



PROFILE OF SEAMEO QITEP IN SCIENCE

Southeast Asian Ministers of Education Organization (SEAMEO)
Regional Centre for Quality Improvement of Teachers and
Education Personnel (QITEP) in Science



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Southeast Asian Ministers of Education Organization (SEAMEO)
Regional Centre for Quality Improvement of Teachers and Education Personnel (QITEP) in Science

Profile of SEAMEO QITEP in Science

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PROFILE

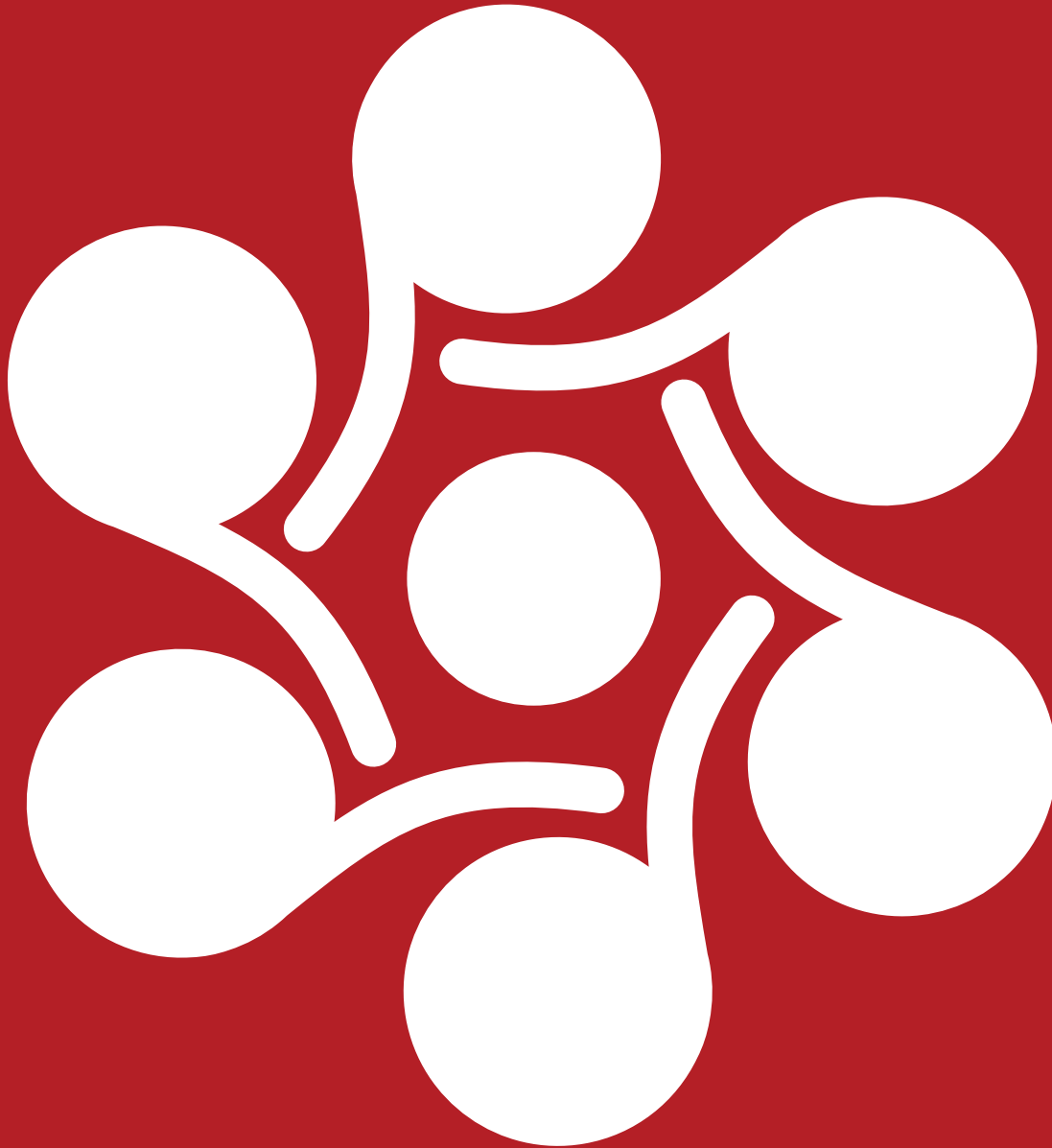
SEAMEO QITEP IN SCIENCE (SEAQIS)

*Southeast Asian Ministers of Education Organization (SEAMEO)
Regional Centre for Quality Improvement of Teachers and
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SCIENCE, ENGINEERING AND ARCHITECTURE





SEAMEO Regional Centre for Quality Improvement for Teachers and Education Personnel (QITEP) in Science known as SEAQIS is hosted by the Ministry of Education, Culture, Research, and Technology of Indonesia under coordination of Directorate General of Teachers and Education Personnel. SEAQIS was established with mandate to improving quality and professional development of teachers and education personnel in science towards sustainable development in Southeast Asia. Provides relevant and quality programmes in professional development for science teachers and education personnel through capacity building, research and development, resource sharing, and collaboration.

