and SEN agreed to collaborate with MARDI to offer in-country training on urban agriculture. This training course will feature existing technologies and expertise.

Objectives

In general, this training was designed to enable SPED teachers to acquire basic knowledge and skills on specific technologies appropriate for urban agriculture with the expectation that such could be adopted in their respective schools so their students can learn and apply their learning for personal, family, and community development. This training specifically aims to:

- Enable teachers to understand and appreciate the concept and principle of urban agriculture and its importance as a life skill to develop a self-reliant citizenry
- Enhance the knowledge and skills of teachers on urban agriculture technologies (hydroponics, vegetable and fruit production, verticulture, container gardening, and compost making) that are appropriate for re-teaching and actual practice
- Help establish the above-mentioned technologies in the teachers’ respective schools for re-teaching, food production, and income-generating purposes so they can become garden schools

Expected Outcomes

The participants are expected to formulate their individual action plans to apply what they have learned from the training in their respective schools.

Participants

At least 30 SPED teachers from all of the states of Malaysia

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual in-country training</td>
<td>MARDI Malaysia</td>
<td>8–11 August 2017</td>
</tr>
</tbody>
</table>
# Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO BIOTROP</td>
<td>Airfare and per diem of resource persons and staff members to and from Malaysia, Meals and snacks of participants, Training materials</td>
<td>US$6,000, US$960, US$2,100</td>
</tr>
<tr>
<td>SEAMEO SEN</td>
<td>Communication with participants, Airfare and per diem of staff members to and from Selangor, Field trip of participants</td>
<td>To be determined</td>
</tr>
<tr>
<td>MARDI</td>
<td>Accommodations of participants and resource persons, Training venue, Materials and facilities for the practicum</td>
<td>To be determined</td>
</tr>
</tbody>
</table>

# Potential Donours

State governments of the participants
2.3 Improving Student Literacy and Nutritional Improvement and Entrepreneurial Skills Through School Gardens Amongst Primary and Secondary Schools in Southeast Asia

SEAMEO BIOTROP
Dr. Jess C. Fernandez
Deputy Director
j.fernandez@biotrop.org

Other SEAMEO Centres and Partners

- SEAMEO RECFON
- Partner institutions for conducting training courses that have yet to be determined

Background

Schools and communities have long proven effective entry points for introducing new ideas and programmes for societal development, including matters related to health care, literacy, livelihood, and environmental awareness. In Indonesia, one successful programme that has been raising environmental awareness in schools is Sekolah Adiwiyata, which is being implemented by the Ministry of Environment and Forestry (MoEF) since 1977. Every year, more and more schools apply to become sekolah adiwiyatas, producing an increasing number of environmentally aware citizens. From 2012 to 2014, the programme has targeted more than 6,000 schools to become sekolah adiwiyatas.
To ensure the health and nutrition of children and mothers, another successful government programme has to do with operating community health care centres commonly known as “posyandus” since the 1980s. Posyandus are free integrated health care service centres run by communities (specifically by a group of mothers from 40–100 households) under the supervision of paramedics. They help one another monitor the growth and health of babies and young children. The government has also been putting up thousands of CLCs since the mid-2000s to enhance basic literacy, life skills for livelihood and entrepreneurship, culture appreciation, and community empowerment. These programmes, however, operate independently of each other.

In 2016, SEAMEO implemented a participatory action research project on school- and community-based food and nutrition for literacy, poverty reduction, and sustainable development as a component of the SEAMEO College Initiative with ADB funding. SEAMEO BIOTROP was designated as the lead implementing organisation for this project in Indonesia in collaboration with SEAMEO RECFON and SEAMOLEC.

SEAMEO BIOTROP was expected to provide technical assistance on the agriculture and environmental protection components of the project. Meanwhile, SEAMEO RECFON and SEAMOLEC were expected to share their expertise on health care and nutrition and distance learning, respectively. As such, SEAMEO BIOTROP conceptualised a training course on establishing school gardens for literacy, nutrition, and entrepreneurship.

Before the implementation of the training, SEAMEO BIOTROP and RECFON assessed the current status and needs of participating schools in terms of nutrition, literacy, and entrepreneurship. The assessment results helped improve and validate the design of the training. Out of the 150 schools that applied for the training, 52 were finally selected from nine provinces in Indonesia. The training was conducted on 27–31 March 2016 at the SEAMEO BIOTROP headquarters. The participants consisted of teachers; head masters; primary, secondary, vocational, and SPED school supervisors; and community health care centre staff members.

Due to the encouraging results of the training and the sustained enthusiasm of training alumni on school gardening, SEAMEO BIOTROP committed to continue the project as a major component of its “10th Five-Year Development Plan (2017–2022).”

**Objectives**

This project aims to institutionalise school gardens as a learning mechanism in primary and secondary school curricula in Southeast Asia to improve student literacy, nutrition, and entrepreneurial skills.

**Expected Outcomes**

This project expects to:

- Train at least 250 schools from at least five Southeast Asian countries on school gardening from 2017 to 2019
• Complete at least 10 action research projects on school gardens with primary, secondary, vocational, and SPED schoolteachers in Indonesia by 2018

• Recognise at least three schools with the best gardens each year from 2018 to 2020

• Compile best school garden practices from at least 10 schools each from at least five Southeast Asian countries by 2021

• Publish a book and other relevant teaching-learning materials on best school garden practices to improve student literacy, nutrition, and entrepreneurial skills by 2021

Participants

The number of participants for this project will depend on the nature of the activities that will be conducted:

• The training course to establish school gardens for student literacy, nutrition, and entrepreneurial improvement will be open to at least 50 schools per offering.

• Action research project grants will be offered to as many applicants as possible but only five will be selected and given grants each year.

• The “Best School Garden Awards” are open to as many schools as possible but only three will be recognised each year—“Best School Garden for Student Literacy Improvement,” “Best School Garden for Nutritional Improvement,” and “Best School for Entrepreneurial Development.”

• The compilation and development of a database on best school garden practices to improve student literacy, nutrition, and entrepreneurial skills improvement is open to as many schools as possible.

• The publication of school garden best practices and other relevant teaching-learning materials to improve student literacy, nutrition, and entrepreneurial skills is open to as many schools as possible.

• The participants should come from at least five Southeast Asian countries, depending on where the potential partner institutions are from.
## Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training on establishing a school garden for student literacy, nutrition, and entrepreneurship in at least five Southeast Asian countries (Note: SEAMEO BIOTROP hopes to get institutional partners from outside Indonesia.)</td>
<td>SEAMEO BIOTROP and partner institutions from other Southeast Asian countries for the in-country offering</td>
<td>2017–2019</td>
</tr>
<tr>
<td>Provision of school garden action research grants (for Indonesian teachers)</td>
<td>SEAMEO BIOTROP (depends on what schools will be given grants)</td>
<td>2017–2018</td>
</tr>
<tr>
<td>“Best School Garden Awards” (for Indonesian schools) (Note: This can be extended to non-Indonesian schools if SEAMEO BIOTROP can find donors in other Southeast Asian countries.)</td>
<td>SEAMEO BIOTROP</td>
<td>2018–2020</td>
</tr>
<tr>
<td>Compilation and development of a database on school garden best practices to improve student literacy, nutrition, and entrepreneurship in Southeast Asia</td>
<td>To be determined</td>
<td>2019–2021</td>
</tr>
<tr>
<td>Publication of school garden best practices and other teaching-learning materials to improve student literacy, nutrition, and entrepreneurial skills development</td>
<td>SEAMEO BIOTROP</td>
<td>2021</td>
</tr>
</tbody>
</table>

## Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMES</td>
<td>Promotions for funding the prizes for the “Best School Garden Awards”</td>
<td></td>
</tr>
<tr>
<td>SEAMEO BIOTROP</td>
<td>Training package Action research grants “Best School Garden Awards” Compilation of best school garden practices Publication of a book on best school garden practices and other relevant teaching-learning materials to improve student literacy, nutrition, and entrepreneurship</td>
<td>At least US$7,000 per training At least US$550 per grantee (total of US$2,750 for five grantees per year) At least US$800 per school (total of US$2,400 for three awardees per year) US$2,000 US$3,000</td>
</tr>
<tr>
<td>SEAMEO RECFON</td>
<td>Pre-training assessment of schools on the nutritional status of students Resource persons</td>
<td>To be determined</td>
</tr>
<tr>
<td>Partner institutions to conduct training</td>
<td>Facilities and resource persons</td>
<td>To be determined</td>
</tr>
</tbody>
</table>
Potential Donours

• MoEs of SEAMEO Member Countries (tapped for sponsoring teachers to attend training and providing prizes for the “Best School Garden Awards”)

• Private agricultural companies (tapped for prizes for the “Best School Garden Awards”)
2.4 Towards an Association of Southeast Asian Nations Lifelong Learning Agenda

SEAMEO CELLL
Mr. Khau Huu Phuoc
Manager of Research and Training
khauhuuphuoc@seameocelll.org

Other SEAMEO Centres and Partners

- UNESCO Institute for Lifelong Learning (UIL)
- DVV International
- NILE
- Representatives from the 11 SEAMEO Member Countries

Background

SEAMEO Regional Centre for Lifelong Learning (CELLL)’s flagship project, Towards an ASEAN Lifelong Learning Agenda, funded by UIL, was initiated in January 2016 to share best policies and practices in lifelong learning amongst Southeast Asian nations to create a regional lifelong learning agenda. This project has the following components:

- Study of best practices in lifelong learning in SEAMEO Member Countries
- Experts meeting to discuss enabling policies, legislations, and financing options for lifelong learning
- Online portal for sharing national policies and best practices
- Publication of best practices and policies
- Submission of working papers during SEAMEO meetings, including an education leaders’ summit
• Dissemination of best practices and policies in SEAMEO Member Countries (in both English and their national languages)

• Project monitoring

Objectives

The project aims to support Southeast Asian countries’ development and implementation of holistic and comprehensive lifelong learning approaches that link together different sectors and forms of learning.

Expected Outcomes

This project expects to:

• Create a compendium of the countries’ best practices in different aspects of lifelong learning as well as government policies and strategies that enable its development

• Develop a set of recommendations on policies, legislations, and financing for lifelong learning that will subsequently be presented for adoption in the next stage during a high-level policy dialogue on lifelong learning agenda

• Create an online portal that serves as a hub for regional information exchange and lifelong learning best practice dissemination

Participants

• SEAMEO CELLL

• UIL

• Representatives from the 11 SEAMEO Member Countries

• Other stakeholders

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning meeting</td>
<td>8 March 2016</td>
</tr>
<tr>
<td>Experts meeting</td>
<td>4–5 October 2016</td>
</tr>
<tr>
<td>National report submission</td>
<td>31 January 2017</td>
</tr>
<tr>
<td>Online portal launch</td>
<td>March 2017</td>
</tr>
<tr>
<td>Publication of best practices and policies</td>
<td>July 2017</td>
</tr>
</tbody>
</table>
### Activity Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working paper submission during the 49th SEAMEC</td>
<td>July 2017</td>
</tr>
</tbody>
</table>

## Funding Mechanism

UIL (€100,000)
2.5 Visiting Research Fellow Programme in Japan

SEAMEO CELLL
Mr. Khau Huu Phuoc
Manager of Research and Training
khauhuuphuoc@seameocelll.org

Other SEAMEO Centres and Partners
University of Tsukuba, Japan

Background
At the invitation of the University of Tsukuba in Japan, SEAMEO CELLL sent two researchers to the university for the four-month-long visiting research fellow programme to study the mechanism of the well-known Japanese social educational institution—Kominkan—and its sister community centre.

Objectives
This study aims to explore aspects of the Japanese CLC and answer the following questions:

• Why does it attract public participation?
• How can it sufficiently and appropriately cater to local needs?
• What management mechanism facilitates its successful operation?

Expected Outcomes
This study expects to deliver a detailed description of the two models—Kominkan and the Japanese Community Centre, in English.
Participants

SEAMEO CELLL research staff members

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research on Kominkan and the Japanese</td>
<td>Japan</td>
<td>November 2016–February</td>
</tr>
<tr>
<td>Community Centre</td>
<td></td>
<td>2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

Research grant from the University of Tsukuba, Japan
2.6 Workshop on the Japanese Community Learning Centre: Why and How It Functions Effectively in Japan

SEAMEO CELLL
Mr. Khau Huu Phuoc
Manager of Research and Training
khauhuuphuoc@seameocelll.org

Other SEAMEO Centres and Partners

University of Tsukuba, Japan

Background

At the invitation of the University of Tsukuba in Japan, SEAMEO CELLL sent two researchers to the university for the four-month-long visiting research fellow Programme to study the mechanism of the well-known Japanese social educational institution—Kominkan—and its sister community centre.

As a result, a workshop on the Japanese CLC was convened to present the researchers’ findings and explore the model’s applicability in SEAMEO Member Countries.

Objectives

This workshop aims to:

- Introduce the model of the Japanese CLC
- Discuss how and why it functions effectively
- Explore its applicability in SEAMEO Member Countries
Expected Outcomes

This workshop expects to:

- Provide a deeper understanding of the model of the Japanese CLC
- Identify its potential applications in the region

Participants

- CLC management officials
- Researchers from SEAMEO Member Countries

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop on the Japanese CLC</td>
<td>SEAMEO CELLL office</td>
<td>March 2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

SEAMEO CELLL
2.7 Capacity-Building Workshop for Community Learning Centres in Lower Mekong

SEAMEO CELLL
Mr. Khau Huu Phuoc
Manager of Research and Training
khauhuuphuoc@seameocelll.org

Other SEAMEO Centres and Partners

• SEAMES
• UIL
• DVV International

Background

The Lower Mekong Sub-Region in Southeast Asia, comprising Cambodia, Lao PDR, Myanmar, Thailand, and Vietnam, has been facing challenges whilst modernising its economy and enhancing its competitiveness. CLCs, in this case, are playing a crucial role in providing education to tackle such challenges. Unfortunately, the coverage and quality of CLCs in Lower Mekong leaves much to be desired. In order for CLCs to function more effectively and respond to the SEAMEO 7 Priority Areas, a capacity-building workshop for CLC officials in the region has been deemed essential.

Objectives

This workshop will provide opportunities for participants to:

• Share successful models and practices of CLC management and operation
• Suggest solutions to particular problems in CLC management and operation
• Consolidate a CLC network in the region
Expected Outcomes

This workshop expects to:

• Produce paper abstracts, which will serve as reference for CLC best practices in Lower Mekong

• Foster collaboration amongst CLCs in Lower Mekong

Participants

25 participants from Lower Mekong

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity-building workshop for CLCs in Lower Mekong</td>
<td>SEAMEO CELLL premises</td>
<td>Two days in March 2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

• SEAMEO CELLL

• Stakeholders
2.8 Instructional Resources: Using Soft Skills in Non-Formal Education

SEAMEO CELLL
Mrs. Cao Thi Thu Hien
Manager of Personnel and Administration
caothithuhien@seameocelll.org

Other SEAMEO Centres and Partners

DVV International, Cambodia and Lao PDR

Background

In 2015 and 2016, DVV International and PRiA jointly organised two workshops concerning soft skills in non-formal education (NFE) in Lao PDR and Cambodia, respectively. The series of workshops led to the publication of the “Training Manual for Facilitators: Using Soft Skills in NFE,” which was compiled by PRiA. The future use of this manual necessitates the writing of an instructional resource that will accompany the training manual, turning it into an applicable teaching material that facilitates teaching in the region.

Objectives

This project aims to:

• Develop a package of training materials in English to accompany the “Training Manual: Using Soft Skills in NFE” originally compiled by PRiA

• Validate the instructional resource package once it is made available through a consultation workshop

• Set up and strengthen networking in NFE in Cambodia, Lao PDR, and Vietnam
Expected Outcomes

This project expects to:

- Create an instructional resource package that includes standardised lesson plans for each module in the manual, a set of presentation slides as an aid for delivering classroom lessons, and a list of reference materials or sources for each module
- Provide constructive comments and feedback from participants for modification purposes
- Create a network of experts on NFE in Cambodia, Lao PDR, and Vietnam

Participants

- Representatives from DVV International, Lao PDR and Cambodia
- SEAMEO CELLL (Vietnam)

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs analysis</td>
<td></td>
<td>February–March 2017</td>
</tr>
<tr>
<td>Developing the instructional resource package</td>
<td></td>
<td>April–July 2017</td>
</tr>
<tr>
<td>Consultation workshop</td>
<td>SEAMEO CELLL office</td>
<td>Two days in August or September 2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

DVV International
2.9 Workshop on Open and Distance Learning and Its Impact on Lifelong Learning

SEAMEO CELLL
Mr. Khau Huu Phuoc
Manager of Research and Training
khauhuuphuoc@seameocelll.org

Other SEAMEO Centres and Partners

SEAMEO Regional Centre for Technical and Vocational Education and Training (VOCTECH)

Background

In the last few decades, the world has seen the rapid growth of open and distance learning (ODL) not only in mainstream education but also in NFE. This educational approach provides better learning opportunities for all, regardless of educational, geographical, or cultural background. Therefore, its contribution to equity and high quality in education is considerably appreciated.

In SEAMEO Member Countries, the growing demand to promote education for all (EFA) accentuates the usefulness of this educational approach. As such, more attention needs to be given when it comes to ODL application and its impact on lifelong learning.

Objectives

This workshop aims to:

• Discuss ODL trends in the context of lifelong learning

• Use assistive technologies for ODL in SEAMEO Member Countries
Expected Outcomes

This workshop expects to provide a deeper understanding of ODL in the context of lifelong learning, which can be applied in SEAMEO Member Countries.

Participants

• Policy makers from SEAMEO Member Counties

• Educators, specifically NFE practitioners, in SEAMEO Member Countries

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop on ODL and its impact on lifelong learning</td>
<td>SEAMEO CELLL office</td>
<td>5–6 May 2018</td>
</tr>
</tbody>
</table>

Funding Mechanism

• SEAMEO CELLL

• Other stakeholders
2.10 Workshop on Successful Community Learning Centre Models in Southeast Asian Ministers of Education Organisation Member Countries

Other SEAMEO Centres and Partners

Representatives from the 11 SEAMEO Member Countries

Background

Fully aware of the crucial role of CLCs in lifelong learning development in SEAMEO Member countries, SEAMEO CELLL continuously develops programmes that centrally focus on CLC capacity building. A number of programmes have been successfully carried out and received positive feedback from participants. This workshop will be organised to continue the chain of events that has been enhancing CLCs’ operational capacity.

Objectives

This workshop aims to:

• Share successful models of and practices for CLCs in the region
• Establish collaboration amongst CLCs in the region
Expected Outcomes

This workshop expects to provide a collection of successful CLC models and best practices, which will serve as a useful reference for managerial officials to improve their efficient operation.

Participants

- CLC managers and facilitators from SEAMEO Member Countries
- SEAMEO CELLL's Governing Board Members

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop on successful CLC models in SEAMEO Member Countries</td>
<td>SEAMEO CELLL</td>
<td>27 September 2018</td>
</tr>
</tbody>
</table>

Funding Mechanism

- SEAMEO CELLL
- Stakeholders
2.11 Workshop on Lifelong Learning Best Practices in Southeast Asian Ministers of Education Organisation Member Countries

SEAMEO CELLL
Mr. Khau Huu Phuoc
Manager of Research and Training
khauhuuphuoc@seameocelll.org

Other SEAMEO Centres and Partners

Representatives from the 11 SEAMEO Member Countries

Background

SEAMEO CELLL’s flagship project, Towards an ASEAN Lifelong Learning Agenda, funded by UIL, was initiated on January 2016 to share best policies and practices in lifelong learning amongst Southeast Asian nations to lead to the creation of a regional lifelong learning agenda.

This project received strong commitment from the 11 SEAMEO Member Countries to undertake national reports on lifelong learning within their own borders.

To enhance understanding of best practices and policies made in countries other than one’s own and encourage the modification and application of those, it is necessary to hold a workshop to disseminate lifelong learning best practices in the participating countries.

Objectives

This workshop aims to exchange experiences in lifelong learning development in SEAMEO Member Countries as a result of the implementation of the project, Towards an ASEAN Lifelong Learning Agenda.
Expected Outcomes

This workshop expects to:

• Foster better understanding of effective lifelong-learning-enabling policies and mechanisms in SEAMEO Member Countries

• Enhance the lifelong learning network in SEAMEO Member Countries

Participants

• Representatives from the 11 SEAMEO Member Countries

• SEAMEO CELLL

• UIL

• DVV International

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop on lifelong learning best practices in SEAMEO Member Countries</td>
<td>SEAMEO CELLL</td>
<td>15–16 April 2020</td>
</tr>
</tbody>
</table>

Funding Mechanism

• SEAMEO CELLL

• Stakeholders
2.12 Model for Partnerships to Translate Guidelines into Practices for the Optimal Diet for the Southeast Asian Community

SEAMEO RECFON
Dr. Umi Fahmida
umifahmida@gmail.com
ufahmida@seameo-recfon.org

Other SEAMEO Centres and Partners

- MoH Indonesia
- MoH Lao PDR
- MoH Myanmar
- MoH Cambodia

Background

Southeast Asia still faces great challenges in combating malnutrition, especially amongst children and women of reproductive age. In some countries such as Cambodia, Indonesia, Lao PDR, and Myanmar, the prevalence of child stunting is a huge public health care problem. This has adverse consequences such as poor performance in school and low productivity in adulthood.

Anemia and other micro-nutrient deficiencies such as zinc and folate deficiencies are prevalent in both children and women of reproductive age. These have been attributed to inadequate nutrient intake from poor diet. In particular, children less than two years old are at great risk, given their limited gastric capacity and requirement for a more nutrient-dense diet.
Despite these problems, however, resources are available in the region. Nutrient-dense food, which have the potential to improve nutrient adequacy are available locally but are often under-utilised. The use of suitable locally available food has also been emphasised in the World Health Organisation (WHO) and UNICEF’s “Global Strategy for Infant and Young Child Feeding.” Affordable, available, and locally contextual CFRs that take into account cultural diversity and food availability are expected to result in long-term improvements in complementary feeding practices than just general recommendations.

Another important resource that has been made available by WHO to formulate food-based recommendations (FBRs) is a tool called “Optifood,” which uses linear programming (LP) to develop affordable, locally contextual FBRs. LP is an optimisation method that can be used to identify optimal but realistic, available, and affordable FBRs to meet the recommended nutrient intakes (RNIs) of energy and nutrients. Using LP, the diet that comes closest to RNIs can be identified whilst taking into account food availability, patterns, portions, and costs.

SEAMEO RECFON has been involved in the preliminary study on developing and using LP to develop CFRs in various sites and settings (urban or rural and different socio-economic groups) in Indonesia. The centre also conducted CFR community interventions, which proved that people better comply with CFRs when they are developed with consideration for local food patterns and availability.

Given these findings, the centre hopes to share its expertise to contribute to the improvement of Southeast Asian communities. To succeed, this effort will require collaboration with those engaged in dietary data collection as well as programme implementers and other relevant stakeholders.

Memoranda of understanding (MoUs) with partners that have been identified for this project have been signed. These partners include the Lao PDR, Myanmar, and Indonesia MoHs through several nutrition academies. In the future, the centre hopes to establish MoUs with the MoHs in Cambodia and the Philippines as well. This project will target mothers, young children (in communities), and adolescent girls and children (in school).

Objectives

This project aims to:

- Provide capacity-building and technical advice to academe and programme implementers of dietary data collection and Optifood to formulate FBRs or CFRs

- Provide technical assistance to programme implementers at the regional, provincial, or district level via the academe or other partners located in the respective areas on the development of health care promotion messages to promote FBRs or CFRs

- Together with relevant institutions in participating countries, evaluate FBRs or CFRs to improve nutrient intake and, eventually, the nutritional status of target groups
Expected Outcomes

This project expects to:

- Produce training materials on dietary assessment to develop LP and Optifood inputs to establish FBRs or CFRs
- Provide region- or province-specific FBRs or CFRs
- Produce health care promotion materials featuring region- or province-specific FBRs or CFRs
- Publish reports and scientific publications on evaluating CFRs as feedback to governments and stakeholders

Participants

150 local members of the academe, programme planners, and implementers from Cambodia, Indonesia, Lao PDR, Myanmar, and the Philippines

Activities and Time Line

In each participating country, a 3–5-year project time line was established. This includes capacity building, development and implementation of FBRs or CFRs, project evaluation, and reporting or publication writing. The table below provides an overview of the activities lined up from January to December 2017.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-house LP or Optifood training for nutrition academies of MoH Indonesia</td>
<td>Jakarta, Indonesia</td>
<td>March 2017</td>
</tr>
<tr>
<td>Roll-out of the LP or Optifood training for MoH Philippines</td>
<td>Manila, Philippines</td>
<td>July 2017</td>
</tr>
<tr>
<td>Roll-out of the LP or Optifood training for the nutrition academy of Mataram, MoH Indonesia</td>
<td>Mataram, Indonesia</td>
<td>August 2017</td>
</tr>
<tr>
<td>Roll-out of the LP or Optifood training for the nutrition academy of Medan, MoH Indonesia</td>
<td>Medan, Indonesia</td>
<td>September 2017</td>
</tr>
<tr>
<td>Roll-out of the LP or Optifood training for MoH Myanmar</td>
<td>Nay Pyi Taw, Myanmar</td>
<td>November 2017</td>
</tr>
</tbody>
</table>
Funding Mechanism

SEAMEO RECFON provides support for experts primarily for capacity building. The centre also provides local academe support in the form of technical support for developing, implementing, and evaluating FBRs or CFRs whilst the relevant ministries provide funding (directly or indirectly through donors) for training or workshop sessions, programme implementation, and evaluation. The table below provides a funding overview for the project from January to December 2017.

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO RECFON</td>
<td>Airfare and accommodations of resource persons from SEAMEO RECFON</td>
<td>US$10,520</td>
</tr>
<tr>
<td>SEAMEO RECFON</td>
<td>Package for the in-house training or workshop session</td>
<td>US$2,051</td>
</tr>
<tr>
<td>MoHs in Indonesia, Myanmar, and the Philippines</td>
<td>Training or workshop package for roll-out</td>
<td>US$3,969</td>
</tr>
<tr>
<td>MoHs in Indonesia, Myanmar, and the Philippines</td>
<td>Operational cost for the dietary survey (for LP inputs)</td>
<td>US$15,000 (1,000,000 respondents per survey, depending on the scope [district, provincial, or national])</td>
</tr>
</tbody>
</table>

Potential Donours

- WHO (for Optifood training)
- WHO or UNICEF (for the dietary survey, FBR or CFR development, and evaluation)
2.13 Nutrition Goes to School

SEAMEO RECFON
Dr. Luh Ade Ari Wiradnyani
awiradnyani@gmail.com

Other SEAMEO Centres and Partners

- Ministry of National Education (MoNE), Indonesia
- MoH Indonesia
- National Agency of Drug and Food Control (NADFC), Indonesia
- Ministry of Internal Affairs (MIA), Indonesia
- DepEd Philippines

Background

Nutrition problems amongst schoolchildren remain a public health care concern. Anemia amongst schoolchildren has become a major concern, as it closely relates to students’ ability to concentrate in school that may influence their school performance. A classic conceptual framework suggests that dietary practices comprise one of two direct determinants of nutritional status.

Studies show that the dietary practices of schoolchildren are generally inappropriate. Skipping breakfast, low intake of fruits and vegetables, frequent intake of fried and sweet food and drinks, frequent consumption of instant food, and inappropriate dieting are amongst these inappropriate practices. Moreover, continuous and intensive exposure to food advertisements, limited time of parents to prepare food at home, and the availability of affordable and easy-to-access convenient and ready-to-eat food are some of the many challenges today’s schoolchildren have. Pocket money received from parents allow schoolchildren to choose the food they want to eat. Therefore, providing schoolchildren with adequate and practical knowledge about food and nutrition is very important. The effort should be done since the early stages (play school or kindergarten) until the children grow up.
Schools should be treated as media for promoting good nutrition practices because students spend a lot of their time there. Therefore, increasing awareness of school communities (students, teachers, school principals, school canteen management staff, and parents) about the importance of good nutrition practices is necessary. In some activities, teachers are central actors because they are respected and influential to most students. In addition, making safe and nutritious food available in school should also be highlighted.

SEAMEO RECFON has been implementing some school-based nutrition-promotion activities under the “Nutrition Goes to School Framework” that focuses on demand creation, ensuring appropriate food supply, supporting school policies, and monitoring implementation using a good information system (IS) such as the Demand, Supply, and Policy Information System (DEPPIS). This is translated into several activities such as online training for elementary and junior-high schoolteachers, fun and interactive nutrition education for kindergarten students through the revitalisation of the School Health Unit (CERIA) Project, making FBRs for adolescent girls (high-school students), nutrition competitions, and the development of healthy school canteens. In addition, under this framework, SEAMEO RECFON also strengthens the nutrition aspect of the School Garden and STAR Village Projects and the Nutrition Programme for School Children (PROGAS). In PROGAS, SEAMEO RECFON specifically contributes to nutrition module development and programme evaluation via impact and process evaluation.

Objectives

This project aims to:

• Expose teachers to the importance of good nutrition for schoolchildren and encourage them to take part and play a role in promoting good nutrition practices

• Improve the capacity (knowledge and skills) of schoolteachers to create interactive nutrition education sessions in school

• Obtain the commitment of school communities (especially parents, teachers, and food handlers in school canteens) to play an active role in ensuring food safety

• Increase access to safe and healthy food in school through the development of healthy school canteens in collaboration with other stakeholders (local governments, MoHs, MoEs, and departments similar to NADFC)

• Develop FBRs for adolescent girls

• Strengthen the School Feeding Programme of the DepEd in the Philippines through the development of FBRs for elementary schoolchildren

• Provide media for school communities to participate in promoting good nutrition practices to wider audiences through interactive and creative ways by conducting nutrition competitions with various themes every year
Expected Outcomes

This project expects to:

- Provide materials to build the capacity of teachers (modules; lesson plans; information, education, and communication [IEC] materials; and promotional kits)
- Train and encourage schoolteachers to commit (through a series of training sessions) to disseminating nutrition and food safety messages in school
- Integrate nutrition education sessions in school on a regular basis
- Improve the nutrition knowledge and practices of schoolchildren
- Establish functional school health units in participating schools
- Establish school canteens that can be considered healthy
- Agree to collaborate with local governments to establish healthy school canteens
- Produce modules and IEC materials for school communities about healthy school canteens
- Come up with FBRs for adolescent girls
- Improve the menu for the school feeding programme in elementary schools in the Philippines
- Use the interactive nutrition promotion media developed by nutrition competition participants

Participants

- 150 elementary and junior-high schoolteachers in Indonesia
- 12 elementary schools in the Senen Subdistrict, Central Jakarta (pilot area)
- Eight schools in Cihideung Ilir, Bogor (pilot area)
- Stakeholders from 10 relevant institutions to establish the mechanics for the healthy school canteen model
- Five kindergarten and play schools in the Senen Subdistrict, Central Jakarta (pilot area)
- Eight high schools in Malang, East Java (pilot area)
• University of Los Baños academe and DepEd staff
• Approximately 50 high schools in Indonesia
• Approximately 51 (batch 1) and 40 schools (batch 2) from several provinces in Indonesia
• Nine districts in Indonesia

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials to build the capacity of teachers (modules, lesson plans, IEC materials, and promotional kits)</td>
<td>Jakarta</td>
<td>November 2016 (for elementary and junior-high schoolteachers) June–July 2017 (for kindergarten and play schools)</td>
</tr>
<tr>
<td>Training for schoolteachers</td>
<td>Bogor, West Java</td>
<td>April 2017</td>
</tr>
<tr>
<td>Workshop and advocacy session with stakeholders about healthy school canteens</td>
<td>Jakarta</td>
<td>April–August 2017</td>
</tr>
<tr>
<td>Nutrition education sessions with junior-high schoolchildren</td>
<td>Bogor, West Java</td>
<td>August–September 2017</td>
</tr>
<tr>
<td>Online monitoring of nutrition practices of schoolchildren by the teachers who participated in the school garden project (batches 1 and 2)</td>
<td>Indonesia</td>
<td>May–October 2017</td>
</tr>
<tr>
<td>Nutrition education sessions with play-school and kindergarten children</td>
<td>Jakarta</td>
<td>July–October 2017</td>
</tr>
<tr>
<td>Development of IEC materials, promotion of FBRs to high schoolchildren, and evaluation</td>
<td>Malang, East Java</td>
<td>February–May 2017</td>
</tr>
<tr>
<td>FBR development for elementary schoolchildren</td>
<td>Philippines</td>
<td>July 2017</td>
</tr>
<tr>
<td>Nutrition competition for high schoolteachers and students</td>
<td>Across provinces in Indonesia</td>
<td>July–August 2017</td>
</tr>
<tr>
<td>Module development and evaluation (impact and process evaluation of PROGAS)</td>
<td>5 provinces in Indonesia</td>
<td>March–November 2017</td>
</tr>
<tr>
<td>Online training for elementary and junior high schoolteachers</td>
<td>Java, Bali Nusa Tenggara Regions</td>
<td>August–November 2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

• SEAMEO RECFON through MoNE Indonesia
• MoNE Indonesia
• SEAMEO BIOTROP (for teacher training under the School Garden Project)
• DepEd (for the School Feeding Programme)
PRIORITY 3

IMPROVING RESILIENCE IN THE FACE OF EMERGENCIES
3.1 Alternative Delivery Modes for Education in the Face of Emergencies

SEAMEO INNOTECH
Dr. Ramon C. Bacani
Director
www.seameo-innotech.org

Other SEAMEO Centres and Partners

DepEd Philippines

Background

Alternative delivery modes (ADMs) are implemented in response to a variety of challenges such as overcrowding, teacher shortage, lack of instructional materials, and remoteness or inaccessibility of schools. In the aftermath of a calamity, communities may suffer from any or all of the above, which points to the potential of ADMs to sustain education in the face of an emergency.

