EUROPEAN COMMISSION E+ Capacity Building in Higher Education

SEA-ABT: SOUTH EAST ASIA ACADEMY FOR BEVERAGE TECHNOLOGY

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Deliverable D2.3

Report on executed trainings for teachers

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Delivery date: **M40**

Dissemination Level		
PU	Public	**X**
PP	Restricted to other programme participants (including Commission services and projects reviewers)	
CO	Confidential, only for members of the consortium (including EACEA and Commission services and projects reviewers)	

Summary:

The main purpose of task 2.3 is to train the teachers in content and new teaching methods through the organization of workshops and – depending on the needs – also webinars. This deliverable *D2.3 – Report on executed trainings for teachers* describes the trainings for teachers in content and new teaching methods through the organization of workshops and – depending on the needs – webinars that have been carried out. Each of the training activities for teachers are detailed with a short summary on the contents, agenda, and evaluation report.

Co-funded by the Erasmus+ Programme of the European Union

Contents

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Overview executed trainings for teachers

This deliverable *D2.3 – Report on executed trainings for teachers* describes the trainings for teachers in content and new teaching methods through the organization of workshops and – depending on the needs – webinars that have been carried out. Each of the training activities for teachers are detailed with a short summary on the contents, agenda, and evaluation report.

The following trainings for teachers have taken place during the project duration:

1. Training workshops at BOKU, Austria, UNITE, Italy, and HGU, Germany, 10-21 April 2017
2. Food Waste Recovery Workshop, Germany, 2 July 2018
3. Certification workshop, Stuttgart Germany, 3 July 2018

1 Training programme Europe, April 2017

From 10-21 April 2017, a group of eight teachers from the 3 Thai partner universities KU, CU and KMITL participated in a targeted training programme at BOKU, Austria, UNITE, Italy, and at HGU, Germany.

The participants:

Asst. Prof. Dr. Chaleeda Borompichaichartkul, CU
Dr. Sarn Settachaimongkon, CU
Asst. Prof. Dr. Sasitorn Tongchitpakdee, KU
Dr. Kriskamol Na Jom, KU
Dr. Ulaiwan Withayagiat, KU
Dr. Sumalika Morakul, KU
Assoc. Prof. Dr. Navaphattra Nunak, KMITL
Assoc. Prof. Dr. Taweepol Suesat, KMITL

Signed lists of participants are kept confidential by the project coordinator and will not be included here.

1.1 Training Programme, BOKU, 10-11 April 2017

The training programme organized by BOKU, Vienna Austria, began with a visit to the Winery School Klosterneuburg where the participants visited the pilot plant to inspect various pieces of teaching equipment and machines such as juice extractor, filter machine, concentration machine, and the wine analysis laboratory. This visit was complemented with a visit to the winery Scheiblhofer outside Vienna. Here the participants were introduced to the process of wine production from grape harvesting to fermentation and curing and bottling with modern tools. Besides these visits, the participants participated in a seminar workshop at BOKU on "Microbial Safety of Beverages" (including hygienic design). This seminar, given by Dr. Marija Zunabovic-Pichler, touched upon the fundamental background on microbial safety of food and beverage and on certain innovative technologies for food microbiological analysis. Furthermore, the participants were introduced to the garage concept – an innovative teaching tool which at BOKU aims at developing students' entrepreneurship skills.

The detailed evaluation report covering all three locataions written by the Thai partners can be found in section 1.4.

