

CAPACITY BUILDING ON WATER AND NATURAL RESOURCES IN SOUTH-EAST ASIA - BENEFITS FROM THE WANASEA PROJECT

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ABSTRACT

Demands on water and natural resources are increasing among the people, communities, and governments of the Lower Mekong River and Delta. These demands are felt most acutely in Thailand, Cambodia and Viet Nam, where 80 percent of people depending on the river and its rich natural resources for their livelihoods. The issues of the region around the sustainable development of natural resources require more cross-sectorial coordination and policy integration. The WANASEA project is form up to improve the cooperation between these states on water and natural resource management. The project funded by the Erasmus+ program of the European Union and lead by University of Nantes. Three training courses related to GIS tool was implement focus on integrating water and socio-economic information with existing models. We will present the results of training courses which strengthen the multidisciplinary research and exchange of expertise and knowledge of project partners.

1. INTRODUCTION

Strengthen the production, management and outreach capacities of research in the field of Water and Natural resources in South-East Asia - WANASEA project has been granted in 2017 by Erasmus+ Programme of the European Union. The project includes 3 countries from Europe and Southeast Asia, respectively France, Denmark and Spain, and, Cambodia, Thailand, and Vietnam. There are 15 partners namely University of Nantes (UN) - Leader, the French School of Asian Studies (EFEO), the French National Institute for Sustainable Development (IRD), the Center for Research and Expertise on Education and Development (CREED) in France; University of Southern Denmark (SDU) - Denmark; Universitat de Barcelona (UB) - Spain; Institut de Technologie du Cambodge (ITC), Royal University of Law and Economics (RULE), National University of Management (NUM) in Cambodia; Thammasat University (TU), Chiang Mai University (CMU) in Thailand; the Graduate Academy of Social Sciences (GASS), Can Tho University (CTU), Vietnam Maritime University (VMU), and RMIT University (RMIT-VN) in Vietnam. In addition, the project has been supported by two associated partners: the Global Development Network (GDN) - India, and the Agence Universitaire de la Francophonie - France.



Figure 1. The WANASEA project consortium

(Source: WANASEA project, 2021)

The project aims to promote the multidisciplinary research, to foster an institutionally-supported research practice (in order to go beyond pure academic research and contribute to both creation of new knowledge, understanding and treatment of contemporary problem), and to help position universities as places for the production and transmission of knowledge open to both public and private actors to interact and involve in the process of changes. WANASEA also keeps on implementing its objective of enhancing the scientific cooperation between researchers, PhD students and non-academic stakeholders. Corresponding to these goals, the project developed five packages to strengthen not only scientific expertise but also the institutional capacities, create open spaces for exchange and develop channels of communication with other stakeholders, academic and non-academic, on an international scale, in order to improve the quality of high education institution curricula.

The third development package of the project aims to build the research capacity of students and young researchers related to Water and Natural Resources Management (WNRM). The main outcome of this package is launching the ASEAN Water Platform (AWP) in the year of 2018, 2019, and 2020. This platform is an annual research seminar and training which brought together young researchers from Asian and EU partners. Its main objective is to increase their research capacity by learning new innovative methodologies, multi-disciplinary approach to solve complex problems, and by creating durable links between each other.

For each AWP, around 80 people will be selected to participate to this annual 14-day event. The host country was changed every year among ASEAN countries partners. Furthermore, other countries such as Lao PDR and Myanmar will be contacted in order to expand the AWP in other ASEAN states after the end of the project. This paper presents the results of AWP activities through the project lifespan, the contribution of the AWP to the project, and also the lesson learnt from AWP.

2. ACTIVITIES OF AWP EVENTS

2.1 Structures and presentations of the AWP

2.1.1 AWP program

In according to discussion from the Kick-off meeting, the title “Water and Its Many Issues - Methods and Cross-Cutting Analysis” was chose and applied for annual AWP events. In the structure, each AWP was organized along two complementary axes: Plenary sessions (the first 2 days), following by Thematic workshops (3 to 5 topics), and end by the Workshop restitution at the last day. Topics of plenary sessions and workshops would prior draw up at least 6 months, so that each partner could announced and pick-up participants on-time.

