

## **ANNUAL REPORT ON PROGRAMMES AND ACTIVITIES**

### **SEAMEO REGIONAL CENTRE FOR QITEP IN SCIENCE**

**FY 2013/2014**

## **CHAPTER I**

### **EXECUTIVE SUMMARY**

SEAMEO Regional Centre for QITEP in Science is the SEAMEO Centre focusing on improving the science competences and quality of science teachers and educational personnel throughout the Southeast Asia region. Fiscal Year (FY) 2013/2014 is the fifth year in which SEAMEO QITEP in Science operates under the first Five-Year Development Plan (5YDP).

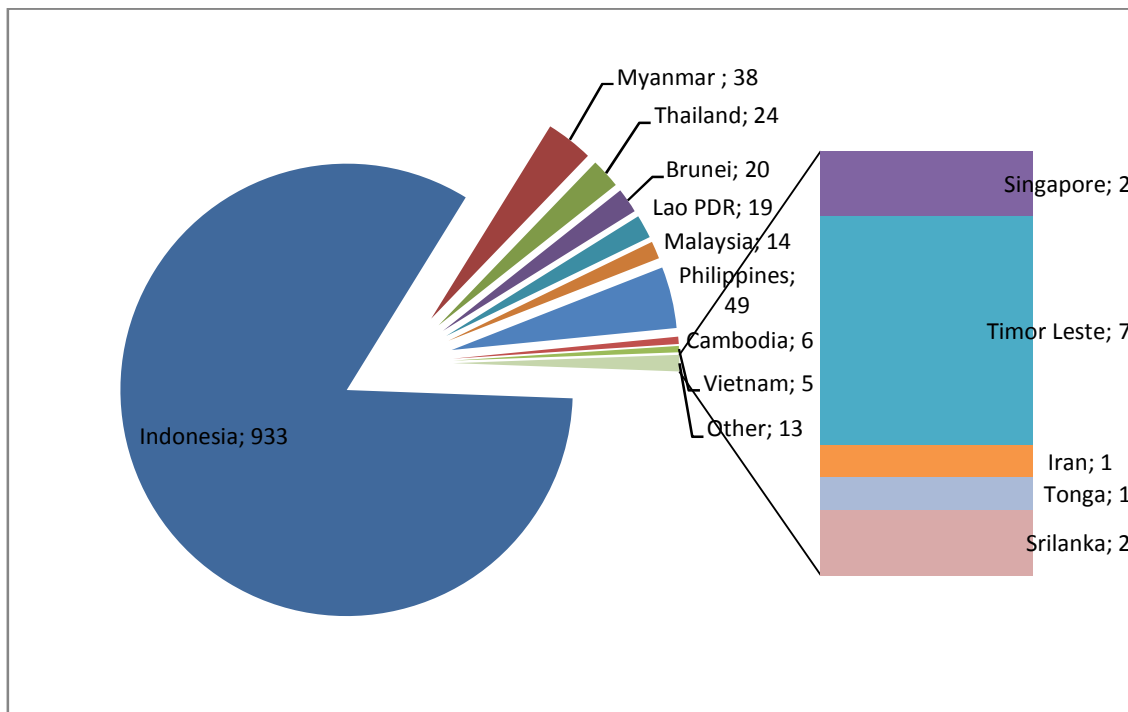
This executive summary highlights the centre progress in three Key Result Areas (KRAs) including Regional Leadership, Regional Visibility, and Solid Resource Base.

In terms of Regional Leadership, The Centre conducted 4 regular trainings, namely; Environmental Education (2013 and 2014), Earth and Space Science (2013 and 2014), and three workshops on Developing and Planning the QITEP in Science Programme 2014, Development of Programme 2015, and also Development of QITEP in Science 2<sup>nd</sup> Five-Year Development Plan. Until June 2014, those trainings conducted since 2009 have absorbed a total of 1120 participants from Indonesia, Malaysia, Thailand, Lao PDR, Myanmar, Vietnam, and Cambodia.

The table below shows the Centre regular training course activities for FY 2013-2014 and followed by diagram shows the total number of participants joining the regular training courses to date.

**Table 1.1** Regular Training Courses Conducted in FY 2013-2014

<b>No.</b>	<b>Training Course</b>	<b>Date</b>	<b>Number of Participant</b>
1.	Environmental Education	21 – 30 August 2013	28
3.	Environmental Education	17 – 26 June 2014	29
4.	Earth and Space Science	17 – 26 June 2014	29



**Chart 1.1** Regular Training Course Participant Distributions

In terms of Regional Visibility, there are various collaborative activities between QITEP in Science and regional and international institutions. Seminar-Workshop on Inquiry-Based Science Education and 1-day Workshop on STELR Renewable Energy in collaboration with International Science, Technology and Innovation Centre for South-South Cooperation (ISTIC), an organization under the auspices of UNESCO, La main à la pate (LAMAP), the educational foundation assisted by French Ministry of Education, and the Australian Academy of Technological Sciences and Engineering (ATSE) are some of our collaborative projects in regards to promoting inquiry base approach in science education.

Promoting Real Australian Indonesian Science Education (PRAISE), our collaborative project with Australian Academy of Science started in 2013, has come to completion stage. Being funded by Indonesian and Australian government, this project evaluation report shows that there are improvements in regards on student inquiry-skills in learning science.



**Image 1.1** Seminar-Workshop on IBSE (left) and 1-day Workshop on STELR Renewable Energy (right)

The latter is our project with Total E&P Indonesia, the Fresh Graduate Participating in Science (FGPS), involving five fresh graduates from Indonesian universities to promote science learning that incorporates an inquiry approach. These young scientists were located in five schools in the separated remote area in East Kalimantan for six months. This is the second FGPS project aimed to give the science teacher in those remote areas a new perspective and spirit in enhancing the science learning atmosphere and student learning experiences.

Tables 1.2 summarize the collaborative activities in this fiscal year.

**Table 1.2** List of Collaborative Activities in FY 2013-2014

No.	Title of International Seminar and Workshop	Year
1.	Promoting Real Australian-Indonesia Science Education (PRAISE) Project	2013
2.	Seminar-Workshop on Inquiry-Based Science Education	2013
3.	Workshop on STELR Renewable Energy	2013
4.	Fresh Graduates Participating in Science (FGPS) 2 <sup>nd</sup> Batch	2013
5.	The 4 <sup>th</sup> International Conference (ICon) on Science Education and Teacher Professional Development	2013
6.	In-Country Training on Inquiry-Based Science Learning in Davao, Aceh, and Ambon	2013

Also, QITEP in Science has successfully conducted the 4<sup>th</sup> International Conference (ICon) on Science Education in 9 – 12 September 2013 that was taking place in Mercure Convention Centre, Jakarta. The theme of the conference was “Science Education for Our Future”,

focusing on research and development of science curriculum, teaching and assessment practices in primary and secondary science education and Science Teacher Professional Development. There were 4 keynote speakers and 27 participants from SEAMEO members Countries. Also, three of the participants have received the best presenter award in this occasion.