SEAMEO INNOTECH extended its assistance in compiling and publishing best practices for disaster preparedness and education in the face of emergencies in selected Southeast Asian countries.

Objectives

This project primarily aims to explore the potential of Instructional Management of Parents, Communities, and Teachers (IMPACT) and other ADMs as mechanisms to sustain education in disaster-affected areas. It specifically aims to:

- Identify ADM-implementing schools, both elementary and secondary, in disaster-prone regions in the Philippines
- Collect and share the experiences of ADM-implementing schools during disasters such as Typhoon Haiyan and in the post-disaster-recovery phase
• Identify the strengths and weaknesses of various ADMs during emergencies and in the post-disaster-recovery phase

• Discover and describe innovations undertaken by ADM implementers in the areas of study in response to emergencies

• Prepare a guidebook containing recommendations for adapting IMPACT and other ADMs in disaster-prone areas and how they complement existing education-in-emergency interventions (The recommendations will be aligned with and built upon recent related products of the centre such as the “Good Practices in Disaster Preparedness and Education in the Face of Emergencies and the Toolkit for Building Disaster-Resilient School Communities.”)

Participants

17 Philippine schools in the National Capital region (NCR), Bohol, Eastern Visayas, Bicol, and Zamboanga City

Activities and Time Line

This project should be completed by June 2017. It has identified a variety of ADMs that are being implemented in the Philippines and compiled a list of schools that implement the main ones. With the help of DepEd’s DRR and Management Service, a hazard profile was obtained for these schools to know what and how many kinds of calamities they have experienced in the last five years. Seventeen schools were eventually selected from NCR, Bohol, Eastern Visayas, Bicol, and Zamboanga City as focus areas for data gathering.

The project team visited these schools and conducted focus group discussions (FGDs) with principals, supervisors, teachers, students, and parents about the challenges of teaching and learning in emergency situations, and interventions that they undertook to sustain learning during the recovery phase.

Funding Mechanism

SEAMEO INNOTECH Endowment Fund
3.2 Disaster Risk Management to Preserve the Southeast Asian Cultural Heritage: A School-Based Approach to Promoting Disaster Risk Mitigation for Cultural Heritage Preservation in Brunei Darussalam, the Philippines, and Thailand

SEAMEO SPAFA
Dr. M.R. Rujaya Abhakorn
rujaya@seameo-spafa.org

Other SEAMEO Centres and Partners

- Kampong Ayer, Brunei Darussalam
- SEAMEO VOCTECH
- Thai partner institution (to be determined)

Background

Cultural heritage is threatened by natural disasters as well as man-made hazards or human-induced activities. The situation is becoming more severe and detrimental events more frequent. Within Southeast Asia, a tsunami hit Indonesia, Thailand, and Malaysia in 2015, which severely impacted South Asia (particularly Sri Lanka). This natural disaster caused much devastation, including a tremendous loss of lives, economic damage, and negative effects the countries' natural and cultural heritage.
This was followed by the severe cyclone, Nargis, in 2008 in Myanmar; a catastrophic flooding in Thailand in 2011, which caused the greatest amount of damage to the country; and Typhoon Haiyan, which hit the Philippines in 2013. These recent natural disasters, coupled with the latest Nepal Gorkha earthquake on 25 April 2015 where World Cultural Heritage sites located in the Kathmandu Valley were severely affected, raised the awareness of the global society on the impact of disasters on cultural heritage.

For some heritage sites, the damages are irreversible. Natural disasters are also unpredictable in terms of timing, duration, and severity. Therefore, various measures to mitigate the devastating effects of disasters have been discussed and proposed to preserve the region’s heritage and values so that these may be transmitted to the next generation.

For communities in Southeast Asia, it is evident that schools have the potential to play a crucial role in strengthening the resilience of communities in the face of disasters as well as encouraging children to conserve their cultural heritage through education. Some schools are located in or close to cultural heritage sites (temples, churches, mosques, and natural landscapes) whilst others are even housed in historic or heritage buildings. Some schools also own invaluable collections of antiques, archives, or works of art. Furthermore, in times of disaster, many schools have played an instrumental role in disaster mitigation measures and resiliency, alongside community organisations (temples, churches, and mosques). Therefore, this proposed research will help identify the appropriate methods to engage schoolchildren, teachers, and staff members as well as broader communities to participate in mitigation measures to reduce the impact of disasters on cultural heritage.

Objectives

This project aims to:

• Conduct research on traditional wisdom and community-level engagement in mitigating various disasters that affect cultural heritage (fire, floods, storms, and earthquakes)

• Increase understanding of the effects of natural and human-induced disasters on cultural heritage amongst children

• Enhance appreciation for and awareness of cultural heritage protection and conservation

• Extend the access of beneficiaries to information and resources on disasters and cultural heritage through various digital tools

Expected Outcomes

This project expects to:

• Provide site-specific research on traditional wisdom and community-level engagement to mitigate various disasters that affect cultural heritage
• Enhance awareness and increase the number of engagement activities in disaster risk mitigation for cultural heritage preservation in school communities at selected sites

• Provide educational tools, manuals, or guidelines on disaster risk mitigation for cultural heritage preservation that can be distributed to schools in areas that are vulnerable to disasters

• Provide mixed-media resources on disaster mitigation and cultural heritage activities to schools

Participants

Southeast Asian schools (number to be determined)

Activities and Time Line

This project will run from July 2017 to June 2022.

Funding Mechanism

• SEAMEO SPAFA

• SEAMEO VOCTECH
3.3 Southeast Asian Ministers of Education Organisation Student Networking for Learning Science and Mathematics Together

SEAMEO RECSAM
Dr. Ng Khar Thoe
R&D Specialist
nkt@recsam.edu.my

Other SEAMEO Centres and Partners

- SEAMEO INNOTECH
- SEAMEO SPAFA
- SEAQIM
- SEAQIS
- SEAMEO SEAMOLEC

Background

SEAMEO Student Networking for Learning Science and Mathematics Together (LeSMaT) in the Borderless World, also known as “SEAMEO LeSMaT (Borderless)” is a project formerly known as the “SEAMEO Borderless School Project.” SEAMEO LeSMaT (Borderless) is in line with the SEAMEO 7 Priority Areas, specifically Priority No. 3—ensuring resilience in the face of emergencies, which aims to prepare school leaders, teachers, students, and local communities to manage and maintain the delivery of educational services during emergencies such as conflicts, instances of extreme weather, and natural disasters. It also particularly responds to the ever-increasing complexity of the Southeast Asian economic, socio-cultural, and political environments, developing teachers imbued with ASEAN ideals in building the ASEAN community within the next 20 years (2015–2035).
Objectives

The inter-disciplinary curricular resources that will be developed as part of values-based ODL modules aim to:

- Enhance knowledge acquisition and promote critical thinking skills
- Improve knowledge sharing by promoting technological and life (work, entrepreneurial, or survival) skills for sustainable living in a borderless world amongst learners with diverse backgrounds in the region and beyond (The draft output may be prepared in the form of an interactive digital book [d-book] or an ODL module.)

Expected Outcomes

This project expects to:

- Revise the Climate Awareness and DRR Education (CADRED) module that is facilitated through ODL or the blended-learning mode
- Guide students (as part of their co-curricular activities) in producing evidence-based learning outputs and research data that can be in the form of an electronic portfolio (e-portfolio), a project or a research report, electronic forum (e-forum) posts or responses, or an online quiz or electronic survey (e-survey) feedback

Participants

- In-service science or mathematics teachers and students from selected pilot project schools from the 11 SEAMEO Member Countries
- Experts and consultants from teacher education institutions (TEIs), colleges, and universities from SEAMEO Member and other countries
- Officers from SEAMEO INNOTECH, SPAFA, SEAQIM, and SEAQIS, and SEAMOLEC

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refinement of the CADRED module to consider OERs and copyright and proofreading issues with research and development (R&amp;D) activities to produce research models using digital platforms and statistical tools (SmartPLS) and evidence of exemplary practices through ODL</td>
<td>SEAMEO RECSAM Selected SEAMEO pilot schools</td>
<td>16–19 May 2017 Between May and September 2017</td>
</tr>
</tbody>
</table>
Workshop on training trainers to produce a critical mass of educators who are advocates and facilitators of education for sustainable living (ESL) through LeSMaT Integrating technology-enhanced learning (TEL) (Edmodo, Facebook, and the Learning Activity Management System [LAMS])

**Activity Venue Time Line**

| Workshop on training trainers to produce a critical mass of educators who are advocates and facilitators of education for sustainable living (ESL) through LeSMaT Integrating technology-enhanced learning (TEL) (Edmodo, Facebook, and the Learning Activity Management System [LAMS]) | SEAMEO RECSAM Selected SEAMEO pilot schools | 16–19 May 2017 14–17 August 2017 |

Promoting thinking, technological, and life skills through trans-disciplinary mathematics and science education that integrates active learning approaches to encourage Learning Trans-Disciplinary Science Integrating Mathematics, Arts, Engineering, and Technology (LearnT-SMArET) in a Borderless World

| Promoting thinking, technological, and life skills through trans-disciplinary mathematics and science education that integrates active learning approaches to encourage Learning Trans-Disciplinary Science Integrating Mathematics, Arts, Engineering, and Technology (LearnT-SMArET) in a Borderless World | SEAMEO RECSAM Selected SEAMEO pilot schools | 14–17 August 2017 |

---

**Funding Mechanism**

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO RECSAM</td>
<td>Local hospitality (food, facilities, materials, printouts, and local travel) Events management Coordinators, reporters, and resource persons</td>
<td>US$5,500 (RM25,000 for two workshops in May and August 2017)</td>
</tr>
<tr>
<td>Japanese research grant or funding unit</td>
<td>Airfare of key speakers and facilitators</td>
<td>US$3,000</td>
</tr>
<tr>
<td>MoE</td>
<td>Workshop package that includes accommodations and registration packs</td>
<td>US$3,000 each</td>
</tr>
<tr>
<td>SEAMEO centres (INNOTECH, SPAFA, SEAQIM, SEAQIS, and SEAMOLEC)</td>
<td>Airfare of resource persons</td>
<td>US$2,000 each</td>
</tr>
</tbody>
</table>

---

**Potential Donours**

- **Tsukuba University, Japan** (for digital book software and consultancy)
- **LAMS International** (for software and webmaster who will provide technical inputs or advice and assistance)
- **Edmodo International** (for platform and technical advice)
- **Any agency willing to sponsor additional workshops and field studies for participants from the 11 SEAMEO Member Countries**
3.4 Mangrove Conservation Education

SEAMEO SPAFA
Dr. M.R. Rujaya Abhakorn
rujaya@seameo-spafa.org

Other SEAMEO Centres and Partners

• SEAMEO BIOTROP
• SEAMEO SEAMOLEC

Background

Mangroves are immensely significant to many countries in Southeast Asia where plantations are seen in coastal regions, bearing ecological, social, and economic benefits for fisheries and communities. Scientists and researchers have, for a long time, been emphasising the importance of restoring mangrove forests, as deforestation in parts of the region have reached alarming levels. The loss of mangrove areas creates serious implications for coastal livelihood and efforts to mitigate natural calamities.

Mangroves can protect coastal regions from severe wave damage and erosion as well as mitigate the disastrous effects of natural phenomena such as typhoons and tsunamis. A report (2005) in the “Science Journal” on the impact of the 2004 Indian Ocean tsunami, which killed about 220,000 people living close to the Indian Ocean, revealed that 30 coastal trees per 100 square meters may reduce the flow of a tsunami by 90% (the UN reported that “mangroves can absorb 70–90% of the energy of a normal wave”).

Southeast Asian mangrove habitats are known to contain the most diverse and best-developed flora and fauna. The largest extent of mangroves, about 35% of the world’s total, is found in Southeast Asia, particularly in Indonesia (almost 60% of the regional total), Malaysia (nearly 12%), Papua New Guinea (about 9%), Thailand (5%), and the Philippines (2.2%).

In Indonesia, 75% of the major cities with more than 100,000 inhabitants live in coastal zones, most of which are mangrove forests. Large areas of such forests were converted to fishponds. As is the case elsewhere in the world, the major factors that cause mangrove degradation in Indonesia are urbanisation and population growth, with economic expansion inevitably transforming the use of mangrove areas for the construction of roads, ports and harbours, industries, and so on (Food and Agriculture Organisation of the United Nations [FAO]).
In Vietnam, the deforestation rate dramatically rose by 13% between 1996 and 2008, mainly as shrimp farmers expanded their prawn ponds into forests as a result of changes in land use.

Another case in point is Thailand where mangrove forests were reported to have declined by an estimated 55% of the total before 1961, 50% of which were converted for other land use before 1991.

The degradation and disappearance of mangrove areas create serious implications for coastal livelihood. Raising awareness and working with communities to protect and conserve mangrove areas are small but meaningful contributions to the efforts to restore and sustain mangrove habitats. Compiling and managing knowledge, experience, and innovation from community mangrove forest management will benefit the education and other communities as well as other interested individuals.

**Objectives**

This project aims to:

- Provide a collaborative educational platform for mangrove conservation between Thailand and Indonesia
- Work with schools and SEAMEO centres to promote and develop educational materials on environmental conservation
- Develop educational models for mangrove conservation education that will be applied in schools across the region

**Expected Outcomes**

The expected outcomes of this project will be determined once partner schools in Indonesia have been identified.

**Participants**

Thai and Indonesian representatives (number to be determined)

**Funding Mechanism**

- SEAMEO SPAFA
- SEAMEO BIOTROP
3.5 Mitigating the Health and Psychosocial Impact of Emergencies and Disasters: Development and Pilot-Testing of a Reference Material or Guide for Teachers

SEAMEO TROPMED Network
Dr. Ma. Sandra B. Temponko
Deputy Coordinator
jolinateoph@yahoo.com

Other SEAMEO Centres and Partners

- TROPMED Malaysia
- TROPMED Philippines
- TROPMED Thailand

Background

Emergencies and disasters are a constant global threat. The Centre for Research on the Epidemiology of Disasters (CRED) report in 2015 underscores the fact that Asia bore the brunt of natural disasters in terms of frequency over a 20-year period. Asia was hit by 2,778 disasters over the 20-year period, with 3.8 billion people affected in addition to nearly 841,000 deaths.
Health is always a primary concern in all kinds of emergencies—natural disasters, disease outbreaks, and conflicts. Disasters have direct and indirect effects on health. The direct effects include death, injuries, disabilities, and mental health problems. Disasters also affect water quality, ecology, the quality of air, and food security and safety, which can give rise to an increase in respiratory diseases, malnutrition, diarrheal illnesses, and other infectious diseases such as leptospirosis, malaria, and dengue. They can also exacerbate chronic and non-communicable diseases amongst the vulnerable. Access to health can also be reduced because of infrastructural damage to health care facilities and disruption of services.

The impact of disasters and emergencies on health is highly visible. Efforts have been exerted to underscore the importance of mainstreaming health in disaster risk reduction (DRR) strategies both in the education and health care sectors. However, mainstreaming health in broader DRR strategies remains a challenge.


Education is a necessary and appropriate strategy to prevent and reduce vulnerability and enhance the capacity of vulnerable populations to cope with the effects of disasters and emergencies. However, teachers—primary educators in school—need to have a ready reference manual or teaching materials for curricular, co-curricular, and extra-curricular activities. A number of materials are now available in relation to DRR in the school setting. However, these do not include discussions on the effects of disasters on health, including prevention, risk reduction, and how to mitigate effects. The proposed reference material will complement existing materials in the school setting.

## Objectives

This project aims to strengthen the capacity of teachers to mainstream or integrate the prevention and mitigation of the effects of emergencies and disasters on health in curricular, co-curricular, and extra-curricular activities in selected schools and year levels in Southeast Asia. It specifically aims to:

- Develop a reference material for teachers to mainstream the effects of emergencies and disasters on health in the school setting
- Determine the utilisation and effectiveness of the reference material in selected schools and year levels
- Identify points for strengthening the mainstreaming process into curricular, co-curricular, and extra-curricular activities
**Expected Outcomes**

This project expects to come up with a tested teachers’ reference material and guide for mainstreaming the prevention and mitigation of the effects of disasters on health that can be upscaled for national utilisation in pilot and other Southeast Asian countries.

Results of the development and pilot test will be presented at the HOM for Education and endorsed to MoEs in SEAMEO Member Countries.

**Activities and Time Line**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1</strong></td>
<td></td>
</tr>
<tr>
<td>Social preparation or coordination meeting with MoEs and selected schools in some Southeast Asian countries</td>
<td>1Q 2018</td>
</tr>
<tr>
<td>Assessment of the current mainstreaming process of DRR and effects of disasters on health in pilot countries</td>
<td>1Q 2018</td>
</tr>
<tr>
<td>Review of curriculum and co-curricular and extra-curricular activities to establish entry points</td>
<td>1Q 2018</td>
</tr>
<tr>
<td>Development of different modules as reference materials or guides for teachers</td>
<td>2Q 2018</td>
</tr>
<tr>
<td>Orientation of participating teachers on using the materials</td>
<td>3Q 2018</td>
</tr>
<tr>
<td><strong>Phase 2</strong></td>
<td></td>
</tr>
<tr>
<td>Pilot-testing of the reference materials or guides in selected schools and year levels</td>
<td>AY2018-2019</td>
</tr>
<tr>
<td>Monitoring the use of the materials</td>
<td>AY2018-2019</td>
</tr>
<tr>
<td><strong>Phase 3</strong></td>
<td></td>
</tr>
<tr>
<td>Summative (post-intervention) evaluation of the use and effectiveness of and satisfaction by teachers and students with the materials</td>
<td>End of AY2018-2019</td>
</tr>
</tbody>
</table>
3.6 Enhancing Climate Awareness and Disaster Risk Reduction Education Through Learning Science and Mathematics Together

SEAMEO RECSAM
Dr. Ng Khar Thoe
nkt@reksam.edu.my

Other SEAMEO Centres and Partners

• SEAMEO INNOTECH
• SEAQIM
• SEAQIS
• SEAMEO SEAMOLEC

Background

One of the themes identified under the SEAMEO LeSMArt (Borderless) Project is CADRRED. The LeSMArt (Borderless) initiative is in line with Priority No. 3 of the SEAMEO 7 Priority Areas—ensuring resilience in the face of emergencies. It aims to prepare school leaders, teachers, students, and local communities to manage and maintain the delivery of educational services during emergencies such as conflicts, cyber-security issues, fire, extreme weather conditions, and natural disasters. It also particularly responds to the ever-increasing complexity of the Southeast Asian economic, socio-cultural, and political environment, developing teachers imbued with ASEAN ideals to build an ASEAN community within the next 20 years (2015–2035).
Objectives

The inter-disciplinary curriculum resources developed in the values-based ODL modules of LeSMaT aim to enhance:

- Knowledge acquisition and promotion of thinking skills
- Knowledge sharing by promoting technology and life (work, entrepreneurial, and survival) skills for sustainable living in a borderless world amongst learners from diverse backgrounds in the region and beyond

The draft output may be prepared in the form of an interactive d-book or an ODL module.

Expected Outcomes

This project expects to come up with a revised module (CADRRED) to be facilitated through ODL or the blended-learning mode mainly through the Edmodo social learning platform and LAMS. Students will be guided by teachers as part of their science curriculum (e.g., endangered ecosystem) and co-curriculum (e.g., science clubs). Activities are also expected to produce evidence-based learning outputs and/or research data that can take the form of an e-portfolio, a project or research report, posts or responses made on e-fora, and feedback on e-surveys and/or online quizzes, to name a few. Participants can also publish their work for entrepreneurial opportunities or recognition at the national, regional, and international levels.

Participants

- In-service science or mathematics teachers and students from selected pilot project schools
- Experts or consultants from TEIs, colleges, and/or universities in SEAMEO Member Countries
- Officers from SEAMEO INNOTECH, SEAMOLEC, SEAQIM, and SEAQIS

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refinement of LeSMaT (Borderless) modules (CADRRED), considering open educational resources (OERs), copyright, and proofreading issues with R&amp;D activities to produce research models using digital platforms and statistical tools (e.g., SmartPLS) and evidence of exemplary practices through the ODL mode</td>
<td>SEAMEO RECSAM Selected SEAMEO pilot schools</td>
<td>October 2016</td>
</tr>
</tbody>
</table>
Activity Venue Time Line
Workshop on training trainers to produce a critical mass of educators who are advocates of ESL through LeSMaT (e.g., Edmodo, Facebook, and LAMS) SEAMEO RECSAM Selected SEAMEO pilot schools October 2016 May, August, and November 2017
Colloquium, seminar, or workshop on promoting the CADRRED module through the development of a d-book and an e-journal or e-book for online exchange and publishing October 2016 May and August 2017 May and August 2018

Funding Mechanism

<table>
<thead>
<tr>
<th>Responsible Unit</th>
<th>Expenditure Type</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO RECSAM</td>
<td>Local hospitality (food, facilities, materials, printing, and local travel)</td>
<td>US$5,500 (RM25,000 for two workshops in May and August 2017)</td>
</tr>
<tr>
<td></td>
<td>Events management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coordination and reporting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Resource persons</td>
<td></td>
</tr>
<tr>
<td>Japanese research grant or unit fund</td>
<td>International airfare of key speakers and facilitators</td>
<td>US$3,000</td>
</tr>
<tr>
<td>MoE</td>
<td>Workshop package that includes accommodations and registration packages</td>
<td>US$3,000 each</td>
</tr>
<tr>
<td>SEAMEO INNOTECH</td>
<td>International airfare of resource persons</td>
<td>US$2,000 each</td>
</tr>
<tr>
<td>SEAQIM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEAQIS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEAMOLEC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Potential Donours

- Tsukuba University, Japan for d-book software and sponsorship of consultants as speakers and reviewers of CADRRED
- LAMS International for sponsoring the software and a webmaster who gives technical inputs or advice and assistance
- Edmodo International and Media8 for providing platform and technical advice
- Any agency willing to sponsor additional workshops and/or field studies for the participants from the 11 SEAMEO Member Countries
PRIORITY 4

PROMOTING TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING
4.1 Workshop on Urban Agricultural Skills

SEAMEO CELLL
Mr. Khau Huu Phuoc
Manager of Research and Training
khauhuuphuoc@seameocelll.org

Other SEAMEO Centres and Partners

- SEAMEO BIOTROP
- SEAMEO SEN
- Vietnam University of Forestry and Agriculture

Background

During the “2016 Centre Directors Meeting (CDM),” SEAMEO CELLL formalised its collaboration with BIOTROP by signing an MoU on 27 July 2016. The collaboration would involve joint conduct of training and other learning events, staff and information exchange, facilities sharing, and expertise consultations related to life skills development in Indonesia and Vietnam.

On 10 November 2016, SEAMEO BIOTROP, CELLL, and SEN arranged a meeting at the CELLL office to plan for a project concerning urban agricultural skills that is expected to be carried out for one week between 20 July and 20 August 2017.

Objectives

This workshop aims to provide SPED teachers and CLC facilitators with the basic knowledge and skills on agri-based technologies that are appropriate for urban agriculture.

Expected Outcomes

This workshop expects to provide relevant knowledge on urban agriculture, which can be adopted for the development of schools, CLCs, and communities as a whole.
Participants

- SPED teachers from Malaysia, Indonesia, and Vietnam
- CLC facilitators from Malaysia, Indonesia, and Vietnam

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop on urban agricultural skills</td>
<td>Vietnam University of Forestry and Agriculture</td>
<td>One week between 20 July and 20 August 2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

- SEAMEO CELLL
- SEAMEO BIOTROP
- SEAMEO SEN
4.2 Workshop on the Recognition, Validation, and Accreditation of Non-Formal Education

SEAMEO CELLL
Mr. Khau Huu Phuoc
Manager of Research and Training
khauhuuphuoc@seameocelll.org

Other SEAMEO Centres and Partners

- UIL
- DVV International
- NILE
- Representatives from the 11 SEAMEO Member Countries

Background

Lifelong learning is not confined to formal education but also involves non-formal and informal education. Whilst countries strive to promote the latter two, formal education still seems the favoured choice of learning, as its outcomes are more widely accepted. A system of recognition, validation, and accreditation (RVA) for non-formal and informal education is, therefore, needed to bridge the gap between these and formal education. The UNESCO publication, “Guidelines for RVA,” is evidence of this necessity.

Objectives

This workshop aims to:

- Highlight the significance of RVA for NFE
- Discuss challenges and opportunities with regard to recognising, validating, and accrediting NFE in the SEAMEO context
• Share good practices and suggest possible directions for promoting RVA in SEAMEO Member Countries

Expected Outcomes

This project expects to:

• Heighten awareness of RVA for NFE
• Identify possible directions for promoting RVA in SEAMEO Member Countries

Participants

• Policy makers in SEAMEO Member Countries
• CLC managers and facilitators in the NFE sector in SEAMEO Member Countries
• SEAMEO CELLL’s Governing Board Members

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop on RVA for NFE</td>
<td>SEAMEO CELLL</td>
<td>4–5 October 2019</td>
</tr>
</tbody>
</table>

Funding Mechanism

• SEAMEO CELLL
• Stakeholders
Towards the Development of Competency Standards for Agricultural Workers in Southeast Asia

SEAMEO SEARCA
Dr. Gil C. Saguiguit
Director
www.seameosearca.org

Other SEAMEO Centres and Partners

SEAMEO VOCTECH

Background

Agriculture remains the backbone of the majority of Southeast Asian economies. Approximately 450 million professionals and skilled workers depend on it for livelihood and survival. A significant share of the labour force in ASEAN Member States (AMSs) engages in agriculture. There is a need to focus efforts in developing the competencies of agricultural workers in light of their role in raising farm productivity, which in turn contributes to food and nutrition security and poverty alleviation in the region.

Labour force composition in selected Southeast Asian countries, 2012
With the ASEAN Economic Community (AEC), labour migration is likely to continue to rise, dominated by low- and middle-level skilled workers such as those in agriculture and aquaculture. Hence, there is a need for sending countries to ensure the quality of the skills of migrant workers and receiving countries to implement a mechanism for skills recognition for these workers.

Skills recognition frameworks promote a more sustainable and legitimate mode of managing labour mobility with benefits for both sending and receiving AMSs. It is, therefore, important for agricultural workers across the region to be given equitable access to high-quality learning and fair opportunities to participate in the growing ASEAN workforce.

During a round table discussion at the second HOM for TVET held on 12–14 May 2016 in Bali, Indonesia, it was agreed that regional and national qualification reference and assurance frameworks are necessary to harmonise and internationalise TVET in Southeast Asia. This includes developing competency standards for various TVET skills amongst AMSs, including those in agriculture, which ironically has not been given enough attention and priority.

The SEAMEO Regional Centre for Graduate Study and Research in Agriculture (SEARCA), which has been mandated to promote agricultural and rural development in Southeast Asia, has been tasked by SEAMEO to assist in developing competency standards for agricultural workers in the region as part of its efforts to promote TVET under its educational priorities.

A review of literature reveals that in 2016, the International Labour Organisation (ILO) developed, in consultation with governments and employers, the “Regional Model Competency Standards (RMCS)” for major industries including agriculture and aquaculture. RMCS is meant to be a regional reference for countries that are in the process of developing or reviewing national competency standards. Through RMCS, AMSs can ensure that their skills and competencies meet international and regional standards and systems for mutual recognition of such standards are in place.

However, it remains unclear how AMSs are faring and where they are in their efforts to develop and apply their national competency standards. To summarise, “we cannot get to where we are going if we do not know where we are” in relation to the above-mentioned standards.

Objectives

SEARCA through SEAMEO proposes to review and assess the current situation of AMSs in developing competency standards for agriculture and identify gaps, challenges, and recommendations to be addressed by ASEAN and individual AMSs.

Expected Outcomes

At the end of this project, we hope to publish competency standards for agricultural workers across AMSs.
Participants

Agricultural practitioners in the Philippines, Malaysia, Indonesia, Thailand, Vietnam, Cambodia, and Myanmar

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convene a regional scoping workshop to determine the status of developing and implementing competency standards for agricultural workers across AMSs</td>
<td></td>
</tr>
</tbody>
</table>
| Assess the status of activities and current institutional arrangements and capacities of selected AMSs based on ILO’s grouping according to the “readiness of an AMS for implementing commitments to free flow of labour within AEC” and the results of the scoping workshop | Group 1: Philippines or Malaysia  
Group 2: Indonesia, Thailand, or Vietnam  
Group 3: Cambodia or Myanmar |
| Disseminate the results of the study through a regional workshop or dialogue and submit the report to the ASEAN Secretariat, SEAMEO, and concerned AMSs for their perusal and application; the AMSs may use the report as guide to address gaps and refine national competency standards |                                                 |
4.4 Exploratory Study on Health Care Technical and Vocational Education and Training in Southeast Asia Towards the Development of Regional Competency Standards

SEAMEO TROPMED Network
Dr. Ma. Sandra B. Tempongko
Deputy Coordinator
jolinatwoph@yahoo.com

Other SEAMEO Centres and Partners

• SEAMES
• TROPMED Malaysia
• TROPMED Philippines
• TROPMED Thailand
• SEAMEO VOCTECH
Background

The changing landscape of public health in Southeast Asia brings new challenges to the health care workforce. The increased prevalence of chronic diseases, demographic changes, unanticipated disease outbreaks, and the need to meet SDGs demand enormous expectations from the health workforce that constitute a range of health care workers ranging from auxiliaries to technicians and professionals. To meet these challenges, TVET can be maximised to expand participation and diversity in health care employment as well as produce a workforce that can meet the populations’ needs. However, there is an urgent need to establish regional competencies and standards to support education programme development, evaluation and quality improvement, and ensuring the fit of TVET programmes with other health care occupations.

A number of efforts have been undertaken in relation to health care TVET by SEAMEO. One of the possible areas of cooperation identified for SEAMES, SEAMEO centres (Regional Centre for Higher Education and Development [RIHED] and TROPMD Network), and the Directorate General of Higher Education, Research, and Technology of MoEC Indonesia during a dialogue in August 2016 is “an experts meeting on revitalising TVET in Indonesia in key areas of health care (medical, nursing, and caregiving).

