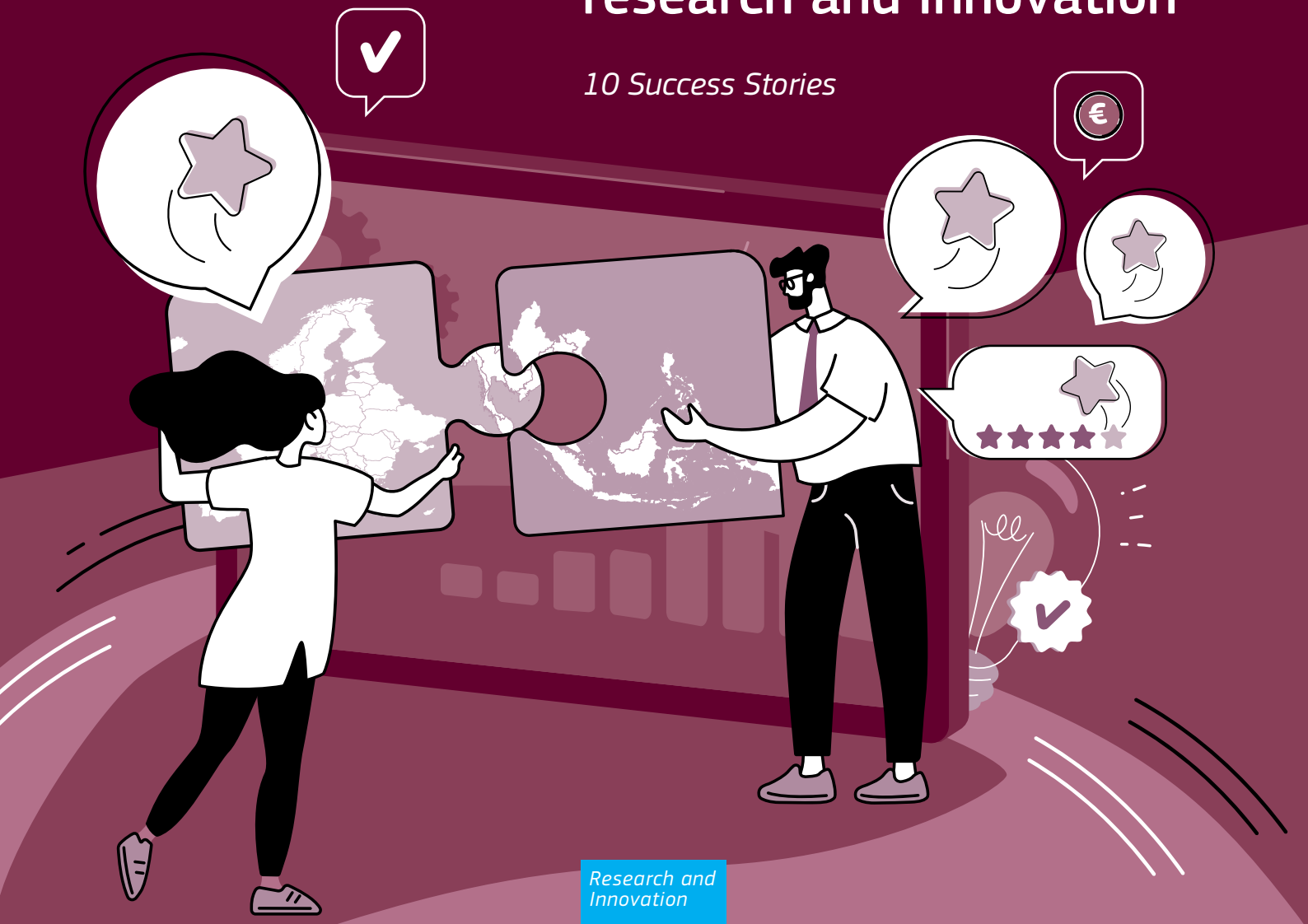
European Commission

Southeast Asia-Europe

Joint funding scheme for research and Innovation

10 Success Stories



Research and Innovation

Southeast Asia – Europe Joint Funding Scheme for Research and Innovation 10 Success Stories

European Commission
Directorate-General for Research and Innovation
Directorate Directorate RTD – Research and Innovation
Unit F.2 – International Cooperation II

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EUROPEAN COMMISSION

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10 Success Stories

2021

Directorate General for Research and Innovation
Supported by the European Commission through Horizon 2020

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THE SOUTHEAST ASIA-EUROPE JOINT FUNDING SCHEME (JFS)

SUCCESS STORIES

IN **BRIEF**

THE SOUTHEAST ASIA-EUROPE JOINT FUNDING SCHEME (JFS)

What is the JFS?

The JFS implements **Joint Calls for Proposals** on an annual basis to fund bi-regional, multilateral **Research & Innovation Projects**.

The JFS involves national/local **funding agencies** from **Southeast Asia & Europe**.

The central management of the JFS is funded by the **European Commission** (EC) and implemented by the **Service Facility** in Support of the Strategic Development of International Cooperation in Research and Innovation. The JFS Call Secretariat is hosted by the **Indonesian Science Fund** (DIPI) and the **National Science & Technology Development Agency** (NSTDA).

The **Topics** of the Calls are jointly selected by the funders.

What are the basic JFS rules?

Each project consortium needs to be **bi-regional & multilateral** and fulfil our 2+1 rule: This means that in total there must be min. **3 Partners** from **SEA & Europe**. At least 1 partner from **SEA** & 1 partner from **Europe** must be **eligible for funding** by **JFS participating funders**.

2x **SEA** + 1x **Europe** or 2x **Europe** + 1x **SEA**

Additional partners can join a consortium. Partners from "non-participating countries" need to bring own funding. The Coordinator must always be eligible for JFS funding.

The JFS is open to all funding organizations (federal, state, local etc.) from SEA and Europe. The participating funders contribute to our "Virtual Common Pot". However, each funder funds his own researchers only, so that no money is crossing borders. Exemptions can be made only for Cambodia, Lao PDR and Myanmar.

The specific funding rules of each funder are laid down in the funder's National Regulations.

What are the benefits from the JFS?

By joining the JFS, funders enable cooperation with many partner countries including also small countries that no bi-lateral cooperation agreements may exist for.

The topics are selected jointly by the funders and cover thematic areas of common bi-regional interest. Due to the bi-regional and multilateral dimension of our scheme, very diverse research consortia are formed and new research partners get linked through our projects.

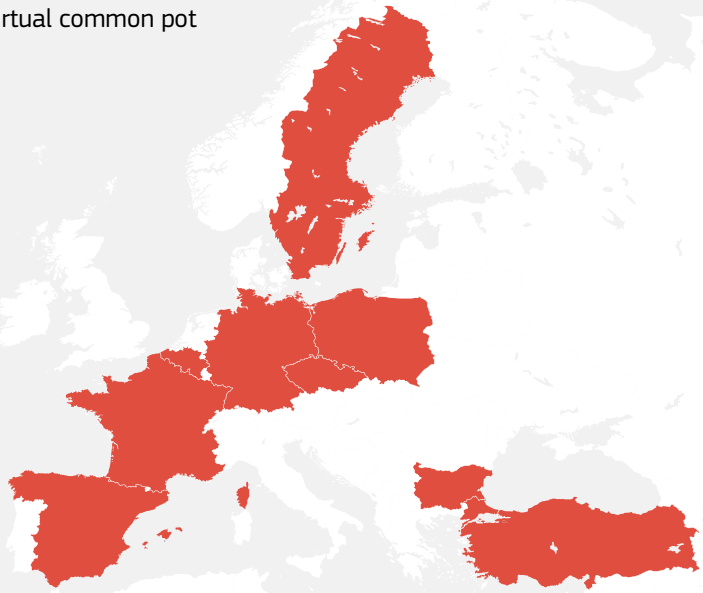
Generally, the JFS is a large networking platform for both, funders and researchers.

This brochure highlights selected success stories and will give you insight into the multiplicity of the exciting projects that the JFS is funding.

