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Sida Decentralised Evaluation

Eliseo R. Ponce
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The Research Cooperation for Sustainable Farming Systems in the Lower Mekong Basin (2008-2012)

Final Report

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**Final Report
December 2014**

**Eliseo R. Ponce
Serena Sanchez**

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The views and interpretations expressed in this report are the authors' and do not necessarily reflect those of the Swedish International Development Cooperation Agency, Sida.

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LAOS: NATIONAL UNIVERSITY OF LAOS (NUOL), VIENTIANE, NATIONAL AGRICULTURE AND FORESTRY RESEARCH INSTITUTE (NAFRI), VIENTIANE,

THAILAND: KHON KAEN UNIVERSITY (KKU), KHON KAEN, CHIANG MAI UNIVERSITY (CMU), CHIANG MAI, PRINCE OF SONGKLA UNIVERSITY (PSU), HAT YAI, SURANAREE UNIVERSITY, NAKHON RATCHASIMA (THE LATTER TWO NOT BEING ACTIVE AT PRESENT IN THE MEKARN NETWORK),

VIETNAM: UNIVERSITY OF AGRICULTURE AND FORESTRY (UAF) LATER LONG NAM UNIVERSITY, HO CHI MINH CITY, CAN THO UNIVERSITY (CTU), CAN THO, AN GIANG UNIVERSITY, AN GIANG, HUE UNIVERSITY OF AGRICULTURE AND FORESTRY, (HUAF) HUE, NATIONAL INSTITUTE OF ANIMAL HUSBANDRY (NIAH), HANOI, AND

SWEDEN: SWEDISH UNIVERSITY OF AGRICULTURAL SCIENCES (SLU), UPPSALA



Evaluation Team & Acknowledgment

The evaluation was carried out by Dr. Eliseo R. Ponce, retired professor of agriculture research and extension management, and Dr. Serena Sanchez, retired professor of animal science, of the Visayas State University, City of Baybay, Philippines from May to August 2013. In conducting this research, the evaluators deeply acknowledge the invaluable assistance provided by the Mekarn officials and scholars in the countries of Vietnam, Cambodia, and Laos, and the SIDA in Bangkok, Thailand. Special mention goes to Dr. Dping Nguyen Khang, the current Executive Director of Mekarn and Dr. Reginald Preston, SIDA-Mekarn on-site expert, for the excellent travel arrangements and data support. Of course, the team wishes to extend their thanks and gratitude to Dr. Renée Ankarfjård of SIDA Bangkok for the administrative and financial support.

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Executive Summary

The evaluation covers the years 2008-2012, the last phase of Mekarn 1, a SIDA supported network since 2001 on Research Cooperation for Livestock Based Sustainable Farming Systems in the Lower Mekong Basin (MEKARN). Fifteen universities and research institutions in Vietnam, Laos, Cambodia, Thailand and Sweden are participants of the co-operation. The programme is coordinated by Nong Lam University in Ho Chi Minh City, Vietnam, in co-operation with the Swedish University of Agricultural Sciences (SLU). The focus for research is the sustainable use of local resources in small-scale livestock production systems to improve the livelihood of poor farmers. The purpose of the evaluation is to follow up on the development of the network, take stock of progress, as well as assess where the programme stands against planned activities and outcomes, and its set target as well as how it is situated in the emerging development context of the region.

The evaluation commenced in 13 May 2013, consisted of document review, survey, a teleconference, field visits to Vietnam, Cambodia, and Laos from May 13-June 6 that included focused group discussion of over 95% of all the MSc & PhD grantees, interview with officials of key institutions, and visits to villages involved in research projects in Laos and Vietnam.

In terms of the **quantitative dimension of the program**, outputs versus targets, the achievement is judged **very satisfactory**. It exceeds in the most essential aspects of the programme i.e., on the areas of human resource development and scientific publications. However, Mekarn fails in certain targets, some of which may be considered as less important to the overall objectives of the programme. Its accomplishments versus targets can be summarized as follows: 20/24 (83%) in MSc, 20/14 (143%) in PhD, 5/2 (250%) in international conference, 5/8 (63%) in workshops/round-table discussions, 155/80 (193%) in scientific papers published in international refereed journals, 0/12 (0%) in extension materials, 4/4(100%) in advanced level courses, 0/4 (0%) in English training, and 100% in the improvement of laboratories and internet access.

To the extent possible, the evaluation looks at the **qualitative dimension of the outputs**. The evaluation rates the quality of human resource development (HRD) as **excellent**. The very high publication rate in international refereed journals is exceptional, and it speaks of the strength of the Mekarn mentorship program that is central to the programme's objective of developing a high calibre human resources. The promotions of Mekarn/SIDA graduates to very responsible positions in government

agencies over the years especially in Vietnam can be viewed as a recognition of the quality of Mekarn graduates. Mekarn human resource development, which is a major strength, is manifested in its graduates' superior technical skills and core values. The former is generally accomplished through advanced training of graduates in SLU specially in the early years of Mekarn while the latter is anchored on Mekarn policy and financial support to require its scholars to return to their own countries to work on practical or actual field problems. These core values have been consistently manifested in the scholars' answers/comments during the focused group discussion or FGD. The values manifested include linking theory to practice, research excellence, social responsibility, learning & innovations, and resource stewardships. The Mekarn/SIDA emphasis on core values development and its strategy of achieving this objective deserve special recognition in this evaluation.

The **very high percentage**, almost 100%, of MSc & PhD grantees finishing their degrees reflects both good recruitment policies as well as the quality of advice and mentorship of the Mekarn program. This is even more impressive given the fact that courses in SLU and research reports are in English, and the Mekong countries basically use their own language as a medium of communication; the use of English in instruction and research in the university is quite limited.

As to **research quality**, the very high percentage of papers published in internationally refereed journals shows the level of research quality. It should be noted that the mentorship strategy employed by Mekarn by putting in the field very senior and highly competent experts to work closely with its grantees from proposal development to writing of research results was a major factor to this achievement.

