

A SCIENTIST'S STRONG DESIRE TO HELP COMMUNITIES

Dr. LE THI KIM PHUNG: A Vietnamese woman in bioenergy sector



Associate Professor Dr. Le Thi Kim Phung
University of Technology of Ho Chi Minh City (HCMUT), VNU-HCM

Phung, who comes from a rural family, grew up knowing firsthand the challenges and benefits of farming. Despite the hard job, she realised its importance in supplying products for people's everyday lives. She pursued her dream of becoming an engineer because she had a passion for the field and understood that technical development is the core to improve labor productivity.

After graduating from high school, Ms. Le Thi Kim Phung was admitted to several top universities in the South, but she chose the University of Science and Technology – the Vietnam National University in Ho Chi Minh City, where the majority of students were male.

“My father’s job might influence me so I like engineering to work with machines and technologies. I also don’t see any barriers prevent women from working well in the tech sector”, she explains.

Ms. Phung received the gold medal of the Faculty of Chemical Engineering in 1999 after graduating from university with the highest-scoring thesis. As a result, she was able to continue working as a lecturer at the university. However, she chose to start her career at a company because she dreamt of being a factory engineer. She often wondered at university how she would put what she had learned into practice. Another reason was the financial burden of taking care of her family, including two younger siblings attending college.

When a part of her dream came true and her job became stable and relatively easy as the factory’s equipment ran smoothly, she felt that her capacity had not yet been developed. She realized that her passion was to create new products, to study and innovate something, rather than doing a task repeatedly.

As a result, she decided to return to teaching at the university, complete her master’s degree and then apply for a scholarship to study a PhD abroad. In 2008, she completed her doctoral thesis at the University of Sheffield in the United Kingdom.

Dr. Phung then returned to Viet Nam to pursue her dream of becoming a scientist. She was committed to applied research and technological development, where agricultural by-products are processed into energy and valuable products.

“Viet Nam has potential for agricultural waste. With my research, I hope I can give a hand to solve environmental and economic problems, contributing to the nation’s sustainable development,” she explains.

“Just follow your passion and sweet fruits will come.”



Ms. Phung at the technology forum under GIZ/BEM in HCMC in Nov 2022

“Just follow your passion and sweet fruits will come” is Dr. Phung’s life motto. She has succeeded in applying her research into practice, promoting the development of sustainable agriculture in Viet Nam, and bringing high values to communities. As a result of her efforts, she has received a number of awards both in the country and Asia.

In 2016, Ms. Phung was granted with the ASEAN-US Scientist Award for female scientists in the field of applied sciences. One year later, she was recognised as one of Asia’s top 100 scientists. In 2019,

Forbes Viet Nam named her one of the country’s 50 Most Influential Women.

She was awarded for outstanding contributions to science by Viet Nam Intellectual Women’s Association in the period from 2011 to 2015. She is also an active member of the Viet Nam Energy Association. Her latest prize was the Hitachi Global Foundation Asia Innovation Award in November 2022. She won with a project to create advanced biomaterials Aerogel from agricultural waste for environmental treatment.

Assoc. Dr. Phung doesn’t want to keep her knowledge to herself, because she wants to help more people in rural areas and promote Viet Nam’s sustainable development. Instead, she has shared her research with other relevant partners, so they can join her efforts.

In November 2022, Ms. Phung presented the findings of a study on bio-silica from agricultural residues for bioenergy at a technology exchange forum for the private sector in Ho Chi Minh City. The research concluded that bio-silica can be produced from rice husk ash, which is abundant in Viet Nam, and that it has a high potential for application in energy. The event was a part of the Climate Protection through Sustainable Bioenergy Markets in Viet Nam (BEM) project, which is implemented by GIZ and the Electricity and Renewable Energy Authority of the Ministry of Industry and Trade. BEM is funded by the German Federal Ministry for Economic Affairs and Climate Action (BMWK) through the International Climate Initiative (IKI).

She has also joined the GIZ/BEM project’s national consultants to carry out pre-feasibility studies on converting fossil fuel boilers to biomass ones in textile factories and promoting biomass power plants in the industry sector. The research will provide valuable information to investors, allowing them to estimate the cost of constructing biomass boilers or biomass power plants and consider whether the investment is feasible or not. With her strong connections to relevant stakeholders and her support to link with profound practical research, the study has received more inputs for data analysis and has gained the trust of bioenergy investors.

Despite her busy schedule, Ms. Phung manages to balance work and life. ***“My family is the greatest motivation and encouragement to my professional career,”*** she says.

“This is a disadvantage for my family when I’m too busy to take proper care of all members,” she explains. ***“But it has also created a good habit for other members as they should care and support me. With this habit, we love each other more.”***



Ms. Phung with GIZ/BEM team and her colleagues



Ms. Phung received the Best Asia Innovation Award in Nov 2022, Japan



Ms. Phung at her workplace