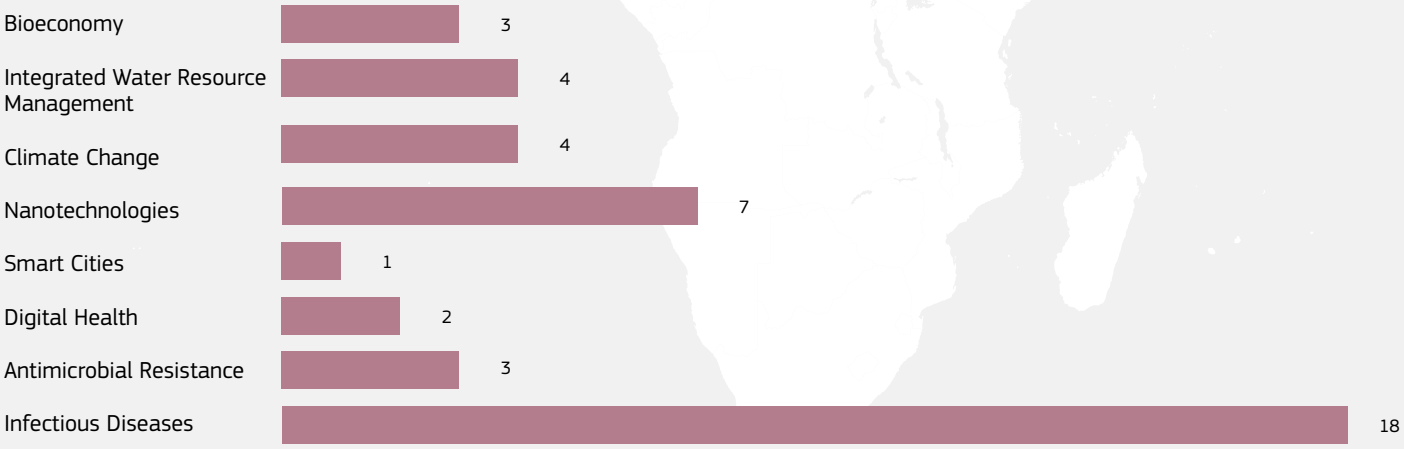
The Southeast Asia-Europe
Joint Funding Scheme: Facts & Numbers

Achievements: Call 1-6

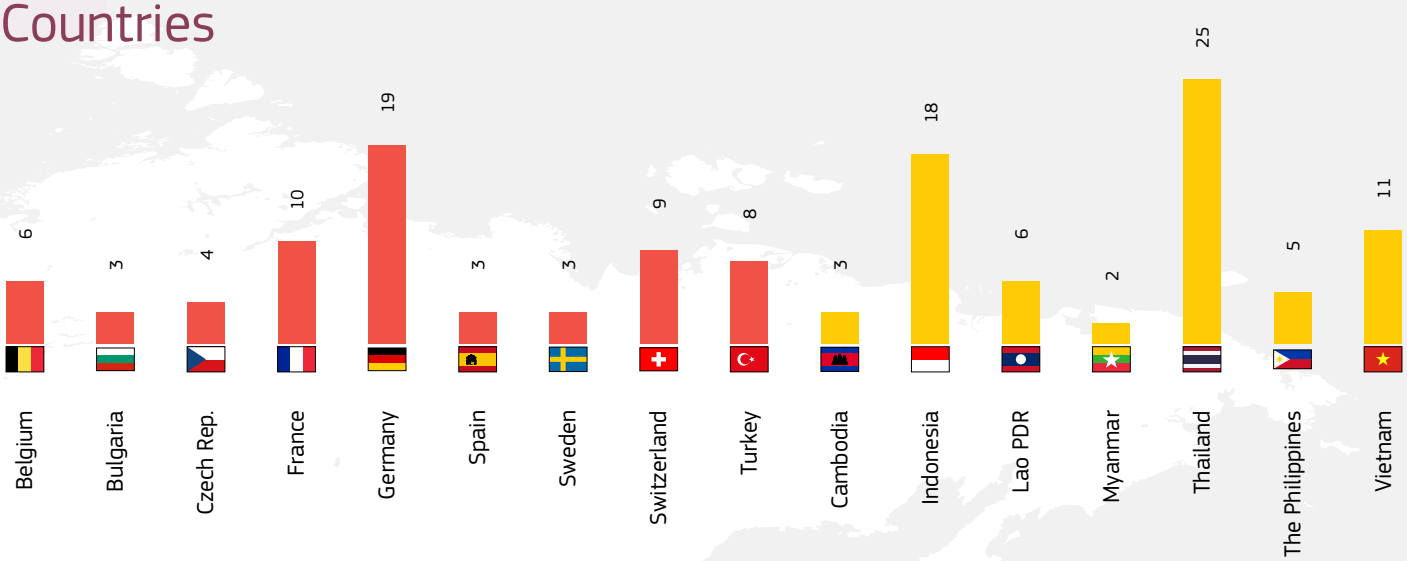
- 178 Research Proposals submitted
- 42 Research Projects funded
- 30 Mio. € committed to virtual common pot
- 18 Countries involved
- 14 Mio. € funding



JFS funded Projects
Topics



JFS funded Projects
Countries



Partnering:

You want to become a part of the SEA-Europe JFS Research Network? Register now in our JFS Partnering Tool and get linked to the growing number of researchers that are already registered with a profile:

https://www.sea-eu-jfs.eu/info-partnering-tool

Open Now: Call 7

The 7th Call will be open from **June 15 – October 15, 2021**.

The topics are:

- Climate Change: Resilience & Adaptation
- Sustainable Food Production

Malaysia and the Netherlands joined us as new funders!

If you want to learn more about the JFS, register for one of our upcoming **Dissemination Events, Matchmaking Events and Lab Exploration Tours.**

All events will be announced on our website and through our social media channels at **Twitter** and **Facebook**.

#JOINTFUNDINGSCHEME
#SEAEUJFS
www.sea-eu-jfs.eu

SUCCESS **STORIES**

CWSSEA

Climate Change: Impacts

France Sweden Thailand

Assessments of vulnerability of mature and secondary forests to climatic water stress in Southeast Asia

Pantana Tor-ngern, Thailand

1. Can you introduce yourself shortly (position, nationality) and elaborate on the role you have in the project?

My name is Pantana Tor-ngern. I am an Associate Professor at the Department of Environmental Science, Faculty of Science, at Chulalongkorn University in Bangkok, Thailand. I am also the Principal Investigator of the CWSSEA project. CWSSEA is my first joint project with international partners after my PhD graduation in 2015. As an early-career scientist, it has been quite challenging to lead this project. At the same time I learned a lot from working with various researchers and students both from Southeast Asia and Europe and I am happy that this was made possible through the Joint Funding Scheme.

Field Work

2. Can you describe your project in a few words? What is it about? What is special about it?

We study how trees in typical Southeast Asian forests respond to climate variability, focusing on water stress. Our project is unique in many ways. First, it is perhaps the first study in this region that addresses the trees' responses (from leaf to forest scale) to climate variability in multi-aged tropical forests. The information we gained is missing in modelling climate change impacts on global water and carbon cycles. Second, we performed the research in Khao Yai National Park, which is a UNESCO protected heritage and a significant habitat for diverse plant and animal species. Third, we established two flux towers, one with a height of 20 meters in a young forest and one with a height of 50 meters in an old-growth forest. They are great tools to further study ecosystem processes in these forests. The larger one is the first that has been built in an old-growth forest in Thailand. With these towers we continuously monitor water flows and standard weather variables and this benefits the research on climate change caused impacts on water cycling. Overall, through CWSSEA we were able to lay the basis for long-term research on the topic in the multi-aged tropical forests of Southeast Asia.

3. What were the objectives of the project at the start? Why is it relevant for society? What is the possible long-term impact of your project?

Our project aimed to fill research gaps on water cycling in tropical forests, with a particular emphasis on tropical forests in Southeast Asia (SEA) as they are considered the missing jigsaw for earth system models. With projected increased droughts in SEA, forests will be affected too. According to some evidence from Amazonian forests, drought-induced mortality may occur.