- For the plenary sessions, speakers from outside of project were invited to present their experiences, their point of view, or their project results which related to WNRM. The sessions were wound up with a round table that was open to organizations outside of the WANASEA consortium.
- For the thematic workshops: putting together of the team of trainers through the calls for candidates within the consortium so as to mix Asian and European teams. The training was wound up by a workshop summary session presented.

Table 1. Programs for annual AWP

AWP	Plenary sessions	Thematic workshops
Year 2018	Session 1: Water resources changes - A great threat for sustainable development in the Mekong Basin Session 2: Global challenges for fisheries management and South-East Asian perspective Session 3: Holistic urban water resources management Session 4: An inquiry into the implementation of Phuoc Hoa Water project, Vietnam (video presentation) Session 5: Some examples about environmental and social challenges: Solid waste management and human impacts on deltas (video show)	Workshop 1: Risk management Workshop 2: Water management in an urban environment Workshop 3: Inputs of modeling for the analysis of saline intrusion in the Mekong Delta Workshop 4: Field research - Usage and management of the water resources in the context of change
Year 2019	Session 1: What role for a development bank in the improvement of the urban water supply and sanitation services? The case of AFD in Asean Session 2: Using simulations to design evacuation strategies in case of flooding Session 3: Knowing and governing water Session 4: Valuation of ecosystem services of mangrove forests in Cambodia Session 5: Equitable, reasonable and sustainable use of water resources in Cambodia Session 6: Inland commercial fishing lot and mobile gear fishing in Tonle Sap lake Session 7: Evaluating the success and sustainability of community fisheries in Tonle Sap lake after fisheries reforms	Workshop 1: Transboundary river management / water governance Workshop 2: Development of maritime policy in ASEAN and comparisons with the EU Workshop 3: Urban water risks: designing evacuation strategies in case of flooding with Agent-Based modeling and GAMA Workshop 4: Non-conventional water resources: Wastewater reclamation and reuse Workshop 5: Field research - Irrigation and agricultural management in Kandal Stueng system

AWP	Plenary sessions	Thematic workshops
Year 2021	Session 8: Knowledge and development - From principles to practice Session 1: Qualitative methodologies in social sciences Session 2: Sustainability of small-scale fisheries - Community based resource management approach in Cambodia, Vietnam and Bangladesh Session 3: Technology adoption in agriculture: Theory and application to irrigation technology Session 4: Water resources in the Mekong Delta Session 5: Bio-diversity versus climate change in the Mekong Delta Session 6: Restitution of inequalities and environmental changes Nexus project Session 7: Research on the Mekong River - Overview of the Mekong river ecology and its relationships with people livelihood Session 8: Research on the Mekong River - Role of Mekong River Commission and research on transboundary water governance	Workshops were implemented in specific program for each ASEAN country due to pandemic.

(Source: Lagree, 2018, 2019, 2021)

For the AWP 2021, program was refined 14 days of training in Thailand namely AWP 2020, including two days of plenary sessions, four thematic workshops, among which a training workshop on field surveys in a district located 60 km from Chiang Mai, two days of parallel training (Doctoral student's days and a communication workshop), and a half day of restitution of the work of the two weeks in a plenary session. However, at the beginning of the year 2020, the emergence of Covid-19 has led the preliminary set-up of the AWP to be redefined due to the impossibility to carry out any mobility, both in the Asian region and from Europe to South East Asia. By that reason, the consortium to set the new dates of AWP on Feb - Mar 2021, but organized at each ASEAN country (Thailand, Cambodia, and Vietnam).

The realities of the field in each of the three Asian countries have led to specific organizations as detailed below:

- Plenary Sessions and Innovative Research Competition: face-to-face in Thailand and online for all other participants
- Face-to-face workshop in Thailand
- Face-to-face and online workshop in Phnom Penh: due to an increase in the number of Covid-19 cases in Phnom Penh just before the opening of the AWP, only the first day of the training could be held face to face, the other sessions were held online when possible
- Online workshop “Modeling and Simulation of Water Basin Integrated Management” in Vietnam
- Two different sites for the workshop “Qualitative methodologies in social science - Covid-19 as case study”, one in Hanoi city and the other one in Ho Chi Minh city, Face-to-face workshop for participants in these two cities and online workshop for participants from other provinces.