It is difficult to make **evidenced-based judgment on cost-effectiveness** of the program in view of absence of adequate empirical data to make the computation possible. Mekarn's database is not structured to make judgment on operational efficiency. This is an area that needs SIDA's attention in future programmes. However, if the quantity of outputs in 2001-2007 is compared to that of 2008-2012, then it appears that the latter (Phase 2) is more cost effective; it has a much lower budget but its outputs are higher compared to Phase 1. Understandably, of course, this rough conclusion should be taken with caution.

From 2008-2012, as it has been since Mekarn started, it continues to be a loose network of institutions without long-term institutionalized resource commitment by its members. But despite these limitations, Mekarn has been successful, as evidenced by past and present evaluations, to implement its program and achieve its outputs. Therefore, on this basis, the governance **of the network can be rated as satisfactory**.

But it should be understood that a major contributor to this achievement is the funding and oversight functions of SIDA, and the fielding of SIDA senior technical experts who provide advice and guidance either formally or informally not only to the scholars and research grantees but also to the Mekarn management. This arrangement has worked quite well in the past. However, there are important issues, which Mekarn has failed to address over a little over a decade of existence: its sustainability. The issue sustainability requires that Mekarn deals with it in its next phase especially as the network proposes to broaden its membership to include institutions in Myanmar and to redefine the role of more mature research or academic institutions in Mekarn.

As Mekarn expands and redefines its role in the agriculture development of the Mekong subregion with due consideration to the dynamic regional socio-economic situation and, of course, climate change, the Consortium should provide more attention to the issues of network sustainability and efficiency. In pursuit of these objectives, it is wise that Mekarn shall build on its strengths while adapting good practices by similar networks in other parts of the world.

Good governance is central to consortium efficiency, which is anchored on principles of transparency, predictability, participation, and check and balance. A central feature of good governance requires that people involved in policy making are divorced from actual program implementation. Improving the quality of governance would open Mekarn to a wider stakeholder participation, increased program transparency, and, hopefully, more robust member participation. Some undercurrents on the lack of transparency and participation were gathered from Laos and Cambodia during the field visits and interview. These are critical areas that deserve careful attention in Mekarn II.

In terms of **program impact, the human resource training can be rated as excellent**; this alone, to the evaluators' view, makes Mekarn a highly successful and justifiable HRD program. Mekarn has significantly contributed to building of a critical mass of highly trained human resource in the three Mekong countries of Vietnam, Laos, and Cambodia. The Mekarn graduates have replicated their skills and values through their students. In addition, a number of graduates have been promoted to highly responsible positions in government, exerting positive influence to their respective organizations as highlighted in the case of two women PhD graduates who serve as head and deputy head of a regulatory department under the Ministry of Agriculture & Rural Development in Vietnam.

As to the **diffusion and impact of technologies** generated by Mekarn research, the rating is at best, fair despite what seems to be a good adoption of the methane gas technology from animal manure in Cambodia. The spread of technologies generated

by Mekarn has been rather limited even in villages involved in the field experiments. This is illustrated, for example, in making silage out of cassava. Up to the time of the visit, only 10% of the households in the village involved in the field experiment has adopted the technology. The results should not be surprising, however. Mekarn's approach to technology innovation for small farmers is rather narrow or limited in scope. It has not factored in the over-all game plan the use of interdisciplinary approach to accelerate the adoption of new knowledge or technologies. Beyond animal science, other disciplines such as economics, sociology, and extension have not been deeply involved. Therefore, the barriers to technology or knowledge transfer have not been well addressed in the programme. This is an area that needs substantive attention in the next phase of Mekarn.

The impact of laboratories supported by Mekarn has been rather difficult to measure; this evaluation is unable to make judgment. Time and resources limitation do not allow this evaluation to adequately address this issue. This is further complicated by the lack of a good database to measure program impact.

The current evaluation of Mekarn will be incomplete unless **related impacts on the programme** are highlighted in this report. SIDA's support to Mekarn and, before that SAREC, has developed a reservoir of goodwill in the MEKARN countries of Laos, Cambodia, and, specially, Vietnam. In the interview and FGD, SIDA's faithfulness to its programme commitments and its flexibility or less than rigid approach to program implementation, and its long-term support to human resource development to help address the countries' development problems in agriculture are deeply appreciated. It is interesting to note, however, that the same goodwill was not visibly manifested as regards the SLU. Perhaps the lack of institutional visibility in the Mekarn countries and the lack of an institutional effort to develop linkages beyond the immediate scope of the program are factors worth looking at.

As a way forward, this evaluation strongly suggests that Mekarn II builds on the strengths of Mekarn I and makes a conscious effort to address the issues of greater network sustainability and cost-effectiveness, and to open Mekarn to a wider sub-regional institutional partnerships and linkages towards greater sub-regional impact. The proposal to include Myanmar as part of the network is a move towards the right direction. On the other hand, since Mekarn is mainly a network of agriculture universities, it should examine how it can partner with established networks of universities of agriculture in the ASEAN particularly the Southeast Asia Research Center in Agriculture (SEARCA) based in the Philippines.

Human resource development should continue as a major program of future Mekarn, which is its core competence. However, careful attention should be placed on the **strategic role of member institutions** in relation to the Mekarn II development goals. There is a need to assess the needs and strengths of current and potential members and define how the more mature universities and institutions could assume a more pivotal or leadership role in the next phase.

The proposal to broaden the Mekarn's problem focus is also a move in the right direction. Perhaps the Consortium should consider the totality of small farms as a unit of development under a community-based development framework with special attention to gender issues, resource stewardship & sustainability, climate change and livelihood resiliency, and the development of strong rural institutions as a foundation for sustained growth with equity. An interdisciplinary approach to program development and implementation is highly recommended given the complexity of the issues involved.