**Image 1.2** the 4<sup>th</sup> International Conference (ICon) in Science Education

In terms of Solid Resource Based, to strengthen the institution organizational structure, certain positions have been filled in and also a number of various staff capacity building activities were followed and those programmes have widened the knowledge and skill of The Centre's personnel. Table below show various staff capacity building conducted in FY 2013-2014.

**Table 1.2** Staff Capacity Building Activity FY 2013-2014

No.	Capacity Building Activity	Year
1.	The IBSE Writing Workshop (Cycle 3)	2014
2.	Regular Course in Science conducted at SEAMEO RECSAM	2014
3.	IBSE Writing Workshop	2014
4.	Basic News Writing Course	2014
5.	Training on Protocol and MC	2014
6.	Benchmarking of New SEAQIS Division to SEAMOLEC	2014
7.	Training of ASEAN Community e-Classroom	2013
8.	The Sixth China-Asean Education Cooperation Week	2013
9.	ASEAN plus One Training Program on Understanding China	2013

In terms publication, The Centre has several media coverage in the form of newspaper and magazine articles and also television coverage to disseminate the programs and activities.



Figure 1.3 PRAISE Project Student and Teacher Book (Indonesian Version)

The Centre has also published the proceeding of the 4<sup>th</sup> International Conference proceeding and the PRAISE project student and teacher books in Bahasa Indonesia and English version. These documents are made available online at the website.

To undertake its programmes and activities during the fiscal year under review, The Centre augmented the funds coming from the Government of Republic Indonesia. The chart below shows the finance distribution of the Centre in conducting its activities in FY 2013-2014.

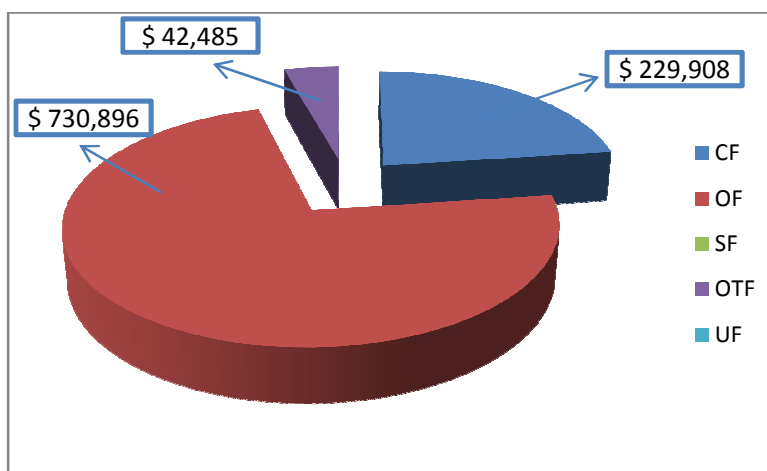


Chart 1.2 Finance Distributions FY 2013-2014

## **CHAPTER II**

### **GENERAL INFORMATION**

The Regional Centre for Quality Improvement of Teacher and Education Personnel (QITEP) in Science is one of the new Centres under the Southeast Asian Minister of Education Organization (SEAMEO). The main purposes of SEAMEO QITEP in Science are to assist the Member States in: (a) improving the quality of science teachers and education personnel in the region, (b) conducting research and development, providing training and information services and clearing house as well as engaging in other related activities in science within and beyond the region, (c) establishing network for the purpose of resource sharing, information exchanges, research and development in the area of science teaching, and (d) providing access for decision makers to up-to-date, accurate, and consistent data and information in science for the benefit of the region.

#### **Vision**

The vision of the Centre is to be a centre of professional excellence in the area of science teaching for teachers and education personnel within the framework of sustainable development.

#### **Mission**

The mission of the Centre is to provide relevant and quality programmes in professional excellence for Science teachers and educational personnel through capacity building activities, resource sharing, research and development, and networking.

#### **Values**

To realize the vision and carry out its mission, SEAMEO QITEP in Science strongly believes in the importance of values as principles for its staff in executing their tasks. All SEAMEO QITEP in Science staff should be aware of, comprehend and apply the Centre's values as follows.

- a. Professional
- b. Togetherness
- c. Empathy
- d. Democratic
- e. Accountable
- f. Productive
- g. Innovative
- h. Credible
- i. Life-Long Learning
- j. Global Minded

## Goals

- a. To enhance the function of the organisation in managing SEAMEO QITEP in Science's resources for improving the competence of science teacher and educational personnel.
- b. To develop an excellent training system that meets the demand of national and international education communities.
- c. To enhance the ICT competence of SEAMEO QITEP in Science staff.
- d. To conduct natural preservation efforts collaboratively with relevant national and international agencies.
- e. To have sufficient infrastructure and financial resources.
- f. To develop research-based training programmes cooperatively with national and international institutions.
- g. To strengthen national and international networks for improving science teacher and education personnel competency in Southeast Asia region.
- h. To develop research-based innovations and resource-sharing in science education among member countries and relevant international institutions.

## Governing Board

The SEAMEO Centre for QITEP in Science Governing Board (GB) is the Centre's highest policy-making body. The GB is composed of representatives from each SEAMEO Member Country who are nominated by their respective Ministers/Secretaries of Education and appointed by the SEAMEO Council President. The GB is responsible for operational policies, strategic planning, annual evaluation, and review of the Centre's programmes and budget. The SEAMEO Secretariat (SEAMES) Director and the Director of the Centre serve as ex-officio members of the Board.