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1.1.1 Agenda training programme, BOKU, 10-11 April 2017

Arrival Vienna, Austria Saturday 8 April 2017 Saturday evening common dinner for all who want to join **BOKU (Vienna, Austria) 10-11 April 2017**	
Monday, 10 April 2017	8:30 pick-up from hotel by minibus and private car 9-12: Winery School Klosterneuburg (http://www.weinobstklosterneuburg.at): wine analysis, pilot plant for fruit and vegetable processing 12-13 lunch 13-14 travel to Burgenland by minibus 14-17: Winery Scheiblhofer (https://www.scheiblhofer.at/en/startseite.html)
Tuesday, 11 April 2017 **BOKU, Muthgasse 18, 1190 Wien**	09-15: Microbial safety of Beverage (including Hygienic design)
	13-15: Small project meeting
	15-16: Transport to airport 18:25-20:00 flight to Rome Bus to Teramo
List of participants:	Asst. Prof. Dr. Chaleeda Borompichaichartkul, CU Dr. Sarn Settachaimongkon, CU Asst. Prof. Dr. Sasitorn Tongchitpakdee, KU Dr. Sumalika Morakul, KU Dr. Ulaiwan Withayagiat, KU Dr. Kriskamol Na Jom, KU Assoc. Prof. Dr. Navaphattra Nunak, KMITL Assoc. Prof. Dr. Taweepol Suesat, KMITL Asst. Prof. Dr. Gerhard Schleining, BOKU Dipl-Ing. Rainer Svacinka, BOKU Dr Line Friis Lindner, BOKU

1.2 Training programme, UNITE, 12-13 April 2017

The training programme organized by UNITE, Teramo in Italy, consisted of lectures, interactive discussions among students and teachers and excursions to the Italian beverage industries. The first teaching lecture was given on the topic of "Food safety issues in fruit juice processing" with specific attention to innovative technologies for microbial risk management and shelf-life extension of beverages. The second teaching lecture was entitled "Design and development of innovative beverages" with specific focus on innovation in processing, product formulation using alternative ingredients and packaging design for convenient life style. Students had been invited to join these sessions which gave all participants and teachers the opportunity to engage in an active discussion and sharing and exchange of experiences. Following from these lectures, the Thai participants participated in a teaching lecture devoted to quality and chemical safety concerns in beverage products followed by a visit to the food microbiological and analytical chemistry laboratory of UNITE for demonstration of research facilities. The lectures were supplemented with two excursions. One of the largest manufacturer of packaging materials for the Italian beverage industry, situated in Sulmona, and the second to a winery where the participants visited various wine production units and the quality control laboratory.

The detailed evaluation report written by the Thai partners can be found in section 1.4.

1.2.1 Agenda Training programme UNITE, April 2017

UNITE (Teramo, Italy) 12-13 April 2017	
Wed, 12 April 2017 ***Place Board meeting room Law Faculty***	**9:00 Welcome @ UniTE** Prof. Dino Mastrocola, vice Rector University of Teramo Prof. Antonello Paparella, Dean of the Faculty of Bioscience and Technology for Food Agriculture and Environment Prof. Paola Pittia, vice –Rector of Internationalisation of UniTe, reference scientists of SEA-ABT project ***9:15: Quality and microbial safety aspects*** 1. Food Safety issues in fruit juice processing", prof. Antonello Paparella 2. Design and development of innovative beverages , prof. Paola Pittia (seminar) 3. Visits to the Faculty of Bioscience labs (Food Technology and Microbiology) ***Lunch @ UniTE Canteen*** ***14:30 Quality and chemical safety aspects*** "Assessment of quality and safety of beverages via innovative rapid assays" – prof. Dario Compagnone (seminar) Demonstration activities in lab: 1) detection of polyphenols via gold nanoparticles formation 2) use of e-nose for quality control 3) detection of pesticides via liquid chromatography mass spectrometry – prof. Dario Compagnone **17:30-18:30 :** Briefing on the SEA-ABT project (UniTE tasks, WP2, WP4)