Forests in SEA regulate water supply to downstream users, including the agricultural sector. Thus, if we understand better how forests respond to climatic water stress, such as droughts, we will also be able to give more precise estimations how this affects water supply for the agricultural sector. We also investigate the capacity of trees to withstand droughts, which will provide important insights for forest restoration or conservation projects. Lastly I come back again to the mentioned flux towers. Using the data acquired through these towers, we will be able to

Call 1 — 2018

Field Work

analyse long-term impacts on water cycling and this is of great relevance to the strategic planning for forest and water management in Thailand.

4. Is there anything about the JFS that you really like, for instance about the application process, the rules for participation, the call topics etc.?

When I heard about this call of the JFS, I felt really excited. It is difficult to find grants that support the topics of my research. My research typically requires larger and long-term funding and this is almost non-available in Thailand. So I immediately started writing my research proposal for the JFS. Overall, I think the application process was easy and the JFS staff promptly responded to any of my inquiries. Fortunately, I have had relatively well-established collaborations with the partner countries Sweden and France at the time of my application, thus it was not difficult to form the team. The cooperation with my partners was very smooth and we could effectively cope with the application deadline. If I would be asked for a recommendation for the JFS, I would continue launching calls that support research in forest ecosystems. That way, existing projects may have the possibility to continue after the end of the project lifetime. And this could help in answering even more questions related to climate change impacts on terrestrial water and carbon cycles.

5. A word about your international partners: How would you describe the quality of your network that was initiated through the project? What is the benefit from the bi-regional dimension, involving both European and Southeast Asian researchers, of the project?

This project definitely has strengthened the already existing collaboration with my international partners. Together with our French partner, my graduate student went to the USA to learn about techniques and field measurements in temperate forests. Using the knowledge gained there my student could complete the PhD thesis and initiated similar studies in our forests in Thailand. We also had planned to send students to Sweden for doing laboratory analysis, but this exercise was postponed due to COVID-19. What is also important to mention is that the installation of both flux towers would not have possible without our Swedish partner. Altogether this is why I think the JFS bi-regional dimension greatly benefitted our project in many aspects.

6. What kind of opportunities did the scheme offer you, which would not be possible otherwise?

As I already explained, the scheme offered us many opportunities at the same time, with the realisation of the flux towers as the most important. These towers belong to the few tools that allow research at the ecosystem level. It is almost impossible to find grants that would support their installation in Thai forests, like the JFS did.

7. Did the project create new opportunities for you or your team (you can mention any opportunities here)?

Besides the opportunity for some of my students to do research abroad, this project allowed us to realise our vision of having two flux towers in the multi-aged forests of a Thai national park. But the journey is not over yet. On these towers we would still need some additional tools to be installed in order to answer more urgent research questions. This is why we have started advertising our towers and attracting new research groups – but for the moment the process is still on-going and therefore inconclusive.

I use the opportunity of this success story to engage anyone who is interested in our work around the flux towers to get in touch with me. We would be really happy to hear from you!

ARC

Climate Change:
Adaptation & Resilience of Food
Production Systems

Lao PDR France Thailand

Strengthening rice breeding programs in Laos and Thailand and developing climate-resilient rice varieties

Jonaliza L. Siangliw, Thailand

Phetmanyseng Xangsayasane, Lao PDR

1. Can you introduce yourself shortly (position, nationality) and elaborate on the role you have in the project?

My name is Jonaliza L. Siangliw and I am a researcher with the National Center for Genetic Engineering and Biotechnology (BIOTEC), Thailand. I am from the Philippines and have been working with BIOTEC for 11 years. I am serving as the project principal investigator with co-investigators from France, Laos and Thailand. I oversee the breeding programs in the project with the inputs from France in generating the molecular markers for plant selection and from Laos in participating in the validation of the traits that we introgressed into our new breeding lines.

And I am Dr Phetmanyseng Xangsayasane. I am a rice breeder and director of the rice research center under the national agriculture and forestry research institute in Laos (NAFRI). In ARC I am the team leader for developing climate-resilient rice varieties.

2. Phetmanyseng, can you describe your project in a few words? What is it about? What is special about it?

The project focuses on improving rice breeding programs in Laos by using modern breeding technologies and a proper data management system by strengthening human resources towards developing rice that is resilient to the effects of climate change.

3. Jonaliza, what were the objectives of the project at the start? Why is it relevant for society? What is the possible long-term impact of your project?

The objectives of the project are to 1) improve the heat tolerance in three rice varieties from Thailand which are already tolerant to flooding and have a resistance to diseases, to 2) develop molecular markers for heat tolerance and to 3) curate breeding data generated in the project into our breeding management system. At the end of the project, we will be generating rice prototypes that may be released as a new variety in Laos and Thailand.

Since Thailand is one of the top rice producers and exporters, and rice is an important food crop in both Thailand and Laos, improving rice to withstand the adverse effects of diseases, flooding and heat brought about by climate change is necessary for food security and economy. Farmers in rice planting areas that are usually affected by the said stresses will have then an alternative variety which can cope with the problems in production.

Once the rice prototypes are registered, the improved rice will be more beneficial to farmers since the new varieties may have more commercial value and thus give more returns to farmers.

Call 1
—
2018

4. Is there anything about the JFS that you really like, for instance about the application process, the rules for participation, the call topics etc.?

The application process in the JFS was very smooth. I think the topics are also interesting and scientists working in different expertise may have the chance to participate. I like the idea of putting together scientists from EU and Southeast Asia (SEA).

5. A word about your international partners: Phetmanyseng, How would you describe the quality of your network that was initiated through the project? What is the benefit from the bi-regional dimension, involving both European and Southeast Asian researchers, of the project?

NAFRI and BIOTEC cooperate since 15 years, and also with CIRAD our first cooperation started a few years ago. All institutes maintain a good research partnership and we decided to develop a project on strengthening rice breeding programs in Laos and developing climate-resilient rice varieties. This collaborative research project allows NAFRI's scientist who is involved to work in the laboratories of BIOTEC and CIRAD for developing climate resilience rice varieties for Laos.

6. Jonaliza, What kind of opportunities does the scheme offer you, which would not be possible otherwise?

The JFS has given us the chance to collaborate with a European research institute and to continue our rice breeding program in the Mekong region. After we finished an earlier project in 2014 it was very difficult to access new funding to continue this collaboration between the countries of the Mekong region.

7. Does the project create new opportunities for you or your team (you can mention any opportunities here)?

The project definitely created new opportunities as we would like to explore more on the genetics of heat tolerance and discover new positions governing the control of the said trait.

We also would like to understand the physiology of heat tolerance in different stages of rice development.

These ideas have brought us to find opportunities to look for more funding and to share the opportunity in improving human resource in our rice breeding programs in the Mekong region.

Anything to add, Phetmanyseng?

Yes, the project has also strengthened NAFRI's rice breeding program and allowed for building capacities at NAFRI's scientists. On the long run, the new knowledge and competences gained will benefit NAFRI's development of new climate resilience rice varieties. And this we do for helping Laotian rice farmers so to alleviate their production losses due to reasons such as floods, droughts, heats, pests or diseases.

Field work

FarmResist

Anti-microbial drug resistance

France Thailand Switzerland

Occupational risks for animal farmers to be colonised with animal-associated resistant bacteria in Thailand, impact on the faecal microbiota

Anne Oppliger, Switzerland

1. Can you introduce yourself shortly (position, nationality) and elaborate on the role you had in the project?

I am a biologist from Lausanne in Switzerland. I was the coordinator of FarmResist and in this role had to find and select the best scientific partners that would fit to the project. I was very lucky since I found them quite quickly. In my eyes, it was very important for the success of the project that the scientists from Thailand, France and Switzerland, including me, had a strong and friendly collaboration.

As a coordinator I also had to recruit a PhD candidate in Thailand, to organise the field work locally together with the French partner and to oversee the laboratory work together with the Thai partner.

FarmResist Researchers

2. What were the objectives of the project at the start? Why is it relevant for society? What is the possible long-term impact of your project?