SEAMEO Regional Centre for QITEP in Science Governing Board Members:

- |                     |   |
|---------------------|---|
| • Dr Chong Kui Kian | Specialist Inspector in Science Education<br>Ministry of Education<br><b>BRUNEI DARUSSALAM</b>  |
| • Mr. Sun Bunna     | Deputy Director of Curriculum Development<br>Department<br>Ministry of Education, Youth and Sport<br><b>CAMBODIA</b>                                  |
| • Dr Abi Sujak, MSc | Secretary of Board for Human Resource<br>Development of Education and Culture and<br>Education Quality Assurance<br>Ministry of Education and Culture |

## **INDONESIA**

- Mr Keth Phanhack  
Deputy Director General  
Department of the Teacher Training  
Ministry of Education and Sport

## **LAO PDR**

- Dato' Misrah Haji Ibrahim  
Chief Inspector  
Inspectorate and Quality Assurance  
Ministry of Education

## **MALAYSIA**

- Dr Lorna Dig-Dino  
Assistant Secretary for Programs and Projects  
Department of Education

## **PHILIPPINES**

- Mdm Irene Tan  
Master Teacher (Chemistry)  
Academy of Singapore Teachers  
Ministry of Education

## **REPUBLIC OF SINGAPORE**

- Dr. Pornpun Waitayangkoon  
President of The Institute for the Promotion of  
Teaching Science and Technology

## **THAILAND**

- Assoc. Prof. Dr. Le Phuoc Minh  
Vice Rector, Institute for Education Management  
(NIEM) Hanoi

## **VIETNAM**

- Dr. Than Soe  
Pro Rector  
Pathein University

## **MYANMAR**

## **Organizational Structure**

SEAMEO Regional Centre for QITEP in Science is headed by a Director and assisted by two Deputy Directors: Deputy Director for Programme and Deputy Director for Administration. Under the two Deputy Directors, there are five divisions, namely: Intellectual for Policy Makers and Experts/Capacity Building/Trainings Division, ICT and Network Division, Personnel, Finance and Infrastructure Division, International Public Relations & Marketing, Partnership/ Collaboration Division, and Research and Development Division.

## CHAPTER III

### KEY RESULT AREA

#### KRA 1: Regional Leadership

##### Capacity Building

To increase the Centre and also teachers and education personnel capacity buildings, the Centre conducted training courses, workshops, and Monitoring and Evaluation programmes as follows.

##### Training Courses:

##### i) Environmental Education for Sustainable Development



This training was held on 21 – 30 August 2013 and attended by 28 environmental education teachers from Indonesia, Brunei Darussalam, Cambodia, Lao PDR, Malaysia, Myanmar, Philippines, and Thailand. The topics presented covered environmental education for sustainable development in ASEAN context and Indonesia, sustainable development and implementation, environmental ethic, climate change impact, ecosystem services and conservation, environmental education and facilitation method, zero waste lifestyle, environmental management, comparative study, and the strategy on persuading the public. The participant visited Saung Angklung Udjo to enjoy the angklung performance, the West Java traditional musical instrument, and also Cigadung Compostry to see the production of home compost. At the end of the training, every participant performed and shared cultural performance of their respective countries and regions.

### **ii) Inquiry-Based Science Learning (Aceh)**

In collaboration with Syiah Kuala University (Unsyiah) and Provincial Education Authority of Aceh Darussalam, SEAMEO QITEP in Science organizes a training on Inquiry-Based Science Learning (IBSL) participated by 28 junior high school science teachers of Nangroe Aceh Darussalam Province and 2 lectures from Unsyiah. The training was initiated by MoU agreement signing between the three institutions.



The purpose is to give a basic overview about the principles of inquiry learning also to offer an alternative model of science learning in class based on the scientific approach. This IBSL training takes place in the Centre for Quality Improvement of Teacher (PPMG) Banda Aceh from 25 – 30 August 2013. There are 7 topics covered such as Effective Questioning, Inquiry-Based Hands-On Activities, Evaluation of Inquiry-Based Class, including Peer Teaching session. It is expected that after the training all participants could implement the inquiry approach to nurture student engagement and thus enhance student motivation in science learning.

### **iii) Inquiry-Based Science Learning (Ambon)**

SEAMEO QITEP in Science collaborated with the Education Office of Ambon District, Maluku Province, held the Training of Inquiry-Based Learning on 7 – 11 October 2013 in Ambon. The participants were 41 elementary school teachers from 5 sub districts in Ambon. The topics in this training delivered in inquiry model, thus the participants could experience, understand and plan on how to implement the inquiry in their own class. There was also peer-teaching session in the training to evaluate the participants' understanding about the inquiry-based learning by simulating the teaching on a certain science topic. After joining this training, the participants were expected to be the core teachers in disseminating the inquiry-based learning at provincial level.



The Head of Education Office of Ambon opened the training officially, and visited while the training is conducted. As the inquiry-based learning is in line with the latest national curriculum of Indonesia, the government of Ambon and SEAMEO QITEP in Science plan to conduct trainings on inquiry-based science education next year, collaborating with Pattimura University, Ambon. The scope will be broadened to science teachers in lower and higher secondary school levels.

The National Television of Indonesia for Maluku and North Maluku Province broadcasted the training twice, based on requests from Maluku and North Maluku viewers who wanted to know and follow the collaboration scheme between SEAMEO QITEP in Science and the government of Ambon to conduct this kind of training.

#### **iv) Inquiry-Based Science Learning (Davao)**

The SEAMEO QITEP in Science, Mathematics and Language in the collaboration with the Embassy of the Republic of Indonesia in Manila and the Consulate General of the Republic of Indonesia in Davao City organized the Training Course on Competencies Development of Science, Mathematics and Arabic Teachers in Davao City, Philippines.

The opening ceremony was attended by the Education Attache of the Embassy of the Republic of Indonesia, Dr. Paristiyanti Nurwandani and officiated by Mr. Hermawan Janu Wibowo representing the Consul-General of the Republic of Indonesia.



The team of SEAMEO QITEP in Science consisted of Prof. Ismunandar, Dr. Indarjani, Mrs. Lidiya Br. Sinulingga, Mr. Reza Setiawan, Mrs. Lili Indarti, and Mr. Kusumo Wibowo. The team facilitated 31 local science teachers participating in the Inquiry-Based Science Learning course. The course encouraged them to implement inquiry-based science learning in class. The participating teachers were very enthusiastic at all sessions mainly at the hands-on activities using the alternative energy kit named STELR.

Both parties, the Embassy of the Republic of Indonesia in Manila and the Consulate General of the Republic of Indonesia in Davao City expected more programmes can be implemented for teachers in Davao City, generally in the Philippines

### **v) Monitoring and Evaluation in Davao, Philippines**

To achieve the accountability of the courses conducted by the Centre, SEAMEO QITEP in Science conducted a monitoring and evaluation to find out the impact of the training course as well as evaluating the programme.