The “Southeast Asian TVET Workshop on Hospitality, Creative Industry, and Health Care (Nursing)” was organised by SEAMEO, MoEC Indonesia, and SEAMEO SEAMOLEC in October 2016 in Indonesia. The discussion on health care TVET focused on nursing with Indonesian institutions defining possible areas of exchange with the Philippines.

In the third HOM for TVET held on 23–25 May 2017 in Kuala Lumpur, Malaysia, the high officials agreed to expand the TVET priority areas in Southeast Asia to include health care. A concept related to health care TVET was presented by SEAMEO TROPMD Network and was approved by the high officials.

Objectives

This project aims to:

- Establish the state of health care TVET related to different health-related TVET courses and training in Southeast Asia as defined by a certain country; demand for specific courses; a national qualification framework; national competency standards for different courses; harmonisation in the region; and student mobility

- Prioritise health care TVET courses according to demand

- Recommend measures towards the development of regional competency standards for prioritised health care TVET
Expected Outcomes

This project aims to produce a report on the state of health care TVET in Southeast Asia that will facilitate the development of regional competency standards for prioritised courses.

Activities and Time Line

The workshop will be organised for several purposes, namely:

- Presentation of country reports on the state of health care TVET
- Validation of results via desk reviews and key informant interviews (KII s)
- Agreement on what health care TVET courses will be prioritised
- Recommendations for follow-up actions based on the current situation in Southeast Asia

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordination meetings with SEAMES and SEAMEO centres and Member Countries</td>
<td>Bangkok</td>
<td>4Q 2017</td>
</tr>
<tr>
<td>Development of instruments</td>
<td></td>
<td>4Q 2017</td>
</tr>
<tr>
<td>Data collection including KII s with relevant institutions, desk reviews, and surveys</td>
<td></td>
<td>1Q 2018</td>
</tr>
<tr>
<td>Workshops for accreditation bodies, professional groups, and key TVET officials of Southeast Asian countries</td>
<td>Bangkok</td>
<td>2Q 2018</td>
</tr>
<tr>
<td>Documentation of exploratory study and workshop results</td>
<td></td>
<td>2Q 2018</td>
</tr>
<tr>
<td>Presentation of results in the HOM for TVET for endorsement of follow-up actions</td>
<td>Philippines</td>
<td>Fourth HOM for TVET</td>
</tr>
</tbody>
</table>
High Officials Meeting for Technical and Vocational Education and Training in Southeast Asia

Other SEAMEO Centres and Partners

- SEAMEO VOCTECH
- MoEs and related ministries of SEAMEO Member Countries
- SEAMEO SEAMOLEC

Background

Since the launch of ASEAN integration in 2015, all Southeast Asian countries have positioned TVET as a mainstream education system, setting it as a priority in their education agenda in view of the fact that it plays an important role in the socio-economic development of a nation (Paryono, 2013). In addition, TVET has been identified as one of the SEAMEO 7 Priority Areas, which were agreed upon during the SDEM meeting in September 2014.

In response to the needs of the region, the HOM for TVET in Southeast Asia has been annually hosted by MoEs and related ministries of SEAMEO Member countries since 2015. The most recent meeting was co-organised by SEAMES, SEAMEO VOCTECH, and other development agencies.

The first HOM for TVET in Southeast Asia was hosted by the Office of the Vocational Education Commission (OVEC) under MoE Thailand in August 2015. Its theme was “Working Together Towards the Harmonisation and Internationalisation of TVET in Southeast Asia.” The “Chiang Mai Joint Statement on Harmonisation and Internationalisation of TVET in Southeast Asia” was officially announced as the regional policy direction that emerged from the TVET high officials’ round table discussions.
In May 2016, the second HOM for TVET with the theme “Strengthening Efforts Towards the Harmonisation and Internationalisation of TVET in Southeast Asia” was hosted by MoEC Indonesia. The meeting aimed to review the implementation of TVET programmes in 2015 and 2016 and further determine other regional strategies to accelerate partnerships amongst TVET institutions and implement harmonisation and mobility as well as provide other regional recommendations to improve the quality of TVET.

The third HOM for TVET in Southeast Asia was hosted by MoE Malaysia in May 2017. It focused on sharing and discussing country reports, initiatives, and institutional best practices for advancing, harmonising, and transforming TVET to meet 21st-century demands in Southeast Asia.

The fourth HOM for TVET in Southeast Asia will be hosted by the Technical Education and Skills Development Authority (TESDA) in the Philippines in May 2018.

Objectives

This project aims to:

- Discuss the current situation of TVET collaboration and trends in TVET development in Southeast Asia
- Review the progress of TVET programmes in Southeast Asia within the last FY
- Determine and plan regional directions and strategies to promote the transformation, harmonisation, and advancement of TVET in Southeast Asia to meet the needs of the 21st century
- Strengthen cooperation amongst TVET departments and institutions in Southeast Asia

Expected Outcomes

This meeting aims to come up with:

- Regional policy recommendations and action plans for TVET advancement, harmonisation, and transformation, as agreed upon by the TVET high officials
- A consolidated report on TVET cooperation in Southeast Asia (collaborative activities and teacher and student exchange programmes)
- Approval of regional initiatives to be endorsed to the SEAMEC Conference
- A summary report or proceedings of the meeting
Participants

HOM for TVET in Southeast Asia expects to bring together approximately 180–200 participants from Southeast Asian MoEs, TVET-related ministries, and related development agencies and partners such as:

- Secretaries, Director-Generals, or Directors of TVET-related ministries, MoEs, ministries of labour and training, ministries of science and technology, and other related ministries from Southeast Asian countries including MoE Brunei Darussalam, the Ministry of Education, Youth and Sports (MoEYS) and the Ministry of Labour and Vocational Training in Cambodia, MoEC and the Ministry of Research, Technology and Higher Education in Indonesia, the Ministry of Education and Sports in Lao PDR, MoE and the Ministry of Higher Education in Malaysia, MoE Myanmar, DepEd and TESDA in the Philippines, MoE Singapore, MoE Thailand, MoE Timor-Leste, and the Ministry of Education and Training (MoET) and the Ministry of Labour, Invalid and Social Affairs (MOLISA) in Vietnam

- Representatives from partner countries such as Japan, the People’s Republic of China (PRC), and Germany

- Representatives of related development agencies and industries such as SEAMEO, the ASEAN Secretariat, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), UNESCO, and the German Academic Exchange Service (DAAD)

- TVET policy makers and directors and related ministries from the host country

Activities and Time Line

<table>
<thead>
<tr>
<th>Schedule of HOM for TVET</th>
<th>Host Organisation</th>
<th>Co-Host</th>
<th>Schedule and Venue</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>First HOM for TVET</td>
<td>MoE Thailand</td>
<td>SEAMES</td>
<td>24–26 August 2015</td>
<td>250</td>
</tr>
<tr>
<td>Theme: Working Together Towards Harmonisation and Internationalisation</td>
<td>British Council</td>
<td>Shangri-La Chiangmai Hotel Chiang Mai, Thailand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second HOM on TVET</td>
<td>MoEC Indonesia</td>
<td>SEAMES</td>
<td>Bali, Indonesia</td>
<td>300</td>
</tr>
<tr>
<td>Theme: Strengthening Efforts Towards the Harmonisation and Internationalisation of TVET in Southeast Asia</td>
<td>SEAMOE VOCTECH</td>
<td>SEAMOE SEAMOLEC German Cooperation</td>
<td>12–14 May 2016 Hotel Grand Nikko</td>
<td></td>
</tr>
<tr>
<td>Third HOM for TVET</td>
<td>MoEC Indonesia</td>
<td>SEAMES</td>
<td>23–25 May 2017</td>
<td>180</td>
</tr>
<tr>
<td>Theme: 21st-Century TVET in Southeast Asia: Advancing Towards Harmonisation and Internationalisation</td>
<td>SEAMOE VOCTECH</td>
<td>Swiss Garden Hotel and Residences Kuala Lumpur, Malaysia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fourth HOM for TVET</td>
<td>TESDA, Philippines</td>
<td>SEAMES</td>
<td>May 2018 (tentative)</td>
<td>To be determined</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SEAMOE VOCTECH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Funding Mechanism

The host country shoulders the following programme expenses for country representatives:

• Accommodations for two representatives from each ministry

• All meals, including snacks

• Local transportation from the airport to the hotel

• Logistical arrangements and local transportation for study visits

• Meeting kits and documents

Country representatives and participants are responsible for their own airfare. SEAMEO will shoulder the travel expenses of resource persons and coordinating staff.
4.6 Inclusive Technical and Vocational Education and Training for Special Education Teachers in Southeast Asian Ministers of Education Organisation Member Countries

SEAMEO SEN
director@seameosen.org

Other SEAMEO Centres and Partners

• SEAMEO VOCTECH
• SEAMEO CELLL

Background

TVET for students with special needs or disabilities is very important for sustainability and to enable students with disabilities to lead independent lives. It is estimated that there are between 180 and 220 million youth with disabilities worldwide, nearly 80% of whom live in developing countries (UN Department of Economic and Social Affairs [DESA], 2012). They are often discriminated and rejected for employment due to stigmatisation and being underestimated in terms of capability to learn and acquire occupational skills. Lack of inclusion in education and skills development initiatives for young people with disabilities foreshadows a lifetime of unemployment and marginal employment amongst a population eager to work (“Putting Education to Work,” 2012). Students with disabilities must be given skills that are appropriate to the local labour market. This would necessitate a change in the education system by providing skills and knowledge to students with disabilities during schooling years that can be transitioned to post-school education.
TVET not only prepares a person for work, it is also a preparation for life. The purpose of TVET is to provide knowledge and skills required in the world of work and a means to support one’s economic income. Therefore, it is so important to make TVET accessible to all (UNESCO, 2013). People with disabilities are often marginalised and face a lot challenges with regard to education and training. They are often seen as a burden rather than people who can significantly contribute to economic and societal development or independently support themselves. People with disabilities should be given training and education that accommodate their abilities as well as teach them skills that they can master so they can be employed or become able to sustain decent lives by generating their own income.

To promote inclusive TVET, SEAMEO SEN proposes a project, which consists of a number of TVET training sessions for SPED teachers. The project aims to transfer TVET techniques and knowledge to SPED teachers who will later transfer these in a customised manner to students with disabilities.

Objectives

This project aims to:

• Empower SPED teachers with selected TVET skills as a means of professional development or capacity building

• Impart TVET knowledge and skills that can be taught to students with disabilities

• Enable effective delivery and skills transfer to students with disabilities by making necessary accommodations and adaptations

• Ensure sustainable TVET skills are transferred, shared, and retained as life skills by students with disabilities by providing a supportive school environment that will allow them to easily transition to a post-school environment

Expected Outcomes

At the end of this training, SPED teachers can learn about:

• Urban agriculture

• Hospitality services

• Food manufacturing

• Handicraft making

• Spa and massage services

• Baking
We expect the following training to be conducted and supported by SEAMEO Member Countries:

- **Initial project**: 2018, TVET training for SPED teachers specifically on urban agriculture
- **2019 and 2020**: one TVET training each year for a specific area

**Participants**

SPED teachers of hearing-impaired or blind and visually impaired students and/or students with learning difficulties (autism, down syndrome, cerebral palsy, and attention deficit/hyperactivity disorder [ADHD]) from SEAMEO Member Countries

**Activities and Time Line**

The activities and time line below is for the initial project on urban agriculture.

<table>
<thead>
<tr>
<th>Time Line</th>
<th>Activity</th>
<th>Responsible Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>October−November 2017</td>
<td>Discussion with potential host country or institution to provide trainers and participants</td>
<td>MoEs of SEAMEO Member Countries SEAMEO BIOTROP SEAMEO SEN</td>
</tr>
<tr>
<td>November−December 2017</td>
<td>Invitation letters to all participants</td>
<td>SEAMEO SEN</td>
</tr>
<tr>
<td>February 2018</td>
<td>One in-country TVET training for SPED teachers (phase 1)</td>
<td>SEAMEO SEN SEAMEO BIOTROP MoEs of SEAMEO Member Countries</td>
</tr>
<tr>
<td>March−May 2018</td>
<td>Implementation of content and skills by participants in home countries (phase 2)</td>
<td>Participants</td>
</tr>
<tr>
<td>May 2018</td>
<td>Reporting of activities and projects by participants (phase 3)</td>
<td>MoEs of SEAMEO Member Countries SEAMEO SEN SEAMEO BIOTROP</td>
</tr>
<tr>
<td></td>
<td>Evaluation of the training and identification of ways forward</td>
<td></td>
</tr>
</tbody>
</table>

**Funding Mechanism**

<table>
<thead>
<tr>
<th>Component</th>
<th>Funding Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two trainers</td>
<td>Airfare Accommodations Meals</td>
</tr>
<tr>
<td>Participants: 22 SPED teachers from SEAMEO Member Countries; two per country</td>
<td>Airfare Accommodations Meals Materials</td>
</tr>
<tr>
<td>Component</td>
<td>Funding Required</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------</td>
</tr>
</tbody>
</table>
| Proposed funding mechanism for phase 1 (in host country) | Host country should provide:  
- Accommodations for two representatives from each Southeast Asian country  
- Accommodations of TVET trainers  
- Meals and venue arrangements  
- Local transportation fees from the airport to the venue  
- Logistical arrangements and local transportation fees for study visits  
- Venue of training, technical assistance, and materials required (institutes, universities, or institutions)  
- Round-trip airfare for two representatives from Myanmar, Lao PDR, Cambodia, and Timor-Leste  
MoEs should provide:  
- Round-trip airfare for two representatives |
| Proposed funding mechanism for phase 2 (in respective countries) | MoEs should provide:  
- Grants and funding support to implement urban agriculture techniques by participants in selected schools  
- Monitor and document the pilot project for presentation during phase 3 |
| Proposed funding mechanism for phase 3 | None |
4.7 Inter-Country Student Exchange with Industries

SEAMES
Ms. Anti Rismayanti
Programme Officer
anti@seameo.org

Other SEAMEO Centres and Partners

• SEAMEO SEAMOLEC
• SEAMEO VOCTECH
• MoEs of SEAMEO Member Countries

Background

Southeast Asian countries are diverse in terms of educational access, equity, and quality. During the second SDEM held in Bandung, Indonesia in April 2016, ministers reviewed the progress they made in moving forward with priorities identified by SEAMEO for the next 20 years and arrived at the following statements:

• We noted the need to move beyond our national boundaries, thinking as Southeast Asians, solving problems of the region whilst building on our individual country’s strengths.

• We recognised that the region has much to share in ensuring access to and relevance of programmes to learners’ needs.

• We recognised that public engagement is very important to the success of programmes and reforms. Different modes and types of public engagement done in the region were explored such as strengthening school community partnerships, promoting open and shared information, and other modalities.
Aligned with the SEAMEO 7 Priority Areas, reforms and breakthroughs in TVET are indispensable, especially in the context of internationalisation of TVET institutions in Southeast Asia. One alternative to internationalise TVET institutions in Southeast Asia is to initiate mutual recognition of inter-country learning credit programmes in relation to industries. This activity can be conducted to strengthen regional cooperation, improve quality and competitiveness, ensure harmonisation, and support mutual understanding amongst TVET institutions in Southeast Asia.

One example of years of TVET institution cooperation in Southeast Asia is between Indonesia and Thailand. Since 2010, student and teacher exchange activities for very short periods of time are very intensively implemented. The exchanges that occur are not only in the context of cultural exchange as part of cultural-awareness-building activities but also within the framework of learning and apprenticeship with partner industries for 1–6 months.

Therefore, it is necessary to enhance other forms of cooperation in the form of exchange in higher levels based on curriculum equality using a framework of competencies approved by both parties and industrial networks committed to support the programme and ensure the absorption of graduates in related industry networks.

**Objectives**

This cooperation is expected to improve the quality of human resources in the region, particularly amongst the involved institutions. Furthermore, this cooperation can improve students’ skills according to their respective fields.

Credit-transfer programmes for one year is a form of student mobility that has been initiated to provide knowledge and experience to students in relation to academic and college life in partner institutions and overseas industries. This knowledge and experience is expected to develop students’ international insights and improve opportunities for them to network with partners on a wide scale.

Furthermore, this programme can strengthen cooperation with major industries to formulate competencies required on a regional scale. This will expand student opportunities, allowing them to work across countries in the future.

**Expected Outcomes**

The development of this platform is expected to create:

- Opportunities to form a network of TVET colleges and regional industries
- A collection of courses and competencies for inter-country learning offered by TVET institutions in Southeast Asia
- Credit earning and transfer systems for one-year programmes across TVET institutions in Southeast Asia
• Linkages and competency matching with the regional job market

• Students who have the right skills and qualifications to become part of the ASEAN labour market

Participants

• Implementing partners

• Regional coordinator, SEAMES

• Expertise and knowledge contributor, the Directorate of Technical and Vocational Education (DTVE) of Indonesia, OVEC Thailand, and SEAMEO VOCTECH

• Programme implementers (colleges and polytechnic universities with industry partners in Southeast Asia appointed by MoEs)

• Course providers (colleges, polytechnic universities, and industry partners in Southeast Asia that offer TVET programmes such as mechatronics, tourism and hospitality, and agriculture and fisheries courses)

• Course participants (students of mechatronics, tourism and hospitality, and agriculture courses in certain educational levels, as agreed upon by TVET course providers and their partners)

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
<th>Responsible Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept development</td>
<td>May 2017</td>
<td>SEAMES</td>
</tr>
<tr>
<td>Preliminary meeting between SEAMES, DTVE Indonesia, OVEC, polytechnic universities, Thai colleges and industries</td>
<td>April–May 2017</td>
<td>SEAMES</td>
</tr>
<tr>
<td>Inviting other polytechnic universities or higher education institutions (HEIs) in Southeast Asia to participate and consolidation of contributions and commitments from SEAMEO centres</td>
<td>May 2017 onwards</td>
<td>SEAMES</td>
</tr>
<tr>
<td>Meeting on curriculum alignment</td>
<td>May–June 2017</td>
<td>SEAMES DTVE OVEC</td>
</tr>
<tr>
<td>Online or face-to-face training for TVET institutions on the curriculum, principles, and technical implementation</td>
<td>July 2017</td>
<td>SEAMES DTVE OVEC</td>
</tr>
<tr>
<td>Development of programme guidelines</td>
<td>June–July 2017</td>
<td>SEAMES SEAMEO SEAMOLEC VOCTECH</td>
</tr>
<tr>
<td>Activity</td>
<td>Time Line</td>
<td>Responsible Unit</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Language improvement programme</td>
<td>May 2017 onwards</td>
<td>SEAMES DTVE OVEC Indonesia Language Centre</td>
</tr>
<tr>
<td>Programme implementation</td>
<td>September 2017</td>
<td>Polytechnic universities or HEIs</td>
</tr>
<tr>
<td>Evaluation</td>
<td>January 2018</td>
<td>All parties</td>
</tr>
</tbody>
</table>

**Funding Mechanism**

Cost-sharing amongst participating TVET institutions
4.8 Regional Knowledge Platform for Technical and Vocational Education and Training

SEAMEO VOCTECH
Dr. Paryono
paryono@voctech.edu.bn

Other SEAMEO Centres and Partners

- GIZ Regional Cooperation Programme to Improve the Training of TVET Personnel (GIZ-RECOTVET)
- SEAMES
- SEAMEO SEAMOLEC
- UNESCO Centre for TVET (UNESCO-UNEVOC)
- UNESCO Bangkok
- Regional Cooperation Platform (RCP)
- Regional Association of Vocational Teachers Education (RAVTE)

Background

This project aims to become a major source of open knowledge and exchange on TVET in Southeast Asia and beyond by filling a niche that specifically focuses on TVET personnel development. A key principle of the platform is that it is owned collectively by the region and regarded as a tool for TVET stakeholders to share content, present themselves, and seek wider engagement via regional exchange, either virtual or physical.
Objectives

This project generally aims to:

• Provide a platform for continuous learning, regional interaction, and cooperation

• Offer easy access to all relevant knowledge and information on TVET and related initiatives, particularly on personnel development across Southeast Asia on a single platform

• Share outcomes and strengthen the continuity of regional policy dialogues

It specifically aims to:

• Provide easy access to knowledge on TVET personnel development in Southeast Asia and beyond on a single platform

• Provide relevant, comprehensible, and actionable knowledge on TVET, particularly on personnel development

• Inform stakeholders about TVET personnel development initiatives across the region

• Share outcomes and strengthen the continuity of regional dialogues

• Provide a platform for continuous regional exchange

• Connect TVET personnel development research with a wider audience

• Provide a platform for electronic learning (e-learning)

• Create opportunities for policy learning and transfer amongst countries in Southeast Asia and beyond

• Foster engagement between TVET personnel and the private sector

Expected Outcomes

The major source of open knowledge and exchange on TVET personnel development in Southeast Asia.
Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of a regional knowledge platform for TVET</td>
<td></td>
<td>2016–2017</td>
</tr>
<tr>
<td>Soft launch at the fourth “GIZ TVET Conference”</td>
<td>Myanmar</td>
<td>June 2017</td>
</tr>
<tr>
<td>Official launch to Southeast Asian MoEs, TVET partners, and TVET institutions</td>
<td></td>
<td>September–October 2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

- GIZ
- SEAMEO VOCTECH
4.9 Southeast Asia Technical and Vocational Education and Training Koutou Senmon School Modeling Programme

Other SEAMEO Centres and Partners

- National Institution of Technology or Koutou Senmon (KOSEN), Japan
- MoEC Indonesia

Background

KOSEN was first founded in 1962 in response to a strong demand from the industrial world for engineers to support Japan through its period of high economic growth starting in the mid-1950s and cope with further development of science and technology. The country first established 12 national and two public KOSENs, the Tokyo Metropolitan College of Technology, and the Tokyo Metropolitan College of Aeronautical Engineering. At present, there are 57 KOSENs nationwide.

The education system of KOSEN is different from that of universities, as it offers five years of consistent, practical, and professional education for junior-high-school graduates at an earlier age or seven years for those who choose to continue further studies in the advanced course to foster engineers capable of playing mid-level roles in production sites in industries.

The KOSEN model develops TVET human resources from technologists or technicians into engineers who are well-equipped with theory and practical training is expected to improve the quality of TVET education in Indonesia, particularly in technology and engineering programmes. Under DTVE and MoEC Indonesia, there are more than 12,000 vocational schools with three- and four-year programmes.
To enhance the quality of TVET graduates of four-year programmes for vocational and technical schools, DTVE initiated to partner with KOSEN and possibly adapt the KOSEN model in vocational and technical schools to prepare highly competitive graduates who are equipped with skills and knowledge.

Objectives

This project aims to:

• Share the KOSEN educational model and curriculum with Indonesian and other Southeast Asian TVET institutions

• Discuss the possibility of improving Indonesian and other Southeast Asian TVET institutions by adapting the KOSEN educational model and curriculum

• Plan further strategies to implement the Southeast Asian TVET KOSEN School Modeling Programme in Indonesia by having discussions amongst KOSEN experts, TVET policy makers, vocational schools, and polytechnic universities

Expected Outcomes

This project expects to:

• Arrive at a mutual perception about educational models and curricula in the field of mechanical, electronics, ICT, and chemical science and industry immersion in KOSEN and Indonesian TVET institutions

• Identify potential activities such as study visits, curricular development, quality assurance, assessment, student internships, teacher and student exchanges, and research sharing between students and teachers in Indonesia and KOSEN Japan

• Implement a strategy on adapting the KOSEN Modeling Programme for Indonesian TVET education

• Identify technical and vocational schools who will join the pilot stage of the programme

Participants

Vocational and technical schools in Indonesia that provide certificates in metal fabrication engineering and manufacturing; automotive engineering; maintenance management; industry automation engineering; mechatronics; IS networking and application, and analytical chemistry
Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Detail</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation of the “TVET KOSEN School Modeling Workshop” with the theme “Adapting the KOSEN Education system in Indonesian Vocational Schools”</td>
<td>Approximately 80 technical and vocational schools were invited</td>
<td>11−13 August 2016 Bekasi, Indonesia</td>
</tr>
<tr>
<td>Sharing the KOSEN curriculum with Indonesia</td>
<td>Mechanical engineering, Electrical engineering, Electronic engineering, Computer science (ICT)</td>
<td>September−October 2017</td>
</tr>
<tr>
<td>Selection of schools for the pilot stage and search for Japanese industry partners</td>
<td>10−15 schools were selected</td>
<td>September−December 2017</td>
</tr>
<tr>
<td>Development of an MoU between MoEC Indonesia and KOSEN</td>
<td>Student exchange through the internship programme between TVET institutions in the PRC and Southeast Asia</td>
<td>September 2017 onwards</td>
</tr>
<tr>
<td>Translation of the curriculum</td>
<td></td>
<td>2017 onwards</td>
</tr>
<tr>
<td>Training Indonesian teachers on KOSEN</td>
<td></td>
<td>2017 onwards</td>
</tr>
<tr>
<td>Implementation of the KOSEN curriculum and teaching strategies in Indonesian technical and vocational schools</td>
<td></td>
<td>2017 onwards</td>
</tr>
</tbody>
</table>

Funding Mechanism

- MoEC Indonesia
- KOSEN (resource persons and training and travel expenses)
4.10 Southeast Asian Ministers of Education Organisation-China Technical and Vocational Education and Training Cultural Twinning Programme

SEAMES
Ms. Piyapa Su-angavatin
piyapa@seameo.org

Other SEAMEO Centres and Partners

- ASEAN-China Centre (ACC)
- SEAMEO VOCTECH
- MoEs and related ministries from SEAMEO Member Countries

Background

In response to the recommendations in the second SEAMEO HOM for TVET held in Bali in May 2016 to promote collaboration amongst TVET institutions in Southeast Asia with those from other regions, SEAMES collaborated with the PRC through the ACC to organise the China-Southeast Asia TVET Mobility and Networking Programme during the ninth China-ASEAN Education Cooperation Week held in Guiyang in the Guizhou Province in the PRC on 1–3 August 2016.

The workshop in 2015 went successfully with 90 participants from 74 TVET institutions from Brunei Darussalam, Cambodia, the PRC, Indonesia, Malaysia, the Philippines, and Thailand in accordance with the three priority study areas—hospitality and tourism, agriculture and fisheries, and electrical engineering and manufacturing. The outputs of the workshop held on August 2016 included 10 MoUs, eight frameworks of cooperation, one letter of intent, and 39 action plans agreed upon by the Southeast Asian and PRC institutions.
To strengthen collaboration between Southeast Asian and PRC TVET colleges and institutions, SEAMES in collaboration with the ACC and the PRC government organised the “Preparation Workshop for the SEAMEO-China TVET Cultural Twinning Programme,” which will be conducted back to back with the 10th China-ASEAN Education Cooperation Week on 28–31 July 2017 in Guiyang in the PRC.

**Objectives**

This project aims to:

- Strengthen the collaboration between TVET institutions in Southeast Asia and the PRC
- Promote cultural exchange between the PRC and Southeast Asia through student and teacher exchange and cross-country cultural activities
- Provide capacity development for TVET school administrators, teachers, and students through language development and inter-cultural understanding programmes
- Develop a group of model schools or best practices for cross-country partnership development between Southeast Asia and the PRC

**Expected Outcomes**

This project expects to result in:

- Partnership commitments or agreements between TVET institutions in the PRC and Southeast Asia
- Action plans for Southeast Asian and PRC TVET institutions (from September 2017 onwards) on language teacher exchange programmes, student exchange programmes (lasts 3 months–1 year), online cultural twinning classrooms, and benchmarking or study visit programmes

**Participants**

- 25–30 advanced TVET colleges or polytechnic universities from the PRC
- 25–30 advanced TVET colleges or polytechnic universities from Southeast Asia

The participating TVET institutions must provide vocational certificates, diplomas, or higher diplomas in at least two of four main study areas—hospitality and tourism; mechatronics, electronics, and manufacturing; agriculture and fisheries; and IT or creative industry.
Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Detail</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation workshop for the SEAMEO-China TVET Cultural Twinning Programme</td>
<td>Organisation as a back-to-back event with the 10th China-ASEAN Education Cooperation Week</td>
<td>30–31 July 2017 Guiyang</td>
</tr>
<tr>
<td>Implementation of language teacher exchange programme</td>
<td>Exchange of Chinese and English language teachers from Southeast Asia</td>
<td>September 2017 onwards</td>
</tr>
<tr>
<td>Implementation of student exchange programme</td>
<td>Student exchange through the internship programme between TVET institutions in the PRC and Southeast Asia</td>
<td>September 2017 onwards</td>
</tr>
<tr>
<td>Implementation of online cultural twinning classrooms</td>
<td>Institutions should have online cultural twining classrooms with various student activities</td>
<td>October 2017 onwards</td>
</tr>
<tr>
<td>Implementation of benchmarking and study visit programme</td>
<td>Conduct benchmarking or study visits to TVET institutions in the PRC and Southeast Asia</td>
<td>January 2018 onwards</td>
</tr>
</tbody>
</table>

Funding Mechanism

- Programme expenses for the preparation workshop, host organisations in the PRC; includes funding for accommodations, meeting packages, local transportation and study visit fees; Southeast Asian participants should cover their airfare

- Implementation of teacher and student exchange programmes, cost-sharing; sending colleges: parents are responsible for return airfare and daily allowance; receiving colleges: accommodations, meals, and airport transfer

- Implementation of online cultural twinning classrooms, no direct costs

- Implementation of benchmarking and study visits, can be discussed and agreed upon by the concerned parties during the preparation workshop
4.11 Southeast Asian Technical and Vocational Education and Training Consortium Website:
http://seatvet.seameo.org/

SEAMES
Ms. Piyapa Su-angavatin
piyapa@seameo.org

Other SEAMEO Centres and Partners

• SEAMEO VOCTECH
• SEAMEO SEAMOLEC

Background

TVET has been identified as one of the seven priority areas for educational development in Southeast Asia from 2015 to 2035. This was officially confirmed by the SDEM meeting held in Lao PDR in September 2014.

In response to the ASEAN integration, the perceived mobility of skilled workers in the region, and the need to improve the quality of TVET in Southeast Asia, the first HOM for TVET was hosted by OVEC under MoE Thailand on 24–26 August 2015 in Chiang Mai, Thailand. Its theme was “Working Together Towards the Harmonisation and Internationalisation of TVET in Southeast Asia.”

As a result of the meeting, the “Chiang Mai Joint Statement on the Harmonisation and Internationalisation of TVET in Southeast Asia,” which included four priority industry areas was officially announced as the regional policy direction.

The establishment of the Southeast Asian TVET Consortium and website were two of the recommended strategies to promote TVET student and staff exchange, which includes cross-country industrial attachment and internship programmes. In addition, the consortium through the website will formalise partnerships amongst TVET institutions and industry sectors and operationalise the Southeast Asian TVET activities implemented by SEAMEO.
The first version of the Southeast Asian TVET Consortium website (http://seatvet.seameo.org/) was developed in September 2015 with 300 members.

In March 2017, SEAMES launched the new Southeast Asian TVET Consortium website with the following main features:

- Collected institutional profiles and partnership plans of TVET institutions on teacher and student exchange programmes in accordance with study areas
- Search function to find new partners for student and staff exchange programmes and industrial attachments
- Presentation of statistic data on members and partnership activities conducted by participating institutions
- Sharing of TVET education systems in Southeast Asian countries and agreements and MoUs signed by TVET institutions during the Southeast Asian TVET meetings and activities in September 2015
- Sharing of all meeting documents, photos, and reports related to Southeast Asian TVET programmes since August 2015
- News and reports of upcoming TVET activities by SEAMEO and its partners

With the new design of the Southeast Asian TVET Consortium website, the self-registration function, partnership plans, self-partnership reports, search function for partnerships, and statistic data reports were improved. However, to minimise the back-office operation and for sustainability, the system requests that TVET institutions proceed with self-registration and self-reporting of partnership activities from 2016 to 2017. The profile data and partnership plans of TVET institutions can be self-edited and updated anytime by assigned or coordinating teachers. The users’ manual can be downloaded from the website as well.