In terms of location of pilot villages, it might be best for Mekarn to make a conscious effort to focus on areas of high poverty and high vulnerability to climate change.

Introduction

The MEKARN History. The Research Cooperation for Livestock Based Sustainable Farming Systems in the Lower Mekong Basin (MEKARN) evolved /emerged from two consecutive programs that started in 1989, namely:

- a. From 1989 to the late 90's, an SLU international MSc programme had accepted students from Vietnam and neighbouring countries, financed by SAREC (1992-1994) and by SIDA (from 1995). On the basis of a sustainable production systems approach, different technologies suitable for resource-poor farmers in the region had been developed.
- b. The SAREC and SIDA supported bilateral research cooperation between Sweden and Vietnam of the same decade had a component "Sustainable Livestock Based Farming Systems", based at the University of Agriculture and Forestry in Ho Chi Minh City and supported by SLU.

The main function of the two SIDA contributions was to finance PhD and MSc training, and research projects in the subject area. The two programmes had created a strong base in Vietnam and had become well known also outside Vietnam.

An opportunity was seen to expand these programmes to include the whole region of the Lower Mekong Basin (Cambodia, Laos, Thailand and Vietnam). It was assumed that such an expansion would benefit all participating countries as each research center/university can contribute as well as gain from such a network. The idea was supported by the fact that SIDA's country strategies for the region all emphasized a change in focus towards research and assistance to the rural poor.

Three large SIDA area development programmes in the region all aimed at finding sustainable livelihoods for resource-poor farmers. New knowledge on farming systems, based on research findings, was assumed to be important for the three programmes.

It was also assumed that the proposed research cooperation could play a key role in training local researchers, who might be attached to the programmes, and in an exchange of ideas and experiences between the countries concerned. It was also felt that existing agriculture research and training had a bias towards large scale conventional livestock based production systems, which had proved to be successful in industrialised countries but less relevant for smallholders in developing countries.

On the basis of preparatory discussions, a stakeholder meeting took place in Ho Chi Minh City in August 2000, agreeing to the following joint proposal.

- a. The participating academic entities would form a network, the Research Cooperation for Livestock Based Sustainable Farming Systems in the Lower Mekong Basin (MEKARN). The network would cooperate by holding annual workshops, at least once per year and rotated among participating countries, submitting candidates to the SLU initiated MSc training programme that would be gradually more and more adapted to, and implemented at, the regional level, and formulating and implementing research projects to be done by participants in the MSc training programme and other researchers at the cooperating institutions, financed from the Research Fund and presented at the MEKARN annual workshops.
- b. The Nong Lam University in Ho Chi Minh City offered its services for the function of regional coordination.

Evaluation Background . The MEKARN has operated since 2001 involving four countries: Cambodia, Laos, Thailand and Vietnam, which involved the Research Cooperation for Livestock Based Sustainable Farming Systems in the Lower Mekong Basin. Sida has contributed SEK 19.5 Million for 2001-2003 (First Phase), 32.5 Million for 2004-2007 (Second Phase) and 24 859 520 SEK for 2008-2012 (Third Phase) The performance of the network from 2001 to 2007 was evaluated by a team as “High” in terms of capacity building specifically in supporting researchers to have MSc and PhD training and that the research objectives, concerning sustainable technology development, regional cooperation in research, training materials and database

production, and information sharing, have been almost fully met. The team also finds that MEKARN has met its development objectives

The team recommended that the MEKARN continues in a third phase, is given a more comprehensive capacity building task, is strengthened in its regional dimension, is given an increased priority for Cambodia and Laos, has a continued gender objective, increases the share of lecturers from the region, and strengthens research on other farming systems, on poultry and on fish production.

This evaluation covers the period from 2008-2012.

Objectives of Mekarn 2008-2012: The immediate objectives of the project are to:

- Strengthen cooperation in research, training and dissemination of information in the Lower Mekong Basin.
- Exchange ideas, experiences and information between researchers in the region.
- Promote livestock as the epicentre of sustainable farming systems

Capacity objectives:

- To mobilize a critical mass of researchers conversant with sustainable development, with emphasis on integrated agriculture.
- To train junior researchers through short courses and MSc. and PhD. training. These training courses center around knowledge and technologies necessary to further develop sustainable agriculture in the region e.g. diagnostic methods, biological basis for livestock and plant production, computer skills, biometrics, research methodology, feed evaluation, production systems, environment interaction, aquaculture, agro-forestry and farming systems methodology.

Major Findings

I. Outputs vs Targets

This evaluation looks at the **quantitative dimension of the program**, outputs versus targets; the achievement could be judged as **very satisfactory**. It exceeded in the most essential items i.e., on the areas of human resource development and scientific publications. While Mekarn fails in certain targets, some of these, however,

may be considered as less important to the overall objectives of the programme. Its accomplishment versus targets can be summarized as follows: 20/24 (83%) in MSc, 20/14 (143%) in PhD, 5/2 (250%) in international conference, 5/8 (63%) in workshops/round-table discussions, 155/80 (193%) in scientific papers published in international refereed journals, 0/12 (0%) in extension materials, 4/4(100%) in advanced level courses, 0/4 (0%) in English training, and 100% in the improvement of laboratories and internet access (Table 1).

Table 1. Expected vs. Actual Outputs of Mekarn 2008-2012

Item	Target	Actual	% Accomplishment
	Count	Count	
Degree			
MSc*	24	20	83.3
PhD	14	20	143
Non-Degree			
Advanced level course	4	4	100
Short courses applied level	4	3	75
English Training	4	0	0
Regional/International Trainings attended	2	5	250
Publication in International Refereed Journal	80	155	193.75
Infrastructure	Improved Infrastructure (no quantitative targets set)	9**	
*1 MSc grantee accepted another scholarship with better benefits			
** Laboratories improved provided with equipment and chemicals			

Degree Training (MSc & PhD)._A core activity of Mekarn involves its scholarship program to train young staff from member institutions through scholarship towards MSc or PhD degrees. In this area, the results were mixed. The programme exceeded its target in the PhD program by 45% by graduating 20 scholars instead of the original target of fourteen (14). In the MSc programme, however, its attainment was 83%, which is four (4) short of its

original target of twenty (20). The results are seen as a reflection of the dynamic nature of the scholarship. The programme is able to respond to the changing needs of member institutions instead of being locked in targets originally set at the beginning of the program, which may not be anymore relevant.