Today, the increase of bacteria resistant to antibiotics is one of the most worrying public health issues according to the World Health Organisation (WHO).

By using a “One Health” approach, that is to study at the same time the health of animals and humans, our project documented new insights about the role of different parameters explaining the presence of animal-associated antimicrobial resistant bacteria in traditional small extensive family farms in Thailand.

The main goal was to study how the resistant genes of bacteria colonising the gut of animals (chicken, pigs and rodents) are transmitted to humans (the owners of small farms).

Thai pig

The originality of this study was to investigate small family farms, which account for more than 80% of the total number of farms in Thailand. We performed a “Knowledge, Attitudes and Practices” (KAP) survey to both quantify and qualify the knowledge (a set of understandings), attitudes (positions towards), and practices (behaviours and actions) of antibiotic uses among participants. Generally speaking, understanding farmers’ knowledge and practices with regards to the use of antibiotics can help to identify their knowledge gaps, behavioural patterns and other barriers contributing to the misuse of antibiotics. Ultimately, this can help to improve antibiotic management at the interface between the health of humans and animals.

3. What were the objectives of the project at the start? Why is it relevant for society? What is the possible long-term impact of your project?

Initially we had four objectives. The first objective was to assess, using the mentioned “One Health” approach, the occupational risk for pig and poultry farmers to be colonised with animal-associated antibiotic-resistant enterobacteria. The

Call 1 — 2018

Project team Thailand

Small-scale farming in Thailand

second objective was to look at the association between farm parameters and the prevalence of antimicrobial resistance. The third objective was to study the influence of faecal carriage of some antibiotic resistant bacteria on the faecal microbiota of farmers. The fourth and last objective was to transfer the knowledge about the analytical methods (metagenomic) to a Thai PhD student and to propose efficient preventive measures to reduce the prevalence of bacteria resistance on animal farms including the transmission to farmer.

As already mentioned, the emergence and increase of new bacteria genes able to resist the last resort antibiotics of the third and fourth generation is one of the most worrying worldwide public health issue according to WHO. If we do not find efficient measures to reduce this increase, we will not be able to cure very basic infections such as Angina or Otitis in the future. Thus, it is crucial to understand the parameters involved in the dynamic of resistant bacteria dissemination from animals to humans now.

4. Is there anything about the JFS that you really like, for instance about the application process, the rules for participation, the call topics etc.?

I really liked the specific opportunity to collaborate with a country of Southeast Asia. Thanks to the JFS we could build a strong collaboration with two different scientific teams in Bangkok, and this would never have been possible without the support of JFS.

5. A word about your international partners: How would you describe the quality of your network that was initiated through the project? What is the benefit from the bi-regional dimension, involving both European and Southeast Asian researchers, of the project?

The competences, the skills and the motivation of all partners involved is the most important point in such an international collaboration set-up.

I think that the project significantly benefitted from its Thai partners and, more specifically, from their very efficient organisation of the work to be done and their knowledge concerning the prevalence of antibioresistance locally. From their point of view they appreciated to learn more about the research on metagenomics. A last word on the mentioned PhD student I had to select in Thailand: I really hope that she could further pass her knowledge acquired to more Thai students.

6. What kind of opportunities did the scheme offer you, which would not be possible otherwise?

The scheme offered me the opportunity to collaborate with a multidisciplinary and international team. Without the financial support from the Joint Funding Scheme, this wouldn't have been possible. Now, as the collaboration is ongoing, we hope that new and additional projects or activities will emerge from this network.

7. Does the project create new opportunities for you or your team (you can mention any opportunities here)?

FarmResist opened the opportunity for us as project to contribute to strengthening the occupational health sciences in Thailand, in particular on the topic of biological risks.

DeZi

Infectious Diseases

Cambodia France Thailand

A single component pentavalent DengueZika vaccine preventing antibody-dependent enhancement phenomenon

Dr. Anavaj Sakuntabhai, France

1. Can you introduce yourself shortly (position, nationality) and elaborate on the role you have in the project?

I am a professor and head of research unit at Institut Pasteur in Paris. By training I am a medical doctor and originally I come from Thailand. I have been working at Institut Pasteur in France for more than 20 years. I'm coordinating the DeZi project which consists of four partners – Institut Pasteuer and InCellArt from France, BionetAsia, a vaccine company, from Thailand and Institut Pasteur from Cambodia. I am behind the concept of DeZI and was involved in designing the experimental plan, the scientific direction and I coordinated the legal and administrative work.

2. Can you describe your project in a few words? What is it about? What is special about it?

The project revolves around the development of a new Dengue and Zika vaccine that is based on a novel concept for activating the cellular immune response in addition to antibodies. Dengue and Zika viruses are transmitted by mosquitoes and they are causing public health problems worldwide. South East Asia (SEA) is among the high endemic regions for four serotypes of Dengue viruses. Past infections with one serotype could enhance the severity of the disease when infected with another serotype.

While the current Dengue vaccine and other Dengue vaccine candidates focus on the induction of antibodies against all four Dengue serotypes, our to be developed vaccine focuses on the induction of cellular immunity which is another way for the immune system to fight against this viral infection. We believe that induction of cellular immunity could prevent the enhancement effect of cross-reactive antibodies.

In addition, our vaccine will have a broader spectrum and protects again infection with the Zika virus as well. The Zika virus is a close relative of the Dengue virus. Although not common in SEA, the outbreak of Zika in South America in 2015 and 2016 caused birth defects of newborn babies and neurological complications.

3. What were the objectives of the project at the start? Why is it relevant for society? What is the possible long-term impact of your project?

We wanted to prove the concept that a vaccine that activates the cellular immune response can minimise the effect of the antibody-dependent enhancement (ADE) phenomenon. The current Dengue vaccine does not protect these children, that have never been infected with Dengue virus, very well. In SEA, the current vaccine is licensed for children above the age of nine years. This causes problems in Dengue control and in minimising the risk of infection for children of younger age. Given that we will be successful with our work, we will have a new vaccine suitable also for this age category. In the long term we hope to contribute to minimising the risk of severe Dengue infections with children and to better controlling Dengue epidemics.

Call 1 — 2018

4. **Is there anything about the JFS that you really like, for instance about the application process, the rules for participation, the call topics etc.?**

The JFS gave us the opportunity to work with partners in Thailand and Cambodia where the Dengue disease is a particular public health problem. Through the JFS our team could obtain matching funding from each partner's country, which allowed us to start our cooperation. The application process was anything than complicated.

5. **A word about your international partners: How would you describe the quality of your network that was initiated through the project? What is the benefit from the bi-regional dimension, involving both European and Southeast Asian researchers, of the project?**

BionetAsia is a well-known vaccine company established in Thailand. We could set up a network between Europe and SEA on innovative vaccine development for diseases that are prevalent here and there. We could transfer an innovative DNA vaccine technology to a specific production platform in Thailand and test its efficacy in animal models.

6. **What kind of opportunities does the scheme offer you, which would not be possible otherwise?**

The scheme gave us the opportunity to transfer innovative technology from Europe to SEA in order to solve public health problems there. Generally speaking, the JFS helped in creating new and in strengthening existing partnerships.

7. **Does the project create new opportunities for you or your team (you can mention any opportunities here)?**

We are now working on the valorisation of our results and could create a partnership with a vaccine business targeting diseases which are prevalent in SEA, but not in Europe. Moreover, we are in discussions for the development of a business partnership between France and Thailand. And lastly we could perform a clinical study in SEA.

IRRIGATION 4.0

Bioeconomy

Germany Myanmar Thailand

Strengthening agriculture 4.0 technology in a Thailand-Myanmar-Germany collaboration: development of a plant-based irrigation platform

Teera Phatrapornnant, Thailand

1. Can you introduce yourself shortly (position, nationality) and elaborate on the role you have in the project?

My name is Teera Phatrapornnant and I am a researcher at the National Electronics and Computer Technology Center (NECTEC) in Thailand. Currently I am Head of a Digital Agriculture Technology Research Team at NECTEC. Regarding the JFS funded project IRRIGATION 4.0, I am the principal project coordinator. In total, the project has three partners: NECTEC, Forschungszentrum Jülich in Germany and the University of Computer Studies in Yangon, Myanmar.

