

Deliverable No. 2.4 Capacity Building Workshop Events 1&2

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Deliverable N°2.4

Capacity Building Workshop Events 1 and 2 Report

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Summary

Within the framework of EURASTiP, Task 2.1 of Work Package 2 (Innovative Education, Training and Capacity Building), focuses on aligning European and south-east Asian capacity building. This report presents the outputs from D2.4 - the EURASTiP Capacity Building Workshops 1 and 2, organised by project partner AquaTT. A total of three Capacity Building Workshops will be held over the total duration of the project, all focusing on key themes in aquaculture education and training.

Objective: The aim of the EURASTiP Capacity Building Foresight workshops is to bring together experts and representatives from the wider aquaculture stakeholder community to discuss trends, opportunities and areas for strategic cooperation in the aquaculture education sector across the regions of Europe and south-east Asia. The objective of the first EURASTiP Capacity Building Foresight workshop: *Promoting Innovative Teaching through Collaboration in the International Aquaculture Sector* (held on Thursday the 9th of November 2017, in Batu, east Java, Indonesia) was to bring together aquaculture parties from both Europe and south-east Asia to discuss trends, opportunities and areas for strategic cooperation in the area of innovative teaching in the aquaculture sector. The objective of the second EURASTiP Capacity Building Foresight workshop: *Ensuring Aquaculture Education meets the needs of the Aquaculture Sector* (held on Saturday the 25th of August 2018, in Montpellier, France) was to continue the conversation with aquaculture parties from both Europe and south-east Asia to ensure that the educators are responding to the sector's rapid expansion. Furthermore, the workshop aimed to discuss educational level collaboration between the regions to create versatile employees for the sector as a whole.

Results: The first EURASTiP Capacity Building Foresight workshop brought together 29 participants from 12 different countries in Europe and south-east Asia, namely Belgium, Cambodia, Indonesia, Ireland, Malaysia, Norway, Portugal, Spain, Sweden, Thailand, the Netherlands, and the United Kingdom.

The event focused on innovative teaching (methods, materials, pedagogies, etc.) in the aquaculture sector through collaboration with European and Asian educators. The workshop tackled stimulating topics such as best practice examples of innovative teaching materials; real-life challenges experienced by educators in trying to implement innovative teaching and how to address them; how can a teacher be innovative, and how can aquaculture educators in Asia and Europe collaborate in innovative teaching.

The second EURASTiP Capacity Building Foresight workshop brought together 28 participants from 19 different countries Europe and south-east Asia, namely Bangladesh, Belgium, Cambodia, France, Germany, Indonesia, Ireland, Italy, Malaysia, Myanmar, Norway, Portugal, Spain, Sweden, Thailand, the Netherlands, the Philippines, the United Kingdom and Vietnam.

The two workshops were live streamed on YouTube to enable wider participation. The workshops were also recorded and uploaded to the EURASTiP website (www.eurastip.eu) for wider reach.

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Introduction

Both Europe and south-east Asia have a strong interest in current and future cooperation in aquaculture education matters, as this guarantees a strong research component that can result in new business opportunities. EURASTIP's WP2 focuses on connecting European and south-east Asian educators to develop and strengthen relationships for mutual benefit, amongst other through the organisation of joint capacity building workshops.

Task 2.1 of Work Package 2 (Innovative Education, Training and Capacity Building), focuses on aligning European and south-east Asian capacity building. A total of four workshops will be carried out, one Alignment Workshop and three Capacity Building Workshops, to consolidate EU-Asian education and consolidate efforts of existing networks, AQUA-TNET, EATiP and ASEAN-FEN. The workshops aim to bring together actors working in and between Europe and south-east Asia to carry out best practice and foresight exercises in relation to aquaculture training provision to support a sustainable global market.

The three Capacity Building Workshops discuss key themes in aquaculture education and training, bring together experts and the wider stakeholder community to discuss trends, opportunities and areas of strategic cooperation.

This report for Deliverable 2.4 presents the outputs of the first two Capacity Building Workshops, which took place in November 2017 and August 2018 respectively.

Methodology

To determine the key themes of each Capacity Building foresight workshop, an alignment workshop (see EURASTIP D2.2 report) took place in July 2017, which discussed main issues at stake within the aquaculture education and training field, in particular looking at collaboration between Europe and south-east Asia. The discussions led to a prioritisation of the three key themes, which are 1). Promoting innovative teaching through collaboration in the international aquaculture sector; 2). Enhancing opportunities for mobility and 3) Ensuring education is responding to industry needs. Once key themes were decided upon, participants of the alignment workshop discussed where the workshops should be held and when. To engage diverse interested groups, it was decided that the workshops would be held alongside larger aquaculture events and conferences, alternating between project regions Europe and south-east Asia.

It was agreed that the workshops on Innovative Teaching would be held at the International Fisheries Symposium (IFS2017), the major annual event of the ASEAN-FEN network, attracting hundreds of aquaculture education related stakeholders in the ASEAN region. IFS2017, projecting ASEAN-FEN-Plus for sustainable aquaculture, fisheries and aquatic ecosystems, was held in Batu, east Java (Indonesia), from 7-9 November 2017 (<http://ifs2017.ub.ac.id/>).

During the alignment workshop, it was also agreed that the second capacity building workshop should then take place in Europe and it was decided that the workshop on ensuring aquaculture meets industry needs should take place alongside AQUA2018, a joint conference and tradeshow of the World Aquaculture Society (WAS) and the European Aquaculture Society (EAS) which was held in Montpellier France on 25 August 2018 (<https://www.was.org/Aqua18PressConference/index.html>).

While it was determined that the third capacity building workshop should take place in south-east Asian on the topic of enhancing mobility between the regions, the specific dates and location were not yet determined at the time this report was written.

To attract participants, both workshops were announced and promoted to the wider aquaculture education stakeholder community, in specific the mailing lists of the Aqua-tnet and ASEAN-FEN networks, through the EURASTiP website (<http://eurastip.eu/>), the EURASTiP twitter account (<https://twitter.com/eurastip>), and to members of relevant networks such as EAS, EATiP and FEAP and circulated across relevant, GDPR compliant aquaculture mailing lists. Selection of final participants was carried out ensuring an equal balance between European and south-east Asian participants, men and women, and representation of different stakeholder groupings (not only education, but also research and industry to ensure stakeholder input).

In order to ensure the programmes for the workshops covered each topic sufficiently to create maximum discussion, engagement and outputs, all applicants were asked to submit their motivation for attending the workshop along with their relevant experience of the workshop topic, to get a good insight into existing skills and knowledge, as well as an appreciation of their English level. This was assessed and taken into account into the selection of final attendees, but also to develop a focused, suitable and content-rich programme. A gender and geographical balance of attendees was also considered throughout the review stage of applications. Those applicants who had particularly relevant, interesting or unique perspectives were invited to speak or give a small workshop within the overall event.