SEAQIS is officially established on 13 July 2009 after gained approval from SEAMEO Council in the 44th SEAMEO Council Conference, which was held from 5-9 April 2009, in Phuket, Thailand, and ratified by SEAMEO Council President who was also Thailand Minister of Education, Jurin Lhaksanawisit.



01

The establishment of SEAMEO QITEP in Science proposed and approved in the 43rd SEAMEO Council Conference

2007-2008



03

The 1st SEAQIS program was conducted, including Training Courses on Science Classroom Supervision, ICT-based Science Learning, Science Laboratory Management, Research and Development, and Earth and Space Science training course

2009



2009

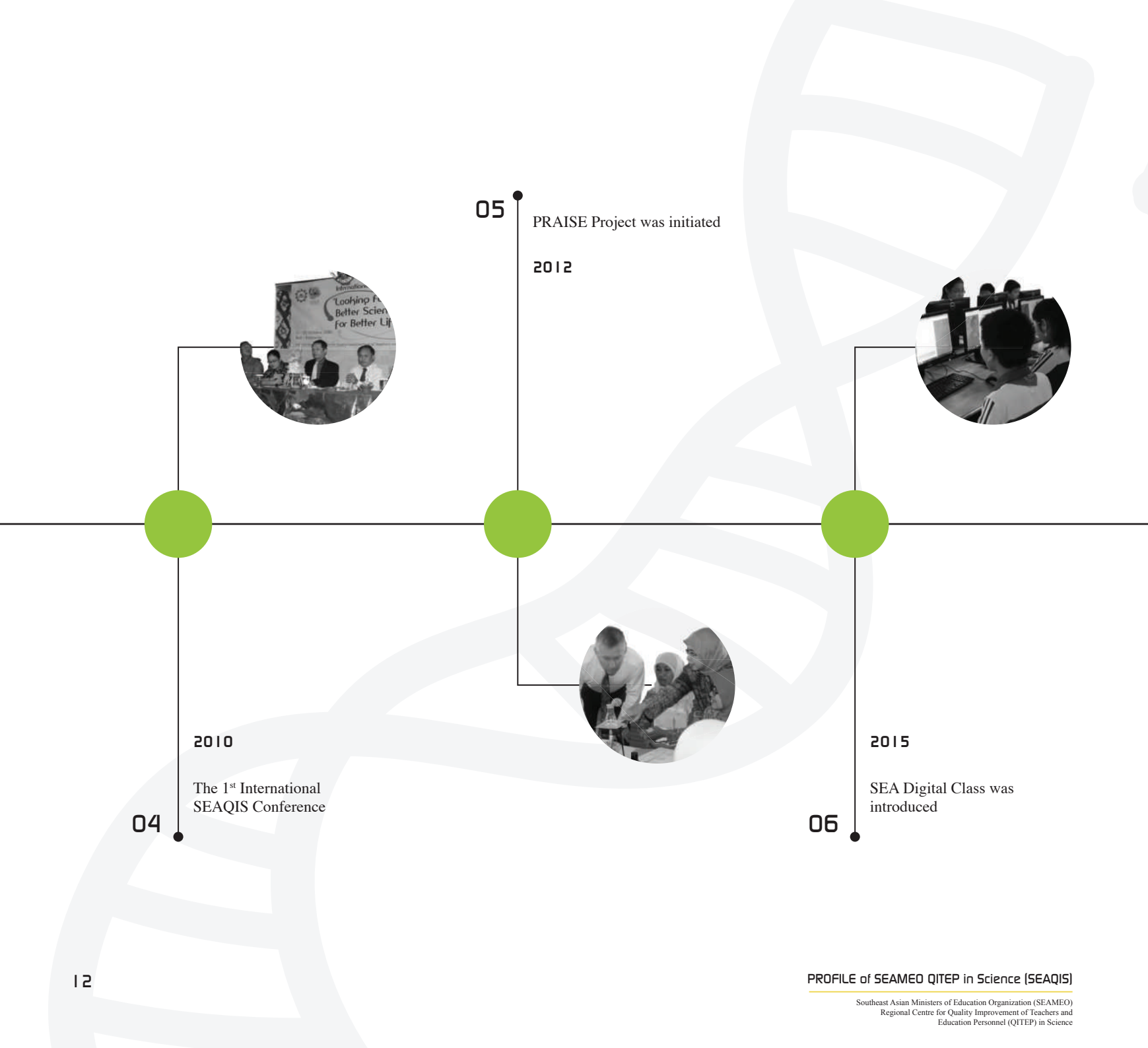
13 July 2009 SEAQIS was officially established in the The 44th SEAMEO Council Conference was held