Figure 1. Courtesy Call with Consul General, Mr. Eko Hartono



Figure 2. Monitoring and Evaluation

The first programme to be monitored and evaluated was the Inquiry-Based Science Education (IBSE) training course which was conducted in late September 2013. The monitoring and evaluation was conducted in March 24 – 27, 2014, in Davao City, Philippines. The Centre was represented by Mr. Reza Setiawan, Mr. Zuhe Safitra, and

Ms. Retzy Noer Azizah. During the programme, the Centre's representatives visited schools and interviewed science teachers that attended the IBSE training course. Besides, the school principals and other science teachers were also being interviewed. The team also conducted a courtesy call to the Consulate General of the Republic of Indonesia in Davao, meeting the Consul General, Mr. Eko Hartono.

From the interview and instrument given to the respondents, it is found out that the training course conducted by the Centre gives benefits to the science teaching-learning process in the class. They stated that the inquiry approach is more practical in teaching, as hands-on activities really promote learning among students. The students easily remember since they apply in reality. Besides, the approach also improves students' interest to learn science since they do many activities and find the answers of problems by themselves through those activities.

### **vi) Monitoring and Evaluation on Training Programmes in Brunei Darussalam**

In the series of IBSE Writing Workshop 3 at ILIA Building, Universiti Brunei Darussalam, on Monday, 7th April 2014, the two Centre representatives, Ms. Lili Indarti and Ms. Dewi Ratih Fuji Astuti had the chance to meet several SEAMEO QITEP in Science training alumni at the Core Residential College, Universiti Brunei Darussalam, Tungku Road, Bandar Seri Begawan, Brunei Darussalam. The agenda scheduled was to have a discussion on the impact of their previous trainings in Indonesia as well as sharing in their experience of dissemination. The discussion results showed their concerns on the training improvement in the future.

The inputs and suggestion dealing with programmes and services would be well-extended and followed-up for the advancement and continuation of the training programmes.



## **KRA 2: Regional Visibility**

### **Strengthening linkages among centres, national, regional, and international institutions**

The main purpose of the SEAMEO Regional Centre for QITEP in Science in increasing the linkages with national, regional, and international institution was to develop networking, to increase the access and to establish cooperation and recognition. The following are list of collaboration and networking activities conducted by the Centre during FY 2012/2013.

#### **i) Panda Mobile WWF Indonesia**



Panda Mobile made its third visit to SEAMEO QITEP in Science. This visit was in a series with the Training of Environmental Education for Sustainable Development 2013. During its three-day visit from 27 – 29 August 2013, Panda Mobile was visited by junior high school students from the Centre's partner schools, which were: SMPN 6 Bandung, SMPN 36 Bandung, SMPN 1 and SMPN 3 Parongpong, SMP Istiqomah Bandung, SMPN 1 Bandung, SMPN 13 Bandung, SMP BPK Penabur Bandung, SMP Taruna Bakti Bandung, and SMPN 4 Lembang. The aim of Panda Mobile was to spread the importance of conservation to the Indonesian public through campaigns and educational activities and involving the communities in conservation efforts by donating through fundraising program. Panda Mobile provided the information about the environment and conservation in its mobile library. They also have a variety of educating games and activities for students. Hopefully after visiting Panda Mobile, the students will become more aware about the importance of environment conservation especially in Indonesia.

#### **ii) The 4<sup>th</sup> International Conference (ICon) on Science Education and Teacher Professional Development**

From 9 to 12 September 2013, the Centre conducted the 4<sup>th</sup> International Conference on Science Education in Mercure Convention Centre, Jakarta. Dr. Abi Sujak, Secretary of The Board of Educational Human Resource Development and Quality Assurance, represented the Minister of Education of the Republic Indonesia to give remarks and

officially opened the conference. The participants of the conference were 27 best science teachers selected through their research papers in science education practices from Brunei Darussalam, Cambodia, Malaysia, Myanmar, Lao, Philippines and Thailand who were selected and recommended by their government.



At the conference, they presented their research findings by oral and poster presentation. The invited speakers were experts in science education, namely; Prof. Denis Goodrum from Science by Doing Centre Australia, Prof. Hideo Ikeda from Hiroshima University, Japan, Dr. Rodolfo Treyes from University of Philippines, and Dr. Kusalin Musikul from IPST Thailand. These resource persons contributed greatly to the event by also giving inputs and corrections to the papers, as well as becoming the juries in the competition of three best presenters among the participants. Ms. Dayangku Nurul Aminatun Farida bt. Pangeran Haji Moh. Ali from Brunei Darussalam won the 1st Best Presenter, followed by Mr. Muhammad from SMAN Banjarsari 1 Banten, Indonesia and Mr. Yohannes Eko Nugroho from SMPN 2 Ungaran Semarang, Indonesia, as the 2<sup>nd</sup> and 3<sup>rd</sup> Best Presenters. This event was covered and aired by a nationwide television stations (ANTV) and locally in the province of West Java by PJTV as well.

### **iii) High Level IBSE Roundtable Discussion**

SEAMEO QITEP in Science and the International Science, Technology, and Innovation Centre for South-South Cooperation (ISTIC) under the auspices of UNESCO, organized the roundtable discussion held on 2 July 2013 in Jakarta, Indonesia. The purpose was to give the proper IBSE exposure and future Inquiry-Based Science Education (IBSE) programs in Indonesia.



Prof. Dr. Ainun Naim, the Secretary General of The Ministry of Education and Culture of Indonesia, opened the roundtable discussion and also Prof. Bruce Alberts, the US President Obama's Science Envoy to Indonesia, were invited as the keynote speaker and moderator for the event. About ten panellists participated in the discussion to introduce IBSE initiatives in their respective countries and institutions.

The event was also expected to provide the platform for high level support of the ISTIC/LAMAP/QITEP in Science training workshop 21-25 October 2013 in Bandung, West Java, Indonesia.

**iv) Workshop on Formulation of 2nd Five Year Development Plan 2015/2016 – 2019/2020 of SEAMEO QITEP in Language, SEAMEO QITEP in Mathematics and SEAMEO QITEP in Science**

Following the first workshop conducted on 14 – 17 June 2013, in Marbella Suites Hotel Bandung, SEAMEO QITEP in Language, SEAMEO QITEP in Mathematics and SEAMEO QITEP in Science met again to jointly formulate the 2nd Five Year Development Plan 2015/2016 – 2019/2020 in the workshop on 23 to 25 September 2013 at the Goodway Hotel and Resort, Nusa Dua, Bali, Indonesia. The workshop aimed to present the draft 2nd Five Year Development Plan 2015/2016 – 2019/2020 for the GB members and stakeholders, as well as get feedback from them to furnish. As the three centres have common targets, teachers and education personnels, formulating a joint plan deemed necessary to reinforce and complement the common goal to improve the quality of education in Southeast Asian countries.