2.1.2 Support programs¹

Before the opening ceremony day, the AWP files were distributed to all participants. These files present: the program of the plenary sessions and the workshops accompanied by a synopsis of each presentation and a calendar of the week's work; reading texts - certain texts were transmitted by email; trainers' biographies; a list and contact addresses of the trainees in order to enable networking, etc.

The plenary sessions were all captured on film. The filmed presentations *in extenso* for viewing on the WANASEA web site; they are subtitled in English.

Filmed interviews were conducted with the speakers in the plenary sessions and those responsible for each workshop in order to present the goals and the methodological tools used in the course of the week. The video-clips available on the WANASEA website.

A common question grid was given to the trainees at the end of the training session in order to obtain feedback about the week's training.

Diffusion of economic, human and social science works at the heart of the WANASEA thematic that stem from the previous "Tam Dao Days" project (see: www.tamdaoconf.com). These textbooks are distributed free of charge during the WANASEA modules in the three Asian countries of the consortium (AWP and biannual training sessions to improve teaching and research)

- (2018) The challenges of energy transition in Vietnam and Southeast Asia, collection *Etudes de l'AFD*, n°16, AFD-ÉFEO - Tri Thúc, Hanoi, July.
- (2014) Perception and management of risks. Methodological approaches applied to development, collection *Conférences & Séminaires*, n°10, AFD-ÉFEO - Tri Thúc, Hanoi, July (reprint).
- (2013) Water and its many issues. Methods and multi-disciplinary analysis, collection *Conférences & Séminaires*, n°8, AFD-ÉFEO - Tri Thúc, Hanoi, July (reprint).

All the trainees and trainers participating were distributed by AWP labelled T-shirts (in the 2018 and 2019 edition) and water bottles (in the 2019 edition).

A master of ceremony (MC) and a moderator from the host institute facilitated the organization and hosted the two days of plenary sessions.

A certificate of participation and completion of training was awarded to each trainee during the AWP closing ceremony. This certificate had already been validated and signed by the representative of host institute and the University of Nantes.

For the AWP 2018, the IRD representation in Vietnam placed at the disposal of the AWP, with the agreement of CTU, a photographic exhibition about pollution by plastics in Vietnam in which the objects are followed from the places where they are produced, and then consumed in the privacy of everyday life, to the accumulation of plastic waste in the aquatic environment (trilingual exhibition in French, English and Vietnamese). Exhibition was particularly thorough about the sources and consequences of pollution by plastics; high-quality examples; opening out towards current issues.

¹ Some support programs not involved to the AWP 2021 as this event was organized online

2.3 AWP trainees' profiles and activities

At least 3 months prior each AWP, the call for attendance will announce at each partner institutes and also through project webpage. Enrolment in the AWP has been made easier by the placing online of a registration form via its Internet site. This form allows the examination and validation of the applications submitted, the identification of requests with regard to the four predefined workshops and the strengthening of the database for scientific networking.

Each application form had to meet the criteria that were explicitly stated on the selection sheet for candidates. From the registration forms of the selected trainees, the following profile emerges:

- A female majority: 62 percent (2018), 60 percent (2019), 53 percent (2021) of the trainees.
- A diversity of statuses and levels of education: master, master and teacher, master and development, doctoral student, doctor/doctoral student and teacher, researcher, researcher and teacher, teacher and development, development practitioner.
- High multi-disciplinarily and different fields of research: economics (macro, international, energy); environment (water management, risk management, climate change, maritime, law, biology); hydraulics and hydrology; remote sensing and geographic information systems; geography (human and physical); urban planning; development studies.
- Institutional opening out in Vietnam and Myanmar made possible through AUF, IRD, and UN co-financing methods.
- More participants attended in AWP 2021 due to the consortium would extend benefits both to people inside and outside of WANASEA partners as the event organized via online platform.