**Objectives**

This project aims to:

- Leverage the TVET standards and competencies in Southeast Asia through internationalisation and harmonisation
- Promote and develop curricular harmonisation and internationalisation of study programmes through lecturer or student exchange and joint research programmes and industrial linkages
- Create a sustainable networking platform amongst TVET leaders and institutions in Southeast Asia and industries as well as other related development agencies and industry sectors
Expected Outcomes

Once a TVET institution (a secondary TVET school, a technical and vocational college, or a polytechnic university) joins the consortium by completing the self-registration form, it becomes a registered member that can network with other members and identify relevant partners to carry out activities. To become a full member, an institution must be committed to create student and staff exchange programmes, along with industrial attachments.

Registered members refer to those who self-registered by completing and submitting the form. Active members, meanwhile, refer to those who sent students or staff for exchange. To become an active member, a TVET institution must commit to achieving the consortium’s objectives by participating in Southeast Asian TVET meetings and workshops; facilitating at least a student exchange annually with other international partner schools, colleges, or polytechnic universities; and assisting in industrial attachments for overseas students to be able to liaise with nearby industries. The consortium expects to have approximately 100 members by the end of 2017.

Participants

- TVET institutions (vocational schools, colleges, polytechnic universities, and technological or technical universities) in 11 Southeast Asian countries that agreed to work together to harmonise and internationalise their programmes; the priority industry or study areas were based on the agreement of high officials in Chiangmai in 2015
- TVET development agencies
- Industry partners

Activities and Time Line

The SEA-TVET Consortium mainly focuses on:

- Student exchange programmes are facilitated by TVET institutions. The number of students and duration will be decided upon by the participating schools, colleges, and polytechnic universities. Ideally, the minimum duration for student exchange is six months. However, considering various school capacities, an institution may shorten this duration. Details of implementing student exchange programmes such as harmonising curricula for possible matriculation and recognition, travel arrangements, and pre-departure programmes can be found in the “Southeast Asian TVET Consortium Guidebook” that may be downloaded from the website.

- To conduct staff exchange or short-course training, participating schools or colleges must discuss arrangements such as identifying and selecting subject teachers, assignments during the exchange, duration, and cost-sharing.
Industrial attachment is part of student and staff exchange programmes. Host institutions should identify and communicate with participating industries regarding the number of students and staff that can be accommodated for industrial attachment. Host institutions identify and select relevant industries and discuss with industries regarding industrial attachment programmes for students and/or teachers on scheduling, programmes and activities, certifications, and financial arrangements.

Sharing best resources or practices should generate new or innovative ideas through research collaboration.

**Funding Mechanism**

- No membership fee for participation
- SEAMES (website development)
4.12 Southeast Asian Technical and Vocational Education and Training Massively Open Online Courses

SEAMES
Ms. Anti Rismayanti
Programme Officer
anti@seameo.org

Other SEAMEO Centres and Partners

• SEAMEO SEAMOLEC
• SEAMEO VOCTECH
• SEAMEO RIHED
• Polytechnic universities
• Technological or technical universities

Background

Southeast Asian countries are diverse in terms of educational access, equity, and quality. During the second SDEM held in Bandung, Indonesia in April 2016, the ministers reviewed the progress made with moving forward with SEAMEO’s priorities for the next 20 years and arrived at the following statements:

• We noted the need to move beyond our national boundaries, thinking as Southeast Asians, solving problems of the region whilst building on our individual country’s strengths.

• We recognised that the region has much to share in ensuring access to and relevance of programmes to learners’ needs.
We recognised that public engagement is very important to the success of programmes and reforms. Different modes and types of public engagement done in the region were explored such as strengthening school community partnerships, promoting open and shared information, and other modalities.

Needless to say, education ministers highlighted the use of ICT in reaching the unreached and sharing quality education for teachers in different levels through SEAMEO’s innovative technology but needs to be consolidated in the spirit of the SEAMEO family.

Globally, massively open online courses (MOOCs) made headlines in 2012 when it penetrated the Web in making educational content and lectures available to anyone at any time and from any place. Ivy League schools opened MOOC programmes, which are generating a lot of interest from the region.

MOOCs have consequently provided means for lifelong learning and are here to stay but education leaders need to determine how they can contribute to the SEAMEO 7 Priority Areas to achieve SDG No. 4 on technology, pedagogy, content, and knowledge.

SEAMEO has introduced digital classes and is presently developing OERs for the use of free and open courseware pursuant to the “2012 World OER Congress” and the “Paris OER Declaration.” SEAMEO centres such as SEAMOLEC, INNOTECH, and RIHED have been leading discussions and using ODL before the emergence of MOOCs. SEAMEO plans to develop a Southeast Asian TVET MOOC platform to consolidate all outstanding MOOC providers in the region and document best practices, particularly in TVET education.

Southeast Asian TVET MOOCs were developed to address some of the challenges in TVET education such as limited college capacity, low college affordability due to uneven distribution, inadequate educational resources and quality, high-quality college concentration in particular places, low quality of equal educational services, and low guarantee to meet the needs and demands of TVET educational quality.

Objectives

Southeast Asian TVET MOOCs were initiated by SEAMES in collaboration with RISTEK Indonesia and SEAMEO SEAMOLEC, RIHED, and SEAMEO VOCTECH to support the SEAMEO 7 Priority Areas and the ministers’ call for action in the “Bandung Statement” and the “Action Agenda.” The platform specifically aims to:

- Determine the status of MOOCs and ODL in TVET programmes in Southeast Asia
- Take stock of the challenges and opportunities of using MOOCs in Southeast Asia, particularly to meet TVET needs
- Create a regional Southeast Asian TVET MOOC network for promoting continuous or further dialogue
- Improve equitable access to quality learning in TVET areas
• Provide opportunities to students from a particular college to be able to attend certain qualified courses from other colleges and get their learning outcomes recognised

**Expected Outcomes**

The development of the Southeast Asian TVET MOOC platform is expected to create:

• Opportunities for networked higher education and online learning

• A collection of courses in the form of MOOCs offered by TVET institutions in Southeast Asia

• Credit-earning and -transfer programmes amongst TVET institutions in Southeast Asia

• A Southeast Asian TVET MOOC network

**Participants**

• Regional aggregator: SEAMES

• Online learning system contributor: SEAMEO SEAMOLEC

• Expertise and knowledge contributor: RISTEK Indonesia and SEAMEO RIHED and VOCTECH

• Course providers (polytechnic universities and HEIs in Southeast Asia that offer programmes in the field of TVET for the diploma and bachelor levels)

• Course participants from 11 Southeast Asian countries—Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste, and Vietnam
## Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
<th>Responsible Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept development</td>
<td>May 2017</td>
<td>SEAMES</td>
</tr>
<tr>
<td>Preliminary meeting between SEAMES, RISTEK Indonesia, and four polytechnic universities in Indonesia</td>
<td>May 2017</td>
<td>SEAMES</td>
</tr>
<tr>
<td>Inviting other polytechnic universities or HEIs in Southeast Asia to participate and consolidate contributions and commitments from SEAMEO centres</td>
<td>May 2017 onwards</td>
<td>SEAMES</td>
</tr>
<tr>
<td>Development of the Southeast Asian TVET MOOC aggregator system</td>
<td>May–July 2017</td>
<td>SEAMEO SEAMOLEC SEAMES</td>
</tr>
<tr>
<td>Online or face-to-face training for polytechnic universities or HEIs on the curriculum, online interaction, principles, and technical media development and assessment</td>
<td>June 2017</td>
<td>SEAMEO SEAMOLEC SEAMES</td>
</tr>
<tr>
<td>Development of online course syllabus template and guidelines</td>
<td>May–July 2017</td>
<td>SEAMES SEAMEO SEAMOLEC SEAMEO VOCTECH SEAMEO RIHED</td>
</tr>
<tr>
<td>Development of online courses</td>
<td>May–July 2017</td>
<td>Polytechnic universities HEIs</td>
</tr>
<tr>
<td>Online course review</td>
<td>July 2017</td>
<td>SEAMES SEAMEO SEAMOLEC RISTEK Indonesia</td>
</tr>
<tr>
<td>Uploading courses to provider’s system and consolidation with the aggregator system</td>
<td>August 2017</td>
<td>SEAMEO SEAMOLEC Polytechnic universities HEIs</td>
</tr>
<tr>
<td>Development of web page, promotional materials, and online registration platform</td>
<td>June–August 2017</td>
<td>SEAMES SEAMEO SEAMOLEC</td>
</tr>
<tr>
<td>SEAMEO Member Countries and networks</td>
<td>July–August 2017</td>
<td>SEAMES Polytechnic universities HEIs</td>
</tr>
<tr>
<td>Deliver Southeast Asian TVET MOOCs to polytechnic universities or HEIs</td>
<td>September 2017</td>
<td>Polytechnic universities HEIs</td>
</tr>
<tr>
<td>Evaluation</td>
<td>January 2018</td>
<td>All parties</td>
</tr>
</tbody>
</table>

## Funding Mechanism

Cost-sharing amongst implementing partners and course providers
4.13 Young Southeast Asian Technical and Vocational Education and Training Future Farmers Forum

SEAMES
Ms. Piyapa Su-angavatin
piyapa@seameo.org

Other SEAMEO Centres and Partners

• OVEC
• MoE Thailand

Background

Due to the rich of natural resources and suitable climate of Southeast Asia, agriculture remains the most important sector for the region’s economic growth. However, an agricultural study showed a declines in the sector’s labour force at 43 million (Paryono, 2016). In the past 10 years, evidence has shown that the number of TVET students who choose to take up agriculture and related courses has been rapidly decreasing in many countries due to globalisation, technological advancements, and social trends.

In August 2015, a TVET study on agriculture and fisheries was taken up by TVET high officials from 11 Southeast Asian countries. It was agreed during the first HOM for TVET that one of the four priority areas should be strengthening collaboration amongst, improving the quality of, and promoting the internationalisation and harmonisation of TVET institutions in Southeast Asia.

In May 2016, the second HOM for TVET highlighted that TVET education should not only improve the quality of teachers and students but also promote TVET innovative practices and 21st-century skills amongst students.

In response to the regional policy directions agreed upon in the HOMs for TVET in 2015 and 2016, OVEC under MoE Thailand in cooperation with SEAMEO will organise the first “Young Southeast Asian TVET Future Farmers Forum” to be tentatively held on August 2017 in Chonburi, Thailand.
Objectives

This project aims to:

- Enhance the advanced and role model skills (innovation, technological mindset, leadership, communication effectiveness, entrepreneurship, and social responsibility) and competencies of TVET students and teachers in agriculture and fisheries to become future farmers

- Promote the global competitiveness of students and teachers for agricultural development in the region

- Share and exchange R&D and innovations in agriculture and fisheries with TVET schools and colleges in Southeast Asia

- Establish a regional networking platform for the exchange of innovations and best practices amongst teachers and students of agriculture and fisheries

Expected Outcomes

This project expects to come up with:

- A consolidated report on R&D and innovations presented by the students and teachers

- A networking platform for students and teachers

Participants

300–350 teachers and students (approximately 50 teachers; 100 Thai TVET students; and 150 TVET students from Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand, Singapore, Timor-Leste, Vietnam, and others such as Korea, the PRC, Japan, the U.S., the U.K., Australia, and New Zealand)

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentations of students and teachers on innovative agriculture and entrepreneurship</td>
<td>Chonburi (To be determined)</td>
<td>10:30 a.m.–12:00 p.m. 31 August</td>
</tr>
<tr>
<td>Student group activity and innovative competition</td>
<td>Chonburi (To be determined)</td>
<td>1:30–4:30 p.m. 31 August</td>
</tr>
<tr>
<td>Student cultural performance</td>
<td>Chonburi (To be determined)</td>
<td>4:30–9:30 p.m. 31 August and 1 September</td>
</tr>
<tr>
<td>Cultural and study visit</td>
<td>Chonburi (To be determined)</td>
<td>1:30–3:00 p.m. 2 September</td>
</tr>
</tbody>
</table>
Funding Mechanism

- OVEC (accommodations, meals, and local transportation and study visit fees)
- Participating schools or colleges (airfare and travel allowances)

Potential Donours

To be identified and approached by OVEC
PRIORITY 5
REVITALISING TEACHER EDUCATION
5.1 Pre-Service Student Teacher Exchange in Southeast Asia

Background

The Southeast Asian Teacher Project also known as the “Pre-Service Student Teacher Exchange Southeast Asia Project” aims to provide opportunities to pre-service student teachers from universities to obtain teaching experiences (practicum) in schools in other countries within the region.

Based on the SEAMEO 7 Priority Areas, the 11 SEAMEO Member Countries need to work together to improve the quality of education in Southeast Asia. Revitalising teacher education is one of the priority areas to build and strengthen the capacity of teachers in the region.

This project is for pre-service student teachers majoring in math, science, English, and preschool education. The practicum period lasts one month. The students’ roles and responsibilities are assigned weekly within the one-month period (observe, assist in teaching, teach, and reflect). Host universities will provide mentors to supervise and monitor the students throughout the practicum period. The project uses the mechanism of cost-sharing.

Objectives

This project aims to:

- Enable pre-service student teachers to develop their teaching and pedagogical skills
- Encourage pre-service student teachers to practice their English skills
- Allow pre-service student teachers to gain broader regional and world views
Expected Outcomes

This project expects to:

- Help students gain broader regional and world views
- Help students develop their teaching skills, improve their English and develop 21st-century skills

Participants

The table below provides details on the intended participants of this project.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number of Student Participants</th>
<th>Number of University Participants</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>First batch</td>
<td>22</td>
<td>2</td>
<td>Indonesia Thailand</td>
</tr>
<tr>
<td>(20 January–18 February 2016)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second batch</td>
<td>101</td>
<td>7</td>
<td>Indonesia Philippines Thailand</td>
</tr>
<tr>
<td>(17 July–15 August 2016)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third batch</td>
<td>198</td>
<td>27</td>
<td>Indonesia Philippines Thailand</td>
</tr>
<tr>
<td>(15 January–13 February 2016)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>First batch</td>
<td>Indonesia Thailand</td>
<td>20 January–18 February 2016</td>
</tr>
<tr>
<td>Second batch</td>
<td>Indonesia Philippines Thailand</td>
<td>17 July–15 August 2016</td>
</tr>
<tr>
<td>Third batch</td>
<td>Indonesia Philippines Thailand</td>
<td>15 January–13 February 2016</td>
</tr>
</tbody>
</table>

Funding Mechanism

- SEAMES
- Host universities (accommodations and airfare)
Background

Widespread discussions on the need for teaching HOTS to prepare students to become a creative and innovative workforce have been seen. No longer is it enough for high-school graduates to simply know basic facts and skills. To succeed, students must master decision making, prioritising, strategising, and collaborative problem solving. Moreover, higher-order thinking allows students to excel and achieve intellectual freedom (Limbach and Waugh, 2010).

Although we often assume that thinking skills are automatically developed as students go through school, higher-order thinking specifically needs to be taught, either implicitly or explicitly. To help students develop HOTS, teachers need to purposely and persistently practice strategies that promote higher-order thinking such as bringing real-world problems into classrooms, encouraging open-ended class discussions, and carrying out inquiry-oriented experiments (Miri, David, and Uri, 2007).

This course will introduce participants to the what, why, and how of higher-order thinking as well as useful teaching and learning approaches, strategies, and thinking tools that foster HOTS amongst students.

Objectives

This project primarily aims to provide participants with the knowledge and skills required to foster higher-order thinking amongst students.

Expected Outcomes

At the end of the course, the participants should be able to:

- Understand the definition of and learning theories related to HOTS
• Acquire the necessary skills to develop HOTS through contemporary teaching and learning approaches such as IBSE and socio-scientific issue-based education

• Utilise questioning techniques and meta-cognition to promote higher-order thinking in science classrooms

• Incorporate ICT and thinking tools to cultivate creative, critical, and inquiry thinking skills

• Develop higher-order thinking assessment tools

Participants

Science educators or key primary science teachers

Activities and Time Line

This project will be held on 3–28 April 2017.

Funding Mechanism

Regular course fees (the centre is mandated to offer seven scholarships in each of the 11 SEAMEO Member Countries)
Background

The most important ability that mathematics educators need to cultivate amongst students is mathematical thinking, which instills the ability to think and make judgments independently. Students need the ability to find issues, learn, think, make judgments, and act on their own so they can solve problems skillfully amidst ever-changing scenarios (Isoda and Katagiri, 2012). Unfortunately, teaching mathematical thinking has been far from adequate in reality.

Research shows that instructional practices can enhance teaching effectiveness to instill mathematical thinking in students. Several studies (Isodia and Katagiri, 2012 and Schoenfeld, 1994) suggest problem-solving approaches to cultivate mathematical thinking.

This course will focus on some of the practices and strategies that promote students’ mathematical thinking in classrooms. Participants will also be exposed to elements to appreciate mathematical thinking and ideas.

Objectives

This course primarily aims to provide participants with the knowledge and skills required to promote the cultivation of mathematical thinking in their own classrooms.

Expected Outcomes

At the end of this course, the participants should be able to:

• Acquire basic knowledge on and know the philosophy behind conducting mathematics lessons that focus on problem solving

• Select, develop, and refine appropriate mathematical tasks
• Identify the appropriate strategies to solve problems
• Develop skills to create lessons that promote mathematical thinking
• Adopt teaching and learning approaches and strategies to promote mathematical thinking
• Assess mathematical thinking skills
• Collaboratively plan, design, implement, analyse, and make conclusions for quality lesson plans that promote and enhance mathematical thinking

Participants

Mathematics educators or key secondary mathematics teachers

Activities and Time Line

This project will be held on 3–28 April 2017.
Background

In the past two decades, digital technologies have become inseparable from development and research in science education. However, it has not been fully integrated into the field of teaching and learning of science.

“Billions of dollars have been invested to equip schools with educational technological tools yet the vast majority of teachers do not use technology in meaningful ways in their instruction” (Guzey and Roehrig, 2012). Exploring the use of animations, simulations, and games that feature scientific phenomena can potentially support and enable learning. Therefore, TEL should be maximised to improve hands- and minds-on activities used in science classrooms.

TEL is organised around the types of learning technology to make science learning authentic and provide tools to sustain engaged participation in making sense of the real world. Technological applications that will improve students’ understanding of teaching and learning of science content have been growing. Understanding various strategies and effective learning approaches to implement learning technologies is required. TEL complements constructivist teaching approaches and assessment to develop HOTS.

Objectives

This course aims to provide participants opportunities to use technologies to enhance science pedagogical content, knowledge, and skills.
Expected Outcomes

At the end of this course, the participants should be able to:

• Acquire basic knowledge on the types of TEL

• Develop skills in using TEL applications and tools to improve teaching and learning primary science

• Adopt strategies such as project-based, active, and lifelong learning to enhance effective primary science teaching and learning

• Collaboratively plan, design, implement, and make conclusions for a primary TEL lesson study

Participants

Science and ICT educators or key primary science and ICT teachers

Activities and Time Line

This project will be held on 3–28 April 2017.

Funding Mechanism

Regular course fees (the centre is mandated to offer seven scholarships in each of the 11 SEAMEO Member Countries)
Background

Teachers are continuously seeking ways, albeit systematically, to improve classroom teaching and learning. To facilitate learning, teachers prepare lessons, develop instructional materials, evaluate students’ work, and share outcomes with students to improve learning. This may sound like daily classroom-teaching routines but if seen from a different perspective with teachers who design and implement a plan of action, observe and analyse outcomes, and modify plans to better meet the needs of students, then the description is robust enough to be seen as classroom research (Anderson, 2004). These activities will yield the ultimate goal of improving the quality of teaching and enhance learning. As such, it is certainly appropriate to regard teachers as researchers. In fact, meaningful teacher research should be an intentional and systematic inquiry to improve classroom practice and, accordingly, the outcome should also be a formal way of recording good teaching in a written format.

However, it is equally important that all academic staff members work towards the school’s common purpose. Otherwise, they may be moving towards different directions that can result in lack of alignment with the scope and reduce the effect of collegial cohesion. Hence, all teachers should come together to meet as one community, share what they learn as individuals or in smaller units, and carry out specific research learning that the whole school deems important. This is the basic purpose of establishing a professional learning community (PLC)—to upgrade the quality of teaching and thereby enhance students’ successful learning (Hord, Roussin, and Sommer, 2010). Quality teaching is strengthened by the continuous professional development of teachers. And PLCs set the environment that facilitates collegiality and close collaboration amongst teachers.
To promote teachers as researchers and increase the effectiveness of PLCs, three classroom-based research methodologies—an action research, a case study, and a lesson study—are recommended for teacher use. In the process of implementing any or all of these, teachers have to choose a research question that they want to focus on, as provided by the whole school, then plan on how to gather data to derive useful information. Through data analysis, they will then be able to reflect on their learning and make conclusions or decisions on improving instructional practices to better serve students’ needs.

Objectives

This course primarily aims to provide participants the knowledge and skills required to conduct classroom-based research so they can establish PLCs in their own schools to enhance secondary mathematics teaching and learning.

Expected Outcomes

At the end of this course, the participants should be able to:

- Acquire basic knowledge on and know the philosophy behind classroom-based research (action research, case study, and lesson study)
- Develop the basic research skills necessary to conduct classroom-based research to improve secondary mathematics teaching and learning
- Learn simple statistical techniques for data analysis
- Adopt alternative teaching methods and strategies derived from classroom-based research to enhance secondary mathematics teaching and learning
- Plan, design, implement, analyse, and make conclusions collaboratively on a secondary classroom-based research study
- Establish PLCs in their own schools

Participants

Mathematics educators or key secondary mathematics teachers
Activities and Time Line

This project will be held on 3–28 April 2017. It emphasises good grounding of theories in educational research and reflective classroom practices. The participants will need to actively engage in course activities and discussions as well as foster team work to design and implement a small-scale classroom-based research study. The knowledge and skills acquired will enable them to initiate classroom-based research and form PLCs to improve their own secondary mathematics classroom practices.

Funding Mechanism

Regular course fees (the centre is mandated to offer seven scholarships in each of the 11 SEAMEO Member Countries)
5.6 Third Country Training Programme—Japan International Cooperation Agency: Primary Science Educators Training for African Countries—Enhancing Constructivist-Based Pedagogy and Content Knowledge

SEAMEO RECSAM
Dr. Nur Jahan Ahmad
nurjahan@reksam.edu.my

Other SEAMEO Centres and Partners

Japan International Cooperation Agency (JICA)

Background

Teacher and national trainers, educators, or classroom teachers in African countries where JICA implements programmes to strengthen science education will be trained to focus on contemporary pedagogies and strategies in science education.

Objectives

This course primarily aims to provide participants from African countries opportunities to exchange experiences in conducting relevant and meaningful science lessons with their counterparts from the SEAMEO Regional Centre for Education in Science and Mathematics (RECSAM). It will also provide opportunities for them to try out some of the teaching strategies, instructional materials, and teaching aids they developed in active science and mathematics teaching and learning. It specifically aims to:

- Enhance the participants' understanding of constructivism-based pedagogies
• Contextualise the participants’ content knowledge of science

• Improve their skill in improvising teaching materials using discarded or inexpensive materials

• Widen the participants’ perspectives by sharing national development experiences and taking cues from good classroom practices in Malaysia and other SEAMEO Member Countries

Activities and Time Line

This project will be held on 9–29 August 2017.

Funding Mechanism

• TCTP, Government of Malaysia

• JICA
5.7 Academic Writing for Professional Development

SEAMEO RECSAM
Dr. Nur Jahan Ahmad
nurjahan@recsam.edu.my

Other SEAMEO Centres and Partners
Representatives from MoEs of the 11 SEAMEO Member Countries

Background

Academic writing is a form of evaluation that requires the writer to demonstrate knowledge and proficiency with certain disciplinary skills of thinking, interpreting, and presenting. To be successful in this kind of writing, the writer must be completely aware of what to accomplish with a particular task.

Academic writing heavily involves the “literacy task,” which includes finding and reading information. In addition, the ability to write well will be based on the quality of reading. The author needs to think critically as he or she reads. This means separating facts from opinions, recognising biases and assumptions, and making inferences. The reader must arrive at conclusions or interpretations based on known factors discovered from reading. The purpose of academic writing, like most other kinds of writing, is to communicate by presenting a paper in a conference then publish it.

Objectives

This workshop focuses on techniques on writing and presenting a research paper (both from the science and social science perspectives) in conferences, symposia, and poster events. It includes strategies for converting a written paper into an oral presentation using limited time effectively and incorporating multimedia elements into a presentation. At the end of the workshop, the participants should be able to:

- Enhance the overall structure, knowledge, and processes involved in academic writing and presenting in conferences and other fora
- Enhance and apply one’s abilities and skills to manage a conference or poster event presentation
Expected Outcomes

This project expects the participants to:

• Come up with a piece of written work for publishing
• Present a paper in a forum or a conference

Participants

• Lecturers, educators, and research students from HEIs or universities
• Teachers
• MoE staff members

Activities and Time Line

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Day 1</strong></td>
<td></td>
</tr>
<tr>
<td>8:00–8:30 a.m.</td>
<td>Registration</td>
</tr>
<tr>
<td>8:30–10:00 a.m.</td>
<td>Session 1: Introduction to Academic Writing for Conferences (An Overview)</td>
</tr>
<tr>
<td>10:00–10:30 a.m.</td>
<td>Photo Session and Morning Tea</td>
</tr>
<tr>
<td>10:30–11:30 a.m.</td>
<td>Session 2: Preparing an Abstract</td>
</tr>
<tr>
<td>11:30 a.m.–1:00 p.m.</td>
<td>Session 3: Deciding on the Paper’s Contents</td>
</tr>
<tr>
<td>1:00–2:30 p.m.</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>2:30–3:30 p.m.</td>
<td>Session 4: Preparing a Conference Presentation</td>
</tr>
<tr>
<td>3:30–4:30 p.m.</td>
<td>Session 5: Planning a Presentation</td>
</tr>
<tr>
<td><strong>Day 2</strong></td>
<td></td>
</tr>
<tr>
<td>8:30–10:30 a.m.</td>
<td>Session 6: Preparing for a Presentation</td>
</tr>
<tr>
<td>10:30–11:00 a.m.</td>
<td>Morning Tea</td>
</tr>
<tr>
<td>11:00–11:30 a.m.</td>
<td>Session 7: Delivering a Presentation</td>
</tr>
<tr>
<td>11:30 a.m.–1:00 p.m.</td>
<td>Session 8: Poster Presentation</td>
</tr>
<tr>
<td>1:00–2:30 p.m.</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>2:30–3:30 p.m.</td>
<td>Session 9: Dos and Don’ts in Presenting</td>
</tr>
<tr>
<td>3:30–4:30 p.m.</td>
<td>Session 10: Evaluating and Assessing a Presentation</td>
</tr>
<tr>
<td>4:30–5:00 p.m.</td>
<td>Afternoon Tea</td>
</tr>
<tr>
<td><strong>Day 3</strong></td>
<td></td>
</tr>
<tr>
<td>8:30–10:30 a.m.</td>
<td>Tryout 1</td>
</tr>
<tr>
<td>10:30–11:00 a.m.</td>
<td>Morning Tea</td>
</tr>
<tr>
<td>11:00 a.m.–12:00 p.m.</td>
<td>Tryout 2</td>
</tr>
<tr>
<td>12:00–1:00 p.m.</td>
<td>Closing Ceremony and Certificate Presentation</td>
</tr>
<tr>
<td>1:00–2:30 p.m.</td>
<td>Lunch Break</td>
</tr>
</tbody>
</table>
**Funding Mechanism**

Course fee payment (details are shown in the table below)

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition fees</td>
<td>RM250 x 18 hours x 1 class</td>
</tr>
<tr>
<td>Facilities (classroom)</td>
<td>RM55 x 18 hours x 1 class</td>
</tr>
<tr>
<td>Stationeries, supplies, and course materials</td>
<td>RM50 x how many persons</td>
</tr>
<tr>
<td>Accommodations (twin sharing)</td>
<td>RM129 x how many nights x how many participants</td>
</tr>
<tr>
<td>Meals</td>
<td>RM120 X how many persons</td>
</tr>
<tr>
<td>Administration and miscellaneous costs (lump sum)</td>
<td>RM1,500</td>
</tr>
</tbody>
</table>
5.8 Blended Post-Graduate Diploma in Applied Linguistics

Background

The post-graduate diploma course in applied linguistics is the SEAMEO Regional Language Centre (RELC)'s key scholarship programme, which was developed and owned by the centre to extend its mission to provide professional development to language educators in the region. The blended diploma course was a new initiative adopted and implemented in 2013, which leverages teaching on an e-learning portal. The blended diploma course includes both face-to-face components and online modules.

Objectives

This endeavour aims to provide scholars from SEAMEO Member Countries an opportunity to obtain the diploma in Singapore to enhance their teaching skills in grammar, listening, speaking, reading, and writing as well as language curriculum design and implementation.

Expected Outcomes

This endeavour expects to provide professional development to language educators in the Southeast Asian region.

Participants

11 scholars from the SEAMEO Member Countries

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-graduate diploma in applied linguistics</td>
<td>Singapore or home countries</td>
<td>3 July–15 December 2017</td>
</tr>
</tbody>
</table>
Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO RELC</td>
<td>Accommodations, airfare, and tuition fee</td>
<td>US$121,000</td>
</tr>
</tbody>
</table>

Potential Donours

Any agency willing to fund teachers from SEAMEO Member Countries in addition to the 11 scholars of SEAMEO RELC
Master of Arts in Teaching English for Speakers in Other Languages

5.9

SEAMEO RELC
Mr. Vidya Ramnani
vidya@relec.org.sg

Other SEAMEO Centres and Partners

Victoria University of Wellington, New Zealand

Background

Master of Arts in Teaching English to Speakers of Other Languages (MATESOL) is a one-year full-time programme that aims to provide educators with the in-depth knowledge and tools they need to advance their skills in teaching English as a second or foreign language to promote SEAMEO RELC’s mission to develop language teacher education in the region.

Objectives

MATESOL was designed to equip educators with research-based principles for teaching and learning in a language-learning classroom.

Expected Outcomes

This endeavour expects to provide professional development to language educators in Southeast Asia.

Participants

11 scholars from the SEAMEO Member Countries
Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATESOL</td>
<td>Singapore or e-learning in home countries</td>
<td>27 February 2017–2 March 2018</td>
</tr>
</tbody>
</table>

Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO RELC</td>
<td>Accommodations, airfare, and tuition fee</td>
<td>US$190,000 per academic year</td>
</tr>
</tbody>
</table>

Potential Donours

Any agency willing to fund teachers from SEAMEO Member Countries in addition to the 11 scholars of SEAMEO RELC
5.10 Master of Teaching Chinese for Speakers of Other Languages

SEAMEO RELC
Mr. Loo Yow Tong
ytlo@relc.org.sg

Other SEAMEO Centres and Partners
Jinan University, Guangzhou, PRC

Background
SEAMEO RELC has been collaborating with the Jinan University in Guangzhou in the PRC since 2011 to offer Master of Teaching Chinese to Speakers of Other Languages (MTCSOL) in Singapore. The centre provides administrative services and support for the implementation, management, and operation of MTCSOL conducted in Singapore as well as instructional services for the teaching practice module of the programme. This serves as a platform for SEAMEO RELC to share its teaching experience and exchange ideas on teaching Chinese as a foreign language in the region.

Objectives
The primary objective of MTCSOL is to train and develop specialist teachers to teach Chinese as a foreign language in countries outside the PRC.

Expected Outcomes
This endeavour expects to provide professional development to language educators in Southeast Asia.