	<u>20:30 :</u> Dinner in a Restaurant in Teramo or nearby
Thursday, 13 April 2017	**<u>8:00</u>** Departure from Hotel Abruzzi 1. Visit at **MEDIBEV** (beverage packaging company of the REFRESCO group, Sulmona) (under definition) ***Lunch …somewhere in the area (under definition)*** **<u>15:00</u>** 2. Visit at **Zaccagnini** winemaker company (processing area) (Bolognano) **<u>18:00</u>** (max): back to Hotel Abruzzi ***Free evening-dinner***
Friday, 14 April 2017	Departure from Teramo
List of participants:	Asst. Prof. Dr. Chaleeda Borompichaichartkul, CU Dr. Sarn Settachaimongkon, CU Asst. Prof. Dr. Sasitorn Tongchitpakdee, KU Dr. Sumalika Morakul, KU Dr. Ulaiwan Withayagiat, KU Dr. Kriskamol Na Jom, KU Assoc. Prof. Dr. Navaphattra Nunak, KMITL Assoc. Prof. Dr. Taweepol Suesat, KMITL Paola Pittia, Associate Prof., UNITE Dario Compagnone, Full Prof. , UNITE Antonello Paparella, Full Prof., UNITE Lilia Neri, Assistant Professor., UNITE

1.3 Training programme HGU, April 2017

The training programme organized by HGU, Geisenheim in Germany, consisted of lectures dedicated to the topic of fruit juice processing and specifically on apple and berry processing. At the pilot plant, the participants were provided with a demonstration of black currant juice (concentrate) processing and apple juice processing and hands on experience with different pilot plant scale machine. Furthermore, the participants were given training on brewing and distillation and on brewing techniques supplemented by a practical session on distillation and the basics of German fruit distillery in theoretical and practical units.

1.3.1 Agenda Training programme HGU, April 2017

HGU (Geisenheim, Germany) 18-21 April 2017	
Monday 17.04.2017	Flight Rome – Frankfurt, hotel check in
Tuesday 18 April 2017	apple and berry processing
Wednesday 19 April 2017	apple and berry processing
Thursday 20 April 2017	pilot plant brewery including tasting
Friday 21 April 2017	pilot plant distillery including tasting
Saturday 22 April 2017	airport transfer or further private activities
List of participants:	Asst. Prof. Dr. Chaleeda Borompichaichartkul, CU Dr. Sarn Settachaimongkon, CU Asst. Prof. Dr. Sasitorn Tongchitpakdee, KU Dr. Sumalika Morakul, KU Dr. Ulaiwan Withayagiat, KU Dr. Kriskamol Na Jom, KU Assoc. Prof. Dr. Navaphattra Nunak, KMITL Assoc. Prof. Dr. Taweepol Suesat, KMITL Prof. Dr. Frank Will, HGU Dipl. Ing. Michael Ludwig, HGU Peter Bach (technician), HGU Tim Dreifke (technician), HGU

1.4 Evaluation report

Report prepared by the Thai participants

Monday, April 10, 2017

In the morning, Prof. Gerhard Schleining, a representative of the SEA-ABT program at BOKU, introduced the keynote speaker, Mr. HARALD SCHEIBLHOFER, a professor at the wine college named "Hochschul Bundeslehranstalt für Wein und Obstbau". He started from the target group of the college, learning and teaching activities, number of students and the job of the graduates. Then we visited the pilot plant and laboratory. There were many teaching equipment and machines such as juice extractor, filter machine, concentration machine. Before entering the fermentation and incubation process, we took a look at the fermentation and the distillation column equipment. This was a modern tool that operates with automation. Then we took to see the process of curing wine in a stainless steel tank. Mr. HARALD SCHEIBLHOFER described the production of many types of wines. The importance of Oak and what if curing in a stainless steel tank would be equivalent to curing in an Oak barrel, the difference between Oak from each country such as the US, France, etc.

Then we visited the wine analysis laboratory which analyzes the chemical composition and properties of beverages. In addition, there were numerous research papers from this college published in the international journals.

In the afternoon, we took a tour of the SCHEIBLHOFER winery in Vienna. Mr. HARALD SCHEIBLHOFER explained the process of wine production from grape harvesting to fermentation and curing and bottling with modern tools. Then we tasted the different types of wines to analyze differences. The taste of each wine varies according to the species of grape, storage and production processes.