02



PROFILE of SEAMEO QITEP in Science [SEAQIS]

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04

2010

The 1st International
SEAQIS Conference



05

PRAISE Project was initiated

2012



06

2015

SEA Digital Class was
introduced



07

The 1st Ki Hajar Dewantara Award was presented

2016



2018

SEAQIS' first woman Director

08

09

SEAQIS 10th Decafiesta! was celebrated

2019



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11

Conducting The 3rd Ki Hajar Dewantara Award

2021



SEACEP
Southeast Asia Climate Change
Education Programme

10

2019

Raising 3 Innovation Studies
STEM Learning, Computational Thinking, Climate Change Education



12

2022

Launching Southeast Asia
Climate Change Education
Programme (SEACEP)

Director of SEAQIS



Dr. Sediono Abdullah
2009-2010

Founding father the Establishment of SEAMEO in Science was proposed



Prof. Ismunandar
2011-2013

Successfully conducted the 2nd International Conference, Prise Project & Fresh Graduate Participant in Science



Dr. Maman Wijaya
2014

Successfully conducted the Training Course on IBSE



Prof. Triyanta
2015-2017

Successfully conducted the 1st KI Hajar Dewantara Award



Dr. Indrawati
2018-Present

Successfully promoted the Southeast Asia Climate Change Education Programme (SEA CEP), STEM & Computational Thinking

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Vision

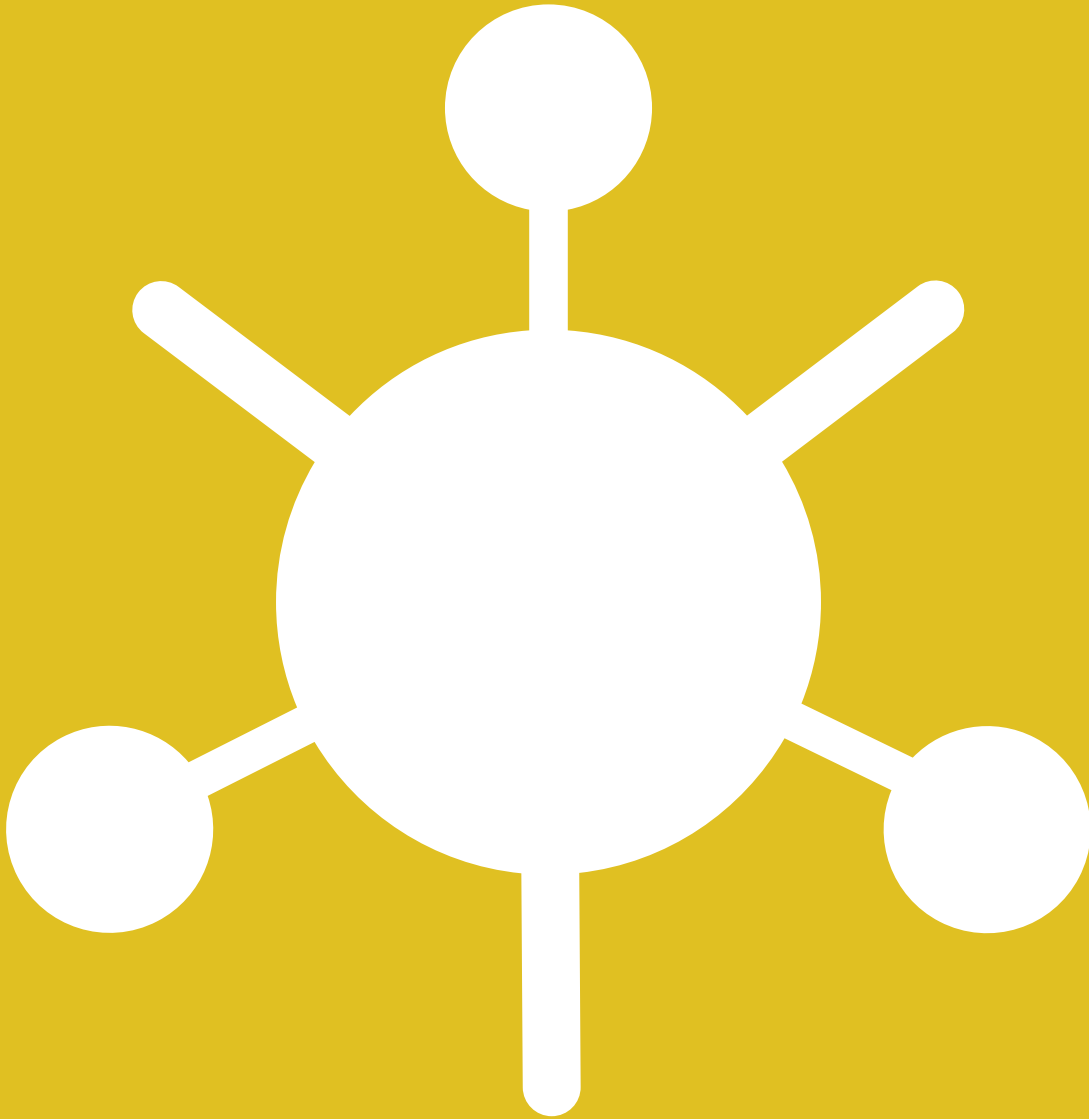
“To be the Centre of excellence in professional development of teachers and education personnel in science towards sustainable development in Southeast Asia.”