The programme was designed to be highly interactive, facilitating active and close collaboration between European and south-east Asian participants during the day. It was also felt that working in interactive, small working groups would facilitate contribution from all group members, as opposed to plenary sessions only which might inhibit some attendees from speaking up. This led to the development of the programme for each workshop (see Annex 2), including interactive working groups whereby the organisers made sure to balance European and south-east Asian participants, men and women, and representation of different stakeholder groupings in each discussion group.

The Capacity Building Workshops and Key Results

Within the budget capabilities of the EURASTiP project, it was determined that a maximum of 25 - 30 participants could be funded per workshop. Applicants were asked to outline what their motivation for attending the workshops was, how they could contribute to the specific topic of each workshop and what their level of experience was in relation to the topic. Priority was given to funding those who were members of Aqua-tnet, EATiP, ASEAN-FEN and APC nominated participants (as per DoA) and applicants deemed to have either good knowledge on the topic, or no knowledge and wanting to learn. Both events were oversubscribed and attendees who were not selected were advised on how they could follow streaming of the events, or where to find the recordings.

A gender-balance was strived for in the participants attending and presenting at both Capacity Building Workshops. This results from EURASTiP's recognition of gender inequalities that still exist within access to education, training and technology in the aquaculture sector. EURASTiP strives to capitalise on the opportunity to promote gender equality in all actions of the project. As such, a conscious effort was made to invite women to attend the events, the result of which were high numbers of women attending both events: 10 of 29 (34%) participants were women at the first Capacity Building Workshop in Indonesia and 13 of 28 (46%) participants were women at the second Capacity Building Workshop

in France. In addition to attendance, workshop organiser AquaTT encouraged and invited women to present and speak at both workshops, the result of which was a diverse range of female speakers from Europe and south-east Asia during both workshops. Specifically, at the first Capacity Building Workshop two out of three presentations were presented by women (one from a European and one from a south-east Asian institute); and at the second Capacity Building Workshop three out of four 'setting the scene' presentations were presented by women (two from European and one from south-east Asian institutes). Furthermore, during the workshop efforts were made to have a balance of European and south-east Asian, as well as a gender balance, within breakout groups during the interactive sessions. Through working in smaller groups, it was hoped that this would encourage and facilitate those reluctant to speak during plenary sessions, to share their opinions and perspectives in this smaller scale format. These actions taken, in the planning stages and during the workshops, not only contributed to gender balance in project activities but also allowed fresh perspectives, outlooks, approaches and best practices to be shared for the mutual benefit of the aquaculture sector, stakeholders and society as a whole.

1. EURASTiP Capacity Building Foresight Workshop 1: *Promoting Innovative Teaching through Collaboration in the International Aquaculture Sector*

The first **EURASTiP Capacity Building Foresight workshop: *Promoting Innovative Teaching through Collaboration in the International Aquaculture Sector*** took place on Thursday the 9th of November 2017, in Batu, east Java, Indonesia. The workshop brought together 29 participants from 12 different countries in Europe and south-east Asia, namely Belgium, Cambodia, Indonesia, Ireland, Malaysia, Norway, Portugal, Spain, Sweden, Thailand, the Netherlands, and the United Kingdom. The event's focus was on innovative teaching (methods, materials, pedagogies, etc) in the aquaculture sector through collaboration with European and south-east Asian educators.



Figure 1: Group picture of participants at the first EURASTiP Capacity Building Foresight Workshop, in Batu, east Java, Indonesia.

The master of ceremony, Marieke Reuver from AquaTT, opened the workshop by warmly welcoming all attendees who were then invited to introduce themselves in a roundtable discussion. David Bassett, the EURASTiP project manager then presented an overview of the EURASTiP project, to allow all workshop participants to become familiar with the project, its aims and objectives. After this, innovative teaching practices were presented: Firstly, Dr Sandra Catherine Zainathan from Universiti Malaysia Terengganu, Malaysia set the scene by presenting on Innovative Teaching Philosophies. She highlighted the importance of student engagement and two-way interactions through innovative teaching methods between the student and teacher and integrating student centre and teacher centre learning into classes to ensure students are absorbing the knowledge they are being given. This was followed by Dr Sara Barrento from Swansea University, UK, who presented on SPOT (Short Public Online Tutorials). She gave a hands-on training session on different types of innovative teaching tools and methods such as virtual presenting using PowerPoint with narrated slides or digital animated posters to engage students and interested parties on various topics. Participants had been invited in advance to send examples of PowerPoint presentations as they use them in their aquaculture education courses, and Sara used an example to explain very hands-on some useful rules in relation to presentations. After lunch, in a presentation on how videoconferencing can be used as a tool for successful innovative teaching, Dr Türker Bodur using an Aquaponics learning module as a showcase, “dialled in” from Akdeniz University in Turkey to the workshop. During his presentation he highlighted the potential of the internet to allow educators to present their work remotely to people in different regions to allow for knowledge sharing and new techniques to be learnt. Participants showed great interest in learning about the practicalities of distance learning training courses.

In the afternoon sessions the group broke up into interactive working sessions to discuss stimulating topics, such as:

- *Best practice examples of innovative teaching and materials:* participants were asked to give examples and experience of teaching and engagement with industry.
- *Real-life challenges experienced by educators in trying to implement innovative teaching and how to address them:* discussions of digital literacy skills required for teachers and students, investments needed, and the strengths and weaknesses in relation to other teaching methods available.
- *How can aquaculture educators in Asia and Europe collaborate in innovative teaching?* Such as open educational resources, collaboration platforms and engaging with industry.

Facilitators were appointed and instructed in advance to be impartial and help moving discussions on, let the group brainstorm and come up with ideas and suggestions. They were asked to try to include all participants if they noticed some were reluctant to speak up. Each group discussed each topic, building upon ideas and suggestions presented by the previous group, to enrich the discussions and results. Facilitators took notes of the discussions on flip charts and presented the main points in a plenary session at the end of the event.

Selected participants were encouraged to bring along examples of innovative teaching methods they had experience with, to show first-hand ideas.



Figure 2: Breakout interactive sessions



Figure 3: Breakout interactive sessions

Results:

Best practice examples of innovative teaching and materials

The majority of participants felt that when describing innovative teaching it was considered the idea of trying new teaching techniques. Other key words that were used to describe innovative teaching were: 'thinking outside the box'; 'transformation'; 'improvement'; 'using technology and IT skills' and 'good teaching'. The best practice examples that workshop participants felt worked for them in the past were:

- Interesting lessons that motivate students.
- Opportunities for feedback and feedforward.
- Farm practice, role play and storytelling.
- Project-based learning.
- Engaging with experts, technicians and industry.
- Fieldwork and visits to fish and tasks to complete on innovate marketing system.
- Weekly summary presentations by students based on teacher's lectures from the previous week.
- Coaching and mentoring on an individual student basis to prepare for the job market.
- Encouraging students to become a critical thinker. For example, reviewing a scientific paper.
- Blended learning: Dividing classes into teaching and group work or discussions.
- Theoretically plan and design a fish farm, make a production plan and drawing over six-month period.
- Use online tools and resources such as Kahoot! and Today's Meet.