Tuesday, April 11, 2017

Prof. Gerhard Schleining, representative of the SEA-ABT at BOKU, introduced speaker and administrative staff to the SEA-ABT Thai delegates. During the morning session, a seminar devoted to microbial safety concerns in beverage production was given by Dr. Marija Zunabovic-Pichler. She started with the fundamental background on microbial safety of food and beverage. Major types of pathogenic microorganisms associated with food including bacteria, fungi, viruses and protozoa were demonstrated. Epidemic data and statistics reveal that, among these pathogens, Listeria monocytogenes and Campylobacter spp. are the most predominant agents causing foodborne disease in EU. Important factors influencing microbial contamination, microbial cell adaptation in food matrices and biofilm formation on food contact surfaces were mentioned. Their virulence factors and preventive controls were also discussed. The speaker gave attention on certain innovative technologies for food microbiological analysis. For example, innovative concepts of rapid immunoassay and metagenomics technology were highlighted. Finally, she demonstrated her active research on detection of microbial quality of tap water in Vienna metropolitan using on-line flow cytometry technology. This project allows a real-time assessment of water quality and safety possible.

Afterward, Dr. Marija Zunabovic-Pichler presented brief of garage concept which is one of WP4. The main idea of the garage concept is to develop the entrepreneurship skill for students starting from their knowledge and experience. The students must be grouping for creating the business idea and then submit the proposal to competition. We provide the

specialist for coaching all students. Finally, they can make the business plan for supporting their business idea; the best business plan will be awarded the prize.

In the afternoon, Professor Gerhard Schleining, SEA-ABT Program Coordinator from BOKU, chairman of the SEA-ABT meeting. The agenda is about monitoring and planning of the project.

Wednesday, April 12, 2017

Upon the arrival, Prof. D. Mastrocola, Vice Rector and Prof. A. Paparella, Dean of the Faculty of Bioscience and Technology for Food, Agriculture and Environment, delivered a warm welcome to the SEA-ABT Thai delegates. Prof. P. Pittia, representative of the SEA-ABT Italian partner, reported the objectives and activities involved in this exchanged training program consisting of lectures, interactive discussion and excursions to the Italian beverage industries. The morning session devoted to quality and microbial safety concerns in beverage production. The first lecture given by Prof. A. Paparella was entitled “Food safety issues in fruit juice processing”. He gave attention on certain innovative technologies for microbial risk management and shelf-life extension of beverages. For example, innovative concepts of pasteurization, non-thermal processing, pulsed electric field and pulsed light technology as well as the application of bio-preservatives from plant extracts and bacteriocins were highlighted. The second lecture given by Prof. P. Pittia was entitled “Design and development of innovative beverages”. Her experiences on innovation in processing, product formulation using alternative ingredients and packaging design for convenient life style were deliberated. Certain graduate students of UNITE also attended the lecture with SEA-ABT Thai delegates. This provided an interactive discussion and exchange of experiences between the two sides. The afternoon session devoted to quality and chemical safety concerns in beverage products. Prof. D. Compagnone gave a lecture entitled “Assessment of quality and safety of beverages via innovative rapid assays”. He demonstrated active researches on detection of functional compounds and toxins in beverages, e.g. polyphenols detection using gold nano-particles, trace chemicals detection using peptide-based modified e-nose and LC/MS. Afterwards, the SEA-ABT Thai delegates were guided to food microbiological and analytical chemistry laboratory of UNITE for demonstration of research facilities. A traditional Italian welcome dinner was arranged by UNITE.