There are three main focuses: centre of excellence, professional development, and sustainable development. The meaning of those three key focuses are:

1. Excellence means SEAQIS focuses on innovation, solutions for teacher and education personnel, and is oriented toward teachers and education personnel.
2. Professional development means the effort to produce teachers and education personnel which able to conduct their task professionally.
3. Sustainable development relates to the Sustainable Development Goals number 4: “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”, which explained in SEAMEO 7 Priority Areas as the following.
 - A. Early Childhood Care and Education
 - B. Addressing Barriers to Inclusion
 - C. Ensuring Resiliency in the Face of Emergencies
 - D. Promoting Technical and Vocational Education and Training
 - E. Revitalising Teacher Education
 - F. Promoting Harmonisation in Higher Education and Research
 - G. Adopting a 21st Century Curriculum

Mission

1. Providing relevant and quality programmes in professional development for science teachers and education personnel in Southeast Asia.
2. Conducting research and development on science education, school management, public policy, and other relevant fields.
3. Broadening and strengthening network through resource and information sharing to support the Centre’s visibility and leadership.
4. Providing the current, excellent, and relevant data and information in science education as reference for policy makers.
5. Improving the quality of the Centre’s resource management to provide service excellence.





SEAQIS' success in achieving its vision will be determined by SEAQIS' values which are measured in standard measurement and targets which are evaluated with performance measurement indicators. Those values are criteria which are believed and decided as a norm which every SEAQIS' staffs must conformed. These values include organisation's behaviour as a work culture in decision making and mission implementation to achieve its vision.

Q

Quality

Quality is the first and the main consideration for the Centre's staff in carrying out their duty.

I

Innovativeness

The Centre's staff should possess and develop the ability to predict and respond to the changes and generate new ideas.

T

Togetherness

All the staff members are part of a big family that has the same vision, mission, and goals. Each staff member should be able to support, cooperate and bring mutual benefit to each other in order to achieve the Centre's vision and mission. The staff members should put as priority the principle of togetherness.

E

Empowerment

All staff are expected to be able to make themselves empowered and become lifelong learners so they can empower others.

P

Professionalism

Professionalism means that every staff performs their job corresponding to their skills and special abilities and using intellectual-based techniques and procedures. Every staff is required to have high integrity, capabilities, discipline, qualified skills and knowledge to implement the Centre's vision and missions.

Goals

To strengthen SEAQIS' function in accommodating policymakers' needs to become an excellence regional centre in science education.


To increase SEAQIS' visibility through innovative research and development which is relevant with science and technology development and the needs of stakeholders.

To increase SEAQIS' visibility and leadership through human resource competence enhancement and participation in national, regional, and international scientific forum.