Real-life challenges experienced by educators in trying to implement innovative teaching and how to address them

There are a number of challenges experienced by educators trying to implement innovative teaching including access to facilities and infrastructure; workload; time; training; skills; support and knowledge:

- Access to strong internet connection and bandwidth are considered of the upmost importance for innovative teaching. In many regions the bandwidth is low, the internet connection is slow and interrupted, forcing educators to work off-line or develop back-up teaching plans in the event the internet fails, this makes preparation more time consuming. There are also concerns surrounding cybersecurity.
- The application of new approaches to teaching methods can be time consuming to prepare.
- Teacher/lecturers have a diverse and heavy workload, and this make the task of innovative teaching a big challenge.
- Some students are reluctant to engage with innovative learning. Sometimes innovative methods are viewed as having an extra work-load in comparison to traditional teaching methods.
- There is a lack of training on innovative teaching – what kind of methods exist, their suitability for teaching particular topics. It was felt that the innovative teaching landscape moves too fast to be able to track this on an individual basis. As a result, it was felt that there is a need to be

advised by specialists on what exists, technical support, the benefits and pitfalls of specific methods.

How can aquaculture educators in Asia and Europe collaborate in innovative teaching?

It was determined by all that there is a need for more collaboration between Europe and south-east Asia. Many felt that while collaboration at postgraduate level is strong, collaboration at undergraduate level remains weak and this is largely due to funding and language issues. All participants felt that engaging in collaboration across the regions could lead to new curriculum development. Especially in terms of learning from the skillset and expertise of the different region. For example, it was stated that there is a need to collaborate to “plug gaps” in knowledge or the market. For example: Europe is “weak” on ornamental, tropical fish and shrimp, while south-east Asia is weak on technologies and cold-water salmonids. It was also felt that in Europe the emphasis is still very academic whilst in Asia there is greater emphasis on vocational experience – e.g. model farms, commercial realities etc. Europe could learn from greater innovative market and vocational teaching.

To maximize education innovation, there is a need:

- To increase inter-disciplinary approaches in collaboration.
- For cultural understanding and appreciation.
- For educators and industry guest lecturers to be invited to help with this on a more frequent basis.
- For greater emphasis to be placed on collaboration with economically less developed countries (for example Laos, Cambodia) rather than always looking to the existing relationships between wealthier countries and institutions.
- To consider innovation in working with smaller scale sectors. The majority of south-east Asian aquaculture is small-scale, and this is expected to continue being the case for some time.
- For a better understanding of the skills and expertise that (the diverse) aspects of the industry need is required. This is particularly true with regard to understanding the value chain, government regulations, certification and the ecosystem-based approach.
- To work more closely with south-east Asian research institutes in addition to more formal universities.

Finally, the participants from the workshop felt that there is a need to develop a European / south-east Asian “exposure” course.

- Cross regional accreditation will be required to promote mobility and therefore understanding of both educators and researchers (Suggestion EURASTiP could potentially play a role to assist in this!)
- The use of open educational resources will help to facilitate this, but this will be a big commitment from all required in terms of time and money and needs to be carefully worked through.
- It was suggested that a general depository of visual aquaculture related material such as pictures and movies should be established.

2. EURASTiP Capacity Building Foresight Workshop: *Ensuring Aquaculture Education Meets the Needs of the Aquaculture Sector*

The second **EURASTiP Capacity Building Foresight workshop: *Ensuring Aquaculture Education Meets the Needs of the Aquaculture Sector*** took place on Saturday the 25th of August 2018, in Montpellier, France. The workshop brought together 28 participants from 19 different countries Europe and south-east Asia, namely Bangladesh, Belgium, Cambodia, France, Germany, Indonesia, Ireland, Italy, Malaysia, Myanmar, Norway, Portugal, Spain, Sweden, Thailand, the Netherlands, the Philippines, the United Kingdom and Vietnam.



Figure 4: Group picture of participants at the second EURASTiP Capacity Building Foresight Workshop, in Montpellier, France

The overall aim of the workshop was to bring together aquaculture parties from both Europe and south-east Asia to discuss trends, opportunities and areas for strategic cooperation in relation to training provision that supports a sustainable global market. Aquaculture is one of the most important and rapidly expanding food production industries in the world. As an exciting yet constantly evolving sector, excellent education underpins each person working in aquaculture. An important question to ask is “whether aquaculture education is fit for purpose for the 21st century?” Most of Europe’s imported seafood comes from south-east Asia, and both regions have a substantial interest in collaborating at an educational level too, to ensure that aquaculture education delivers the best employees for the aquaculture sector overall. At this workshop we explored whether current aquaculture educational programmes and methods sufficiently address many of the emerging trends in the aquaculture sector, and how we can collaborate better and learn from each other to develop education and training that delivers fit for purpose employees.

The workshop started with a welcome word and introduction by master of ceremony Marieke Reuver from EURASTiP third party partner AquaTT. This was followed by the round table introductions; participants had been invited in advance to introduce themselves using a printed A4 poster including

their name, organisation and role/position, as well as their picture (for easier recognition throughout the day), and to indicate in just one word what they think is important in terms of employability (addressing the theme of the workshop), and to explain what kind of collaboration they were looking for (supporting collaboration after the workshop). This methodology proved highly popular and very efficient; the wall with A4 introductions was a welcome and easy conversation starter all throughout the day.



Figure 5: A4 Introductions, making networking easy!

After the introductions David Bassett (EATiP and the EURASTiP project manager) presented an overview of the EURASTiP project, to allow all workshop participants to become familiar with the project, its aims and objectives. This was followed by several presentations to set the scene around the topic of ensuring that aquaculture education meets the needs of the aquaculture sector, looking at it from the different perspective of both regions, as well as different stakeholders.

Firstly, Yolanda Molares from Acuiplus (the Spanish aquaculture cluster), presented the aquaculture industry perspective on the ideal employee. This presentation outlined the skills that are required to respond to the aquaculture sector demands, such as: automation, technology, digitalisation, market perception and international business. The future aquaculture employee should have multiple intelligence, creativity, networking skills, project focus and team management, intercultural communication, adaptation and flexibility, time management, mobility, ongoing learning, vision and be collaborative. There is a need to search for new talent and the aquaculture industry needs to be attractive for this new generation of skilled employees. Yolanda Morales highlighted the need to promote collaboration between different sized companies, develop new training programmes including online learning, cross sectoral exchanges and industrial doctorates.

