



Training session
Genesis of research: science, knowledge and society
Phnom Penh, RULE, 26-30 Nov 2018
Terms of reference – 25/09

Context

Improvement to the quality of teaching and research in Water and Natural Resources Management (WNRM) cannot be ensured without a) a high commitment of HEIs in the partner countries, b) a high quality of trainers selected from the program countries, c) the ability to provide support (financial and supervision) of young researches, and d) a balance/good fit between the academic skills taught and the skills needed by the wider economic and social environment.

This is the reason why the WANASEA (Water and Natural resources in South-East Asia) project includes, as part of its activities, 5 training sessions in its 3 years of implementation. The first one focuses on the theme: Genesis of research: science, knowledge and society. It is co-organized by the Center for Research and Expertise on Education and Development (CREED, France) and the Royal University of Law and Economics (RULE, Cambodia).

Objective

The main objective of this initial training session is to improve the quality of teaching and research in the field of WNRM among WANASEA's Higher Education Institutions (HEIs). More specifically, the goals are to strengthen the capacities of stakeholders to implement multidisciplinary research activities and to foster cooperation between researchers and staff. The quality of teaching will be improved through the production of relevant knowledge and by deepening teachers' expertise.

Target groups

Both academic and administrative staff, who are or plan to be involved in scientific activities related to WNRW, are targeted for training. A clear holistic approach is taken since WNRM issues are clearly connected to their societal environment. In addition, an inclusive approach that combines learning about both the scientific and professional aspects of research and teaching activities makes WANASEA's training sessions unique. Moreover, the training sessions are designed to address HEI's needs and promote collaboration and institutional commitments among its staff.

Criteria of selection

Trainees should be young professionals (under 40), who can communicate well in the English language and who demonstrate a strong interest for developing research and teaching innovation. Their profiles should be complementary enough so that as a whole, they will constitute a team of researchers and staff who are able to boost research activities and quality of teaching. We encourage WANASEA's partners to carefully select the trainees in order to meet the above mentioned objectives.



Topic: Genesis of research: science, knowledge and society

In this session, we will focus on the very first steps of the implementation of a research project. We will work on basic concepts of research for development, know more about how to choose and design the right research methodology, and also learn how the professional sector of research (governance, institutions, funding, etc.) works. The following questions will be answered:

- What are the preconditions for conducting research?
- Why do we do research? Who actually does research? What does it mean to conduct research? What are the distinct stages of the research process? What are the requirements of modern scientific research?
- What is a research question? How do you get to it from an initial personal or institution curiosity?
- How do you choose the right scientific method? What is it? What tools suits best the objectives?
- How can HEIs work a multidisciplinary and/or transdisciplinary level?
- And how can the institution support all the process of inception of research?

The session will teach trainees to transform their initial curiosity into a scientific question, through defining an area of research, having the basics of critical literature review, conducting mind mapping, developing a conceptual framework and learning about other tools and methods. They will then learn how to benchmark and compare different scientific methodologies, helping them to choose the more suitable ones for their questions. Finally, trainees will be taught how to deal with their institutional environment, local and national context, and evaluate to what extent conditions are met for designing a project.

This session will help to develop the core skill of a scientist and to identify the conditions for an HEI to set up some administrative support for researchers. The course material is well suited for anyone interested in the problem of developing knowledge in science; interested in learning about the appropriate methodology and approach for the achievement of educational and scientific activities.

Methodology

- Pre-course: pre-assessment will be sent to participants to determine their existing knowledge, skills and interests; articles will be sent, that must be read in preparation.
- The training session will last 4 to 5 days and is designed to train approximately 20 people.
- The learning process is founded upon concrete and tangible activities related to trainees' concerns. Methods, techniques and exercises will be based on ideas, case studies, programs and/or projects developed by the trainees themselves, resulting in clear improvement of the latter. For this reason, substantial (but reasonable) preparatory work will be asked to the trainees, 2 to 3 weeks before the training.
- For the training session, 4 or 5 trainers will be mobilized into dynamic working groups. We expect a high level commitment of the trainers and trainees attending seminars and transparency of the selection process.

Calendar and milestones

- **From 1 to 22 October:** call for applications open
- **24 October:** Wanasea's members send to RULE/CREED up to 5 applications
- **5 November:** selection of the trainees and beginning of the pre-class activities.



Planning

2018	Mon. 26 Nov.	Tue. 27 Nov.	Thu. 29 Nov.	Fri. 30 Nov.	Sat. 1 Dec.
Morn.	<ul style="list-style-type: none"> Introduction: presentation of Wanasea, trainers, trainees, expectations, etc.; description of the methodology of the training and planned activities Why do we do research (production of knowledge; science... history of science) and who actually does research? 	<ul style="list-style-type: none"> Inception of a research initiative: the research question - how to get to it. Defining an area of research, critical literature review, mind mapping, conceptual framework How can the institution support this? Feedback from trainees about how their institution supports research 	<ul style="list-style-type: none"> Research methodology: how to choose the right scientific method? What is it? Existing tools, importance of the initial choices, etc. Disciplines, multidisciplinary; transdisciplinary (diversity of sources of knowledge) How can the institution support this? Feedback from trainees about how their HEI links with other producers of knowledge (BB) 	<ul style="list-style-type: none"> Preconditions for using the research methodology and conduct research. Management of human and financial resources; security; ethics; property rights, etc. How can the institution support this? Feedback from trainees about how their HEI deals with these questions (BB) 	<ul style="list-style-type: none"> Presentation (30'), by each group, of their research project: initial question, research question, chosen methodology and preconditions. Discussion: ideas for going further (from the project to the proposal...) Closing ceremony (diplomas and prize?)
Aft.	<ul style="list-style-type: none"> Research as a professional activity vs science Role in society Feedback from trainees on how is research in their institution / on how they manage to resolve their personal curiosity... Presentation by trainees of one development issue that could be subject of a scientific research: initial curiosity/ question (prepared before the training session) Formation of 5 work groups 	<ul style="list-style-type: none"> Presentation of the methodology to go from the initial curiosity (be it personal or institutional) to a research question Work groups: definition of the research question 	<ul style="list-style-type: none"> Presentation of the methodology to shift from the research question to the definition of the research methodology Work groups: definition of the research methodology 	<ul style="list-style-type: none"> Presentation of the methodology to evaluate needs and constraints related to the research methods chosen in order to conduct research Work groups: identification and evaluation of needs and constraints faced by researchers / teams / units, departments/ institutions... 	