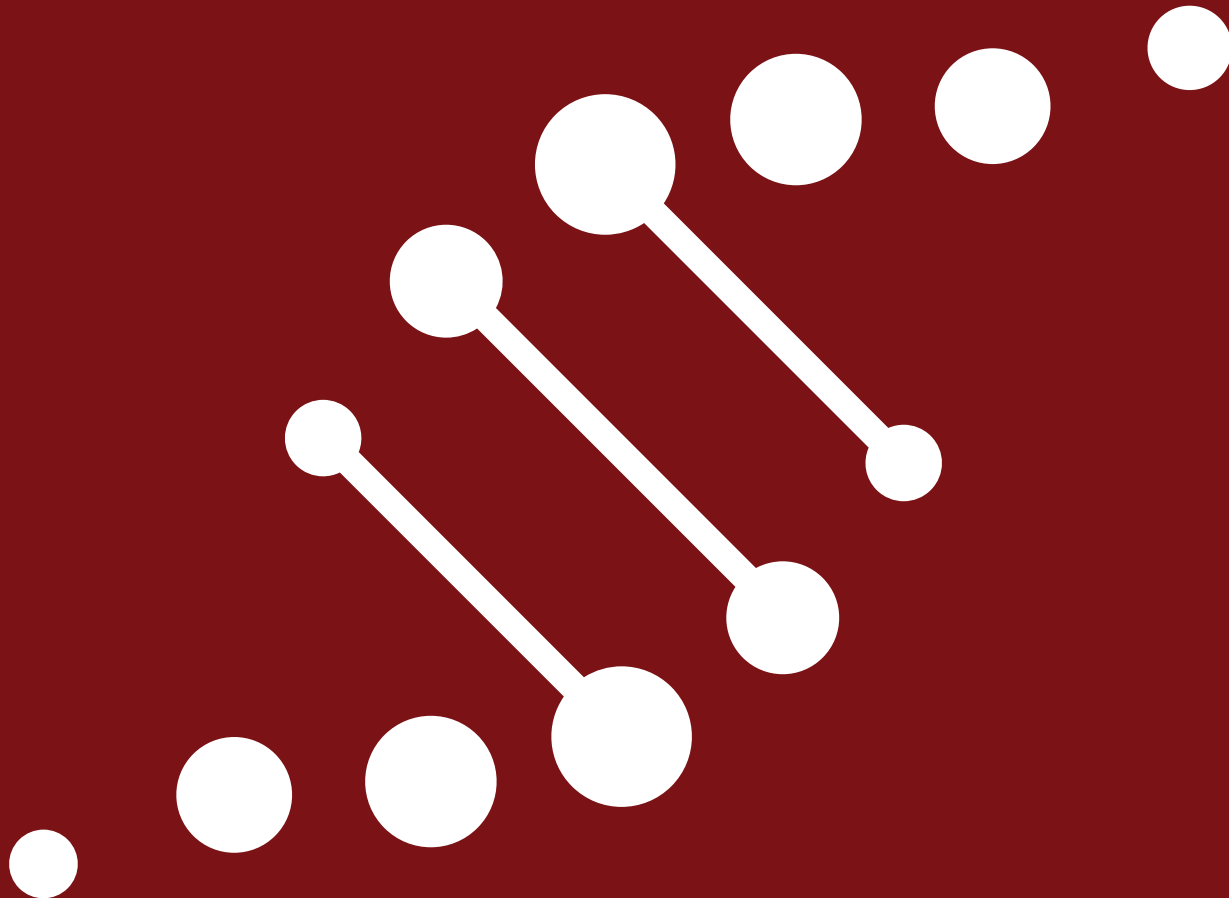
To expand and strengthen national, regional, and international connection to promote SEAQIS' visibility and leadership through teachers and education personnel improvement and accessibility for product and program implementation in a region.

To diversify products by researching and developing innovative programs which are relevant with local potential, stakeholders, and science and technology development.

To utilize SEAQIS' resources effectively to provide excellence service.Scope



In the 3rd FYDP, the development of Inquire-Based Science Education (IBSE) became the main goal and focus of SEAQIS. IBSE also became the scope as well as main philosophy to realize SEAQIS' vision to become the centre of excellence in professional development of teachers and education personnel in science towards sustainable development in Southeast Asia. Development of IBSE in 3rd FYDP also focused on problem solving and current education trend (STEM education and computational thinking) to prepare human resource to face digital and industrial revolution 4.0 era.



STEM Learning

STEM education is one of the educational reforms in many countries to prepare students to be able to compete and face the challenges of the 21st Century.

In line with Sustainable Development Goals (SDGs) number 4 "Quality Education" and SEAMEO Priority Areas number 7 "Adopting a 21st Century Curriculum" SEAQIS as one of the centres that has a focus on improving the quality of science education, through improving competence of teachers and education personnel in the field of science, participate in developing and introducing STEM education in Southeast Asia, especially in Indonesia.

SEAQIS has been focused to developing STEM learning programme since 2015 and begun implemented massively in Indonesia on 2018. STEM learning also always being our main approach in our training programme nationally or regionally. The various theme of STEM learning, are:

- a. Integration STEM into Science Learning.
- b. STEM Learning in Local Context.
- c. Partner School Assistance in implementing STEM Learning.



Computational Thinking in Science Learning

In implementing SEAMEO priority number 7 “Adopting a 21st Century Curriculum”, since 2019, SEAQIS has prepared Computational Thinking training in science learning to support the acceleration of digital transformation, complement 21st century skills and efforts to achieve SEAMEO priority indicator 7.3 priority number 7.