Thursday, April 13, 2017

Two excursions to Italian beverage manufacturers were coordinated by Prof. P. Pittia and Prof. D. Compagnone. In the morning, the SEA-ABT Thai delegates were taken to visit REFRESCO GROUP, one of the largest manufacturers of packaging materials for Italian beverage industry, situated in Sulmona. This company was found in 2011 with an intention statement as “Our drinks on every table”. Its products include mineral water, carbonated soft-drink, fruit juices, tea, high energy drinks. A welcome presentation regarding vision and mission of the company was given by their two R&D supervisors. Local site visits to the production areas of carbonated soft drink and fruit juices were endorsed. Technical knowledge transfer and discussion between academia and industrial party were effectively archived. In the afternoon, a visit to Italian winery named Zaccagnini, established since 1978 in Pescara, was organized. Many varieties of product including red, white, rose and sparkling wines are produced. The SEA-ABT Thai delegates were introduced by the winemaker, Mr. Concezio Marulli, to appreciate the horizontal landscape of vineyards, various wine production units and quality control laboratory. Finally, selective bottles of their product were given to all SEA-ABT Thai delegates as token of appreciation.

Friday, April 14, 2017 – Monday, April 17, 2017 Easter Holiday

Tuesday, April 18 - Wednesday, April 19, 2017

On the first 2 days of training, Prof. Dr. Frank Will and Mr. Michael Ludwig organized training on fruit juice processing: apple and berry processing. Comprehensive lecture contents included preparation steps (washing), crushing, mash enzyme treatment, pectin (structure and degradation), clarification, stabilization, fining and preservative, evaporation. The pilot plant demonstration of black currant juice (concentrate) processing and apple juice processing were also shown to participants. During the training, participants had hands on experiences with different pilot plant scale machines ,such as Bucher L200-press, decanter and evaporator. Demonstration of enzyme applications in juice processing for viscosity reduction and clarification were also shown. Furthermore, effect of fining agents were also demonstrated through laboratory set up.

Thursday, April 20 - Friday, April 21, 2017

On the last 2 days of training, Prof. Dr. Frank Will organized about brewing and distillation. Comprehensive lecture contents included overview of purity laws, cider, malts, brewing, hop calculation, and distillation. In practical session, a 50 L brew were made on copper pilot plant. Details on brewing technique were explained by Mr. Arne Sperl, a brew master. For practical session for distillation, a mash preparation of perry were performed. However, because the distillery the heating element of small unit was broken one day before, the distillation could not me done during the training. Therefore, Dr. Frank showed the basics of German fruit distillery in theoretical and practical units.

2 Food Waste Recovery Workshop

A group of eleven teachers from the 3 Thai partner universities KU, CU and KMITL participated in two workshops organized by the ISEKI Food Association as a pre-conference workshop at the 5th ISEKI_Food Conference in Stuttgart, Germany, 2 July 2018.

The participants:

Asst. Prof. Dr. Sasitorn Tongchitpakdee, KU
Dr. Sumalika Morakul, KU
Dr. Kriskamol Na Jom, KU
Asst. Prof. Dr. Chaleeda Borompichaichartkul, CU
Dr. Sarn Settachaimongkon, CU
Asst Prof Dr Kitipong Assatarakul, CU

Signed list of participants is kept confidential by the project coordinator and will not be included here.

2.1 Agenda Food Recovery Workshop

Timeline	**Activity**
08:14-08:45	Registration
08:45-09:00	Opening session & IFA's Intoduction
09:00-09:20	"Food Waste Recovery: Open Innovation Network", Charis M. Galanakis (Food Waste Recovery Group, IFA, Austria)
09:20-09:50	Invited Speech: "Leverage points for food waste prevention in Europe", Carmen Priefer (Karlsruhe Institute of Technology), Germany
09:50-10:15	"Durum wheat bran by-products for oil and phenolic acids: industrial symbiosis development", Vladimiro Cardenia (University of Bologna, Italy)
10:15-10:35	Coffee break
10:35-11:05	Invited Speech: "Broccoli by-products as source of bioactive ingredients-the spin -off experience", Diego M. Moreno (CEBAS-CSIC, Spain)
11:05-11:35	Invited Speech: "Utilization of pistachio hull for the recovery of phenolic antioxidants: characterization and extraction studies", Sevcan Ersan (University of Hohenheim, Germany)
11:35-12:00	"Emerging technologies for extraction of bioactives and polysaccharides from tropical fruit waste", Paulomi (Polly) Burey (University of Southern Queensland, Australia)
12:00-12:25	"Sustainable valorisation of chicory processing by-products: green extraction of antioxidants and energy consumption optimization", Delphine Pradal (University of Lille, France)
12:25-12:55	Poster session