Secondly, Noordiyana Mat Noordin from the Universiti Malaysia Terengganu (UMT) (Malaysia) presented the south-east Asian experience with developing courses in response to aquaculture industry demands. The presentation highlighted how industry is included when new aquaculture programmes are developed. This is achieved through industry representation on the board of advisors

and the distribution of the market survey of aquaculture programmes to be reviewed by aquaculture industry managers, who are asked to review the course to assess if it addresses their industry demands, and how much they would pay a graduate from the program. This approach allows UMT academics to develop industry responsive courses. Another point made during this presentation was the importance of class sizes to ensure courses are responsive to industry demands. The university has made efforts to reduce class sizes, as this allows teachers to monitor the lapse in skills and abilities of students and provides them more opportunity to support students to develop skills fully. Finally, they find it important including generic skill modules, such as communications, which are useful for graduates when entering into the workforce.

Thirdly, Amaya Albalat from the University of Stirling, United Kingdom, presented the Erasmus+ project 'Curriculum Development for Sustainable Seafood and Nutrition Security, SSNS', comprising of both south-east Asian partners (Thailand, Vietnam and Indonesia) and European partners (UK, Greece and Norway). The project identified that the market is increasingly characterised by higher competence and more complex working tasks and therefore there is a need for professionals who are: capable of problem-solving, critical thinking, and able to collaborate across regions, sectors and cultural boundaries. In order to produce such professionals, a higher quality of education is required. During this presentation, some suggested reasons for why higher education, particularly MSc. courses, in Aquaculture and Fisheries are facing challenges were outlined, these included: Aquaculture/Fisheries degrees are less attractive; Declining trend in student enrolment; Employment not aligned with expectations; and Employers have low satisfaction rate with graduates. The aim of the Erasmus+ SSNS project is to identify best practice Higher Education programmes and to develop a new MSc curriculum to be offered in nine universities in Thailand, Vietnam and Indonesia, which focus on sustainable seafood and nutrition security. The project aims to identify best practice in MSc aquaculture and fishery programmes across Europe and south-east Asia. The project was in its early stages at the time of the workshop, but some early key findings from the project so far highlight that innovative learning facilities and a Virtual Learning Environment (VLE) are known to increase learning outcomes, however, the lack of two-way participation in online teaching is often stated as a challenge due to the lack of gesturing. The needs analysis highlights how industry and enterprises have different needs and requirements of graduates and courses should be tailored to different industry types.

Fourthly, Dinh the Nhan presented the Vietnamese outlook on capacity building through education. This presentation outlined the context and current practices of Vietnamese aquaculture, which since the mid-1980s has been oriented toward exporting and has moved from a shrimp mangrove farming system to semi-intensive, intensive, rice-shrimp rotation, to an indoor super-intensive farming system. This presentation highlighted the different types of education and training systems for aquaculture development in Vietnam, these are: through education (degree training) within 13 universities; job training (diplomas) in 6 colleges and more than 20 provincial vocational schools; and farmer training provided within national extension centre and regional extension centre. It also highlighted some key problems within small-scale farmer training, which are: lack of cooperation and knowledge sharing among farmer; lack of and/or out-of-date knowledge of extension staff. Traditional training of small-scale farmers applies one of four methods of classroom training, on-farm training, farm visit, demonstration farms. To improve the aquaculture system in Vietnam there is a need for support and investment in education from government, support for retraining and improved working conditions provincial extension staff; universities should carry out out-reach programmes and provide new technique transfer to farmers; NGOs should promote farmer groups and club-building.

After the 'setting the scene' presentations, , Saro Saravanan (from the NAFC Marine Centre, University of the Highlands and Shetland Islands, Scotland) connected to the workshop virtually through Skype, sharing his extensive experience with developing and delivering an international, work-based Aquaculture Course in direct response to industry demands. This presentation highlighted the work of the Aquaculture Training NAFC Marine Centre which include Modern Apprenticeships in Aquaculture (Level 1 – 3), and Technical Apprenticeship in Aquaculture Management (Level 4). The centre also conducts short courses and e-Learning courses that are responding to requests and needs of the industry. Saro's presentation also highlighted the challenges in providing industry responsive training, such as the fast pace of industry and the need to respond in a timely manner to the industry needs, and the limited funding available.

In the afternoon the group broke up into interactive working groups to discuss key topics:

- *Best practice examples of developing and delivering aquaculture courses in direct response to industry demands.*
- *Real life challenges experienced by educators in trying to implement industry responsive courses and how to address them.*
- *How can aquaculture educators in Asia and Europe collaborate in the development of courses that respond to industry needs and deliver the best employees for the aquaculture sector.*

The outcomes of each of the working groups were presented in plenary at the end of the day, followed by an open discussion.



Figure 6: Discussions on key topics during the interactive session



Figure 7: Discussions on key topics during the interactive session

Results:

Best practice examples of developing and delivering aquaculture courses in direct response to industry demands.

- Industry consultation to determine their needs and how universities and educators can respond to these needs with resources.
- Industry deliver Master thesis topics and allow access to facilities.
- Blended learning courses in collaboration with transnational companies.
- Short internships (one to two weeks). Companies evaluate students' skills afterwards to allow institutes know whether their students are industry ready.
- Longer internships to cover one life cycle.
- Industry PhDs: A real industry problem to be proposed and that is the research focus of a PhD student. Industry could provide 50 percent funding.
- Design of custom developed short courses designed by industry, ranging from one day to one week.
- Meeting of groups of companies to identify common interest and problems.
- Allow foreign PhD students to conduct research on problem of their own countries, rather than the problems/focus on hosted laboratory.
- Identify problems in industry and deal with this in class.
- Industry visits.
- Industry network through alumni.
- Continuous Professional Development.
- Training entrepreneurship.
- Site visits and regional visits.

Real life challenges experienced by educators in trying to implement industry responsive courses and how to address them.

- Educators and industry are co-dependent, cannot operate independently, particularly given the applied nature of aquaculture education, but it is often uneven and 'dysfunctional'. In order for the relationship to work it needs to be symbiotic and not a top-down relationship
- Different concept of times between industry and education. Academic works on development over the long-term, while industry is more fast paced.
- Different standard operating procedures. Academics are trained to approach problems in a different way. Industry driven by time, the need to sell and generate profit. While academia wants to understand a problem, industry just wants to fix it. These issues create disconnect between the sectors.
- Industry has become so specialised now that a generic industry module is not enough. There is a need for the generic and also a need for highly specialised courses.
- Trust is key for effective communication, for positive influence and content across sectors.
- Political interference, either direct interference or more passive interference.
- Increasing secrecy and non-cooperation within industry can be a barrier to success, academia values the open sharing of knowledge. This is further exacerbated by the industry drawing in on itself due to often undeserved negative publicity.
- Differences between small farms and big farms.
- Poor communications and each sector not listening to each other.

How can aquaculture educators in Asia and Europe collaborate in the development of courses that respond to industry needs and deliver the best employees for the aquaculture sector.

There is potential to learn from each other, experience different cultures, learn to work in different environments and different work ethics. Collaboration across the regions can lead to new content, teaching methods and practices.