One important observation on the scholarship is its very high percentage of scholars finishing their degrees: all scholars of the PhD programme and almost 100% of the MSc grantees. The very low rate of failure is even more impressive given the fact that courses in SLU and research reports are in English. And in the Mekong countries the use of English is limited. The national language of member countries is used in education and formal communications. This performance, in the evaluators' view, reflects both good recruitment policies as well as the quality of advice and mentorship. The SIDA has supported the posting of senior project-based experts to work closely with its scholars and research grantees in the conduct of research including the preparation of research reports.

In evaluating the Mekarn scholarship program, the evaluators thought it wise to look at gender balance. In the PhD program, Figure 2 shows that Cambodia has slightly more males, which is opposite in Vietnam. In Laos, however, the PhD grantees were predominantly female. In the MSc programme (Figure 2), males constitute the predominant grantees in both Cambodia & Laos. Vietnam, on the other hand, is the opposite with females make up almost 75% of the total grantees. When both the PhD and MSc programs are combined, however, as shown in Figure 3, Laos has a perfect gender balance while Cambodia has a ratio of about 1 female for every two males scholars, which is opposite in Vietnam. Gender, however, did not surface as an issue in the focused group discussion with scholars and in the interview with Mekarn officials.

Figure 1. MSc grants by Gender and by Country, 2008-2012

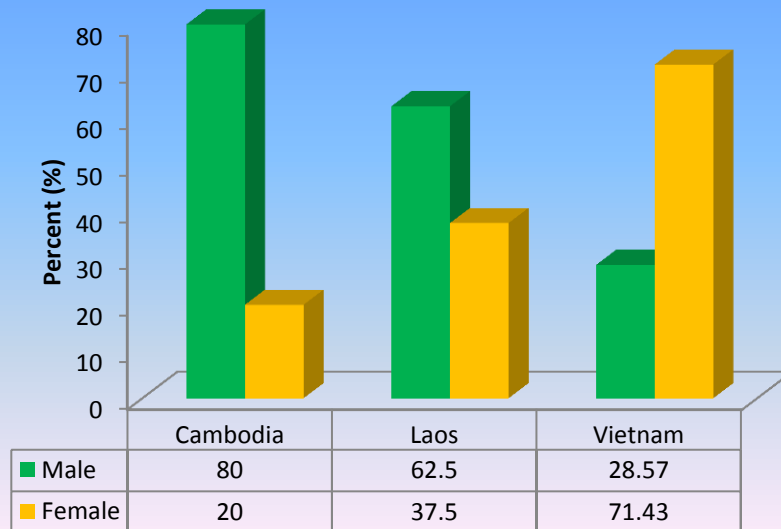
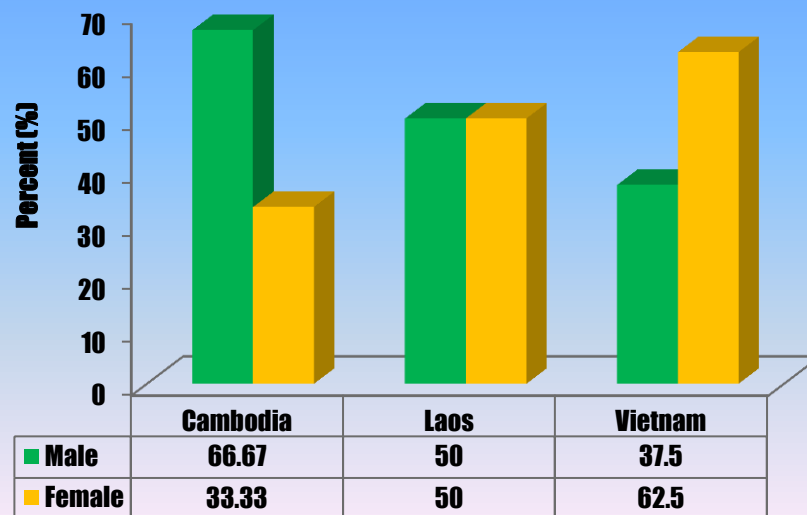


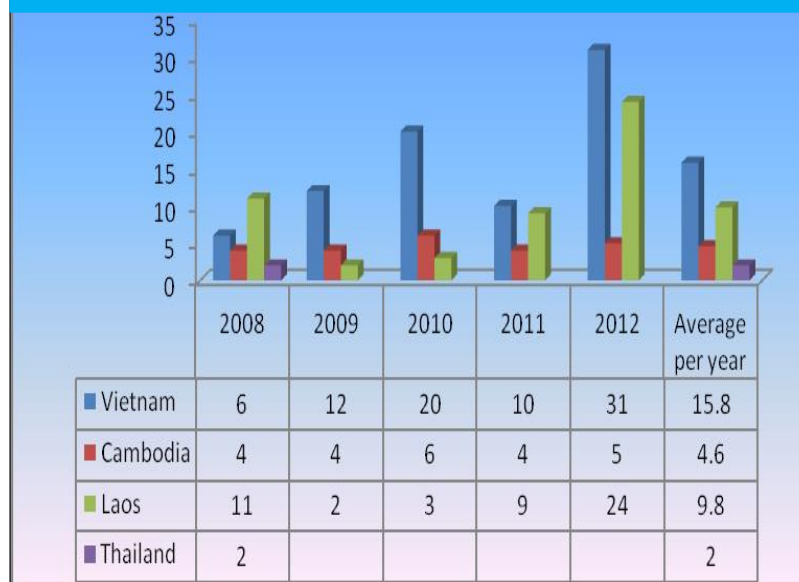
Fig. 2. PhD grantees by Gender and by Country, 2008-2012