2. Can you describe your project in a few words? What is it about? What is special about it?

We aim to improve a traditional irrigation system that mainly uses weather based or soil-moisture based sensors, to a plant-based irrigation system. We use a psychrometer and an infra-red thermal camera to understand better the plant water status in durian trees and maize. From there we aim to develop a computer-based algorithm that controls irrigation scheduling. In general, the water potential from a psychrometer and the canopy temperature from thermal imaging will be used to study and find the correlation link to plant water stress.

Call 2 — 2019

3. What were the objectives of the project at the start? Why is it relevant for society? What is the possible long-term impact of your project?

The objectives of IRRIGATION 4.0 were focused on reducing water consumption in the agricultural sector by being tuned to the plant's actual water use and to agronomic practices aimed at maximising the yield. Plant biomass production in Southeast Asia and Europe heavily depends on irrigation, but the deficiency of water as a resource will increase due to climate change. Looking at the long-term impact of our project, we aim to contribute to mitigating this problem with our smart irrigation system. If nothing is done, there is the real threat of a shortage in the supply of durian in Thailand and of increasingly intense droughts, which cause both poor growth and poor yield of maize.

Field Work

4. Is there anything about the JFS that you really like, for instance about the application process, the rules for participation, the call topics etc.?

I think the JFS creates a real opportunity for researchers from different fields, such as plant physiology, plant phenotyping, embedded systems, machine learning, agronomics, and economics, and from different countries to work together. This collaborative project allowed NECTEC to expand its irrigation systems with image-based sensors, whereas Jülich wanted to extent its activities in wireless sensor networks in plant phenotyping, and our colleagues from Myanmar aimed to evaluate technologies in the context of embedded hardware and software as well as considered the deployment of the new irrigation technology in their home country.

Field Work

Field Work

5. A word about your international partners: How would you describe the quality of your network that was initiated through the project? What is the benefit from the bi-regional dimension, involving both European and Southeast Asian researchers, of the project?

Forschungszentrum Jülich focuses on plants as the basis for a future bio-economy of renewable raw materials and resources as well as material utilisation of biomass for energy. With the expertise on non-invasive phenotyping and modern sensor technologies, they were used in this project to explore the dynamic behaviour of plant water status including stomatal regulation. Our German colleagues were responsible for the implementation and validation of the plant-based sensors that were integrated in the new irrigation system.

University of Computer Studies in Yangon has been working on the evaluation of an evapotranspiration and soil moisture-based irrigation platform that is built on a wireless sensor network already in one of their earlier projects. In our project they realised the demonstration of the plant-based irrigation system at one of their local sites in Myanmar.

To sum it up, IRRIGATION 4.0 primarily contributed to the introduction of agriculture 4.0-related research at all three partner institutions of the project.

6. What kind of opportunities does the scheme offer you, which would not be possible otherwise?

I had the chance to learn more about the advanced tools and techniques for evaluating plant phenotyping and about plant physiology to understand plant behaviour. With a background in engineering, this knowledge is really new, but very interesting for me.

7. Does the project create new opportunities for you or your team (you can mention any opportunities here)?

IRRIGATION 4.0 created changes to the development of human resources in and across these institutes, including the training and mobility of researchers and of a Ph.D. student. Furthermore and with a view on the future, the project responds to the need for capacity development in Myanmar, and the further development of a technology cluster in Thailand.

SEA-dog-SEA

Infectious Diseases

Belgium France Indonesia

Socio-Ecological Approach of Dog-borne zoonotic diseases in Southeast Asia

Prof. Dr. Wayan Tunas Artama, Indonesia

Michel de Garine-Wichatitsky, France

1. Can you introduce yourself shortly (position, nationality) and elaborate on the role you have in the project?

Michel de Garine-Wichatitsky (MdGW): I am a senior researcher for the French agricultural research and international cooperation organisation, called "CIRAD". Currently I am a research associate and lecturer at the Kasetsart University in Bangkok and I am acting as the CIRAD representative for Thailand.

Prof. Dr. Wayan Tunas Artama (WTA): I am a professor in biochemistry and molecular biology at Universitas Gadjah Mada in Yogyakarta, Indonesia and the coordinator of the EcoHealth and One Health Resource Center. The center focuses on zoonotic/emerging infectious diseases and wildlife as a potential reservoir for the diseases of the future.

Both our role was to co-design the research proposal for SEA-Dog-SEA together with the third Principal Investigator of the project, Prof. Johan Michaux from the University of Liège in Belgium. We also coordinated the field research activities that were implemented in selected rural agro-ecosystems in Indonesia, Cambodia and Thailand – all this in spite of the major disruptions caused by the COVID-19 pandemic that started soon after our project was kicked off.

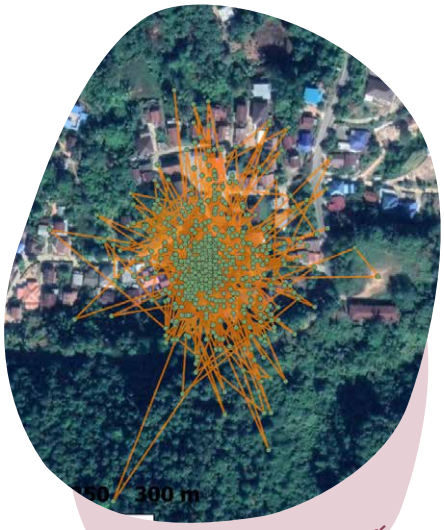
2. Can you describe your project in a few words? What is it about? What is special about it?

MdGW: The acronym SEA-dog-SEA stands for "Socio-ecological approach of dog-borne diseases in South-East Asia". Our ambition is to associate several disciplines from the bio-medical and social sciences through field-based participatory approaches and laboratory analysis in order to improve our understanding of the epidemiological risks associated with dogs as well as our understanding of managing such risks.

WTA: The project allows many different disciplines to come together. This makes it able to look at various dimensions, such as the social aspects of the communities, the geographical mapping of the disease or the molecular analysis of pathogens (microbiome, viriome and parasites) of the dog. The project is a genuine "One Health-EcoHealth" project, such as those that we are promoting at the Universitas Gadjah Mada One Health Collaborating Center and in the GREASE network.

Both: Our project is very special in that it combines different approaches and innovative techniques, such as microbiome analysis, GPS radiotracking and artificial intelligence/image recognition in order to map and improve the management of a significantly neglected public health issue – namely the zoonotic diseases associated with dogs in Southeast Asia (SEA).

Call 2 — 2019



GPS location of a sedentary dog radio-tracked in a village in Thailand

3. What were the objectives of the project at the start? Why is it relevant for society? What is the possible long-term impact of your project?

WTA: Domestic dogs are a very important component of societies in SEA, where dogs and humans have co-existed for a very long time. Dogs play significant roles in the cultural and socio-economic lives of billions of people around the world. It is estimated that more than ½ billion dogs are roaming in the urban and rural agrosystems of our five continents! What is more, dogs play very important social roles and they have acquired a special status within millions of households, establishing intimate contacts with children, adults and the older generation.

MdGW: From an epidemiological point of view, domestic dogs also have a special status. They are a reservoir of important zoonotic diseases with significant impacts on public health, such as Rabies which is still endemic in some countries of SEA. With a view on emerging zoonotic diseases of wildlife origin, dogs are also very interesting since they can play a role in the transmission of microbes from wild animals (hunting, scavenging, biting by same insects or ticks) to humans. They could potentially be used as 'sentinels' of disease (re)-emergence!

4. Is there anything about the JFS that you really like, for instance about the application process, the rules for participation, the call topics etc.?

MdGW: The JFS gave us an unique opportunity to secure funding for an innovative interdisciplinary project at the junction between different sectors and disciplines that do not naturally collaborate for operational research and the management of health issues.