Benefits for industry in international collaboration:

- Cross region collaboration is especially beneficial for companies supplying to the aquaculture sector, dealing with international trade and developing international business to increase their competitiveness within the sector.
- Internationalised students assist in the better ability for innovation and better capacity for technology transfer.
- Staff with international competence, knowledge, communication skills have better understanding and networks.
- Mobility of students and staff – staff should be encouraged to work in industry to develop understanding and industry links.
- Great opportunities for blended learning, both online and face to face learning.
- Sharing materials through better use of open educational resources, funding collaboration materials such as case studies.
- More student to student contact and collaboration through problem-based learning involving students from two different institutions.
- Need to move beyond traditional teaching into gamification, apps and virtual reality. Industry could contribute to this development, creating engaging learning.

Concluding remarks

The first two EURASTiP Capacity Building workshops have generated new ideas and connections and have allowed key stakeholders from the aquaculture sectors in Europe and south-east Asia to connect and discuss regional challenges, best practices and approaches within aquaculture education and industry. In doing this, the workshops have provided an effective space to facilitate discussions on trends, opportunities and areas for strategic cooperation.

The two workshops were very well received by all participants attending the events. During the closing session of each workshop, the online game-based learning platform Kahoot! was used to gather participants feedback regarding workshop topics, their experience and their views of the workshop. Kahoot! results from the first Capacity Building Workshop showed that 100 percent of participants felt the workshop was well organised. Participants also felt that they learned a lot of new things (100 percent) during the workshop. The interactive sessions were determined as the most valuable part of the workshop (53 percent) and all participants stated that they hoped to be invited back to any future events organised by the EURASTiP project. The Kahoot! results from the second Capacity Building workshop highlighted the success of the workshop, with 84 percent of participants stating that attending the workshop was worthwhile, and 94 percent of participants felt that the workshop was well organised.

Results from Kahoot! showed that 95 percent of participants from the first Capacity Building workshop and 68 percent of participants from the second felt that they had met someone at the workshop that they would be interested in collaborating with in the future. Since the workshops, EURASTiP partners have been able to identify indications of positive collaboration between European and south-east Asian aquaculture stakeholder, seen in the numerous applications to the EURASTiP Exchange Programme (WP2 for educators and WP4 for research and industry) between Europe and south-east Asian stakeholders who made connections and new collaborations during the first two EURASTiP Capacity Building Workshops.

The first and second capacity building workshops were live streamed and recorded in full. They are available on YouTube (<https://bit.ly/2MkexHb>) and have been shared on the EURASTiP website (<http://eurastip.eu/education/>), so that other interested actors can watch and hopefully take up the key outcomes and learning elements in the future, for wider impact. The livestream videos for the first Capacity Building workshop were viewed over 100 times, highlighting the interest in the event.

Annex 1 Example of promotional activity

Event Announcement and Invitation: EURASTiP Capacity Building Foresight workshop: *Promoting Innovative Teaching through Collaboration in the International Aquaculture Sector* **9 November 2017, Malang (Indonesia)**

Inviting all aquaculture educators interested in innovative teaching!

The EU-funded EURASTiP project (<http://eurastip.eu/>), bringing together aquaculture partners from both Europe and south-east Asia, aims to create and strengthen international cooperation on sustainable aquaculture between Europe and south-east Asia. One area of particular focus is aquaculture education and training.

EURASTiP is pleased to invite aquaculture educators to its first highly interactive Capacity Building Foresight workshop, taking place in Indonesia, which will focus on innovative teaching (methods, materials, pedagogies, etc) in the aquaculture sector through collaboration with European and Asian educators. Innovative teaching is a necessity for all teachers to meet the educational needs of the new generations. Within the aquaculture sector, how can we benefit of the opportunities in this exciting area by collaborating between Europe and Asia and learning from each other?

This workshop will tackle stimulating topics such as best practice examples of innovative teaching and materials; real-life challenges experienced by educators in trying to implement innovative teaching and how to address them; how can a teacher be innovative, and how can aquaculture educators in Asia and Europe collaborate in innovative teaching.

Conditions:

- Participation will be restricted to a maximum of 30 participants to ensure effective discussions
- Funding for travel & subsistence costs will be available for selected participants (conditions apply)
- Workshop will be conducted in English and participants are expected to actively contribute.

Registration:

- Please register by sending an email to Marieke Reuver, AquaTT Programme Manager: marieke@aquatt.ie, indicating the following:
 - o Full name details
 - o Affiliated organisation
 - o Country
 - o Indicate if you are a member of the European Aquaculture Technology and Innovation Platform (EATiP), ASEAN-FEN or any other aquaculture education platform and give details
 - o Motivation: how do you think you can contribute to the topic? What is your experience with innovative teaching, in particular in collaboration between Europe and Asia?
- **Deadline for registration = 10 October 2017**

For further information on the EURASTiP project, please check the project website: <http://eurastip.eu/>

For questions on the EURASTiP Capacity Building Foresight workshop: **Promoting Innovative Teaching through Collaboration in the International Aquaculture Sector**, please contact Marieke Reuver at marieke@aquatt.ie

Annex 2 Capacity Building Workshop Agendas

Agenda Capacity Building Workshop one, Malang Indonesia:



EURASTiP – Promoting Multi-Stakeholder Contributions to
International Cooperation on Sustainable Solutions for
Aquaculture Development in South-East Asia

EURASTiP Capacity Building Foresight workshop: Promoting Innovative Teaching through Collaboration in the International Aquaculture Sector

Kusuma Agro Hotel, Anyelir hall
Malang (Indonesia)
Thursday 9 November 2017

FINAL PROGRAMME

Overall aim: bringing together aquaculture parties from both Europe and south-east Asia to discuss trends, opportunities and areas for strategic cooperation in the area of innovative teaching in the aquaculture sector. Innovative teaching is a necessity for all teachers to meet the educational needs of the new generations. Within the aquaculture sector, how can we benefit of the opportunities in this exciting area by collaborating between Europe and Asia and learning from each other?

- 8:30 – 9:00 Registration & coffee**
- 9:00 – 9:10 Welcome and introduction workshop – Marieke Reuver (AquaTT, Ireland)**
- 9:10 – 10:00 Round Table Introductions - All – Each participant is invited to very briefly introduce themselves. State name and current affiliation briefly and include motivation for attending this workshop and main outcome expected. No ppt allowed, max 2 minutes per attendee.**
- 10:00 – 10:10 EURASTiP presentation – David Bassett (EATiP, Belgium)**
- 10:10 – 10:30 “Include me and I will learn” Innovative Teaching philosophies - Dr Sandra Catherine Zainathan (Universiti Malaysia Terengganu, Malaysia)**
- 10:30 – 10:45 One Word – Interactive group session on current thinking around Innovative Teaching**
- 10:45 – 11:00 Coffee**
- 11:00 – 12:30 Short Public Online Tutorials (SPOT), a practical class on designing short public online tutorials, using participants’ own material – Dr Sara Barrento (Swansea University, UK). Preparation: all participants are invited to bring their own PowerPoint (ppt) presentation corresponding to 5 minutes of teaching. You are welcome to send your ppt in advance to s.i.barrento@swansea.ac.uk**



EURASTiP has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 728030 (EURASTiP). This output reflects the views only of the author(s), and the European Union cannot be held responsible for any use which may be made of the information contained therein.