Publications. The Mekarn looks at publication not just a mechanism to communicate research results but also as an indication of research quality. Therefore, a major criterion of research quality is publication in internationally referred journals to which the Mekarn exceeded its targets by almost 100% (Table 1). The range of research topics that were published (Table 2) was quite varied from production technology involving ruminants (small and large) to pigs, fish and rabbit to climate change mitigation technologies involving soil amelioration and methane reduction. Given the wide range of topics, it was difficult to see major thematic areas that would have given Mekarn distinct visibility in the literature although its work on climate change mitigation technology on the reduction of methane in cattle was cited. The evaluation also looks at the authorship in publications in internationally refereed journals to determine research collaboration. It appears that this development is happening at much higher rate in Vietnam than either Laos or Cambodia.

Table 2. MSc or PhD research publication by subject area, 2008-2012							
	Cambodia	%	Laos	%	Vietnam	%	Total
Pigs	9	30	5	26.32	28	22.22	42
Large Ruminant	2	6.67	2	10.53	9	7.14	13
Small Ruminant	1	3.33	2	10.53	16	12.70	19
Poultry (chicken, ducks and geese)	6	20	2	10.53	17	13.49	25
Fish	6	20	2	10.53	8	6.35	16
Rabbit	1	3.33	1	5.26	6	4.76	18
Soil Amelioration	1	3.33	0	0	5	3.97	6
Methane Mitigation	0	0	2	10.53	15	11.90	17
Others	4	13.33	3	15.79	12	9.52	19
Total	30	100	19	100	126	100	175

Figure 3. Number of publications in refereed journals by country, 2008-2012.



Research grants. Mekarn has provided research grants to 173 qualified researchers with a total amount of US\$ 606,400 from among the member institutions of the consortium from 2008-2011. As Table 3 below shows, the greatest number of recipients came from Vietnam, which account for 72% of total recipients and 74% of the total grant. Laos and Cambodia accounted for the remaining research grantees with Cambodia getting 17% of the total grantees and accounting for 16% of the total research grant. It is noted that not only Vietnam had much higher number of research recipients but it also had much higher average research grant per research grantee compared to either Cambodia or Laos.

Table 4. Research Grants and Amount from 2008-2011 by country

Country /Institution	Number of Research Grants and Amount (USD)									
	2008		2009		2010		2011		Total	
	No.	US\$	No.	US\$	No.	US\$	No.	US\$	No.	US\$
Vietnam										
NIAS	4	15,700	6	23,000	6	16,000	5	13,800	21	68,500
CTU	8	26,700	6	22,500	5	17,500	8	26,500	27	93,200
HUAF	3	14,500	8	45,000	4	15,000	5	22,500	20	97,000
AGU	5	14,000	3	10,800	8	19,500	6	19,500	22	63,800
NLU	2	7,500	3	23,000	4	18,000	6	22,800	15	71,300
HUAF			8	24,500	8	18,000	3	7,000	17	50,000
TNU							2	5,000	2	5,000
Subtotal	22	78,400	34	148,800	35	104,000	35	117,100	124 (72%)	448,800 (74%)
Average Grant		3,564		4,376		2,971		3,346		3,619
Cambodia										
Cel-Agrid/UTA	7	23,400	6	26,000	10	29,000	7	17,200	30	95,600
Subtotal	7	23,400	6	26,000	10	29,000	7	17,200	30 (17%)	95,600 (16%)
Average Grant		3,342.86		4,333.33		2,900		2,457.143		3,186.67
Laos										
SU	3	9,000			1	1,000	2	3,500	6	13,500
NAFRI	3	10,000							3	10,000
LRC	1	3,000	2	9,000	2	8,500			5	20,500
NUOL	1	3,500							1	3,500
CU					2	9,000	2	5,500	4	14,500
Subtotal	8	25,500	2	9,000	5	18,500	4	9,000	19 (11%)	62,000 (10%)
Average Grant		3,188		4,500		3,700		2,250		3,263
Grand Total		104,988		183,800		151,500		143,300	173 (100%)	606,400 (100%)
Mekong Average		2,837.5		4,376.19		3,030		3,115.217		3,505.202

II. Program Strengths and Challenges

The **major strength** of Mekarn lies on its human resource development program. The list of graduates who have been promoted to responsible positions in both academic & non-academic institutions (Table 4, Annex) is truly impressive. The Mekarn graduates have exerted positive influence to their respective organizations as highlighted in the case of two women PhD graduates who are officers of a regulatory department under the Ministry of Agriculture & Rural Development in Vietnam. Therefore, in terms of **program impact**, the human resource development is perhaps the **most evident**, and on this basis it is rated as **excellent**. To the evaluation team, it is worth the investment that SIDA has poured through the years.

In view of the number of scholars that Mekarn has supported even before the 2008-2012 period, it can be concluded that it has made significant contribution in helping the three Mekong countries of Vietnam, Laos, and Cambodia to build a critical mass of highly trained human resource in agriculture education and research especially in the area of animal science and production. The greatest number of scholars is from universities or institutions involved in teaching. Therefore, it can be reasoned that the Mekarn scholarship program has multiplier effects. Through the educational function of Mekarn institutions, its scholars have, in a sense, replicated themselves in the skills and values of their students. And perhaps this is more dramatic in Vietnam where there is rapid growth of graduate education in agriculture.