Participants
10 scholars from the SEAMEO Member Countries
# Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTCSOL</td>
<td>Singapore</td>
<td>27 February 2017–2 March 2018</td>
</tr>
</tbody>
</table>
5.11 Research on the Teaching Profession and Teacher Satisfaction with Basic Education in Southeast Asia

SEAMEO RETRAC
Dr. Ho Thanh My Phuong
Centre Director
htmhuong@vnseameo.org

Other SEAMEO Centres and Partners

• SEAMES

• International partners

Background

SEAMEO is looking forward to an integrated ASEAN community in the next 20 years (2015–2035) characterised by stable economics and education. SDEM released the SEAMEO 7 Priority Areas for the organisation’s post-2015 education agenda in Southeast Asia as a compass of practices from 2015 to 2035. In response to the rapidly changing demands and educational issues in the region, SEAMEO has deployed several practices in education and human resource development. Linked to the solutions identified in the “SEAMEO College Module 3: Education Leaders Innovation Forum (ELIF), Forum 2” by educational officers from regional countries, research on the teaching profession and teacher satisfaction with basic education in Southeast Asia is a must to realise deeper understanding of and practice Priority No. 5—revitalising teacher education (and making teaching profession a first choice).

This research aims to collect data from educational administrators and pre- and in-service teachers in the basic education level. It focuses on current educational scenarios in the regional countries and the satisfaction of pre- and in-service teachers to develop and build necessary policies for teacher training.
Objectives

This research primarily aims to point out existing issues on teacher education in regional countries and find out the levels of satisfaction of pre- and in-service teachers in the basic education level. The table below shows more details on the objectives of this research.

<table>
<thead>
<tr>
<th>Specific Objective</th>
<th>Main Activity</th>
<th>Indicator of Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective 1: Research key underlying issues and problems that affect current teacher education in each country</td>
<td>Online round table discussion amongst representatives from various countries on existing issues and problems Question-and-answer (Q&amp;A) session A moderator with strong knowledge and experience in relevant fields will monitor and highlight main points throughout the discussion</td>
<td>Discussion of the reports prepared by the education experts from SEAMEO Member Countries monitored by representatives from SEAMES and the RETRAC Research Team</td>
</tr>
<tr>
<td>Objective 2: Study how satisfied pre- and in-service teachers are with their benefits, roles, and opportunities for professional development</td>
<td>Data collection</td>
<td>Interviews (six) with and completed questionnaires (20) from pre- and in-service teachers in the basic education level (three schools will be selected in each country)</td>
</tr>
</tbody>
</table>

Expected Outcomes

This research involves at least 20 administrators and 99 senior teachers in the basic education level from Southeast Asia and expects to:

- Write and share a report on the overall view of teacher education in the region to enhance understanding of existing policies (inapplicable policies should be reviewed and adapted for implementation in the new context)
- Compile a list of suggested policies or innovative solutions for teacher education that is applicable to the ASEAN context

Participants

- 11 educational experts from the SEAMEO Member Countries
- Two representatives from SEAMES
- Two senior members of SEAMEO RETRAC (online round table discussion)
- 99 interviewees from the 11 SEAMEO Member Countries (nine pre- and in-service teachers per country)
- 220 teachers (survey respondents; at least 20 teachers per country)
Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete relevant documents for processing the research</td>
<td>SEAMEO RETRAC</td>
<td>2017</td>
</tr>
<tr>
<td>Submit the proposal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Find a moderator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepare contracts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Write general and detailed action plans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study the budget in detail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select participants:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• For online round table discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Local pre- and in-service teachers for interviews and the survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select the research approach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select the data-collection method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepare the contents:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Questionnaire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Guide for the online round table discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collect and code the data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online round table discussion with teachers in the elementary, junior, and senior levels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct the questionnaire survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Read, analyse, and interpret the data</td>
<td>SEAMEO RETRAC</td>
<td>2018</td>
</tr>
<tr>
<td>Write learning</td>
<td>Countries within the region</td>
<td></td>
</tr>
<tr>
<td>Release the results (policy for education training in the region)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apply the results in trial schools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow up and get feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edit results</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Write the report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disseminate the report within the region</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants (15)</td>
<td>Online meeting package</td>
<td>US$6,000</td>
</tr>
<tr>
<td>Moderator</td>
<td>Moderator</td>
<td>US$1,000</td>
</tr>
<tr>
<td>Data collection</td>
<td>Travel package</td>
<td>US$27,500</td>
</tr>
<tr>
<td>Researchers</td>
<td>Written outputs</td>
<td>US$20,000</td>
</tr>
<tr>
<td>Research support</td>
<td>Stationeries and office supplies</td>
<td>US$1,000</td>
</tr>
<tr>
<td>Communications</td>
<td></td>
<td>US$2,000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>US$57,500</td>
</tr>
</tbody>
</table>
Potential Donours

- SEAMES
- MoEs of the SEAMEO Member Countries
- ADB
- World Bank
- UNICEF
5.12 Training Workshop on Improving the Communicative English Competence of Learners in Southeast Asia

SEAMEO RETRAC
Dr. Ho Thanh My Phuong
Centre Director
htmphuong@vnseameo.org

Background

On 30 November 1965, the Ministers of Education of Southeast Asian countries established SEAMEO to develop the region through regional cooperation in education, science, and culture.

Vietnam, readmitted as a SEAMEO Member Country on 10 February 1992 by the SEAMEC, houses SEAMEO RETRAC in Ho Chi Minh City.

SEAMEO RETRAC assists SEAMEO Member Countries, especially Cambodia, Lao PDR, and Vietnam in identifying and tackling educational management problems in all levels. The centre directs its efforts on educational management issues by undertaking innovative and relevant programmes through research, training, consultancy, staff exchange, fostering regional and international partnerships, and engaging in other related activities within and outside the region. In addition, it offers language, teacher, and other training programmes in education.

SEAMEO RETRAC is looking forward to any kind of collaboration to develop human resources, especially in the field of education and English teacher training for a variety of reasons. First, improving the English communicative competence of students in all levels has been identified as one of the breakthroughs in lifting the language barrier for regional integration and student and teacher mobility.

This training workshop intends to enable teachers to solve problems with teaching English for successful communication. This is in line with one of the major aims of Vietnam’s National Foreign Language Project 2020, one of the key implementers of which is SEAMEO RETRAC. Finally, the training workshop also aims to create an environment for teachers in the region to develop their professional expertise and enhance their experience in the field of English teaching whilst building a network for professional development and cooperation.
Objectives

This training workshop aims to:

• Update and impart theoretical and practical issues in teaching English communicative competence

• Provide hands-on training in using classroom activities that enhance learners’ active participation in communication

• Develop skills for cascade training

• Build a network of language instructors for professional development

Expected Outcomes

This training workshop expects to:

• Help participants master techniques and strategies to improve learners’ communicative English competence

• Propose practical collaborative activities to promote the use of language for English learners in the community

• Enhance the participants’ ability to deliver training to or share their learning with other English teachers in their communities

• Complete a package of materials for cascade training

Participants

100 English teachers, master teachers, or trainers from Vietnam, Lao PDR, Thailand, Indonesia, Timor-Leste, Myanmar, and other interested countries in Southeast Asia

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures and hands-on activities delivered by resource persons</td>
<td>Ho Chi Min City</td>
<td>Four days in June or July 2017</td>
</tr>
<tr>
<td>Group discussions and presentations</td>
<td>Ho Chi Min City</td>
<td>Four days in June or July 2017</td>
</tr>
<tr>
<td>Micro-teaching</td>
<td>Ho Chi Min City</td>
<td>Four days in June or July 2017</td>
</tr>
<tr>
<td>Online projects</td>
<td>Online</td>
<td>Four months</td>
</tr>
</tbody>
</table>
## Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>MoEs</td>
<td>Airfare for participants</td>
<td>US$50,000</td>
</tr>
<tr>
<td>MoEs</td>
<td>Accommodations for participants</td>
<td>US$20,000</td>
</tr>
<tr>
<td>SEAMEO RETRAC</td>
<td>Three facilitators (including training, transportation, and accommodations)</td>
<td>US$30,000</td>
</tr>
<tr>
<td>SEAMEO RETRAC</td>
<td>Venue</td>
<td>US$10,000</td>
</tr>
<tr>
<td>SEAMEO RETRAC</td>
<td>Training packages</td>
<td>US$10,000</td>
</tr>
</tbody>
</table>

## Potential Donours

Any agency willing to sponsor additional workshops for participants from the 11 SEAMEO Member Countries
5.13 Training Course on Environmental Education for Sustainable Development

SEAQIS
Dr. Indarjani
www.qitepinscience.org

Background

UNESCO has identified that professional development of teachers in education for sustainable development should be a top priority. Teachers and their educators need to play a role in re-orienting transformative education to build a sustainable future (UNESCO, 2005). But good intentions for the professional development of teachers have fallen short in practice. Although taken up by enthusiasts, teacher education for sustainable development has rarely been mainstreamed and, where there are courses, is often approached within a disciplinary frame (Wals, 2009).

The most influential living creatures on Earth are humans. Learning about all environmental topics by discussing them as concepts is not enough, how we as human beings must act to face them is necessary. From past achievements and future challenges related to education in Southeast Asia, particularly those linked to the development of global development goals and ASEAN integration, one can identify a number of important driving forces that necessarily influence the future development of education in the region. These include environmental deterioration and sustainability as well as emergency conflicts and disasters (SEAMES, 2014). Education systems can at least make the effort to promote sustainable development in what they teach and in efforts to make their own institutions “green” and eco-friendly. Even less discussed, education systems must do something to sustain themselves and be resilient in the face of and to prevent, prepare for, mitigate the impact of, respond to, and recover from emergencies. This training course is one of the efforts to encourage the real implementation of environmental education in supporting sustainable development.

Since 2009, SEAQIS has been developing whole-school approaches to promote environmental education. The essence of this approach is the involvement of all parties within a school, which lead to empowerment in integrating environmental education issues into all school programmes and activities. This programme is an important part of improving the quality of science teaching and learning in schools with respect to the environment, ecosystem conservation, and sustainable development.
Objectives

This course aims to:

• Share best practices in environmental education activities related to knowledge development, skills, and values and how these support sustainable development

• Describe the science, issues, and solutions to ecosystem problems in relation to sustainable development

• Integrate sustainable development issues into science learning and assessment

• Participate in cultivating ecosystem awareness and empowering the community to support sustainable development

Expected Outcomes

Upon completing this course, the participants should be able to:

• Share best practices regarding the implementation of environmental education in their schools

• Explain the science, issues, and solutions to ecosystem problems in relation to sustainable development at the local and regional levels

• Integrate sustainable development issues into lesson plans, hands-on activities, learning materials, and published content on environmental education

• Observe examples of environmental management efforts in educational institutions as best practices

Participants

• Elementary school science teachers

• Secondary school Biology teachers

Activities and Time Line

This programme will be conducted on 1–10 August 2017. Activities comprise lectures, hands-on activities, group presentations, group work, study and cultural visits, and cultural performances.
5.14 Training Course on Science Classroom Supervision

Background

The capacities and commitment of principals and supervisors that are vital to the quality of educational outcomes and most education systems in the world require high-quality teachers and leaders working in schools. One of the main roles of school supervisors is to monitor the quality of education in schools through teachers. Monitoring activities are expected to produce a positive impact on educational quality. Monitoring instruments such as examinations, achievement tests, and self-assessment practices are covered by schools and teachers.

The term “instructional supervision” is widely used in literature to embody all efforts to improve teaching and learning. Some authors use the term synonymously with “general supervision.” Meanwhile, Richard A. Gorton (2003) stated that the core business of supervision is instructional leadership. Instructional leadership is defined as “activities engaged by one or more individuals that have as their main purpose the improvement of a person, a group, or an instructional programme.” The emphasis in this definition is on improvement, not merely maintenance, and on instructional leadership as opposed to other kinds of leadership. Whilst at the building level, an administrator is usually involved in a variety of situations that call for leadership; probably the most important area for which he or she has leadership responsibilities is the instructional programme. The instructional leadership programme comprises all of the factors and conditions within a school that influence students’ learning. Although the teacher is perhaps the most important instructional variable affecting student learning, other factors and conditions also play roles.

By understanding administrative and educational leader roles, school principals and supervisors will become more responsible for efficient school management. The leadership role has a function to ensure that successful learning can take place for all the pupils in the school. As a school leader, the principal needs to ensure that every task is actually carried out on time and in a proper manner. Furthermore, school principals and supervisors need to supervise and administer all work in school.

For this reason, the course on science classroom supervision is relevant to those who lead schools, as it will improve their competence and capacity to achieve effective school management. This, at the end, will bring schools to significantly contribute to shaping people to form a scientific society.
Objectives

This course aims to improve the competence of principals and supervisors so they can enhance the quality of science educational personnel to achieve effective school management.

Expected Outcomes

After taking this course, the participants should be able to:

- Comprehend the quality assurance framework for the continuing professional development of teachers and educational personnel
- Apply instructional management to instructional processes
- Plan achievements and issues in academic supervision in relation to science learning
- Develop school supervision programmes and science classroom supervision instruments to create an effective school
- Follow up on results of science classroom supervision

Participants

- School principals
- School supervisors

Activities and Time Line

This programme will be conducted on 1–10 August 2017. Activities comprise lectures, hands-on activities, group presentations, group work, study and cultural visits, and cultural performances.
5.15 Training on Earth and Space Science

Background

Earth is the only planet known to have an abundant and complex life. Its interlocking spheres (geosphere, hydrosphere, atmosphere, and biosphere) are dynamically balanced and sustained by energy from the sun and its core. Understanding how Earth and space systems interact, how they affect us, and how we affect them is vital for our survival (Te Kete Ipurangi, 2012).

Southeast Asia is a natural laboratory for earth sciences and astronomy. Our unique geology has been formed as a result of the interaction between three major plates—Eurasia, India-Australia, and the Pacific-Philippine Sea. Southeast Asia is characterised by extremely high rates of plate convergence, which are amongst the highest on the planet (Blumea 54, 2009). Today, we live in a time when the Earth and its inhabitants face many challenges. Our climate is changing caused by human activity. Earth scientists recognised this problem and will play a key role in efforts to resolve it. We are also challenged to develop new sources of energy that will have a minimal impact on the climate; locate new sources of metals and other mineral resources, as known sources are depleted; and determine how Earth’s increasing population can live and avoid serious threats such as volcanic activity, earthquakes, landslides, floods, and more. These are just a few of the problems whose solutions depend on a deep understanding of earth science (Hobart King).

Since 2009, SEAQIS has been developing whole-school approaches to promote earth and science education. The essence of this approach is the involvement of all parties within a school, which lead to empowerment in integrating earth and space education issues into all school programmes and activities. The purpose of this programme is even further for students who learn about earth and space science. They come to appreciate the dynamic inter-relationship that exists between the solar system, the universe, and Earth. They develop a sense of wonder and desire to explore space. This programme is an important part of improving the quality of science teaching and learning in schools with respect to human beings in relation to the solar system, the universe, and Earth. It is also relevant to Priority No. 3 of the SEAMEO 7 Priority Areas in that it prepares school leaders, teachers, students, and local communities to manage and maintain the delivery of educational services during emergencies such as conflicts, extreme weather conditions, and natural disasters.
Objectives

This training programme aims to develop teachers’ content comprehension and support the development of classroom activities related to earth and space science to improve the quality of learning in class.

Expected Outcomes

At the end of this training, the participants should be able to:

• Describe the process of rock formation
• Demonstrate how tectonic plates move and how landscapes are formed
• Establish school risk reduction and mitigation procedures
• Experience and learn about interactions in the solar system through simple activities and simulations
• Develop interactive Earth and space lessons using simple hands-on activities
• Experience and learn about the use of exemplary science teaching practices such as inquiry, cooperative or collaborative, and problem-based learning

Participants

Secondary school Physics or Geography teachers

Activities and Time Line

This programme will be conducted on 1–10 August 2017. Activities comprise lectures, hands-on activities, group presentations, group work, study and cultural visits, and cultural performances.
5.16 Training on Science and Technology Education
Leveraging Relevance-Science, Technology, Engineering, and Mathematics Education

Other SEAMEO Centres and Partners

Australian Academy of Science and Engineering (ATSE)

Background

Science and technology have changed the world for the better. Their various applications have improved the well-being of people. More people are able to benefit from advances in science and many of these outcomes may not be achievable without economic progress where science and technology again play a major role. In developed countries, the culture of discovery and innovation has been well-established within communities. Peoples’ ability to infuse the use of their hands and creativity to address the need to create better efficiency at lower industry costs have enabled them to drive economic growth and maintain global innovative supremacy. Basic knowledge in science as well as up-to-date technical know-how and innovativeness are indispensable for countries aspiring to become part of this global world. As many children and young people as possible should be educated in science, not only to prepare them to become future science specialists but also help them understand their environment and enable them to act and make informed decisions.

Many developing countries have embarked on programmes to support the development of science in schools. National science curricula have been revised, many teachers have been trained, and a substantial amount of money has been spent on laboratories and equipment to support science teaching in schools. However, despite these investments, results have not met expectations. Interest in studying science in many countries has dwindled, which could eventually affect the overall science literacy as well as the preparation of science specialists who will fill up science courses in higher education and eventually form a scientific and technological workforce.
Although various reasons can be attributed to this phenomenon, a fundamental component that needs to be addressed is the way science is taught. Poor teaching can lead to lack of interest and motivation to learn. The “International Conference on Science Education Policy and Inquiry Based Science Education for Development” organised by the International Science, Technology and Innovation Centre (ISTIC) in December 2010 clearly identified that in participating developing countries, science teaching is very much teacher centred, leaving little opportunity for pupils to develop their curiosity, conduct their own experiments, and form their own hypotheses. The conference recommended that:

• National curricula should promote the importance of learning by doing and the use of relevance evidence to test hypotheses and determine causal relationship in realistic ways relevant to livelihoods and social contexts and the development of critical thinking.

• Inquiry-based methods should be an integral part of the teacher education science curriculum and given due emphasis in the preparation of science teachers.

• IBSE should be piloted on a small scale. Its impact should then be studied and its implementation slowly expanded for wider effective implementation.

Objectives

This training concurs with the importance placed on IBSE and science, technology, engineering, and mathematics (STEM). It is also a follow-up to the recommendations of the conference.

Expected Outcomes

At the end of the training, the participants should be able to:

• Recognise the importance of IBSE in teaching science

• Experience the process of inquiry-based science teaching and learning

• Experience STEM lessons and activities

• Be aware of the latest pedagogical research and effective instructional strategies

• Produce a lesson schema to enable teachers to construct lessons that incorporate research-based instructional strategies

The training will involve a mix of presentation sessions and a series of theme-based workshops where hands-on experiential learning is the focus.
Participants

Master or selected science teachers recommended by the MoEs of the SEAMEO Member Countries

Activities and Time Line

This programme will be conducted on October 2017. Activities comprise lectures, hands-on activities, group presentations, and group work.
5.17 Annual Training Course on School Health and Nutrition Programme in Asia

SEAMEO TROPMED Thailand
Dr. Srivicha Krudsood
Deputy Director
Deputy Dean for Research and International Relations
srivicha.kru@mahidol.ac.th

Mr. Peerawat Maipanich
International Relations Officer
peerawat.mai@mahidol.ac.th

Other SEAMEO Centres and Partners

- TROPMED Network
- TROPMED Philippines
- Japanese Consortium for Global School Health Research
- Partnership for Child Development, Imperial College, London, U.K.

Background

In the past decade, rapid progress has been made across Southeast Asia in putting in place policies, strategies, and activities to support the implementation of school health and nutrition programmes in primary and secondary schools. Regional experiences and lessons learned have been instrumental in refining the programmes globally, especially with regard to sustainable programme planning. However, there is still a long way to go. New challenges are arising and more effort is needed to scale up interventions and ensure that all those in school benefit from them whilst not leaving OSY behind. Scaling up school health and nutrition activities requires sufficient human resources, which in turn increases the demand for capacity-building programmes.
In response to the need, this regional course was organised in collaboration with the faculty of Tropical Medicine of the Mahidol University, the Japanese Consortium for Global School Health Research, and Partnership for Child Development of Imperial College from London in the U.K.

The first course was organised in February 2012 with participants from Cambodia, Indonesia, Lao PDR, Myanmar, Nepal, the Philippines, Singapore, Sri Lanka, Thailand, and Vietnam. To date, six courses have been organised and participated in by more than 200 officials from MoEs and MoHs of Asian countries.

Objectives

The course places strong emphasis on building countries’ capacity and strengthening regional partnership initiatives that seek to harmonise school health and nutrition activities, thereby contributing to the achievement of EFA, the MDGs, and the SDGs. It specifically aims to:

- Strengthen global, regional, national, and local partnerships in the school health and nutrition community
- Provide evidence-based teaching that will improve school health and nutrition knowledge in Asia and beyond
- Strengthen capacities at the national and regional levels of both the health care and education sectors to support all of the school health and nutrition components

The course is delivered over a period of eight days and time is shared between lectures, workshops, and field visits.

Expected Outcomes

The participants are expected to formulate country-specific school health and nutrition action plans to address challenges and issues in their own settings.

Participants

- MoE representatives
- MoH representatives
- UN agency representatives
- Non-government organisation (NGO) representatives
### Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual conduct of the annual regional training course</td>
<td>Bangkok, Thailand</td>
<td>To be determined</td>
</tr>
</tbody>
</table>
5.18 Training Workshop on Culture in Society and in Educational Practices for Special Education Teachers

SEAMEO CHAT
Dr. Khin Lay Soe
khinlaysoe62@gmail.com

Dr. Naw Si Blut
siblutnaw@gmail.com

Other SEAMEO Centres and Partners:

SEAMEO SEN

Background

Culture is a word for people’s “way of life,” meaning the way they do things. It is seen in people’s writing, religion, music, clothes, cooking, and what they do. Different groups of people may have different cultures and it is passed on to the next generation. The meaning and concept of culture testifies to the fact that education and culture are intimately connected. In a broader sense, culture is not a part of education but it is education itself. Whatever ideals, values, and beliefs people in the society have, the aims of education will preserve them.

As the SEAMEO Regional Centre for History and Tradition (CHAT) is a centre that promotes the study of history and traditions whilst SEAMEO SEN specialises in education to support the needs of children with different disabilities, including gifted and talented children in Southeast Asia, the proposed training workshop will enhance SPED teachers’ knowledge on the cultures and traditions in Southeast Asia.

Objectives

This programme aims to:

- Enhance knowledge on the cultures and traditions of Southeast Asian countries
• Share experiences in teaching SPED from a cultural perspective
• Strengthen relationships amongst SPED teachers from the SEAMEO Member Countries

**Expected Outcomes**

The proposed programme expects to promote the capacity of SPED teachers to know the cultural traditions in Southeast Asian countries.

**Participants**

20 SPED teachers from Southeast Asia

**Activities and Time Line**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training workshop on culture in the society and educational practices for SPED teachers</td>
<td>SEAMEO CHAT Yangon, Myanmar</td>
<td>Three days (two-day workshop and one-day cultural trip) in 2019</td>
</tr>
</tbody>
</table>

**Funding Mechanism**

• MoE Myanmar
• SEAMEO CHAT
• SEAMEO SEN
PRIORITY 6
PROMOTING HARMONISATION IN HIGHER EDUCATION AND RESEARCH
6.1 Regional Centre for Tropical Biology PhD Thesis Grants Programme

Background

Building the capacity of human resources is a vital factor in enabling any organisation to achieve its vision, mission, and goals as well as contribute to societal development. Academic and research institutions are no exemptions to this. The credibility of institutions is heightened by having PhD degree holders amongst their ranks who could generate quality and useful research outputs and publications that address the needs of their stakeholders. The high cost of graduate education, however, usually restrains an academic and research institution to send staff members to pursue a PhD degree unless they find and qualify for full scholarship.

Considering its budget limitations whilst having the desire to contribute to human resource development in research in Indonesia, SEAMEO BIOTROP launched the PhD Thesis Grants Programme in 2011. The first batch of grantees consisted of six PhD students. Since then, the programme has benefitted a total of 39 individuals from 16 academic and research institutions in Indonesia.

In 2016, the centre conducted an impact assessment of the programme. This assessment showed encouraging results, as the majority of the grantees recommended the continuation of the programme within SEAMEO BIOTROP’s “10th Five-Year Development Plan,” which would start in July 2017.

Objectives

In general, this programme aims to increase the number of qualified human resources in HEIs and government research agencies where the grantees are affiliated with the expectation that they should contribute to the development of Indonesia in the area of tropical biology and natural resource management. It specifically aims to:

• Produce quality research outputs related to tropical biology that would have direct applications to address developmental concerns in Indonesia
• Provide PhD students an opportunity to work and be mentored by SEAMEO BIOTROP scientists on specific research areas that are of mutual interest to them, their institutions, and the centre

• Generate quality research papers for journal publication

• Enhance the research environment in SEAMEO BIOTROP by maximising the use of its existing facilities and equipment for the grantees’ research

Expected Outcomes

After completing this programme, the grantees are expected to:

• Complete their dissertations

• Produce draft articles for journal publication

Participants

At least five grantees per year from Indonesia

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Announce the call for proposals</td>
<td>Bogor, Indonesia</td>
<td>At least eight months before thesis research project implementation (April 2016)</td>
</tr>
<tr>
<td>Close the call for proposals</td>
<td>Bogor, Indonesia</td>
<td>Within 3–4 months after the announcement (April–July 2016)</td>
</tr>
<tr>
<td>Conduct internal and external reviews of proposals</td>
<td>Bogor, Indonesia</td>
<td>August–November 2016</td>
</tr>
<tr>
<td>Announce the results of the internal and external reviews of proposals to proponents</td>
<td>Bogor, Indonesia</td>
<td>December 2016</td>
</tr>
<tr>
<td>Conduct a seminar for presenting the proposals that passed internal and external reviews</td>
<td>Bogor, Indonesia</td>
<td>January–February 2017</td>
</tr>
<tr>
<td>Sign contracts with grantees</td>
<td>Bogor, Indonesia</td>
<td>February 2017</td>
</tr>
<tr>
<td>Monitor the implementation of the dissertation research of the grantees</td>
<td>Bogor, Indonesia (grantees will submit monthly progress and midterm project reports; ocular inspections will be done, depending on the selected research sites)</td>
<td>March–November 2017</td>
</tr>
</tbody>
</table>

Note that the same set of activities and time line is followed every year.
Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO BIOTROP</td>
<td>Full research implementation</td>
<td>US$5,000–6,000 per grantee (depending on the nature of their research; part of the research budget allocation will come from the Government of Indonesia)</td>
</tr>
</tbody>
</table>

Potential Donours

Government of Indonesia
6.2 Supporting and Harmonising Nutrition Training Programmes and Research in the Southeast Asian Region

SEAMEO RECFON
Dr. Dwi Nastiti Iswarawanti
diswarawanti@seameo-recfon.org
diswarawanti@gmail.com

Other SEAMEO Centres and Partners

- MoH Lao PDR
- MoH Vietnam
- MoH Myanmar
- MoH Cambodia
- Local governments
- University of Brawijaya, Indonesia
- MoH Indonesia
- Health Politechnique

Background

The Southeast Asian region still faces great challenges in combating malnutrition, especially amongst children and women of reproductive age. In some countries such as Cambodia, Indonesia, Lao PDR, and Myanmar, the prevalence of child stunting is a huge public health care problem, which has adverse consequences such as poor school performance and low productivity in adulthood.
Through training, research, and community development activities, SEAMEO RECFON will continue to build up human resource capacity in food and nutrition to help improve the nutritional status of communities. From 2017 to 2018, several activities will be proposed under this training programme.

MoUs with partners have been signed, including MoH Lao PDR, MoH Myanmar, MoH Indonesia (through several nutrition academies), and the National Institute of Public Health (NIPH) in Cambodia, along with some universities in Indonesia. The target groups include health care and nutrition professionals who use their knowledge and skills in universities, communities, and schools.

In the area of food and nutrition research, SEAMEO RECFON is committed to serve as the focal point for coordinating the Probiotics Working Group in Southeast Asia. This group aims to provide fora for discussion on current updates on the benefits of probiotic studies on human microbiota and clinical trial studies in Southeast Asia as well as networking activities and fruitful collaborations amongst scientists, medical associations, industries, and regulators related to probiotics.

**Objectives**

This programme aims to build the capacity of stakeholders (academia, governments, and research institutions) and programme implementers on food and nutrition through capacity building and research collaboration.

**Expected Outcomes**

This programme expects to:

- Provide training materials and action plans on the implementation of the training
- Create a multi-centre research proposal and a position paper on issues in probiotics in Southeast Asia

**Participants**

- Approximately 225 representatives from local academic institutions, programme planners, and implementers from Cambodia, Indonesia, Lao PDR, Myanmar, the Philippines, Vietnam, Malaysia, and Thailand
- At least 100 participants with relevant expertise will join the working group, along with national, regional, and international experts from Cambodia, Indonesia, Lao PDR, Myanmar, the Philippines, Vietnam, Malaysia, and Thailand
Activities and Time Line

The table below provides an overview of the activities from January to December 2017.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional training on food safety</td>
<td>Jakarta, Indonesia</td>
<td>March 2017</td>
</tr>
<tr>
<td>Roll-out of the course, Qualitative Study</td>
<td>Padang, Indonesia</td>
<td>April 2017</td>
</tr>
<tr>
<td>Roll-out of the food safety training for health care professionals</td>
<td>Vientiane, Lao PDR</td>
<td>July 2017</td>
</tr>
<tr>
<td>Roll-out of the applied nutrition assessment training for master students in nutrition</td>
<td>Phnom Penh, Cambodia</td>
<td>July 2017</td>
</tr>
<tr>
<td>Roll-out of the food safety training for health care professionals</td>
<td>Ho Chi Minh, Vietnam</td>
<td>August 2017</td>
</tr>
<tr>
<td>Roll-out of the food safety training for master students in nutrition</td>
<td>Phnom Penh, Cambodia</td>
<td>August 2017</td>
</tr>
<tr>
<td>Roll-out of the scientific writing training</td>
<td>Malang, Indonesia</td>
<td>August 2017</td>
</tr>
<tr>
<td>Regional training on nutritional assessment</td>
<td>Jakarta, Indonesia</td>
<td>September 2017</td>
</tr>
<tr>
<td>12th Southeast Asian nutrition leadership training</td>
<td>Jakarta, Indonesia</td>
<td>October 2017</td>
</tr>
<tr>
<td>Roll-out of the public health care and nutrition training for master students in nutrition</td>
<td>Phnom Penh, Cambodia</td>
<td>November 2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

- **SEAMEO RECFON** (provides support for experts mainly for the capacity-building component)

- **Local institutions** (provide support in the form of technical assistance for the preparation, implementation, and evaluation of the training)

The table below provides a funding overview for the project from January to December 2017.

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO RECFON</td>
<td>Airfare and accommodations of resource persons from SEAMEO RECFON</td>
<td>US$16,709</td>
</tr>
<tr>
<td>SEAMEO RECFON</td>
<td>Package for the in-house training-workshop</td>
<td>US$50,027</td>
</tr>
<tr>
<td>MoH Indonesia, MoH Vietnam, MoH Lao PDR, University of Brawijay</td>
<td>Operational costs during and prior to the training</td>
<td>US$2,308</td>
</tr>
</tbody>
</table>
Southeast Asia-China Educational Research Network

Background

Southeast Asia-China Education Research Network (SEA-CERN) is a network of researchers representing each Southeast Asian country’s MoE as well as NIES under MoE PRC. It differs from other research networks in that it is the only one whose education research institution members were officially recognised and designated by their respective countries’ MoEs.

The network was initiated by SEAMEO and NIES PRC in cooperation with ACC. In 2014, the 36th SEAMEO HOM and SEAMEC took note of the establishment of the network, which was previously known as “SCERN.”

