



Call for Projects

deadline 31st of October 2021

CONTEXT

This call for projects is in the context of ACROSS, hosted in Thuyloi University (TLU), Hanoi, under the authority of the Ministry of Agriculture and Rural Development (ODA project 3355/QĐ-BNN-HTQT). ACROSS (for "Advanced Computational Research for Sustainability Science") is a new laboratory jointly established by the French Institute for Sustainable Development (IRD), TLU, Hanoi Architectural University (HAU) and Toulouse Computer Science Research Institute (IRIT) to design modeling and simulation tools in support of a scientific approach to sustainability in the management of irrigation systems in Vietnam. ACROSS will promote a progressive, problem-oriented methodology to organize the contributions of scientists, students and practitioners on several case studies (Bac Hung Hai in the Red River Delta, Ta Trach in the centre, Dak Lak in the highlands and Duc Hoa in the Mekong Delta).

CHALLENGES

Designing, implementing and using models of these case studies for supporting the management of irrigation systems unwrap a number of challenges, among which:

- To better understand the management issues of each case study and the dynamics of negotiations about them.
- To collect data relevant for these issues, about the hydrological, environmental, ecological, social, economic components of each irrigation system.
- To couple different sub-models of these components into integrated models
- To provide stakeholders with a simple way to virtually experiment different management options in various simulated scenarios

EXPECTED CONTRIBUTIONS FROM APPLICATIONS

We need projects that fulfill these gaps and can contribute to the research of the laboratory, for instance by proposing :

1. The design of IoT systems for collecting data on water quality, waterflow, pollution, etc.
2. Design of web data visualisation interfaces for simplifying the management of complex irrigation systems
3. Design of models of the different components of an irrigation system: hydraulic simulation, water quality, pollution, etc
4. Data collection on the different stakeholders and groups involved in the management of irrigation systems
5. Innovative methodological proposals to support the participation of stakeholders and users of irrigation systems, ...

Projects that propose an application to the two first case studies (Bac Hung Hai and Ta Trach) will be prioritized.

REGULATIONS AND APPLICATION

1. **The projects are for a period of 6 months and will be granted a maximum of 50M VND each.**
2. **It is expected that a large part of the proposed activities will be undertaken** in strong interaction with the researchers in ACROSS, ideally in the premises of the laboratory.
3. **The projects will involve two presentations** during workshops organized at TLU: one in December 2021 in order for all the teams to meet and present their goals, one during a collective workshop in Summer 2022 so that they can share their results.
4. **A short report at the end**, accompanied by the concrete results (code, sensors, guidelines, etc.) if any, will be asked to participants.

Send **your proposal** and the **CV of the project coordinator** before the **31st of October 2021**, to across@tlu.edu.vn. Please indicate the reference: ACROSS_Project_2021. Proposals must be in PDF format, written in English, and cannot exceed two pages. They must clearly describe the contents of the research, the methodology followed as well as the expected results and contributions to ACROSS. Accepted projects are expected to begin as soon as possible (before December 2021).