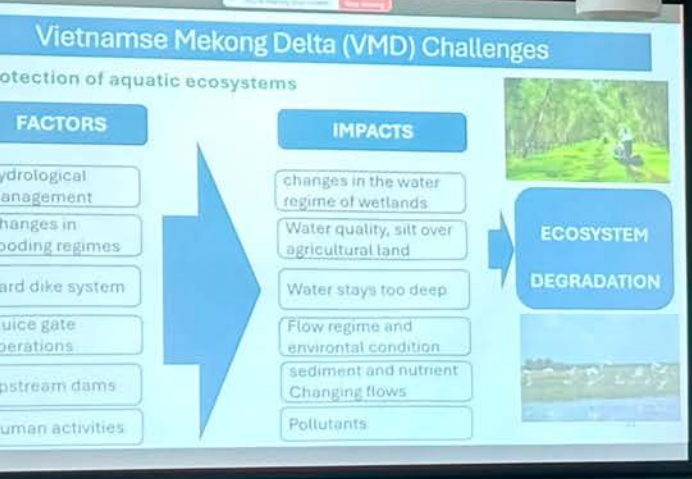




IEIF ASEAN Research Collaboration Project:

Get to know: Dr Thi Thuy Hang Nguyen

Round 1 and 2 Early Career Researcher from Viet Nam

Round 1

- **Host Organisation:** University of New South Wales
- **Project title:** Improving stream flow predictions by an optimised rainfall-runoff modelling strategy for the best performance across hydrological conditions
- **Project outline:** The model will be further developed, integrated optimisation techniques. New optimisation strategies will be then developed and tested, completed with performance analysis and final report

Round 2

- **Host organisation:** University of New South Wales
- **Project title:** Reconstruction of 500-year daily river flow based on tree-ring data to support long-term water resource management
- **Project outline:** The project aims to extend the methodology for disaggregating annual tree-ring data to reconstruct 500-year daily flow series, contributing to long-term water resource management. Data to cross-validate the approach will be collected from both Australian and Vietnamese catchments.

What motivated you to apply?

I applied for the IEIF ASEAN Research Collaboration Project because I wanted the opportunity to experience a research environment in Australia. As a researcher in hydrology and water resources, I was interested in exploring new perspectives, learning from experienced researchers, and expanding my professional network through international collaboration.

Climate change and extreme weather are becoming increasingly pressing global challenges, and Australia and ASEAN countries share many similar water resource issues. Australia is particularly well-suited for research in this field, given its diverse climate and complex water resource challenges. It also aligns well with my research and enables me to contribute to more effective water resource management in the face of climate change.





How would you describe your experience of the Project, and what was the most valuable aspect or highlight for you?

I found my experience with the Project really rewarding and enriching. It gave me the opportunity to work in a new research environment and gain practical experience beyond my usual academic setting.

One of the most valuable aspects was the opportunity to work closely with experienced researchers, especially my supervisor. Being in such a dynamic research environment at a leading university like UNSW, surrounded by passionate researchers, was truly inspiring. Being there in person also helped build stronger connections, which made me feel more confident about pursuing future collaborations. This experience has also laid a strong foundation for my ongoing work in water resource management.



How has the Project supported you to participate in commercially focused research?

My research is not directly commercial, but it is strongly application-oriented. It focuses on modelling and forecasting water resources, as well as analysing water availability and system dynamics to support decision-making in resource management, with clear relevance for practical and operational applications.

It supports areas such as disaster risk assessment, hydropower management, and agricultural planning, where the outputs can inform decision-making by government agencies, industry stakeholders, and infrastructure operators. This is particularly important in the context of increasing extreme weather events and climate change, where reliable forecasting and modelling are essential for adaptation and mitigation. It also contributes to longer-term goals such as sustainable water management and supporting net-zero strategies.

How will you use this experience to expand ASEAN-Australia collaboration in your future work or research?

This experience has helped me build valuable connections with researchers in Australia, particularly with my host supervisor, which I plan to further develop in my future work. I aim to strengthen ASEAN-Australia collaboration through joint research projects and publications, co-supervision of students, and academic exchange, particularly in water resources and climate-related challenges that are highly relevant across both regions. I also hope to expand these networks by connecting researchers and supporting further collaboration where possible.

Dr Thi Thuy Hang Nguyen

Visiting researcher, University of New South Wales

Vietnam National University Ho Chi Minh City

Email: ntthang@hcmus.edu.vn

LinkedIn: <http://linkedin.com/in/hang-nguyen-8437a3221>