Objectives

This project aims to:

• Serve as a platform for education researchers to seek, share, exchange, and generate knowledge

• Raise awareness on the importance of education research and promote a research culture in Southeast Asia and the PRC
• Enhance R&D capacities within Southeast Asia and the PRC

• Build a regional community of education research experts and advocates

**Expected Outcomes**

This project expects to promote collaboration amongst educational stakeholders in Southeast Asia and the PRC.

**Participants**

• Researchers from the MoEs of 11 SEAMEO Member Countries

• Researchers from NIES

**Activities and Time Line**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth SEA-CERN meeting</td>
<td>10th PRC-ASEAN Education Cooperation Week</td>
<td>August 2017</td>
</tr>
<tr>
<td>Publication of the National University Admission System Guidelines</td>
<td>To be determined</td>
<td>2018</td>
</tr>
</tbody>
</table>

**Funding Mechanism**

Stakeholders
6.4 Association of Southeast Asian Nations International Mobility of Students Programme

SEAMEO RIHED
Dr. Chantavit Sujatanond
Director
www.rihed.seameo.org

Other SEAMEO Centres and Partners

- National higher education authorities of participating ASEAN International Mobility of Students (AIMS) Member Countries
- Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan

Background

The AIMS Programme has had a long history. It emerged from the Malaysia, Indonesia, and Thailand (M-I-T) Student Mobility Pilot Project, which was initiated in 2009 as a collaborative programme of the governments of the three countries and SEAMEO RIHED.

The M-I-T Student Mobility Project was a pilot project that is now being turned into a full-fledged ASEAN programme. Additional Southeast Asian nations are now being invited to join the efforts of the three countries to collectively develop a regional Southeast Asian student mobility programme.

Objectives

The AIMS Programme aims to create a vibrant student mobility programme for the citizens of all of the SEAMEO Member Countries. It has been at the core of SEAMEO RIHED’s educational programmes, as indicated in its fourth “Five-Year Development Plan” to cultivate globalised human resources. To SEAMEO RIHED, student mobility has always been a key strategic element of cooperation that leads to the development of a harmonised higher education environment in Southeast Asia.
Participants

- Eight countries, 68 universities from Southeast Asia as well as Korea and Japan, and 160 participants

- Additional 100 universities from participating countries (as of 2016)
6.5 Academic Credit Transfer Framework for Asia

Supported by the ADB, SEAMEO RIHED has been implementing a policy action research project to build a common credit transfer framework called the “Academic Credit Transfer Framework for Asia (ACTFA)” to provide the Greater Mekong Sub-Region (GMS), including Cambodia, the PRC (specifically, Yunnan), Lao PDR, Myanmar, Thailand, Vietnam, and non-GMS countries, including Indonesia, Japan, South Korea, and Malaysia, a means to simplify credit transfer arrangements in higher education and promote harmonisation in higher education across Asia.

Objectives

This framework aims to promote mobility in higher education in GMS and beyond.

Expected Outcomes

This framework expects to:

- Provide participants guidelines for implementing and monitoring credit-transfer exercises in local institutions
- Provide opportunities to participants to compare information and share experiences
- Provide participants exercises on implementing the framework at the institutional and faculty levels in local institutions by means of a template
• Share the handbook and results of the project with the higher education community to seek national and regional endorsements for ACTFA

Participants

• HEIs in the GMS University Consortium (GMS-UC)

• Phase 1 (2013–2014); 10 countries (seven from ASEAN, the PRC, Japan and South Korea)

• Phase 2 (2015–present); 24 countries (seven from ASEAN, the PRC, Japan, and South Korea)

Activities and Time Line

This project will run from 2013 to 2017. More details are shown in the table below.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action research</td>
<td></td>
<td>2014</td>
</tr>
<tr>
<td>Kickoff meeting for ACTFA and the GMS-UC Project</td>
<td>Vientiane, Lao PDR</td>
<td>2015</td>
</tr>
<tr>
<td>Form the National Credit-Transfer Framework, develop the manual, and disseminate the framework</td>
<td></td>
<td>2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

Greater Mekong Sub-Region University Consortium

SEAMEO RIHED
Dr. Chantavit Sujathanond
Director
www.rihed.seameo.org

Other SEAMEO Centres and Partners
ADB

Background
SEAMEO RIHED facilitated the establishment of GMS-UC with 24 universities nominated by their respective governments (Cambodia; the PRC, specifically Yunnan and the Guanxi Zhuang Autonomous Region; Lao PDR; Myanmar; Thailand; and Vietnam).

Objectives
Supported by ADB, GSM-UC aims to build a regional platform to strengthen and accelerate cross-border collaboration amongst universities and address human resource development as well as promote the quality and excellence of higher education in GMS.

The key areas of collaboration include faculty exchange, university governance and social responsibility, credit transfer, information sharing, talent cultivation, quality assurance, and research collaboration.

Participants
24 HEIs from the six GMS countries (Cambodia, the PRC, Lao PDR, Myanmar, Thailand, and Vietnam)

Activities and Time Line
This project has been running since 2003.
6.7 Association of Southeast Asian Nations-China Network for Engineering and Technological Universities

Other SEAMEO Centres and Partners

ACC

Background

ASEAN-China Network for Cooperation and Exchanges Amongst Engineering and Technology Universities (ACNET-EngTech) was initiated in 2014 by SEAMEO RIHED in collaboration with ACC. This network is led by 17 founding member universities, comprising the PRC’s E9 universities (an alliance of nine engineering universities renowned for excellence) and eight Southeast Asian universities.

Objectives

ACNET-EngTech aims to promote collaboration in higher education, more specifically within the fields of engineering and technology, between the PRC and Southeast Asia.

Participants

17 universities from Cambodia, Indonesia, Lao PDR, Thailand, and the PRC

Objectives

This project has been running from 2014 to date.
6.8 Southeast Asian Quality Assurance Network

SEAMEO TROPMED Network
Dr. Ma. Sandra B. Tempongko
Deputy Coordinator
jolinatwoph@yahoo.com

Other SEAMEO Centres and Partners

- SEAMES
- TROPMED Malaysia
- TROPMED Philippines
- TROPMED Thailand
- SEAMEO RIHED

Background

In Southeast Asia, governments, the private sector, and all stakeholders have been working together towards fully realising “ASEAN Community 2015.” SEAMEO, as the leading organisation in education, science, and culture cooperation in the region, has initiated several projects to support ASEAN integration and the building of “ASEAN Community 2015.”

SEAMEO College is one of SEAMEO’s initiatives under the “2011–2020 SEAMEO Strategic Plan” that aims to strengthen the organisation’s capacity to promote education and social development in Southeast Asia and support regional platforms on innovations in education and human resource development towards the formation of an integrated ASEAN community.
SEAMEO College consists of a series of fora targeting four groups with four modules for education ministers, high officials, education leaders, and youth leaders. “Module 2: High Officials Country Case Study (HOCCS)” performs a dual function—to support SDEM in preparing the SDEM agenda and generate innovative solutions and policy interventions, if required, to implement decisions reached by SDEM as well as deliberate on inputs provided by policy research, in-depth case studies, and other sources and propose innovative solutions and necessary actions and interventions. It focuses on mutual recognition and harmonisation of higher education in general and, in particular, health professionals in Southeast Asia.

To fully achieve the objectives of the module, SEAMEO TROPMED Network as the lead, organised two fora and two research projects. These fora were participated in by high officials of the SEAMEO Member Countries coming from ministries of higher education and health, regulatory boards and councils, accreditation bodies for health professions, rectors and deans of medical and nursing schools, and SEAMES and relevant SEAMEO centre officials. The two research projects focused on the current state of harmonisation of medical and nursing education in Southeast Asia.

To move forward with SEAMEO’S initiative on harmonising health profession education, recommendations were provided by participants during the second forum. The main recommendation was to institutionalise a quality assurance network for Southeast Asian countries that will serve as a mechanism for harmonising health professional education towards student and professional mobility. The Southeast Asian Quality Assurance Network (SEA-QA) aims to complement the existing ASEAN Quality Assurance Network. Its specific functions, amongst others, as discussed in the forum will be to:

- Spearhead alignment activities for national core competencies with the five core competency standards of ASEAN in nursing and the ASEAN minimum standards for medicine
- Develop mechanisms for and lead activities related to harmonisation (credit-transfer systems, systems of equivalency, and minimum standards)
- Undertake capacity-building efforts to help SEAMEO Member Countries develop and enhance their own accreditation systems
- Organise information exchange platforms for different stakeholders
- Develop a common website
- Undertake research relative to issues with regard to quality assurance in health professions

This initiative is being proposed beyond SEAMEO College to contribute to harmonisation in higher education in Southeast Asia.
Objectives

This project aims to:

- Set up a quality assurance network for professional health education in Southeast Asia
- Organise workshops and fora for specific health professions (nursing and medicine)
- Serve as a platform for information sharing and discussion of issues related to credit-transfer systems, student mobility, and other issues that influence harmonisation
- Provide a common website that will contain a relevant database related to the harmonisation of health professions
- Define research needs for harmonisation
- Facilitate the implementation of research projects

Expected Outcomes

The following are the expected outputs of this initiative:

- A functional SEA-QA for professional health education
- A functional website
- Alignment of core competencies in nursing education in Southeast Asia with the five core competency standards of the ASEAN
- A memorandum of agreement (MoA) for the exchange of medical students between selected universities in Southeast Asia
- A career and technology studies (CTS) framework or system for selected health professions in Southeast Asia

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning workshop for developing the quality assurance network that will be used to implement all activities</td>
<td>Bangkok</td>
<td>1Q of the first year</td>
</tr>
<tr>
<td>Disseminate draft working paper for feedback</td>
<td></td>
<td>2Q of the first year</td>
</tr>
<tr>
<td>Finalisation of the working paper</td>
<td></td>
<td>2Q of the first year</td>
</tr>
<tr>
<td>Activity</td>
<td>Venue</td>
<td>Time Line</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>----------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>Establish the quality assurance network website</td>
<td></td>
<td>2Q of the first year</td>
</tr>
<tr>
<td>Capacity building for health professions at the regional and national levels</td>
<td>To be determined</td>
<td>3Q of the first year to the next year</td>
</tr>
<tr>
<td>Planning workshop for nursing education for alignment with the core competencies in Southeast Asia</td>
<td>To be determined</td>
<td>1Q of the second year</td>
</tr>
<tr>
<td>Action planning workshop for medical education in relation to student exchange and preparation of the draft MoA</td>
<td>To be determined</td>
<td>1Q of the second year</td>
</tr>
<tr>
<td>Workshop for developing a credit transfer system for medicine and nursing</td>
<td>To be determined</td>
<td>3Q of the second year</td>
</tr>
<tr>
<td>Establishment of a task force at the national and regional levels for developing the credit transfer system</td>
<td></td>
<td>3Q of the second year</td>
</tr>
<tr>
<td>Workshop for presenting the draft credit transfer system</td>
<td>Bangkok</td>
<td>4Q of the second year</td>
</tr>
<tr>
<td>Finalisation of the credit transfer system</td>
<td></td>
<td>1Q of the third year</td>
</tr>
<tr>
<td>Pilot utilisation of the credit transfer system</td>
<td>To be determined</td>
<td>2Q of the third year</td>
</tr>
<tr>
<td>Monitoring</td>
<td></td>
<td>Throughout the implementation of the initiative</td>
</tr>
<tr>
<td>Evaluation</td>
<td></td>
<td>4Q of the third year</td>
</tr>
</tbody>
</table>
6.9 Southeast Asian Education for Sustainable Development for Higher Education Institutions

SEAMES
Dr. Ethel Agnes P. Valenzuela
Deputy Director for Programme and Development
ethel@seameo.org

Other SEAMEO Centres and Partners

- UNESCO
- Japan Funds-In Trust
- HEIs in Southeast Asia

Background

In November 2014, the Global Action Programme (GAP) on ESD was launched during the “UNESCO World Conference on ESD” held in Aichi-Nagoya, Japan to build on the achievements of the UN Decade of ESD and create new momentum for action. GAP’s goal is to generate and scale-up action in all levels and areas of education and learning to accelerate progress towards sustainable development. GAP has five priority action areas to allow for strategic focus and partnerships, namely:

- Advancing policy
- Enhancing learning and training environments
- Building the capacities of educators and trainers
- Empowering and mobilizing the youth
- Accelerating sustainable solutions at the local level

As the lead agency for ESD, UNESCO coordinates the global implementation of GAP.
In this context, UNESCO designed the new initiative “Today for Tomorrow: Coordinating and Implementing the GAP on ESD.” Funded by the Government of Japan, the project focuses on the implementation of the five GAP priority action areas via effective global coordination.

Educators and trainers are powerful agents of change who can deliver the educational response to advance sustainable development but they must first acquire the necessary knowledge, skills, attitudes, and values to support the transition to a sustainable society.

TEIs, teacher educators, and teachers have a wide-ranging influence on policy and practice in education and development and hold key responsibilities for delivering quality education in all levels. ESD in teacher education should help re-orient the community about the practice, revisit the priorities of the programmers, and rethink methods to make education relevant and responsive to today’s global challenges.

Objectives

This project with the theme “Sustainability Begins with Teachers in Southeast Asia” aims to:

• Support TEIs to mainstream ESD in their programmes and institutions to increase the number of teachers who are appropriately qualified to deliver ESD

• Provide capacity building through a set of training workshops for deans and educators of selected TEIs to integrate ESD concepts and principles into their institutions’ curricula and teaching and learning practices

• Develop and utilise Southeast Asian ESD modules that are adapted to the contexts of the sub-region and respective countries

• Conduct a review and analysis of ESD materials, a regional survey, and a meta-analysis as inputs to the Southeast Asian ESD modules

Expected Outcomes

This project expects to result in a report on ESD in Asia and the Pacific (phase 1) from surveys and document analyses.

Participants

• 25 TEIs in five countries in Southeast Asia empowered to mainstream ESD content, methods, and principles into their programmes and institutions (phase 2)

• 25 TEIs supported to become centres that develop relevant knowledge, skills, and values to enable learners to contribute to sustainable societies (phase 3)
• Documentation of good practices on ESD implementation utilised by TEIs in Southeast Asia (phase 4)

The project’s capacity-building requirements include:

• Relevant content: Trainees will learn how to integrate critical issues such as climate change, biodiversity, DRR, and sustainable consumption and production (SCP) into teacher education programmes.

• Effective methods: Trainees will learn to design teaching and learning in an interactive, learner-centred way that enables exploratory, action-oriented learning, and steer-teaching from being transmissive and authoritarian to becoming transformative and participatory.

• Learning environments: Trainees will be further encouraged to rethink learning environments—physical as well as virtual (online)—to include sustainability principles in managing learning environments and inspire learners to act for sustainability.

• Essential competencies: Trainees will be supported in defining learning outcomes and promoting learning of core competencies that contribute to the development of sustainable societies such as critical and systemic thinking, collaborative decision making, and taking responsibility for present and future generations.

Activities and Time Line

Specifically, the project will be implemented using the phases in the table below.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
</tr>
</thead>
</table>
| **Phase 1. Preparatory Stage: Identification of leading TEIs and curating ESD materials via surveys and meta analyses**  
• The first stage will identify leading TEIs from five countries (one from each country), which will be selected from the past UNESCO or SEAMEO ESD networks, those identified or nominated by MoEs and/or Ministries of Higher Education (tentatively from Cambodia, Lao PDR, Indonesia, the Philippines, and Thailand). Lead institutions will be trained to lead the capacity building of five other TEIs on ESD.  
• This stage will also undertake a regional survey on ESD in teacher education and be part of the curation and review of existing ESD resources to identify those that can be used for training in phase 2.  
• An external consultant will be hired to conduct the review of literature and data curation and management. | January–March 2017 |
|**Phase 2. Training of Trainers (ToT) Stage: Organise a regional ToT and capacity-building workshop**  
• Leading TEIs will be convened for a one-week capacity-building workshop in Bangkok, Thailand.  
• Through the workshop, SEA-ESD modules will be developed by adapting and contextualising the prototype modules prepared by the UNESCO headquarters and the resources curated in phase 1.  
• The workshop will also prepare the five TEIs to deliver training for other TEIs in their countries. | April 2017 |
<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 3. National Training and Monitoring: Lead TEIs will conduct</td>
<td>June or July 2017–March 2018</td>
</tr>
<tr>
<td>training for other TEIs in their respective countries and monitor their progress</td>
<td></td>
</tr>
<tr>
<td>• Each TEI trained in phase 2 will conduct training workshops for at least four other TEIs in the respective countries using the SEA-ESD modules, adapted and contextualised to their countries. One dean, one department chair with an ESD background, and a teacher educator will participate from each TEI.</td>
<td></td>
</tr>
<tr>
<td>• The training is meant to strengthen the capacity of the participating TEIs to integrate ESD concepts and principles into the TEIs' curricula and teaching and learning practices.</td>
<td></td>
</tr>
<tr>
<td>• Some language experts will be hired to translate the ESD modules for the countries.</td>
<td></td>
</tr>
<tr>
<td>• Following the workshops, lead TEIs will work with the deans of the participating TEIs to support and monitor the implementation of the change projects in their respective institutions. SEAMEO and UNESCO will supervise the lead TEIs.</td>
<td></td>
</tr>
<tr>
<td>• An evaluation workshop will be organised before April 2018 in each country for the participating TEIs to review their experiences and assess outcomes with the help of UNESCO Bangkok and SEAMEO and an assessment centre from a reputable university.</td>
<td></td>
</tr>
<tr>
<td>Phase 4. Documentation and Dissemination of Project Experiences</td>
<td>August 2017–April 2018</td>
</tr>
<tr>
<td>• Project experiences will be documented as case studies.</td>
<td></td>
</tr>
<tr>
<td>• Project outcomes will be consolidated and published as a report and disseminated through SEAMEO and UNESCO platforms.</td>
<td></td>
</tr>
</tbody>
</table>

**Funding Mechanism**

- **UNESCO**
- **SEAMES**
Modernising Indonesian Higher Education with Tested European Pedagogical Practices Project

Other SEAMEO Centres and Partners

- European Union (EU)
- Turku University of Applied Sciences (TUAS), Finland
- Business Academy Aarhus (BAA), Denmark
- Inholland University of Applied Sciences, Netherlands
- University of Gdansk, Poland
- University of Seville, Spain
- Bina Nusantara University (BINUS), Jakarta
- State Islamic University of Syarif Hidayatullah (UIN), Jakarta
- Yogyakarta State University (UNY), Yogyakarta
- Widya Mandala Catholic University (UKWM), Surabaya
- Syiah Kuala University, Banda Aceh
Background

The Modernising Indonesian Higher Education with Tested European Pedagogical Practices (INDOPED) Project is co-funded by the Erasmus+ Programme of the EU to modernise Indonesian higher education with tested European pedagogical practices. It started at the end of 2015 and will last until 2018. It is conducted by five European and five Indonesian universities and SEAMEO SEAMOLEC. Six European pedagogical practices are applied to Indonesian higher education—learning by teaching, Project Hatchery, Project Module, rubrics, Innovation Camp, and gamification.

Objectives

The overall aim of the INDOPED Project is to raise the teaching capacity of Indonesian university teachers. Teachers should be more like mentors and facilitators of learning and not teachers in the traditional context. Active university-enterprise cooperation, which gives students more possibilities to enhance their competencies in real working life situations, is key for more efficient as well as cost-effective higher education.

Expected Outcomes

By introducing and sharing different learning methods from European to Indonesian university partners, it is expected to bring added value to the current Indonesian education system by updating pedagogical approaches and bridge the gap between what is taught in universities and what is required by businesses and industries. Those learning methods will put students at the centre of the learning process. Many of these methods will use multidisciplinary pedagogical approaches that allow students to prepare for challenges in the labour market.

Participants

- Lecturers and students from Indonesian universities
- TUAS, Finland
- BAA, Denmark
- Inholland University of Applied Sciences, Netherlands
- University of Gdansk, Poland
- University of Seville, Spain
- BINUS, Jakarta
- UIN, Jakarta
• UNY, Yogyakarta
• UKWM, Surabaya
• Syiah Kuala University, Banda Aceh

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDOPED kickoff meeting</td>
<td>UKWM, Surabaya</td>
<td>25–27 November 2015</td>
</tr>
<tr>
<td>INDOPED Project ceremonial opening</td>
<td>BINUS, Jakarta</td>
<td>12 April 2016</td>
</tr>
<tr>
<td>First newsletter</td>
<td>TUAS, Finland</td>
<td>June 2016</td>
</tr>
<tr>
<td>Third general project meeting</td>
<td>UNY, Yogyakarta</td>
<td>30 November–12 December 2016</td>
</tr>
<tr>
<td>Second newsletter</td>
<td>SEAMEO SEAMOLEC</td>
<td>March 2017</td>
</tr>
<tr>
<td>First INDOPED webinar</td>
<td>Online</td>
<td>20–24 February 2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

Erasmus+ Programme of the EU

Potential Donours

Ministry of Research Technology and Higher Education (RISTEK)
Open Educational Resources for Teacher Education Institutions

Background

Over the past decade, OERs have been gaining attention due to their potential to widen access to education in all levels with the integration of lifelong learning concepts both in formal and non-formal systems. They are also expected to improve the cost efficiency and quality of teaching and learning outcomes. Recognising what OERs can bring about in educational development, UNESCO convened the World OER Congress in Paris in June 2012, which announced the “2012 Paris OER Declaration.” To operationalise the declaration in the context of Southeast Asia, UNESCO, sponsored by the William and Flora Hewlett Foundation, launched a project to assist the Philippines in developing OER-based curricula for teacher education.

Taking the lead in this initiative, the Commission on Higher Education (CHED), UP Open University (UPOU), and SEAMEO in collaboration with the technical panel of CHED worked to develop OER-based materials and a framework for teaching and learning activities.

Prior to this orientation workshop, an OER experts meeting was convened on 20–21 October 2016 to review and discuss the OER learning materials developed by inviting experts from UNESCO, CHED, and relevant institutions. The meeting also addressed the assessment methods of the pilot course whilst reaching an agreement with partner education institutions that will implement the course in their frameworks of teacher education.

In stepping forward, the “OER Orientation Workshop” aims to provide a platform to directly engage with teachers from selected schools in the country to ensure their sound knowledge and understanding of OERs and how these can be utilised in learning activities.

The “OER Orientation Workshop for TEIs” will be made available on the MOOC platform of UPOU and its learning management system (LMS).
Objectives

The OER Orientation Workshop for TEIs will introduce OERs to teacher educators on 6 April 2017 at the SEAMEO INNOTECH compound in Diliman, Quezon City. The training aims to:

- Provide TEIS with information on the use of OERs for Teaching Technology Lab (TTL) phase 1 modules
- Develop the capacity of TEI administrators and teachers on identifying and using OERs
- Provide feedback on TTL courses and the LMS platform and their accessibility to TEIs
- Discuss how to move forward with TTL phase 2

Expected Outcomes

This project expects:

- Teachers to be trained on OERs
- Teachers to provide feedback on the OERs developed by CHED, UPOU, UNESCO, and SEAMES
- TEIs to participate in the pilot run of the OERs for the summer programme up to the first semester of AY2017–2018

Participants

- CHED officials
- CHED Technical Panel for Teacher Education
- CHED Technical Panel for Transnational and Distance Education
- Deans and representatives from TEIs
- Teachers of educational technology courses
- CHED Secretariat
Funding Mechanism

- CHED
- UPOU
- SEAMES
- UNESCO
- William and Flora Hewlett Foundation
PRIORITY 7
ADOPTING A 21ST-CENTURY CURRICULUM
7.1 Southeast Asian Ministers of Education Organisation Schools Network

Other SEAMEO Centres and Partners

- SEAMEO centres
- Stakeholders and partners

Background

As part of SEAMEO’s 50th anniversary, the 50 x 3 Schools Network was launched in May 2015 in hopes of developing a network platform for sharing amongst primary, secondary, and vocational schools across Southeast Asian countries.

Objectives

The SEAMEO Schools Network aims to provide opportunities and help schools develop partnerships, exchange teachers and students, share practices, participate in SEAMEO programmes, obtain scholarships and grants, and improve teachers and students’ capacity through various training activities of SEAMEO centres and partners.

Participants

Approximately 165 school members from 10 SEAMEO Member Countries, excluding Timor-Leste at the end of the application on 27 August 2015
Activities and Time Line

This project is ongoing. In fact, SEAMES has involved some schools in activities such as online Edmodo training, the “ESD Awards,” and the Asia-Pacific Centre of Educational for International Understanding (APCIEU) projects. SEAMES will also hold a discussion with regional centres during “CDM 2016” to seek coordination and support for the schools.

Funding Mechanism

- SEAMEO centres
- Stakeholders and partners
7.2 Southeast Asia Primary Learning Metrics

Other SEAMEO Centres and Partners

- SEAMEO CELLL
- SEAMEO INNOTECH
- SEAQIM
- SEAQIS
- SEAMEO RECSAM
- SEAMEO Regional Training Centre (RETRAC)
- SEAMEO SEN
- SEAMEO VOCTECH
- UNICEF Regional Office for East Asia and the Pacific (EAPRO)
- ACER

Background

The Southeast Asia Primary Learning Metrics (SEA-PLM) is a regional contextualised primary education learning assessment tool that covers the domains of reading, writing, mathematics, and global citizenship for primary school grade 5. SEA-PLM targets the SEAMEO Member Countries.
Objectives

The project aims to:

• Improve the quality of education and learning

• Provide key data and analyses to ensure that all children learn, allowing the development of interventions to reduce inequalities in learning

• Offer regional contextualised tools to explore cross-national variations to inform and improve policy strategies and programmes for equitable quality education

• Enhance in-country capacities, including the competence of national examination and assessment staff members

• Strengthen technical collaborations on learning assessment and standards across education systems in the region

Expected Outcomes

SEA-PLM will contribute to the improvement and redefinition of learning outcomes by providing culturally appropriate metrics, thereby contributing to more equitable and meaningful EFA for children across the region.

Activities and Time Line

This project is ongoing. The table below provides more details on the project.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field trial of SEA-PLM</td>
<td>Brunei Darussalam</td>
<td>2015</td>
</tr>
<tr>
<td>Field trials of SEA-PLM</td>
<td>Cambodia</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td>Lao PDR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Myanmar</td>
<td></td>
</tr>
<tr>
<td>Field trials of SEA-PLM</td>
<td>Malaysia</td>
<td>2017</td>
</tr>
<tr>
<td></td>
<td>Philippines</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vietnam</td>
<td></td>
</tr>
<tr>
<td>Regional Steering Committee</td>
<td>SEAMES as host of the online meeting</td>
<td>13 December 2016</td>
</tr>
<tr>
<td>meeting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major survey</td>
<td>Brunei Darussalam, Cambodia, Lao PDR,</td>
<td>2018</td>
</tr>
<tr>
<td></td>
<td>Myanmar, Malaysia, the Philippines, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vietnam</td>
<td></td>
</tr>
<tr>
<td>Dissemination and utilisation of</td>
<td>All SEAMEO Member Countries</td>
<td>2019–2020</td>
</tr>
<tr>
<td>the final report</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Funding Mechanism

UNICEF EAPRO country offices in the SEAMEO Member Countries (Brunei Darussalam, Cambodia, Lao PDR, Myanmar, Malaysia, the Philippines, and Vietnam)
7.3 Mathematics Region-Wide Assessment

SEAQiM
Dr. Wahyudi
Director
www.qitepinmath.org

Other SEAMEO Centres and Partners

- MoE Malaysia
- University of Hong Kong
- Bandung Institute of Technology, Indonesia

Background

SEAQiM has been developing a tool for mathematics regional assessment called “Mathematics Region-Wide Assessment (MaRWA)” which was pilot tested in 2013 and 2014.

Objectives

MaRWA was designed to assess grades 5 and 8 students’ readiness to learn mathematics. It consists of 30 items in the form of a diagnostic test. This test can be paper or computer based (online). MaRWA’s results aims to help diagnose students’ strengths and weaknesses in learning mathematics that can be used as a point of departure for teachers to improve their teaching and their students’ learning.

Expected Outcomes

The results of MaRWA can be used to improve teaching practices. Moreover, teachers can also use MaRWA’s findings as a point of departure for classroom teaching.
Activities and Time Line

This project is 75% complete. More details on which are shown in the table below.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis of MaRWA data</td>
<td>Completed</td>
</tr>
<tr>
<td>Dissemination of results through seminars and meetings</td>
<td>Completed</td>
</tr>
<tr>
<td>Implementation of MaRWA</td>
<td>September–November 2016</td>
</tr>
<tr>
<td>MARWA on Line</td>
<td>2017 onwards</td>
</tr>
</tbody>
</table>

Funding Mechanism

Cost-sharing between SEAQIM, partners, and stakeholders
7.4 Southeast Asian Basic Education Standards: Common Core Regional Learning Standards

SEAMEO RECSAM
Mr. Dominador M. Mangao
dominador_mangao@recsam.edu.my

Other SEAMEO Centres and Partners

• SEAMES
• SEAQIM
• SEAQIS
• SEAMEO SEAMOLEC
• Institute for the Promotion of Science and Technology (IPST)
• Representatives from the MoEs of the 11 SEAMEO Member Countries

Background

The goal of regional integration in developing the ASEAN community provides an opportunity for the establishing an educational policy framework for all SEAMEO Member Countries to enhance access to educational opportunities, support the development of quality basic education, and encourage regional mobility. Such a framework will support all governments as the main providers of basic education to meet the learning needs of all students.

Indeed, Priority No. 7 of the SEAMEO 7 Priority Areas—adopting a 21st-century curriculum—states that to “pursue radical reforms, systematic analysis of knowledge, skills, and values needed to effectively respond to changing global contexts, particularly to the ever-increasing complexity of the Southeast Asian economic, socio-cultural, and political environments as well as developing teachers imbued with ASEAN ideals are required to build the ASEAN community within the next 20 years (2015–2035).”
As an initiative, SEAMES established the “SEAMEO Basic Education Standards (SEA-BES).” To face the challenges of the future, 21st-century skills and competencies (Organisation for Economic Co-operation and Development [OECD], 1997) are emphasised in the proposed curriculum. These 21st-century skills encompass learning, literacy, and life skills. Other than knowledge and well-cultivated values, a competent learner should be able to use tools such as languages and technologies to convey ideas and thoughts, act autonomously based on rational decisions, and interact well with others in the community.

A well-designed and balanced curriculum will support the aim of producing children who are brave enough to face complex demands in their daily lives. The learners should grow and develop with the knowledge and skills that will allow them to find jobs, be responsible and self-reliant, and contribute to the society.

Objectives

SEA-BES aims to support the SEAMEO Member Countries in the following respects:

- Serve as an analytical tool to support the future development of a regional integrated curriculum that is necessary for ASEAN integration with emphasis on 21st-century skills
- Strengthen ASEAN collaboration on curricular standards and learning assessment across different education systems to effectively respond to the changing global context and complexity of Southeast Asia
- Promote in every member country the establishment of best practices to overcome differences in curricula
- Produce a systematic discussion process for the establishment of a regional integrated curriculum and assessment tool
- Serve as a platform for curricular and professional development for all stakeholders to develop teachers imbued with ASEAN ideals in building the ASEAN community
- Serve as a platform for SEA-PLM

Expected Outcomes

SEA-BES is a regional curricular project to develop standards. It envisions to develop standards in learning and teaching science and mathematics. Initially, SEA-BES aimed to develop learning standards in science and mathematics based on a curricular review of the SEAMEO Member Countries’ national curricula.
SEA-BES aimed to improve curricular quality, efficiency, and equity in the SEAMEO Member Countries. It expects to produce the “Common Core Regional Learning Standards (CCRLS)” that can be used as benchmark or guideline in curricular reformation in all SEAMEO Member Countries. The diagram below shows its conceptual framework.