Dr. Vitaya Jeradechakul, Director of the SEAMEO Secretariat, remarked and officially opened the workshop. The representative GB members from each SEAMEO member countries then presented their view on draft of 2nd Five Year Development Plan 2015/2016 – 2019/2020 formulated by three QITEP Centres, and provided valuable and important comments and inputs.

**v) The 4<sup>th</sup> Governing Board Meeting of SEAMEO QITEP in Science**

The 4<sup>th</sup> Governing Board (GB) Meeting of SEAMEO QITEP in Science was convened from 25 to 27 September 2013 at the Goodway Hotel and Resort, Nusa Dua, Bali, Indonesia. It was preceded by a Workshop on Formulation of 2nd Five Year Development Plan 2015/2016 – 2019/2020 of SEAMEO QITEP in Language, SEAMEO QITEP in Mathematics and SEAMEO QITEP in Science on 23 to 25 September 2013 at the same venue. The opening ceremony was conducted jointly with SEAMEO QITEP in Mathematics and SEAMEO QITEP in Language, as it was arranged to be back to back event after the workshop. This was a new history of SEAMEO, as the three QITEP centres convened their GB meeting together for the very first time. Students of SMAN 4 Denpasar enlivened the opening ceremony with the choir of SEAMEO song entitled Building the Future, and performed a Prabasastra dance which reflects the beauty of Goddess Saraswati, the goddess of knowledge.



At the opening ceremony, Dr. Harris Iskandar, Director of Senior High School Development, delivered his remark on behalf of the Vice Minister for Education, Ministry of Education and Culture of the Republic of Indonesia. He stated that the Government of the Republic of Indonesia would like to extend sincerest gratitude and appreciation to all educational community, including the individuals, organisations, regional governments, and other stakeholders for their initiatives, attempts, and concerns to develop education in general. Dr. Tinsiri Siribodhi, Deputy Director for Administration and Communication of SEAMEO Secretariat, implied that the SEAMEO Secretariat took pleasure to support the three SEAMEO QITEP Centres in implementing SEAMEO programmes, and expressed her appreciation and acknowledged on the strong leadership of QITEP in Language, Mathematics and Science despite they are newly established Centres.

The GB members who attended the meeting were Dr. Abi Sujak, GB member of Indonesia, Dr. Chong Kui Kian, GB member of Brunei Darussalam, Mr. Sun Bunna GB member of Cambodia, Mr. Keth Phanhack, GB member of Lao PDR, Dr. Lorna D. Dino, GB member of the Philippines, Dr. Pornpun Waitayangkoon and GB member of Thailand. Prof. Dr. Handoko, the Deputy Director for Programme and Development of SEAMEO Secretariat, was supervised and guided the meeting as well. The meeting scrutinized, took note and approved reports and plans of SEAMEO QITEP in Science activities for year 2013 to 2014. One of the approved program in the meeting was Proposal for the Ki Hajar Dewantara Award, which will be awarded to Regional Best Science Teacher.

### **vi) Director QITEP in Science attended AELF**

Director QITEP in Science attended AELF (Asia Education Leader Forum) in Bangkok 9-11 October 2013. The forum has the objectives (i) Promote the national and regional education, knowledge, services and technology exchange to cope with the upcoming of the Asean Economic Community in 2015 (ii) Strengthen the Southeast Asia education

community to convene, network, exchange ideas, develop education partnerships and share best practice (iii) Generate collaboration between public and private sectors in the development of ASEAN education for the success and power of the AEC.



The topics of discussion are very relevant to the centre since for all education innovation, teacher development play a very central role

### **vii) QITEP in Science in MSCEIS UPI**

SEAMEO QITEP in Science participated in the International Seminar on Mathematics, Science and Computer Science Education hosted by the Faculty of Mathematics and Science Education (MSCEIS), Indonesia University of Education, on 19 October 2013. The theme of the seminar is 'Turning Dreams into Reality: Current Trends in Mathematics, Science and Computer Science Education'.



The aims of the seminar are to provide a forum where educators, researchers, and teachers can exchange pedagogical, educational, scientific, and epistemological ideas in mathematics, science, and computer science education to promote and stimulate interdisciplinary research in those areas and to initiate further development of the educational aspects of mathematics, science, and computer science education. The

seminar also provides an exceptional opportunity for all participants to contribute to the world of mathematics, science, and computer science education. In the seminar the Director of QITEP in Science presented his remarks at the opening ceremony, and the Head Division of Partnership and Collaboration chaired the collaboration Program with TOTAL E&P Indonesia on Introducing Inquiry Base Science Education to the school in remote areas of East Kalimantan Province.

### **viii) Workshop on Inquiry-Based Science Education: STELR Renewable Energy**

This 1-day workshop was held on 24<sup>th</sup> October 2013 in the Centre. The workshop was lead by 2 resource person, Dr. Peter Pentland the Project Manager of Science and Technology Education Leveraging Relevance (STELR), and Dr. Gregory Smith, Senior Lecturer from Charles Darwin University and participated by 21 local secondary level science teachers in Bandung area, West Java.



The aim was to introduce the participants to inquiry science learning with the use of Science and Technology Education Leveraging Relevance (STELR) science learning module. It was expected that by using this STELR module in science learning in the class, especially in the theme of global warming and renewable energy, students could draw relevance from what they have learnt in their science class to their surroundings and also have fun while learning science.

### **ix) Seminar-Workshop on Inquiry-Based Science Education**

Aiming to improve the quality of science teaching in Southeast Asia through the inquiry method, targeting educators and education personnel, the QITEP in Science organized a seminar-workshop on IBSE from 21<sup>st</sup> to 26<sup>th</sup> October 2013, in Marbella Suites Hotel, Bandung, Indonesia. The workshop was a collaborative activity with International Science, Technology and Innovation Centre for South-South Cooperation (ISTIC), an

organization under the auspices of UNESCO, in collaboration with La main à la pâte (LAMAP), the educational foundation assisted by French Ministry of Education, and the Australian Academy of Technological Sciences and Engineering (ATSE).



A total of 50 teachers and educational personnels from 10 countries (Indonesia, Brunei Darussalam, Philippines, Iran, Malaysia, Srilanka, Thailand, Timor Leste, Tonga and Vietnam) has participated this program. The resource persons for the workshop were the instructors from LAMAP foundation and ATSE Australia. The purpose of the activity is to strengthen the philosophy, principles and planning in the implementation of IBSE for teachers and education personnels, as well as to introduce the dissemination procedure of IBSE done by LAMAP.