The call that funded SEA-dog-SEA was launched in 2018, so still before the COVID-19 pandemic. While this global tragedy has triggered a renewed interest in "One Health-EcoHealth" approaches to deal with such emerging zoonotic diseases, the funding opportunities for innovative and multidisciplinary health research projects were limited back then. The mentioned JFS call addressing health issues in SEA offered our consortium a very timely opportunity to submit an innovative research idea for funding.

WTA: In Indonesia, the JFS is administered through the Ristek DIKTI (Research and Technology/National Research and Innovation Agency). This call gave us the opportunity to secure funding for a collaboration with international partners in France, Belgium Cambodia and Thailand.

5. A word about your international partners: How would you describe the quality of your network that was initiated through the project? What is the benefit from the bi-regional dimension, involving both European and Southeast Asian researchers, of the project?

WTA: This collaborative research project fills a gap in controlling zoonotic diseases in Indonesia which are not yet properly addressed. The contribution from French colleagues helps us in research setting and with the artificial intelligence component of the project, our Belgian partners are experts in Next Generation Sequencing (NGS) and microbiome analysis and our Cambodian colleagues are very strong on the social sciences side.

6. What kind of opportunities does the scheme offer you, which would not be possible otherwise?

WTA: As mentioned already, the staff and students of Universitas Gadjah Mada benefit from training opportunities in various new technique such as NGS, radiotracking, camera-trap, microbiome analysis, etc.

MdGW: The mandate of my organisation CIRAD is to carry out research in partnership with tropical and Mediterranean countries, and we have established long-term collaboration networks with key academic and research actors around the world. At the time when SEA-dog-SEA started, the GREASE network was already operating in SEA, and it allows for active collaboration between The French Agricultural Research Centre for International Development (CIRAD), France, Universitas Gadjah Mada (UGM), Indonesia, Institut Pasteur Cambodia (IPC), Kasetsart University (KU), Thailand. However, the project could still strengthen this existing collaboration, and opened new possibilities to work with new partners and communities in Indonesia, Cambodia and Thailand.

7. Does the project create new opportunities for you or your team (you can mention any opportunities here)?

MdGW: Yes for sure! SEA-dog-SEA has already triggered several promising new collaboration ideas between research teams in Cambodia, Thailand and France that are not part of the core project consortium. It allowed and still allows us to explore new research and technical frontiers on various topics, including GPS radiotracking/computer engineering, artificial intelligence/semi-automated image recognition and diagnosis of zoonotic pathogens/microbiome.

WTA: Yes definitely! This project has created a great opportunity for all of us to strengthen the existing and build a new network between Southeast Asian and European scientists!

Field Work

Workshop

SEa-dog-Sea research team

Bulgaria Germany

Lao PDR Vietnam

Integrated Water Resource Management

IWRM DaMe

IWRM Danube & Mekong: Bi-regional IWRM Dialogue And Multi-Local Twinning for Small Scale Water Supply and Reuse

Nguyen Manh Khai, Vietnam

1. Can you introduce yourself shortly (position, nationality) and elaborate on the role you have in the project?

I am Nguyen Manh Khai, Dean of the Faculty of Environmental Sciences at the Vietnam National University in Hanoi. I am the project manager of DaMe, in charge of planning, executing, monitoring and controlling the project.

And I am Irina Angelova, an environmental engineer with a PhD in water treatment. As a young scientist in the Bulgarian team of the DaMe project, I am involved in the development of technology-based concepts for Integrated Water Resources Management (IWRM) implementation in the two river basins.

2. Irina, can you describe your project in a few words? What is it about? What is special about it?

The project aims to inspire the development of a bi-regional approach in IWRM implementation in remote areas. Local water executives will be selected under a multi-local twinning scheme, who are facing similar challenges and tasks and with whom we will share experience, knowledge and know-how. Finally we aim to jointly build and operate small scale water supply plants, agricultural water reuse systems or to install a remote (digitised) water monitoring system in order to enhance the development of integrated water resource management.

Irina Angelova, Bulgaria

3. Khai, what were the objectives of the project at the start? Why is it relevant for society? What is the possible long-term impact of your project?

The overall objective of the project is to create and strengthen synergies between the institutions and individuals involved. This can be achieved through a structured and organised exchange of information and data that follows the methodological approach of a bi-regional IWRM dialogue, accompanied by multi-local twinning activities.

The specific objectives of the project are to 1) evaluate the potential of urban, agricultural and industrial wastewater reuse, to 2) propose solutions and technologies for wastewater treatment to serve small-scale domestic water supply in the Mekong River basin, to 3) contribute to integrated water resources management through bi-regional dialogue and sharing of information that is gathered from the Mekong and Danube basins and to 4) build 02 models of applying wastewater reuse technology for small-scale domestic water supply. Policies and technologies established through the bi-regional dialogue among all partners may solve the problems of water conflicts and ensure the future water security in the Mekong basin.

Call 3 — 2020

4. Irina, Is there anything about the JFS that you really like, for instance about the application process, the rules for participation, the call topics etc.?

The most valuable thing about the JFS is the opportunity to bring together a multicultural and multidisciplinary team to create and develop technologies based on scientific excellence which at the same time contribute to the national research priorities of the participating partner countries.

5. Irina, would you tells us more about your international partners? How would you describe the quality of your network that was initiated through the project? What is the benefit from the bi-regional dimension, involving both European and Southeast Asian researchers, of the project?

The Danube and the Mekong are transboundary rivers of outstanding socio-economic and ecological importance. Regardless of the differences between the two large river basins and between the riparian countries participating in the project (Germany, Bulgaria, Vietnam and Laos), we aim to carry out multi-local twinning activities to support IWRM implementation in all rural areas that we work with. The team includes all relevant disciplines and comprises researchers with an engineering, geography, natural sciences, law, socio-economics, business administration and finance background. All partners bring in scientific, technological and managerial excellence on how to develop technology-based concepts for IWRM with small water supply, agricultural water reuse, and remote water monitoring and how to apply this knowledge in practice.

6. Khai, what kind of opportunities does the scheme offer you, which would not be possible otherwise?

On the macro-level, the IWRM dialogue will create added value, considering that the diversity of IWRM stakeholders from the two very different river basins will greatly benefit from the exchange of water know-how and experiences.

On the micro-level the greatest benefit is that technology based solutions and other IWRM implementation measures can be adapted or exchanged between our partners. This saves a lot of time and money because not everybody has to develop the very own solution alone and from scratch. The transnational added value will be on all sides, since all four partners from the four countries bring to the project their specific profile and strengths.

7. Does the project create new opportunities for you or your team (you can mention any opportunities here)?

We think that such a project can be the start of a partnership that goes beyond the technical project lifetime and is sustainable in the future. Specific measures of training and education will be possible under different activities, which the partners carry out, anyhow, in the IWRM-target regions and locations of the twinning partners.

Germany Indonesia Thailand

Nano-technologies

SiNanoBat

3D nano-engineered silicon anodes for high-energy-density lithium-ion rechargeable batteries

1. Can you introduce yourself shortly (position, nationality) and elaborate on the role you have in the project?

I am Hutomo Suryo Wasisto, a research group leader at the Institute of Semiconductor Technology at the Technische Universität Braunschweig in Germany. My research expertise is in nanotechnology, micro-/nanoelectromechanical systems, sensors, electronics, optoelectronics, and semiconductor technology. Originally I am from Indonesia, but I have been living and working as a nanoscientist in Germany for more than ten years since 2010.

As the project coordinator for SiNanoBatt I am responsible for planning, executing, monitoring, and controlling the project. Or in other words: I make sure that the research collaboration among consortium partners is effective and productive.

Personally, I am really fascinated about this project! It was always my dream to contribute to the development of my home country while belonging to the scientific diaspora.

Hutomo Suryo Wasisto, Germany

2. Can you describe your project in a few words? What is it about? What is special about it?

The official title of our project is "3D nano-engineered silicon anodes for high-energy-density lithium-ion rechargeable batteries" or "SiNanoBatt" in short. In this project, we are implementing nanotechnology to develop silicon nanowire anodes for lithium-ion batteries with high-energy density and long-cycle life.