Computational Thinking is considered as one of the additional skills that is becoming a global trend in the world of education, culture, and science. Even CT is one of the additional skills proposed to complement the 4 C's (Critical thinking & problem solving, Creativity, Communication & Collaboration) skills that have been issued by UNESCO as a "skill" needed by future generations or more often referred to as the digital generation. Adopting the 21st century curriculum until 2030, all countries in ASEAN must have integrated 5C skills, Education for Sustainable Development (ESD), and Global Citizen Education (GCED) into their respective national curriculum.





Southeast Asia Climate Change Education Programme (SEA CEP)

SEA CEP is a flagship programme of SEAQIS with a focus on studies in the fields of Environmental Education for Sustainable Development (EESD) and Climate Change Education (CCE). This field of study supports many sustainable development goals (SDGs) both directly and indirectly. The field of study that becomes a priority according to current conditions and international agreements is Climate Change. Based on the SEAMES Strategic Plan which accommodates the strategic plans of all centres in ASEAN, the development of the SEA CEP programme is currently designed to be implemented in the period 2021 – 2030.



SEAQIS' Programme

SEAQIS' programmes are developed for the purpose of science teachers and education personnel's quality improvement in Southeast Asia. Our yearly programmes are the following:

Regional Training

- Training on Science Classroom Supervision
- Training on Earth and Space Science
- Training on Environmental Education for Sustainable Development

In-Country and Collaboration Trainings

- a. In-Country Training in collaboration with MoE in SEAMEO Member Countries and SEAMEO Centres
- b. In-Country Training in collaboration with Provincial/City/Regency Department of Education and/or Teachers Community

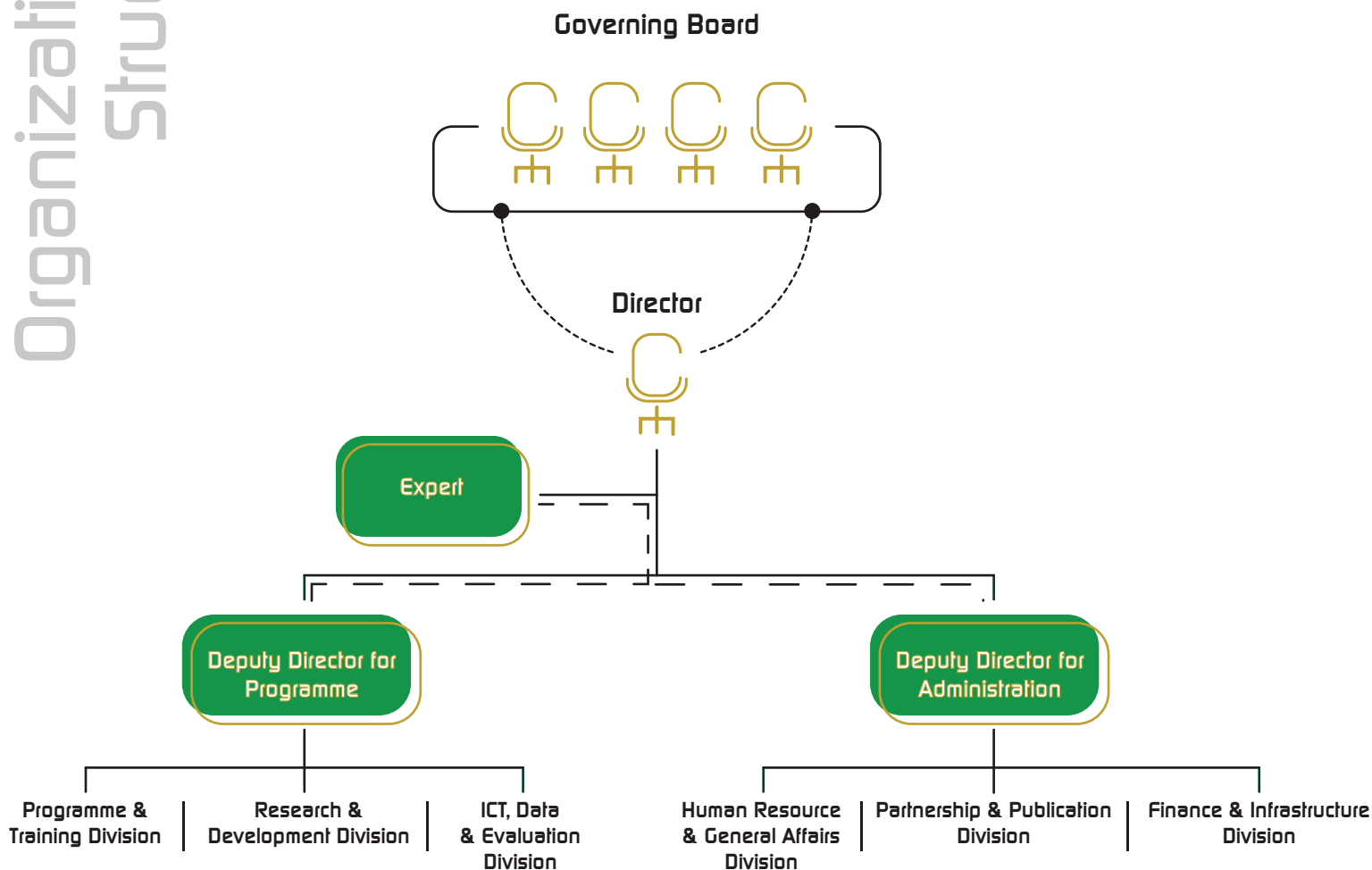
Optional theme:

- Training on Implementation STEM into Science Learning
- Training on Implementation Computational Thinking into Science Learning
- Training on Reinforcing Climate Change Education at Schools
- Training on Inquiry Based Science Education
- Comprehending Science Materials Training
- Training for Prospective Head of Laboratory
- Training on the Development of IT-based Media in Science Learning
- Training on Scientific Publication and Innovative Works
- Training on Reinforcing Science Subjects for Primary School Teachers
- Training on Reinforcing Learning Models
- Authentic Evaluation Training
- Development of Simple Science Teaching Aids Training
- Training on Development of HOTS (Higher Order Thinking Skills) Problems
- Training on Worksheet Development
- Training on Use of Primary Schools Science Kit
- Training on Thematic-learning Development

- Seminar, Conferences, Workshops, National and International Seminars
- Ki Hajar Dewantara Award
- Webinar and Online Training
- Student Competition



Organizational Structure



She is the Director of SEAMEO QITEP in Science since 2018. Her passion for science and education world has been ingrained for a long time, especially when she decided to enrol in Chemistry Education, Science Education, and Management of Education for her bachelor, master, and doctoral degrees.

She has actively engaged to education world since 2005 as an instructor, member, and chairperson of various organizations, and also researcher. Some of her prominent writings in science are STEM Learning and Industry 4.0 as Media for Climate Change Impact Mitigation, Training Modules in CDETEP in Science, Training on STEM Integration in 2013 Curriculum, and Report Book of STEM Implementation in Science Learning in Indonesia.

A portrait of Dr. Indrawati, a woman wearing a grey hijab and a black double-breasted jacket with a brooch. She is standing with her arms crossed, wearing a ring and a watch. The background features large overlapping circles in yellow, green, and blue.

Dr. Indrawati

Director of SEAMEO QITEP in Science



Reza Seliawan
Deputy Director for Programme

He is the Deputy Director for Programme of SEAMEO QITEP in Science. He is both enthusiastic and professional in the field of STEM as he has attained bachelor and master's degrees in physics and Information Technology. Moreover, he has been actively taking charge as a science instructor for several activities such as STEM training in Indonesia, Inquiry-Based Science Learning Training for Secondary Schools in Angkor High School (Cambodia), and as Widyaiswara (teachers' trainer) at P4TK IPA (2011-2019).

He has written several academic writings and joined some overseas training such as Workshop on Development Evaluation Training at SEAMEO TROPED (Bangkok), Spring Short Course for Science, Technology, and Innovation Policy at NISTEP (Tokyo), and Promoting Real Australian Indonesian Science Education (PRAISE) at Australian Academy of Science (Canberra). In 2015, he got an award in SEAMEO Service Award.



Zuhe Safitra

Deputy Director for Administration

He is the Deputy Director for Administration of SEAMEO QITEP in Science. Being passionate about English Language has made him pursue his bachelor and master's degrees in English Education, which produced research entitled "The Realization of Grice's Cooperative Principle in the Process of Introduction (A Case Study on a Chat Script of QQ International)" and "Theme System of Systemic Functional Grammar in Student's Narrative Texts".

His devotion to the educational practice has led him to become an instructor of "English for Teaching Science". Besides that, he has abundant training experiences such as ASEAN Plus 3 Programme in Beijing, Training of Developing Science Learning Media Based on AR and VR, and IHT Computational Thinking Skills. He is also one of the writers on Compilation Books of Six SEAMEO Centre Indonesia and SEAQ-IS'10-Yearbook.



Dr. Elly Herliani, M.Phil., M.Si

Head of Research and Development Division

She is the Head of Research and Development Division of SEAMEO QITEP in Science. Her educational background is quite diverse, starting from microbiology, Biology education, to environmental education. Her experiences in science, education, and personnel training have a history of about three decades. Previously, she was the member of Programme Development and Development of Evaluation Design Team in a programme called “The Development and Empowerment of MGMP (Musyawarah Guru Mata Pelajaran) for STEM Learning” in P4TK IPA and SEAQIS. Also, she was the member of Development Team for STEM Learning Programme in SEAQIS. In terms of her experiences in research, she was engaged in Profile of Indonesia Teachers on ASEAN Teacher Competency Framework in 2019 and Profile of Engineering Design Process (EDP) Implementation in Junior High STEM Learning in 2018. Besides, she took part in an international event as the Keynote Speaker on NOSTE International Research Conference, Seminar-Workshop and Biennial Convention 2019 at Tacloban City, Leyte, Philippines.