**x) QITEP in Science Director Presented PRAISE in 5th Cosmed-2013**



QITEP in Science's Director, Prof. Ismunandar, presented the progress of the PRAISE project in 5th Cosmed-2013, RECSAM, Penang 11-14 November 2013. The paper was presented in parallel session 5 in Myanmar Room, 13 November 2013 and it raised quite a large interest in the audience. Cosmed-2013 was attended by 460 participants from 15 countries. The conference featured 160 oral and poster papers

### **xi) PRAISE Project Completion**

Promoting Real Australian-Indonesian Science Education (PRAISE) is a collaboration project between SEAMEO QITEP in Science and Science by Doing centre of the Australian Academy of Science with the aim to implement at least two important pillars which are supporting inquiry base science education: i) develop a curriculum resource, and ii) professional learning community. One of the main points of this project is the piloting of learning resources involving 10 lower secondary schools, 50 science teachers, and 2800 students of grade 7 started on 1<sup>st</sup> October 2013 for about 8 weeks. There were 3 series of workshops conducted in this project.



The 1<sup>st</sup> workshop, Pre-Implementation Workshop of PRAISE Pilot Schools, was conducted from 6-8 September 2013 located in SanGria Hotel, Lembang, West Java participated by 10 junior high schools from Bandung and West Bandung Province. The aim was to provide the teachers of PRAISE pilot schools the introduction of what inquiry-based learning is and also experience in using the resource book to prepare them for piloting phase. The Centre also invited resource person from Science by Doing Australia namely Prof. Denis Goodrum, Dr. Jef Byrne, and Dr. Kerrie Wilde to give the participants some insights about inquiry learning and also to share experiences in the way their promoting inquiry-based science learning throughout Australia.



The piloting phase was implemented from 1 October – 30 November 2013 involving 50 science teachers and 2800 students from 10 schools. This phase was aimed to do the trial on the developed student and teacher book to see how the science learning was taking place by using the books. Each school was also getting assistance by 1 Centre staff to guide the school teacher in using the book.



The 2<sup>nd</sup> In-Service Workshop on PRAISE Project Implementation was conducted from 31 October to 2 November 2013 participated by 50 science teachers and school principals of 10 pilot schools, as well as the academic supervisors of the schools. It was designed to facilitate participants to share any findings, discuss problems arose during the piloting and also to strengthen the collaboration among stakeholders to support the establishment of inquiry-based science education learning community.



The final round of PRAISE Project was the Workshop on PRAISE Project Evaluation conducted in 29 to 30 November 2013 at the Grand Hani Hotel, West Bandung Province attended by 50 teachers of PRAISE Piloting Schools in Bandung, Dr. Kerrie Wilde and Mr. Jeff Byrne, the representatives of Australian Academy of Science, Ms. Astrida Upitis, representatives of Australian Embassy in Indonesia, and Ms. Claudina Milawati, the Deputy Director, Australian Education International.

The workshop activity was led by Dr. Kerrie Wilde and Mr. Jeff Byrne and also the PRAISE book writers. They evaluated the implementation of PRAISE Project and provided feedbacks and inputs for the finalization of the draft of the student and teacher books.

Furthermore, with the assistance of Dr. Harry Firman, the lecturer from the Indonesian University of Education (UPI) in Bandung, the teachers proposed class action researches during the implementation of the project to be more developed. It is expected that the researchers could bring benefits to their teaching careers.

### **xii) Workshop on the 2<sup>nd</sup> Five-Year Development Program Finalisation**

SEAMEO QITEP in Science, SEAMEO QITEP in Mathematics, and SEAMEO QITEP in Language made their third meeting on developing their 2nd FYDP in Lor-In Hotel, Solo, Central Java. The meeting was conducted on 3 to 6 December 2013. The agenda of the meeting was to report the progress of 2<sup>nd</sup> FYDP draft from every centre.



At this stage, SEAMEO QITEP in Science has formulated its preferred scenarios and programme thrusts for the year 2014, and determined the inquiry-based approach as its niche. Dr. Jesus C. Fernandez, Deputy Director for Programme of SEAMEO BIOTROP shared his experiences and assisted SEAMEO QITEP in Science in finishing the 2nd FYDP document.

In the workshop, it was also planned that the finalization of the 2<sup>nd</sup> FYDP of three SEAMEO QITEP Centres will be on April 2014.

### **xiii) Benchmarking of SEAMEO SEN Malaysia to SEAMEO QITEP in Science**

On 6<sup>th</sup> December 2013, the team of SEAMEO SEN visited our centre in order to introduce themselves as a new centre under the SEAMEO. The focus of the centre is the special education needs.



Prof. Dr. Ismunandar greeted the twenty delegates in the Plato Room. In this informal meeting, Dr. Yasmin binti Hussain, the Director of SEAMEO SEN, discussed about what the SEAMEO QIS has done in its early years of establishment, how to build a cooperation with another institution, how to invite participants from SEAMEO member countries, how to expand networking, and so on. Hopefully, the meeting would bring benefits for both centres.

### **xiv) The Director of SEAMEO QITEP in Science Attended the Southeast Asian Regional Standards for Science Teachers (SEARS-ST) Workshop**

Prof. Ismunandar, the Director SEAMEO QITEP in Science attended workshop on the Southeast Asian Regional Standards for Science Teachers (SEARS-ST). The workshop

aimed to develop a framework and standards to support and improve the quality of teachers which are important to enhance the standard of science education in general.



Teachers and their development of teaching must be at the heart of any plan to improve educational systems. The goal of the Southeast Asia Regional Standards for Science Teachers (SEARS-ST) is to document a set of standards describing the qualities, skills and attribute that science teachers in the SEAMEO region should attain in the 21<sup>st</sup> century. The formulation of SEARS-ST is an effort towards improvement in science education in Southeast Asia.

**xv) SEAMEO QITEP in Science Participated in SEAMEO Consultation and Workshop on Post-2015 Education Scenarios and Post-EFA Education Agenda in Southeast Asia**

Prof Ismunandar and Dr. Maman Wijaya representing SEAMEO QITEP in Science attended the above workshop. The workshop was held on 28-30 January 2014, in The Empress Hotel, Chiang Mai, Thailand.



This three-day consultation with SEAMEO stakeholders is the key in determining the most appropriate education agenda in Southeast Asia beyond 2015, particularly in taking into consideration the region's unique needs and context as well as the current effort to strengthen the ASEAN Community.

**xvi) International Symposium New Direction in Higher Education and University Tsukuba-SEAMEO Symposium: Bridging ASEAN Community and Japan Through Education**



Prof. Ismunandar, Director QITEP in Science attended International Symposium New Direction in Higher Education on Friday 21 February 2014. After the symposium on Saturday, 22 February 2014, he also attended University Tsukuba-SEAMEO Symposium: Bridging ASEAN Community and Japan Through Education. In the University Tsukuba-SEAMEO Symposium, the director presented the vision mission and centre activities. He also involved in further collaboration between University Tsukuba and SEAMEO QITEP in Science. Further collaboration between University Tsukuba-QITEP in Science will be realized in 2015 in the area of staff exchange in inquiry based science education.