12:55-14:25	Lunch break
14:25-14:55	Invited Speech: “Recovery of pectin from by-products of industrial food processing – promising sources and their valorization", Judith Müller-Maatsch (University of Hohenheim, Germany)
14:55-15:20	“Recovery of valuable protein co-products from meat industry by enzymatic hydrolysis: bovine fleshing and hides”, Cecilia Anzani (Teagasc Food Research Centre Ireland)
15:20-15:45	“Optimization of drying conditions to preserve phenolic contents and antioxidant activity of “annurca” apple, Southern Italian cultivar”, Begüm Önal (University of Salerno, Italy
15:45-16:05	Coffee break
16:05-16:35	Invited Speech: "Biomass side streams from agriculture and forestry as one opportunity to built up a sustainable bioeconomy", Hartmut Welck (Steinbeis, Germany)
16:35-17:00	“Investigation of green techniques for the recovery of sterols, phenols and oil from olive pomace: subcritical water and steam explosion pretreatments”, Özge Seçmeler (Altınbaş University, Turkey)
17:00-17:25	“Influence of the addition of hazelnut skins on the physico-chemical and polyphenol content of yogurt and fresh egg pasta ”, Marta Bertolino (University of Turin, Italy)
17:25-17:40	Summary
17:40	End of workshop

Organized by the Special Interest Group “Food Waste Recovery” of the ISEKI-Food Association, and chaired by Dr. Charis M. Galanakis, the “Food Waste Recovery Workshop” was dedicated to the recovery of valuable compounds (e.g. polyphenols, antioxidants, pectin, carotenoids, proteins etc) from food processing by-products (olive mill waste, grape marc, coffee silverskin, and cereal processing by-products etc) as well as to synergies with food industries via our open innovation network.

The objective of the workshop was to provide up-to-date knowledge and critical information in the field by:

- exchanging methodologies, ideas and scale up experiences in an open innovation framework
- discussing relevant processes and technologies
- investigating applications of recovered compounds in the food industry
- highlighting sustainable solutions
- recruiting experts

During the workshop, the following topics were addressed:

- Recent advances on food by-products processing: olive mill wastewater, wine lees, grape marc, coffee husk, coffee silverskin, polyphenol-rich substrates, wheat bran etc
- Emerging non-thermal technologies for the recovery of compounds and the development of functional foods and nutraceuticals

- Examples, innovation barriers, ways out and success stories of industrial and commercialized applications
- Presentation of Food Waste Recovery Group activities (open innovation network, books, e-course, training)
- Round table discussion for future trends, synergies and consortiums' development

For more information about the workshop, please visit
https://www.isekiconferences.com/stuttgart2018/workshops/food-waste-recovery-workshop

2.2 Evaluation report by the Thai participants

Report on Food Waste Recovery Workshop

Prepared by Asst Prof Dr Chaleeda Borompichaichartkul, CU

SEA-ABT project members attained the 2nd Food Waste Recovery Workshop and Open Innovation on 2 July 2018 at University of Hohenheim, Germany. The objective of joining the workshop is to be trained to understand and know how to recovery of valuable compounds (e.g. polyphenols, antioxidants, pectin, carotenoids, proteins etc) from food processing by-products (olive mill waste, grape marc, coffee silverskin, and cereal processing by-products etc).