**Definition of Terms**

- **Common**: Shared and agreed-upon standards that can be related to the national curricula of SEAMEO Member Countries.
- **Core**: Refers to aspects of a curriculum (knowledge, skills, and attitudes) that all students have access to and are expected to learn.
- **Learning standards**: Written descriptions of what students are expected to know and be able to do at a specific stage of their education. These describe educational objectives (what students should have learned at the end of a grade or grade span) but do not describe any particular teaching practice, curriculum, or assessment method.
- **Regional standards**: Standards that have been adopted by SEAMEO Member Countries for application to their national curricula.
- **Key stages**: Blocks of years covering the period of basic education—key stage 1 covers grades 1–3; key stage 2 covers grades 4–6; and key stage 3 covers grades 7–9.
Development Process of the CCRLS (Phase 1)

The “CCRLS in Science” was developed based on the strengths of the existing national educational standards of the SEAMEO Member Countries. The various activities undertaken to develop the draft of the “CCRLS in Science and Mathematics” are shown in the diagram (Mangao, Tahir, and Zakaria, 2015) below.

Pilot Implementation: Utilisation of the Common Core Regional Learning Standards in Science and Mathematics, 2017–2019 (Phase 2)

The project entitled, “Assessing Scientific and Mathematical Literacy in SEAMEO Member Countries” will be led by SEAMEO RECSAM in collaboration with:

- At least eight pilot MoEs in SEAMEO Member Countries such as Malaysia, Indonesia, the Philippines, Thailand, Myanmar, Cambodia, Lao PDR, and Vietnam
- SEAQIS
- SEAQIM
- SEAMEO Biotrop
- SEAMEO SEAMOLEC
- IPST Thailand
- UP National Institute for Science and Mathematics Education Development (NISMED), Philippines
- University of Tsukuba, Japan
- School principals of pilot schools from the 50 x 3 Schools Network
- In-country SEA-BES assessment task force
The project’s components involve:

- Development of test items in science and mathematics literacy and STEM or global citizenship via an evaluation of administration test items, analyses of test results, and reporting of test results

- Pilot-testing in at least six schools chosen from the SEAMEO 50 x 3 Schools Network by representatives from the eight MoEs (two schools per grade—grades 4 using the “Grade 3 CCRLS in Science and Mathematics,” 7 using the “Grade 6 CCRLS in Science and Mathematics,” and 9 using the “Grade 8 CCRLS in Science and Mathematics”)

At the end of phase 2, a project proposal will be submitted to source for funds to conduct the project from July to August 2017. A proposal and draft working paper on assessing scientific and mathematical literacy in SEAMEO Member Countries will also be submitted to CDM in July 2017. Pilot countries and schools will be identified from the SEAMEO 50 x 3 Schools Network in the same month. The proposed countries include Malaysia, Indonesia, the Philippines, Thailand, Myanmar, Cambodia, Lao PDR, and Vietnam. Approval to involve grades 4, 7, and 8 students will also be secured. A regional consultative meeting and workshop will then be conducted in October 2017 when funding has been made available. A project orientation and test item development workshop for grades 4, 7, and 8 will also be conducted in December 2017. Test items will be submitted and reviewed by batch (batches 1 and 2 in March and June 2018, respectively). A test administration planning and data management workshop will be held between August and September 2018. All items will be finalised from September to October 2018 then in-country test administration will be done between October and November 2018. In-country marking will follow between November and December 2018 and in-country data analysis and reporting from January 2018 to March 2019.

Participants

- SEAMEO RECSAM Project Management Team: Dr. Hj Mohd Johan bin Zakaria (Centre Director), Dr. Nur Jahan Ahmad (Deputy Director, R&D 16 March 2016–present), Dr. Suhaidah Tahir (Deputy Director, R&D until 29 February 2016), Dr. Koay Suan See (Deputy Director until 1 April 2016), Ms. Khor Sim Suan (Acting Deputy Director, 1 April 2016–present), Mr. Shamsul Azha B. M.D. Yusuf (Deputy Director, Administration), Ms. Rashihah Hj Othman (Accountant), Mr. Dominador Dizon Mangao (Specialist, R&D, Project Leader and Coordinator for Science Standards), Dr. Hj Mohd Sazali bin Khalid (Specialist, R&D, Coordinator for 2015, Mathematics Standards), and Mr. Pedro Montecillo, Jr. (Specialist, TPD, Coordinator for 2016, Mathematics Standards)

- SEAMES Project Management Team: Dr. Gatot Hari Priowirjanto (Centre Director), Dr. Ethel Agnes P. Valenzuela (Deputy Director for Programme and Development), Dr. Witaya Jeradechakul (former Centre Director), Dr. Handoko (former Deputy Director for Programme and Development), and Dr. Asmah Ahmad (Programme Officer II)
Consultants: For science education—Dr. Mark Windale (Principal Lecturer in Science Education and Director of International Programme, Centre for Science Education, Sheffield Hallam University, U.K.); for mathematics education—Prof. Masami Isoda (Faculty of Human Science and Director of Centre on International Cooperation in Educational Development [CRICED], University of Tsukuba, Tokyo, Japan); and for curricular development—Prof. Kerry J. Kennedy (Research Chair and Professor of Curriculum Studies and Director, Centre for Governance and Citizenship, Hong Kong Institute of Education)

Activities and Time Line

<table>
<thead>
<tr>
<th>Main Activity</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare the concept paper for SEA-BES for endorsement to the HOM through CDM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct the first regional consultative meeting to define SEA-BES and the next action steps</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 1: Workshops (2015–2016)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct Workshop No. 3: Benchmark with the standards of high-performing countries in science and mathematics</td>
<td>Q3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct Workshop Nos. 4–6: Develop a draft framework, aims, domains, contents, and learning outcomes of the “CCRLS in Science and Mathematics”</td>
<td>Q3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct Workshop No. 7: Second regional consultative meeting to agree on the draft framework, aims, domains, contents, and learning outcomes of the “CCRLS in Science and Mathematics”</td>
<td>Q4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct Workshop No. 8: Revise the draft framework, aims, domains, contents, and learning outcomes of the “CCRLS in Science and Mathematics”</td>
<td></td>
<td>Q1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Activity</td>
<td>2015</td>
<td>2016</td>
<td>2017</td>
<td>2018</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td><strong>Conduct Workshop No. 9: Revise the draft framework, aims, domains, contents, and learning outcomes of the “CCRLS in Mathematics” (Tsukuba University, Tokyo, Japan)</strong></td>
<td></td>
<td></td>
<td>Q1</td>
<td></td>
</tr>
<tr>
<td><strong>Conduct Workshop No. 10: Revise the draft framework, aims, domains, contents, and learning outcomes of the “CCRLS in Science and Mathematics”</strong></td>
<td></td>
<td></td>
<td></td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Conduct Workshop No. 11: With Japanese professors and SEAMEO RECSAM science and mathematics specialists (various universities in Japan)</strong></td>
<td></td>
<td></td>
<td></td>
<td>Q2</td>
</tr>
<tr>
<td><strong>Conduct Workshop No. 12: Third regional consultative meeting to finalise the “CCRLS in Science and Mathematics” and prepare action plans and design programmes to utilise the standards</strong></td>
<td></td>
<td></td>
<td></td>
<td>Q4</td>
</tr>
<tr>
<td><strong>Publish the “CCRLS in Science and Mathematics”</strong></td>
<td></td>
<td></td>
<td></td>
<td>Q1</td>
</tr>
</tbody>
</table>

**Phase 2: Pilot (preparation of action plans and programme designs and implementation of the CCRLS and Mathematics, 2017–2018)**

<table>
<thead>
<tr>
<th>Activity</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receive or collect action plans and project or programme designs from pilot MoEs</td>
<td></td>
<td></td>
<td>Q2</td>
<td></td>
</tr>
<tr>
<td>Start implementing action plans and project or programme designs in pilot MoEs</td>
<td></td>
<td></td>
<td>Q3–Q4</td>
<td>Q1–Q4</td>
</tr>
<tr>
<td>Monitor the status of pilot implementations by collecting reports from pilot MoEs</td>
<td></td>
<td></td>
<td>Q4</td>
<td>Q1–Q4</td>
</tr>
<tr>
<td>Conduct the fourth regional meeting and workshop to share best practices and challenges encountered in pilot Implementations and gather recommendations and feedback as bases for revising or refining the “CCRLS in Science and Mathematics”</td>
<td></td>
<td></td>
<td></td>
<td>Q4</td>
</tr>
</tbody>
</table>
### Funding Mechanism

<table>
<thead>
<tr>
<th>Activity</th>
<th>Amount (RM)</th>
<th>Amount (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Airfare:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 22 MoE experts (one in science and one in math = 2 x 11)</td>
<td>44,000</td>
<td>11,282.05</td>
</tr>
<tr>
<td>• Four consultants</td>
<td>10,000</td>
<td>2,564.10</td>
</tr>
<tr>
<td>• Six representatives from SEAQIS, SEAQIM, and BIOTROP; SEAMOLEC; and national science centres (IPST and UP NISMED)</td>
<td>18,000</td>
<td>4,615.38</td>
</tr>
<tr>
<td>Mileage (local) for science or mathematics lecturers and teachers (RM50 x 31 people)</td>
<td>1,550</td>
<td>397.44</td>
</tr>
<tr>
<td>Honoraria of four consultants</td>
<td>16,000</td>
<td>4,102.56</td>
</tr>
<tr>
<td><strong>Accommodations:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• RM151 x 32 rooms x 6 days</td>
<td>28,992</td>
<td>7,433.85</td>
</tr>
<tr>
<td>• RM175 x 4 people x 6 days</td>
<td>4,200</td>
<td>1,076.92</td>
</tr>
<tr>
<td><strong>Meals:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• RM250 x 32 people</td>
<td>8,000</td>
<td>2,051.28</td>
</tr>
<tr>
<td>• RM170 x 52 people</td>
<td>8,840</td>
<td>2,266.67</td>
</tr>
<tr>
<td>Domestic transportation (RM60 x 32 people)</td>
<td>1,920</td>
<td>492.31</td>
</tr>
<tr>
<td><strong>Facilities (RM160 x 30 hours)</strong></td>
<td>4,800</td>
<td>1,230.77</td>
</tr>
<tr>
<td><strong>Supplies (RM100 x 80 people)</strong></td>
<td>8,000</td>
<td>2,051.28</td>
</tr>
<tr>
<td>Management expenses (lump sum)</td>
<td>2,500</td>
<td>641.03</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>156,802</td>
<td>40,205.64</td>
</tr>
</tbody>
</table>

### Potential Donours

Any agency willing to sponsor additional workshops for participants from the 11 SEAMEO Member Countries such as the University of Tsukuba, Toho University, SEAMES, the British Council, and MoEs
7.5 Southeast Asian Ministers of Education Organisation Student Networking for Learning Science and Mathematics Together

SEAMEO RECSAM
Dr. Ng Khar Thoe
R&D Specialist
nkt@recsam.edu.my

Other SEAMEO Centres and Partners

• SEAMEO INNOTECH
• SEAMEO SPAFA
• SEAQIM
• SEAQIS
• SEAMEO SEAMOLEC

Background

SEAMEO LeSMaT (Borderless) is a project formerly known as the “SEAMEO Borderless School Project.” SEAMEO LeSMaT (Borderless) is also in line with the SEAMEO 7 Priority Areas responds to the ever-increasing complexity of the Southeast Asian economic, socio-cultural, and political environments, developing teachers imbued with ASEAN ideals in building the ASEAN Community within the next 20 years (2015–2035) or Priority No. 7.
Objectives

The inter-disciplinary curricular resources that will be developed as part of values-based ODL modules aim to:

- Enhance knowledge acquisition and promote critical-thinking skills
- Improve knowledge sharing by promoting technological and life (work, entrepreneurial, or survival) skills for sustainable living in a borderless world amongst learners with diverse backgrounds in the region and beyond (The draft output may be prepared in the form of an interactive d-book or an ODL module.)

Expected Outcomes

This project expects to:

- Revise the CADRED module that is facilitated through the ODL or blended-learning mode
- Guide students (as part of their co-curricular activities) in producing evidence-based learning outputs and/or research data that can be in the form of an e-portfolio, a project or a research report, e-forum posts or responses, or online quiz or e-survey feedback

Participants

- In-service science or mathematics teachers and students from selected pilot project schools in the 11 SEAMEO Member Countries
- Experts and consultants from TEIs, colleges, and universities from the SEAMEO Member and other countries
- Officers from SEAMEO INNOTECH, SPAFA, SEAQIM, SEAQIS, and SEAMOLEC

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refinement of the SEAMEO LeSMaT (Borderless) CADRED module to consider OERs, copyright, and proofreading issues with R&amp;D activities to produce research models using digital platforms and statistical tools (Smart PLS) and evidence of exemplary practices through ODL</td>
<td>SEAMEO RECSAM Selected SEAMEO pilot schools</td>
<td>16–19 May 2017 Between May and September 2017</td>
</tr>
</tbody>
</table>
Workshop on training trainers to produce a critical mass of educators who are advocates and facilitators of ESL through LeSMaT integrating TEL (Edmodo, Facebook, and LAMS)

SEAMEO RECSAM
Selected SEAMEO pilot schools
16–19 May 2017
14–17 August 2017

Promoting thinking, technological, and life skills through trans-disciplinary mathematics and science education that integrates active learning approaches to encourage LearnT-SMArET in a borderless world

SEAMEO RECSAM
Selected SEAMEO pilot schools
14–17 August 2017

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop on training trainers to produce a critical mass of educators who are advocates and facilitators of ESL through LeSMaT integrating TEL (Edmodo, Facebook, and LAMS)</td>
<td>SEAMEO RECSAM Selected SEAMEO pilot schools</td>
<td>16–19 May 2017 14–17 August 2017</td>
</tr>
<tr>
<td>Promoting thinking, technological, and life skills through trans-disciplinary mathematics and science education that integrates active learning approaches to encourage LearnT-SMArET in a borderless world</td>
<td>SEAMEO RECSAM Selected SEAMEO pilot schools</td>
<td>14–17 August 2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO RECSAM</td>
<td>Local hospitality (food, facilities, materials, printouts, and local travel) Events management Coordinators, reporters, and resource persons</td>
<td>US$5,500 (RM25,000 for two workshops in May and August 2017)</td>
</tr>
<tr>
<td>Japanese research grant or funding unit</td>
<td>Airfare of key speakers and facilitators</td>
<td>US$3,000</td>
</tr>
<tr>
<td>MoE</td>
<td>Workshop package that includes accommodations and registration packs</td>
<td>US$3,000 each</td>
</tr>
<tr>
<td>SEAMEO Centres (SEAMEO INNOTECH, SPAFA, SEQIM, SEAQIS, and SEAMOLEC)</td>
<td>Airfare of resource persons</td>
<td>US$2,000 each</td>
</tr>
</tbody>
</table>

Potential Donours

- Tsukuba University, Japan for d-book software and consultant sponsorship
- LAMS International for the software and webmaster (for technical inputs or advice and assistance) sponsorship
- Edmodo International for platform and technical advice sponsorship
- Any agency willing to sponsor additional workshops or field studies for the participants from the 11 SEAMEO Member Countries
Regional Intellectual Exchange Forum on Adopting and Integrating 21st-Century Skills into Basic Education Curricula in Southeast Asian Countries

SEAMEO RETRAC
Dr. Ho Thanh My Phuong
Centre Director
htmphuong@vnseameo.org

Other SEAMEO Centres and Partners
SEAQIS

Background

Due to rapidly changing educational demands and to enhance the competency of students, a wide range of questions have been raised for educators, researchers, and practitioners, especially on integrating 21st-century skills into teaching and learning (UNICEF, 2015). In addition, Dede (2010) mentioned that students need to be prepared for jobs that do not exist yet. In response to such urgency, SEAMEO RETRAC is looking into implementing a regional intellectual exchange forum on adopting and integrating 21st-century skills into basic education curricula in Southeast Asian countries.

This forum falls within the SEAMEO 7 Priority Areas. It has been designed for secondary educational administrators and practitioners in Southeast Asia.

For such a special context and with its mission of assisting SEAMEO Member Countries in identifying and solving common problems in educational administration and management, SEAMEO RETRAC will serve as a suitable body to conduct an intellectual exchange forum for the sharing of innovative practices, approaches, and solutions to enhance the adoption and integration of 21st-century skills into curricula.
In addition, the forum is expected to provide opportunities for networking with those involved, including presenters, facilitators, and participants from Southeast Asian countries to help identify challenges as well as discuss and come up with initiatives for educational improvement.

Objectives

This forum aims to:

• Find innovative solutions to adopt and integrate 21st-century skills into basic education curricula

• Create a shared platform for intellectual exchange on adopting and integrating 21st-century skills into existing curricula

Expected Outcomes

This forum expects to:

• List innovative solutions to adopt and integrate 21st-century skills into basic education curricula

• Develop a network of educators and educational practitioners to promote 21st-century skills education

As proposed, the forum will be held on the third week of November 2017 at the SEAMEO RETRAC headquarters in Ho Chi Minh City, Vietnam.

Participants

Three participants from each of the 11 SEAMEO Member Countries

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept note development</td>
<td>January 2017</td>
</tr>
<tr>
<td>Designing the forum agenda</td>
<td>February 2017</td>
</tr>
<tr>
<td>Distributing the information to the 11 SEAMEO Member Countries</td>
<td>March 2017</td>
</tr>
<tr>
<td>Selecting and inviting resource persons</td>
<td>April 2017</td>
</tr>
<tr>
<td>Selecting and finalising forum participants</td>
<td>June 2017</td>
</tr>
<tr>
<td>Forum organisation</td>
<td>October 2017</td>
</tr>
<tr>
<td>Report creation</td>
<td>November 2017</td>
</tr>
</tbody>
</table>
Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMES</td>
<td>Airfare and accommodations of two resource persons</td>
<td>US$2,000</td>
</tr>
<tr>
<td>Donour</td>
<td>Honoraria for two resource persons</td>
<td>US$3,000</td>
</tr>
<tr>
<td>Donour</td>
<td>Airfare for 33 participants</td>
<td>US$20,000</td>
</tr>
<tr>
<td>Donour</td>
<td>Accommodations for 33 participants</td>
<td>US$6,000</td>
</tr>
<tr>
<td>Donour</td>
<td>Per diem of the 33 participants</td>
<td>US$5,000</td>
</tr>
<tr>
<td>Donour</td>
<td>Forum support</td>
<td>US$3,000</td>
</tr>
<tr>
<td>SEAMEO RETRAC</td>
<td>Meeting package (venue, equipment rental, and local transportation)</td>
<td>US$3,000</td>
</tr>
</tbody>
</table>

Potential Donours

Any funding agency willing to sponsor the forum
7.7 Southeast Asia Digital Class
Phase 2: Intervention Study

SEAQiS
Dr. Indarjani
Deputy Director for Programme
secretariat@seameo.org

Other SEAMEO Centres and Partners

- SEAMEO SEAMOLEC
- SEAQIM

Background

Records of achievements of the SEAMEO Member Countries in science and mathematics show an uneven and irregular trend. Considering the importance of these two subjects, particularly in the pursuit to promote a curriculum that truly addresses the realities and requirements of the 21st century and support ASEAN integration, it is necessary to develop curricula that respond to the needs and contexts of the Southeast Asian countries.

The region’s large geographical coverage and the huge number of teachers pose big challenges in developing a curriculum that is practical, useful, and functional. To address this issue and in hopes of satisfying the SEAMEO 7 Priority Areas, SEAQiS proposed the creation of the “ICT-Based 21st-Century Curriculum for Science and Mathematics in the Context of Southeast Asia.”

This initiative will focus on identifying learning domains in science and mathematics that are generic to all Southeast Asian countries. It will consider realities in the region with regard to technologies, national policies, learning contexts, and conditions. ICT use will allow speedy and efficient transmission of science and mathematics content and teaching-learning materials throughout the region. This will leverage the existing connectivity of students, teachers, schools, and educational institutions within SEAMEO Member Countries to make the regional vision to become a fully integrated community a reality. This will thus help define what a 21st-century curriculum truly is for Southeast Asian countries.
The first phase of this programme was a diagnostic test that served as a baseline study to map students' skills in mathematics and science and their readiness to adopt 21st-century skills. The students' readiness was determined according to the scores they got on the test. The test targeted grades 5, 8, and 10 students from 10 SEAMEO Member Countries (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand, Timor-Leste, and Vietnam).

Overall, the data revealed that most grade 5 Southeast Asian students were not ready (both in science and mathematics). The situation for grade 8 students differed, meanwhile. Data showed that they were ready to adopt a 21st-century curriculum in both mathematics and science. Grade 10 students were mostly not ready. Admittedly, students in the participating countries had varying strengths and weaknesses with regard to science and mathematics.

As such, SEAQIS proposed an intervention study based on the results of the first phase of the project. This intervention will promote STEM education to address challenges in improving students’ thinking skills for science and mathematics as well as the 21st-century skills mentioned in the SEAMEO 7 Priority Areas.

In the long run, STEM education will be a powerful and productive driving force of economic growth. A strong STEM education system will provide the essential foundation for an innovative and scientifically literate culture that helps individuals function effectively within a science-and-technology-based society. It provides an ever-widening range of career opportunities and builds the productive capacity required to drive a prosperous economy and enhance citizens’ well-being in an increasingly competitive world.

Objectives

This intervention study aims to:

- Formulate a type of intervention needed based on results gathered from phase 1 of the programme
- Develop strategies, materials, and instruments for intervention activities
- Implement intervention activities for target participants

Expected Outcomes

This study expects to come up with a report on how the intervention activity impacted the target participants’ science and mathematics cognitive thinking levels.

Participants

Grades 5 and 8 science teachers and students from the 10 SEAMEO Member Countries that were involved in the first phase of the project
Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programme preparation</td>
<td>SEAQIS</td>
<td>March 2017</td>
</tr>
<tr>
<td>Workshop on formulating the intervention</td>
<td>SEAQIS</td>
<td>April 2017</td>
</tr>
<tr>
<td>study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials and instruments development</td>
<td>SEAQIS</td>
<td>May–July 2017</td>
</tr>
<tr>
<td>Coordination meeting with partner Centres</td>
<td>SEAQIS</td>
<td>August 2017</td>
</tr>
<tr>
<td>Intervention study implementation</td>
<td>10 SEAMEO Member Countries</td>
<td>August–October 2017</td>
</tr>
<tr>
<td>Reporting</td>
<td>SEAQIS</td>
<td>October 2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAQIS</td>
<td>Workshop on formulating the intervention study, programme preparations,</td>
<td>US$30,000</td>
</tr>
<tr>
<td></td>
<td>materials, and instruments development</td>
<td></td>
</tr>
<tr>
<td>SEAQIS SEAQIM</td>
<td>International airfare of resource persons, accommodations, and stipends</td>
<td>US$2,750 per centre per country</td>
</tr>
<tr>
<td>SEAMOE SEAMOLEC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEAMEO Member Countries’ MoEs</td>
<td>Sharing funding</td>
<td></td>
</tr>
</tbody>
</table>
7.8 Mobile Application Language Learning Development Through the Mobile Application Goethe-Institute and Southeast Asia Regional Open Learning Centre Camp

Other SEAMEO Centres and Partners

- Goethe Institute Jakarta
- MoE Thailand
- MoE Malaysia

Background

Mobile-based learning is an important movement to unlock the full potential of students. With its capability to support anywhere and anytime learning, mobile learning is not only providing flexibility in learning but also supports three pillars of learning activities—individual, collaborative, and situated learning. In terms of language learning, mobile-assisted language learning has become increasingly common.

Since 2013, to enhance German language learning for Indonesian students, Goethe Institute Jakarta as a cultural institute of the Federal Republic of Germany for regional Southeast Asia, Australia, and New Zealand, in collaboration with SEAMEO SEAMOLEC, established the Mobile Application Goethe-Institute and SEAMOLEC (MAGIS) Camp.
MAGIS Camp is a one-week workshop for high-school students to develop mobile learning apps for German learning. During the workshop, students will work in groups of three (programmer, designer, and content developer). The Goethe-Institute will assist students in terms of German language learning as content for the app and SEAMEO SEAMOLEC will assist them on mobile programming and app design.

Objectives

This project aims to:

• Provide real-time work experience for students in building teamwork and working with others

• Provide a place for students to have a network or colleagues and share their culture with others

Expected Outcomes

This project is expected to encourage creativity amongst students to design and develop mobile-based apps.

Participants

MAGIS Camp has been conducted five times with 20–30 high-school students each.

<table>
<thead>
<tr>
<th>Event</th>
<th>Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAGIS Camp Indonesia 2013</td>
<td>10 Indonesian programmers</td>
</tr>
<tr>
<td></td>
<td>10 Indonesian content developers</td>
</tr>
<tr>
<td>MAGIS Camp Thailand 2014</td>
<td>10 Thai programmers</td>
</tr>
<tr>
<td></td>
<td>10 Thai content developers</td>
</tr>
<tr>
<td>MAGIS Camp Indonesia 2014</td>
<td>10 Indonesian programmers</td>
</tr>
<tr>
<td></td>
<td>10 Indonesian designers</td>
</tr>
<tr>
<td></td>
<td>10 Indonesian content developers</td>
</tr>
<tr>
<td>Regional MAGIS Camp 2015</td>
<td>10 programmers: Seven Indonesians and three Thais</td>
</tr>
<tr>
<td></td>
<td>10 designers: Seven Indonesians and three Thais</td>
</tr>
<tr>
<td></td>
<td>10 content developers: Seven Indonesians and three Thais</td>
</tr>
<tr>
<td>Regional MAGIS Camp 2016</td>
<td>10 programmers: Four Indonesians, three Malaysians, and three Thais</td>
</tr>
<tr>
<td></td>
<td>10 designers: Four Indonesians, three Malaysians, and three Thais</td>
</tr>
<tr>
<td></td>
<td>10 content developers: Four Indonesians, three Malaysians, and three Thais</td>
</tr>
</tbody>
</table>
Activities and Time Line

The MAGIS Camp usually lasts nine days, including two days for arrival and departure and one day for a cultural visit. On the first day, the German language students are introduced to various forms of training and competence building using training content. Meanwhile, the IT and design students get technical training to deepen their knowledge.

On the following days, the participants are introduced to the Start-Deutsch-1 level exam to orient them with the materials for the app. The winners of last year’s MAGIS Camp were invited to share their experiences and give feedback to participants. After the second session, the participants will be divided into groups of three (programmer, graphic designer, and content developer). Each group will work together to plan their app and present its design to get feedback from the SEAMEO SEAMOLEC and Goethe-Institute facilitators.

After completing their app design, the students will start developing their apps. The Goethe Institute facilitators will review all content whilst the SEAMEO SEAMOLEC facilitators will assist the programmers and designers with their work. Students from German International School as native speakers were also invited to the camp. The participants can record their voices for use as app-integrated audio. Again, participants will present their apps and get feedback.

At the end of the camp, the participants will be given enough time to complete their apps. The group with most downloaded app and is the best in terms of both language teaching technique and design will be selected as winner. The results of these workshops can be found in the Google Play Store using “MAGIS Camp SEAMOLEC” as search keyword.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAGIS Camp Indonesia 2013</td>
<td>Park Hotel, Jakarta, Indonesia</td>
<td>17–23 May 2013</td>
</tr>
<tr>
<td>MAGIS Camp Thailand 2014</td>
<td>TGDE King Mongkut’s University of Technology North Bangkok, Thailand</td>
<td>Technical workshop: 6–10 October 2014</td>
</tr>
<tr>
<td>Regional MAGIS Camp 2015</td>
<td>Aston Hotel Bogor, West Java, Indonesia</td>
<td>18–25 October 2015</td>
</tr>
</tbody>
</table>

In 2017, this workshop will be conducted in Indonesia and secondary schools from five countries, including Indonesia, Malaysia, the Philippines, Thailand, and Vietnam will be invited.

Funding Mechanism

• Joint funding by SEAMEO SEAMOLEC and the Goethe-Institute
• MoE Malaysia
• MoE Thailand
Potential Donours

• SEAMEO INNOTECH
• SEAQIL
• SEAMEO RELC
• MoEs of the SEAMEO Member Countries
• Other cultural institutes for language learning mobile app development
• SEAMEO RIHED
7.9 Pilot-Testing the Open and Distance Learning Programme for Secondary Schools in West Java

SEAMEO SEAMOLEC
Ms. Arie Susanty
susanty@seamolec.org

Other SEAMEO Centres and Partners

MoEC Office, West Java

Background

The rapid development of educational science requires lifelong learning. As such, the creation of a flexible education system and learning environment is needed. Distance learning systems have become a significant innovation in education in the 21st century. They demonstrated their ability to meet a wide range of learning needs and different types of learners.

The “Law of the Republic of Indonesia No. 20, 2003” regarding the “National Education System” required the formulation of distance education in chapter 6, article 31, which states that:

• Distance education is conducted on all paths, levels, and types of education.

• Distance education provides educational services to community groups that are unable to access face-to-face or regular education.

• Distance education is organised in various forms, modes, and scopes supported by learning facilities, services, and assessment systems that ensure that the quality of the graduates meet the national education standards.

• The provisions regarding distance education as referred to above shall be further regulated by the government.
"MoEC Regulation No. 119, 2014," meanwhile, stated that distance education is conducted to further expand access to and equity with regard to education as well as improving the quality and relevance of primary and secondary education. As such, distance education is an open, self-study, and compulsory form of learning mediated by ICT or other educational technologies. Through the distance education system, individuals can access quality education without leaving home or work.

The “Medium-Term Development Plan of West Java, 2013–2018” states its vision as “building a qualified and competitive community” and its mission as “improving the quality and competitiveness of the West Java community through excellent, affordable, equitable, and open education.” To realise its vision and mission, the government launched free education from elementary to high school.

West Java has the second-lowest enrolment after Papua. In AY2013–2014, the West Java enrolment had a 10% gap with the target. It was said that 247,067 students are not able to continue to high school. In AY2014–2015, the junior high school data showed that the total number of students should be 703,747. The school capacity only provided for 469,567 students so 234,180 students cannot continue to high school.

To overcome the disparity in school capacity, the government through the Office of Education implemented several excellent programmes, including new classroom and school development and afternoon school and C package programme implementation. The results, however, have yet to meet the target enrolment number.

A big reason for this is the insufficient physical capacity of secondary schools in West Java. Other factors include low income of parents and remoteness of students’ residence. To accelerate progress, the West Java Provincial Education Office developed models of Open High School (SMA Terbuka) and Distance Learning Vocational Schools (PJJ pada SMK). These were developed from existing high and vocational schools with additional learning places (TKBs) in certain areas that cannot be reached by regular high schools. These new programmes require implementation guidelines as reference for all parties involved.

**Objectives**

This project aims to:

- Improve access to and the quality and relevance of secondary education to achieve the target high-school enrolment in Indonesia
- Improve access to secondary education for junior-high-school graduates who cannot continue studying due to economic, geographical, time, social, and cultural constraints
- Increase the enrolment number
- Improve the quality of and access to education through a distance education system, especially in West Java
Expected Outcomes

This project expects to implement the open high school model throughout Indonesia and Southeast Asia as a special service education unit for junior high school graduates who cannot attend regular high or vocational schools. It will allow the establishment of an independent learning system in collaboration with businesses and industries by combining distance learning systems with Internet use.

Furthermore, this project is expected to reduce unskilled labour and provide the widest range of possible learning opportunities for those who cannot attend regular high schools.