**xvii) PRAISE Program Dissemination**

From 24 – 26 March 2014, a workshop titled Primary Education Program Coordination and Synchronization was conducted by the Provincial Education Office of West Java in Bandung.



It was attended by over 100 people from the Local Education Offices of 70 Regencies/Cities across West Java Province. On the second day of the workshop, Dr Indarjani, Deputy of Program at SEAMEO QITEP in Science, presented an information session about PRAISE (Promoting Real Australia-Indonesia Science Education) to the participants. The session was conducted as part of the Program Dissemination phase of the PRAISE Project, in accordance with the Project's and SEAMEO QITEP in Science's responsibility for public accountability

### **xviii) The 2<sup>nd</sup> Fresh Graduates Participation in Science (FGPS) Collaboration Program**

Based on the successful result of the first programme, QITEP in Science and TOTAL E&P Indonesia continue the collaboration programme to enhance inquiry-based science education in East Kalimantan's remote areas. The form of collaboration is to assist the science teachers in elementary and lower secondary schools in the vicinity of operation area of TOTAL E&P Indonesia by fresh graduate scientists.



The programme preceded by 10 days of Departure Training for 5 selected young scientists in SEAMEO QITEP in Science secretariat. The training aims to equip them with basics of inquiry-based science learning, making preparation for teaching and disseminating strategies, and real teaching practice experience.

The young scientists formally begin delivering to their duties by involved in a one day workshop in Sub-District Anggana, Kutai Kartanegara, on 3 December 2013. The workshop was officially opened by Mr. H. Basri, S.Pd, Head Officer Education Office of Anggana and also attended by Mr. Zainal Abidin and Mr. Abdul Muthalib, representatives of TOTAL E&P Indonesia. There were 30 teachers and principals of elementary schools with enthusiasm participated in the workshop which was themed "Science learning in daily life and linking the inquiry-based science to the policy of Indonesian Education and Culture Ministry", facilitated by SEAMEO QITEP in Science (Ms. Eka Danti Agustiani and Ms. Retzy Noer Azizah). After the workshop, the young scientists begin their 6 months companionship in 5 remote villages in Anggana Sub-district.

### **The increase means for stakeholders to access SEAMEO programs**

To ensure accessibility for our stakeholder to the programs and activities information, The Centre has also produced some publications as follows.

#### **i) Proceeding of 3<sup>rd</sup> International Conference (ICon) on Science Education**

QITEP in Science has published the proceeding of 4<sup>th</sup> International Conference (ICon) on Science Education. This proceeding comprises of 21 presented papers from the conference that was taking place in Jakarta in September 2013.

#### **ii) PRAISE Book**

Formulation of learning resources was one of the aims of the Centre in conducting the PRAISE Project, in collaboration with Science by Doing, Australia.



These learning resources comprise of two kinds of book, student guidebook and a teacher guidebook with the topics of chemistry for grade 8. These books have now been published online in the SEAMEO QITEP in Science website.

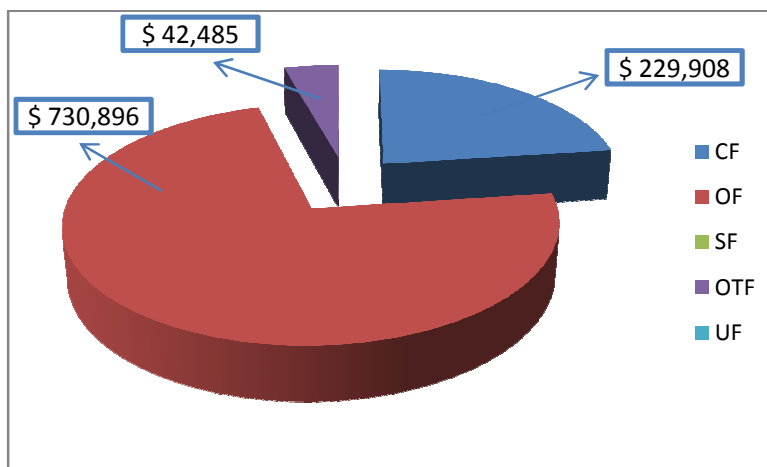
### iii) Media Coverage

In promoting the programs, the Centre has several media coverage, including newspaper, magazine, and television.

## KRA 3: Solid Resource Base

### Financial Viability

To undertake its programmes and activities during the fiscal year under review, The Centre augmented the funds coming from the Government of Republic of Indonesia. The budget system applied in Indonesia is based on Performance-Based Budgeting and Medium Term Expenditure Framework. The diagram below shows the finance distribution of SEAMEO QITEP in Science activities from July 2013 – June 2014.



### Human Resource Management

At present, there are three new staff members to fill up three Centre divisions. Mr. Enang Sumarna as staff of Head of Finance, Infrastructure, and Personnel Division, Mr. Haidar as staff of Programme and Training Division, and Mr. Rizwan as the staff of the Centre secretariat.

Enhancing the staff professional development is one of the Centre main missions. Various staff development programmes have been implemented as it will help to improve the

effectiveness and efficiency of the Centre's management. The Centre's staff development programmes in the Fiscal Year under review are as follows:

### i) ASEAN plus One Training Program on Understanding China



SEAMEO QITEP in Science was invited to send its representative to the ASEAN plus One Training Program on Understanding China conducted on 31 August – 22 September 2013. The program was divided in two parts, the first part was conducted on 31 August – 15 September 2013 in Beijing Foreign Studies University (BFSU), and the second part was conducted on 16 – 22 September 2013 in Guizhou Province. It was aimed to promote better understanding of China among young diplomats, officials, and scholars from ASEAN countries who work in China-related positions.

In the forum, several issues were discussed, including the education system in each country, student exchanges, and studying abroad. Each ASEAN plus One participant should also deliver a speech about their views on the role of youth in Education. During the program, the participants also visited universities in Guizhou Province, including Guiyang University, Guizhou University, Kaili University, and Xingyi Normal University for Nationalities.

### ii) The Sixth China-Asean Education Cooperation Week

The sixth China- ASEAN Education Cooperation Week was conducted from 15 to 19 September 2013 at Guizhou Normal University, Guiyang, Guizhou Province, China. Ms Atik Rahmawati representing the SEAMEO Regional Centre for QITEP in Science attended the program that was sponsored by the Ministry of Foreign Affairs, P.R China, The Ministry of Education, P.R China and the People's Government of Guizhou Province.