The training is led by Dr Charis M. Galanakis who are member of Food Waste Recovery Group founded in 2013 by **ISEKI Food Association** and today has been developed to the biggest open innovation network worldwide in the field of food waste recovery, aiming at helping food industries and other involved partners in the food chain to recover valuable compounds from food waste, valorize their streams and improve their sustainability. The group continuous training is not only its responsibility, but also their expertise targeting to update its knowledge in recovery methodologies and implement them in compliance with International standards and local needs.

In this workshop Food Waste Recovery and Open Innovation are emphasized. Food Waste Recovery underlines the prospect of upgrading compounds and ingredients lost within food waste streams by creating high added-value products (e.g. functional foods).

Open innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation within organizations and expand the markets for external innovation usage, respectively. For example, when relevant knowledge exists outside the company, managers need to recognize, identify, capture, and manage such knowledge, choosing an appropriate integration mechanism

Objectives

The workshop aims to support food industries and organisations to innovate and develop food waste recovery and sustainability projects and provide up-to-date knowledge and critical information in the field by:

- exchanging methodologies, ideas and scale up experiences in an open innovation framework
- discussing relevant processes and technologies
- investigating applications of recovered compounds in the food industry
- highlighting sustainable solutions
- recruiting experts

Each researcher presents the interest information to exchange on topic that is very informative and some of them involved technology.

The overall information and knowledge gained from this workshop is about recovery techniques and processing of bioactive compounds from food waste and characterize their activity and properties to use in food as the ingredients or food additives. Processing method such as drying also discussed on its effect on the bioactive compounds from waste. Energy recovery from food waste and green process are also draw the attention of scientist to be aware of how important and how much food waste can be utilized to gain maximum benefit.

3 Certification workshop

This certification workshop was aimed to provide essential information regarding the European higher education certification system and how to prepare a standard SAR (self-assessment report) document for receiving an EQAS accreditation of the existing BSc and MSc programs in Food Science and Technology delivered in Thai university partners, i.e. Kasetsart University and Chulalongkorn University. The workshop was organized in Stuttgart, Germany, on 3 July 2018. Rui Costa, Chair of the EQAS Accreditation Commission, was the instructor.

The participants:

Asst. Prof. Dr. Sasitorn Tongchitpakdee, KU
Dr. Sumalika Morakul, KU
Dr. Yaowapa Lorjaroenphon, KU
Asst. Prof. Dr. Kriskamol Na Jom, KU
Dr. Pinthip Rumpagaporn, KU
Dr. Pathima Udompijitkul, KU
Asst. Prof. Dr. Wannee Jirapakkul, KU
Asst. Prof. Dr. Chaleeda Borompichaichartkul, CU
Dr. Sarn Settachaimongkon, CU
Asst. Prof. Dr. Kitipong Assatarakul, CU

Signed list of participants is kept confidential by the project coordinator and will not be included here.

3.1 Agenda certification workshop

Timeline	**Activity**
10:00-10.15	Opening session & EQAS accreditation introduction
10.15-10.30	Quality assurance in EU higher education and aims
10.30-10.45	Subject-specific quality labels
10.45-11.30	Self-assessment report (SAR) and how to prepare this document
11.30-12.30	EQAS Food learning outcomes and how to well define them
12.30-12.45	EQAS Complimentary information: reports and resources
12.45-13.00	Summary, concluding remarks, Q&A
13.00	End of workshop

3.2 Evaluation report by the Thai participants

Report prepared by Dr. Sarn Settachaimongkon, Chulalongkorn University, Thailand

Before the actual workshop, an online meeting was organized on 16 May 2018, among Rui Costa, KU and CU staffs, for discussion of the overview of EQAS food accreditation system and how to prepare a SAR document. Accordingly, the Thai partners decided which BSc and MSc curricula they would like to submit for the EQAS accreditation. The Thai partners collected essential information and prepared draft versions of SAR documents for the workshop on 3 July 2018.