Participants

- Junior-high-school graduates in West Java
- 200 high schools in West Java
- 10,000 learning units in West Java
- ODL teachers
- ICT-trained learning place tutors

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blueprint development for distance learning in Indonesia, especially in West Java</td>
<td>January–February</td>
</tr>
<tr>
<td>Workshop on guidelines and references for distance learning</td>
<td>5–9 February</td>
</tr>
<tr>
<td>Workshop on instructional design development for distance learning</td>
<td>16–21 April</td>
</tr>
<tr>
<td>Online assistance provision for instructional design development</td>
<td>22 April–19 May</td>
</tr>
<tr>
<td>Workshop on digital learning materials development</td>
<td>20–24 May</td>
</tr>
<tr>
<td>Online assistance provision for digital learning materials development</td>
<td>24 May–15 June</td>
</tr>
<tr>
<td>Establishment of open high or distance learning vocational schools</td>
<td>20 May</td>
</tr>
<tr>
<td>Implementation of student candidate data collection</td>
<td>23 May</td>
</tr>
<tr>
<td>Trial of LMS and the academic information system (IS)</td>
<td>10–14 July</td>
</tr>
<tr>
<td>Implementation of LMS and academic IS in high or distance learning vocational schools</td>
<td>17–21 July</td>
</tr>
<tr>
<td>Open high school student enrolment</td>
<td>7–25 August</td>
</tr>
<tr>
<td>Open high school AY begins</td>
<td>September</td>
</tr>
<tr>
<td>Monitoring for first semester via the LMS and academic IS</td>
<td>September–December</td>
</tr>
</tbody>
</table>
## Activity Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation of open high school implementation in the first semester</td>
<td>December</td>
</tr>
<tr>
<td>Monitoring and evaluation of the distance learning programme in West Java, Indonesia</td>
<td>January–February</td>
</tr>
<tr>
<td>Preparing for the distance learning programme in West Papua, Indonesia</td>
<td>February–March</td>
</tr>
<tr>
<td>Distance learning programme preparations for Kinabalu, Malaysia, Lao PDR, and Cambodia</td>
<td>February–March</td>
</tr>
<tr>
<td>Maintenance of the LMS and academic IS for West Java, Indonesia</td>
<td>January–December</td>
</tr>
<tr>
<td>Analysis and blueprint development for Malaysia, Lao PDR, and Cambodia</td>
<td>March</td>
</tr>
<tr>
<td>Workshop on guidelines and references for distance education in Southeast Asia</td>
<td>April</td>
</tr>
<tr>
<td>Digital materials development workshop</td>
<td>To be determined</td>
</tr>
<tr>
<td>Assistance provision for digital materials development</td>
<td>To be determined</td>
</tr>
<tr>
<td>Trial of the LMS and academic IS in Southeast Asia</td>
<td>To be determined</td>
</tr>
<tr>
<td>Workshop on the LMS and academic IS for Open Secondary Schools in Southeast Asia</td>
<td>To be determined</td>
</tr>
<tr>
<td>Open secondary school admission and AY start in Southeast Asia</td>
<td>To be determined</td>
</tr>
<tr>
<td>Monitoring for the first semester via the LMS and academic IS in Southeast Asia</td>
<td>To be determined</td>
</tr>
<tr>
<td>Evaluation of open high school implementation in the first semester in Southeast Asia</td>
<td>To be determined</td>
</tr>
</tbody>
</table>

## Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure Type</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO SEAMOLEC</td>
<td>Training and workshops Model distance learning IS Model curriculum</td>
<td>US$100,000 Model curriculum US$50,000 Model distance learning IS</td>
</tr>
<tr>
<td>Provincial Education Office</td>
<td>Preparation of teachers and tutors Preparation of students Operation costs Preparation of learning facilities Setting up of learning tools</td>
<td>US$500,000 (depending on the number of students; West Java’s target is 50,000)</td>
</tr>
<tr>
<td>Directorate General of Primary and Secondary Education, MoEC</td>
<td>Preparation of teachers and tutors Training and workshops Preparation of students Operation costs Preparation of learning facilities Setting up of learning tools</td>
<td>US$500,000 (depending on the number of students; West Java’s target is 50,000)</td>
</tr>
</tbody>
</table>
Potential Donours

- MoEs of the Southeast Asian countries
- Company or industry that assisted and cooperated with schools
- Ministries of Social Affairs of the Southeast Asian countries
- Ministries of Communications and Informatics of the Southeast Asian countries
7.10 Development of Southeast Asia Regional Open Learning Centre Innovative Education Resources and a Community Radio Technology as Alternative Solutions for Remote Areas Without Internet Connection

SEAMEO SEAMOLEC
Mr. Fazhar Restu Fauzi
fazhar@seamolec.org

Other SEAMEO Centres and Partners

• SEAQIS
• ICT Centre, MoEC Indonesia
• Directorate of Literacy and Equity of Education, MoEC Indonesia
• MoEC Office, West Java
• SEAQIL
• SEAMEO BIOTROP
• SEAQIM
• SEAMEO CHAT
• SEAMEO INNOTECH
Background

Southeast Asia has distinct geographical features. Countries ranging from India to the PRC and are generally divided into a mainland and several islands. This causes challenges and unequal dissemination of education in terms of both access and quality. A huge gap lies between big cities and remote areas in terms of educational quality and dissemination. This condition should not be allowed because education is a basic privilege. ICT use can solve this problem. Unfortunately, some remote areas do not even have electricity, which is needed for ICT use.

In response to this, SEAMEO SEAMOLEC launched called “SEAMOLEC Innovative Education Resources for Remote Area (SIERRA)” in April 2016 during the SDEM meeting held in Bandung, West Java. SIERRA is a server-based storage media technology that allows students to learn by accessing learning materials in form of videos, audio files, and 60,000 content compiled in an offline site using their smartphones or personal computers. Users can simply access the media through a local area network (LAN).

SIERRA can be used as a self-directed learning medium. It offers offline tests or exams and storage that can be accessed from a virtual library. With very low electrical power consumption, this technology works at maximum capacity. As an intranet, it can also be accessed wirelessly or via an Ethernet-cable-based technology (LAN). SIERRA has been installed in three locations in Indonesia—Bandung Barat (West Java), Ternate (North Maluku), and Aceh Jaya (Nangroe Aceh Darussalam)—and one location in Malaysia—Kinabalu (Sabah).

Another technology developed by SEAMEO SEAMOLEC for remote areas is frequency modulation (FM) radio that has been installed in areas with limited access to the Internet. This FM radio broadcasts audio learning media developed by the best teachers in their fields. It can also be accessed through a customised frequency and listeners can enjoy broadcasts via their own radios.

Objectives

This project aims to:

• Improve access to media or learning resources in remote areas
• Improve ICT utilisation in teaching and learning, especially in remote areas
• Enrich learning media for teachers

Expected Outcomes

SIERRA and the FM radio technology were developed and designed specifically to anticipate challenges in education in remote areas. These two technologies are expected to be widely utilised by students and teachers. They should also improve access to learning resources in areas with limited access to the Internet.
Participants

- Teachers and students in remote areas
- Schools that serve as distance education providers
- Kids of farmers in plantations areas who want to learn and have media to enrich their learning activities

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop teaching materials for SIERRA and the FM radio technology</td>
<td>West Java</td>
<td>January–April 2017</td>
</tr>
<tr>
<td>Install radio system in a pilot school</td>
<td>SMKN 4 Padalarang, West Java</td>
<td>May 2017</td>
</tr>
<tr>
<td>Update SIERRA’s OS</td>
<td>SEAMEO SEAMOLEC</td>
<td>July 2017</td>
</tr>
<tr>
<td>Test SIERRA and the FM radio technology in PJJ Jabar</td>
<td>SMKN 11 Bandung</td>
<td>July–August 2017</td>
</tr>
<tr>
<td></td>
<td>SMKN 1 Leuwiliang</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SMKN 4 Padalarang</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SMAN 2 Padalarang</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(West Java)</td>
<td></td>
</tr>
<tr>
<td>Check and update SIERRA in Kinabalu Malaysia</td>
<td>Sekolah Indonesia Kinabalu, Malaysia</td>
<td>August–September 2017</td>
</tr>
<tr>
<td></td>
<td>(Indonesia International School of Kinabalu)</td>
<td></td>
</tr>
<tr>
<td>Install SIERRA in West Java</td>
<td>West Java</td>
<td>August–September 2017</td>
</tr>
<tr>
<td>Research on using SIERRA and the FM radio technology in remote areas</td>
<td>SMKN 4 Padalarang, West Java</td>
<td>October–December 2017</td>
</tr>
<tr>
<td>Install SIERRA in Southeast Asia</td>
<td>Cambodia</td>
<td>To be determined (2018)</td>
</tr>
<tr>
<td></td>
<td>Lao PDR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Myanmar</td>
<td></td>
</tr>
<tr>
<td>Workshop on SIERRA use in Southeast Asia</td>
<td>Selected countries</td>
<td>To be determined (2018)</td>
</tr>
</tbody>
</table>

Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure Type</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO SEAMOLEC</td>
<td>SIERRA workshop and training&lt;br&gt;SIERRA testing&lt;br&gt;Development of audio teaching materials for the FM radio technology&lt;br&gt;Development of the SIERRA operating system (OS)&lt;br&gt;Development of the SIERRA platform</td>
<td>US$100,000</td>
</tr>
<tr>
<td>Local governens (provincial)</td>
<td>Procurement of SIERRA&lt;br&gt;Hardware and radio hardware&lt;br&gt;SIERRA workshop and training&lt;br&gt;License for FM radio technology</td>
<td>US$150,000</td>
</tr>
<tr>
<td>Unit Responsible</td>
<td>Expenditure Type</td>
<td>Estimated Budget</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>MoE</td>
<td>Procurement of SIERRA Hardware and radio hardware</td>
<td>US$100,000</td>
</tr>
<tr>
<td></td>
<td>SIERRA workshop and training</td>
<td></td>
</tr>
<tr>
<td></td>
<td>License for FM radio technology</td>
<td></td>
</tr>
</tbody>
</table>

**Potential Donors**

- Ministry of Communication and Informatics, Indonesia
- SEAQIM
- SEAMEO INNOTECH
7.11 Entrepreneurship in Science Education

Other SEAMEO Centres and Partners

MoE representatives from the 11 SEAMEO Member Countries

Background

Entrepreneurship has emerged over the last two decades as arguably the most potent economic force the world has ever seen. With that expansion came a dissimilar increase in the field of entrepreneurship education. The recent growth and development of curricula and programmes devoted to entrepreneurship and new-venture creation have been remarkable but not inter-disciplinary. Amidst this huge expansion remains the challenge of complete academic legitimacy for entrepreneurship. Whilst it can be argued that some legitimacy has been attained in the current state of entrepreneurship education, critical challenges lie ahead in the accommodation of entrepreneurship education within the entire scope and length of schooling, including the primary grades.

The expanse of the impact of modern science to the society and businesses, along with the seismic changes taking place in the education arena, necessitated the urgent need to acquaint science educators and students about the social implications of science teaching. Science educators of the modern world need to understand and appreciate the dependence of a modern society on science and changes in the social structure that were brought about by the seepage of science and technology in day-to-day life. They should not only be able to appreciate and wonder about the modern marvels of science in the business world but also inculcate entrepreneurial skills and the entrepreneurial spirit in their day-to-day science teaching. This, in a nutshell, is what science educators can and must do—learn to inculcate and imbibe entrepreneurial skills and the entrepreneurial spirit to help learners acquire the same skills and imbibe the same spirit.
Objectives

Traditionally, entrepreneurship education focuses on simply teaching and training individuals on using entrepreneurship tools but not about the entrepreneurial spirit. However, many initiatives are increasingly becoming more action oriented, emphasising learning by doing, hence the need to inculcate the entrepreneurial spirit in day-to-day learning, especially in math and science.

This workshop will illuminate basic concepts, procedures, stages, and essential indices for acquiring entrepreneurial skills through globalised teaching enterprises amongst teachers, lecturers, and students. It also justifies the inclusion and acquisition of entrepreneurial skills in professional development and essential pedagogical strategies that educators can use in the field of science education. This will ultimately promote the employability of science education students in a globalised economy.

This workshop will also focus on trends and challenges in entrepreneurship education for the 21st century as well as teach students to sustain life by applying entrepreneurship knowledge and skills. At the end of this workshop, the participants should be able to:

• Understand entrepreneurship in relation to science education
• Promote entrepreneurial skills development amongst educators and students
• Apply the knowledge and skills related to entrepreneurship to attain sustainable living

Expected Outcomes

This workshop expects to:

• Promote skills and knowledge on integrating entrepreneurial skills into science education
• Integrate STEM elements into science and entrepreneurship

Participants

• Lecturers and educators from polytechnic colleges and universities
• Schoolteachers
• MoE representatives from the 11 SEAMEO Member Countries
7.12 Southeast Asian Ministers of Education Organisation
Community Development: Online Lecture Series and Training Programmes

SEAMES
Ms. Anti Rismayanti
anti@seameo.org
Mr. Tan Ketudat
tan@seameo.org

Other SEAMEO Centres and Partners

• All SEAMEO centres
• Other partners

Background

The SEAMEO Community Development: Online Lecture Series and Training Programmes aim to build the capacity of human resources in Southeast Asia via an online platform, specifically WebEx and MOOCs, designed for e-learning to improve their knowledge. With contributions from SEAMEO regional centres, highly committed lecturers and trainers with relevant academic qualifications will be delivering lectures (single sessions) and training courses (multiple sessions) in various academic fields throughout 2017 and 2018.

This programme hopes to increase the SEAMEO centres’ visibility with regard to and impact on community development whilst further strengthening its network in Southeast Asia.
Objectives

This programme aims to:

• Develop the capacity of and provide updated knowledge in various academic areas to Southeast Asian communities in all levels

• Provide access to knowledge for individuals and educational institutions in Southeast Asia from SEAMEO regional centres and a variety of lecturers through information exchange utilising the latest in ICT

• Strengthen the partnerships and networks of SEAMEO regional centres with stakeholders, educational institutions, communities, and other development agencies who can contribute to the implementation of this programme

Expected Outcomes

This project expects participants to:

• Build their knowledge through learning about topics of interest

• Broaden their knowledge on teaching media via the use of e-learning platforms

• Strengthen the SEAMEO network

Participants

The participants will come from various backgrounds in the areas of education with different education levels, depending on the target audience of the lecture series and training programmes. They will primarily come from the 11 SEAMEO Member Countries—Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste, and Vietnam. The number of participants will be limited to 197 due to system capability.

Activities and Time Line

The lectures and training programmes have been running since March 2017. Update lectures and training programmes can be accessed at http://www.seameo.org/SEAMEOWeb2/index.php?option=com_content&view=article&id=613&Itemid=633.
Funding Mechanism

<table>
<thead>
<tr>
<th>Unit Responsible</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMES</td>
<td>Staff to coordinate and organise the programme</td>
</tr>
<tr>
<td>SEAMEO SEAMOLEC</td>
<td>Online platform</td>
</tr>
<tr>
<td>SEAMEO centres and external institutions</td>
<td>Resource persons and course evaluation</td>
</tr>
</tbody>
</table>

Potential Donours

Any agency (MoE or educational institution)
7.13 Southeast Asian Ministers of Education Organisation Regional Centre for the Quality Improvement of Teachers and Education Personnel in Language Goes to Schools

Other SEAMEO Centres and Partners

MoEs of SEAMEO Member Countries

Background:

Language education always changes its paradigm, following the latest development in technology and societal needs. Therefore, today’s language classroom is vastly different from that of the mid- to late-20th century in terms of teaching approach and learning focus. The teaching approach has moved away from teacher- to student-centred modes that recognise the need for learner autonomy and cooperative learning for building up collaborative and communication skills. The learning focus also shifts by providing more use of target language embedded with culture to facilitate learners in connecting to others around the globe. Such language learning activity can be organised with the support of ICT through various devices available in learners’ immediate surroundings.

Aiming to support language teachers to create enjoyable learning and sustain motivation, SEAQIL has been conducting a series of workshops entitled “SEAQIL Goes to Schools (SGTS)” since 2014. The workshops aim to compile language teaching techniques written by teachers themselves. Language teaching techniques in this workshop refer to “techniques or strategies that a teacher uses to enable learners to master or acquire language skills.” The strategies or techniques have been proven by teachers to advance learners’ communication ability. These will be selected and edited according to the criteria determined by the centre prior to publishing.
One example of an SGTS publication from 2016 is “Language Teaching Techniques: Good Practices from Indonesia.” The teaching techniques are for languages such as Arabic, Chinese, English, French, German, Indonesian, Japanese, Korean, and Indonesian for Foreign Learners (ILFL). The publication is available for download from www.qiteplanguage.org.

To come up with a similar publication entitled “Compilation of Language Teaching Techniques from Teachers of Southeast Asia” projected for 2019, the centre will continue to conduct SGTS workshops in SEAMEO Member Countries from 2017 to 2018.

**Objectives**

The workshop aims to compile language teaching techniques from language educators in Southeast Asia region.

**Expected Outcomes**

The project hopes to come up with a compilation of language teaching techniques to enhance communication and critical-thinking skills. In FY2017, the centre expects to obtain 90 drafts from language educators from Brunei Darussalam, Cambodia, and the Philippines.

**Participants**

90 teachers from Brunei Darussalam, Cambodia, and the Philippines

**Activities and Time Line**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGTS workshop (Cambodia)</td>
<td>Cambodia</td>
<td>4–9 September 2017</td>
</tr>
<tr>
<td>SGTS workshop (Philippines)</td>
<td>Philippines</td>
<td>9–14 October 2017</td>
</tr>
<tr>
<td>Workshop of SEAQIL Goes to Schools (SGTS)</td>
<td>Brunei Darussalam</td>
<td>13–18 November 2017</td>
</tr>
</tbody>
</table>

**Funding Mechanism**

<table>
<thead>
<tr>
<th>Responsible Unit</th>
<th>Type of Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAQIL</td>
<td>Airfare and accommodations</td>
<td>US$22,300</td>
</tr>
<tr>
<td>SEAQIL</td>
<td>Experts' honoraria</td>
<td>US$7,500</td>
</tr>
<tr>
<td>MoEs of Brunei Darussalam, Cambodia, and the Philippines</td>
<td>Meeting package</td>
<td>In-kind contribution</td>
</tr>
</tbody>
</table>
7.14 Developing Higher-Order Thinking Skills Through Language

SEAQIL
deprog@qiteplanguage.org
info@qiteplanguage.org

Other SEAMEO Centres and Partners

Directorate-General of the Teachers and Education Personnel (DG-TEP), MoEC Indonesia

Background

To promote HOTS in students, teachers can start by forwarding questions that lead from low to high order in their daily teaching process. In other words, elicitation from students should lead them to think gradually from the factual to abstract concepts. Because in HOTS, students must apply their understanding of one concept to another. Or HOTS requires students to find answers to the problems by thinking out of the box. Thus, HOTS give students chances to think critically.

In the context of language learning, teachers can use text as bases to design and develop questions. They can ask many types of questions from factual or recall to rhetoric and lead to divergent and higher-order thinking. Divergent and higher-order thinking questions encourage students to think critically before making or taking any decision. In nurturing students' language skills, teachers should make use of different types of questions that can be developed by engaging Bloom's Taxonomy. The questions that teachers use may facilitate students' thinking level, which is in line with the taxonomy.

This programme intends to support teachers in the primary and junior-high-school levels included as referral schools by the Directorates of Primary and Junior High School so that teachers will be able to use HOTS as a teaching strategy to eventually develop students' critical thinking skills.
Objectives

This project aims to improve participants’ competence in understanding the concept of HOTS to nurture critical thinking skills and embedding HOTS in the language teaching and learning process.

Expected Outcomes

This project hopes to obtain 30 draft lesson plans that integrate HOTS to advanced critical thinking skills.

Participants

30 teachers from Indonesia, Malaysia, and the Philippines

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop on developing HOTS through language</td>
<td>Jakarta</td>
<td>11–15 September 2017</td>
</tr>
</tbody>
</table>

Funding Mechanism

<table>
<thead>
<tr>
<th>Responsible Unit</th>
<th>Type of Expenditure</th>
<th>Estimated Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAQIL</td>
<td>Local transportation of resource persons and participants</td>
<td>US$8,100</td>
</tr>
<tr>
<td>DG-TEP, MoEC</td>
<td>Meeting package</td>
<td>In-kind contribution</td>
</tr>
</tbody>
</table>

Potential Donours

Local educational offices in Indonesia
7.15 Developing and Strengthening the Culture-Based Education in Southeast Asian Countries via the Basic Education Curriculum

SEAMEO CHAT
Dr Khin Lay Soe
khinlaysoe62@gmail.com

Dr. Naw Si Blut
siblunaw@gmail.com

Other SEAMEO Centres and Partners

- SEAMEO SPAFA
- SEAMEO INNOTECH
- SEAQIL

Background

Education is defined as “an act or experience that has a formative effect on the mind, character, or physical ability of an individual.” It is “the process by which society deliberately transmits its accumulated knowledge, skills, and values from one generation to another.” In recent years, education systems have undergone some changes, especially in Southeast Asian countries.

Culture refers to “a people’s traditions, history, values, and language that make up the culture of a group and which contribute to their identity.” Integrated with education, it brings about awareness, appreciation, and understanding of one’s national patrimony, which reflects, validates, and promotes the values, world views, and languages of the community’s culture.

Culture-based education is “education that reflects, validates, and promotes the values, world views, and languages of a community’s culture.” It intends to respect all forms of knowledge and ways of knowing and support indigenous people and various ethnicities as individuals and community members in educational practices.
As SEAMEO CHAT aims to promote the study of history and tradition amongst Southeast Asian countries, this proposed project seeks to develop the Culture-Based Education in Southeast Asian Countries Through the Basic Education Curriculum.

Objectives

This regional project aims to produce students with a strong foundation of cultural identity; who are knowledgeable about history, traditions, values, and language; are comfortable with various cultures; will continue to grow and understand their own culture; will develop a balanced approach to life; and who are connected to the world.

Expected Outcomes

This project expects to contribute to the standardised content, which would be included in the “Culture-Based Education in Southeast Asian Countries Through the Basic Education Curriculum.”

Participants

Maximum of 15 curriculum planners, experts, and representatives from SEAMEO Member Countries

Activities and Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>Venue</th>
<th>Time Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experts meeting involving representatives from SEAMEO SPAFA, INNOTECH, SEAQIL, and CHAT and curriculum planners from SEAMEO Member Countries</td>
<td>SEAMEO CHAT Yangon, Myanmar</td>
<td>2018</td>
</tr>
<tr>
<td>Implementation of the standardised content</td>
<td>SEAMEO CHAT Yangon, Myanmar</td>
<td>2019</td>
</tr>
</tbody>
</table>

Funding Mechanisms

- MoE Myanmar
- SEAMEO CHAT
- SEAMEO SPAFA
- SEAMEO INNOTECH
- SEAQIL
About the Southeast Asian Ministers of Education Organisation

SEAMEO is a regional inter-governmental organisation established in 1965 amongst governments of Southeast Asian countries to promote regional cooperation in education, science, and culture.

As an organisation that has continued to nurture human capacities and explored peoples’ fullest potential, SEAMEO maintains its work and aspirations for development with peoples of the region to make lives better by providing quality education, ensuring educational equity, enhancing preventive healthcare education, preserving cultures and traditions, promoting ICT use in education, enhancing language education, alleviating poverty, and promoting agriculture whilst preserving natural resources.

The organisation’s highest policy-making body is SEAMEC, which comprises the 11 Southeast Asian MoEs. The SEAMES is located in Bangkok, Thailand.
Southeast Asian Ministers of Education Organisation Regional Centres

SEAMEO has 21 specialist institutions that undertake training and research programmes in various fields of education, science, and culture. Each centre has a governing board composed of senior education officials from each SEAMEO member country. The governing boards review the centres’ operations and budgets and set their policies and programmes.

<table>
<thead>
<tr>
<th>SEAMEO Regional Centre</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAMEO BIOTROP</td>
<td><a href="http://www.biotrop.org">www.biotrop.org</a></td>
</tr>
<tr>
<td>SEAMEO CELLL</td>
<td><a href="http://www.seameocelll.org">www.seameocelll.org</a></td>
</tr>
<tr>
<td>SEAMEO CHAT</td>
<td><a href="http://www.seameochat.org.mm">www.seameochat.org.mm</a></td>
</tr>
<tr>
<td>SEAMEO INNOTECH</td>
<td><a href="http://www.seameo-innotech.org">www.seameo-innotech.org</a></td>
</tr>
<tr>
<td>SEAQL</td>
<td><a href="http://www.qileplanguage.org">www.qileplanguage.org</a></td>
</tr>
<tr>
<td>SEAQIM</td>
<td><a href="http://www.qilepinmath.org">www.qilepinmath.org</a></td>
</tr>
<tr>
<td>SEAQIS</td>
<td><a href="http://www.qilepinscience.org">www.qilepinscience.org</a></td>
</tr>
<tr>
<td>SEAMEO RECFON</td>
<td><a href="http://www.seameo-recfon.org">www.seameo-recfon.org</a></td>
</tr>
<tr>
<td>SEAMEO RECSAM</td>
<td><a href="http://www.recsam.edu.my">www.recsam.edu.my</a></td>
</tr>
<tr>
<td>SEAMEO RELC</td>
<td><a href="http://www.relc.org.sg">www.relc.org.sg</a></td>
</tr>
<tr>
<td>SEAMEO RETRAC</td>
<td><a href="http://www.vnseameo.org">www.vnseameo.org</a></td>
</tr>
<tr>
<td>SEAMEO RIHED</td>
<td><a href="http://www.rihed.seameo.org">www.rihed.seameo.org</a></td>
</tr>
<tr>
<td>SEAMEO MOLEC</td>
<td><a href="http://www.seamolec.org">www.seamolec.org</a></td>
</tr>
<tr>
<td>SEAMEO SEARCA</td>
<td><a href="http://www.searca.org">www.searca.org</a></td>
</tr>
<tr>
<td>SEAMEO SEN</td>
<td><a href="http://www.seameosen.org">www.seameosen.org</a></td>
</tr>
<tr>
<td>SEAMEO SPAFA</td>
<td><a href="http://www.seameo-spa%D1%84%D0%B0.org">www.seameo-spaфа.org</a></td>
</tr>
<tr>
<td>SEAMEO TROPMD Network</td>
<td><a href="http://www.seameotropmednetwork.org">www.seameotropmednetwork.org</a></td>
</tr>
<tr>
<td>SEAMEO TROPMD Malaysia</td>
<td><a href="http://www.seameotropmednetwork.org">www.seameotropmednetwork.org</a></td>
</tr>
<tr>
<td>SEAMEO TROPMD Philippines</td>
<td><a href="http://www.seameotropmednetwork.org">www.seameotropmednetwork.org</a></td>
</tr>
<tr>
<td>SEAMEO TROPMD Thailand</td>
<td><a href="http://www.seameotropmednetwork.org">www.seameotropmednetwork.org</a></td>
</tr>
<tr>
<td>SEAMEO VOCTECH</td>
<td><a href="http://www.voctech.edu.bn">www.voctech.edu.bn</a></td>
</tr>
</tbody>
</table>
# Index of Project Exemplars from the Various Southeast Asia Ministers of Education Organisation Centres

<table>
<thead>
<tr>
<th>SEAMEO Centre</th>
<th>Project Exemplar Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Leading Centre</td>
</tr>
<tr>
<td>BIONROP</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>6.1</td>
</tr>
<tr>
<td>CELLL</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>2.10</td>
</tr>
<tr>
<td></td>
<td>2.11</td>
</tr>
<tr>
<td></td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>4.3</td>
</tr>
<tr>
<td>CHAT</td>
<td>5.18</td>
</tr>
<tr>
<td></td>
<td>7.17</td>
</tr>
<tr>
<td>INNOTECH</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>RECFON</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>2.12</td>
</tr>
<tr>
<td></td>
<td>2.13</td>
</tr>
<tr>
<td></td>
<td>6.2</td>
</tr>
<tr>
<td>RECSAM</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>4.1</td>
</tr>
<tr>
<td></td>
<td>5.2</td>
</tr>
<tr>
<td></td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>5.18</td>
</tr>
<tr>
<td></td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td>RELC</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td>5.9</td>
</tr>
<tr>
<td></td>
<td>5.10</td>
</tr>
<tr>
<td>RETRAC</td>
<td>5.11</td>
</tr>
<tr>
<td></td>
<td>5.12</td>
</tr>
<tr>
<td></td>
<td>7.6</td>
</tr>
<tr>
<td>SEAMEO Centre</td>
<td>Project Exemplar Number</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>RIHED</td>
<td>6.4</td>
</tr>
<tr>
<td></td>
<td>6.5</td>
</tr>
<tr>
<td></td>
<td>6.6</td>
</tr>
<tr>
<td></td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>4.13</td>
</tr>
<tr>
<td></td>
<td>6.8</td>
</tr>
<tr>
<td></td>
<td>7.1</td>
</tr>
<tr>
<td>SEAMOLEC</td>
<td>7.9</td>
</tr>
<tr>
<td></td>
<td>7.10</td>
</tr>
<tr>
<td></td>
<td>7.11</td>
</tr>
<tr>
<td></td>
<td>7.12</td>
</tr>
<tr>
<td></td>
<td>7.13</td>
</tr>
<tr>
<td></td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>4.9</td>
</tr>
<tr>
<td></td>
<td>4.12</td>
</tr>
<tr>
<td></td>
<td>4.13</td>
</tr>
<tr>
<td></td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td>7.7</td>
</tr>
<tr>
<td></td>
<td>7.8</td>
</tr>
<tr>
<td>SEAQIL</td>
<td>7.15</td>
</tr>
<tr>
<td></td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>7.1</td>
</tr>
<tr>
<td>SEAQIM</td>
<td>7.3</td>
</tr>
<tr>
<td></td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>7.2</td>
</tr>
<tr>
<td></td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td>7.7</td>
</tr>
<tr>
<td></td>
<td>7.8</td>
</tr>
<tr>
<td>SEAQIS</td>
<td>5.13</td>
</tr>
<tr>
<td></td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>7.2</td>
</tr>
<tr>
<td></td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td>7.6</td>
</tr>
<tr>
<td></td>
<td>7.13</td>
</tr>
<tr>
<td>SEARCA</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>7.1</td>
</tr>
<tr>
<td>SEN</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>7.2</td>
</tr>
<tr>
<td>SPAFA</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td>TROPMED Network</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>3.17</td>
</tr>
<tr>
<td></td>
<td>7.1</td>
</tr>
<tr>
<td>TROPMED Malaysia</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>4.15</td>
</tr>
<tr>
<td></td>
<td>6.8</td>
</tr>
<tr>
<td></td>
<td>7.1</td>
</tr>
<tr>
<td>SEAMEO Centre</td>
<td>Project Exemplar Number</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>TROPMED Philippines</td>
<td>1.4 1.6 3.5 4.5 4.15 5.17 6.8 7.1</td>
</tr>
<tr>
<td>TROPMED Thailand</td>
<td>5.17 1.6 3.5 4.5 4.15 6.8 7.1</td>
</tr>
<tr>
<td>VOCTECH</td>
<td>4.9 2.9 3.2 4.4 4.5 4.6 4.7 4.8 4.11 4.12 4.13 4.15 7.1 7.2</td>
</tr>
<tr>
<td>SEAMES</td>
<td>4.6 2.7 4.8 4.5 4.10 4.9 4.11 4.15 4.12 5.1 6.3 6.8 6.9 6.11 7.1 7.2</td>
</tr>
</tbody>
</table>
Acknowledgements

SEAMES would like to thank the SEAMEO centre directors and officials who attended several workshops for their commitment and unfailing support in developing the “Action Agenda for the SEAMEO 7 Priority Areas.”

We would also like to recognise the excellent cooperation we received from the SEAMEO Member Countries, associate and affiliate members, and the international community. All of these efforts have, in one way or another, contributed to the completion of the projects and programmes described in this book.

The “Action Agenda for the SEAMEO 7 Priority Areas First Edition (2017)” would not be possible without the leadership of Dr. Gatot Hari Priowirjanto and the Programme and Development Team headed by Dr. Ethel Agnes P. Valenzuela (Deputy Director) with the Project Exemplar Review Committee comprising Dr. Patama Punthawangkul (PO1), Dr. Asmah Ahmad (PO2), Ms. Anti Rismayanti (PO3), Mr. Ismariwan Shamsudin (PSO), and Ms. Chanika Nonthachai (SPD).

Special thanks to Ms. Bernadette Caraig for her technical assistance in finalising this report.