Table 2. Number of trainers and trainees to AWP events

	Trainer + trainee numbers		
	2018	2019	2020
<i>European partners</i>			
UN	4 + 1	3 + 0	2 + 0
IRD	4 + 1	5 + 0	6 + 0
EFE0	1 + 0	2 + 0	1 + 0
CREED	1 + 0	1 + 0	1 + 0
SDU	3 + 1	1 + 1	1 + 0
UB	2 + 1	3 + 0	-
<i>ASEAN partners</i>			
GASS	1 + 8	1 + 8	0 + 7
VMU	1 + 8	3 + 6	0 + 10
RMIT-VN	0 + 2	5 + 0	0 + 4
CTU	2 + 8	2 + 12	4 + 9
RULE	0 + 9	0 + 6	0 + 1
NUM	0 + 9	0 + 5	1 + 8
ITC	0 + 10	2 + 9	2 + 12
TU	0 + 9	1 + 8	2 + 5
CMU	0 + 6	4 + 8	6 + 16
Other institutions	-	-	10 + 38

(Source: Lagree, 2018, 2019, 2021)

2.4 Evaluation of the AWP

To evaluate for the success of the event, all trainees were required submitted their feedback on the AWP activities. Figures 2, 3, and 4 show that activities of AWP improve year-by-year as the trainees appreciate of good and excellent increasing at later events.

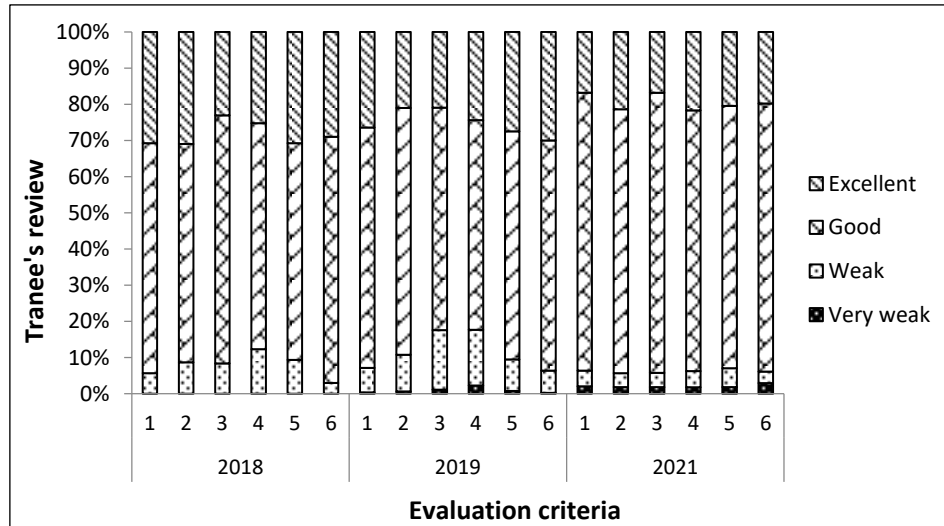


Figure 2. Feedback for plenary sessions (average recorded from all sessions)

Criteria: (1) Relevance of the subjects treated to the general thematic of AWP, (2) Overall quality of the presentation, (3) How enlightening was the presentation in terms of multidisciplinary approach, (4) New scientific or/and methodological perspectives, (5) Quality of the interactions with the speaker, (6) Quality of the organization of the plenary sessions

(Source: Derived from Lagree, 2018, 2019, 2021)