EURASTIP – Promoting Multi-Stakeholder Contributions to International Cooperation on Sustainable Solutions for Aquaculture Development in South-East Asia

12:30 – 13:30 Lunch

13:30 – 14:00 Live demonstration from Turkey – dr. Türker Bodur from Akdeniz University in Antalya, Turkey will demonstrate live from Turkey an innovative teaching activity and explain the material and support needed. Q&A session at the end

14:00 – 16:00 Interactive working groups – In small groups we will discuss stimulating topics such as:

- Best practice examples of innovative teaching and materials (e.g. give examples of what you have been using/doing; getting involvement of industry in teaching; looking at technical requirements and feasibility in different contexts);
- Real-life challenges experienced by educators in trying to implement innovative teaching and how to address them (e.g. what are (digital literacy) skills required for teachers and students; other investment requirements; what are weaknesses (and strengths) in relation to other available teaching methods, etc);
- How can aquaculture educators in Asia and Europe collaborate in innovative teaching (e.g. practical examples of Open Educational Resources and collaboration platforms; getting involvement of industry in teaching)

16:00 – 16:15 Coffee break

16:15 – 17:00 Presentation of interactive working group outcomes (plenary):

- Best practice examples of innovative teaching and materials (and perhaps examples of what doesn't work!);
- Real-life challenges experienced by educators in trying to implement innovative teaching and how to address them;
- How can aquaculture educators in Asia and Europe collaborate in innovative teaching?

17:00 – 17:30 Open discussion & feedback

17:30 Closure

18:00 – 22:00 IFS2017 Gala Dinner, including cultural performance (for registered participants)



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Agenda Capacity Building Workshop two, Montpellier France:



EURASTiP – Promoting Multi-Stakeholder Contributions to
International Cooperation on Sustainable Solutions for
Aquaculture Development in South-East Asia

EURASTiP Capacity Building Foresight workshop: Ensuring Aquaculture Education Meets the Needs of the Aquaculture Sector

Le Corum MONTPELLIER, Room Sully 3
Montpellier (France)
Saturday 25 August 2018

PROGRAMME

Overall aim: bringing together aquaculture parties from both Europe and south-east Asia to discuss trends, opportunities and areas for strategic cooperation in relation to training provision that supports a sustainable global market.

Aquaculture is one of the most important and rapidly expanding food production industries in the world. As an exciting yet constantly evolving sector, excellent education underpins each person working in aquaculture. An important question to ask is “whether aquaculture education is fit for purpose for the 21st century?”

Most of Europe’s imported seafood comes from south-east Asia, and both regions have a substantial interest in collaborating at an educational level too, to ensure that aquaculture education delivers the best employees for the aquaculture sector overall. At this workshop we explore whether current aquaculture educational programmes and methods sufficiently address many of the emerging trends in the aquaculture sector, and how we can collaborate better and learn from each other to develop education and training that delivers fit for purpose employees.

9:00 – 9:30 Registration & coffee / tea

9:30 – 9:40 Welcome and introduction workshop – Marieke Reuver (AquaTT, Ireland)

9:40 – 10:10 Round Table Introductions – All – Each participant is invited to very briefly introduce themselves, using a printed A4 poster including:

- *Photo*
- *Name*
- *Organisation*
- *Role/position*
- *What do you think is important in terms of employability? (ideally using just one word)*
- *What type of collaboration are you looking for? (keep it short and sweet)*

Maximum 1 minute per attendee



EURASTiP – Promoting Multi-Stakeholder Contributions to International Cooperation on Sustainable Solutions for Aquaculture Development in South-East Asia

10:10 – 10:30 EURASTiP presentation – *David Bassett (EATiP, Belgium)*

10:30 – 11:10 Setting the scene:

- The ideal employee from an aquaculture industry point of view. *Yolanda Molares (Acuipius, Spain)*
- SE Asian experience with developing courses in response to aquaculture industry demand. *Noordiyana Mat Noordin (UMT, Malaysia)*

11:10 – 11:35 Coffee

11:30 – 12:10 Setting the scene (continued):

- Development approach in the Erasmus+ project 'Curriculum Development for Sustainable Seafood and Nutrition Security, SSNS'. A new EU / south-east Asian project looking into developing new curricula and innovative MSc programmes on sustainable seafood nutrition security in south-east Asia. *Amaya Albalat (University of Stirling, United Kingdom)*
- The Vietnam outlook: building capacity through education. *Dhin the Nhan (Nong Lam University, Vietnam)*

12:10 – 12:30 Live interaction with Shetland – *Saro Saravanan from NAFC Marine Centre, University of Highlands and Islands (United Kingdom)*, will share his experience with developing and delivering an international work based – Aquaculture Course in direct response to industry demands. Q&A session at the end

12:30 – 13:30 Lunch

13:30 – 16:00 Interactive working groups – In small groups we will discuss the following stimulating topics, facilitated by *David Bassett (EATiP, Belgium)*, *Mieke Eggermont (Ghent University, Belgium)* and *John Bostock (University of Stirling, United Kingdom)*:

- Best practice examples of developing and delivering aquaculture course in direct response to industry demands (e.g. if you have experience with this, give examples of what you have been doing (what works and what doesn't work! taking into account the farming sector and educational level you have experience with, noting that there are big differences between Europe and Asia); establishing industry contact and getting an insight into industry demands; getting direct involvement of industry in teaching;



EURASTiP – Promoting Multi-Stakeholder Contributions to International Cooperation on Sustainable Solutions for Aquaculture Development in South-East Asia

students getting real life experience through industry internships; length of courses, delivery type of courses; etc);

- Real-life challenges experienced by educators in trying to implement industry responsive courses and how to address them (e.g. what are skills required for teachers and students; other investment requirements; etc);
- How can aquaculture educators in Asia and Europe collaborate in the development of courses that respond to industry needs and deliver the best employees for the aquaculture global sector? (e.g. practical examples of collaboration platforms; getting involvement of industry in teaching (again, taking into account the huge difference in farming sectors between Europe and Asia), etc.)

16:00 – 16:15 Coffee break

16:15 – 17:00 Presentation of interactive working group outcomes (plenary):

- Best practice examples of developing and delivering an aquaculture course in direct response to industry demands (and perhaps examples of what doesn't work!);
- Real-life challenges experienced by educators in trying to implement industry responsive courses and how to address them;
- How can aquaculture educators in Asia and Europe collaborate in the development of courses that respond to industry needs and deliver the best employees for the aquaculture global sector?