The purpose of this activity was to follow up the common understanding reached in the previous five China-ASEAN Education Cooperation Weeks, and to expand cooperation in education and culture between China and ASEAN countries. It is hoped that through this kind of involvement, the SEAMEO Regional Centre for QITEP in Science would expand its cooperation in education and culture not only within and among ASEAN countries, but also to other Asian countries.

### **iii) Training of ASEAN Community e-Classroom**

After success in Workshop on ASEAN Community e-Classroom that hold during 10-12 July 2013. Ministry of Information and Communication Technology of Thailand has a strong intention to push this project forward by holding "Training of ASEAN Community e-Classroom" in 4-8 November 2013.



Mr. Kandi representing the SEAMEO Regional Centre for QITEP in Science attended the program that conducted at the Central Government Complex Hotel and Convention Centre Chaeng Watthana, Thailand. This training has a main objective to teach all group

leaders to use ASEAN Community e-Classroom ([www.asean-eclass.org](http://www.asean-eclass.org)) to develop their knowledge and use this e-Class to expand knowledge of all kinds of people especially people with disability, women and elderly.

#### **iv) Benchmarking of New SEAMEO QITEP in Science to SEAMOLEC**

A new division, which is established on January 2014, the Research, Development and Capacity Building (RD and CB) Division, needs to look for more information and references from its sister centre, SEAMOLEC. On 4 – 5 February 2014, the RD and CB staffs visited SEAMOLEC Jakarta to learn how to conduct the work flow in research and development field.



In this activity, Ms. Eka Danti Agustiani (Head of Research, Development and Capacity Building Division) and the other staffs, Ms. Retzy Noer Azizah and Ms. Dewi Ratih Fuji Astuti, were involved. The agenda of this activity was to identify and to discuss the job description, work targets, how to manage research, etc., thus, this division can do its task properly, in line with the SEAQIS' vision and mission. Ms. Lili Indarti, the Head of Secretariat also involved in this activity in order to learn and to compare the work flow in the Secretariat Division, to achieve feedback which can improve the task in Secretariat to be more efficient.

#### **v) Training on Protocol and MC**

To fulfil the needs of the protocol officer in the Centre, Mr. Zuhe Safitra, staff of Secretariat Division, attended the training on Protocol and MC conducted by SEAMEO BIOTROP from 26 to 28 November 2013.



The training was attended by 15 officers from other SEAMEO Centers i.e. SEAMEO SEAMOLEC, SEAMEO RECFON, Private Company, Universities, and Senior Secondary School. Topics covered in the event were about formulating good MC scripting and also protocol on minister and ministerial guests' reception.

### **vi) Basic News Writing Course**

Two SEAMEO QITEP in Science staff, Mrs. Dian Indriany from Collaboration and Networking Division and Mr. M. Firman Sujana from ICT Division, together with 23 other staff from four SEAMEO Centers in Indonesia, participated Training on the Basics of News Writing for Newsletter Publication and Website Updating held from 1 – 2 April 2014 in Bogor. The training was organized by SEAMEO BIOTROP as its contribution to the SEAMEO Mentoring Program.



The general aim of the training was to provide participants with basic skill concepts and processes in news writing, and to eventually develop the skills for promoting the activities in newsletters and websites of their respective Centers.

Dr Jess C. Fernandez, Deputy Director for Program of SEAMEO BIOTROP, coordinated the training and also acted as the primary resource person.

### **vii) The IBSE Writing Workshop**

SEAMEO QITEP in Science keeps putting its intention on Inquiry-Based Science Education (IBSE) as the centre's niche. Lili Indarti and Dewi Ratih Fuji Astuti representing the Centre participated in the IBSE Writing Workshop (Cycle 3) and the Training on Teachers Trainers at ILIA Building, Universiti Brunei Darussalam on 5-19 April 2014.

The two programs were part of the Ministry of Education, Brunei Darussalam's project to develop IBSE in Brunei Darussalam. The project is the three-year project and it has stepped into its second year. It aims to set science teaching materials for all elementary (Year 4,5 and 6) and secondary (Year 7,8 and 9) science teachers.

Selected science teachers with excellent achievement, officers of the units of the Ministry of Education, Brunei Darussalam, and the consultant, Dr. Mark Windale from Shallom University were involved in the programs. They worked on the draft of science teaching materials that will be finalized to be uploaded in the internet to be utilized by all science teachers in Brunei Darussalam.

The next cycles of the workshop and the training will continue in the following year to finalize all science topics of elementary and secondary levels.



## viii) QITEP in Science Staff complete RECSAM courses

To enhance capacity building and science education methodologies, QITEP in Science sent three staff members, Ms Eka Danti Agustiani, Ms Dian Indriany and Ms Gena Aghnia Fadhila, along with one lecturer from PPPPTK IPA, Mr Zaenal Arifin, to participate in the Regular Course in Science conducted at SEAMEO RECSAM, Malaysia. The course was held over four weeks from 5 – 30 May, 2014 and attended by participants from ten other ASEAN Countries.

Two courses were conducted, Linking Learning Secondary Science to Everyday Life and Societal Needs (RC-SS-138-1), and Lesson Study: Improving Instructional Practices in Secondary Science Classroom (RC-SS-138-4). The main objective of RC-SS-138-1, which was attended by Ms Gena Aghnia Fadhila and Mr Zaenal Arifin, was to expose participants to the various strategies that can be used in primary science classrooms to improve scientific and technological literacy and to acquire basic life skills through investigative inquiry based on local and real life issues. This Course also included the International Workshop on Inquiry Based Science Education (IBSE), which was conducted by a resource person from the University of Canterbury, New Zealand.



Ms Eka Danti Agustiani and Ms Dian Indriany attended RC-SS-138-4. The main objective of this course was to provide participants with the knowledge and skills required to conduct Lesson Study in their own classrooms. This course emphasised a good grounding in theory with reflective classroom practices. It involved hands-on and minds-on activities that facilitate discussion and teamwork. It was expected that upon completion of the course participants would be able to initiate and design small-scale Lesson Study projects aimed at improving secondary science classroom practices in their respective schools. All participants of this course also attended the Fundamentals of Inquiry Workshop with a resource person from Petronas, a Malaysian oil and gas company. It was also sponsored by Petronas.



At the end of the course, all participants were expected to have completed a collaborative Project Work Report and an individual Multiplier Effect Action Plan. The reports and action plans would then be delivered to each participant's respective government.