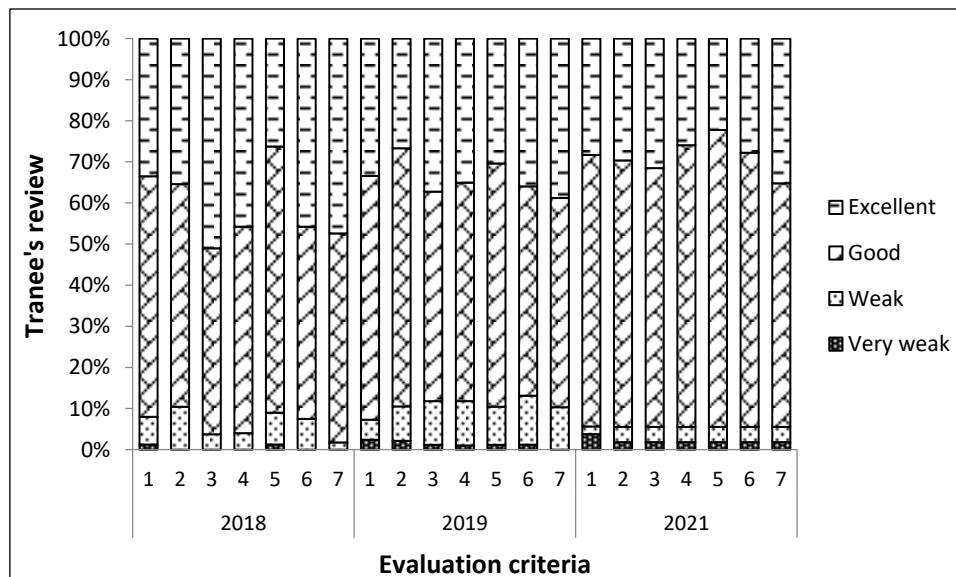


Figure 3. Feedback for thematic workshops (average recorded from all workshops)

Criteria: (1) Clarity of the program and objectives of your workshop, (2) Consistence between the program and its objectives, (3) Dedication and availability of trainers, (4) Collective and participatory approach of the teaching, (5) Amount of personal work required, (6) Improve your skills and abilities, (7) Relevant and useful knowledge

(Source: Derived from Lagree, 2018, 2019, 2021)

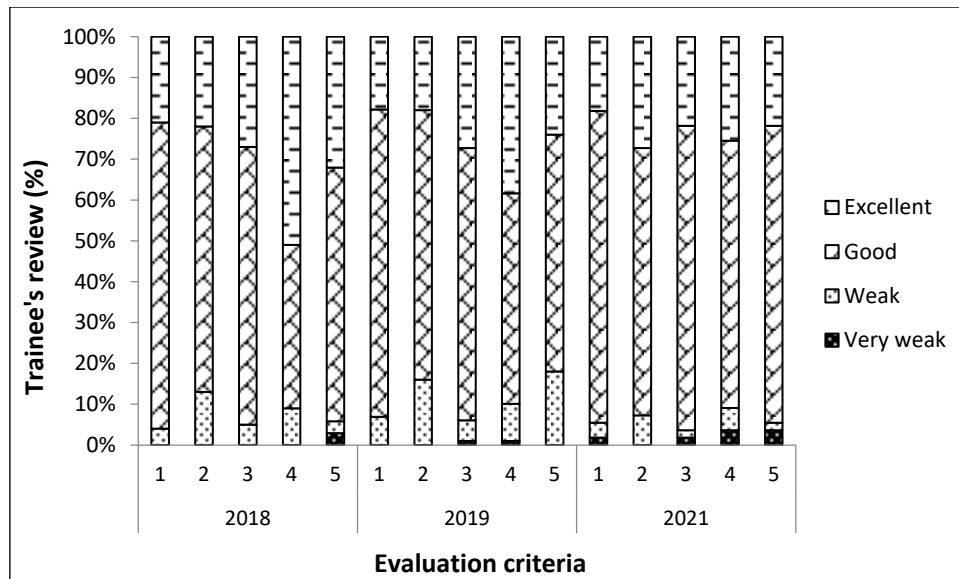


Figure 4. General appreciations for plenary sessions and workshops

Criteria: (1) Relevance of the thematic and program, (2) Balance between theory and practice, (3) Multidisciplinary approaches, (4) International networking and collaboration opportunities, (5) Quality of the organization (logistic and facilities, etc.)

(Source: Derived from Lagree, 2018, 2019, 2021)

The overall quality of AWP events combining plenary sessions and workshops is really satisfying according to both participant and trainer surveys. More than 90% of the trainees rated the event as good to excellent. Two points seem particularly satisfactory: the proposed thematic correspond to the audience’s expectations, the organizational quality of the sessions. Although relatively marginal, there is some criticism of educational aspects in the course of the lectures and of the answers given during the exchanges with the audience; furthermore, the trainees remarked a certain weakness of methodological tools and the multi-disciplinary variations proposed.

Few trainees (less than 2%) stated that the AWP did not meet their expectations. The most recurrent criticisms concern a lack of equilibrium between theory and practice 12%, limited space for cooperation opportunities and certain organizational shortfalls 8%, and 2% regarding catering conditions. From a quality point of view, let us note the following requests: sending of PowerPoint presentations before the beginning of the training; slower delivery of plenary interventions, and more generally, a need to strengthen the level of English (both the trainees and speakers); greater integration of field visits, a stricter educational approach and greater open-mindedness from some of the trainers.