17:00 – 17:30 Open discussion & feedback

17:30 Closure

Annex 3 Online discussions during the Workshop

Selection of tweets from Capacity Building Workshop one:



EURASTIP @eurastip · Nov 9

A great #eurastip workshop is only great because of those who participated! @GiusPaladini @WUR @ugent @MariekeReuver @EATIP_eu @JohanVerreth @MiekeEggermont @AquaTT_Ireland @debassett Can anyone help us add anymore? Help spread the word #int'l #collaboration



Giuseppe Paladini @GiusPaladini

@eurastip great workshop today at the EURASTiP meeting in Batu, Indonesia 🇮🇩 really enjoyed meeting so many nice colleagues

Weblink: <https://twitter.com/eurastip/status/928825440906694656>



Giuseppe Paladini
@GiusPaladini

Follow

@eurastip great workshop today at the EURASTiP meeting in Batu, Indonesia 🇮🇩 really enjoyed meeting so many nice colleagues



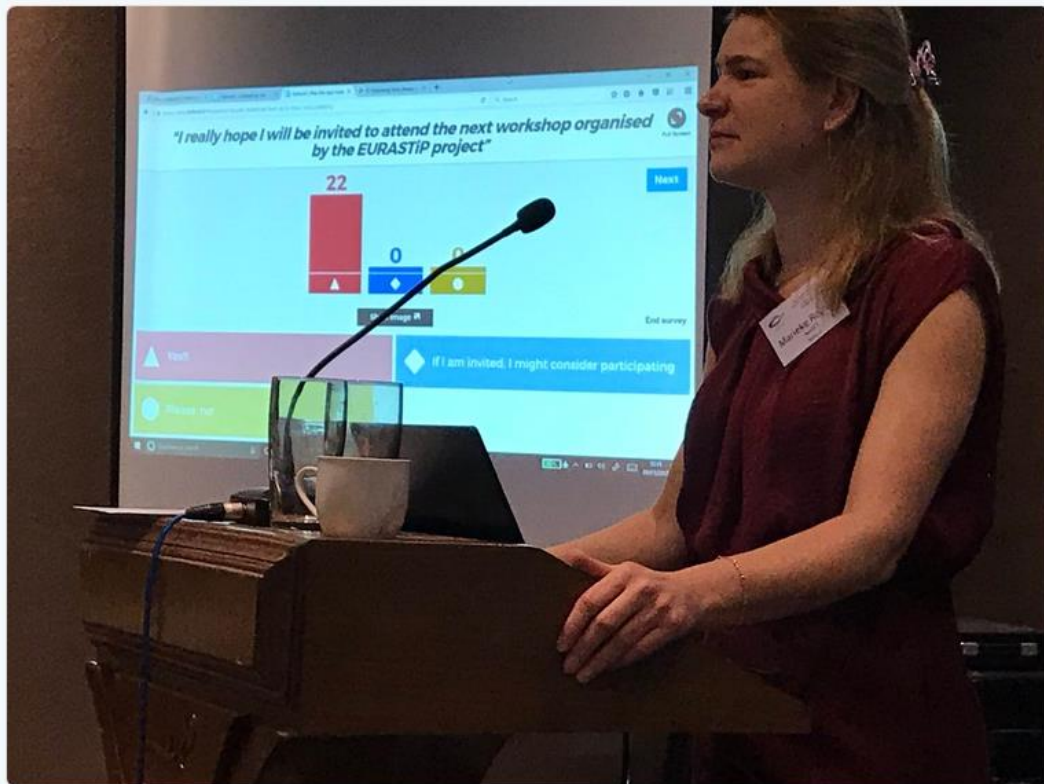
7:55 AM - 9 Nov 2017

Weblink: <https://twitter.com/GiusPaladini/status/928652293905424384>



EURASTIP @eurastip · Nov 9

The screen says it all! 100% of participants hope to be invited to the next #eurastip workshop! Now looking forward to the #IFS2017 Gala Dinner...!!



Weblink: <https://twitter.com/eurastip/status/928568458660286464>



EURASTIP @eurastip · Nov 8

40 participants and 15 nationalities are at the #eurastip #Horizon2020 funded workshop, ranging from Scandinavia to SE Asia! True international #Collaboration #cooperation #understanding working towards #international #Sustainable #aquaculture



Johan Verreth @JohanVerreth

@MariekeReuver opens @eurastip workshop on aquaculture education. Great to see EU and Asian Lecturers share drive for interactive teaching

Weblink: <https://twitter.com/eurastip/status/928466301013573632>



EURASTIP @eurastip · Nov 8

Marieke Reuver @AquaTT_Ireland oversees the technical checks for the live streaming of #eurastip workshop promoting innovative teaching through collaboration @ #IFS2017



Weblink: <https://twitter.com/eurastip/status/928443812736778241>



EURASTIP @eurastip · Nov 7

#EURASTIP Capacity building Foresight #workshop will be broadcast live in 38 hours! More info and full programme on



Watch Live: EURASTIP Capacity Building Foresight...

Promoting Innovative Teaching through Collaboration in the International Aquaculture Sector Are you an aquaculture educator interested in learning new teach...

eurastip.eu

Weblink: <https://twitter.com/eurastip/status/927853696507088896>



EURASTIP @eurastip · Nov 6

#eurastip hosting a workshop on #innovation in teaching through #collaboration working with #aseanfen colleagues @ #IFS2017 @AquaTT_Ireland



Weblink: <https://twitter.com/eurastip/status/927768907099734016>

EURASTIP Retweeted



Johan Verreth @JohanVerreth · Nov 6

Underway to a #eurastip workshop on innovative teaching methods which can stimulate EU-Asian UNIVERSITY COLLABORATION in aquaculture

EURASTIP @eurastip

...further #eurastip exchanges programme details here and via eurastip.eu soon. seAsian/EU collaboration in action! #aquaculture

Weblink: <https://twitter.com/JohanVerreth/status/927760800189521920>

Selection of tweets from Capacity Building Workshop two:

EURASTiP Retweeted



AquaTT Ireland @AquaTT_Ireland · Aug 25

Marieke Reuver @AquaTT_Ireland kicking off the @eurastip capacity building workshop ahead of #AQUA2018 in Montpellier. Great to have such collaboration continuing between Europe and SE Asia!



💬 3 ❤️ 12 ✉

Weblink: https://twitter.com/AquaTT_Ireland/status/1033257405679902720



Cluster Acuiplus @ClusterAcuiplus · Aug 25

Sharing our thoughts on the future employee at aquaculture industry and further cooperation eu asia. Thanks @eurastip and @AquaTT_Ireland for the opportunity. #sustainableaquaculture @ClusterAcuiplus



💬 4 ❤️ 10 ✉️

Weblink: <https://twitter.com/ClusterAcuiplus/status/1033299346006175744>



EURASTIP @eurastip · Aug 25

16 Nations represented at the #eurastip funded capacity building workshop - 6 from se-Asia and 10 from Europe. The closest participant travelled 40 km the furthest c. 10,950...!! 😊 #international #collaboration #aquaculture #education



Cluster Acuiplus @ClusterAcuiplus

Sharing our thoughts on the future employee at aquaculture industry and further cooperation eu asia. Thanks @eurastip and @AquaTT_Ireland for the opportunity. #sustainableaquaculture @ClusterAcuiplus

💬 1 ↻ 2 ❤️ 6 ✉️

Weblink: <https://twitter.com/eurastip/status/1033301254309638145>



EURASTIP @eurastip · Aug 25

We have representatives from:



If only our meeting room had flag poles...!