Dr. Poppy Kamalia Devi

Head of Programme and Training Division

Dr Poppy is the Head of Programme and Training Division of SEAMEO QITEP in Science. Her enthusiasm in teaching has inspired her to pursue her doctoral degree in Science Education, specifically Chemistry, which later was proved through her career track as an instructor in various training until now, as Widyaaiswara (teachers’ trainer) at P4TK IPA (2006-2019), and a member of Development Team for STEM Learning Programme in SEAQIS. She has published several scientific papers and research related to Science learning, including Chemistry. Furthermore, she has participated in some overseas training such as STEM Professional Development Programme at Monash University in Australia and 21st-Century Skills and Design Thinking in STEM Contexts at SEAMEO RECSAM in Malaysia.



Dr. Dedi Herawadi, M.Si.

Head of Personnel, Finance, and Infrastructure Division

Dr Dedi is the Head of Personnel, Finance, and Infrastructure Division of SEAMEO QITEP in Science. His excellence in the field of science and education on a macro level is rooted from his expertise in Biology and Public Policy. Furthermore, he has participated globally in UNESCO World Conference for Sustainable Development in Nagoya (Japan) as well as in short course on Education and Management in Australia.



Rizwan Darmawan, M.M.

Head of Human Resources and General Affairs

He is the Head of Human Resources and General Affairs of SEAMEO QITEP in Science. His educational background is diverse from English Language and Literature to Innovation and Entrepreneurship Management. He has participated in various projects and experiences, including the Practitioner-Lecturer of Public Speaking/Storytelling at Piksi Ganesha Polytechnic from March to June 2022. He has also been dedicated as a Focal Point Assistant for Indonesia on Belt and Road International Science Education Coordinating Committee (BRISECC) since 2017. Besides, he is the English editor for SEAQIS Journal of Science Education and the writer/editor of Pengayaan Materi IPA: Perubahan Materi, Meteorologi and Keanekaragaman Hayati Tropika. Furthermore, he took an active part in the training of Workshop on Development of Southeast Asia TVET Collaborative Project by Thai-Tech Group in Bangkok, Thailand and In-house Training on Implementation of Risk Management in Facing Digital and New Normal Era by SEAMEO BIOTROP in Bogor, Indonesia.



Lukman Nulhakim, M.Pd.

Head of ICT, Data, and Evaluation

He is Head of ICT, Data, and Evaluation of SEAMEO QITEP in Science with proficiency in the field of Chemistry Education. He has published the paper A Study of Levels of Inquiry Learning Model in Grade V. As a training's instructor, he worked for STEM Learning for Virtual Coordinator Training (VCT) in West Java Province, 2019 and Science Material In-dept Learning for Elementary School Teachers in Wonosobo Regency, 2019. Apart from that, he works as a facilitator for SEAQIS Research Grant programme and Regular Training on Science Classroom Supervision, a journal reviewer for LSM borderless, SEAMEO RECSAM in Malaysia, 2019. He has actively participated in trainings programmes for science teachers and STEM education, such as Regular course on Enhancing Primary Science Teaching and Learning through Professional Learning Community at SEAMEO RECSAM, Penang, Malaysia, and Workshop on Enhancing Critical and Computational Thinking through Design-based Approach in STEM Context: Challenge to Transform STEM Education to Artificial Intelligence (AI) Generation Education at SEAMEO RECSAM, Penang, Malaysia.



Lintang Ratri Prastika, M. Si.

Partnership and Publication Division

She is the Head of Partnership and Publication Division of SEAMEO QITEP in Science with proficiency in the fields of School Physics content, School Physics Experiment, Physics Instructional Media and Multimedia, Physics Instrumentation, as well as Microcontroller. Because of her expertise in Physics, she has also been assigned as a trainer in several training, such as Developing Inquiry Based Teaching Materials as well as STEM Learning and Science Laboratory Management. Besides that, she became an intern as a Project Assistance at SEAMEO Secretariat (Thailand) in 2019 for about two months and acquired the regional award of SEAMEO Service Award in 2021. She also has been into academic research for a long time, especially when she could publish her research papers—The Virtual Lock in Amplifiers Accuracy of Measurement Results in Light Transmission Experiments, for instance.



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SEAMEO QITEP in Science



Thank you
for going above and beyond to help us achieve our goal

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