On the day of workshop, Rui Costa started by giving an introduction about the framework of EQAS Food accreditation. Information regarding aims and criteria for EU higher education quality assurance standards and quality guidelines were addressed. Differences between Thai university credits and ECTS were discussed and clarified their equivalence. The concepts of student-centered learning, necessary learning resources and student's supports were described. The SAR documentation protocol was demonstrated. Examples and drafts of SAR that the Thai partners had previously prepared were discussed and verified. The process regarding how to establish a well-defined EQAS Food learning outcomes were demonstrated and discussed. Relevant learning theories, e.g. Bloom's taxonomy and Behaviorism learning theory, and guidelines were given as additional information on how to formulate learning outcomes. Examples of several modules were demonstrated as case studies and opened for group discussion. Finally, relevant issues regarding EQAS complimentary reports and resources were described.

After the workshop, the Thai partners had to develop their SAR documents responsible for each specific curriculum to be accredited. A primary revision could be provided by Rui Costa then the SAR documents would be submitted to EQAS Food accreditation committee. The tentative period for institutional evaluation was estimated around September 2018.

The participants were asked to fill in an evaluation form (see annex 1). Replies were collected from 5 participants:

	Highly Satisfactory	Satisfactory	Poor	Unsatisfactory
Rating First online session (May 16 2018)	2	2		
Rating Presential session (July 3 2018)	3	2		
Rating Follow-up (August 2018)	2	2		

	Highly useful	Useful	Poor	Not useful
How useful were of the following contents/information?				
Standards and Guidelines for Quality Assurance in the European Higher Education Area	4	1		
EQAS criteria	4	1		
How to write learning outcomes	4	1		
Feedback on the draft self-assessment reports	2	2		

How well were the questions addressed during the event answered for you?

- All questions were clearly answered. It helped a lot on writing a self-assessment report.

- The instructor was very informative and enthusiastic. The criteria for IFA accreditation and how to prepare a well written SAR document were described. Examples of learning outcomes and essential keywords for learning outcomes statement were given.
- The answer and information given is clear and easy to follow for prepare SAR.
- Appreciate the course and helpful for set up outcomes base learning
- Very well

What (relevant) questions do you now carry away with you, as you leave this training?

- The question was “how to write LO (learning outcome)”
- How to address the learning outcomes which relevant to the expectation from IFA?
- Can you provide a template for writing a good and acceptable SAR document?
- How to write and explain learning outcomes that suit to the characteristic of the program?
- What is the teaching method and assessment that can be used for student to get to the learning outcomes?

Is there any other aspect on which you would like to give us your opinion?

- No, the training session is well designed
- I think the effective assessment methods should be addressed and case study, thank you

4 Annex 1: Questionnaire SAR Training

Training on self-assessment report

by Rui Costa, Polytechnic Institute of Coimbra, Portugal

May 16, 2018

July 3, 2018

August 2018

Name :

Institution:

Evaluation Questionnaire

Please answer to the questions bellow to help us assess the training.

1. My rating for the several sessions is:

	Highly Satisfactory	Satisfactory	Poor	Unsatisfactory
First online session (May 16)				
Presential session (July 3)				
Follow-up (August)				

2. How useful were of the following contents/information?

	Highly useful	Useful	Poor	Not useful
Standards and Guidelines for Quality Assurance in the European Higher				

Education Area				
EQAS criteria				
How to write learning outcomes				
Feedback on the draft self-assessment reports				

3. How well were the questions addressed during the event answered for you?

4. What (relevant) questions do you now carry away with you, as you leave this training?

Could you please clarify these questions as either “D” or “S”.

D = “ I was disappointed that this question was not answered by or during the event”

S = “ I was stimulated to think about this question, as something I want to move towards, and to tackle next”

5. Is there any other aspect on which you would like to give us your opinion?