7



Weblink: <https://twitter.com/eurastip/status/1033302440064499712>



Pamela Ernstberger @EDinAqua · Aug 25

Great networking and learning more @eurastip workshop #AQUA2018



3



7



Weblink: <https://twitter.com/EDinAqua/status/1033398845034643460>



Weblink: <https://twitter.com/search?vertical=default&q=%23AQUA2018&src=typd>









ANNEX 4 – signed signature lists from both events

Annex 4 Signed attendance lists from Workshops






Attendance list from Workshop 1:


EURASTIP – Promoting Multi-Stakeholder Contributions to International Cooperation on Sustainable Solutions for Aquaculture Development in South-East Asia
EURASTIP Capacity Building Foresight workshop:
Promoting Innovative Teaching through Collaboration in the International Aquaculture Sector
 Malang (Indonesia)
 Thursday 9 November 2017

Attendees list

Participant Name	Institute	Country	Signature
Alysa Joyce 3	University of Gothenburg	Sweden	
Ana Roque 2	Institut de Recerca i Tecnologia Agroalimentàries (IRTA)	Spain	
David Bassett 1	European Aquaculture Technology and Innovation Platform (EATIP)	Belgium	
Desrina 3	Diponegoro University	Indonesia	
Fernando Afonso 3	University of Lisbon	Portugal	
Giuseppe Paladini 2	University of Stirling	UK	
Hong Nguyen	Hue University	Vietnam	
Johan Varreth 2	Wageningen University (WUR)	The Netherlands	

EURASTIP – Promoting Multi-Stakeholder Contributions to International Cooperation on Sustainable Solutions for Aquaculture Development in South-East Asia

Participant Name	Institute	Country	Signature
Julie Ekasari 5	Bogor Agricultural University	Indonesia	
Kamarul Zaman Zarkasi 3	Universiti Sains Malaysia	Malaysia	
Kartik Baruah 1	Swedish University of Agricultural Sciences	Sweden	
Krishna Salin 2	Asian Institute of Technology (AIT)	Thailand	
Marieke Reuver	AquaTT	Ireland	
Mieke Eggermont 2	Ghent University	Belgium	
Noor Khalidah Abdul Hamid 2	Universiti Sains Malaysia	Malaysia	
Nor Fazliyana Mohtar 3	Universiti Malaysia Terengganu	Malaysia	
Odd-Ivar Lekang 1	Norwegian University of Life Sciences	Norway	
Patrick Sorgeloos 3	Ghent University	Belgium	
Sandra Catherine Zainathan 1	Universiti Malaysia Terengganu	Malaysia	
Sara Barrento 1	Swansea University	UK	

EURASTIP – Promoting Multi-Stakeholder Contributions to International Cooperation on Sustainable Solutions for Aquaculture Development in South-East Asia

Participant Name	Institute	Country	Signature
Tita Elifasari ²	Diponegoro University	Indonesia	
Tum Nyro ¹	Stung Treng Fisheries Administration Cantonment	Cambodia	
Wiyoto ³	Bogor Agricultural University	Indonesia	
LIM LEONG JENG ²	Universiti Malaysia Sabah	Malaysia	
Woraporn Terangkoon ²	RMUTSV	Thailand	
Preda Phumee ³	RMUTSV	Thailand	
Fahamud Atanaka			
CHUSINA TANTIKIT ¹	Prince of Songkla Univ. Thailand		
SUREG HAJISARINO ³	Prince of Songkla Univ. Thailand		
SUNNY YEOW ²	Universiti Malaysia Terengganu	Malaysia	

Murwantoko¹ Univ. Gadjah Mada Indonesia

Attendance list from Workshop 2:

EURASTIP – Promoting Multi-Stakeholder Contributions to International Cooperation on Sustainable Solutions for Aquaculture Development in South-East Asia

**EURASTIP Capacity Building Foresight workshop:
Ensuring Aquaculture Education Meets the Needs of the Aquaculture Sector**






Montpellier (France)
Saturday 25 August 2018

Attendees list

Participant Name	Institute	Country	Signature
Amaya Albalat	University of Stirling	United Kingdom	
Anita Nordeng Jakobsen	Norwegian University of Science and Technology	Norway	
Arnaldo Marin	Universidad de Murcia	Spain	
David Bassett	EATIP	Belgium	
Dinh The Nhan	Nong Lam University	Vietnam	
Elin Kjorsvik	Norwegian University of Science and Technology	Norway	
Fernando Afonso	University of Lisbon	Portugal	
Geert Wiegertjes	Wageningen University	Netherlands	

EURASTIP – Promoting Multi-Stakeholder Contributions to International Cooperation on Sustainable Solutions for Aquaculture Development in South-East Asia



Participant Name	Institute	Country	Signature
Jean-Louis Charriaux	Lycée de la Mer	France	
John Bostock	University of Stirling	United Kingdom	
Jorgen Lerfall	Norwegian University of Science and Technology	Norway	
Kartik Baruah	Swedish University of Agricultural Sciences	Sweden	
Lam Khannarith	Prek Leap National College of Agriculture	Cambodia	
Lluís Tort	Universitat Autònoma de Barcelona	Spain	
Marieke Reuver	AquaTT	Ireland	
Mary Grace Sedanza	University of the Philippines Visayas	Philippines	
Mieke Eggermont	Ghent University	Belgium	
Nguyen Phuc Cam Tu	Nong Lam University	Vietnam	
Noordiyana Mat Noordin	Universiti Malaysia Terengganu	Malaysia	
Noor Khalidah Abdul Hamid	Universiti Sains Malaysia	Malaysia	

EURASTIP – Promoting Multi-Stakeholder Contributions to International Cooperation on Sustainable Solutions for Aquaculture Development in South-East Asia

Participant Name	Institute	Country	Signature
Omar Myint	University of Yangon	Myanmar	
Pamela Erstenberger	Pisces Learning Innovations	Italy	
Pande Gde Sasmita Juliantoro	Udayana University	Indonesia	
Patrick Sorgeloos	Ghent University	Belgium	
Pearl Kwan	Universiti Putra Malaysia	Malaysia	
Sharif Noor Emilia Syed Jamil Fadaak	Universiti Malaysia Terengganu	Malaysia	
Vu Ngoc Ut	Can Tho University	Vietnam	
Yolanda Molaes	ACUIPLUS	Spain	