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Evaluation of SLU's research and capacity development collaborations with Vietnam 1977–2018

Author: Solveig Freudenthal

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Executive summary

The Swedish University of Agricultural Sciences' (SLU) contacts with Vietnam were initiated more than 35 years ago. Several departments and faculties at SLU have over the years been involved in the collaborations. This has mainly consisted of research capacity development programmes funded by Sida/SAREC aimed at strengthening individual and institutional research capacity in Vietnamese priority areas. The programmes have been part of the development agenda to reduce poverty and contribute to the socio-economic development of Vietnam. Smaller research projects undertaken by individual researchers at SLU in collaboration with individual researchers in Vietnam have also taken place with other funding. Some of these projects have also involved Swedish MSc and PhD students who have been able to conduct fieldwork in Vietnam. Many programmes have been large long-term projects involving several universities and research institutes in Vietnam and resulting in a large number of Vietnamese MSc and PhD graduates.

The purpose of the evaluation was to identify results and relevant approaches of SLU's research and capacity development collaborations with Vietnam. Focus has been on initiatives within sectors relevant to agriculture, rural development and forestry. Both qualitative and quantitative methods have been used in the study.

Forty-three Vietnamese researchers with a PhD from SLU were traced, out of probably 50–60 PhDs awarded within the studied programmes. Moreover, 36 MSc graduates were traced, out of probably more than one hundred MSc graduates. An online survey was sent to all 79 traced Vietnamese MSc and/or PhD graduates. Fifty-four individuals (68%) responded to the survey, with an equal number of women and men. Twenty-three of the respondents had a PhD from SLU.

Out of the 54 respondents, 38 individuals, with an equal number of women and men, were interviewed during a field visit to Vietnam in November–December 2019. During that field visit, many

universities and research institutes as well as field sites and demonstration farms were visited, from the north to the south of Vietnam. SLU staff and supervisors were also interviewed.

The study examines the career path of Vietnamese researchers who have completed their MSc and/or PhD in collaboration with SLU. The PhD training was mainly done according to the sandwich model, which meant that the research students, who were already supposed to be university staff at the start of the training, should define their research project in the Vietnamese context and only spend periods of time at SLU for coursework, analysis and writing up. All of the respondents live and work in Vietnam today, and the majority are employed at the same university or research institute where they were based as staff before their MSc and/or PhD training. The training was seen as staff development and the researchers were expected to move back to their home university after completing their degrees and to help develop their own institutions. They often had contracts with their home institution which stated that they had to come back for at least 3–5 years following graduation. It is nonetheless remarkable that the majority of the scientists, many of whom graduated 10–20 years ago, are still at the same university they were as students. All of them, both women and men, were given higher positions as they returned to their universities with a MSc or PhD degree. The findings indicate that the sandwich model of PhD training has been successful in terms of retaining staff at the home university, ensuring a high relevance of the training to the Vietnamese context and enabling the combination of studies with family life.

Moreover, the sandwich model of PhD training was also seen by the researchers as a way to form contacts with the international research community and to develop networks and other types of connections with researchers in countries outside Vietnam including Sweden. Employment outside academia has attracted only a few of the graduates who are working at government agencies

and ministries. They have also attained senior positions and are doing important work, often in the fields of policy and analysis. Men have in general reached higher positions than women, but there are also many women with high academic positions. The scientists are located at universities/institutes all over Vietnam, which reflects the history of the research collaborations. They have all continued with teaching and research. It is noteworthy that the majority of the respondents (46 individuals) reported that they thought that their current work to a large degree corresponds to their academic qualification.

The study has also examined capacity development at institutional/national level and can show that institutional capacity has been developed. As increasing numbers of researchers have reached senior positions at their departments and faculties, they have been able to develop research groups and conducive research environments for younger research students using the kind of teaching and research methods they learnt at SLU. More concretely, two new Master's programmes, one in rural development and one in sustainable livestock systems, with emphasis on animal production and management, have been developed in collaboration with SLU. When looking beyond collaborations with SLU both a new faculty on Extension and Rural Development and a new Centre for Climate Change Study in Central Vietnam have been established. The collaborations have led to large and strong research networks, both at national and international level and today Vietnamese research institutions have collaborations with many universities around the world.

Research publications and level of research uptake have been impressive. As this study stretches over 35 years it has not been possible to give a complete picture of the number of publications that have been generated through the collaborations. What we know is that some programmes like the MEKARN, especially in later years, had a high publication rate in international refereed journals. The majority of the respondents in the survey had published both in international and in national refereed journals, as well as in policy briefs, books, teaching materials, university reports and conference papers.

An important part of the study was to examine the knowledge (research findings) generated from the research collaborations and look at how and to what extent this knowledge has been used in society. Apart from a broader discussion on transfer of knowledge and research uptake, five cases (Cases 5–9) have been selected to illustrate how results have been used. The cases show that research has been carried out in fields and areas of importance to the socio-economic development of Vietnam and the reduction of poverty. For example, research within the *Sustainable Livestock-Based Farming Systems* programme has focused on the use of local by-products as new animal feed. There is evidence that these practices, introduced to small-scale farmers all over Vietnam, have reduced poverty in rural areas, enhanced food safety and improved the sustainability and income of livestock farming in Vietnam. At least 100,000 households are nowadays using various local by-products as animal feed. One of the interesting components within the *Farming Systems* programme is the development of biogas digesters. The biogas digesters use manure from pigs (or goats, cows or other animals) to produce cooking gas for family home consumption. The transferring of biogas technology to smallholder farms in Vietnam by the researchers has had an impressive impact. More than 100,000 units of polyethylene tube biodigesters were installed in small scale farms in Vietnam from 1992 to 2010. According to a World Bank report, the biodigesters have so far helped Vietnam reduce 1.3 million tonnes of carbon emissions annually. Another example is the programme in forestry research where scientists have developed fast-growing, economically valuable tree species, by setting up tree nurseries for breeding hybrids of acacia and eucalyptus and developing tissue culture technology. Wood of acacia hybrid generated from the project is now widely used for pulp and timber to produce furniture for domestic use and export. There are indications that the many research programmes are in some respects at the forefront regarding transforming agriculture and food systems into resilient systems with low emissions, including shifting diets and new protein sources.

In conclusion, the collaborations have been successful in terms of results generated and being used in rural areas of Vietnam. The study points to the importance of long-term, flexible research programmes open to new ideas. Research capacity has been developed and a large number of Vietnamese researchers have graduated with a MSc and/or PhD from SLU. The personalities of the Vietnamese and Swedish researchers involved, their communication skills, ability to inspire and mutual interest in research, have all played a part

in making these research collaborations successful. Key Vietnamese scientists have become change agents and developed new research groups and conducive research environments. There is a potential for future research collaborations, not with capacity development programmes, but with joint research projects between equal partners. Opportunities to build partnerships between researchers from Vietnam and SLU to work on important issues to reach the goals of Agenda 2030 are there.



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