Among all energy storage devices, lithium-ion batteries have attracted particular interest due to their long cycle life as well as their high energy and power densities. We combine low-cost material of silicon and advanced nanotechnology to overcome anode limitations and to obtain high battery performance. The production cost per unit energy of the lithium-ion batteries can also be reduced because silicon is environmentally friendly and the second most abundant element in the earth's crust. By using nanotechnology, we are optimistic to be able to respond to issues like mechanical degradation, permanent capacity loss or short cycle life of current batteries as well.

3. What were the objectives of the project at the start? Why is it relevant for society? What is the possible long-term impact of your project?

Besides the advanced battery technology we are aiming to develop, the merits of SiNanoBatt are in the practicability and sustainability of the current consortium. Our transnational team is highly interdisciplinary with a great potential for mutual knowledge transfer. Our proposed work aims to make an impact on the future development of high-energy-density lithium-ion batteries for electric vehicles and large-scale energy storage – a topic that is definitely a top research priority both in Europe and Southeast Asia. Moreover, our concept and our technology of silicon

Call 3 — 2020

nanoanode-based batteries should become available for designing and realising more robust and fast-charging networks for cost-effective electric vehicles. This may be interesting for the auto and battery industry.

4. Is there anything about the JFS that you really like, for instance about the application process, the rules for participation, the call topics etc.?

I would say that the application process was not complicated at all.

The approach to involve three different countries is innovative and differs from the typical bilateral projects that involve only two countries. In our case, the involved teams share the same interest about the development of nanotechnology, especially for lithium-ion nanobatteries.

A big "thanks!" the JFS team and the funding agencies for answering all our questions during the proposal preparation phase.

Yellow cleanroom

5. A word about your international partners: How would you describe the quality of your network that was initiated through the project? What is the benefit from the bi-regional dimension, involving both European and Southeast Asian researchers, of the project?

If I have to describe the quality of our partners in one word it is excellent. We have two excellent partners from Indonesia and Thailand with strong research competence in both battery and nanomaterial modelling. Their expertise perfectly complements ours at TU Braunschweig which is on fabrication and metrology of semiconductor nanomaterials.

Collaboration involving European and Southeast Asian researchers can provide many benefits, especially to open up more research opportunities in both continents and to result in higher impact to society. Ideally, these projects also match the research priorities of the countries involved. As an example: SiNanoBatt supports the national research and innovation strategy of Thailand, in particular related to the topic of "energy storage".

6. What kind of opportunities does the scheme offer you, which would not be possible otherwise?

The SEA-Europe JFS project provides an opportunity to strengthen the research collaboration and joint technology development between Europe and Southeast Asia. If the pandemic wouldn't have upset all these plans, also the mobility aspect of the research teams involved is a very positive side of the projects funded under the JFS. We have moved our knowledge transfer activities to online as a result of this.

7. Does the project create new opportunities for you or your team (you can mention any opportunities here)?

In the bigger picture, this project may turn into the starting point for an extended cooperation that involves more research teams. It is also worth considering to get start-ups or small- and medium-sized enterprises on board in the future. Maybe even the researchers themselves involved in SiNanoBatt should consider launching a start-up given all the know-how they obtained on the production lifecycle of batteries in the project. However, that is a still long-term plan. Now, we need to first achieve the milestones as outlined in the proposal. We are ready for this exciting research journey!

Czech Republic
Indonesia
Spain
Thailand

Infectious Diseases

DAADTHEMAC

Development and application of advanced diagnostic tools for human eosinophilic meningitis caused by Angiostrongylus cantonensis

Barbora Feckova, Czech Republic

1. Can you introduce yourself shortly (position, nationality) and elaborate on the role you have in the project?

My name is Barbora Fecková and I am a post-graduate student at the University of Veterinary Sciences in Brno, Czech Republic. My thesis focuses on the parasitic nematode Angiostrongylus cantonensis. I was involved in the drafting of the JSF proposal from the very beginning and have been so far tasked with parts of the laboratory work, maintenance of the mentioned A. cantonensis laboratory strain (which is the only strain of this pathogen maintained in the EU) and supervising pre-graduate students joining the team.

Moreover, I am responsible for drafting news entries for and maintenance of our own project website, which serves to both communicate the results among the consortium members and to disseminate the relevant information about Angiostrongylus eosinophilic meningitis and its diagnostics and epidemiology to the general public. My great hope is that we can carry out the joint work with our Southeast Asian partners as it was originally planned once the pandemic is under control.

2. Can you describe your project in a few words? What is it about? What is special about it?

The project is focused on an emerging pathogen, namely the parasitic worm Angiostrongylus cantonensis. Naturally, this parasite needs rats and snails to develop and produce offspring, which we parasitologists call two-host life cycle. The larval stages, which are usually found in snails (but can find a way also into fish, freshwater prawns, drinking water and vegetables) can get accidentally ingested by people or some sensitive animal species, causing a disease called neural angiostrongyliasis or Angiostrongylus eosinophilic meningitis.

The parasite is primarily found in tropic and subtropic areas, and is highly prevalent in Southeast Asia. However, during the last decades, the parasite did spread around the world, reaching also EU territories.

The goal of our project is to develop, test and implement a fast, cheaper and more sensitive diagnostic method for detection of the parasite in both environmental and clinical samples. This could lead to a faster and more widely accessible diagnostic of the disease, and also could help to obtain more data about the parasite's spreading and presence.

What makes this project really unique is the consortium that includes teams from both the EU and SEA, with various backgrounds in veterinary, biotechnological or medical studies.

3. What were the objectives of the project at the start? Why is it relevant for society? What is the possible long-term impact of your project?

Call 4 — 2020

The main objective is the development and testing of a novel diagnostic DNA-based method for neural angiostrongyliasis and for checking the presence of the parasite in the environment or food chains. The desired end result is a prototype of a commercial diagnostic test that is ready for being produced by one of the consortium members.

Another important part of the project is the knowledge transfer and dissemination dimension, as we are conducting a series of workshops, informative meetings and trainings for our team members. We are preparing public awareness campaigns in our target countries in SEA (mainly Indonesia, Laos and the Philippines) about the neural angiostrongyliasis and its cause. We hope that our project will contribute to awareness raising about this emerging pathogen and that we may provide new, cheaper and more sensitive diagnosis tests to clinicians and veterinarians in affected countries. Our project is a true "One Health" project, as its mission is not only in the protection of human health and food safety, but also in that of the environment and wildlife (with a focus on wildlife conservation).

4. Is there anything about the JFS that you really like, for instance about the application process, the rules for participation, the call topics etc.?

As a veterinary parasitologist, I truly appreciate the opportunity to participate in a research project carried out by a large, interdisciplinary and international consortium. While drafting the project proposal, our team also appreciated the opportunity to add on the core consortium with additional partners that participate without funding.

5. A word about your international partners: How would you describe the quality of your network that was initiated through the project? What is the benefit from the bi-regional dimension, involving both European and Southeast Asian researchers, of the project?

The European partners involved in DAADTHEMAC have great experience with advanced biotechnological methodologies and are ready to carry out the test development. Our Southeast Asian partners in the other hand take over the necessary testing and practical implementation of the developed diagnostics. The advancements we make in diagnostics and in preventative measures will have a greater and more immediate impact that is directly owing to the SEA partners.

Bacteria

6. What kind of opportunities does the scheme offer you, which would not be possible otherwise?

The scheme offers excellent opportunities for a mutual knowledge exchange between European and Southeast Asian researchers. In our case regarding the University of Veterinary Sciences in Brno, this includes planned field work in Indonesia, which would have been hardly possible to realise without the JFS funding.

7. Does the project create new opportunities for you or your team (you can mention any opportunities here)?

In my opinion the project creates many unique opportunities both for more and less experienced researchers. To give two concrete examples: I believe that the partnership with a renowned biotechnological company is an excellent opportunity for me to broaden my knowledge and to participate in the development of a commercial diagnostic DNA-based assay. Moreover, through the partnership with our Indonesian team we are offered the chance to work in the field and in local labs, to obtain interesting samples and to test the developed methods in challenging conditions.


