

## Pro tips for international joint research program

### Introduction

Project's title: Development of Coupling Atmospheric-Hydrologic-Hydrodynamic Models and Big-Data for Evaluation and Projection of Flow Characteristics, Drought, and Saltwater Intrusion in the Vietnam Mekong Delta in the Context of Climate Change and Upstream Human Interventions.

Summary:

This joint-project aims:

- Develop an Atmospheric-Hydrologic-Hydrodynamic coupling models for simulation and prediction flow and saltwater intrusion in River Deltas;
- Apply the developed coupling model for simulation and projection of flow characteristics, drought and saltwater intrusion in the Vietnam Mekong Delta (VMD) in the context of climate change and upstream human interventions;
- Establish BIG-DATA structure towards development of AI (Artificial Intelligence) technology for improving accuracy in predictions of flow, drought and saltwater intrusion in the VMD.

### Advisory for foreign researcher

In general, it is not easy for a foreign professor to find a research funding in Korea due to the barrier of language and connection; therefore, I mostly relied on the research funding supported by NRF, which is highly competitive. I always asked my graduate students to regularly check on NRF's website about the information on new funding opportunities, and targeted only on small grant budget (typically about KRW 50 mil. per year). For joint research project with other countries, it costs a lot of time to prepare a proposal. First, we need to know well about our counterpart team (their facility and reputation in their country) to set up a collaboration. We arranged many online meetings for both sides to figure out a current hot topic in their country, and how to prepare a proposal to cope with the topic. Luckily, the joint-research proposal can be written in English (This is the most advantage one); only the summary of project has to be prepared in Korean, of which my graduate students can take care. If a full proposal has to be written in Korean, this is the most difficult task for foreign researchers.

In my point of view, there are a couple of tips how to succeed in application of NRF joint-research projects:

- 1) Should have a good and potential counterpart team;
- 2) Targeting small budget (about KWR 50. mil/year);
- 3) Considering a significant and hot topic and well preparing the proposal.

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