As to the **diffusion and impact of technologies** generated by Mekarn research, the rating at best is fair even with the “success” on the spread of biogas technology in Cambodia, which Mekarn has pointed out. However, in other areas of technology development, the spread of the technologies has been rather limited. Take the case, for example, of making silage out of cassava. Up to the time of the visit only 10% of the households in the village in Vietnam where the experiment was conducted has adopted the technology. Nearby villages, while aware of the technology, says the researcher, have still not adopted the technology. And in the households that adopted the technology, the technology impact to household income or household labour has not been studied. Such a research would have given insights on the nature of technologies being disseminated including their interaction with socio-economic variables.

These results should not be surprising given Mekarn's approach to technology discovery and adoption towards small farmer development. The programme has adopted a rather narrow or limited approach. Mekarn has not factored in its over-all strategy or game plan the use of interdisciplinary approach to small-farmer development; therefore, animal production research is mainly biophysical. The socioeconomics aspects such as market, financing, gender, and labour and the knowledge transfer dimensions are absent from the research agenda as shown in the list of completed research. Therefore, socio-economic barriers to technology or knowledge transfer have not been adequately addressed in the program.

Complicating the matter is the institutional linkages that Mekarn has built over the period, which mainly revolve around the university and research system of the countries. Extension agencies at both the national and local levels have not been formally or institutionally involved in the planning of research nor in the dissemination of research results. Cambodia is perhaps an exception because of Celagrid, a research and extension NGO, which Mekarn has supported in its development. Therefore, formal inputs of extension agencies to research prioritization and dissemination have been absent from Mekarn 2008-2012, and in all likelihood in the early years.

Translating research results to extension messages and insuring that research on technology does adequately address socio-economic barriers to adoption are important considerations that should be addressed in the planning and implementation of next phase of Mekarn.

Governance Structure & Organizational Arrangements. Mekarn can be considered a loose network of academic and research institutions without long-term resource commitment; its basic organizational structure and governance have virtually remained unchanged since it started in 2001. There appears no long-term institutional commitment particularly in terms of resource contribution to Mekarn's operation among the members of the consortium. SIDA continues to be its main source of financing and has played an oversight function since the Consortium started. SIDA's role is perhaps one of the major factors that explains Mekarn's success in the attainment of its objectives. Its oversight function keeps Mekarn "faithful" to its purposes and program. On this basis, therefore, the **governance of the network can be rated as satisfactory.**

There are, however, sustainability and governance issues particularly on funding and fund management that have taken centre stage as Mekarn proposes for another phase. There are undercurrents observed in the course of the field visit particularly in Laos and Cambodia as regards participation, transparency, and equity. The feeling, as key

officials of the ministries expressed during one to one interview, was the lack of participation and transparency in decision making and equity in resource allocation. The officials maintained that while they fully support Mekarn and appreciate its programs including its proposal for the next phase, they expect, however, that these issues be fully addressed in the next phase.

Monitoring & Evaluation: Methods & Issues. The current system of monitoring focuses on process documentation of financial and non-financial transactions. Mekarn puts inordinate attention to documentation of processes and activities undertaken and the corresponding expenditures involved. Mekarn submits regular reports on these items to SIDA. In addition SIDA hires an auditing company to look at the financial transaction of the consortium to determine if Mekarn financial and accounting system do subscribe to accepted accounting procedures. These standard practices should, of course, continue to the next phase. However, the current M&E system does not make it easy to make judgement on cost efficiency or cost effectiveness, which should be of interest to SIDA. The next phase should address this concern, if judgment on cost-efficiency is of interest.

Mekong Developments & the Needs of Small Farmers. The Mekong sub-region, like the rest of ASEAN countries, looks at food security, gender equity, and sustainable development as national goals that are increasingly being threatened by climate change. In many of the ASEAN countries, like the Mekarn countries, poverty continues to be a national concern. Therefore, the Mekarn is in the right direction with its aim to make positive contributions to these issues by helping accelerate the subregion's agriculture and rural development through small-farmer or small holders development. But Mekarn do realize the presence of several development agencies, both national and international, working in the subregion with the same general objectives and focus. Given the current situation, there is a need for the Consortium to look at its comparative advantage and anchor the next phase on the basis of its strength i.e., human resource development. It should aim towards strengthening research and extension services towards small-development with special attention to gender, climate change, and fragile environments.

III. Way Forward

Key Questions, Major Lessons, & Recommendations

- 1. What, if any, changes to the present governance structure should be considered for Mekarn beyond 2012? What are the key recommendations to**

Mekarn coordination regarding the improvement of programme's implementation and achievement of results beyond 2012.

While governance has not been seen as a major issue in the past evaluations, the current evaluation believes it is for four reasons: (a) The proposed new phase aims to broaden the countries involved by including Myanmar and to redefine the human resource development program to include postdoctoral fellowship, (b) The proposed inclusion of the extension objectives in the next phase, which is not the comparative advantage of current Mekarn members perhaps with the exception of CelAgrid in Cambodia, and (c) The issue of sustainability of financial support given SIDA's uncertain long-term financial support and (d) The need to address the undercurrents observed during the visits in Laos & Cambodia in the areas of equity, transparency, and participation. Towards this end, the following recommendations are given:

- a. **Consider strengthening the principle of check and balance by separating policy making from program implementation while at the same time address the issue of organizational & program sustainability.** Given the more complex set of activities proposed for the next phase and an expanded Mekarn membership, it is important to pay greater attention to improving the quality of governance to achieve higher efficiency while keeping an eye on program sustainability.