The mixed presentation of videos and lectures in the plenary session was greatly appreciated from trainees. The satisfaction rating “excellent” was noted for 40% of the trainees (Lagree, 2018). The format of these mix presentation should apply to further training events for both inside and outside WANASEA project.

For the AWP 2021, a characteristic of this workshop is the large number of trainers mobilized inside and outside the consortium; this dimension was particularly appreciated by the trainees. The most common criticisms basically refer to the lack of balance between theory and practice and a limited opportunity for networking and collaboration; the AWP 2021 online sessions can certainly explain a feeling of disappointment/frustration on both points.

Principal benefits of AWP:

- Shared expertise;
- Disciplinary diversity; open-mindedness;
- Gain in self-confidence (possibility of speaking in group/public);
- Input of methodological tools (quantitative and qualitative);
- International, regional and personal networking;
- Linguistic enrichment.

However, there are some noticeable criticisms for improvement such as:

- Lack of balance between theory and practice, better to integrate field visits to each workshop;
- Limited space for opportunities to meet and network;
- Should have sent PowerPoint presentations before the beginning of the training;
- Speakers should deliver presentations slower for plenary sessions;
- Weak quality of the catering;
- Strengthening the selection by prioritizing the level of English for both trainees and trainers;
- A stricter educational approach and greater open-mindedness from some of the trainers;
- Too technical an approach;
- Strengthening group work for the restitution;
- Strengthening (trainers') knowledge about South-East Asia and develop case studies in Asia;
- A better qualitative/quantitative balance;
- Improving quality of Internet connection;
- Better collaboration between trainers during the training.

2.4 The AWP co-financing model

Each ASEAN partner of the WANASEA consortium has a budget that allows them to select nine candidates per AWP (one staff member, eight students), but the financing is not available for the partner that hosts the platform. Besides that, WANASEA AWP 2018 - 2020 also benefit from distinct and complementary co-financing according to signed agreement between project consortium and AUF, IRD, UN and AFD partners. Total amounts of 68,528 euros co-financing to the annual AWP.

- AUF financed actions: support the mobility and cost of stay to 4 and 12 trainees (from AUF member establishments outside of the consortium) in 2018 and 2019. Three professional internships. Consolidation for the identification of the needs and expectations of academic and non-academic players regarding the federating thematic of water and its associated resources.
- IRD financed actions: support the mobility and cost of stay to 5 trainees from Myanmar for each AWP. Construction of a new regional platform entitled "International JTDs" (output to AWP WANASEA) to widen networking in order to identify new financial and scientific partners, public and/or private, around the new model. Grant 6,000 euro for the AWP 2021's Innovative Research Competition module. This event attracted over 15 candidate's application, two laureates were nominated in Cambodia (ITC) and three in Vietnam (GASS, VMU and CTU).

- UN financed actions: selection of 3 trainees from Laos / Myanmar for the 2018 and 2019 AWP; academic and non-academic networking (invitations to development practitioners and university teachers from outside the consortium).
- AFD financed action: since Jan 2019, WANASEA is eligible for new co-financing in order to consolidate the actions carried out within the framework of the project and its sustainability (non-earmarked financing).
- CTU financed action: sending 4 trainees from Vietnam, in which 2 trainees from government authority to the 2019 AWP in Cambodia. Funding to do research, sent 3 participants for oral presentation the two results at The first VietPhil Research Forum 2019 at Tra Vinh University, Vietnam.

4. CONCLUSION

Within the WANASEA framework, the training sessions and seminars AWP gathered researchers, PhD candidates, professors and professionals from various fields around the topics of WNRM. This rise awareness about the current transboundary issues in the Greater Mekong Sub-region regarding WNRM. In parallel, WANASEA project generated and disseminated new knowledge which goes beyond methodological exchange. Participants on these events had chance to develop their research skills and learn how to work together on complex issues such as WNRM. AWP offered an excellent opportunity to connect Asian and European students with ASEAN and European professors.

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