Indonesia, Turkey

The Philippines

Smart Cities

ROBTI

Reputation on Blockchain for the Tourism Industry

Call 4 — 2020

1. Can you introduce yourself shortly (position, nationality) and elaborate on the role you have in the project?

I was born in Istanbul in 1983. I have a background in Computer Engineering and in Engineering Management. In the last year of my master, I started to work at KoçSistem, which is the first R&D center belonging to the private sector in Turkey. After several years of experience working in business and logistics, I joined Setur in 2018 as a R&D process leader.

In this role I am responsible for all administrative issues of national and international projects in R&D center. I am responsible from consortium building, team building, project application, documentation, project management and development processes.

I am the representative of the ROBTI project as the country leader and project manager on the international side.

2. Can you describe your project in a few words? What is it about? What is special about it?

The project is based on sustainable and multidisciplinary cooperation that can be used by more than one country. It aims to provide a two-way cross-reputation building and review service that will be put into practice for the hotel and tourism industry.In this context, the objectives of the project are:

- Prototype level development of a reliable blockchain-based cross-reputation assessment and review software for the hospitality and service industry,
- Bringing together different disciplines, holistic concepts and approaches in computer science, urbanism, environmental studies, tourism science and management,
- Establishing an integrated, decentralized system for customer rating and reviews in tourism,
- Contributing to the transformation of the hospitality industry into a sustainable, inclusive, collaborative cross-border business model that is rated with a reliably distributed rating.

The importance of the project stems from the progressive use of new technologies, artificial intelligence and blockchain approaches in the tourism industry. This project is not just a prototype, it is an opportunity to capture the future. In addition, it will bring a wider revolutionary arrangement to the very conventional and limited grading assessment approaches by making natural language processing close to the real need.

3. What were the objectives of the project at the start? Why is it relevant for society? What is the possible long-term impact of your project?

As Setur, we aim for progressive projects that can guide the tourism behavior of the future in the context of smart cities. Our aim is to reach structures that can be measured in the best possible way.,. Until now, the same restrictive scoring system used for evaluating books and movies is used to evaluate tourism accommodation and services. However, aspects of the sectoral evaluations will be different. In this sense, we are planning to revolutionize evaluations as a consortium.

Our aim is to create a new platform that is clear, reliable, consistent in the evaluation of these systems, where companies can follow their customers' opinions about them in detail and structurally. In this sense, Machine Learning, using Artificial Intelligence, analyzing, and dividing comments with Natural Language Processing methods, allowing aspect sentimental analysis by separating them according to the issues and criteria that are important in tourism, apart from scoring, the hotels improve themselves with these feedbacks, without skipping important issues in the comments.

Cenk Yusuf Ustabas, Turkey

In the long run, we think that our project will have a wide impact, such as automatically evaluating the facilities themselves, automatically seeing the opinions written about them, and taking action in relation to this.. This will open the way for better, more enjoyable, and higher quality holidays.

4. Is there anything about the JFS that you really like, for instance about the application process, the rules for participation, the call topics etc.?

The fact that JFS is primarily a financing tool that combines two different geographies under the umbrella of the European Union makes it very powerful. Smart cities will become much more popular and will be a basic need, especially with the spread of 5G. It was quite visionary and meaningful that they opened an additional call in this area after its establishment. Especially in South East Asian countries, combining smart city projects and academic studies with European countries and developing joint projects will do very well in terms of bilateral cooperation.

JFS´sapplication questions are kept at a very optimum level. We didn't have to write the same statements over and over with different phrases. Being given the opportunity of Even giving us of writing our story in this brochure, showcases the particularity of JFS.

5. What kind of opportunities does the scheme offer you, which would not be possible otherwise?

With this program (SEA-Europe JFS), thanks to the National Finance Institution (TÜBİTAK) in our country, we provide access to public finance for our R&D projects. JFS calls help us find international partners, create the ideal project consortium and choose the best call subject. It supports us in accessing new markets by providing tools and advice for the expansion of the project. This program relies on project managers to manage and execute strategic projects to achieve broader goals.International project of this sizerequires skills to manage complexity, understand risk and manage stakeholders. Thanks to this program, it is possible to realize different projects and goals. This program brings together the culture, technology and know-how of both Southeast Asia and Europe, providing us with the opportunity to network with participants from different sectors and sectors, giving us unique insights into leading strategic projects.

6. Does the project create new opportunities for you or your team (you can mention any opportunities here)?

The project is especially important for us in terms of using the blockchain approach at different stages. It will also form the basis for forward-looking initiatives. Thus, we can think of storing and creating a lot of our data in the blockchain. What is more important is the future of the tourism, especially with regard to the evaluation of customers, because aqt this stage the tourism industry are not very keen on evaluating customers, especially because of commercial concern. But that this has the benefit of learning about behavior in society, Wethink that it has an effect on how we can influence each other positively in common areas.

Here, especially with our Indonesian partner, the initiative of doing different projects in the future has developed. We have already started negotiations with Gebze Technical University for other projects. When we applied to this project, there was no pandemic, but when our project was accepted, we were in a completely different world and met the pandemic. After completing this project, it may be possible to switch to the electronic passport business, which everyone needs after the pandemic. Although we talked about electronic passport and visa evaluation of individuals without considering their nationality. This idea would not be accepted by the authorities. But after pandemic, we all are considering this option.

FIND OUT MORE

For more information on all projects funded so far under the Southeast Asia-Europe Joint Funding Scheme for Research and Innovation and contact details of the project coordinators, please visit:
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10 Success Stories

Call 1	Climate Change: Impacts	**CWSSEA**	Assessments of vulnerability of mature and secondary forests to climatic water stress in Southeast Asia
	Climate Change: Adaptation & Resilience of Food Production Systems	**ARC**	Strengthening rice breeding programs in Laos and Thailand and developing climate-resilient rice varieties
	Health and Environment	**FarmResist**	Occupational risks for animal farmers to be colonised with animal-associated resistant bacteria in Thailand, impact on the faecal microbiota.
	Health and Environment	**DeZi**	A single component pentavalent DengueZika vaccine preventing antibody-dependent enhancement phenomenon
Call 2	Bioeconomy	**IRRIGATION 4.0**	Strengthening agriculture 4.0 technology in a Thailand-Myanmar-Germany collaboration: development of a plant-based irrigation platform
	Infectious Diseases	**SEA-dog-SEA**	"Socio-Ecological Approach of Dog-borne zoonotic diseases in Southeast Asia"
Call 3	Integrated Water Resource Management	**IWRM DaMe**	IWRM Danube & Mekong: Bi-regional IWRM Dialogue And Multi-Local Twinning for Small Scale Water Supply and Reuse
	Nanotechnologies	**SiNanoBat**	3D nano-engineered silicon anodes for high-energy-density lithium-ion rechargeable batteries
Call 4	Infectious Diseases	**DAADTHEMAC**	Development and application of advanced diagnostic tools for human eosinophilic meningitis caused by Angiostrongylus cantonensis
	Smart Cities	**ROBTI**	Reputation on Blockchain for the Tourism Industry

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For more information on all projects funded so far under the Southeast Asia - Europe Joint Funding Scheme for Reserach and Innovation as well as contact details of the respective project coordinators, please have a look at our JFS Info Leaflet or visit: https://www.sea-eu-jfs.eu/funded-projects

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This publication gives an overview of the achievements of the Southeast Asia - Europe Joint Funding Scheme (JFS) activitites from its beginnings in 2017 until today. It highlights 10 successful JFS-funded research projects in dedicated success stories allowing the reader to zoom into specific JFS research activities. The Success Stories demonstrate the diversity of research topics of bi-regional interest that are covered by the projects as well as the diversity of the bi-regional multilateral research consortia that are collaborating under the JFS and its funding partners. The publication makes the reader to get an idea of the wide impacts that are expected from the JFS-funded research activities.

Project Information

Publications Office
of the European Union