At the policy level, the Mekarn may want to create a Governing Council (GC) rather continue with the current Steering Committee, the former being more authoritative and formal to approve Mekarn-wide policies and perform oversight functions. Members can include ministers/sub-ministers of education and agriculture from the Mekong countries. By getting the ministers/sub-ministers as members of the GC, it gives Mekarn higher authority and greater public visibility and clout. As important, it also becomes more convenient for Mekarn countries to allocate counterpart funds to the SIDA financial support as these ministries are the source of annual budgets for Mekarn government member institutions. Additionally, the Mekarn Governing Council may also include representatives of the private sector and the NGOs operating in the Mekong countries, two prominent or distinguished Mekarn alumni in the areas of agriculture education and agriculture research, the Rector of Nong Lam University as ex officio member to serve as its Secretary although operational responsibilities reside with the Mekarn Director, and, finally, SIDA as its major donor. Theoretically, therefore, total membership could reach a minimum of twelve. To accelerate the restructuring

of Mekarn, the SIDA may want to organize a ministerial or sub ministerial meeting involving the ministries of agriculture and education of the Mekong countries and key NGO and private sector stakeholders to discuss the proposal for restructuring and long-term financial support.

To draw lessons from existing practices, SIDA and Mekarn may want to examine a more formal organizational structures with the necessary check and balances and more sustainable funding support such as the Southeast Asian Ministries of Education Organization (SEAMEO) based in Bangkok, which has one of its centres, the Southeast Asian Research Centres in Agriculture (SEARCA).

- b. **Consider the organization of Mekarn Research, Development, and Extension Council (RDEC) to better define the research and extension agenda of the expanded consortium on behalf of the GC.** Agenda setting for research and extension to meet the diverse and complex needs of target clients of Mekarn in the Mekong sub-region requires a more methodical and defined process. The complexity of these needs are better appreciated when one considers the diversity of culture, the diversity of the agriculture production systems and the biophysical environments, the dynamics of regional and global agriculture development, and the importance to address gender issues and climate change challenge unique to each country of the expanded Mekarn. Therefore, it is advisable that Mekarn institutionalizes a well-defined yet highly participatory process of research and extension agenda setting. Towards this end, Mekarn may consider organizing a Mekarn RDEC whose main responsibility is twofold: to define the RDE agenda and to oversee the review of the RDE sub-regional performance based on the approved and funded agenda.

RDEC membership may include prominent sub-regional and international scientists representing various research disciplines and agriculture extension practitioners with substantive Mekong experience. The agenda shall serve as a guide for Mekarn's call for proposals for research and extension grants. At the same time, the agenda shall help define the research focus of Mekarn's graduate and post-graduate scholars. Overseeing the implementation of the agenda and the corresponding programs lies, of course, with the Mekarn Executive Director in close partnerships with Mekarn member institutions. To provide strong technical support to Mekarn, the SIDA is advised to continue its support for onsite senior experts preferably representing key disciplinary areas.

- c. **Consider appointing a full-time Director of Mekarn who shall serve as the Chief Executive Officer (CEO) of the Consortium Secretariat.** At the time of the evaluation, the Director of the Mekarn Secretariat is a faculty member of Nong Lam University, and he, as the evaluators understand, has other duties and obligations to the university besides Mekarn. In the next phase, the SIDA is advised to negotiate with the university that the Director works full time or at least 90% of his time to allow focused attention and timely delivery of outputs. SIDA, on the other hand, is advised to examine and provide adequate support to the administrative needs of the Secretariat at least in the short-term. Finally, to make the appointment of the Mekarn Director formal, it is suggested that upon the nomination of the University, the GC, once organized, shall formally approve the appointment.
- d. **Finally, given the above suggestions, the Mekarn may consider revisiting its constitutions and by laws and make the necessary changes and approval by the Governing Council.**

2. What are the lessons learnt for the network, from current collaboration with extension actors, for future collaboration with other actors as proposed in the new proposal?

It is important, as pointed out earlier, that extension is not simply viewed as a collaboration with extension “actors” after technologies are generated. It should start with defining the research agenda to achieve a multi and interdisciplinary understanding of the science and the socio-economic dimensions of the technology being pursued so that barriers to knowledge and technology diffusion and use are better understood and properly addressed in the program. Unfortunately, as pointed out earlier, the Mekarn has taken a limited approach to knowledge transfer and extension. Therefore, its research agenda are quite narrow, and it does not have a well-defined strategy for research knowledge or technology transfer.

To better address this issue, it is suggested earlier in this report that Mekarn defines its research and extension agenda through a well-articulated, participatory process. Such a process should result to, among others, a clear decision to resource allocation so that appropriate budgets are allocated to meeting **both** the research and extension objectives of Makarn.

Mekarn in the next phase may want to pay more attention to building of broad based institutionalized linkages in the research-extension continuum of the program. The Mekarn may want to create in each country a Mekarn Research, Development, and

Extension Advisory Committee (Mekarn-RDEAC) whose members can include key research and extension stakeholders of the country that can include NGOs and the private sector. The idea is to provide a framework of institutionalized partnerships in the RDE continuum and for members of the RDEAC to provide advice in defining the country's RDE agenda to building institutional linkages to accelerate knowledge generation and transfer. The RDEAC members can, at the same time, help harness their respective institutions to help build institutional connections and financial support.

Finally, at the village level where Mekarn field experiments are conducted, the program may want to issue a policy guidance to its partner institutions involved in the project as regards the protocol and importance of holding of field days. The aim is for extension agencies operating in the area and the households in the pilot villages to be fully aware of the technology being tested from planning to the implementation of the experiment so that the agencies and the village households are able to learn alongside the researchers. Such a technique does provide important pay offs in accelerating knowledge transfer.

The proposal to broaden the problem focus is a move in the right direction. Of central importance is to focus on the totality of the small-farm as a unit of development with due attention to gender issues, resource stewardship, climate change and resiliency, sustainability, competitiveness, and the development of strong rural institutions. These require an interdisciplinary approach to program development and implementation.

3. What are Mekarn's key strengths and how should the new program make use of these assets towards the improvement and achievement of results beyond 2012?

Mekarn's human resource development program is its key strength and over the years it has contributed to help build a critical mass of highly trained human resource in agriculture education and research especially in Vietnam. The long years of faithful support from SIDA has created a reservoir of goodwill as regards the program and SIDA itself. It is important that the proposed next phase of Mekarn builds on this very important asset by mobilizing the support of friends and alumni.

HRD should continue as the cornerstone of Mekarn's program, and this evaluation supports the move as regards the following changes in the HRD program:

- a. The program shall support post-doctoral fellowship in SLU especially from the universities in Vietnam in order for the country to keep up with more

advanced developments in scientific methods and procedure available in SLU.

- b. MSc and PhD training shall primarily be pursued in the universities and laboratories in Vietnam in view of the significant increase in human and laboratory capacity of the country, which Mekarn/SIDA has helped build over the years.
- c. HRD training in Laos, Myanmar, and Cambodia shall primarily be towards building a critical mass of highly trained human resource with at least an MSc degree.

While the above proposals have strong merits, there are undercurrents observed from Laos and Cambodia as regards equity in resource allocation, which have been earlier noted. Therefore, the Mekarn may want to put a dollar value to the in-kind contribution from Vietnam, and work out with the country to raise its in-kind contribution to a level proportional to the benefits the country receives from Mekarn.

The continuing development of current Mekarn member institutions through HRD and research support should be reviewed in relation to their **strategic role in the attainment of the objectives of Mekarn** in the next phase. Universities without a clear strategic role may be dropped from the list of universities for HRD support although they may continue to access research grants. In determining the strategic role of the universities in their service areas, it might help Mekarn to **identify priority target areas/populations for development** bearing in mind the following key elements of agriculture and rural development in the selection: gender, poverty alleviation, climate change and resiliency of livelihoods and communities, and sustainable development.

Annex Table 1.

Mekarn grantees and positions held from 2008-2012 by country

Mekarn Grantees and Positions held		
Name of Grantee or Scholar	Year Degree Completed	Highest Position & Institution Where Grantee Worked and years in highest position
Cambodia		
Mr. Khieu Borin	PhD 2005	Director of CelAgrid (Jun 2013)
		Chief Executive Officer and Adviser to CelAgrid (Oct 2009 – May 2013)
		Team Leader of Cambodian Agricultural Value Chain – Au\$45 million (Feb 2007 – Sept 2009)
		Steering Committee member of MEKARN (2005 – 2012)
		Advisory board of various NGOs in Cambodia – Centre for Advance Study, ISOC KH. (2010 – present)
		Advisory Committee for the development of Cambodian Veterinary Law/MAFF (2010 – 2012)
		Editorial board of Cambodian Journal of Agriculture (2007 – present)
Mr. Pok Samkol	MSc 2003-2005	Director of CelAgrid (Jun 2011 – May 2013)
Mrs. Seng Sokerya	PhD 2009	Director of CelAgrid (Jan-Jun 2011)
Mr. Chiv Phiny	PhD 2013	Adviser of Phum Bank Ltd. (May-present 2013)

Mr. Sorn Suyheang	MSc 2003-2005	Vice Dean of Faculty of Animal Science and Veterinary Medicine, RUA (2010 – present)
Mr. Toeun Kouch	MSc 2001-2003	Vice Chief of Office of Planning and International Cooperation, RUA (2010 – present)
Laos		
Mr. Vanthong Phengvichith	PhD 2007	Deputy Director General of NAFRI, MAF
Mr. Phonepaseuth Phengsavanh	MSc 2003, PhD 2012	Deputy Director of Livestock Research Center, NAFRI
Mr. Phanthavong Vongsamphan	MSC 2003	Deputy Director of Planning Division, Dept. of Livestock & Fisheries, MAF
Mr. Hongthong Phimmasane	MSc 2007	Head of Livestock and Fisheries Division, Xieng Khouang Province, PAFO Xieng Khouang
Ms. Malavanh Chithavong	PhD 2012	Vice Head of Post Graduate Study Division, Faculty of Agriculture, National University of Laos, Nabong Campus
Sitone Kongvongsay	MSc 2012	Head of Cattle Breeding Station, Livestock Research Center, NAFRI, MAF
Vietnam		
Mr. Pham Hong Son	*	Faculty, Vice Dean Assoc Prof., DVM
Ms. Nguyen Thi Loc	*	Assoc. Prof, Lecturer
Ms. Le Thi Lam Phuong	*	Lecturer & Researcher
Ms. Du Thanh Hang	*	Lecturer and Researcher

Ms. Tran Thi Thu Hong	MSc (2003), PhD (2008)	Head,, Dept of Animal Physiology
Ms. Nguyen Duyy Quynh Tram	MSc(2003), PhD(2010)	Lecturer & Researcher, Faculty of Fisheries
Mr. Le Van An	*	Vice Rector, Assoc. Professor,
Ms. Vo Thi Kim Thanh	*	Head of Department
Mr. NguyenThi Hon Ly	*	Retired
Mr. Le Dinh Phing	*	Assoc. Pof., Dean of International Cooperation
Ho Trung Thong	*	Assoc. Prof., Vice Dean of Animal Prouction Faculty
Du Thanh Huy	*	Head of Animal and Nutritional Dept.
<i>*not indicated</i>		

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The Research Cooperation for Sustainable Farming Systems in the Lower Mekong Basin (2008-2012)

The evaluation covers the years 2008-2012, the last phase of Mekarn 1, a SIDA supported network since 2001 on Research Cooperation for Livestock Based Sustainable Farming Systems in the Lower Mekong Basin (MEKARN). Fifteen universities and research institutions in Vietnam, Laos, Cambodia, Thailand and Sweden are participants of the co-operation. The programme is coordinated by Nong Lam University in Ho Chi Minh City, Vietnam, in co-operation with the Swedish University of Agricultural Sciences (SLU). The focus for research is the sustainable use of local resources in small-scale livestock production systems to improve the livelihood of poor farmers. The purpose of the evaluation is to follow up on the development of the network, take stock of progress, as well as assess where the programme stands against planned activities and outcomes, and its set target as well as how it is situated in the emerging development context of the region.

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